

MAY IT PLEASE THE COMMISSIONER

1. This memorandum sets out Valley Rage Inc's comments on the new information provided by the Applicant and the revised consent conditions filed by the Applicant on 23 March 2023.
2. Valley Rage maintains its view that:
 - (a) adverse effects of the proposed land use and discharge activities will be more than minor,
 - (b) the conditions proposed by the Applicant are not adequate to avoid, remedy or mitigate adverse effects, and
 - (c) the proposal is not consistent with the objectives and policies of the planning documents, including the NPS-HPL.
3. Valley Rage comments below on new information provided by the Applicant and consent conditions relating to pit erosion impacts, groundwater monitoring and management of fill, and soil management and restoration. The attachments to this memo also contain specific comments on the revised conditions.
4. By way of general comment, Valley Rage notes the scale and complexity of the conditions and the management plans. Management plans typically describe the methods and procedures to achieve the conditions of a consent. At times, information in the management plans is expressed in different ways or is even in conflict with the revised consent conditions or statements expressed by the Applicant's experts in the joint witness statements. Overall the package of measures proposed to address effects is not consistent or cohesive and does not provide Valley Rage members with confidence that the plans and conditions will be implemented correctly. If the Commissioner is minded to grant consent, Valley Rage requests that the Applicant provide a revised set of conditions that is aligned and consistent with the management plans and that the conditions state that the consent holder must conduct its activities in accordance with the management plans. Valley Rage also requests a condition requiring periodic review of the management plans. Other amendments proposed to the condition set are set out in the attached documents.

Timing and extent of quarrying activities and pit erosion

5. Valley Rage maintains its view that any activity that presents an increased and real risk of sediment loading to receiving coastal waters or freshwater, is contrary to the objective and policies of the NPS-FM including the overarching principle of Te Mana o te Wai and should not be allowed.¹

¹ Legal submissions on behalf of Valley Rage, 24 November 2022, para 146.

6. Dr Harvey has expressed concerns about the potential for erosion of the exposed backfill and pit heads. Mr Aiken's supplementary evidence dated 19 December 2022 acknowledges the potential for sediment to be generated from erosion of material placed in an excavated pit prior to establishment of a vegetated cover and Mr Aiken acknowledges the pit head erosion risk in the JWS.
7. The Applicant proposes to quarry and place fill, subsoil and topsoil only during the months of October to March inclusive to ensure a cover is established before winter to reduce the risk of sediment discharges entering the Motueka River and/or Peach Island overflow channel (Dr MacNeil, Supplementary Evidence dated 16 March 2023, para 2.7) a) and to avoid quarrying in winter when groundwater levels are higher (Mr Aiken, JWS, page 4). This would therefore allow deeper extraction.
8. Valley Rage is concerned about this new proposal for various reasons.
9. First, restricting excavation and fill activities to summer months does not reduce the risk of suspended sediment entering Motueka River and Tasman Bay. As accepted by all the experts participating in the JWS, large flood events occur annually (ie a 10-15% chance of a 10% AEP event during the proposed mining period). Dr Harvey and Mr Griffith agree that more frequent, annual greater than bankful events of lower magnitude are likely to occur which could mobilise pit sediments and not only in the winter season. The backchannel drains to the Shaggery River allowing eroded suspended sediment to be discharged to the Motueka River during all events. Dr Harvey stated that larger flood events are likely to be cyclonic driven events in the summer. According to Dr Harvey, based on the Tonkin + Taylor pit modelling, approximately 7,400 to 9,300 tonnes of suspended sediment could enter Motueka River and Tasman Bay as a result of the quarrying operations during a 10% AEP event which would represent an approximately 1.9 to 2.3 % increase in the annual suspended sediment load for the receiving environments.
10. Second, the Applicant now proposes to quarry Stage 1 in 3 tranches "with a maximum of one third of the Stage 1 area to be actively quarried or being remediated at any time" (see conditions 99 – 100). It is not clear how large each pit will be. Stage 1 is 24,874.9m² so a pit that is approximately one third this size is considerably larger than the 1,600m² 'maximum pit size' presented in the application documents and assessed by Ms Gavin for visual impacts. The Applicant has not provided any plans showing the new three-tranche Stage 1 proposal. Visual effects (and landscape mitigation planting) for the new proposal have not been assessed or provided and this should be done prior to the conclusion of the hearing with an opportunity for submitters to respond. Ms Gavin's evidence relies on landscape mitigation planting to ensure visual effects for some residents are moderate-minor. Ms Gavin's view should be sought on the visual impacts of the Stage 1, 3 tranche proposal. In addition, if the pit size has increased there has been no modelling to evaluate the potential for backfill or headwall erosion. It is logical to assume that the impacts would increase linearly with the increase in area.
11. Third, the conditions proposed by the Applicant are not clear as to whether the Stage 1 tranche approach still involves a 'moving pit' no larger than 1600m² that is progressively backfilled (as suggested by condition 95) or whether the tranche approach now supersedes

this. Or is the Applicant suggesting that within each of the 3 tranches within Stage 1, there will be a moving pit no larger than 1600m² and approximately 20m x 80m). Conditions 94 – 95 and 97 – 100 need to be written so they do not conflict with each other or cause confusion as to the size of the pits and the manner in which the aggregate will be excavated.

12. Fourth, the conditions should be clearer as to when activities will be restricted. Condition 51 states that no quarrying activities will take place within 100m of orcharding activities on neighbouring properties between the months of January and May (inclusive). Therefore, when read together, conditions 51 and 100 state that quarrying and placement of cleanfill, subsoil and soil can only take place between October, November and December within 100m of orcharding activities. To avoid confusion and aid compliance and enforcement, this should be expressly stated in the conditions. The orchard west of the Stage 1 area is approximately some 67m away from the boundary fenceline. In addition, it is not clear as to what is meant by “orcharding activities”. Valley Rage proposes that “orcharding activities” includes flowering, pollination, fruit set, fruit growth and harvest of fruit and this be specified in the consent conditions.
13. Fifth, relying on a vegetated cover establishing in summer means also relying on irrigation methods which could compact and damage the topsoil and reduce its versatility characteristics as discussed in the soil management JWS.
14. If the Commissioner accepts Dr Harvey’s, Ms Le Frantz’ and Mr Griffith’s evidence, then allowing the Applicant to quarry aggregate of this scale and duration in a flood plain will not ensure that natural and physical resources are managed in a way that meets the priorities contained in Te Mana o te Wai. In other words, granting consent for quarrying in this location prioritises economic well-being above the health and well-being of water bodies and freshwater ecosystems and the health needs of people.
15. It is not relevant that effects from the site on water quality and ecological values would be “discernible” as stated by Dr MacNeil. Increasing the risk exposure is inconsistent with Te Mana o te Wai as stated in the Legal submissions presented by Valley Rage at the hearing.
16. Mr Aiken’s evidence is that approximately between 4,246m³ and 5,314m³ could be eroded in a flood event (page 2 of the memo attached to Mr Aiken’s evidence, 19 December 2022). It is unknown what the volume of potentially erodible material would be under the new proposed tranche approach. An open pit that is one third the size of Stage 1 could potentially contain far greater volumes of erodible material. Mr Aiken agreed with Dr Harvey in the JWS that an open pit in a floodplain always presents risks (page 5). Valley Rage requests that new modelling of erosion potential and impacts is carried out based on the new tranche proposal and that this information is provided to submitters before the conclusion of the hearing with an opportunity to comment.
17. Dr MacNeil states in his Third Supplementary evidence statement dated 16 March 2023 states that the revised consent conditions will provide further safeguards to prevent sediment inputs to the Motueka River and potential adverse effects on instream ecological values. Despite Dr Harvey raising the impacts of increased sediment loading to Tasman Bay in both his evidence statement and in the caucusing session, the Applicant has not responded to these concerns other than Dr MacNeil’s assertion that impacts on receiving

waters would be “discernible”. With respect, this has not been established and in any event, Valley Rage considers that allowing these risks to eventuate to the receiving environment is inconsistent with the fundamental principle of Te Mana o te Wai.

Cleanfill and groundwater

18. The Applicant now proposes to excavate to a depth of 30cm above groundwater levels relying on various excavation control methods and criteria including active groundwater level monitoring in monitoring bores, confirmation of water levels from temporary test pits and having sufficient fill available to backfill excavations if groundwater levels show signs of rising. Dr Rutter states that the proposal is “unusual in that material will be placed into the zone of groundwater level fluctuation” leading to increased risk of the migration of any contaminants than if there is only unsaturated material between the fill and groundwater (JWS, page 3). Dr Campbell’s view is that fluctuating water levels within the fill materials will lead to pugging and consolidation and inevitably to restricted soil drainage and potential plant rooting depths.
19. The measures the Applicant is asking the Commissioner and the community to rely on, require the operator and all third parties involved to follow correct processes 100% of the time over 15 years. One error will place residents’ drinking water supplies at risk. Mr Nicol says the quantity of contaminated material would be limited to “small, located zones of material (as opposed to gross contamination)” and that any contaminants mobilised would be “expected to be attenuate/diluted due to small volume” (JWS page 3). Both Dr Rutter and Mr Nicol agree that any potential concern is for people using bores to abstract groundwater (JWS, page 4). Valley Rage asks why the community should be expected to bear the risk of this untried/untested, “unusual” (according to Dr Rutter) approach. Groundwater testing at the Miners Road quarry shows chemical changes in groundwater chemistry even though excavation there does not enter the zone of water table fluctuation (although concrete can be used in fill material at that site; Dr Rutter, JWS page 6).
20. The Applicant’s proposal elevates a company’s economic considerations above the health and wellbeing of water and a community’s needs contrary to Te Mana o te Wai and the measures proposed are not adequate to manage potential adverse environmental effects. Aquifer clean-up costs and the provision of alternative drinking/stock water supplies would be significant if required and far in excess of the \$40,000 bond offered by the Applicant.
21. Mr Nicol says that the NPS-FM does not recommend groundwater specific bottom lines or water quality guidelines to assess if a change in water chemistry is having an effect and the drinking water standards provide a relevant indicator for consistency with Te Mana o te Wai (JWS, page 4).

