

Technical Specialist Memo – Contaminated land

To: Emma Chandler – Lead Planner & Warwick Pascoe - PPL

From: Simon Cocker. Registered Landscape Architect

Qualifications & Relevant Experience:

I hold the qualification(s) of: M.Phil Landscape Design from the University of Newcastle Upon Tyne, and have 35 years of experience in landscape architecture.
I am a Registered member of Tuia Pito Ora / New Zealand Institute of Landscape Architects. I have prepared expert evidence and technical assessments for resource consent applications, plan changes, and notices of requirement for designation and have appeared as an expert witness before consent authorities and the Environment Court on multiple occasions.

Preparation in Accordance with the Code of Conduct:

I confirm that I have read the Environment Court Practice Note 2023 – Code of Conduct for Expert Witnesses, and have complied with it in the preparation of this memorandum. I also agree to follow the Code when participating in any subsequent processes, such as expert conferencing, directed by the Panel. I confirm that the opinions I have expressed are within my area of expertise and are my own, except where I have stated that I am relying on the work or evidence of others, which I have specified.

Date: 20 July 2026

1.0 APPLICATION DESCRIPTION

Application and property details

Fast-Track project name: Hunua Quarry

Fast-Track application number: FTAA-2603-1185 (Council Reference BUN60464053)

Site address: 489 Hunua Road, Hunua

2.0 Executive Summary / Principal Issues

The Landscape Effects Assessment acknowledges that the proposal will result in physical landscape effects which are assessed as high, and landscape character effects, assessed as moderate-high (adverse) during operation before mitigation. These will (respectively) reduce to moderate to moderate high (adverse), and moderate, at completion after mitigation. My understanding of the time scale in relation to the reduction in the level of adverse effect is 10 years after completion. Potentially, the land use consent will run for 80 years, and mitigation measures will only become effective in the latter stages (50 years +) of the activity. The elevated level of effect therefore will be present for some 40 - 50 years.

The same applies for:

1. localised effects on the Outstanding Natural Landscape (ONL) (moderate (adverse) during operation before mitigation, reducing to low-moderate (adverse) at completion after mitigation),
2. natural character effects (high adverse effects on natural character within the affected reach due to the loss of existing 'high to very high' natural character reducing over time to moderate (adverse) at the tributary scale), and
3. visual effects (which are predicted to be - for private properties located to the south and west of the Site, between neutral to moderate-high (adverse) during operation before mitigation, progressively reducing - for the worst affected - to Moderate as rehabilitation and mitigation planting matures on the upper quarry benches).

The longer term predicted levels of effect levels rely on the successful and continued implementation of a suite of mitigation / management tools which are set out in section 7 of the BML landscape effects assessment. These include the Mangapū Stream Tributary realignment, Native Revegetation and Landscape Rehabilitation and off-site mitigation planting. This latter mitigation tool will form a voluntary condition which has been developed to address moderate-high (adverse) visual effects on identified private properties within Viewing Groups (S1, S2, W1 and W2).

In particular, the assessment stresses that the extent to which the natural character values are ultimately restored depends heavily on the success of the realignment design and management, including channel geometry, stream function, hydrological performance, and the long-term establishment of indigenous vegetation (section 6.2).

Noting the importance of the long term focus required to ensure that the mitigation will be, and will continue to be, successful, I am of the opinion that the conclusions of the landscape effects assessment are reliable, and the level of effects predicted are accurate.

The magnitude of adverse effect is as may be expected for a project of this scale, and it is noted that the level of effect on a local scale for landscape, and natural character will remain (using RMA terminology) more than minor after mitigation.

The LEA opines however, that when considering the level of landscape, and natural character effect on a wider landscape / catchment scale, the final level of effect is determined to be (using RMA terminology) minor or less than minor after mitigation.

Visual effects are expected to remain (using RMA terminology) more than minor after mitigation for a limited number of individuals (refer to Table 13 in the landscape effects assessment). These properties are targeted for

the off-site mitigation planting and with this mitigation planting it is stated that the level of effect will be Low-moderate adverse.

I have concerns regarding the Mangapū Tributary Realignment. My concerns are based on the fact that this is a complex project and reinstating the natural systems of the proposed realigned gully will be very challenging. BML recognise, and have signaled this in the Landscape effects assessment and I quoted from that document where they state that (mitigation) success 'depends heavily on the success of the realignment design and management, including channel geometry, stream function, hydrological performance, and the long-term establishment of indigenous vegetation (section 6.2)'. Success will require a relatively high input (and - I assume - cost) over a prolonged period and will require close ongoing monitoring. Section 6 of the technical document confirms this and states:

"As part of operating and maintaining the realigned stream channel, an operational maintenance plan will be prepared to align with the Stream Realignment Management Plan. The plan will detail key operational requirements such as routine inspections to inform maintenance needs along with flood response and associated repairs in order to maintain the design intent and mitigate adverse effects"

Preparation of this technical report has included input from a number of specialists. My review addresses matters which fall into the scope of my expertise and I anticipate that review from other specialists will be undertaken.

