Boffa Miskell

Clevedon Quarry Expansion

Landscape Effects Assessment
Prepared for Stevenson Aggregates Limited

27 October 2026



Boffa Miskell is proudly a
Toitū net carbonzero certified consultancy

Document Quality Assurance

This document may be cited as:
Boffa Miskell Limited 2026. *Clevedon Quarry Expansion: Landscape Effects Assessment*. Report prepared by Boffa Miskell Limited for Stevenson Aggregates Limited.

For any information regarding this report please contact:
Tom Lines | Landscape Planning | Senior Principal [redacted]

Revision /version:	Issue date:	Prepared by:	Description:	Reviewed by:
Final	27/10/2026	Tom Lines Senior Principal | NZILA Registered Landscape Architect Sin Man Cheng Landscape Architect	Final report issued for lodgement	John Goodwin Consulting Partner | NZILA Registered Landscape Architect
Draft v5	15/10/2026		Update report following legal review	
Draft v4	28/09/2026		Updated draft report following planning and client review	
Draft v3	21/09/2026		Updated draft report following confirmation of ecological offset planting areas	John Goodwin Consulting Partner | NZILA Registered Landscape Architect
Draft v2	17/06/2026		Updated report addressing s127 variation matters issued to client	
Final Draft	18/02/2026		Final draft report issued to client	John Goodwin Consulting Partner | NZILA Registered Landscape Architect
Draft	19/12/2025		Draft report issued to client	

Approved for issue:
Tom Lines | Landscape Planning | Senior Principal | [27/10/2026]

Release and Reliance
This report has been prepared by Boffa Miskell Limited on the instructions of our Client, in accordance with the agreed scope of work. If it is intended to support an application under the Fast-track Approvals Act 2024, it may be relied upon by the Expert Panel and relevant administering agencies for the purposes of assessing the application.
While Boffa Miskell Limited has exercised due care in preparing this report, it does not accept liability for any use of the report beyond its intended purpose. Where information has been supplied by the Client or obtained from external sources, it has been assumed to be accurate unless otherwise stated.

File name & Project number: [BM250833_Clevedon_Quarry_Expansion_LEA_20261027.docx] BM250833

Template revision: 20250829 0000
Cover photograph: View of the Site from Highridge Road © BML, 2025

Executive Summary

Stevenson Aggregates Limited ('the Applicant') is proposing a quarry expansion (the 'Project') to extend the life of its Clevedon Quarry in Auckland over approximately 50 years. The Site is located within the northwestern foothills of the Hunua Ranges and is adjacent to the Wairoa River Gorge Outstanding Natural Feature (ONF). The Site displays a working rural character where it is characterised by an operating quarry and plantation forestry. The majority of the proposed quarry expansion is within the Special Purpose – Quarry Zone (SP-QZ) under the Auckland Unitary Plan, with part of the expansion extending into the adjoining Rural – Rural Production Zone (RPZ).

The Project will expand the existing approved quarry footprint to approximately 74ha cumulatively across five indicative stages to a maximum excavation depth of approximately RL 22.5m, establish an overburden disposal area (OBDA), construct internal haul roads and a new wetland water treatment system. The Project will also involve the removal of approximately 6.1ha of native terrestrial vegetation within a Significant Ecological Area Overlay, and the removal of streams and tributaries within the footprint of the proposed quarry expansion. As part of this Project, an extensive mitigation package has been proposed. This report assesses the natural character, landscape and visual effects of the Project.

The Clevedon Quarry Expansion is being advanced under the Fast-track Approvals Act 2024 (FTAA) and under the Substantive Application, assessment under the Resource Management Act (RMA) is required. In addition to the RMA, Section 104(1) of the Amendments to the FTAA requires views from private property to be disregarded.

Natural Character Effects

Natural character effects will vary according to the existing condition of the affected waterways. The greatest effect will occur on the upper reaches of Stream 1, where a **low-moderate adverse** natural character effect is identified. Effects on Stream 1 lower reaches, Streams 2 and 2a have been concluded as **low adverse**. Stream 3 is concluded to have beneficial effects on natural character due to the proposed offset planting within its catchment. All streams flow to the Wairoa River where **very low adverse** effects have been identified.

Landscape Effects

The Project will involve a substantial change to the topographical characteristics of the Site, resulting in **moderate adverse** effects on landform.

In terms of land cover, while approximately 6.1ha of native vegetation and several streams and tributaries will be removed, approximately 67.6ha of terrestrial and freshwater offset planting and approximately 9.45ha of quarry bench indigenous planting is proposed to mitigate this removal. Once these areas of vegetation have established, it is considered effects on vegetation

will be **very low adverse** and effects on streams will be **beneficial** on the balance of the Site.

Effects on landscape character are assessed as **low-moderate adverse**, taking account of the existing quarry, production forestry uses and the extent to which the proposed quarry expansion is within the SP-QZ.

The Project would not directly modify the landform or geological characteristics of the Wairoa River Gorge ONF, and effects on the ONF are assessed as **neutral**.

Visual Effects

Visual effects will vary depending on the nature of the viewing audience, distance to the Site and extent of views. The terrestrial and freshwater offset planting forming part of the Project will be established in the early stages (i.e. the commencement of the Project) to assist in forming a vegetated backdrop to the Project as it progresses. Proposed bench planting will ensure the engineered landform of the Project can be visually softened and integrated to the broader landscape. In summary, it is considered that the effects will be as follows for the identified groups of viewing audiences during the various indicative stages.

- Viewing Audience Group A will obtain short to mid distance views of the Project. In terms of effects on private viewing audiences, the Project will have **very low adverse** visual effects during Stages 1 and 2. Visual effects will increase to **low-moderate adverse** during Stage 3 and become **low adverse** during Stages 4 and 5. Visual effects will reduce to **very low adverse** once mitigation plantings establish. For public viewing audiences, visual effects will be **very low adverse** across all stages.

- The greatest effects are identified for private viewing audience within Viewing Audience Groups B and C where short to mid distance views can be obtained, of which elevated views can also be obtained from Group C. For these private viewing audience groups, **very low to low adverse** effects during Stages 1 and 2 have been identified. Visual effects during Stage 3 of the Project will result in up to **moderate-high adverse**, with effects during Stage 4 becoming **moderate adverse** for Group B and remaining **moderate-high adverse** for Group C. Up to **moderate adverse** effects on private viewing audiences during Stage 5 have been identified. With mitigation plantings established, visual effects will reduce to **low-moderate adverse**. In terms of public viewing audiences, **neutral to very low adverse** effects have been identified during Stages 1 and 2, increasing to up to **low adverse** during Stages 3 and 4. Effects during Stage 5 and Post Closure will become **neutral to very low adverse**.

- Viewing Audience Groups D and E will obtain mid to long distance views of the Project. During Stages 1 and 2, **very low to low adverse** effects are concluded for private viewing audiences within these groups, with effects increasing to up to **low-moderate to moderate adverse** during Stages 3 and 4. **Low to low-moderate adverse** effects have been concluded for these groups during Stage

5. Visual effects will further reduce to **very low to low adverse** once mitigation plantings establish. In terms of public viewing audiences, Stages 1 and 2 will result in **neutral to very low adverse** effects, and up to **low adverse** during Stages 3 and 4. Visual effects will reduce to no more than **very low adverse** during Stage 5 and Post Closure.

- For viewing audience groups that obtain longer distance views, **neutral to low adverse** effects during Stages 1 to 3 have been identified for Groups F, G and H, with up to **low-moderate adverse** effects identified for private viewing audiences within Group I during Stage 3. **Very low to low adverse** effects during Stages 4 and 5 have been concluded for Groups F, G and H and **low to low-moderate adverse** for Group I. Once mitigation establishes, visual effects reduce to **very low to low adverse**. For public viewing audiences, no more than **very low adverse** effects have been identified across all stages for Groups F, G, H and I.

CONTENTS

Executive Summary i

1.0 Introduction 1

2.0 Project background 1

3.0 Assessment Approach 2

3.1 Familiarisation of the Project and Receiving Environment 3

4.0 Existing Environment 5

4.1 Consideration of Cultural Landscape Values 5

4.2 Landscape Context and Character 5

4.3 The Site 6

4.4 Natural Character Condition 7

4.5 Key Landscape Characteristics, Attributes, and Values 16

5.0 Statutory Context 17

5.1 Fast-track Approvals Act 2024 (FTAA) 17

5.2 Resource Management Act 1991 (RMA) 18

5.3 Auckland Unitary Plan – Operative in Part 18

6.0 The Project 19

7.0 Visual Catchment and Viewing Audiences 22

8.0 Assessment of Effects 26

8.1 Natural Character Effects 27

8.2 Landscape Effects 29

8.3 Visual Effects 32

8.4 Evaluation in Relation to Statutory Provisions 38

9.0 Conclusions 39

Appendices

Appendix 1: Method Statement

Appendix 2: Graphic Supplement – Landscape Effects Assessment

Appendix 3: Graphic Supplement – Visual Simulations

Appendix 4: Visual Effects Assessment

1.0 Introduction

Boffa Miskell Limited ('BML') was engaged by Stevenson Aggregates Limited ('the Applicant') in September 2025 to assess the potential landscape, visual and natural character effects of a proposed expansion of the Clevedon Quarry (the 'Project') at 546 McNicol Road, Clevedon. The expansion will extend towards the south and east of the existing quarry across the Applicant's landholdings[1] (therein referred to as 'the Site'), which is anticipated to be staged over a period of approximately 50 years. This assessment has been considered in the context of the existing environment and the relevant statutory planning framework.

The first part of this report provides a description of the Project in its broad landscape and statutory context. The second part of this report sets out an assessment of the Project within its landscape context and identifies the level and nature of landscape, natural character and visual effects. This assessment has involved a combination of on and off-site survey and fieldwork, project shaping and advice, visibility analysis, and photography from representative publicly accessible viewpoints. The assessment also includes a mitigation plan to determine and reduce landscape, natural character and / or visual effects.

In undertaking this assessment, the primary authors have visited the location of the Project to understand its existing landscape attributes, values and character as well as the physical and visual relationship the Site and Project has with the surrounding built and natural environment. Furthermore, the peer reviewer is familiar with the Site through their involvement in previous applications on the Site over the past 10 years.

2.0 Project background

Clevedon Quarry is a regionally significant quarry[2] contributing to the regional aggregate demand. The quarry has been in operation since 1970s, initially operated by Warren Shaw Limited. In 1995, the Site was purchased by Fowler Quarries and was previously known as 'Fowler Quarry'. The Site was later purchased by Fulton Hogan Limited in April 2016 and transferred to the Applicant in 2019.

Boffa Miskell has had long involvement in Clevedon Quarry since 2015, after firstly being commissioned by Fulton Hogan Limited to provide a preliminary analysis of the quarry's landscape and visual context. Following that, a number of landscape and visual assessments were undertaken along with the preparation of evidence. These include:

- a visual assessment as part of a resource consent application to expand the quarry further east within the approved quarry zone[3];

[1] 546 McNicol Road (Lot 1 DP 169491), 646 McNicol Road (Lot 12 DP 49440, Lot 1 DP 177738, Lot 2 DP 177738, Lot 3 DP 177738) and 439 Otau Mountain Road (Lot 1 DP 56208).

[2] Clevedon Quarry Expansion – Referral Application. Report prepared by Tonkin & Taylor Ltd for Stevenson Aggregates Limited.

[3] Clevedon Quarry: McNicol Road: Visual Effects Assessment. Report prepared by Boffa Miskell Limited for Fulton Hogan Ltd, 4 May 2017.

- landscape and visual evidence in relation to the proposed quarry expansion at McNicol Road that enables the extraction over approximately 29ha of area with a depth of RL -50 in the final stages[4]; and
- a landscape and visual assessment in relation to a proposed private plan change (PC89) to amend the Special Purpose – Quarry Zone (SP-QZ) following a request for further information from Auckland Council in relation to potential effects on the Wairoa River Gorge. This private plan change sought to swap the extent of the Clevedon Quarry's SP-QZ located in the northern half of 546 McNicol Road, with a relocated Quarry Zone in the northern part of 646 McNicol Road. The purpose of the plan change was to reflect the preferred direction of expansion to avoid Significant Ecological Areas (SEA) and Natural Stream Management Areas (NSMA), as well as to provide a visual and acoustic barrier between the majority of neighbouring properties. The plan change was approved in 2024 and the zoning of the quarry site has subsequently extended to a total area of approximately 73.78ha in an eastwards and southwards direction from the existing quarry.

The Applicant also holds the following consents for a haul road within an Outstanding Natural Feature (ONF) located within the Site:

- Consent reference: LUC60349699 (granted 6th March 2020). This resource consent was granted retrospectively for the existing quarry haul road within the ONF.
- Consent reference: LUC60361560 (granted 8th March 2021). This resource consent was granted for the widening of the haul road to provide for a safe two-way heavy vehicle movement.