22. Valley Rage prefers Dr Rutter's view that Te Mana o te Wai supports not causing a deterioration in water quality (JWS, page 4). It is not enough to say that compliance with the drinking water standards equates to consistency with Te Mana o te Wai. The NPS-FM applies to groundwater (clause 1.5, NPS-FM), and the health needs of people including drinking water must be prioritised over a person's ability to provide for their social, economic and cultural well-being (clause 2.1). Policy 1 requires freshwater (including groundwater) to be managed in a way that gives effect to this prioritisation. The Applicant's proposal does not do this. Appendix 1B of the NPS-FM sets out values, including drinking water supply, that Tasman District Council may identify as relevant to a freshwater management unit such as the Motueka River. When it notifies a plan change to give effect to the NPS-FM, the council may identify values, outcomes, attributes, baseline states and targets that apply to the Peach Island aquifer. Pending the completion of this assessment, it is not appropriate to approve an application that may have the risk of degrading water quality in the aquifer. To do so would not, in my submission, have appropriate regard to the objective and policies of the NPS-FM.
23. In addition, the NPS-FM through its process for establishing baseline states and targets (and requiring through the National Objectives Framework that water quality not degrade below baseline state) requires limits and other controls to be placed on activities to ensure target attribute states (which must be set above baseline state) are achieved. The current quality of the groundwater at Peach Island is "very good" (Dr Rutter, JWS page 6). Granting consent to an activity that may degrade water quality (irrespective of adherence to MAV / drinking water standards) will not achieve the objective or policies of the NPS-FM.
24. Mr Nicol proposes a 20% difference in Table 3 GCMP concentrations between the year-to-year median concentration in the downgradient bore and upgradient bore as the trigger for determining when a groundwater chemistry exceedance has occurred (criterion B). The process in Mr Nicol's flowchart (Figure 3 of his Third Supplementary Evidence statement) involves considerable steps and time before contaminating activities are ceased and material removed. Monthly monitoring may still allow contaminants to "get through without detection" (Dr Rutter, JWS page 8). Again, Valley Rage considers it inappropriate and inconsistent with the NPS-FM and Te Mana o te Wai for residents to bear the risk of contaminated groundwater supply. Valley Rage agrees with Dr Rutter that the overall response to an exceedance should be faster and more proactive than what Mr Nicol has proposed (JWS, page 9). Dr Rutter notes that the provision of an alternative supply in this circumstance only occurs when samples from the private wells fail to comply with half MAV and that the alternative supply should be instead be "prepared for as soon as possible.. rather than waiting until after an investigation" (JWS, page 9). Valley Rage again fails to understand why these risks and the costs of having a safe water supply should fall to the residents in this situation. Valley Rage also notes that the flowchart and the steps to be followed in the event a trigger level is exceeded, do not appear to be included in either the consent conditions or the GCMP.
25. Valley Rage relies on the expert evidence of Dr Rutter and the concerns she has expressed at the hearing and in the JWS about insufficient existing groundwater level data, climate change impacts on fluctuating water levels, whether levels will rise faster than the rate of

backfilling and that monthly monitoring rather than point sampling is better for the initial year prior to clean fill activities commencing (JWS, page 6).

26. The Applicant is asking the Commissioner and the community to trust that at all times over the 15 year duration of consent, only virgin excavated natural material (VENM) will be used as fill above the aquifer. The Applicant's experts repeatedly state that this is the primary mechanism for mitigating the risk of groundwater contamination. With respect, this is an undertaking the community is unable to accept, and Valley Rage urges the Commissioner to view the undertaking with caution.
27. In *Selwyn Quarries Ltd v Canterbury Regional Council*² the Environment Court reviewed a decision of Hearings Commissioners to decline consent to deepen and backfill part of an existing quarry located above an aquifer in Selwyn District. The Court noted the Commissioners' finding that the nature and quality of the back fill was critical to protecting groundwater quality and their concern about a lack of a chain of custody over fill material. The Commissioners were also concerned about the "complexity of the suite of conditions and requirement for diligent observation and performance 100 percent of the time over a long period of time".³
28. In the present case, the Commissioner must be satisfied that the methods proposed to detect and control the quality of backfill are sound. Similar to the *Selwyn Quarries* situation, there is an unacceptable risk that contaminated materials will be deposited undetected because:
- (a) the fill will arrive from different and numerous sources including third party contractors on whom the Applicant will rely on for carrying out visual assessments, data recording and undertaking independent sampling and testing and deciding to remove fill to authorised disposal locations when it does not meet any of the acceptance criteria
 - (b) the management of risk relies on numerous people (including contractors) adhering to complex standard operating procedures in the GCMP (which have only been provided by the Applicant in late March therefore leaving no time for the community to fully assess and comment)
 - (c) the process relies on suitably qualified and experienced practitioners being available when required to test fill material before it is placed in the pit and retaining chain of custody from source to site, even though adhering to a strict process may conflict with a more immediate need for urgent backfilling of excavated areas in the event of unanticipated rising groundwater levels.
29. In *Selwyn Quarries*, neither the first instance Hearing Commissioners nor the Environment Court were confident that as to the ability of the quarry operator to consistently adhere to a complex set of conditions for a long period of time in order to manage potential adverse

² [2019] NZEnvC 153 (EC).

³ Above, quoted at para 14.

effects. The Court described the conditions proposed as a “superficial response” (para 43) to the concerns raised. In Valley Rage’s view, this is also the only finding available to you on the evidence presented.

30. Mr Nicol says that the key controls to reduce risks of changes in water chemistry are the quality and testing of the clean fill material (Third Supplementary Evidence Statement, 19 December 2022, para 2.4). A similar reference is made in paras 2.10 and 4.5 to the “strict controls and clean fill acceptance criteria to avoid contaminated material being placed within excavations”; and again in para 3.28 where Mr Nicol states that “The primary control to avoid mobilisation of contaminants from inundated fill material is the clean fill acceptance criteria”. In numerous places in his evidence, Mr Nicol states that adverse effects on groundwater will be less than minor provided the recommended clean fill acceptance criteria controls are implemented (emphasis added).
31. With respect, the Commissioner’s questioning in Minute No 6 of the Applicant’s testing, storage, handling and transport of clean fill is completely justified in these circumstances.
32. In response to these questions, the Applicant has stated that the locations that clean fill will be sourced from, and the storage and testing facilities at Hau Road are not relevant to the Commissioner’s determination of the discharge application (paras 10 and 13, Memo of Counsel filed by Ms Gepp, 9 March 2023). Ms Gepp’s memo then explains why storage of clean fill and the transport of clean fill to and from Hau Road is authorised under the existing planning framework.
33. Valley Rage respectfully disagrees with this approach. It is not relevant whether Hau Road is authorised to accept and store clean fill. What is relevant is whether the measures proposed by the Applicant are adequate to manage potential environmental effects and Valley Rage says they are not.
34. In paragraphs 4 and 5 of her memorandum of 9 March 2023, Ms Gepp acknowledges that conditions can be imposed in relation to how cleanfill is managed and the parameters it must meet, and that conditions can relate to activities outside the application site. However, Ms Gepp says that a condition requiring that cleanfill is sourced from, stored at or tested at a specified location or locations prior to being accepted at the Site would not be lawful. This however seems to be what the proposed Standard Operating Procedures in the GCMP are intended to do, that is, impose conditions on the nature and quality of the back fill, including its off-site management, testing and chain of custody to appropriately manage adverse effects on groundwater quality. If the Applicant is intending the SOP to function as guidance as opposed to valid and legally enforceable conditions of consent, this would be useful to know. Valley Rage requests that this is clarified in the Applicant’s reply in response and at the reconvened hearing.
35. The Standard Operating Procedures state that testing of cleanfill will occur by a SQEP. The SOP states that ‘guidance’ for what is expected of a SQEP is set out in the MfE Users’ Guide:

NES for Assessing and Managing Contaminants in Soil to Protect Human Health.⁴ The MfE Guide states that a SQEP must be independent. This is critical and should be stated as an express requirement in the GCMP or consent conditions to ensure the requirement for a SQEP to be independent of the Applicant is not interpreted as ‘mere guidance’.

36. The last two bullet points of the SOP require the analysis of all samples collected to be undertaken under chain of custody by an IANZ accredited certified laboratory with the results interpreted and reported by the SQEP.
37. Valley Rage considers that more certainty is required regarding the SQEP and laboratory analysis. Given the frequency of testing (random chemical testing must occur for every 500m³) and the process required for all validation sampling (as set out in 4.0 of the SOP) across potentially numerous cleanfill source sites including those operated by third parties, Valley Rage queries the arrangements the Applicant will put in place to ensure a SQEP is available when required. Will this be written into the contractual arrangements? Valley Rage requests more information about this process and arrangements so it has confidence an independent SQEP will be available at the times required.
38. As accepted by Dr Rutter, if clean fill contains contaminated materials, this will enter groundwater when backfill is inundated by fluctuating groundwater levels. In turn, this could adversely impact the residents’ drinking water supply. Even the monthly testing proposed by the Applicant for the new bore (installed to detect any changes occurring in downgradient bore 24135) and the three monthly testing of existing bores (24543, 24544, 24545 and 24546) will not be adequate to prevent mobilised contaminants from adversely impacting drinking water supplies.
39. If consent is granted, Valley Rage considers it important that a 1m freeboard remains between the excavation and the groundwater table at all times. This buffer should not be reduced in reliance on fluctuating groundwater levels. Allowing a dynamic freeboard down to as low as 30cm exposes residents’ drinking/community water supplies to undue contamination risk.
40. A minimum 1m buffer should remain at all times between the excavations and the highest recorded groundwater level. A 1m freeboard was considered a “critical environmental bottom line” in *Selwyn Quarries Limited v Canterbury Regional Council*⁵ and it respectfully suggested that a similar position is taken in this situation.
41. Valley Rage makes the following comments on the GCMP:
 - (a) Section 4.0, para 5: Amend to state that temporary test pits “must be undertaken” (for consistency with Mr Nicol’s evidence and the consent conditions).

⁴ [guide-nes-for-assessing-managing-contaminants-in-soil.pdf \(environment.govt.nz\)](#); see pages 16 -17.

⁵ [2019] NZEnvC 153 [at 21].

- (b) Section 5.0, para 2: The sentence “The consent holder must check groundwater level using this information daily when excavation is occurring” is vague. More detail should be provided on when daily checks must occur throughout the day.
- (c) Appendix A – SOP. Amend second para (or elsewhere) to ensure that the Applicant is responsible for testing/acceptance of clean fill brought to site by contractors and third parties. In other words, the responsibility for ensuring the waste acceptance criteria in the table are met, lies with the Applicant.
- (d) Appendix A – SOP – Table 1: Materials sourced offsite. The reference to “testing a representative composite sample of imported fill material” should be amended to ensure that testing satisfies the requirements in the Waste MINZ Guidelines (eg a sample per 500m³ and testing carried out by an independent SQEP). Also amend reference to HAIL activities along these lines: “...and for both these categories of sites, the HAIL activity is known, or could be reasonably expected to be known to have been occurring..”
- (e) Appendix A – SOP – section 2.0, para 1: The SQEP will inspect and undertake representative sampling of the overburden etc “if the material displays any visual or olfactory evidence of contamination”. Also ensure that the SQEP undertakes all inspection and testing as required by the Waste MINZ guidelines (eg random chemical testing of every 500m³ of fill). The footnote refers to ‘guidance for what is expected of a SQEP’. Ensure that the conditions/SOP require a SQEP to be independent and meet the requirements in the MfE Users’ Guide (ie not just guidance which does not need to be followed).
- (f) Appendix A – SOP – section 2.0, Part A, para 3: the reference to clean fill being carted directly to Peach Island by CJI truck and trailers. It is not clear whether these truck and trailer movements are part of the 30 movements per day maximum stated in the conditions. Valley Rage’s view is that they should be included as part of this cap.
- (g) Appendix A – SOP – section 2.0, Part A, para 8: random chemical testing must be carried out for all fill material in accordance with the Waste MINZ guidelines (ie not just where the fill is overburden from CJI quarries).
- (h) Appendix A – SOP – section 2.0, Part B – the comments above relating to the need for a SQEP to be independent and meet the MfE Users guide requirements, and for truck/trailer movements to be incorporated within the 30 movements per day max also apply here.