3.0 Documents Reviewed

Part B: *Assessment of Environmental Effects and Application for Resource Consent – Hunua Quarry Development* (AEE) prepared by Boffa Miskell, dated 30 March 2026, and the following appendices specific to my area of expertise:

- Appendix A6.6 Indicative Construction Sequence and Programme_20260330
- Appendix B12.2b Location Plan Boffa Miskell Plans_20260330
- Appendix B12.3aa Plans of the Proposal_20260330
- Appendix B12.3ab Plans of the Proposal_20260330
- Appendix B12.3ac Plans of the Proposal_20260330
- Appendix B12.3ad Plans of the Proposal_20260330
- Appendix B12.3ae Plans of the Proposal_20260330
- Appendix B12.4.10a - Landscape Effects Assessment
- Appendix B12.4.10b - Landscape Effects Assessment Appendix 3 Visibility Visual Effects Table
- Appendix B12.4.10c & B12.4.10d - Landscape Effects Assessment Appendix 4 Graphic Supplement
- Appendix B12.8.9 - Landscape Rehabilitation Plan
- Memorandum dated 16 June 2026 prepared by BML (and supporting graphic supplement) addressing Landscape and Visual Effects of the Hunua Quarry Development as experienced from Pukekōi wiriki pa and Red Hill Scenic Reserve¹

¹ Assessment from this viewpoint was sought in the Cultural Values Assessment Addendum prepared by Te Ākitai Waiohū

Other:

- Appendix A6.7 Iwi Engagement Report_20260330
- Appendix B12.4.2 Archaeological Assessment Report_20260330
- Appendix B12.4.5a Ecological Effects Assessment_20260330
- Appendix B12.4.5b Ecological Effects Assessment_20260330
- Appendix B12.4.6a Mangapu Tributary Realignment - Preliminary Design and Effects Technical Report_20260330
- Appendix B12.4.6b Mangapu Tributary Realignment - Preliminary Design and Effects Technical Report_20260330
- Appendix B12.8.10 - Ecological Management Plan
- Appendix B12.4.13 - Stream Crossing Report
- Appendix B12.8.7 - Stream Realignment Management Plan

4.0 Additional Reasons for Consent Not included in AEE

There are no additional reasons for consent not included in the AEE

5.0 Specialist Assessment

Introduction

The AEE has detailed that the Fast-track resource consent application for the expansion of the Hunua Quarry Symonds Hill pit is to involve the expansion of the pit by approximately 50 hectares to a full pit extent of 100 hectares, to be progressed in eight indicative stages over 50–80 years.

Two site visits were undertaken, the first on 14 January 2026 to the site itself, and the second on 28 January 2026 when the site was observed from the wider landscape.

My review has been based on guidance provided in Te Tangi a te Manu / Aotearoa NZ Landscape Guidelines²

A peer reviewer will typically review the assessment report, make a site visit, and write a short report confirming (or not) that the assessment:

- *follows a sound methodology and method for the purpose*
- *considers the relevant statutory provisions and any relevant 'other matters'*
- *accurately describes, interprets, and evaluates the relevant landscape and natural character and values*
- *analyses the effects on landscape and natural character values in a balanced and reasoned way*
- *reaches credible findings supported by reasons*
- *makes appropriate recommendations with respect to findings*

² *Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines*, Tuia Pito Ora New Zealand Institute of Landscape Architects, July 2022

Methodology and method

The Landscape Effects Assessment (LEA) explains, in section 2.0, that it was undertaken with reference to the Te Tangi A Te Manu, and Quality Planning Landscape Guidance Note. Further it states that the assessment was undertaken from a Te Ao Pakeha world view using the terminology of Te Tangi a te Manu.

The LEA includes a ZTV analysis and visual simulations. The methodology for preparing the former is explained in section 2.1.5 and the LEA states that the visual simulations were prepared in accordance with NZILA Best Practice Guideline for Visual Simulations

The assessment includes a methodology and outline of the effects ratings used in Appendix 1.

I am of the opinion that an appropriate methodology has been adopted and executed in the preparation of the LEA.

Statutory provisions and any relevant 'other matters'

The relevant statutory matters are identified and discussed in section 5.0 of the LEA. It references the FTAA, the key matters contained in the RMA (1991). With regard to the Auckland Unitary Plan, it explains that a majority of the Site is located within the Special Purpose - Quarry Zone with a small portion extending into the Mixed Rural Zone to the east and south. Some 6ha of the quarry development area extends into the eastern edge of the overall 394ha Ponga Road ONL (ID 60) whilst the quarry development area is also subject to a Significant Ecological Area overlay (SEA_T_5323).