To ensure the security of future aggregate supply and to enable an efficient use of the Site, the Applicant is seeking to expand the Clevedon Quarry, enabling continued operations beyond the quarry's current projected lifespan.

3.0 Assessment Approach

This assessment has been undertaken and peer reviewed by NZILA registered landscape architects with reference to the Te Tangi A Te Manu, Aotearoa New Zealand Landscape Assessment Guidelines (2022). This assessment has been undertaken from a Te Ao Pakeha world view using the terminology of Te Tangi a Te Manu and therefore does not purport to fully understand the connection and values held by Iwi who are associated with the whenua or awa of the Site and its relationship to the wider area.

The full methodology and outline of the effects ratings used in this assessment is provided in **Appendix 1**. In summary, this assessment provides ratings based upon a combination of quantitative information where available, and qualitative professional judgements by the author. The ratings are based upon a seven-point scale which includes: very low; low; low-moderate; moderate; moderate-high; high and very high ratings. These are used within this assessment to describe the level (and significance) of the potential landscape and visual amenity effects that would result from the Project.

[4] Resource consent was granted by the Environment Court on 25th June 2018 and referenced as [2018] NZEnvC 96 (Council reference BUN60302442).

In combination with assessing the significance of effects, this assessment also explains the likely nature of the effects, being a positive (beneficial) or negative (adverse) effect in the context within which it occurs. Benign (neutral) effects are also identified where it is considered that there is no identifiable landscape or visual change in the context of where it occurs.

3.1 Familiarisation of the Project and Receiving Environment

3.1.1 Desktop Analysis of the Project and Receiving Environment

Prior to conducting the assessment, a desktop study was completed, which included a review of the relevant information relating to the landscape and visual aspects of the Project. This information included:

- *The statutory setting of the Project and surrounding context;*
- *Base map data (such as contours and aerial photography);*
- *Quarry expansion design and drawings;*
- *Relevant landscape assessments and findings from previous plan change and resource consent applications in relation to the Site; and*
- *Clevedon Quarry Expansion Ecological Impact Assessment (Tonkin and Taylor).*

3.1.2 Review of Statutory Context

The statutory context of the Site and its environs was reviewed in preparation for this assessment. This included a review of the Auckland Unitary Plan (AUP) zoning and relevant notations, such as overlays.

3.1.2.1 Amendments to Fast-track Approvals Act 2024

Within Section 104(1) of the Amendments to Fast-track Approvals Act 2024, it requires consent authorities to disregard specific amenity effects when considering the effects of a district land use activity, including 'views from private property'.

3.1.3 Review of Project drawings

Project drawings have been reviewed as part of the assessment process. Notable drawing sets that are most relevant to the landscape and visual aspects of the Project are located in the Substantive Application and should be referred to and reviewed alongside this assessment. In particular these include the staging plans provided by the Applicant which have been incorporated within the mitigation strategy. These staging plans have been used to inform proposed landscape mitigation for the Project.

3.1.4 Preparation of a Zone of Theoretical Visibility Analysis

To determine the potential visual catchment and viewing audiences of the Project, a Zone of Theoretical Visibility Analysis (ZTV)[5] was developed (**refer Figures 7 to 12, Appendix 2**). The ZTV analysis was generated by using a 3D landform model of the Project, across Stages 1-5 of

[5] A GIS analysis tool using ground and above-ground topographical information combined with the elevation of project elements to determine areas in the context of a site that may obtain views of the project.

the proposed quarry expansion to provide an understanding of the evolution of the quarry landform.

Once this base data was prepared, points were set across the quarry rim and benches with the analysis undertaken using computer software.

The resulting zone of visibility is shown across a colour band, with a pale yellow colour illustrating a small number of points being visible, and orange and red colour illustrating a larger number of points being visible. These areas of visibility are shown together with distance bands, which have been offset from the Project. The analysis has been undertaken both using landform only (contours), in addition to taking into account above ground features which will influence the extent of visibility (e.g. vegetation).

3.1.5 On-Site Analysis of the Receiving Environment

Multiple site visits were undertaken in order to understand the Site, the Project and the surrounding context, including the likely extent of visibility of the Project. The first site visit took place on 9th October 2025 and focussed on gaining an understanding of the components and scale of the Project, its physical impact on the landscape within the Site, and effects on the wider landscape character and visual amenity for potential viewing audiences. The second site visit to the Site and surrounding areas was undertaken on 2nd December 2025 to take photographs from representative viewpoint locations and further understand the visibility of the Site from the wider landscape. A further site visit was undertaken by the visual simulation specialist on 5th December 2025 to take photographs for the proposed visual simulations.

3.1.6 Visual Simulations

A series of visual simulations has been prepared to provide a greater understanding of the Project and its extent of visibility within the visual catchment (**Appendix 3**). A collection of viewpoint photographs was selected as they provide representative views from a variety of viewing audiences, which are located at a range of viewing distances and locations. It is noted that viewing audiences considered in this assessment include both those in public and private locations, and that the viewpoint photographs were taken from publicly accessible locations only.

The visual simulations have been prepared in accordance with the NZILA Best Practice Guideline for Visual Simulations[6]. To provide an accurate understanding of the Project, the visual simulations depict the quarry at a range of predicted moments in time. In principle, a minimum of two stages of the quarry have been illustrated. Depending on the location, extent of visibility and degree of change the stages illustrated in each view are a combination of indicative Stage 2, Stage 3 and Stage 5. A summary of the stages shown are:

- Existing view (as the Site is currently observed);
- Proposed Indicative Stage 2 (approximately 20 Years from the start of the Project);
- Proposed Indicative Stage 3 (approximately 30 Years from the start of the Project);
- Proposed Indicative Stage 5 (Life of Quarry, anticipated to be approximately 50 years); and

[6] http://www.nzila.co.nz/media/53263/vissim_bpg102_lowfinal.pdf

- Quarry Closure – post implementation of quarry bench planting (anticipated to be approximately 10 years post quarry closure).

The visual simulations also illustrate the likely growth rates of the proposed exotic and indigenous vegetation in line with the quarry stages. The vegetation illustrated in the visual simulations forms part of the ecological and landscape and visual mitigation response. The landscape and visual mitigation response is outlined in **Section 6**, together with a brief overview of the Ecological mitigation.[7]

The starting date of the Project is not fully determined. However, for the purpose of this assessment, it is assumed that the quarry works associated with this Project will commence in 2030. The visual simulations have therefore been prepared with the likely forestry cycles surrounding the Site, which has a 25-year harvesting cycle.

4.0 Existing Environment

4.1 Consideration of Cultural Landscape Values

It is acknowledged that tāngata whenua perspectives in relation to landscape should be considered. Clevedon Quarry is identified as part of the Wairoa River catchment and Statutory Acknowledgement area, which is of Significance to Ngāi Tai ki Tāmaki. The Deed of Settlement Plan OTS-403-127[8] (Wairoa River and tributaries) sets out Ngāi Tai ki Tāmaki's statutory area, encompassing the Wairoa River and its tributaries. However, it is noted that the statutory acknowledgement applies only to the beds of the river or stream owned by the Crown and therefore does not apply to the Site[9].

It is also recognised that the Wairoa Gorge Scenic Reserve (OTS-129-34[10]), is of great significance to Ngāti Tamaoho, and is located approximately 450m southwest of the Site.

It is understood that the Applicant has an ongoing relationship with mana whenua. Of the 9 iwi groups notified in relation to the Project, three have expressed an interest. The Applicant has been engaging with these iwi groups and a Cultural Impact Assessment (CIA) from Ngaati Whanaunga and a letter from Ngai Tai ki Tamaki are expected at time of preparing this report.

4.2 Landscape Context and Character

Clevedon Quarry is located on the outskirts of southeastern Auckland, approximately 5km south of Clevedon village (**refer to Figure 1, Appendix 2**). The Site is positioned within the northwestern foothills of the Hunua Ranges, in the upper reaches of the Wairoa River valley. While largely contained by steep hills to the east, south and west, the Site forms a part of the visual backdrop to the Clevedon valley as the Hunua foothills recede and open out to the northwest. The flatter land of the valley was historically used for pastoral farming, with the lower

[7] Refer to Ecological Impact Assessment prepared by Tonkin & Taylor Ltd. for full description of ecological mitigation / offsetting.

[8] https://www.govt.nz/assets/Documents/OTS/Ngai-Tai-ki-Tamaki/Ngai-Tai-ki-Tamaki-Attachments-Nov-2015.pdf

[9] Section 83 of the Ngāi Tai ki Tāmaki Claims Settlement Act 2018.

[10] https://www.govt.nz/assets/Documents/OTS/Ngati-Tamaoho/Ngati-Tamaoho-Deed-of-Settlement-Schedule-Attachments-30-April-2017.pdf

river flats suited to dairying, with stock farming undertaken within the higher and more elevated land. Today, the valley retains a working rural character that associates with horticultural activities and pastoral farmlands, as well as scattered rural lifestyle blocks that typically align with existing rural road networks and around the Clevedon village. In recent years, residential development has been planned and built to the south of the village, including the Clevedon Meadows and Conmara Estate on Papakura-Clevedon Road and the new subdivision on Monument Road opposite the Clevedon Showgrounds.

The landcover of the Site's broader context is largely modified and reflective of the existing land use. This includes a mix of broadleaved indigenous hardwoods, manuka/kanuka shrubland, indigenous forests and exotic plantation forests across the western foothills of the Hunua Ranges, and extensive areas of exotic pasture and horticultural land with associated shelterbelts and windbreak vegetation within the Clevedon lowlands (**refer to Figure 2, Appendix 2**). Some areas of indigenous vegetation are identified as SEA within the AUP. Cosseys Reservoir (a key water supply for Auckland) is located approximately 500m southeast of the Site.

The sequence of the foothills of the Hunua Ranges support a catchment of deeply incised gullies that feed into the Wairoa River. These streams typically flow from the northern hills of the Hunua Ranges in an east-west direction, with a number of these through the Site and under McNicol Road via culverts and then into the river. The landform surrounding these streams, apart from the ridgetops and valley floors, within the balance of the Site is generally steep with many slopes steeper than 1(v):2(h) gradient.

The broader area provides a number of recreational opportunities, including the Wairoa River Gorge, Hunua Falls Reserve and Clevedon Scenic Reserve.

4.3 The Site

A series of **Site Appraisal Photographs (A-F)** (**refer to Appendix 2**) have been taken to demonstrate the character of the existing quarry and proposed quarry expansion area. The Site covers approximately 544.3ha in area, with the area subject to the quarry approximately 74ha in area. It is broadly bordered by Otau Mountain Road to the north, Orum Road to the east, indigenous forest north of Cosseys Access Road to the south and McNicol Road to the west (**refer to Figure 3, Appendix 2**). The Site is accessed via McNicol Road, which has previously served as part of the Te Araroa Trail, a national walkway spanning the length of New Zealand.

The Site consists of a combination of modified, managed and unmodified areas. The northern portion of the Site supports a large area of indigenous vegetation that is identified as SEA[11] (**refer to Figure 4, Appendix 2**). This indigenous vegetation consists of a mosaic of early successional species, with tree ferns typically occupying steeper gullies and mixed broadleaf species dominating terraces and faces. Some of this northern land has been re-zoned as Rural Production Zone (RPZ) from SP-QZ as a result of private plan change 89. Much of the ONF to the west is also classified as an SEA particularly the valley floor and western slopes, with much of the eastern slopes containing pine forest. Site access roads are constructed primarily within the southern portion of the Site where areas are used for existing quarry activities and pine plantation. Within the SEA and ONF, three areas of pine trees are protected as the outcomes of

[11] SEA_T_5588.

previous resource consents[12] (**refer to Figures 3 and 5, and Site Appraisal Photographs B and C in Appendix 2**).

Immediately adjoining the SEA and the pine forest, is the existing operational Clevedon Quarry, occupying the lower slopes of a local ridge. The quarry working area (Front of House 'FoH') (including weigh bridge, sediment ponds, stockpiles, crushers, site offices, parking and workshop) is located near the front entrance (in the northwestern portion) of the Site. The current activities occurring on Site include extraction of rock from the quarry face, crushing and processing of rock, stockpiling transportation of the rock and other ancillary activities associated with the daily operation of the quarry. The quarry operations area relates to the access tracks, haul roads and erosion and sediment control devices located outside the extractive area required to support these operations, and the processing and stockpile area.