Soil versatility and management

42. The respective experts’ views are set out in the JWS. All experts agree that at least part of the site is highly productive (LUC 3). Valley Rage supports Ms Langford and Dr Campbell’s views regarding the versatility of the Peach Island soils and their potential or capability for producing crops. As these experts state, versatility should not be confused with economic viability (which is not a relevant criterion in either the NPS-HPL or the Tasman Resource Management Plan, JWS, page 3) and the land is capable of producing crops at a high rate and/or across a wide range. Dr Campbell is critical of the Landvision mapping methodology and considers that the site is similar to many others in the district that are used for intensive horticulture (JWS, pages 3 – 4).

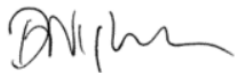
43. Dr Campbell and Ms Langford also express significant reservations in the JWS that the soil management plan will preserve the productive potential of the soil. Dr Campbell states that the dislocation and disruption of the soil profile will be “major” and that there is “no way back to functional soil” (JWS, page 6). Any downgrading of drainage is a downgrading of soil versatility (Dr Campbell and Ms Langford, JWS, page 7).
44. The Applicant is proposing stockpiles of up to 3m above ground level (condition 73). Dr Campbell notes that stockpiles of these heights can only be created by machines driving over the soil (JWS, page 6) and therefore resulting in compaction and degradation of soil properties. Dr Hill accepts that machinery moving over stockpiles must be avoided (JWS, page 6).
45. Both Ms Langford and Dr Campbell agree that at the very least, it is likely that cumulative loss of the availability and productive capacity of highly productive land will occur and that it is unlikely that the soil management plan will be successful in minimising or mitigating loss (JWS, page 10).
46. The experts have not commented on the new Stage 1 tranche proposal (provided by the Applicant post-caucusing) therefore its impacts on soil properties (including the irrigation and other techniques required to ensure vegetated cover establishes prior to winter) has not been considered.
47. Valley Rage wishes to comment on the terms ‘soil’, ‘subsoil’ and ‘topsoil’ used in the proposed consent conditions.
48. In places in the JWS, the experts refer to ‘A and B soil horizons’. Dr Campbell notes that soils consist of three elements or horizons or layers. The surface horizon or A horizon is dominated by the accumulation of organic matter and is dark coloured. The second layer or B horizon is the zone of maximum alteration of mineral and has brown colours resulting from oxidation by weathering. Grey and orange colours may be present where there is soil drainage impairment. The third and lowest horizon or C horizon is a zone of little weathering or mineral alteration and represents a transition into the underlying materials from which the soil has formed. The material underlying the soil is called the regolith. It is the material from which the soil above is typically formed.
49. The surface horizon (A horizon) is often called topsoil in general soil science terms. However, in lay terms, the word topsoil is commonly used non-specifically to include anything that occurs above the C horizon or the regolith and is therefore imprecise.
50. The term subsoil in soil science usage generally refers to the B and C horizon materials but again in lay terms it can mean anything including regolith materials and is very imprecise and therefore difficult to know exactly what is being referred to.
51. At times, the experts called by the Applicant refer to the soil materials in imprecise and non-specific. The fill material intended to be replaced is at times referred to as subsoil but this is confusing when the word subsoil is also used to describe the removed B/C horizons.

52. Dr Campbell's view is that fill materials should only be referred to as fill. In time, they may become regolith if they become incorporated through weathering processes into the replaced soil. They should not be referred to as subsoil. It is essential for clarity that the soil materials be referred to in precise pedological (Soil) terms, not generalised terms that do not have exact meanings.
53. Valley Rage, in reliance on Dr Campbell's expert evidence, does not support the proposed conditions regarding soil management and restoration, nor the processes set out in the Soil Management Plan. Dr Campbell describes the proposed approach as an experiment (a view supported by Ms Langford, JWS page 8) and states that considerably more controls are required to ensure productive qualities are not lost. Dr Hill's view is that the restored soil can be "imperfectly drained" (also reflected in condition 56). Dr Campbell's view is that imperfect drainage would result in significant downgrading in the site (JWS, page 8). It should be noted that the definition of the imperfect drainage class is 'water is removed sufficiently slowly from the soil to keep the soil wet for a significant part of the growing season' and the consequence of this is a significant limitation to the soil versatility).
54. If consent is granted, Valley Rage seeks soil management and rehabilitation/restoration conditions similar to those applied by the court in the Ranzau case⁶ and Staplegrove Farm⁷ consent should be imposed (although those conditions did not allow the introduction of foreign fill). The consent conditions should provide for the following:
- (a) Only vehicles with low ground pressures should be used, apart from trucks removing the extracted gravel.
 - (b) There must be separate removal of the A and B horizons with low ground pressure machinery and separate storage with a stockpile height of not more than 80 cm (approximately what can be expected from a tip truck unloading).
 - (c) In order to achieve a minimum of 80 cm of replaced Riwaka soil material for best possible growing conditions, it is likely that C horizon material will also need to be removed, stockpiled and replaced or incorporated with the B horizon material. At Staplegrove Farm, B and C horizon materials were not separately removed and were therefore homogenised creating conditions different from the original soil and not ideal.
 - (d) The replacement of the original Riwaka soil material must be to a minimum depth of 80 cm and must only be Riwaka soil materials. There are no other soils in the district that have the same natural nutrient levels and replacing any part of the 80 cm soil profile with other soil material represents a downgrading of the natural nutrient status from the original.

⁶ 6 A decision of the Town & Country Planning Appeal Board, 23 July 1976, referenced and discussed in McQueen D J, "Land Reclamation after Gravel Extraction on Ranzau Soils, Nelson, New Zealand", NZ Soil Bureau, Lower Hutt, New Zealand, available at: <http://digitallibrary.landcareresearch.co.nz/digital/collection/p20022coll2/id/181>.

⁷ Discussed in Campbell, I (2017) Report on soil restoration at Staplegrove Farm gravel extraction site, Waimea West, Nelson Land & Soil Consultancy Services, Nelson.

- (e) The replaced A horizon should have a minimum thickness of 15 cm across the whole area. The Landvision report states 300-400mm topsoil minimum and 700mm of subsoil but these are generalised figures and the non-specific definitions of the soil materials and include fill material.
 - (f) After soil replacement is completed, no machinery (other than for cultivation purposes) should be allowed to travel over the restored soil surface to minimise compaction.
 - (g) The replacement of the fill materials must only be with the use of low ground pressure machinery and no fill or foreign materials should be within 80 cm of the soil surface.
 - (h) The replaced soil should be well drained. It will not be possible to determine the soil drainage state at the time of soil reinstatement as drainage problems will only be apparent sometime after a new soil moisture regime has been established. Continued subsurface consolidation of fill materials and the presence of clayey fill material will play an important part in the final soil drainage condition which cannot be predicted.
 - (i) The movement of soil and fill materials should only take place when the soil is dry.
55. If there is a failure to meet the consent conditions, the consent should be terminated as there would be little likelihood that remedial action could be undertaken.
56. It should be a requirement to maintain the site under high producing pasture for a minimum of 30 years in order to establish a stable A horizon soil structure. (This may mean irrigation and intensive stocking).
57. Additional comments on the proposed consent conditions are in the documents **attached**.



D Nightingale
Counsel for Valley Rage Inc

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Alastair Jewell

From: Dhilum Nightingale <dhilum.nightingale@kschambers.co.nz>
Sent: Saturday, 8 April 2023 10:12 am
To: Alastair Jewell
Cc: Bernsdorf Solly, Susi; Sally Gepp
Subject: FW: RM200488, RM200489 and RM220578 CJ Industries
Attachments: 230407 Valley Rage comments on draft volunteered discharge conditions.docx; 230407 Valley Rage comments on draft volunteered land use conditions.docx; 230504 Memorandum of Counsel for Valley Rage providing comments on new information and proposed consent conditions.pdf

Kia ora Alastair

I am resending the memo filed on behalf of Valley Rage as there were some technical errors in paragraphs 9 and 10. Sorry about that. Please forward this version to the Commissioner. No changes have been made to the marked up consent conditions but I am attaching them again so all the documents are in one email.

Ngā mihi
Dhilum

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From: Dhilum Nightingale
Sent: Friday, 7 April 2023 9:47 pm
To: Alastair Jewell <Alastair.Jewell@tasman.govt.nz>
Cc: Bernsdorf Solly, Susi <Susi.b.solly@wsp.com>; Sally Gepp <sally@sallygepp.co.nz>
Subject: RE: RM200488, RM200489 and RM220578 CJ Industries

Kia ora Alastair

Further to the Commissioner's directions in Minute #8, please find attached Valley Rage's comments on the new information provided by the Applicant as well as comments on the updated management plans and revised conditions. I would be grateful if you could please forward these to the Commissioner.

Ngā mihi
Dhilum



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From: Dhilum Nightingale

Sent: Friday, 7 April 2023 3:42 pm

To: Bernsdorf Solly, Susi <Susi.b.solly@wsp.com>; Sally Gepp <sally@sallygepp.co.nz>; Alastair Jewell <Alastair.Jewell@tasman.govt.nz>

Subject: RE: RM200488, RM200489 and RM220578 CJ Industries

Hi Susi, Sally and Alastair

Hope you're having a good long weekend. Just letting you know that I will be getting Valley Rage's comments on the new information and consent conditions to you today but it will be after 5pm and probably a bit later this evening. I hope that's ok.

Kind regards

Dhilum



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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 and 2 September 2022;
 - (c) the evidence received on 15 July 2022 and 4 November 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 Council.
3. Quarrying in the Stage 1 area shall not commence until the Landscape Mitigation Planting required by condition 3 below has been successfully established (at least an 80% survival rate) 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 may review this consent annually commencing 6 months from the commencement of the consented activities, for the purposes of:

Commented [DN1]: Workability issue. Referencing the evidence received could create confusion and potential conflict; lack of transparency re: enforcement. Also the application documents received on 15 June have been updated / superceded by further information so the condition should be worded to reflect that. Also, unclear what the site plan referred to is. The one in the application document has been superceded by the Stage 1 tranche approach. Greater clarity needed on the authorised works to ensure transparency and enforceability

Commented [DN2]: Not clear what these are. Applicant to circulate final version of plan so it is clear what is being referenced. Also helpful given recent revisions to the proposal (Stage 1 tranche approach)

Commented [DN3]: How do the management plans fit in? What if there is a conflict between these plans and the consent conditions?

Commented [DN4]: Not clear what this is. All of 1(a) - (d)? Should include the management plans

Commented [DN5]: Different terms used eg 'prior to works commencement', 'prior to excavation'. Can pre-extraction works occur. Need consistency of terminology. VR preference is that no works occur other than initial Stage 1 planting

Commented [DN6]: Should say 'Quarrying in the Stage 1 area as shown on plan XXX'... and 'Quarrying activities in the Stage 2 and 3 areas as shown in plans YY'

Commented [DN7]: Cross reference may be to conditions 44 and 45. Those conditions currently contain no third party certification (addressed further below)

Commented [DN8R7]: Suggest alternative wording along these lines" "Prior to commencement of quarrying in the Stage 1 area (as shown on Plan XX), the consent holder shall provide a report to Council from a SQEP XXX to confirm that that landscape mitigation planting established under Condition X of this consent has been successfully established (at least an 80% survival rate) for a period of at least 6 years).

Commented [DN9]: Amend here (or elsewhere in conditions) to ensure interim monitoring and third party certification is incorporated. Otherwise, how does someone know if 6 years and 80% survival rate achieved?

Commented [DN10]: Include a requirement for the management plans to be reviewed at least two-yearly.

- (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.

Lapse and expiry

- 5. Pursuant to section 125 of the Act, this consent shall lapse 5 years after the date it commences 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 relevant consumer price indices 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 14(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.