In section 6.5, the LEA states that, from a landscape perspective, the quarry development area is generally consistent with the intent of H19. It explains that the proposal will occur within, and remains legible as part of, a working rural landscape. It opines that the amenity effects will be addressed through containment, staging and mitigation.

In relation to D10, the quarry development will result in localised adverse effects on ONL values, but that these effects will be spatially contained, will occur adjacent to an existing quarry modification, and will be mitigated through a rehabilitation and revegetation programme

It concludes that the Project is not considered inappropriate at the broader landscape scale because the adverse effects have been adequately managed. Provided that mitigation and progressive rehabilitation are implemented as proposed, these measures will continue to maintain the visual coherence and physical integrity of the ONL.

Noting my comments with regard to reliance on mitigation measures (detailed below), I concur with the conclusions above.

Description and interpretation of landscape and natural character and values

The existing landscape is described in section 4.0 of the LEA, with the broader landscape context characterised in section 4.1 and the local context in sections 4.2 and 4.3. I am of the opinion that these sections provide a detailed understanding of the existing landscape and receiving environment.

Landscape values are evaluated in section 4.5. The wider values of the ONL (ID60) are summarised in Table 3, and the site scale values of the ONL helpfully summarised in Table 4. In this section, the LEA also references the Te Ao Māori perspective as provided by Ngāti Tamaoho (Appendix A6.7 Iwi Engagement Report).

Natural character values are evaluated in section 4.6., and this section references the BML ecological report (Appendix B12.4.5a and b - Ecological Effects Assessment).

Based on my review which is undertaken from the perspective of my area of expertise, I am of the opinion that the information provided in these sections is detailed and thorough.

The visual catchment of the quarry development area is described in section 4.7. Based on a site visit with the applicant's landscape architects, and the information provided in the LEA (including the ZTV analysis), I am of the opinion that the identified catchment is accurate.

Effects on landscape and natural character values

The LEA explains that the effects considered include those that can occur in relation to changes to landscape attributes and values, character and visual amenity and confirms that the effects described are considered with the proposed mitigation measures implemented.

It states that in relation to this Project the degree to which landscape and visual effects are generated by a development depends on a number of factors, which include:

- The degree to which the Project contrasts, or is consistent, with the qualities of the surrounding landscape.
- The proportion of the Project that is visible, determined by the observer's position relative to the objects viewed.
- The distance and foreground context within which the Project is viewed.
- The area or extent of visual catchment from which the Project is visible.
- The number of viewers, their location and situation (static or moving) in relation to the view.
- The backdrop and context within which the Project is viewed.
- The predictable and likely known future character of the locality.
- The anticipated outcomes sought in the statutory provisions, including zoning.
- The quality of the resultant landscape, its aesthetic values and contribution to the wider landscape character to the area

I consider this approach and understanding to be appropriate.

In section 6.0, the LEA explains that the particular effects considered relate to the following:

- Landscape effects (inclusive of landscape character and values, including on the ONL);
- Natural Character effects;
- Visual amenity effects from public and private locations (including residences); and
- Cumulative effects

Physical landscape effects.

The LEA determines that the physical landscape effects at the local level are considered to be **high** (adverse)³ during operation (before mitigation) and reduce to **moderate to moderate-high** (adverse) at completion after mitigation (after 10 years). The rationale provided for this is credible, noting the removal of ridges and hillslopes within the ONL, realignment of the Mangapū Stream tributary and the loss of 44.46ha of indigenous vegetation (most of which is in areas of SEAs), including 6ha located within the ONL.

At the broader scale of the hill country landscape, the physical changes occur in the context of the established and long standing Hunua Quarry operation, and the LEA assesses the change in the physical landscape effects as being **low** (adverse), decreasing to **very low** (adverse) at completion (after mitigation). I concur with this determination.

The LEA describes how, across the offset sites, opportunities for native revegetation have been identified, and that once established, and when combined with the physical effects of the Project, these plantings will result in **low-moderate** (adverse) residual physical effects. I concur with this determination however, I note that my understanding of the time scale in relation to the reduction in the level of adverse effect is 10 years after completion. Potentially, the land use consent will run for 80 years, and mitigation measures will only become effective in the latter stages (50 years +) of the activity. The elevated level of effect therefore will be present for some 40 - 50 years.

Landscape character effects.

In section 6.1.2, the LEA opines that the landscape character effects at the Site and immediate surrounds level will be **moderate-high** (adverse) during operation (before mitigation), reducing to **moderate** (adverse) at completion after mitigation has become established.