The majority of the Site, which comprises the areas to the south beyond the SEA and the existing quarry, is primarily exotic pine forestry, with scattered areas of regenerating native bush within the gullies and stream riparian margins. The existing forested areas were retired from pastoral farming and planted in plantation pine that has recently been cleared in 2024 and replanted with pine seedlings in 2024 and 2025. A dense layer of pine slash covers much of the forestry area as a result of recent harvesting. Exotic species including woolly nightshade, gorse, fireweed, black nightshade, pampas grass and Scotch thistle have established within this area.

On the eastern edge of the Landholding adjacent to Orum Road is a small remnant of broadleaf forest block protected by a covenant. It comprises a diverse range of native vegetation, including the At-Risk Declining king fern. Other species also include tawa, hīnau, karaka, kohekoe, māhoe, nikau, pigeonwood, and kawakawa.

In the south, an area of mixed broadleaf treeland is present on very steep terrain on either side of existing stream. Vegetation in this area comprises a diverse range of mature native trees including kohekohe, taraire and rewarewa, with a tree-privet dominated subcanopy layer. Other native species such as māhoe, nikau, mamaku, gully tree fern, tutu and kiekie are also present.

Several tributaries of the Wairoa River, including Streams 1, 2, 2a and 3, flow within the Site and are in the vicinity of the existing quarry. Their existing conditions are detailed in the below section.

4.4 Natural Character Condition

As noted above, the primary aspects of natural character are considered in relation to the waterbodies on the Site. The level of natural character i.e. the biophysical (abiotic and biotic) attributes, reflect the extent to which natural elements, patterns and processes are present and the extent to which human modification has occurred. In addition, experiential aspects associated with the context of such waterbodies and their margins has been considered. Relevant to this application, and the legislative context as outlined in **Section 4**, the natural character analysis of the existing environment has been undertaken in relation to the "*wetlands, and lakes and rivers and their margins*" that occur within the Site, being the affected area relating to the proposed quarry expansion.

[12] Area 1 – Pine trees within the ONF protected via Condition 1 of LUC60361560; Area 2 – Pine trees along the Northern Ridge protected via Condition 49 of [2018] NZEnvC 96; Area 3 – Pine trees protected as an outcome of PC89.

Four streams (Streams 1, 2, 2a and 3) and their tributaries[13] have been identified as being potentially affected by the project. These have been surveyed by the Project ecologists (Tonkin and Taylor) and are illustrated within **Figure 5, Appendix 2**. A description of the existing natural character conditions of each stream is provided below.

4.4.1 Stream 1

Stream 1 is a permanent first order stream, with an average width of 1m, located to the north of the proposed quarry expansion. Stream 1 is a tributary of the Wairoa River that flows largely within the context of the SEA and adjacent to the existing quarry as it flows downstream. It meets its confluence with the Wairoa River immediately northwest of the existing quarry entrance on McNicol Road.

Stream 1 generally characterises a hard-bottomed active bed and characterises a mix of substrate types, including bedrock, boulders, cobble, gravel and silt/sand. Stream 1 is considered to have a high degree of hydrological heterogeneity where there are the presence of runs, riffles, chutes, waterfalls, and pools[14] (**refer to Photos 1 and 2 below**). Within the upper catchment along some tributaries such as Stream 1 Tributary 1 and the SEA Tributary, these sections of Stream 1 demonstrate a moderate instream habitat diversity with the presence of woody debris, cobble, undercut banks and root mats.

[13] Streams and tributaries surveyed include Stream 1 SEA Tributary, Stream 1 Tributary 1, Stream 1 Main Stem, Stream 2 Upstream, Stream 2 Downstream, Stream 2 Main Stem, Stream 2a, Stream 3 Overburden Tributary, Stream 3 Site 5B, Stream 3 East, Stream 3 West and Stream 3 Main Stem.

[14] Some of these pools along the SEA tributary are connected by channelised and low-flow sections.



Photo 1 taken from Stream 1 Tributary 1 (sourced from T&T).



Photo 2 taken from Stream 1 main channel (sourced from T&T).

The majority of Stream 1 is well shaded resulting in minimal instream aquatic plants and high organic matter while mats of long green filamentous algae are present along more exposed and slow-flowing sections. It is noted some reaches of Stream 1 were affected by recent pine harvesting, resulting in high fine sediment loads.

Fish and freshwater invertebrates including banded kokōpu, common bully, kōura, longfin eel, redfin bully, shortfin eel and torrentfish have been detected. Of which, longfin eel and banded kokōpu had been previously captured.

Macroinvertebrate communities at the SEA Tributary also demonstrate high habitat and water quality along upstream sections of Stream 1.

Riparian vegetation comprises native regenerating bush dominated by ponga, mahoe, karamu, kawakawa and hangehange.

Being largely unmodified and surrounded by native vegetation, the upper reaches of Stream 1 (including the SEA Tributary) have a higher level of perceived naturalness, while that of the lower reaches (including Tributary 1) becomes lower due to the influence of nearby forestry activities. Further downstream, the level of perceived naturalness is the lowest compared to its mid and upper reaches as human modification including culverts, roads and the existing quarry are evident.

In summary, the upper reaches of Stream 1, including the SEA Tributary, has high level of natural character due to the general lack of structures and modifications to the active bed, margins and context of the upper reaches of the stream. The natural character of the lower reaches (including Tributary 1) reduces to moderate due to the influence of adjacent land use and the presence of manmade structures.

4.4.2 Stream 2

Stream 2 is a permanent first order stream that is largely located within the proposed quarry expansion. It is a tributary of the Wairoa River and meets its confluence with the river southwest of the existing quarry on McNicol Road. The catchment of Stream 2 is heavily influenced by the surrounding pine plantation with the majority of the stream entirely within pine forestry.

The active bed of Stream 2 transitions from hard bottomed in the lower reaches to soft bottomed as it moves up the catchment into the pine forestry area. The active bed substrate is silt/sand-dominant, with occasional boulders, cobble and gravel of varying sizes. Along some sections, the stream bed is dominated by bedrock. The stream demonstrates a range of hydrological features which include riffles, runs, chutes, pools, and waterfalls.

Heavily influenced by forestry activities, the active bed contains high loading of woody debris and unnatural loading of fine sediment, as well as slash as a result of recent forestry harvesting (**refer to Photos 3 and 4 below**).



Photo 3 showing an overview of Stream 2 (sourced from T&T).



Photo 4 taken from lower reach of Stream 2 (sourced from T&T).

Stream 2 has a varying degree of shading. The majority of the stream has low shading due the lack of canopy cover. High shading along some sections of the stream is predominantly associated with slash and topography. A section downstream near the confluence with the Wairoa River has moderate shading due to the presence of native vegetation cover.

The presence of aquatic plants is highly associated with the amount of shading. Where shading is absent, excessive aquatic plant growth (predominantly fool's watercress) is present while few aquatic plants are present when there is high level of shading.

Fish communities including banded kokōpu, shortfin eel, and longfin eel were detected. Banded kokōpu, shortfin eel and kōura were previously captured. An existing concrete culvert is situated immediately upstream of the confluence, which forms a partial barrier to fish migration.

Macroinvertebrate communities demonstrate an overall high habitat and water quality of Stream 2, with upstream section having excellent quality.

Within the forestry section of Stream 2, riparian vegetation comprises primarily exotic vegetation, such as gorse, pampas, inkweed, willow weed, tree privet and Himalayan honeysuckle. Some young native species including ponga and mahoe are also present within the riparian margins. Along the lower reach immediately upstream of the Wairoa River confluence, this section of the stream margins are dominated by semi-mature native bush, with canopy layer dominated by kanuka and mahoe and understorey species comprising kawakawa, five finger, mingimingi, hangehange, pigeonwood and mapou.

Modifications along Stream 2 are evident and are primarily associated with pine forestry, which result in a very low level of perceived naturalness. Downstream of the forestry block, the presence of native bush and the general lack of human modification (except the concrete

culvert immediate upstream of the Wairoa River confluence) heighten the level of perceived naturalness.

Considering the above, Stream 2 demonstrates a low level of natural character in the upper reaches and a moderate-high level natural character within the semi-mature native bush section in the lower reach. The higher level of natural character in the downstream is affected by the presence of native vegetation within its margins and context, and the general lack of human activities.

4.4.3 Stream 2a

Stream 2a is a permanent first order stream located between Stream 2 and 3, with the majority of the stream located within the existing pine forestry and a section of the lower reach (approximately 200m) within a remnant native bush. It is a tributary of the Wairoa River and its confluence with the river is located along McNicol Road.

Stream 2a characterises a hard-bottomed active bed in the lower reach and transitions to being intermittently flowing and soft-bottomed. The stream channel is highly under the influence of pine forestry in the upstream. Large amounts of pine slash and high loadings of woody debris and fine sediments are present within the active bed. The upper reach of Stream 2a has limited variety of hydrological conditions while the lower reach is characterised by a series of cascades and waterfalls.

Fish communities including shortfin eel and kōura were detected despite the presence of a perched concrete culvert immediately upstream of the Wairoa River confluence, which forms a partial barrier to upstream fish migration.

Macroinvertebrate communities in the lower reach demonstrate an overall high habitat and water quality of Stream 2a.

Within the forestry section of Stream 2a, riparian vegetation is limited to short exotic shrubs and long grasses. Large amounts of slash also present within the stream margins due to pine harvesting (**refer to Photo 5 below**). On the other hand, riparian vegetation within the native bush section of the stream is dominated by native species including kanuka, mahoe and ponga, with understorey layer predominantly comprises kawakawa, pigeonwood, hangehange, and mapou. Extensive parataniwha are present in and around the waterfall / cascade channel.



Photo 5 taken from the upper reach of Stream 2a.

As noted above, modifications of Stream 2a are primarily associated with forestry activity in the upper reaches and human structures, including culvert and road which largely reduces the level of perceived naturalness. Despite this, the level of perceived naturalness is heightened along the section of Stream 2a that is located within the remnant native bush.

In summary, the natural character of Stream 2a is considered low in the upper reaches within the forestry section due to modifications within the active bed, margins and context by forestry activities. On the other hand, the lower reaches demonstrate a moderate-high level of natural character due to largely unimpeded flow, the presence of hydrological features and native vegetation, albeit the presence of human structures.

4.4.4 Stream 3

Stream 3 is a permanent second order stream located to the south of the proposed quarry expansion. It is a tributary of the Wairoa River and has average widths ranging from 0.36m in the upper reaches to 2.84m in the lower reaches. Similar to Streams 2 and 2a, Stream 3 is largely located within the existing pine forestry. A section of the stream, approximately 250m flows through a remnant block of native bush that is enclosed with the forestry land. In addition, a permanent tributary of Stream 3 flows within a covenant native vegetation block in the upstream. The majority of the stream is located within the existing pine forestry.

The active bed of Stream 3 is predominantly hard-bottomed, with a few sections of soft-bottomed bed in the upper tributaries and headwaters. Active bed substrate types include a mix of bedrock, boulders, cobble, gravel, sand and silt. The hydrological conditions in the upper reaches are limited while that of the lower reaches are relatively high and include runs, riffles,

pools, chutes and small waterfalls. Some sections of the lower reaches feature a series of cascades and waterfalls. The upper reaches characterise steep stream banks while the lower reaches typically have shallow gradient profile with wide and flat floodplain.

Due to forestry activities, high loading of instream woody debris is present within the upper reaches and unnatural loading of fine sediment is present throughout the catchment. The upper reaches have generally moderate to high shading due to dense pine slash, along with the topography and bankside vegetation, while the lower reaches are less shaded. Despite this, instream aquatic plants are generally limited, with some areas of high macrophyte mass.

Fish and freshwater invertebrate communities including banded kokōpu, common smelt, inanga, koaro, longfin eel, redfin bully, shortfin eel, torrentfish, rainbow trout and kōura were detected in Stream 3. Fewer species were detected upstream due the presence of waterfalls, which form barriers to upstream fish migration.

Macroinvertebrate communities indicate high habitat and water quality in the headwaters (Stream 3 Overburden Tributary) but reduce to low habitat quality in lower tributaries.

Riparian vegetation is predominantly exotic weed species such as gorse, pampas, privet and long grasses with some areas of bare ground. Native vegetation including seven-finger, karamu, ponga and mahoe are present along some sections of the stream. Abundant forestry slash is also present on the stream banks and margins of the main stream (**refer to Photo 6 below**).



Photo 6 showing an overview of Stream 3 (sourced from T&T).

The experiential quality of Stream 3 is largely influenced by pine plantation, which contributes to a lower level of perceived naturalness of the stream.

In summary, the natural character of Stream 3 is considered low-moderate due to evidence of human influences by forestry activities and exotic vegetation-dominated stream margins.