Commented [DN11]: This should be aligned with the use rate of gravel which is likely to be depleted before 15 years

Commented [DN12]: This is too low in the event site remediation is required/groundwater remediation. Amend to state how long the bond remains in place following completion of quarrying. Bond also sought in discharge consent conditions

Commented [DN13]: Too narrow. Should extend to groundwater remediation and any remedial works required on neighbouring land impacted by the works

Commented [DN14R13]: Include separate condition on liability, requirement for applicant to obtain insurance in the event of a flood etc. Eg

1. the consent holder shall carry full public liability insurance to the vale of NZ\$5 million or 10% of the total capital value of the project, whichever is the greater amount, for the life of the project, from the commencement of the works and including any rehabilitation and decommissioning period.

2. The value of the full public liability insurance required under 1 shall be reviewed on a two yearly basis and adjusted as required according to an appropriate Construction Cost index. The Consent Holder will notify the Council in writing of the adjusted amount, including providing supporting documentation on the Construction Cost index use, and provide the Council with written evidence that the insurance cover has been adjusted accordingly.

Alternatively, the condition could be expressed more simply along these lines:

Prior to the commencement of any work authorised under this consent, the Consent Holder shall provide written verification that the person responsible for carrying out the works holds public liability insurance to the value of \$NZD 5,000,000.00

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 one month prior to commencement of the consent, the consent holder shall contact Te Rūnanga o Ngāti Rārua and Te Ātiawa o Te Waka-a-Māui Trust to advise them of the commencement date of the earthworks and to provide an opportunity for a cultural induction to be undertaken by relevant representatives who will be working on the site.
11. The Consent Holder shall engage a representative of Te Rūnanga o Ngāti Rārua, Te Ātiawa o Te Waka a Māui Trust, Ngāti Toa Rangatira, Te Rūnanga o Ngāti Kuia and Ngāti Tama ki Te Waipounamu Trust to be present during any stripping of topsoil and subsoil on site. The purpose of the monitor is to identify any archaeological artefacts (e.g., midden, hangi or ovens, garden soils, pit depressions, occupation evidence, burials, taonga, etc) uncovered during the disturbance of cultural layers, and to monitor the observance of tikanga. The Consent Holder shall notify the above iwi at least 10 working days prior to commencing initial stripping of topsoil and subsoil and advise them of the planned commencement date and likely duration of the works. Where the above notification is given, and an Iwi Monitor is unable to be present for any reason, the Consent Holder may commence works regardless. For the avoidance of doubt, this condition requires only a single monitor to be engaged by the Consent Holder to be on site at any given time.
12. In the event of any archaeological artefacts being uncovered, the consent holder shall:
 - (a) cease the works immediately, as required by the Heritage New Zealand Pouhere Taonga Act 2014,
 - (b) consult with the Heritage New Zealand's Central Regional Office (email infocentral@heritage.org.nz, PO Box 2629, Wellington 6140, phone (04) 494 8320, and
 - (c) shall not recommence works in the area of the discovery until the relevant Heritage New Zealand approvals to damage, destroy or modify such sites have been obtained.

Advice Note:

At the time this consent was granted the contact details for Te Rūnanga o Ngāti Rārua:
56 Vickerman Street, Port Nelson, Nelson 7010, Phone (03) 553-1198, Email taiao@ngatirua.iwi.nz

Commented [DN15]: Conditions from here to #47 all appear to be 'prior to commencement of quarrying' conditions. Consider amending the hearing and including relevant sub-headings eg 'culture and heritage' etc

Commented [DN16R15]: Include the requirement to complete at least one full year of groundwater chemistry samples and analyses at the existing monitoring bores (24543, 24544, 24545 and 24546) prior to commencement of clean filling activities

Commented [DN17]: Unclear what this is eg is 'prior to commencement of the consent' prior to any physical works commencing on the site, or prior to extraction?

Commented [DN18]: Suggest this moves down to near condition 119, ADP as it is an operational issue. Include requirement to notify iwi

And, for Te Ātiawa o Te Waka a Māui Trust:

Beach Road, Waikawa Marina, Waikawa, Picton 7220, Phone (03) 573 5170, Email taiao@teatiawatrust.co.nz

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

13. The Consent Holder shall seek interest from Te Ātiawa o Te Waka a Māui and Te Rūnanga o Ngāti Rārua for a cultural audit of the site to be undertaken prior to the commencement of the consented activities. If advised by Te Runanga o Ngāti Rārua and/or Te Atiawa o Te Waka a Maui Trust that mana whenua iwi desire a cultural audit, this will be funded by the Consent Holder.

Advice note

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

14. 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

15. 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 15 is invoked.

Commented [DN19]: This could be located in a separate section as it is about notification of works commencing. It should also be expressed in the active tense eg 'The consent holder shall notify...'

Commented [DN20R19]: Amend to also include if works on site have ceased for a period of one month. Cross check against conditions in the event anything specific needs to happen if the site is inactive for a certain period (eg for stabilisation)

Commented [DN21]: 10 working days is too short given the extent of assessment needed. Valley Rage not confident that council has the capacity/all the relevant expertise to undertake this work in this timeframe. Should be increased to at least 20 working days

Commented [DN22]: Include a requirement to notify council if works are discontinued for more than one month.

Commented [DN23]: Include requirement for review of management plans eg 'The Consent holder shall pay the actual and reasonable costs of an independent technical reviewer appointed by the Council to assess the XX management plan provided under condition Y of this consent to ensure that ZZZ is appropriately addressed'

Commented [DN24]: Include traffic management plan

Commented [DN25]: 10 working days is too short given the extent of assessment needed. Valley Rage not confident that council has the capacity/all the relevant expertise to undertake this work in this timeframe. Should be increased to at least 20 working days .

Incorrect cross reference. Should possibly be to condition 16(1)

- (a) existing and proposed Contour Plans prepared in accordance with **condition 16**;
- (b) a Noise Management Plan (NMP) prepared in accordance with **condition 17**18;
- (c) a Soil Management Plan (SMP) prepared in accordance with **condition 18**;
- (d) a Dust Management and Monitoring Plan (DMMP) prepared in accordance with **condition 19**;
- (e) a Groundwater and Clean Fill Management Plan (GCMP) prepared in accordance with **condition 20**.
- (f) a Landscape Mitigation Plan, a Stage 1 River Terrace Restoration Plan and a Maintenance and Establishment Plan prepared in accordance with **Condition 232**.

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.

16. The following shall apply in respect of **condition 14**:

- (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 14** must be certified by the Council's Team Leader - Monitoring & Enforcement, prior to being implemented.

17. **The Contour Plans** required by **condition 15(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.

Commented [DN26]: Are these 3 separate plans or 1 plan covering 3 components? Should potentially be a landscape mitigation, maintenance and establishment and then a restoration plan. Is restoration only required for Stage 1 so that other stages are backfilled with no further requirements?

Commented [DN27]: If plans provided 20 working days prior, then this timeframe should change to 25 working days

Commented [DN28]: Condition should be amended to say works cannot start unless plans resubmitted and certified

Commented [DN29]: The finished contours should be surveyed upon completion of the consent and certified to comply with proposed finished contour plans

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

18. The Noise Management Plan (NMP) required by **condition** 15(b) shall detail the best practicable option for ensuring the noise standards specified at **conditions 578 and 609** of this consent are complied with. The NMP shall be in general accordance with the draft NMP prepared by Hegley Acoustic Consultants dated March 2023, and shall address, as a minimum:

- (a) Mitigation measures proposed
- (b) Training of staff
- (c) Equipment Maintenance
- (d) Neighbour Liaison
- (e) **Complaints**
- (f) Contingency Plan
- (g) Key Personnel and their Responsibilities

19. The SMP required by **condition** 15(c) shall demonstrate the best practicable option to ensure that the restored soils achieve the standards specified in **condition** 55 and that **condition** 54 is complied with in respect of the control of surface water quality. The SMP shall be in general accordance with the draft SMP prepared by LandSystems Ltd dated 8 March 2023 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) Baseline sampling and analysis.
 - (ii) Ongoing sampling and analysis of reinstated areas.

Commented [DN30]: Does the more specific process for addressing noise complaints prevail over the other conditions in this condition set regarding complaints? How are the two read together?

(iii) Sampling and analysis of the following:

- Soil quality properties of the topsoil.
- Trace elements (total recoverable concentrations) of the topsoil and subsoil.
- Soil profile condition soil profile description.
- Visual Soil Assessment of the topsoil.

(d) Requirements for soil management training for staff and for supervision.

20. The DMMP required by **condition 15(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 48**. The DMMP shall be in general accordance with the draft DMMP prepared by Pattle Delamore Partners dated March 2023 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

21. The GCMP required by **condition 14(e)** shall demonstrate the best practicable option to ensure that discharge of Clean Fill to land is managed to avoid adverse effects on groundwater, to:

- Ensure that excavations do not expose groundwater in excavations (**conditions 99 and 100**) 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 requirements of **Condition 109** or this consent.
- Minimise any change to the physical and chemical properties of groundwater as result of the land use and discharge activities associated with clean fill activities (as defined by the groundwater **chemistry monitoring requirements**).

Commented [DN31]: Typo - should be "of" this consent

Commented [DN32]: Specified in the GCMP

- Ensure that under no circumstances will the land use and discharge activities associated with quarry activities result in groundwater quality exceeding the acceptable values in the Water Services (Drinking Water Standards for New Zealand) Regulations 2022 in downgradient water supply bores.

22. The GCMP shall be in general accordance with the draft GCMP prepared by Pattle Delamore Partners dated March 2023 and shall address, as a minimum:

- Consent Compliance and Key Performance Indicators, to be consistent with these conditions of consent
- Clean fill materials
- Proposed clean fill management system
- Groundwater level monitoring and excavation controls
- Response and mitigation to a spill
- Groundwater quality monitoring
- Water quality complaints
- Reporting requirements

23. The Landscape Mitigation Plan, Stage 1 River Terrace Restoration Plan, and Maintenance and Establishment Plan required by condition 15(f) shall be prepared in general accordance with the plans prepared by Canopy, dated November 2022. These plans shall be prepared to ensure that the proposed landscape mitigation and restoration plantings successfully establish and shall include, as a minimum:

- Species and grade of plantings. The Consent Holder will use eco-sourced native species only, except for the use of poplar and eucalyptus species used in shelter belt planting where required to provide fast-growing visual screening of the site. Where such exotic species are used, they shall be removed from the site within 2 years of the cessation of the quarrying activity.
- Timing of plantings
- Preparation
- Setout and spacings. All plantings shall be set back at least 5m from the toe of stopbanks
- Mulching
- Pest management
- Staking and plant guards. Cardboard plant guards shall be used.

Commented [DN33]: Include the requirement to complete at least one full year of groundwater chemistry samples and analyses at the existing monitoring bores (24543, 24544, 24545 and 24546) prior to commencement of clean filling activities.

Commented [DN34]: Amend to state that the GCMP must demonstrate how conditions x to x will be complied with

- Maintenance
- Replacement plantings

Confirmation shall be obtained from Council's River Engineer that the Landscape Mitigation Plan and Stage 1 River Terrace Restoration Plan are acceptable from a flood flow perspective prior to being certified under **Condition 15**.

24. 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)

25. 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 and dust screen to 131 Peach Island Road. The earth bund must be maintained for the duration of the consented activities.