At the broader landscape character scale of the Ararimu Greywacke Dominant Hill Country, it opines that the level of effect will be **low** (adverse) during operation (before mitigation), reducing to **very low** (adverse) at completion after mitigation has become established. This is due to the moderation offered by distance as well as intervening topography and vegetation.

The memorandum dated 16 June 2026 assesses the landscape effects of the Project as experienced from Pukekōiwiriki pā to be **low-moderate** (adverse), reducing to **low** (adverse) over time and as the rehabilitation planting establishes to re-green the quarried cut faces outside of the quarry zone.

I concur with the above determinations.

Effects on the landscape values of the ONL.

In section 6.1.3, the LEA determines that the adverse effects on the landscape values of the Site ONL are assessed as **moderate** (adverse) during operation (before mitigation) and **low-moderate** (adverse) at completion (after mitigation).

³ I note that the 'significance of effects' is explained in Appendix 2 of the LEA, with a 'high' and 'very high' level of effect being identified as 'significant'

It states that at the broader hill country landscape scale, effects on the landscape values of the ONL will be more contained, as the elevated forested ridges, upper slopes, and wider natural landform sequence remain largely unaffected. As such, it states that the adverse effects on landscape values of the broader ONL are considered to be **low-moderate** (adverse) during operation (before mitigation), reducing to **low** (adverse) at completion (after mitigation).

Turning to RMA s6(b), *the protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development*, the LEA concludes that the Project will result in **moderate** (adverse) effects on the Site ONL.

Table 7, in section 6.1.4 usefully summarizes the anticipated levels of effect in tabular form. Unlike Table 8 which summarizes the natural character effect, Table 7 does not provide indicative time scales for the reduction in the level of adverse effect. Inclusion of this information in Table 8 would be helpful to understand the duration of the elevated levels of adverse effects. Similarly, this information would also be of assistance in the tables which summarize the visual effects in section 6.3.1 and in Appendix 3 of the LEA.

I am of the opinion that the rationale provided for the above determinations is credible and I concur with these conclusions.

Natural character effects.

In section 6.2 of the LEA, the immediate effects of the lower reach of the Mangapū Stream tributary realignment are assessed as **high** (significant) adverse at the tributary scale. It states that the level of adverse effect will gradually reduce to moderate-high (adverse) over some 10-20 years as natural character is restored and finally resulting in long-term **moderate** (adverse effects), after some 20-50 years. Notably, the commentary states that “...the extent to which the natural character values are ultimately restored depends heavily on the success of the realignment design and management, including channel geometry, stream function, hydrological performance, and the long-term establishment of indigenous vegetation.”

The LEA opines that once rehabilitated, the level of natural character of the Mangapū Stream system is considered to remain **moderate-high** overall and result in **very low** (adverse) level of effects.

As described above, with regard to RMA s6(a), *the preservation of the natural character of lakes and rivers and their margins, and their protection from inappropriate subdivision, use, and development*, the LEA states that proposed removal of a 1,200m section of the lower reach of the Mangapū Stream tributary and its replacement with an approximate 570m long new engineered, meandering channel will initially result in **high** (significant) adverse effects at the tributary scale, with a reduced level of effects at the wider Mangapū Stream catchment scales.

Table 8, usefully summarizes the anticipated levels of natural character effect in tabular form.

Whilst noting the lengthy period over which the level of adverse effect will remain ‘significant’ (up to 10 years), I am of the opinion that the rationale provided for the above determinations is credible and I concur with these conclusions.

Visual effects.

Visual effects are addressed in some detail in section 6.3. The section concludes that visual effects (which are predicted to be - for private properties located to the south and west of the Site, between **neutral** to **moderate-high** (adverse) during operation before mitigation, progressively reducing – for the worst effected – to **Moderate** as rehabilitation and mitigation planting matures on the upper quarry benches).

Appendix B12.4.10b provides a detailed distillation of the potentially affected receptors and level of adverse effect.

For other public and private locations, the level of effect is predicted to be Low-Moderate (adverse) at most.

The memorandum dated 16 June 2026 assesses the visual effects of the Project as experienced from Pukekōiwiriki pā to be **low-moderate** (adverse), reducing to **low** (adverse) over time, as the rehabilitation planting establishes to re-green the quarried cut faces. It assesses the visual effects of the Project as experienced from Red Hill Reserve are considered to be **very low** (adverse), due to the nature of the view and existing Hunua Quarry operations being an existing element in the landscape.

I am of the opinion that the rationale provided for the above determinations is credible and I concur with these conclusions.