4.4.5 Summary of natural character conditions of streams within the Site

The streams within the Site tend to have low to high levels of natural character. Higher levels of natural character of the streams are associated with the largely unimpeded flows, the presence of hydrological features and native riparian vegetation and the general lack of human influence within the native bushes in the Site. On the other hand, instream sediment and woody debris loads, the presence of exotic vegetation and forestry slash, as well as human structures (roads and culverts) reduce the level of natural character along some sections of the streams.

4.4.6 Wairoa River

The Site is located within the catchment of the Wairoa River. Wairoa River is the second largest river in the Auckland Region that flows along the western base of Hunua Ranges. It is a fifth-order stream and is fed by numerous streams, including Streams 1, 2, 2a and 3 as identified above before discharging into the broader Tāmaki Strait. The Wairoa River Catchment is predominantly rural with some tributaries extending into the forested Hunua Ranges.

A section of Wairoa River flows approximately 30 metres west of the Site. This section of the Wairoa River demonstrates limited levels of modification within the active bed and channel and follows a natural flow path, which has created the steeply incised Wairoa River Gorge. The river gorge is a highly legible feature and is valued for its high intactness[15]. On the true left of the river, its margins and context contain extensive areas of indigenous vegetation that heighten the level of perceived naturalness while on the true right, the level of perceived naturalness is greatly detracted by human modifications including McNicol Road, pine plantation and existing quarry activities.

Further downstream, the Wairoa River is influenced by farming practices and sedimentation is apparent. Water quality is known to be very poor for E. coli, good for clarity and dissolved reactive phosphorus, and excellent for ammoniacal nitrogen and nitrate nitrogen.

The Wairoa River has forest-to-estuary connectivity and supports a diverse group diadromous fish. Its tributaries, including Stream 3, can be considered an important fish migration pathway that provide largely undisrupted access to important fish habitat.

In summary, this section of Wairoa River that is located in proximity of the Clevedon Quarry Site, while retaining some degree of naturalness due to the largely unimpeded flows and presence of indigenous vegetation, is heavily influenced by rural activities including pastoral farming, pine plantation, quarry activities and rural residential development. Considering the above, the level of natural character of this section of the Wairoa River is considered moderate.

4.5 Key Landscape Characteristics, Attributes, and Values

The key characteristics, attributes and values of the Site are broadly captured within the natural and physical environment, perceptual and associative dimensions. The special connection that

[15] ONF criteria (i) 'the state of preservation of the feature or site' under the AUP.

iwi have with the land and the waterways is acknowledged and this relationship is important to their spiritual and cultural wellbeing.

The physical characteristics, attributes and values in relation to the location of the proposed quarry expansion are the broader foothills landform of the Hunua Ranges that characterise a series of east-west orientated ridges and is defined by the Wairoa River Gorge to the west. As noted previously, a portion of the Wairoa River Gorge ONF sits within the western portion of the Site and is located in the vicinity of the proposed quarry expansion. The elements that underpin the values of the ONF are associated with the geology and landform of the Wairoa River Gorge.

The proposed quarry expansion is also partly within a SEA[16], which is valued for its indigenous vegetation composition. It comprises an extensive area of regenerating tree fern-broadleaf forest that has a mosaic of early-successional species, with the canopy layer varying between tree fern and broadleaf dominance according to topographic variation and microhabitat conditions.

While it is acknowledged that portions of the Site are part of a significant, working aggregate quarry, and the underlying zoning (i.e. SPQZ) indicates that the characteristics of the area will change, the perceptual values are also considered to be influenced by the working rural landscape associated with the existing plantation forestry occurring both within and beyond the Site, as well as the pastoral farmland across the broader area. It is also influenced by areas of indigenous vegetation associated with the SEA and regenerating vegetation within the gullies that contribute to a heightened sense of naturalness within the local landscape. In relation to pine forestry areas, perceptual values are associated with the cyclical change through pine planting and harvesting, typically over a 25 year period. This perception of the productive landscape is also experienced through the presence of activity associated with large scale machinery.

The associative values are the intangible things that influence how places are perceived. Notably, this is considered to include (but not limited to) the cultural history of the Site and its wider context including the Wairoa River catchment and Scenic Reserve, considered to have important cultural landscape values. Associative values also include the values that the local community will likely hold for this landscape, that of a working rural landscape on the fringes of developed lifestyle areas and a working quarry.

5.0 Statutory Context

The relevant statutory provisions are set out in the accompanying Clevedon Quarry Expansion – Substantive Application prepared by Tonkin and Taylor (‘Substantive Application’). A summary of the key matters of consideration relevant to this assessment are provided below.

5.1 Fast-track Approvals Act 2024 (FTAA)

The Clevedon Quarry Expansion is being advanced under the Fast-track Approvals Act, which provides an alternative consenting pathway for infrastructure and development projects that can demonstrate alignment with national and regional outcomes. The Clevedon Quarry Expansion under the FTAA Referral Application Process has been successful and under this Substantive

[16] The broader SEA has a total area of 7,023ha.

Application, the requirements to assess applications under the Resource Management Act are set out in **Section 5.2**.

In addition to the RMA, the Amendments to FTAA[17] also require that:

> *(1A) When considering the effects of a district land use activity, a consent authority must disregard –*
>
> *(f) views from private property.*

5.2 Resource Management Act 1991 (RMA)

While the proposed Clevedon Quarry expansion is not located within any identified Outstanding Natural Features or Landscapes (ONFLs), the Site overlaps with a scheduled ONF (Wairoa River Gorge[18]) within the AUP. The Site is also located within the Wairoa River catchment and includes several streams (including Streams 1, 2, 2a and 3).

The following Matters of National Importance set out in Section 6 of the RMA, are therefore considered pertinent to this assessment:

- *6(a) the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development:*
- *6(b) the protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development.*

The following clauses in Section 7 are also of relevance to this assessment:

- *7(c) the maintenance and enhancement of amenity values:*
- *7(f) maintenance and enhancement of the quality of the environment.*

These matters have been addressed within **Section 8** of this assessment.

5.3 Auckland Unitary Plan – Operative in Part

The Site falls under the jurisdiction of Auckland Council. The Site and the proposed quarry expansion are located within two zones under the AUP (**refer to Figure 4, Appendix 2**), with the majority of the proposed expansion being within the SP-QZ and the remainder in the RPZ. The relevant objectives and policies which relate to this application are outlined in the Substantive Application.

In summary, the purpose of the SP-QZ is to provide for significant mineral extraction activities to ensure that mineral extraction can continue in a manner that minimises adverse effects. These provisions seek to ensure that the demand for minerals can be met, where possible, from supply sources within Auckland. Of particular relevance to this assessment, are the assessment criteria under Section H28.7.2 of the AUP which require consideration on visual amenity and states:

[17] Commence 1 month after the Planning Bill receives Royal assent.

[18] Schedule 6 – Outstanding Natural Features Overlay Schedule [rcp/dp] – ID 237 Wairoa River Gorge.

'whether mineral extraction activities in close proximity to dwellings mitigate significant adverse visual amenity effects through the use of screening and landscaping'[19].

For Rural Zones, the maintenance or enhancement of the character, amenity values and biodiversity values are considered, while accommodating the localised character and dynamic nature of the zone[20]. The zone also anticipates a predominantly working rural environment[21] and recognises that mineral extraction are typical features of the RPZ[22] and SP-QZ[23], and will generally not give rise to issues of reverse sensitivity in these zones.

While the proposed quarry expansion itself is not subject to any ONFL overlay, the western part of the Site contains a portion of the Wairoa River Gorge ONF (ID 237), as noted above. The Wairoa River Gorge ONF *'formed along the Wairoa fault trace, the Wairoa River gorge is one of few good examples of steep incised river gorges in the Auckland region'*. The ONF is considered to meet the following criteria under the AUP:

(c) the extent to which the feature is an outstanding representative example of the diversity of Auckland's natural landforms and geological features;

(e) the extent to which the landform, geological feature or site contributes to the values of the wider landscape;

(h) the potential value of the feature or site to provide additional understanding of the geological or biotic history; and

(i) the state of preservation of the feature or site.

Another matter to consider is that the Site contains SEA_T_5588 (located to the north and west of the Site) identified in the AUP. The SEA is valued for its rarity, diversity and being an ecological stepping stone, migration pathway and buffer[24].

6.0 The Project

The description of the Project is detailed in the Substantive Application. In summary, the Project involves the expansion of an existing quarry to extend the life of the Clevedon Quarry operation.

6.1.1 Footprint

The existing quarry is located to the northwest of the Site. The proposed expansion will involve extending the existing quarry in a south-eastern direction and allow for quarrying largely within the SP-QZ (approximately 80% of the Life of Quarry), with approximately 16ha (approximately 20% of the Life of Quarry) within the RPZ.

[19] H28.7.2(b)(i)

[20] H19.2.3(1)

[21] H19.2.4(1)(a)

[22] H19.2.4(2)(b)

[23] H19.2.4(2)(c)

[24] Schedule 3 – Significant Ecological Areas – Terrestrial Schedule – SEA_T_5588.

Overall, the proposed quarry expansion will span across an area of approximately 74ha and yield approximately 150 MT of aggregate cumulatively across five stages over 50 years[25]. The Project will maintain the current consented annual extraction limit of 3 MT per year, with no increase to existing operational parameters such as truck movements or hours of operation. The quarry floor will remain at RL 22.5m for each stage.

To enable the expansion of Clevedon Quarry, and support the extraction of aggregate, the Project will also include the construction of internal haul roads, overburden removal (including the establishment of an overburden disposal area to the east of the proposed quarry expansion) and the construction of a new wetland water treatment system near the Site entrance, to manage water runoff and discharges. The existing FoH activities will continue, with mobile crushing and processing plants remaining the primary infrastructure processing the raw materials. These facilities will primarily remain located at the base of the quarry (within the FoH area) and supported by other ancillary infrastructure, such as weigh bridges and Site offices.

A number of overburden options were previously considered. The proposed OBDA is located to the east of the proposed quarry expansion within a local valley, occupying approximately 4.6ha in area (**refer to Figure 5, Appendix 2**). It is intended that the OBDA will receive overburden during indicative Stage 1 of the Project. Any overburden generated in latter stages will be either stockpiled onsite or transported offsite.

The Project will require the removal of approximately 6.1ha of native terrestrial vegetation that is within SEA_T_5588. Stream reclamation will occur primarily within the upper reaches of Streams 2 and 2a, with some loss of tributaries of Streams 1 and 3.

Revegetation opportunities are identified within the Site and include planting of the proposed OBDA, within the riparian margins and upper catchment of Stream 3 and quarry bench planting. In total approximately 67.6ha of replacement indigenous planting, with an additional 9.45ha of bench planting, is proposed to mitigate the removal of vegetation as part of the Project to assist in mitigating natural character and landscape effects.

6.1.2 Indicative Staging

All stages referred in this report are indicative only and may vary over the life of this Project.

During Stage 1 (indicative 10-year plan), extraction will largely occur within the lower to mid slopes of the 2018 approved quarry extent. Stage 2 of the Project (indicative 20-year plan) will involve expansion towards the east on the upper slopes and remain largely contained within the approved quarry extent. A small portion of the expansion will occur within the RPZ and will require the removal of approximately 0.2ha of the SEA_T.

As the Project progresses towards Stage 3 (indicative 30-year plan), the expansion of the quarry will extend towards the south beyond the approved extent. It is noted that the expansion during this stage will still largely occur within the SP-QZ during this stage.

Stages 4 (indicative 40-year plan) and 5 (indicative 50-year plan and LoQ) will involve expansion primarily in an eastward direction, extending beyond the SP-QZ into the RPZ. The expansion of the quarry to the northeast during these stages will require the removal of indigenous vegetation within the SEA_T.

[25] Timeframe of the 5 indicative stages are as follows: Stage 1 (10 years), Stage 2 (20 years), Stage 3 (30 years), Stage 4 (40 years) and Stage 5 (50 years).

6.1.3 Mitigation Package

The proposed mitigation strategy aims to address landscape effects associated with the proposed quarry expansion and to provide ecological freshwater and terrestrial offsetting or compensation in relation to the removal of indigenous vegetation within the SEA. A number of revegetation opportunities are present within the Site and include areas to the east of the proposed quarry expansion on the OBDA site and south within the riparian margins and the upper catchment of Stream 3 (**refer to Figure 13, Appendix 2**). These account for approximately 10.6ha of terrestrial offset planting, 40.4ha of freshwater offset planting and 16.6ha of riparian planting, totalling approximately 67.6ha area. These mitigation plantings are expected to be undertaken following the commencement of the Project, with planting of the OBDA occurring approximately at Year 10.