Site meeting

26. 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

27. 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

28. 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.
29. 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

Commented [DN35]: Should refer to 'prior to the commencement of physical works on the site..' (not just quarrying)

Commented [DN36R35]: VR notes that the soil used from stage 2 and 3 to build the bund will be compacted / lose productive qualities

Commented [DN37R35]: VR query what soil will be used for restoration in stage 2 and 3 if this soil is used for the bund.

Commented [DN38]: This should be up earlier in pre-commencement. Also should be amended along these lines eg "Prior to the commencement of any work authorised under this consent, the Consent Holder shall hold a pre-start meeting that:

- is located on the subject site,
- is scheduled not less than give (5) days before the anticipated commencement of the activity
- includes a representative of Council's monitoring and Compliance Team
- includes the Consent Holder's agent and engineer responsible for 'signing off' completion of works in accordance with this resource consent
- includes Mana Whenua kaitiaki, and
- includes representation from the contractors who will undertake the works.

The following information shall be made available at the pre-start meeting:

- resource consent conditions
- certified management plans, and
- timeframes for key stages of the works authorised under this consent

Commented [DN39]: Should be the bank on the western side. Not just grass trimming but side of bank needs to be removed to ensure sightlines preserved

Commented [DN40]: Traffic management plan should also be required for the project

Motueka River West Bank Road meet the minimum requirements set out in Table 4-14 of the Nelson Tasman Land Development Manual 2020 (NTLDM).

30. 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.
31. 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.
32. The proposed access, beyond the bridge, 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, and a single passing bay shall be provided on the bend in the haul road within the marginal strip. 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.

33. The proposed access shall not connect to the southern end of Peach Island Road, unless requested to by 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** 354.
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 at least 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. There shall be no extraction of gravel from the unformed legal road.
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 earthworks do not encroach into the setback, except for the stopbank crossing (required by condition 41)
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 maintained for the duration of, and removed upon completion of, the consented activities. 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 22.
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

Commented [DN41]: Include a condition requiring that earthworks do not encroach into 20m setback. This condition just requires setback to be marked

Commented [DN42]: The landscape mitigation planting has to be successfully established (80% survival rate) for a period of 6 years prior to quarrying in Stage 1 commencing. This should therefore have a more stringent monitoring regime attached to it, eg annual reporting to Council (should be reflected in the condition as well as the restoration plan). Also, the condition should be extended to require all planting to be maintained for the life of the consent and during that period, any plants that die shall be replaced and weeds and pests controlled and nutrients provided such that an optimum growing environment is provided

Commented [DN43]: Not clear whether the size of the pit increased by 5 or there will be 5 pits

Commented [DN44]: Should sit with post-quarrying restoration / reinstatement conditions (117 etc)

undertaken in accordance with the certified Stage 1 River Terrace Restoration Plan and Maintenance and Establishment Plan required by **Condition 22**.

Baseline soil sampling and analysis

47. Prior to the commencement of quarrying activities on the site, baseline soil sampling and analysis shall be undertaken on the site in accordance with the certified SMP.

Operational conditions

Dust

48. There shall be no noxious, dangerous, objectionable or offensive dust beyond the boundary of the site.
49. Specific dust control measure described in the DMMP shall be implemented. These dust control measures shall reflect best practical option and be undertaken in accordance with the accepted best practice.
50. No 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 high wind is forecast in the period before measures can be implemented to secure the excavated area and any stockpiles from the effects of dust generation. This condition does not prevent the consent holder from backfilling excavations with clean fill if groundwater levels are rising.
51. No quarrying activities shall take place within 100m of orcharding activities on neighbouring properties between the months of January and May (inclusive).
52. No soil stockpiles may be placed within 100 m of orcharding activities on neighbouring properties.
53. Only water will be used for dust suppression. The Consent Holder will not use polymer or chemical stabilization methods, including Waste Oil or Reprocessed Oil, to control dust.
54. 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. The meteorological monitoring station shall be located and established so as to be, to the extent practicable on site, consistent with AS/NZS 3580.1.1:2016.

Surface water quality

55. Land disturbance shall not result in runoff of sedimentation that results, after reasonable mixing, in any of the following effects in the receiving waters:

Commented [DN45]: Should be undertaken by a competent, qualified and independent person/SQEP. Should be reported to the council

Commented [DN46R45]: Recommend technical review process be built in / or peer review by third party. Esp soils, noise, gwater

Commented [DN47]: BPO should be implemented from the start, rather than once complaints received

Commented [DN48]: Conflict: Stage 1 occurring between March-Oct when g/water lowest.

Commented [DN49]: Amend to require holder to establish meteorological station. This is needed so wind measurements can be taken

- (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.

Soil

56. 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 profile condition to be such that there is no 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.

Commented [DN50]: This should sit with the reinstatement conditions. Amend to include verification/certification - monitoring

Commented [DN51]: Condition unworkable and will not ensure like for like replacement. Needs to be removed and stock piled in layers and put back again in that order

Commented [DN52R51]: Refer to soil horizons instead of subsoil and topsoil

Commented [DN53R51]: Iain - conditions imposed by court for Waimea plains reinstatement; staplegrove conditions

Commented [DN54]: Should say "of original soil" not "plant growth medium". I.e soil from Peach Island site.

Commented [DN55]: VR does not support this. The soil must be at least moderately well or well drained

Commented [DN56]: delete

Commented [DN57R56]: "Be at least moderately well or well drained..". Site is currently 'well drained'. Risk that soil will be poorly drained as a result of compaction. Reference to 'inherent soil drainage characteristics' should be original/pre quarrying characteristics

Commented [DN58]: VR supports Daniel Winter's recommendations re monitoring

Noise

57. Vehicles operating on site shall be fitted with broadband, rather than tonal, reversing alarms.

58. Trucks operating on site shall be fitted with plastic deck liners to reduce impact noise as loads are added.

59. 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. Construction noise shall be measured and assessed in accordance with the provisions of NZS6803:1999 Acoustics – Construction noise.

60. The consent holder shall ensure that all other activities on site (other than 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 a noise level of 55 dBA Leq (day) when measured at or within the notional boundary of any dwelling.

Commented [DN59]: Should be 51 dBA (as recommended by Daniel Winter and Susi Solly)

All noise (other than construction noise) shall be measured and assessed in accordance with the provisions of NZS6801:2008 – Acoustics – Measurement of environmental sound and NZS 6802:2008 - Acoustics - Environmental Noise.

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.

61. Noise monitoring shall be undertaken;
- (a) At the commencement of any activity that is expected to approach the noise limits identified in **Conditions 58 and 59**, and;
 - (b) When requested to by Council in response to a complaint.

Hours of work

62. 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

63. 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

64. 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.
65. All vehicles shall observe a speed limit of 15 kilometres per hour when travelling within the site (including on haul roads). It is the consent holder's responsibility to inform drivers of this speed limit.
66. All trucks shall observe a speed limit of 60 kilometres per hour when travelling along Motueka River West Bank Road.
67. 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

Commented [DN60]: Valley Rage additional conditions be included here eg 'Within three (3) months of the commencement of quarrying on the site, and again within six (6) months, noise from the site shall be monitored on at least two (2) separate occasions (totalling 4) by a SQEP and the results provided to the Council's Team Leader XX. The monitoring shall be representative of the varying noise levels emanating from the activities undertaken on the site to determine compliance with the noise levels in Condition XX

Additional noise monitoring shall be conducted at any time upon a reasonable request from the Council's Team Leader XX. Where any non-compliance is recorded, the Council's XX is to be advised within one (1) working day and advised on what remedial steps will be undertaken and when they will be completed. Once the remedial work has been completed, noise shall be monitored and the results reported to the Council's XX within ten (10) working days

Commented [DN61]: Inclusive of those days

Commented [DN62]: This includes all truck movements (whether cleanfill, aggregate, empty) including those transporting fill from non-CJ quarries/other sites. Wording here is unclear - should be 15 trucks in and 15 out. Delete the words "to and from the site" and state total truck movements. Could include this in an advice note. Trucks includes non-CJs trucks

Commented [DN63]: VR wishes there to be electronic monitoring / cameras to record number of trucks entering and leaving site

be set up to provide alerts to the quarry manager if the speed limits specified in the conditions above are exceeded.

Commented [DN64]: And max truck movements

Site management

68. Works shall be undertaken in accordance with the certified NMP, DMMP, GCMP and SMP.
69. No processing, washing, crushing or screening of gravel shall be carried out on the site.
70. 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 (or for other residential and farming activities on the site) shall be removed from site.
71. The consent holder shall undertake pest plant management across the site for the duration of the consent.
72. No backfill or any other material shall be stored or stockpiled on the river side (outside) of the stopbank, 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.
73. Stockpiled materials (excluding soil and any materials 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. 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).
74. No excavations shall be undertaken if heavy rain is forecast in the period before measures can be implemented to secure the excavated area and any stockpiles from the effects of overland flows.
75. If heavy rain is forecast, heavy machinery shall be moved inside the stopbank for overnight storage. This condition is not intended to prevent machinery from backfilling excavations to meet other conditions of this consent or RM220578 under conditions of rising groundwater levels;
76. All practicable measures shall be undertaken to prevent, as a result of the works:
 - (a) erosion of the Motueka River berm; and
 - (b) the discharge of sediment to the Motueka River.

Commented [DN65]: Amend to refer to all 'operations at the site'

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

77. 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.
78. No refuelling or machinery maintenance shall be undertaken within 20 metres of surface water (including exposed groundwater).
79. 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.

80. 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. Spill kits shall be available on site, and site staff shall be trained in procedures for using them.
81. Fuel shall be stored securely or removed from site overnight.

Groundwater Level Monitoring

82. The Consent Holder shall monitor groundwater levels in two dedicated upgradient monitoring bores located at the southern extent of the site (bores 24544 and 24546) and two dedicated downgradient monitoring bores located at the northern extent of the site (bores 24543 and 24545).

All groundwater level measurements:

- (a) Shall be measured to a local common relative level to the nearest 10 mm accuracy (i.e., Nelson vertical datum 1955, NZVD 2016 or similar).
- (b) Shall be recorded via a tamper-proof electronic recording device such as a data logger(s) that shall record groundwater levels taken at least once every 60 minutes.

The groundwater level recording device:

Commented [DN66]: These provisions expressed in a different way in the GCMP.

Commented [DN67]: GCMP is inconsistent. Refers to reporting to TDC Pollution Incident contact number (para 6.0(4))

Commented [DN68]: Include a reference to groundwater level monitoring requirements in GCMP (see para 5.0(2)).

Commented [DN69]: Needs to state that monitoring will be in accordance with the GMP which states that monitoring will occur every three months

- (c) Shall be connected to a telemetry system that collects and stores all of the data continuously with an independent network provider. No data shall be deliberately changed or deleted.
- (d) Shall be accessible to Tasman District Council at all times for inspection and/or data retrieval.

83. The Consent Holder shall use all the groundwater level measurement data to generate groundwater level elevation contour maps for the entire clean fill area that can be accessed by the Clean Fill Operator and excavator operator(s). The groundwater elevation contour maps will be used daily to inform the excavator operator(s) of excavation depths (outlined in **Condition 86**).

Excavation

84. All excavations between 0.3 and 1 m above groundwater level shall occur during stable weather conditions which are defined as:

- (a) Decreasing or stable groundwater level trends, based on the measurements described in **Condition 882**; and
- (b) Decreasing or stable flow within the Motueka River as measured at the TDC Woodmans Bend flow recorder site.