Section 7 of the 'Appendix 6. Landscape Rehabilitation Strategy and Management Plan' sets out the Offsite visual mitigation planting methodology, stating that such planting is a voluntary condition, developed to address moderate-high (adverse) visual effects (Viewing Groups (S1, S2, W1 and W2)). It explains:

"This methodology sets out an indicative step-by-step process for offering, designing, implementing, and establishing voluntary visual mitigation planting on private properties where owners elect to participate."

This offsite planting appears to differ from the Area C mitigation planting (as shown on the Phase 1 Symonds Hill Pit Rehabilitation Plan - p25 of the above document). Area C is undertaken within the holding and is implemented under phase 1 (0-5 years of the project).

I am of the opinion that this is a practical solution to the elevated effects identified, but that the assessment of visual effects doesn't consider this mitigation in its assessment of the properties in question.

Comment on landscape, natural character and visual effects.

In stating my agreement with the predicted levels of temporary and long term effect, I note that the longer term predicted levels of (landscape, and also natural character and visual) effect rely on the successful and continued implementation on a suite of mitigation / management tools which are set out in section 7 of the BML landscape effects assessment. These include the Mangapū Stream Tributary realignment , Native Revegetation and Landscape Rehabilitation and off-site mitigation planting. This latter mitigation tool, which will form a voluntary condition, has been developed to address moderate-high (adverse) visual effects on identified private properties within Viewing Groups (S1, S2, W1 and W2).

In particular, the assessment stresses that the extent to which the natural character values are ultimately restored depends heavily on the success of the realignment design and management, including channel

geometry, stream function, hydrological performance, and the long-term establishment of indigenous vegetation (section 6.2). With reference to natural character, the LEA states that success will be secured through condition of consent however, I have concerns that the conditions of consent relating to mitigation and rehabilitation appear to limit maintenance to a period of 5 years.

In particular, I have concerns regarding the Mangapū Tributary Realignment. My concerns are based on the fact that this is a complex project and reinstating the natural systems of the proposed realigned gully will be very challenging. BML recognise, and have signaled this in the Landscape effects assessment and I quoted from that document where they state that (mitigation) success 'depends heavily on the success of the realignment design and management, including channel geometry, stream function, hydrological performance, and the long-term establishment of indigenous vegetation (section 6.2)'. Success will require a relatively high input (and - I assume - cost) over a prolonged period and will require close ongoing monitoring. Section 6 of the technical document confirms this and states:

"As part of operating and maintaining the realigned stream channel, an operational maintenance plan will be prepared to align with the Stream Realignment Management Plan. The plan will detail key operational requirements such as routine inspections to inform maintenance needs along with flood response and associated repairs in order to maintain the design intent and mitigate adverse effects"

Based on discussions with the applicant to date, it is understood that this is not the intent, and that maintenance is intended to occur until certain health and sustainability outcomes are achieved, with 5 years being a minimum maintenance period only. Determining whether this is an appropriate response which will achieve the outcomes sought is better addressed by the ecological specialist. My understanding is that the ecological specialist has provided amendments to conditions to deliver this and these are recommended below.

Preparation of this technical report has included input from a number of specialists. My review addresses matters which fall into the scope of my expertise and I anticipate that review from other specialists will be undertaken.

Whilst noting my concern regarding the importance of the long term management required to ensure that the mitigation will be, and will continue to be, successful, I am of the opinion that the conclusions of the landscape effects assessment are reliable, and the level of effects predicted are accurate.

The magnitude of adverse effect is as may be expected for a project of this scale, and it is noted that the level of effect on a local scale for landscape, and natural character will remain (using RMA terminology) more than minor (but not significant within the FTAA context), after mitigation.

Cumulative effects

The LEA states, in section 6.4, that the Hunua and Drury Quarries are part of the same wider rural setting, but they are separated by intervening hill ridges, dissected topography, and extensive areas of indigenous vegetation.

As a result these landform and vegetation patterns effectively prevent simultaneous visibility of both quarries from any single public or private viewpoint within the surrounding district and so the quarries are neither experienced together within the same view, nor do they cumulatively alter skyline profiles or landscape patterns when observed from common vantage points. It asserts that these factors will ensure that the existing and proposed quarries do not give rise to more than low cumulative landscape effects.

I concur with this opinion.

6.0 Section 67 Information Gap

There are no substantive information gaps.

7.0 Recommendation

My review has concluded that the methodology employed in the LEA is appropriate, the information provided is detailed, the characterisation and evaluation of the landscape accurate and the assessment of effects is accurate.

The LEA acknowledges that the proposal will result in physical landscape effects which are assessed as high, and landscape character effects, assessed as moderate-high (adverse) during operation before mitigation. These will (respectively) reduce to moderate to moderate high (adverse), and moderate, at completion after mitigation. My understanding of the time scale in relation to the reduction in the level of adverse effect is 10 years after completion.