Planting on quarry benches from a height of RL 200m to RL 306m will also be implemented Post Closure, accounting for approximately 9.45ha in area. The purpose of this planting is to soften the engineered landform of the quarry benches on the mid and upper slopes. The height of RL 200m is determined based on the higher visual sensitivity of the elevated portion of the Site and is recognised by previous Environment Court decision[26] which requires 'hydro seed or otherwise visually mitigate the batter slopes of those benches from a height of RL 290m to a height of RL 200m'.

6.1.4 Proposed Condition Changes Relating to 2018 Front of House Land Use Consent

As part of this Project, it is proposed to vary the 2018 Land Use consent[27] to reduce its scope so that it becomes a standalone FoH consent, limited to authorising the ongoing operation of the consented ancillary activities such as the weigh bridge, wheel wash, offices, processing and stockpiling at the base of the expansion area. As such, consent conditions not relevant to the FoH activities would be removed. With specific reference to landscape consideration, this relates to Condition 48 which states:

> *'within 6 months of completion of the quarrying and formation of the final benches in stages 5 and 6 (as shown on Boffa Miskell drawing Figure 4, Proposed Quarry Stages, dated 4 December 2017 Revision C), the consent holder shall hydro seed or otherwise visually mitigate the batter slopes of those benches from a height of RL 290m to a height of RL 200m.'*

This proposed change would reflect an administrative change to avoid complexity of operating under two condition sets for the expansion works and supports effective monitoring and compliance. The proposed removal of Condition 48 is essentially addressed and resolved in the mitigation package for this substantive application as stated in **Section 6.1.3**.

6.1.5 Proposed Condition Changes Relating to Removing Planting Areas

It is also proposed to remove Planting Areas A, B, C and E (**refer to Plate 1 below**) as required under Condition 4 of LUC60361560 Land Use consent. Completed Planting Areas A and C and

[26] 2018 NZEnvC 96 para 48.

[27] Consent reference LUC60291842.

Planting Areas B and E (which are not yet planted) within the proposed quarry footprint will be addressed as part of the wider offset and compensation planting package.

7.0 Visual Catchment and Viewing Audiences

To determine the visual catchment and viewing audience of the Project, a study of aerial photography including land use, landform (contours) and vegetation patterns in addition to a series of Zone of Theoretical Visibility (ZTV) analyses were undertaken. Site visits then followed to ground truth and identify potential viewing audiences and to obtain representative photo viewpoints (**Site Context Photographs 1-18, Appendix 2**) to assist in determining the likely level and nature of change. Representative views have been obtained from the nearest available public locations where views could be captured.

Due to the Site's location being enclosed by steep hills to the east, south and west, the Site's visibility is generally concentrated towards the flatter valley and Clevedon area in the north and west. This includes land occupied by rural residential properties, farmland, urban development within the southern reaches of Clevedon village, and the publicly accessible Clevedon Showgrounds. These viewing audiences, in most cases, have existing views of the current Clevedon quarry activities.

With the above considered, the viewing audiences of the Site have been identified and categorised into the following geographical groups. The locations and extents of the viewing audience groups are illustrated in **Figure 6, Appendix 2,** and the distance from the quarry, along with the reason for selection outlined in Table 1 below.

Viewing Audience Group A:

- Residents and road users along east Otau Mountain Road, located to the north of the Site[28].

Viewing Audience Group B:

- Residents and road users along south McNicol Road and eastern end of Whiteside Lane, located to the northwest of the Site[29].

Viewing Audience Group C:

- Residents and road users along Highridge Road, southern end of Monument Road, north McGregor Road, north Sky High Road and Bridle Way, located to the southwest of the Site.
- Visitors to Wairoa Gorge Scenic Reserve.

Viewing Audience Group D:

- Residents and road users south of Tourist Road and Quinns Road, including those along a section of McNicol Road (between Tourist Road and Whiteside Lane),

[28] These particularly include 109, 124, 171, 184, 202, 203, 222, 233, 238, 246, 247, 256, 266, 373, 422, 426, 450 and 494 Otau Mountain Road.

[29] These particularly include 384, 400, 414, 426, 438, 448, 458, 498, 510, 520 and 600 McNicol Road and 7 and 8 Whiteside Lane.

Chesham Lane, Whiteside Lane, Pioneer Road, south Monument Road, Munros Road, located to the west to northwest of the Site.

Viewing Audience Group E:

- Residents and road users north of Tourist Road and Quinns Road, and east of Papakura-Clevedon Road, located to the northwest of the Site. These include north McNicol Road, a section of Monument Road (between Clevedon Showgrounds Reserve and Tourist Road), Rossbern Lane, Ashford Rise, northeastern end of Otau Mountain Road, Taitaia Lane, Holdens Road and south of Clevedon-Kawakawa Road.
- Visitors to the Clevedon Showgrounds Reserve, McNicol Homestead, Clevedon Kawakawa Road Esplanade and Clevedon Wharf Reserve.

Viewing Audience Group F:

- Residents and road users within Clevedon Village, including new residential development in the southern reaches of the village (Clevedon Meadows and Conmara Estate), located to the northwest of the Site.
- Users of Clevedon Tennis Club, Clevedon Bowling Club and Clevedon School.

Viewing Audience Group G:

- Residents and road users along Creightons Road (up to the intersection with Jones Road), Cherrington Road, east of a section of Jones Road (before the intersection with Garvie Road) and Brodie Road, located to the west of the Site.

Viewing Audience Group H:

- Residents and road users west of Papakura-Clevedon Road, south of West Road and the area up to Hamlin Road, Village Way and Altitude Road to the east, located to the west of the Site. These include a section of Papakura-Clevedon Road (between the intersection with West Road to the north and Heard Road to the south), Clevedon-Takanini Road, Parish Line Road, Burnside Road, north Aidens Way, north Church Road, north Ardmore Quarry Road, north Peterson Road, Mullins Road, Bullens Road, Hamlin Road, Village Way and Altitude Road.
- Users of Ardmore Airport and Ardmore School.

Viewing Audience Group I:

- Residents and road users along Twilight Road, West Road, Tyldens Road, eastern end of Fitzpatrick Road, and west of Clevedon Village.
- Users of Clevedon Scenic Reserve (in particular the lookout), located to the northwest of the Site.

No visibility of the Proposal from Tai Rawhiti Scenic Reserve and Papa Turoa Scenic Reserve (located approximately 1.9-2.4km to the north-east) have been identified as indicated in the ZTV analysis (**Figures 7-12, Appendix 2**); therefore, no further assessment of visual effects on users of these reserves has been undertaken.

A range of viewpoints representing the key viewing audiences listed above have been selected and are illustrated on **Figure 6**, with photography provided within **Appendix 2**. Visual simulations from selected locations are illustrated in **Appendix 3**.

Table 1 Visual Assessment Viewpoints

Site Context Photo.	Viewing Audience Group No.	Location	Direction of View	Viewpoint Distance to Applicant Landholding and Proposed Quarry Expansion (approx.)	Reason for Selection
1	Group A	Otau Mountain Road (near the entrance of 286 Otau Mountain Road)	South	400m to Landholding 890m to Proposed Quarry Expansion	Representative of viewing audiences along Otau Mountain Road, particularly nearby residents in elevated locations.
2	Group B	McNicol Road (near the entrance of 520 McNicol Road)	Southeast	45m to Landholding 620m to Proposed Quarry Expansion	Representative of viewing audiences along south McNicol Road, particularly nearby residents.
3	Group C	Highridge Road (near 100 Highridge Road)	Northeast	810m to Landholding 1440m to Proposed Quarry Expansion	Representative of viewing audiences along Highridge Road, particularly nearby residents.
4	Group D	Pioneer Road	Southeast	1160m to Landholding 1610m to Proposed Quarry Expansion	Representative of viewing audiences along Pioneer Road, particularly nearby residents.
5	Group D	The intersection of Tourist Road and McNicol Road	Southeast	1760m to Landholding 2580m to Proposed Quarry Expansion	Representative of viewing audiences along Tourist Road, McNicol Road and Quinns Road, particularly nearby residents.
6	Group D	Tourist Road (near the intersection with Monument Road)	Southeast	2190m to Landholding 2670m to Proposed Quarry Expansion	Representative of viewing audiences along Tourist Road, particularly nearby residents.
7	Group E	Monument Road (near the southern end of	Southeast	3050m to Landholding	Representative of viewing audiences along Monument Road, particularly newly established residential

Site Context Photo.	Viewing Audience Group No.	Location	Direction of View	Viewpoint Distance to Applicant Landholding and Proposed Quarry Expansion (approx.)	Reason for Selection
		Clevedon Showgrounds)		3720m to Proposed Quarry Expansion	viewing audiences south of Clevedon village and visitors of Clevedon Showgrounds Reserve.
8	Group E	Papakura-Clevedon Road	Southeast	4420m to Landholding 4830m to Proposed Quarry Expansion	Representative of viewing audiences along Papakura-Clevedon Road and nearby residents.
9	Group F	Monument Road (near Clevedon Tennis Club)	Southeast	3960m to Landholding 4650m to Proposed Quarry Expansion	Representative of viewing audiences along Monument Road, particularly residents in the southern reaches of Clevedon Village and users of Clevedon Tennis Club, Bowling Club and Clevedon Showgrounds Reserve.
10	Group F	Footpath adjacent to Clevedon-Kawakawa Road (near Clevedon School)	South	4580m to Landholding 5370m to Proposed Quarry Expansion	Representative of viewing audiences along Clevedon-Kawakawa Road, particularly residents in the northern reaches of Clevedon Village, and viewing audiences associated with Clevedon School.
11	Group G	Creightons Road (107 Creightons Road)	Southeast	4450m to Landholding 4640m to Proposed Quarry Expansion	Representative of viewing audiences along Creightons Road, particularly residents in elevated locations.
12	Group G	Cherrington Road (between 2 & 18 Cherrington Road)	East	4510m to Landholding 5170m to Proposed Quarry Expansion	Representative of viewing audiences along Cherrington Road, particularly residents in elevated locations.
13	Group G	Jones Road (near the entrance of 149 Jones Road)	Northeast	3960m to Landholding 4740m to Proposed Quarry Expansion	Representative of viewing audiences along Jones Road, particularly nearby residents in elevated locations.

Site Context Photo.	Viewing Audience Group No.	Location	Direction of View	Viewpoint Distance to Applicant Landholding and Proposed Quarry Expansion (approx.)	Reason for Selection
14	Group H	Burnside Road	Southeast	7280m to Landholding 7600m to Proposed Quarry Expansion	Representative of viewing audiences along Burnside Road, particularly nearby residents.
15	Group H	Clevedon-Takanini Road	Southeast	7080m to Landholding 7450m to Proposed Quarry Expansion	Representative of viewing audiences along Clevedon-Takanini Road and nearby residents.
16	Group I	West Road	Southeast	6520m to Landholding 6980m to Proposed Quarry Expansion	Representative of viewing audiences along West Road, particularly residents and road users in elevated locations.
17	Group I	West Road	Southeast	6220m to Landholding 6730m to Proposed Quarry Expansion	Representative of viewing audiences along West Road and nearby residents.
18	Group I	Twilight Road	Southeast	5130m to Landholding 5850m to Proposed Quarry Expansion	Representative of viewing audiences along Twilight Road and nearby residents.

8.0 Assessment of Effects

The effects covered in this assessment include those that can occur in relation to changes to landscape attributes and values, character and visual amenity (i.e. viewing audiences and their outlook), in addition to natural character effects in relation to the waterbodies that occur within the Site. The effects described in this assessment are considered with the proposed mitigation measures implemented.

Natural character, landscape and visual effects can result from change in the components, character or quality of the landscape values. Usually these are the result of landform or vegetation modification or the introduction of new structures, facilities or activities. All these impacts are assessed to determine their effects on landscape character and quality, and visual

amenity effects on public and private viewing audiences. In this report, the assessment of potential effects is based on a combination of the landscape's sensitivity and visibility, and the nature and scale of the Project in relation to the existing characteristics of the Site.

The findings of this assessment are set out in **Sections 8.1 – 8.3** of this report with a full methodology describing the landscape and visual assessment method set out in **Appendix 1.** The findings of this assessment adopt the seven-point scale between very low and very high as endorsed by the NZILA to determine the overall level of effect.

8.1 Natural Character Effects

As described in **Section 5** of this assessment, the areas considered under the assessment of natural character relate to the identified streams and associated margins within the Site. **Section 4.4** of this report details the existing natural character conditions of the identified streams.