85. Excavations between 0.3 and 1 m above groundwater level shall immediately cease and backfilling shall occur if any of the following occur:

- (a) Tasman District Council issue any flood warnings for the Motueka River catchment.
- (b) Any weather warnings are issued for the Nelson/Tasman region that might be expected to cause groundwater levels at the clean fill to rise.
- (c) When groundwater levels measured in **Condition 882** display an increasing trend.

86. All onsite excavation machinery used for excavation of pit(s) shall be equipped with onboard GPS and elevation systems that will determine the elevation of the digging implement (i.e., excavator bucket). The onboard GPS and elevation systems shall record elevation measurements to a local common relative level (as per **Condition 81(a)**) (i.e., Nelson vertical datum 1955, NZVD 2016 or similar).

87. To assess the occurrence of groundwater beneath the excavation, the Consent Holder shall ensure that the excavator operator(s) undertakes a temporary excavation down to a depth of 1 m below the working level of the excavation on each day when excavation is occurring. This check on the occurrence of groundwater will be used to inform the depths to which excavations can occur on that day, as per Table 1 of the GCMP. Only

Commented [DN70]: ... mix of controls...difficult to monitor.. Need to be read with discharge conditions

Commented [DN71]: Putting fill back in in wet conditions; reduces soil quality; include new condition that if backfilled due to rising g/water levels, they can't excavate that area again (as stated by TIM CJ at hearing)

Commented [DN72]: Inconsistent wording in para 5 of the GCMP which says "temporary test pits that expose groundwater can be undertaken". Should be expressed in GCMP as mandatory requirement

the digging implement of the excavator shall enter the temporary excavation and if groundwater is encountered, the excavation shall be back filled within 30 minutes of the groundwater being observed, to at least 0.3 m above the level at which groundwater was encountered. The backfilling material must be the same material that was excavated to create the temporary excavation.

88. If any of the triggers described in **Condition** 84 occur, then backfilling of the excavation to maintain at least 1 m above groundwater level at the time of the excavation but no more than the elevation of pre-quarry land surface shall occur, taking into account land surface restoration requirements.
89. If any uncontrolled exposure of groundwater occurs in the excavation pit(s) all excavation activities will cease. Placement of clean fill material must occur as soon as practicable to fill in the exposed groundwater.
90. The Consent Holder will notify their consent compliance monitoring officer at Tasman District Council if groundwater enters the excavation pit area.
91. 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.
92. Machinery movement over stockpiled soil is prohibited, other than in the construction of the proposed noise bund on the northern boundary. This condition is applicable to all excavation, backfilling and soil rehabilitation activities.
93. Topsoil and subsoil shall only be excavated in dry soil condition, as defined in the SMP.
94. 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.
95. 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).
96. Sufficient Clean Fill shall always be available on the site for backfilling of any excavation to 1m below original ground level.

Advice Note:

This condition is volunteered to demonstrate that there will, at all times, be sufficient Clean Fill available to enable backfilling of the excavation pit, in the event of rising groundwater levels.

Commented [DN73]: Stockpiles should be max of 1 metre high, to avoid compaction with machinery

Commented [DN74]: Landscape expert for CJs said visual impacts greater if pits greater than 80m x 20m. Include condition to that effect. Confusing re 'tranches'. Need max size of excavation

Commented [DN75R74]: T+ T modelled 20 x 80 pits. Pits to be backfilled and revegetated

Commented [DN76]: Not clear whether this applies to any excavation in any stage. Do the more specific conditions in condition 99 take precedence over condition 95.

Commented [DN77R76]: Needs to be clearer that this applies to Stage 1 if that is the intention. Note different terminology used eg berm land, Stage 1. Stage 1 conditions should sit as a package of conditions as currently not clear which conditions apply to which stage

97. 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.

Commented [DN78]: Seems to be a change in proposal from progressive backfilling originally proposed

98. For any given Stage, excavation works shall commence at the most upgradient (with respect to groundwater flow) end of the Stage, this being generally the southern end of the Stage.

99. Stage 1 is to be quarried in 3 tranches, with a maximum of one third of the Stage 1 area to be actively quarried or being remediated at any time. Subsequent tranches within Stage 1 shall only commence when the previous tranche has been rehabilitated to the point that a vegetated cover is established.

Commented [DN79]: Not clear if this is using 80 x 20m pits.

Commented [DN80]: At odds with condition 95 re generally 80x 20. Valley Range requests more certainty on the tranced approach including size and location of open pit, visual effects (assessed by expert). T+T analysis based on 1600m² to calculate volume of erodible material. If pit size is now increasing, this modelling should be carried out again

100. Stage 1 quarrying and placement of Clean Fill, subsoil and soil is only to take place during the months of October to March, in order to ensure a vegetated cover is established before winter.

Commented [DN81R80]: Applicant to confirm whether there will be more than 1600m² of bare land at a time

101. 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.

Commented [DN82]: Noted that there are orchard close to stage 1 ie within 100m so no quarrying will occur between Jan-May. Conditions could state this more clearly

102. Excavations shall maintain a 10m setback from the southern boundary of the Stage 3 extraction area, shared with the neighbouring title (Lot 3 DP 1650, comprised in RTNL58/75).

Commented [DN83]: At hearing, Wakatu requested 20 m setback

103. 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 the consent holder is to repair/reinstate any damaged land caused by shallow surficial landslips during the gravel extraction pit works.

104. 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-

Commented [DN84]: Amend so independent qualified person; in liaison with council

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.

- 105. Appropriate stormwater controls shall be put in place to avoid concentrated stormwater flows discharging onto temporary cut slopes (within excavation pits).
- 106. No excavations shall occur within 20 m of flowing, open waterways.

Commented [DN85]: Should refer to controls prescribed in any relevant technical reference doc

Backfilling

- 107. 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.
- 108. Commencement of clean filling within a Stage shall occur at locations at the greatest upgradient distance from any water supply bores, as far as can practicably be achieved.
- 109. Backfilling shall be to 1m below the finished levels on site as specified in the Contour Plan required by condition 6.
- 110. Only material that meets the requirements of Table 1 below shall be imported to the site for backfill.

Commented [DN86]: Too long especially for Stage 1.

Commented [DN87]: In addition to backfilling, need reinstallation of topsoil and subsoil.

Commented [DN88]: Requirement for consent holder to provide survey evidence of compliance with this condition is currently down in condition 129. Consider locating that condition higher up or including a cross reference

Table 1: Summary of Clean fill Acceptance Criteria ¹		
Source	Acceptable Material	Unacceptable Material
Materials sourced onsite.	<ul style="list-style-type: none"> • Uncontaminated natural material such as soil, clay, rock and gravel. • Maximum biodegradable materials (i.e., vegetative matter) to be no more than 2% by volume per load of incidental and is limited to incidental organic materials. 	<ul style="list-style-type: none"> • Contaminated soil, clay, rock and gravel. • Materials containing more than 2% by volume per load of biodegradable organic matter, including peat, loams and topsoils with high organic content. • Manufactured materials including concrete, bricks, tiles, etc.
Materials sourced offsite	<ul style="list-style-type: none"> • Uncontaminated natural material such as soil, clay, rock and gravel. Compliance with this definition will be achieved by testing a representative composite sample of imported fill material to demonstrate that total soil contaminant concentrations do not 	<ul style="list-style-type: none"> • Contaminated soil, clay, rock and gravel. • Any material sourced from any site listed on the Tasman District Council Hazardous Activities and Industries List (HAIL) register (as defined by the Ministry for the Environment) or any site where the Clean fill Operator has

Table 1: Summary of Clean fill Acceptance Criteria ¹		
Source	Acceptable Material	Unacceptable Material
	<p>exceed regional soil background concentration limits.</p> <ul style="list-style-type: none"> Maximum biodegradable materials (i.e., vegetative matter) to be no more than 2% by volume per load of incidental and is limited to incidental organic materials. 	<p>a reasonable expectation of HAIL activities occurring, even if it is not listed on TDC's HAIL register and for both these categories of sites, the HAIL activity is known to have been occurring before the date the clean fill material is received.</p> <ul style="list-style-type: none"> Materials containing more than 2% by volume per load of biodegradable organic matter, including peat, loams and topsoils with high organic content. Manufactured materials including concrete, bricks, tiles, etc.
<p>Note: ¹The clean fill acceptance criteria provided in this table shall be applied to all material placed at depths greater than 1 m below ground level. The Soil Management Plan applies to topsoil and sub soil.</p>		

Furthermore, any material, that is understood to comply with the Table 1 definition, but displays visual or olfactory evidence of contamination, shall be rejected.

111. Any backfill material sourced from offsite shall only be brought to the site by the Consent Holder, and shall be pre-screened for compliance with these clean fill requirements before being brought to site in accordance with the Clean Fill Procurement SOP detailed at Appendix A of the draft GCMP. A record shall be kept of all clean fill used as backfill. The record shall be in accordance with the requirements specified in the Clean Fill Procurement SOP. 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.
112. Any part of an excavation pit that has been backfilled with clean fill shall not be re-excavated to enable further quarrying. This condition does not preclude re-excavation of virgin excavated material from the site that has been temporarily backfilled into excavation pits in the event of rising groundwater levels.

Reinstatement and rehabilitation

113. Subsoil and topsoil shall be reinstated, and ongoing management shall be undertaken, in accordance with the methodology specified in the certified SMP. Subsoil and topsoil shall be placed to reinstate the land to the finished levels on site as specified in the Contour Plan required by condition 16. Additional topsoil may need to be added following any settlement of the reinstated land surface.

Commented [DN89]: Record should say what the source is. Source should be identified by GPS location ie identifying site ; records should be provided monthly to council.

Commented [DN90R89]: Need to review sampling methodology - difficult for community to trust sampling approach esp as coming from other quarries, external contractors; controlled sites;

Commented [DN91R89]: Now this is a quarry and cleanfill operation' frquency of sampling/mixing..ask for 5 drill samples of pit to confirm it's cleanfill. Need to prove it's a cleanfill operation. Can also check whether compaction. Previously there was a constraint on where cleanfill came from; but now it can come from anywhere

Commented [DN92]: Saturation of backfill will cause settlement. The final contour should be measured post-settlement, once additional topsoil added.

Commented [DN93R92]: Original topography is deep see para 22 and below of Mike harvey's evidence

114. Topsoil and subsoil shall only be reinstated in dry soil condition, as defined in the SMP.
115. 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.
116. Fertiliser shall be applied following the recommendations of the agronomist to facilitate pasture establishment, increase fertility and promote and maintain even revegetation.
117. Revegetation of reinstated areas shall occur within a month of reinstatement of the soil and be actively managed following revegetation (as detailed in the SMP) to ensure full vegetative cover is achieved and maintained. This revegetation requirement relates also to areas where additional topsoil is added to the land surface to rectify any settlement of the reinstated land surface.
118. 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.

Accidental Discovery Protocol (ADP)

119. In the event of any Māori wāhi tapu/ Māori cultural sites of significance (e.g. midden, hangi or ovens, garden soils, pit depressions, occupation evidence, burials, taonga) or kōiwi (human remains) being uncovered, activities in the vicinity of the discovery shall cease. The consent holder shall notify a representative of Te Rūnanga o Ngāti Rārua and Te Ātiawa o Te Waka a Māui Trust 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.