Potentially, the land use consent will run for 80 years, and mitigation measures will only become effective in the latter stages (50 years +) of the activity. The elevated level of effect therefore will be present for some 40 - 50 years. Unlike Table 8 in the LEA which summarizes the natural character effect, Table 7 does not provide indicative time scales for the reduction in the level of adverse effect. Inclusion of this information in Table 8 would be helpful to understand the duration of the elevated levels of adverse effects. Similarly, this information would also be of assistance in the tables which summarize the visual effects in section 6.3.1 and in Appendix 3 of the LEA.

The same (in terms of timescale and duration of adverse effect) applies for:

1. localised effects on the ONL (moderate (adverse) during operation before mitigation, reducing to low–moderate (adverse) at completion after mitigation),
2. natural character effects (high adverse effects on natural character within the affected reach due to the loss of existing ‘high to very high’ natural character reducing over time to moderate (adverse) at the tributary scale), and
3. visual effects (which are predicted to be - for private properties located to the south and west of the Site, between neutral to moderate-high (adverse) during operation before mitigation, progressively reducing - for the worst affected - to Moderate as rehabilitation and mitigation planting matures on the upper quarry benches).

The longer term predicted levels of effect rely on the successful and continued implementation on a suite of mitigation / management tools which are set out in section 7 of the BML landscape effects assessment. These include the Mangapū Stream Tributary realignment , Native Revegetation and Landscape Rehabilitation and off-site mitigation planting.

In particular, the assessment stresses that the extent to which the natural character values are ultimately restored depends heavily on the success of the realignment design and management, including channel

geometry, stream function, hydrological performance, and the long-term establishment of indigenous vegetation (section 6.2).

In my review I have identified this reliance on long term and complex mitigation as a risk, however this opinion is based on my area of expertise and should be considered in the light of other specialist reviews.

8.0 Proposed Conditions

I have reviewed the proposed draft conditions provided by the applicant. For ease of cross referencing, I have reproduced relevant ecological conditions below and have included comments where relevant.

Land-use Condition		Review comments/recommendations
55	Landscape Rehabilitation Strategy and Management Plan The objective of the Landscape Rehabilitation Strategy and Management Plan (LRSMP) is to detail the process for the progressive rehabilitation of the Site to mitigate the landscape, natural character, and visual effects of the Project, and to ensure compliance with Conditions 111 - 123.	Note: condition 25 requires submission to AC 20 working days prior to commencement of Construction works
56	The LRSMP must include: (a) landscape mitigation objective and design principles; (b) a description of the landscape context and values of the Site to be addressed by the LRSMP; (c) a description of the factors influencing landscape rehabilitation of the Site; (d) landscape rehabilitation strategy including rehabilitation plans showing the phased rehabilitation of the Site as each stage of mineral extraction is completed; (e) a description of the rehabilitation process, including landform modification, drainage, soil preparation, revegetation, natural regeneration, and weed management; (f) the approach to implementing planting, including responsibilities, timing, plant species and source. (g) framework for developing and implementing Detailed Landscape Design and Planting Plans for progressive rehabilitation of the quarry faces and slopes and OBDA areas; (h) timeframes for the implementation of Detailed Landscape Design and Planting Plans;	I question whether 5 years maintenance is sufficient from a project of this scale and risk. I would suggest amendments to this condition (56(i)) to align with the recommended wording of maintenance for Condition 131 below.

	(i) a description of how maintenance of planting areas for five (5) years after planting, including replacement of plants that do not survive, will be undertaken. (j) a description of how landscape management actions will be monitored, including timeframes, and measures of success; (k) provision for reporting on the performance of the landscape rehabilitation works undertaken through the Annual Report required by Condition 64; and (l) a process for review of the LRSMP to adapt to any changes in the receiving environment	
59	The objective of the Ecological Management Plan (EcMP) is to detail the process for developing ecological offset and compensation sites, and undertaking revegetation and enhancement planting for the Project to achieve no net loss of indigenous biodiversity, and ensure compliance with Conditions 128 – 129	-
60	The EcMP must include: (a) a description of the terrestrial and freshwater ecology and biodiversity values to be addressed by the EcMP; (b) plans identifying the locations of all offset and compensation areas; (c) a description of the approach to developing all offset and compensation areas, including staging of planting; (d) best practice actions to: (i) minimise the loss of ecological values prior to and during vegetation removal; (ii) minimise the loss of ecological values prior to watercourse and wetland works; and (iii) manage adverse edge effects on adjoining existing vegetation; (e) a description of the indicative source, species mix, size, spacing, density, and layout, of plants and planting methods to be used at each offset and compensation area;	I question whether 5 years maintenance is sufficient from a project of this scale and risk. I would suggest amendments to this condition as follows: (i) a description of how maintenance of planting areas, including replacement of plants that do not survive, will be undertaken and which as a minimum requires maintenance to continue: (i) for at least five (5) years, or and until 80% canopy closure is achieved (whichever occurs first); and (ii) until a plant survival rate of at least 90% of the original planting density has been achieved;