The assessment of natural character considers the physical impacts on the active bed and margins of existing streams. This assessment has been undertaken by assessing the abiotic, biotic, and experiential characteristics of the waterways within the Site in conjunction with the *Clevedon Quarry Expansion Ecological Assessment: High-level habitat descriptions*[30]. This has also been informed by the assessment inputs from an aquatic ecologist relating to the active bed and margins of identified waterbodies where relevant. In general terms, effects on natural character consider changes in existing condition, across relevant attributes:

- ***Natural Character Effects****: Derived from changes in physical condition and characteristics of waterbodies encompassing their elements, patterns and process and how these are experienced.*

The Project will progressively impact the identified streams which are located within the proposed quarry extent. This will involve in the reclamation (removal) of the upper reaches of Streams 2 and 2a, and some loss of tributaries of Streams 1 and 3. The impacts on these streams will broadly begin in the northern portion of the Site, moving south and then east as extraction activities progress in latter stages (**refer to Plate 2 below**). A mitigation package will occur to the south of the proposed final quarry extent along Stream 3 to provide offset compensation. Through this mitigation, some biophysical and experiential attributes may be in part returned to the stream at a localised level.

Whilst the Project will result in a change in the states of the streams, it is important to note that the level of effects on natural character will need to take into account the existing condition of the streams. In addition to this, the consideration of underlying zoning within which the streams are located will also be given. More specifically, the proposed quarry extent sits largely within the SP-QZ, which indicates an anticipated outcome of the Site as a quarry and consequently the removal of the streams and their tributaries.

[30] Clevedon Quarry Expansion Ecological Assessment: High-level habitat descriptions, Tonkin & Taylor Ltd, 27 January 2026.

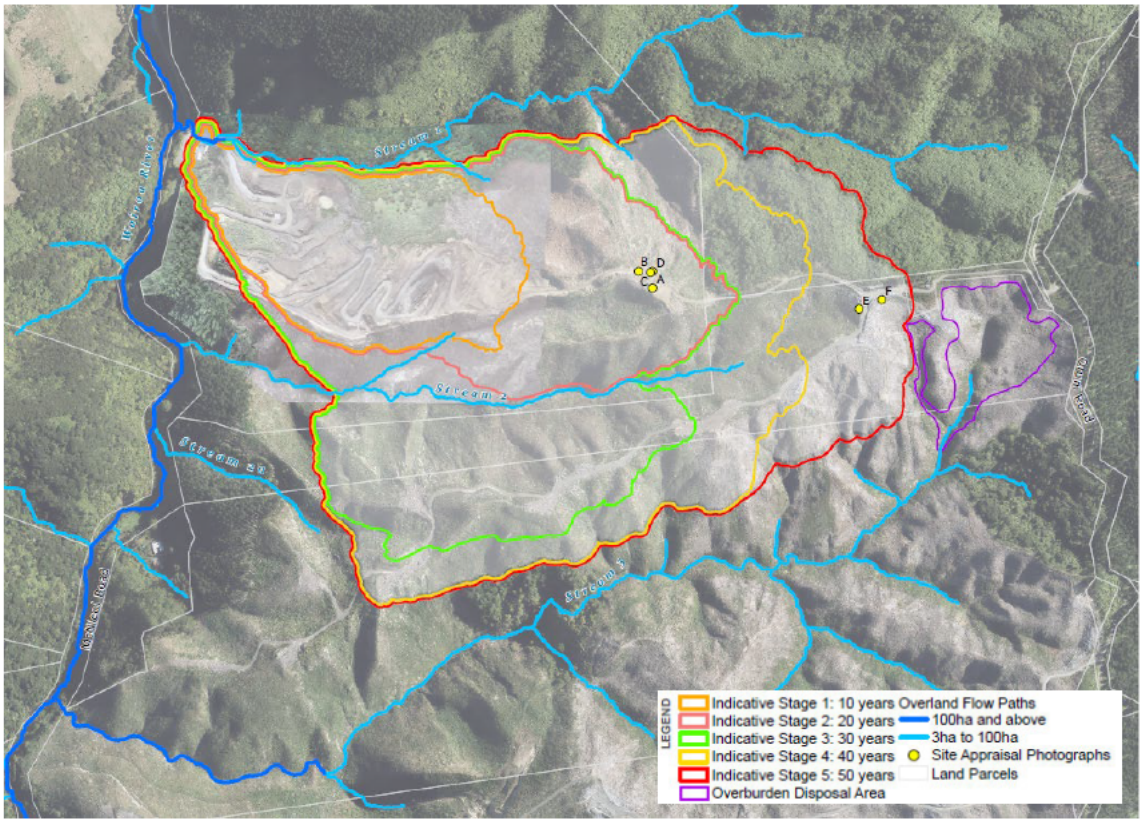


*Plate 1 Proposed staging plan showing the affected streams by each indicative stage of the proposed quarry expansion (also refer to **Figure 5, Appendix 2**).*

Stream 1

The impact of the Project on the natural character of Stream 1 will occur primarily within the SEA Tributary and Tributary 1, both of which will be permanently removed, subsequently altering the geomorphology, hydrological processes, riparian cover and the experiential qualities of these intermittent tributaries.

While the SEA Tributary forms part of the upper reaches of Stream 1 that contains high levels of natural character and a SEA overlay, and is within the RPZ, the majority of the tributaries within the upper reaches will remain unaffected by the Project. The main channel of Stream 1 will also be set back from the proposed quarry expansion, avoiding further natural character effects on the upper reaches of the stream. Taking this into account, the natural character effects on the upper reaches of Stream 1 are considered **low-moderate adverse**.

Similarly, the Project will require the removal of some tributaries within the lower reaches of Stream 1 (including Tributary 1) that have moderate levels of natural character. These tributaries are largely within the approved quarry extent and the SP-QZ. Other project components, including the proposed constructed wetland, Site offices and ancillary infrastructure near the Site entrance (located within the FoH area) will continue to affect the modified lower reaches of Stream 1. This area is already influenced by the existing quarry with associated modifications, and hence exhibits a lower level of natural character. As a result, the natural character effects on the lower reaches of Stream 1 are considered **low** adverse.

Streams 2 and 2a

Streams 2 and 2a have low-moderate levels of natural character within their upper reaches due to the modifications by the existing pine forestry on their active beds, margins and context.

These sections of the streams are also largely within the SP-QZ. The removal of the upper reaches of these streams as a result of the Project is therefore considered to have **low adverse** effects on the natural character of these streams.

Stream 3

Stream 3 has a moderate level of natural character that relates primarily to the biophysical attributes of its active bed and pockets of native vegetation within its margins. The Project will result in the removal of some sections of several intermittent tributaries in the mid and upper reaches, with some located within the SP-QZ. The tributaries to be removed in the upper reaches, while located outside of the SP-QZ, are modified by the existing pine forestry and hence these tributaries have a lower level of natural character. Despite the removal of these tributaries which will further reduce the level of natural character of the stream, the offset mitigation along much of the length of Stream 3 will support a more natural hydrological and geomorphic functioning within the stream corridor. New plantings will also extend and connect the existing indigenous forest and treeland within the wider catchment, enhancing the ecological connectivity for native flora and fauna. From an experiential perspective, the offset mitigation will strengthen the level of perceived naturalness and the sense of remoteness through a vegetated stream catchment that separates the quarry activities from the stream. Over time, the indigenous riparian and terrestrial planting will materially improve the natural character of Stream 3 and its margins. As a result, there will be a **beneficial** natural character effect on the stream.

8.1.1 Natural character effects on the Wairoa River

The proposed quarry expansion will have impacts on streams and their tributaries within the catchments of Streams 1, 2, 2a and 3 that discharge directly to the Wairoa River, causing potential adverse effects on the water quality of the active channel of the river. This effect is, however, limited to the section of Wairoa River just downstream of the Project. It is also noted that the active bed, margins and context of this localised section of the river has already been influenced by existing quarry activities, pine plantation and other human modifications such as roads. Considering this, any natural character effects on Wairoa River are therefore considered **very low adverse**.

8.2 Landscape Effects

Landscape effects consider the consequence of change on the existing characteristics and values of the landscape. Landscape character is derived from the distinct and recognisable pattern of elements that occur consistently in a particular landscape. It reflects combinations of geology, landform, soils, vegetation, land use, features of human settlement, and intangible associations. It creates a unique sense of place defining different areas of the landscape.

To assess the landscape effects associated with the Project, this assessment has considered the landscape context and values outlined in **Section 4** of this report, and the effects the Project will have on these values at both the broader landscape scale of the Hunua Ranges foothills, and the Site scale encompassing the immediate vicinity of the existing quarry.

8.2.1 Direct landscape effects (physical effects)

Landform

In terms of the effects on landform, the Project will ultimately involve the progressive removal of a substantial amount of material from the Site across five indicative stages of work and will permanently change the foothills landform to stepped benches, cut faces and associated overburden area that is characteristic of an operational quarry. This will interrupt the sequence of east-west orientated ridges of the foothills and result in a substantial change in landform at a localised level (i.e. at the scale of the quarry footprint). It is however acknowledged that the proposed quarry expansion during indicative Stages 1 to 3 will occur mostly within the SP-QZ, which suggests the majority of the quarry operations and the associated change in landform within the zone are anticipated. The broader Hunua Ranges foothills landform will remain a legible landform that forms an important backdrop to the Clevedon valley. As such, the adverse effects on landform are considered **moderate**.

Vegetation

In considering the effects on vegetation, a large portion of the proposed quarry expansion will occur in areas of existing pine forestry, which occupy much of the Site. It is not considered that this exotic vegetation holds high landscape values in this context.

However, the Project will require the removal of approximately 6.1ha of native terrestrial vegetation that is subject to a SEA overlay in the AUP during Stages 2, 4 and 5, resulting in adverse effects on the landscape values of the Site. This vegetation comprises a mosaic of early-successional species with canopy composition varying between tree fern and broadleaf vegetation that is considered to contribute to the physical values of the landscape.

To compensate the loss of this indigenous vegetation, an offset mitigation planting of 67.6ha of area is proposed within the balance of the Site, notably on the overburden site and within the riparian margins and upper catchment of Stream 3. This planting focusses on the riparian margins and adjoining terrestrial slopes and the revegetation and enhancement actions would be mostly undertaken from the commence of the Project in advance of or coincide with the expected vegetation removal. Post Closure, approximately 9.45ha area of plantings on mid to upper quarry benches will also be implemented. In time, all of these plantings will extend and connect the existing indigenous vegetation within the Site and eventually providing partial enclosure to the quarry and producing a more naturalised foothills landscape. As such, the effects on vegetation are considered **beneficial** during Stage 1, becoming **low-moderate adverse** during Stages 2-5 when the SEA vegetation is being removed, and reducing to **very low adverse** once plantings are established post closure.

Streams

In relation to the Site's streams and their tributaries within the footprint of the proposed quarry extent, all will be impacted by the Project at different times through the life of the Project. These include several tributaries of Stream 1 (including SEA Tributary and Tributary 1), the upper section of Streams 2 and 2a, and tributaries of mid to upper reaches of Stream 3. Of these, Stream 1 is identified as having moderate to high level of ecological values with tributaries of Streams 2, 2a and 3 having moderate ecological values.

The ecological conditions and values of these streams and tributaries do in part contribute to the physical values of the landscape. The removal of Stream 1 tributaries will result in **low-moderate adverse** physical effects on these tributaries as the riparian vegetation that contributes to the physical values of the broader landscape will be removed, in particular along the SEA Tributary. However, any physical effects on Stream 1 main channel will remain **low adverse** given the majority of the stream is set back from the proposed quarry expansion.

On the other hand, Stream 2 has lower level of ecological values due to their modified nature by existing pine forestry activities and hence its removal will result in **low adverse** physical effects.

However as mentioned previously, the proposed offset mitigation will provide extensive plantings along the riparian margins within the riparian margins and upper catchment of Stream 3 and will enhance the physical values of the stream. Despite some localised adverse effects on Streams 1, 2 and 2a, the mitigation plantings will provide **beneficial** effects to the broader Site once established.

8.2.2 Effects on landscape character

In terms of landscape character, the proposed quarry expansion will inherently change the majority of the Project footprint from a plantation forestry land use to a quarry land use, resulting in a consequential change in the landscape's physical, perceptual and associative attributes. While a change will take place, this change will occur in the context of an existing quarry landscape in which the area of the Project is linked both physically and visually by the eastern portion of the existing quarry. However, it is recognised that the expansion of the quarry, particularly the northeastern part, will affect the landscape which is associated with attributes of greater value (i.e. SEA).

It is also important to note that much of the proposed expansion will occur in the area that is zoned as SP-QZ under the AUP zoning. Notwithstanding this, approximately 20% of the full extent of the Project goes beyond the SP-QZ into the RPZ. However, the margins of the two zones do not necessarily relate to a change in landscape characteristics, although it is considered that both broad areas remain under the influence of the extraction activities in relation to their perceptual and associative qualities.

In addition, the existing quarry and the adjacent plantation land use have underpinned the working rural character of the Site and the broader Hunua Ranges foothills. Based on this and the planned characteristics of the Site, the Project will result in **low-moderate adverse** effects on landscape character.