Advice Note:

At the time this consent was granted the contact details for Te Rūnanga o Ngāti Rārua:

56 Vickerman Street, Port Nelson, Nelson 7010, Phone (03) 553-1198, Email taiao@ngatirarua.iwi.nz

And, for Te Ātiawa o Te Waka a Māui Trust:

Beach Road, Waikawa Marina, Waikawa, Picton 7220, Phone (03) 573 5170, Email taiao@teatiawatrust.co.nz

Advice Note:

In the event that kōiwi (human remains) are uncovered, the New Zealand Police will need to be contacted to assess the site.

Reporting & monitoring

120. Monitoring and reporting of groundwater levels and groundwater quality shall be undertaken in accordance with the approved GCMP, and the conditions of discharge permit RM220578.
121. Monitoring and reporting in relation to dust management be undertaken in accordance with the requirements of the certified DMMP.
122. Monitoring and reporting in relation to soil properties shall be undertaken on the site in accordance with the certified SMP, and results provided to Council.
123. The consent holder shall maintain a complaints 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 53);
 - (e) Any identified cause of the complaint;
 - (f) The action(s) taken to investigate and if appropriate remedy the issue.
124. The consent holder shall inform the Council's Team Leader Monitoring and Enforcement within one working day of any complaint being received.
125. The complaints register shall be forwarded to the Council's Team Leader - Monitoring & Enforcement on request.
126. A contact number of the nominee detailed in the complaint's register shall be provided to all adjoining property owners and occupiers.
127. 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.
128. 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".

Commented [DN94]: Note that the management plans contain at times more specific requirements regarding the handling of complaints eg 8.0(1) of GCMP. This inconsistency should be addressed

Commented [DN95]: Include more detail on process at that point

Commented [DN96]: Is this a tranche within a stage? Or at the end of stage 2 etc

Commented [DN97]: Council should have more of an active monitoring role rather than waiting to be notified by consent holder

Commented [DN98R97]: Include condition that works stop if monitoring results not provided.

Commented [DN99]: Include new condition regarding breach eg Unless otherwise stated within this consent, in the event of any breach of the conditions of this consent, the Consent Holder shall notify the Council within 48 hours of the breach being detected. Within seven (7) days, or a longer period agreed to in writing by the Council of any breach, the Consent Holder shall provide written notification to the Council, which explains the cause of the breach, and if the cause was within the control of the Consent Holder, steps which were taken to remedy the breach and steps which will be taken to prevent any further occurrence of the breach.

Commented [DN100]: There should be a broader requirement for a daily log book of:

- weight of gravel extracted
- loads of cleanfill material carted back to site (source, testing undertaken, SQEP involved)
- hours and days worked
- truck movements

and a subsequent condition that the Consent Holder shall provide a copy of the log book to the Council three (3) months after the grant of this consent and then at intervals not greater than monthly. The Consent Holder shall also make the log book available to Council at any time upon request. Such request shall be met in addition to the requirement to provide the log book monthly.

129. 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 (or similar datum) of the final levels on site, with intervals at 0.2 metres, as required by **Condition 16(a)**.
130. A programme of Cultural Health Indicator (CHI) monitoring shall be undertaken with the cost covered by the Consent Holder. The consent holder shall assist Te Ātiawa o te Waka a Māui Trust, Te Rūnanga o Ngāti Rārua or their nominated representatives to develop a framework for this monitoring and any necessary responses to this monitoring. Monitoring shall occur prior to works, mid-way through the project, on completion of works, and two years post-works to assess remediation and enhancement measures. The framework for monitoring must be completed prior to any earthworks commencing.

Following completion of works

Unformed legal road

131. Following completion of the works, the consent holder shall confirm with the Council's Transportation Manager whether:
- 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
 - retained in its current form.

Commented [DN101]: The requirement to develop this framework should be up near condition 11. The framework needs to be developed and in place prior to works commencing so that monitoring can occur. There also needs to be an operational condition as well.

Commented [DN102]: Valley Rage requests an additional condition be included:

Community Liaison Meeting

On two occasions in the first year in which these consents are exercised and thereafter on one occasion per year throughout the duration of the consents, the Consent Holder shall publicly advertise and convene a public community liaison meeting in Motueka (or other suitable local venue) to present the results of monitoring undertaken over the year, compliance with consent conditions, a summary of quarrying operations proposed for the next year, and any proposed changes to the management or operation of the quarry site. Notice of the meeting shall also be sent to representatives of the following parties:

- Tasman District Council
- Valley Residents Against Gravel Extraction Incorporated

Commented [DN103]: Valley Rage requests an annual work plan monitoring condition along these lines:

Annual Work Plan

1. Before exercising these consents, the Consent Holder shall submit the first Annual Work Plan to the Consent Authority and thereafter submit an Annual Work Plan one-month prior to each anniversary of the date of commencement of the consents.

2. The Annual Work Plan shall include:

- A description of all the mining operations, mitigation measures, rehabilitation, monitoring and reporting carried out in the last 12 months.
- A detailed description of all mining operations, mitigation measures, rehabilitation, monitoring and reporting intended to be carried out in the next 12 months with an approximate timetable of events.
- Long-term projections and intentions for mining operations in relation to the future exercise of these consents.
- An explanation of any intended departure from any previous Annual Work Plan in the next 12 months.
- A description and analysis of any unexpected adverse effect on the environment that has arisen as a result of the exercise of the consents in the last 12 months and the steps taken to rectify it, and the results of those steps.
- Identification of any particular issues that have arisen or are expected to arise as a result of operations, geological conditions or monitoring results.
- A summary of any complaints received and the mitigation measures adopted.

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 XX
- (b) further information provided on and 2 September 2022;
- (c) the evidence received on 15 July 2022 and 4 November 2022

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 Council.

Commented [DN1]: Workability issue. Referencing the evidence received could create confusion and potential conflict; lack of transparency re: enforcement. Also the application documents received on 15 June have been updated / superseded by further information so the condition should be worded to reflect that. Greater clarity needed on the authorised works to ensure transparency and enforceability

Commented [DN2]: How do the management plans fit in? What if there is a conflict between these plans and the consent conditions?

Commented [DN3]: Not clear what this is. All of 1(a) - (d)? Should include the management plans

Lapse and expiry

3. 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.

4. This consent shall expire 17 years after the date it commences.

5. The discharge of clean fill to land shall cease no later than 15 years after the date this consent commences.

Commented [DN4]: Valley Rage agrees that additional time is required to ensure monitoring activities are carried out

Commented [DN5]: This should be aligned with the use rate of gravel which is likely to be depleted before 15 years; see Valley Rage comments on land use lapse and expiry consent condition

Prior to the work

6. The Council's Team Leader - Monitoring & Enforcement shall be notified in writing:
- (a) A minimum of 10 working days prior to commencement of discharge to land; 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).

Commented [DN6]: Valley Rage seeks inclusion of a condition requiring a bond (for remediation/clean up of the aquifer in the event of contamination/costs of providing alternative water supply)

Commented [DN7R6]: Valley Rage seeks separate condition on liability, requirement for applicant to obtain insurance. See wording suggested in land use consent conditions

Commented [DN8]: Suggest rewording to active tense eg 'The consent holder shall notify...'

Commented [DN9]:
Should be increased to at least 20 working days

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.

Site meeting

7. 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.

Submission of plans

8. The consent holder shall, at least 10 working days prior to the commencement of works, prepare and submit a Groundwater and Clean Fill Management Plan (GCMP) prepared in accordance with condition 10 to the Council's Team Leader - Monitoring & Enforcement for certification. No works shall be undertaken until this management plan has been certified by the Council's Team Leader - Monitoring & Enforcement, unless condition 9 is invoked.
9. The following shall apply in respect of condition 8:
 - (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.
10. The GCMP required by condition 8 shall demonstrate the best practicable option to ensure that discharge of clean fill to land is managed to avoid adverse effects on groundwater, to:
 - Ensure that excavations do not expose groundwater in excavations 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 Condition 14 below).
 - Minimise any change to the physical and chemical properties of groundwater as result of the land use and discharge activities associated with clean fill activities (as defined by the groundwater chemistry monitoring requirements).
 - Ensure that under no circumstances will the land use and discharge activities associated with quarry activities result in groundwater quality exceeding the

Commented [DN10]: Include requirement for review of management plans eg 'The Consent holder shall pay the actual and reasonable costs of an independent technical reviewer appointed by the Council to assess the XX management plan provided under condition Y of this consent to ensure that ZZZ is appropriately addressed'

Commented [DN11]: 10 working days is too short given the extent of assessment needed. Valley Rage not confident that council has the capacity/all the relevant expertise to undertake this work in this timeframe. Should be increased to at least 20 working days .

Commented [DN12]: If plans provided 20 working days prior, then this timeframe should change to 25 working day

Commented [DN13]: Condition should be amended to say works cannot start unless plans resubmitted and certified

acceptable values in the Water Services (Drinking Water Standards for New Zealand) Regulations 2022 in downgradient water supply bores.

11. The GCMP shall be in general accordance with the draft GCMP prepared by Pattle Delamore Partners dated March 2023 and shall address, as a minimum:
- (a) Consent Compliance and Key Performance Indicators, to be consistent with these conditions of consent
 - (b) Clean fill materials
 - (c) Proposed clean fill management system
 - (d) Groundwater level monitoring and excavation controls
 - (e) Response and mitigation to a spill
 - (f) Groundwater quality monitoring
 - (g) Water quality complaints
 - (h) Reporting requirements

Commented [DN14]: Amend to state that the GCMP must demonstrate how conditions x to x will be complied with

Commented [DN15]: Include the requirement to complete at least one full year of groundwater chemistry samples and analyses at the existing monitoring bores (24543, 24544, 24545 and 24546) prior to commencement of clean filling activities.

Operational conditions

Backfilling controls

- 12. Backfilling on site with clean fill shall be undertaken in accordance with the certified GCMP.
- 13. Commencement of clean filling within a Stage shall occur at locations at the greatest upgradient distance from any water supply bores, as far as can practicably be achieved.
- 14. Only material that meets the requirements of Table 1 below shall be imported to the site for backfill.

Source	Acceptable Material	Unacceptable Material
Materials sourced onsite.	<ul style="list-style-type: none"> • Uncontaminated natural material such as soil, clay, rock and gravel. • Maximum biodegradable materials (i.e., vegetative matter) to be no more than 2% by volume per load of incidental and is limited to incidental organic materials. 	<ul style="list-style-type: none"> • Contaminated soil, clay, rock and gravel. • Materials containing more than 2% by volume per load of biodegradable organic matter, including peat, loams and topsoils with high organic content. • Manufactured materials including concrete, bricks, tiles, etc.
Materials sourced offsite	<ul style="list-style-type: none"> • Uncontaminated natural material such as soil, clay, rock and gravel. Compliance with this definition will 	<ul style="list-style-type: none"> • Contaminated soil, clay, rock and gravel.