	(f) a framework for developing and implementing Site Specific Planting Plans on a staged basis at each offset and compensation area and the process for preparing and approving these plans prior to works commencing; (g) a description of how all planting will be protected from stock; (h) timeframes for the implementation of Site Specific Planting Plans; (i) a description of how maintenance of planting areas, including replacement of plants that do not survive, will be undertaken and which as a minimum requires maintenance to continue: (i) for at least five (5) years, or until 80% canopy closure is achieved (whichever occurs first); and (ii) until a plant survival rate of at least 90% of the original planting density has been achieved; (j) a description of how ecological management actions will be monitored, including timeframes, and measures of success; (k) procedures for reporting on the performance of planting through the Annual Report required by Condition 64; (l) methods to ensure integration with the following associated management plans: (i) Landscape Rehabilitation Strategy and Management Plan; (ii) Stream Realignment Management Plan; (iii) Aquatic Fauna Salvage and Relocation Plan; (iv) Lizard Management Plan; and (v) Pest Management Plan; and (m) a process for review of the EcMP to adapt to any changes in the receiving environment.	
67	Stream Realignment Management Plan The objective of the Stream Realignment Management Plan (SRMP) is to detail the process for	-

	the design, Construction, and long-term establishment of the Mangapū Tributary realignment in a way that: (a) as far as practicable, replicate the channel form and function of the restored reach upstream, and the natural stream downstream; and (b) incorporates riparian planting along the full extent of the realigned stream corridor, and revegetation on the quarried benches above using native species to enhance natural character and ecological function consistent with the certified Landscape Rehabilitation Strategy and Management Plan required by Condition 55; (c) supports a healthy, resilient, and culturally aligned freshwater ecosystem; and. (d) Ensures compliance with Conditions 96 – 98 and 111 - 114	
68	The SRMP must include the following: (a) stream realignment design objectives and principles; (b) a refined hydrological assessment, incorporating continuous flow gauging on the Mangapū Stream and Mangapū Tributary to inform the detailed design of the stream realignment; (c) detailed design drawings based on A035680017-WR-101 – 104, A035680017-WR-201 – 202, A035680017-WR-301 included in the consent application, illustrating layout, profiles, cross sections, and location of all features; (d) detailed methodology and timing for constructing the stream realignment; (e) methods for diverting upstream flows during the stream works, including how sufficient flow will be maintained at all times below the site of the works to maintain in-stream biota; (f) a description of erosion and sediment controls consistent with the certified ESCP required by Condition 42 (g) a description of methods to manage the discharge of contaminants to water during construction (e.g. hydrocarbons, construction	-

	materials); (h) planting plan showing riparian planting and revegetation of quarried benches above, including: (i) description of the source, species mix, size, spacing, density, and layout, of plants and planting methods to be used; (ii) timeframes for implementation; (iii) description of how maintenance of planting areas, including replacement of plants that do not survive, will be undertaken. (i) description of stream monitoring, including timeframes and measures of success; (j) provision for reporting on the performance of the stream works undertaken through the Annual Report required by Condition 64; and (k) a process for review of the SRMP to adapt to any changes in the receiving environment	
128	Rehabilitation of Mangapū Stream Tributary Realignment Riparian planting along the realignment of the Mangapū Tributary must be: (a) implemented in accordance with the certified Stream Diversion Management Plan required by Condition 62; (b) implemented immediately following completion of Construction of the realigned stream channel, except where Construction is completed outside the planting season in which case it should occur in the next planting season; and (c) completed no later than Stage 2	-
129	Canopy species along the realignment of the Mangapū Stream Tributary corridor must be: (a) planted in accordance with the certified Stream Diversion Management Plan required by Condition 62; (b) and planted in the next planting season following the establishment of the riparian planting required by Condition 111 to ensure appropriate shelter and survival conditions	-
130	Revegetation of quarried benches associated with	-

	the realignment of the Mangapū Stream Tributary must be: (a) planted in accordance with the certified Stream Diversion Management Plan required by Condition 62; (b) phased to follow Construction; and (c) undertaken as soon as practicable within the next available planting season	
131	All planting required by Conditions 111 – 113 must be maintained for at least five (5) years after planting is completed. Maintenance must include replacement of dead, dying, or diseased plants until canopy closure is achieved; and any additional works required to ensure successful establishment and ongoing sustained vegetation growth	I question whether 5 years maintenance is sufficient from a project of this scale and risk. I recommend amendments to this condition as follows: All planting required by Conditions 111-113 must be maintained for <u>at least a minimum of five (5) years after planting is completed and until it is demonstrated that the revegetated areas have been established to a point where 80% canopy cover is achieved, planting density meets or exceeds plan (stems/m²), there are no fruiting or flowering weed species present and long-term health and sustainability is ensured without the requirement for intensive management, whichever is the latest.</u> Maintenance must include replacement of dead, dying, or diseased plants until canopy closure is achieved; and any additional works required to ensure successful establishment and ongoing sustained vegetation growth.