Source	Acceptable Material	Unacceptable Material
	<p>be achieved by testing a representative composite sample of imported fill material to demonstrate that total soil contaminant concentrations do not exceed regional soil background concentration limits.</p> <ul style="list-style-type: none"> Maximum biodegradable materials (i.e., vegetative matter) to be no more than 2% by volume per load of incidental and is limited to incidental organic materials. 	<ul style="list-style-type: none"> Any material sourced from any site listed on the Tasman District Council Hazardous Activities and Industries List (HAIL) register (as defined by the Ministry for the Environment) or any site where the Clean fill Operator has a reasonable expectation of HAIL activities occurring, even if it is not listed on TDC's HAIL register and for both these categories of sites, the HAIL activity is known to have been occurring before the date the clean fill material is received. Materials containing more than 2% by volume per load of biodegradable organic matter, including peat, loams and topsoils with high organic content. Manufactured materials including concrete, bricks, tiles, etc.
<p>Note: ¹The clean fill acceptance criteria provided in this table shall be applied to all material placed at depths greater than 1 m below ground level. The Soil Management Plan applies to topsoil and sub soil.</p>		

Commented [DN16]: Ensure that testing satisfies the requirements in the Waste MINZ Guidelines (eg a sample per 500m3 and testing is carried out by an independent SQEP).

Commented [DN17R16]: Ensure that the conditions/SOP require a SQEP to be independent and meet the requirements in the MfE Users' Guide

Commented [DN18]: Amend along these lines "...and for both these categories of sites, the HAIL activity is known, or could be reasonably expected to be known to have been occurring.."

Furthermore, any material, that is understood to comply with the Table 1 definition, but displays visual or olfactory evidence of contamination, shall be rejected.

15. Any backfill material sourced from offsite shall only be brought to the site by the Consent Holder, and shall be pre-screened for compliance with these clean fill requirements before being brought to site in accordance with the Clean Fill Procurement SOP detailed at Appendix A of the draft GCMP. A record shall be kept of all clean fill used as backfill. The record shall be in accordance with the requirements specified in the Clean Fill Procurement SOP. 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.

Commented [DN19]: Amend to ensure that the Consent Holder is responsible for testing/acceptance of clean fill brought to site by contractors and third parties. In other words, the responsibility for ensuring the waste acceptance criteria are met, lies with the Consent Holder.

Groundwater quality monitoring

16. The following monitoring of groundwater will be undertaken:
- (a) Collection of groundwater samples from at least one dedicated monitoring bore located upgradient at the southern extent of the quarry areas (i.e. Bore 2 (24544 or Bore 4 (24546), representative of background water quality) and at least two dedicated bores located downgradient of the quarry site near the northern extent of the quarry (i.e. Bore 1 (24543) and Bore 3(24545)) as shown in Figure 1 (attached to these conditions).

- (b) Groundwater samples from the dedicated monitoring bores listed in **Condition 16((a))** will be collected at three monthly intervals. At least four samples (one year of samples) will be collected prior to the commencement of clean filling activities and sampling will continue until two years after clean filling activities cease.
 - (c) Collection of groundwater samples from a dedicated monitoring bore located at or about coordinates 1595980 mE / 5447316 mN (NZTM2000) (proposed additional monitoring bore – Bore 5 as shown in Figure 1) will be undertaken at monthly intervals. At least two samples will be collected prior to the commencement of clean filling activities and sampling will continue until two years after clean filling activities cease.
17. The five dedicated monitoring bores referred to in **Condition 16** shall allow groundwater samples to be collected across the full the range of groundwater level fluctuations.
 18. The five dedicated monitoring bores referred to in **Condition 16** shall be made accessible to the Tasman District Council at all times for the purpose of groundwater sampling.
 19. Groundwater samples shall also be collected annually from all water supply bores located within 500 m downgradient of the clean fill, subject to approval of the bore owner(s) and the landowner(s). This sampling will continue until two years after clean filling activities cease.

Advice note

This condition has been volunteered by the Applicant.

20. Prior to the collection of the initial groundwater samples from the water supply bore(s) in accordance with **Condition 19**, the Consent Holder shall undertake a bore condition survey to identify any existing potential sources of contamination related to the condition of the bore head or its proximity to localised sources of contamination.
21. The Consent Holder shall ensure that all groundwater samples shall be taken by a suitably qualified and experienced practitioner using methods described in the NEMS document "Water Quality – Part 1 of 4: Sampling, Measuring, Processing and Archiving of discrete Groundwater Quality Data" (2019). All samples for dissolved metal analysis must be filtered through a 0.45-micron filter onsite before being placed into an acid preserved sampling bottle.

All samples must analysed for the contaminants listed in Table 2 by an International Accreditation New Zealand (IANZ) laboratory.

Table 2: Water quality parameters and trigger concentrations		
Parameter	Trigger concentration	Note
Depth to water level	-	Measured prior to purging (where possible)
pH	<6.5 or >8.5	field and laboratory measurement – trigger value taken from Miners Road Consent example (CRC204349), recognising shallow groundwater naturally has a low pH.
Electrical Conductivity	-	field and laboratory measurement
Water temperature	-	field measurement
Calcium	-	
Magnesium	-	
Hardness	200 g/m ³	GV (Calcium + magnesium)
Alkalinity	100 g/m ³	As CaCO ₃ – trigger value taken from Miners Road Consent example (CRC204349).
<i>E. coli</i>	1 MPN/100ml	MAV
Ammoniacal-N	1.2 g/m ³	GV
Nitrate-N	5.65 g/m ³ (annual average) 11.3 g/m ³ (maximum)	5.65 g/m ³ - Half MAV
Dissolved Boron	1.2 g/m ³	Half MAV
Dissolved Aluminium	0.1 g/m ³	GV
Dissolved Arsenic	0.005 g/m ³	Half MAV
Dissolved Cadmium	0.002 g/m ³	Half MAV
Dissolved Chromium	0.025 g/m ³	Half MAV
Dissolved Copper	1 g/m ³	Half MAV
Dissolved Lead	0.005 g/m ³	Half MAV
Dissolved Nickel	0.04 g/m ³	Half MAV
Dissolved Manganese	0.04 g/m ³	GV
Dissolved Iron	0.3 g/m ³	GV
Sodium	200 g/m ³	GV
Sulphate	250 g/m ³	GV
Chloride	125 g/m ³	Half GV
VOC compounds	Any detectable presence	
Total Petroleum Hydrocarbons	Any detection >0.1 g/m ³	

Table 2: Water quality parameters and trigger concentrations

Parameter	Trigger concentration	Note
<small>NOTE: Trigger values include the guideline values for aesthetic determinands from the Aesthetic Values for Drinking Water Notice (2022) or 50% of maximum acceptable values in the Water Services (Drinking Water Standards for New Zealand) Regulations 2022 which take effect on 14 November 2022.</small>		

22. The Consent Holder shall provide the water quality monitoring results to the Tasman District Council: Attention – Monitoring and Compliance within one month of them being received.

Assessment of Groundwater Quality Samples

23. An exceedance of the trigger concentrations in 2 will be deemed to have occurred if:
- (a) The concentration of a contaminant in a downgradient bore exceeds the relevant trigger concentration in 2 and the year-to-year median concentration of the same parameter in the upgradient bore is below the respective trigger concentration in 2; or
 - (b) The year-to-year median concentration of a contaminant in the downgradient bore exceeds the year-to-year median concentration in the upgradient bore for the same parameter by more than 20%, and the year-to-year median concentration in the upgradient bore for the same parameter exceeds the trigger concentrations in Table 2.

See Figure 2 (attached to these conditions) for an example diagram of operation of the exceedance criteria.

24. The groundwater quality data from all the sampled bores shall be assessed annually for trends using NIWA TimeTrends or equivalent. A trend in water quality for an individual parameter in a downgradient bore will be deemed to be “significant” if the p-value of the trend is less than 0.05 and the data trend for that parameter is toward the relevant trigger concentration in Table 2.

Response to Issues Arising from Groundwater Quality Monitoring

25. If the trend analysis of the groundwater quality data undertaken in accordance with Condition 24 identifies a “significant” trend in the direction of a breach of trigger level, the Consent Holder shall:
- (a) Notify Tasman District Council – Monitoring and Compliance.
 - (b) Commission an investigation and, if appropriate, recommendations for remedial action from a suitably qualified and experienced person (SQEP) into the potential cause(s) of the trend in the water quality data, which may include:
 - i. Review of documentation for clean fill accepted at the clean fill site.
 - ii. Additional testing of clean fill placed within an excavation.

Commented [DN20]: Valley Rage would prefer this to be 10% (or less); defers to Dr Rutter’s expert view on the variation / percentage that is required to manage effects

Commented [DN21]: Is this the flowchart referred to in Mr Nicol’s Third Supplementary Evidence Statement?

Commented [DN22]: Valley Rage would want to see activities cease at this point; steps put in place to secure alternative water source

- iii. Undertaking additional groundwater monitoring beyond the routine sampling.
 - iv. Cessation of activities that may have caused the exceedance.
 - v. Removal of the contaminant source(s).
 - vi. Stabilisation or capping of the contaminant source(s).
 - vii. Provide recommendations for further actions and monitoring to be undertaken.
26. Any material removed in accordance with **Condition 25(b)v** shall be disposed of at a facility authorised to receive such material, and the Consent Holder shall provide the Council, Attention: Regional Leader – Monitoring and Compliance, with written confirmation of such disposal within 10 working days.
27. If there is an exceedance as determined by **Condition 23** in a downgradient dedicated monitoring bore listed in **Condition 16**, the Consent Holder shall as soon as practicable and within 72 hours of receiving that result:
- (a) Obtain a second sample of groundwater from the bore(s) in which the exceedance was identified in accordance with **Condition 16**.
 - (b) Obtain a sample of groundwater from the upgradient bore specified in **Condition 16**.
 - (c) Analyse these samples in accordance with **Condition 21**.
28. If the results of analysis of the second groundwater sample(s) carried out in accordance with **Condition 27** show that none of the concentrations of contaminants analysed exceed the criteria in **23 23 Error! Reference source not found.**, the consent holder shall continue to sample groundwater in accordance with **Condition 16**.
29. If the results of analysis of the second groundwater samples carried out in accordance with **Condition 27** show a continued exceedance as determined by **Condition 23**, the Consent Holder shall:
- (a) Notify the Tasman District Council – Monitoring and Compliance within 72 hours of receiving the results of the sampling in **Condition 27**.
 - (b) Notify the closest downgradient water supply bore owner/landowner and collect groundwater samples from the water supply bores located within 500 m downgradient of the clean fill (subject to approval of the bore owner and the landowner), within 72 hours of receiving the results of the sampling in **Condition 27**.
 - (c) Undertake an investigation to determine the source of the change in concentrations.
 - (d) Undertake additional monitoring beyond the routine sampling based on the outcome of the investigation in **Condition 29(c)**.

30. If the monitoring undertaken in accordance with **Condition 199** or **Condition 29**(**29Error! Reference source not found.**) shows that the drinking water quality in the downgradient water supply bore(s) exceeds the trigger concentrations in Table 2, then additional samples shall be collected from that water supply bore within 72 hours of receiving the initial results and the user(s) of that bore notified of the results. If additional samples continue to show an exceedance of the trigger concentrations in Table 2, then the Consent Holder shall provide an alternative drinking water supply to a similar standard as existed prior to commencement of this consent.

Commented [DN23]: Valley Rage would want to see activities cease at this point; steps put in place to secure alternative water source

Duration of water quality monitoring

31. Water quality monitoring detailed in the conditions of this consent shall continue for no less than two years following completion of quarrying, backfilling and reinstatement and rehabilitation activities on the site. All water quality assessment and responses to issues identified, as detailed in these conditions, shall continue to apply over this period.