132	Rehabilitation of Quarry Faces and Slopes and OBDA Areas Prior to the commencement of each of Stages 6, 7, and 8, the Consent Holder must prepare and submit to the Council for certification in accordance with Conditions 22 – 26 a Detailed Landscape Design and Planting Plan for progressive rehabilitation of the quarry faces and slopes and OBDA within that stage (when those areas are retired from quarrying). The Plan must expand on the rehabilitation plans within the certified Landscape Rehabilitation Strategy and Management Plan and must include: (a) site-specific planting specifications based on actual ground conditions. (b) a detailed planting schedule identifying species, densities, sizes, and spacing. (c) confirmation that all plant material will be ecosourced from the Hunua Ecological District. (d) methods for site preparation, planting, and maintenance. (e) staging of planting in relation to completion of Mineral Extraction Activities	-
133	Progressive rehabilitation of the quarry faces and scopes and OBDA within each stage must: (a) occur with each phase of quarry development (when those areas are retired from quarrying), or earlier where feasible; and (b) be completed prior to completion of the following stage	-
134	All planting required by Conditions 115 – 116 must be maintained for a minimum of five (5) years after planting is completed. Maintenance must include replacement of dead, dying, or diseased plants; and any additional works required to ensure successful establishment.	I question whether 5 years maintenance is sufficient from a project of this scale and risk. I recommend amendments to this condition as follows: All planting required by Conditions 115-116 must be maintained for a minimum of five (5) years after planting is completed <u>and until it is demonstrated that the revegetated areas have been established to a point where 80% canopy cover is achieved, planting density</u>

		<u>meets or exceeds plan (stems/m²), there are no fruiting or flowering weed species present and long-term health and sustainability is ensured without the requirement for intensive management.</u> Maintenance must include replacement of dead, dying, or diseased plants until canopy closure is achieved; and any additional works required to ensure successful establishment and ongoing sustained vegetation growth.
135	Off-Site Visual Mitigation Planting Within six (6) months of consent being granted, the Consent Holder must: (a) consult with the owners of the properties identified as experiencing moderate–high adverse visual effects within Viewing Groups S1, S2, W1, and W2 identified in the Landscape Effects Assessment; and (b) offer, at its cost, to appoint a SQEP to work collaboratively with each landowner to develop a Visual Mitigation Planting Plan to mitigate visual effects on the dwelling and its curtilage.	
136	The objective of each Visual Mitigation Planting Plan is to reduce the identified adverse visual effects on the dwelling and curtilage as far as practicable. Appropriate mitigation measures may include planting of native or exotic plant species at a maximum width of 5m to foreshorten and/or filter views towards the quarry.	Condition 136 should form a part of 135 as it is intrinsically linked to the understanding of the requirements of 135
137	The SQEP must visit each participating property to: (a) confirm the nature and extent of adverse visual effects on the dwelling and curtilage; and (b) identify and recommend appropriate mitigation planting within the property boundary; and (c) develop, with the landowner, a site-specific planting layout that responds to views, topography, existing vegetation, and landowner preferences.	Condition 137 should form a part of 135

138	The Consent Holder must implement all agreed mitigation planting at its cost. Planting must be implemented in the next available planting season and within twelve months of the landowner accepting the mitigation proposal. <i>Advice note: Maintenance of mitigation planting is the responsibility of the landowner, unless an alternative arrangement is mutually agreed in writing between the Consent Holder and the landowner.</i>	-
139	The Consent Holder is considered to have complied with Conditions 135 – 138 if: (a) the SQEP is not granted access to the property to undertake the required assessment; or (b) the landowner agrees to the proposed mitigation, and the planting is implemented within the required timeframe; or (c) the landowner declines the offer of mitigation or refuses to engage in consultation; or (d) an alternative agreement regarding visual mitigation is reached between the Consent Holder and the landowner.	If the above conditions are rolled into one, then this reference would change of course.
140	The Consent Holder must provide the Council with a written record of: (a) the mitigation planting offered; (b) whether it was accepted or declined; and (c) confirmation of implementation (where applicable) within three months following completion of the agreed planting at each participating property.	-