8.2.3 Effects on ONF

While no proposed works will be carried out within the Wairoa River Gorge ONF, the potential effects on the ONF as a result of the Project are considered. An assessment of the key AUP listed criteria of the ONF is provided below.

In relation to criteria (c), (e), (h) and (i), it states:

> *(c) 'the extent to which the feature is an outstanding representative example of the diversity of Auckland's natural landforms and geological features'*,
> *(e) 'the extent to which landform, geological feature or site contributes to the value of the wider landscape',*
> *(h) 'the potential value of the feature or site to provide additional understanding of the geological or biotic history'*, and
> *(i) 'the state of preservation of the feature or site'*.

The Project will not alter the landform or the geological characteristics of the river gorge. It is, however, acknowledged that the proposed quarry expansion will modify the landform adjacent to the northeastern edge of the ONF. For this reason, it is considered that the proposed quarry expansion will not affect the preservation of the ONF and the Wairoa River Gorge will continue to be a representative example of the diversity of Auckland's natural landforms and geological features. In addition, the landform and geology of the ONF does not appear to contribute to the wider character or value of the landscape. It is the more elevated and steeply sloping foothills of

the Hunua Ranges which form a backdrop and enclosing element to the Clevedon valley and contributes to the wider landscape values. Considering the above, any effects of the expansion on the ONF will be **neutral**.

8.2.4 Effects of proposed condition changes

In relation to the effects of removing 2018 Land Use consent condition 48 and varying LUC60361560 Planting Areas, these will effectively be addressed and resolved in the mitigation package proposed under the Project as noted in **Section 6.1.5**. It is therefore considered any effects on landscape as a result of changing conditions will be **neutral**.

8.3 Visual Effects

Visual effects are a component of overall amenity and therefore contribute to peoples' appreciation of the pleasantness and aesthetic coherence of a place alongside its cultural and recreational attributes. In short, this aspect of the assessment considers the effects of visual change that the Project would bring to the outlook and views of people who make up the identified viewing audience.

It should be emphasised that a change in a landscape or view does not, of itself, necessarily equate to an adverse visual effect. Similarly, the scale of visual effects is not automatically commensurate with the extent to which a proposal may be visible. The effects described consider the worst case scenario within each stage. It is however acknowledged that the quarry landscape is dynamic and is constantly changing in both subtle and more dramatic transformational ways. These changes are both natural and human induced and subject to visual human experience as part of the landscape. Further activities within the quarries (such as machinery and truck movements) add to the dynamic nature of these environments.

As part of managing landscape change it is therefore important that the potential for visual effects is understood to ameliorate or address this aspect of adverse effects. The aim is to maintain or enhance the visual environment through appropriate design outcomes whilst recognising that both the level and nature of visual effects may change over time.

A detailed assessment of visual effects on viewing audience groups identified in **Section 7.0** of this report is included in **Appendix 4** of this report and should be read in conjunction with the following summary of visual assessment. A description of the type of viewing audiences, the composition of their view and the nature and degree of visual effect in relation to the proposal have been provided for each viewing audience group.

The assessment refers to the Site Context Photographs within **Appendix 2**, and **Figures 6 to 12**, and **Appendix 3** Visual Simulations, to assist the understanding of where the Project on the Site in relation to the wider landscape context.

In summary, a total of nine viewing audience groups, comprising both public and private viewing audiences, are identified. Viewing Audience Groups A to C obtain short to mid distance views of the Site, whereas Viewing Audience Groups D to I obtain mid to long distance views. Among these viewing audience groups, Groups A, C and G have high elevational views of the Site. For most of the viewing audience groups, available views of the Site are limited to the mid to upper slopes of the Site where the existing quarry and pine forestry activities are visible. These views are in some instances intervened by landform and / or vegetation. Some viewing audiences, notably Group A and the eastern portions of Groups D and E, views of the Site are largely

limited to the north-facing flanks of the hills due to the orientation of the Site. Partial to open views of the Site are available from Groups C and G, and from elevated locations of Group I.

The level of visual effects associated with the Project will vary between stages and viewing audiences. In general, Stages 1 and 2 are expected to result in lower levels of visual effect. This is because quarrying during these stages will occur at relatively low elevations and will largely be contained within the existing approved quarry extent. As a result, changes in views associated with quarry operations during these stages are considered to be broadly anticipated.

Stage 3 is expected to result in a greater degree of visual change. While quarrying will largely remain within the SP-QZ, extraction will extend beyond the currently approved quarry extent and will expose freshly worked quarry faces, particularly on the southern slopes, where they will be visible on the steeper landform.

Stages 4 and 5 involve expansion eastward onto the upper slopes of the Site, outside the SP-QZ. While these stages occur at higher elevations, the progressive removal of the intervening ridgelines will, in many views, reduce the apparent height and vertical extent of exposed quarry faces over time, notwithstanding that quarry activity during the final eastern stages will occur at elevated levels. In addition, as these minor ridgelines are removed, indigenous planting established during Stage 1 to the east and south of the quarry will become increasingly visible and will assist in visually containing and integrating the quarry within the wider landscape.

At quarry closure, mitigation planting will be established on the upper quarry benches (RL200 m and above). Together with the natural weathering and colour attenuation of lower rock faces over time, this planting will reduce the visual prominence of quarry cuts on the more elevated parts of the landform and assist in the rehabilitation of the Site.

In general, the levels of visual effects on public viewing audiences tend to be lower than private viewing audiences, primarily due to the transient nature of these viewing audiences. Visibility of the Site along public roads are also limited as a result of intervening landform, vegetation and built structures in the broader landscape. Where views are available, the Site is typically visible along particular sections of the roads, i.e. no single road has visibility of the Site along its whole length.

For Viewing Audience Group A, despite the short to mid distance views of the Site, these views are largely screened by intervening vegetation and available views of the Project are primarily associated with Stages 2 to 5. Considering the underlying zoning and that views of the Project will be glimpsed, the Project will result in **very low adverse** visual effects during Stages 1 and 2 for both public and private viewing audiences. Visual effects will increase to **low-moderate adverse** during Stage 3 and becoming **low adverse** during Stages 4 and 5 for private viewing audiences. On the other hand, adverse visual effects on public viewing audiences will remain **very low** across Stages 3 to 5 primarily due to the transient nature of views and that the Site is only visible along a comparably short section of Otau Mountain Road. Post closure, mitigation plantings on the mid to upper quarry benches will be implemented and in time soften the engineered landform of the Project and hence adverse visual effects will reduce to **very low** for both public and private viewing audiences.

Viewing Audience Groups B and C will experience the highest levels of adverse visual effects as a result of the Project. For Viewing Audience Group B, viewing audience will experience substantial change in views from Stage 1 due to the close proximity of this viewing audience group to the Site and the lack of screening from intervening landform and vegetation in some locations. Considering the underlying zoning, Stages 1 and 2 of the Project will result in up to **low adverse** visual effects on private viewing audiences and **very low adverse** on public viewing audiences. Visual effects during Stage 3 will increase up to **moderate-high adverse** on private viewing audiences and **low adverse** on public viewing audiences due to an increase in

visible footprint of the Project and that it occurs outside of the approved quarry extent. During Stages 4 and 5, this viewing audience will continue to experience a change in views further upslope and a change in the sequence of visible ridges, with the apparent height and vertical extent of the exposed quarry faces becoming less apparent. Visual effects during these stages will then become **moderate adverse** on private viewing audiences and **very low adverse** on public viewing audiences. Post closure, mitigation plantings particularly on the mid to upper slopes will in time soften the visible extent of the Project, reducing adverse effects to up to **low-moderate** on private viewing audiences and **very low** on public viewing audiences.

Viewing Audience Group C will experience a change in views from Stage 1 due to the available views of the Site being open. Despite this, there will be no more than **low adverse** visual effects on private viewing audiences and **very low** on public viewing audiences during Stages 1 and 2 when taking the underlying zoning into account. Stage 3 will result in **moderate-high adverse** effects on private viewing audiences and **low adverse** on public viewing audiences as the viewing audience will experience a larger footprint of the Project, with Stage 4 experiencing similar views and having **moderate-high adverse** effects on private viewing audiences and up to **low adverse** on public viewing audiences. During Stage 5, mitigation plantings become established and form a vegetated backdrop to the proposed quarry expansion, reducing visual effects to **moderate adverse** on private viewing audiences and **very low adverse** on public viewing audiences. Post closure, mitigation plantings on quarry benches and within the upper catchment of Stream 3 will eventually soften the engineered landform of the Project and provide a more naturalised outlook to this viewing audience, reducing the visual effects to **low-moderate adverse** for private viewing audiences and **very low adverse** for public viewing audiences.

For Viewing Audience Groups D and E, due to intervening vegetation, available views of Stage 1 of the Project will be very limited. These available views will also be mid to long distance. While the expansion of the quarry during Stage 2 will become more visible, this change in views are considered largely anticipated. As such, visual effects on these viewing audience groups are considered **very low to low adverse** on both private and public viewing audiences during Stages 1 and 2. During Stage 3 of the proposed quarry expansion, a larger quarry footprint will be experienced, resulting in **low to low-moderate adverse** effects on the majority of private viewing audiences in Groups D and E. The central portion of Group D of private viewing audiences will however have **moderate** adverse effects during Stage 3 due to the more open views of the Project being experienced by this viewing audience, whereas adverse visual effects on public viewing audiences during Stage 3 are considered **low**. During Stages 4 and 5, while these viewing audience groups will continue to experience an extension of the Project on the upper slopes, these changes in views will be gradual (over a period of 20 years). As such, the visual effects will remain **low to moderate adverse** on private viewing audiences and **low adverse** on public viewing audiences during Stage 4. This will reduce to no more than **low-moderate adverse** on private viewing audiences and **very low adverse** on public viewing audiences during Stage 5. With mitigation plantings in place post closure, the engineered landform of the Project will be softened once plantings are established and the adverse visual effects will reduce to **very low to low**.

For Viewing Audience Groups F, G and H, due to the long viewing distances, the change in views experienced by these viewing audience groups will become less discernible. Available views of Stage 1 will be very limited due to screening from intervening landform and vegetation and therefore the visual effects on public and private viewing audiences within these viewing audience groups will be **neutral to very low adverse**. While Stages 2 and 3 will become more observable, adverse visual effects are considered **very low to low**. Similarly, while the extension of quarry operations on the upper slopes of the Site will be observable, the change in views will be gradual and the adverse visual effects will remain **very low to low** during Stages 4

and 5. With mitigation plantings in place post closure, the engineered landform of the Project will be softened once plantings are established and the adverse visual effects will reduce to **very low** for both public and private viewing audiences.

For Viewing Audience Group I, similar to Groups F, G and H, the change in views as a result of the Project will be less discernible due to the distance from the quarry. Intervening vegetation will screen much of the Project during Stage 1. While some of the viewing audience will have elevated partial views, the visual effects on private viewing audiences during Stage 1 will be no more than **very low adverse** with the planned and consented characteristics of the Site being considered. Stages 2 and 3 will become more observable but visual effects will remain **very low adverse** on private viewing audiences, with the exception of the viewing audience on elevated locations, which will have **low-moderate adverse** visual effects during Stage 3. During Stages 4 and 5, as a larger quarry footprint will be observable, visual effects on private viewing audiences will increase to **low to low-moderate adverse**. With mitigation plantings in place post closure, the engineered landform of the Project will be softened once plantings are established and the adverse visual effects will reduce to **very low to low**. For public viewing audiences, visual effects will remain **very low adverse** across all stages due to the transient nature of views.

The following table provides a summary of the level of adverse visual effects on each viewing audience group as a result of each indicative stage of the Project from Very Low (**VL**), Low (**L**), Low-Moderate (**LM**), Moderate (**M**), Moderate-High (**MH**), High (**H**), Very High (**VH**).

		Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Post Closure (Approximately 10 years Following Mitigation Implementation)
Viewing Audience Group A	Public Viewing Audiences	**VL**	**VL**	**VL**	**VL**	**VL**	**VL**
	Private Viewing Audiences	**VL**	**VL**	**LM**	**L**	**L**	**VL**
Viewing Audience Group B	Public Viewing Audiences	**VL**	**VL**	**L**	**VL**	**VL**	**VL**
	Private Viewing Audiences	**L** (448, 458, 498, 510 & 520 McNicol Road)	**L** (448, 458, 498, 510 & 520 McNicol Road)	**L to MH** (448, 458, 498, 510 & 520 McNicol Road)	**L to M** (448, 458, 498, 510 & 520 McNicol Road)	**L to M** (448, 458, 498, 510 & 520 McNicol Road)	**L to LM** (448, 458, 498, 510 & 520 McNicol Road)

Viewing Audience Group C	Public Viewing Audiences	**Neutral to VL**	**Neutral to VL**	**Neutral to L**	**Neutral to L**	**Neutral to VL**	**Neutral to VL**
	Private Viewing Audiences	**L** (Highridge Road, 14, 14A, 26, 42A, 54 & 56 McGregor Road and 3, 6, 7, 8 & 12 Bridle Way) **VL**	**L** (Highridge Road, 14, 14A, 26, 42A, 54 & 56 McGregor Road and 3, 6, 7, 8 & 12 Bridle Way) **VL**	**MH** (Highridge Road, 14, 14A, 26, 42A, 54 & 56 McGregor Road and 3, 6, 7, 8 & 12 Bridle Way) **VL**	**MH** (Highridge Road, 14, 14A, 26, 42A, 54 & 56 McGregor Road and 3, 6, 7, 8 & 12 Bridle Way) **VL**	**M** (Highridge Road, 14, 14A, 26, 42A, 54 & 56 McGregor Road and 3, 6, 7, 8 & 12 Bridle Way) **VL**	**LM** (Highridge Road, 14, 14A, 26, 42A, 54 & 56 McGregor Road and 3, 6, 7, 8 & 12 Bridle Way) **VL**
Viewing Audience Group D	Public Viewing Audiences	**VL**	**VL**	**L**	**L**	**VL**	**VL**
	Private Viewing Audiences	**VL** (eastern portion) **VL** (central portion) **VL** (western portion)	**L** (eastern portion) **L** (central portion) **VL** (western portion)	**LM** (eastern portion) **M** (central portion) **L** (western portion)	**LM** (eastern portion) **M** (central portion) **L** (western portion)	**L** (eastern portion) **LM** (central portion) **L** (western portion)	**VL** (eastern portion) **L** (central portion) **VL** (western portion)
Viewing Audience Group E	Public Viewing Audiences	**Neutral to VL**	**Neutral to VL**	**Neutral to L**	**Neutral to L**	**Neutral to VL**	**Neutral to VL**
	Private Viewing Audiences	**VL** (eastern portion) **VL** (central & western portion)	**VL** (eastern portion) **VL** (central & western portion)	**LM** (eastern portion) **LM** (central & western portion)	**LM** (eastern portion) **LM** (central & western portion)	**L** (eastern portion) **L** (central & western portion)	**VL to L** (eastern portion) **VL to L** (central & western portion)

Viewing Audience Group F	Public Viewing Audiences	**Neutral to VL**	**Neutral to VL**	**Neutral to VL**	**Neutral to VL**	**Neutral to VL**	**Neutral to VL**
	Private Viewing Audiences	**Neutral to VL**	**Neutral to VL**	**VL to L**	**VL to L**	**VL to L**	**VL**
Viewing Audience Group G	Public Viewing Audiences	**VL**	**VL**	**VL**	**VL**	**VL**	**VL**
	Private Viewing Audiences	**VL**	**L**	**L**	**L**	**L**	**VL**
Viewing Audience Group H	Public Viewing Audiences	**VL**	**VL**	**VL**	**VL**	**VL**	**VL**
	Private Viewing Audiences	**VL**	**VL**	**L**	**L**	**L**	**VL**
Viewing Audience Group I	Public Viewing Audiences	**VL**	**VL**	**VL**	**VL**	**VL**	**VL**
	Private Viewing Audiences	**VL** **VL** (elevated views)	**VL** **VL** (elevated views)	**L** **LM** (elevated views)	**L** **LM** (elevated views)	**L** **L** (elevated views)	**VL** **L** (elevated views)

8.4 Evaluation in Relation to Statutory Provisions

8.4.1 RMA - Section 6

In relation to the preservation of natural character values with respect to the streams and their margins, the Project will effectively remove these features that are within the footprint of the quarry. Whilst these features are not considered to be high or very high in their degree of natural character, these effects will however be elevated and permanent. It is considered the greatest effects will be **low-moderate**, however in considering the proposed offsetting and compensation within the Site, it is considered that the effects on natural character are adequately addressed on balance of the Site.

The identified ONF adjacent to the Site will not be directly impacted by the Project through quarrying operations. As such, the effects on ONF are considered **neutral**.

In relation to section 6(e) and the relationship of Māori and their culture and traditions with their ancestral landscape, it is acknowledged that iwi have a special connection with the land and waterways associated with the Site. Whilst it is recognised that the landscape of the Site will change through its broad alignment with the underlying special purpose zoning, and as such these activities are, to some degree, anticipated, the Project will minimise impacts on identified attributes seen to hold particular cultural landscape value wherever possible. Where effects are not able to be avoided or mitigated (e.g. streams within the footprint of the proposed quarry expansion), offsetting is proposed.

8.4.2 RMA – Section 7

In considering the amenity values[31], the amenity values of the Site are in part derived from its rural land use, pine forestry and quarry context. It is however recognised that the Site holds a number of natural and physical qualities and characteristics which contribute to the amenity values. This includes the streams, areas of native vegetation and the underlying topographical landform of the Site and people's appreciation of the Site being part of the backdrop to the Clevedon Valley. Whilst these natural qualities are degraded through its land use, they individually and collectively contribute to the aesthetic values of the Site. Cultural aspects also from part of amenity values and it is acknowledged that the Site holds cultural landscape values.

The Project will by its very nature impact on the amenity values. Whilst the current 'condition' of a number of areas within the Site do not hold high qualities in relation to the physical resources, it is considered that the ultimate nature of the proposed activity and resultant landscape condition will mean that within the footprint of the proposed quarry, effects will be very high. With mitigation such as that proposed, and considering the wider Landholding, its characteristics and associated amenity values, landscape effects are anticipated to be **low-moderate**.

8.4.3 Auckland Unitary Plan

Special Purpose – Quarry Zone

[31] RMA s7(c)

The large majority of the Project will take place within the Special Purpose – Quarry Zone and avoid any physical encroachment into the ONF (except within the already consented haul road). It is also accompanied by a mitigation package that will over time reduce adverse landscape effects. Visual mitigation techniques have been employed through the use of vegetation to soften views of the quarrying activities. Notwithstanding this, a large part of the Project will take place within this zone and such activities in relation to mineral extraction are anticipated. The existing Clevedon Quarry has been in operation on the Landholding for over 40 years and remains a defining part of the landscape.

Rural – Rural Production Zone

The Project, including quarrying activities are proposed to occur partially in the Rural Production Zone (approximately 20% of the proposed quarry expansion). This will occur across the area to the east of the proposed quarry expansion. This will undoubtedly impact on the rural characteristics and amenity values of neighbouring rural zones, where quarry activities occur in adjoining areas. In this case, the rural characteristics and amenity values of this area to the east will change and therefore not reflect the anticipated characteristics and qualities associated with the RPZ.

However, these areas interface with the Special Purpose – Quarry Zone and therefore it is considered that certain 'edge effects' to these interfaces, particularly quarry zones can be anticipated. Despite the incremental adverse effects on localised rural character in the RPZ, this part of the proposed quarry expansion is located in an area already characterised by a working rural landscape, with the balance of the wider Landholding remaining production forestry. It is therefore considered that the Project will not compromise the broader pattern of rural production, and is consistent with objectives and policies under the AUP.

9.0 Conclusions

The Project is for an expansion of the existing Clevedon Quarry across five indicative stages over a period of approximately 50 years, at 546 McNicol Road, Clevedon, Auckland. The Site is located within a working rural landscape on the northwestern foothills of the Hunua Ranges and comprises an established quarry and production forestry. The majority of the Project falls within the Special Purpose – Quarry Zone and partially within Rural Production Zone of the AUP.

In consideration of natural character, any streams and tributaries within the footprint of the proposed quarry expansion will be removed, although much of these features are located within the SP-QZ and as such there is a level of anticipation that these features would be impacted through quarry activities. Offsetting is proposed to manage the adverse effects of stream loss. The greatest effects will be on the upper reaches of Stream 1 where some tributaries containing high levels of natural character would be removed, and a **low-moderate adverse** effect has been concluded. Natural character effects on the Stream 1 lower reaches, Streams 2 and 2a are concluded to be **low adverse**, primarily due to their modified nature and underlying zoning within which they sit. While some tributaries of Stream 3 will be removed for the proposed quarry expansion, the proposed offset mitigation planting along the stream will improve the overall natural character of Stream 3, resulting in a **beneficial** natural character effect. Natural character effects on Wairoa River are concluded to be **very low adverse**.

In terms of landscape effects, the Project will result in a change in landform, vegetation and stream removal, as well as the landscape character of the Site. Effects on vegetation and

streams are mitigated, offset or compensated through mitigation planting within the Site. Any effects on physical landscape is concluded to be no more than **moderate adverse** and no more than **low-moderate adverse** effects on landscape character**.**

Visual effects will vary across the identified visual catchment and associated viewing audiences comprising both public and private viewing audiences. In terms of effects on private viewing audiences, **very low to low adverse** effects are concluded for all viewing audience groups during Stages 1 and 2. The highest levels of effects are identified during Stages 3 and 4 of the Project where it will result in up to **moderate-high adverse** effects on Groups B and C. Up to **moderate adverse** effects are identified for Group D and up to **low-moderate adverse** for Groups A, E and I, during these stages. Visual effects will reduce during Stage 5 and Post Closure as mitigation plantings become established, with no more than **moderate adverse** effects identified for Stage 5 and **low-moderate adverse** effects at Post Closure.

In terms of visual effects on public viewing audiences, no more than **low adverse** effects are concluded across all stages.

In summary, apart from a small number of private viewing audiences to the west of the Site who may experience moderate-high effects, the adverse effects on the Site's natural character, landscape, and visual amenity—as well as the surrounding landscape—are largely in line with expectations based on the Site's zoning. Furthermore, adverse effects are addressed through implementing extensive ecological offsetting, and landscape mitigation measures.

Appendix 1: Method Statement

22 November 2023

This assessment method statement is consistent with the methodology (high-level system of concepts, principles, and approaches) of 'Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines', Tuia Pito Ora New Zealand Institute of Landscape Architects, July 2022. The assessment provides separate chapters to discuss landscape, visual and natural character effects where relevant, but is referred to throughout as a Landscape Effects Assessment in accordance with these Guidelines. Specifically, the assessment of effects has examined the following:

- The existing landscape;
- The nature of effect;
- The level of effect; and
- The significance of effect.

The Existing Landscape

The first step of assessment entails examining the existing landscape in which potential effects may occur. This aspect of the assessment describes and interprets the specific landscape character and values which may be impacted by the proposal alongside its natural character where relevant as set out further below. The existing landscape is assessed at a scale(s) commensurate with the potential nature of effects. It includes an understanding of the visual catchment and viewing audience relating to the proposal including key representative public views. This aspect of the assessment entails both desk-top review (including drawing upon area-based landscape assessments where available) and field work/site surveys to examine and describe the specific factors and interplay of relevant attributes or dimensions, as follows:

- **Physical** –relevant natural and human features and processes;
- **Perceptual** –direct human sensory experience and its broader interpretation; and
- **Associative** – intangible meanings and associations that influence how places are perceived.

Engagement with tāngata whenua

As part of the analysis of the existing landscape, the assessment should seek to identify relevant mana whenua (where possible) and describe the nature and extent of engagement, together with any relevant sources informing an understanding of the existing landscape from a Te Ao Māori perspective.

Statutory and Non-Statutory Provisions

The relevant provisions facilitating change also influence the consequent nature and level of effects. Relevant provisions encompass objectives and policies drawn from a broader analysis of the statutory context and which may anticipate change and certain outcomes for identified landscape values.

The Nature of Effect

The nature of effect assesses the outcome of the proposal within the landscape. The nature of effect is considered in terms of whether effects are positive (beneficial) or negative (adverse) in the context within which they occur. Neutral effects may also occur where landscape or visual change is benign.

It should be emphasised that a change in a landscape (or view of a landscape) does not, of itself, necessarily constitute an adverse landscape effect. Landscapes are dynamic and are constantly changing in both subtle and more dramatic transformational ways; these changes are both natural and human induced. What is important when assessing and managing landscape change is that adverse effects are avoided or sufficiently mitigated to ameliorate adverse effects. The aim is to maintain or enhance the environment through appropriate design outcomes, recognising that both the nature and level of effects may change over time.

The Level of Effect

Where the nature of effect is assessed as 'adverse', the assessment quantifies the level (degree or magnitude) of adverse effect. The level of effect has not been quantified where the nature of effect is neutral or beneficial. Assessing the level of effect entails professional judgement based on expertise and experience provided with explanations and reasons. The identified level of adverse natural character, landscape and visual effects adopts a universal seven-point scale from very low to very high consistent with Te Tangi a te Manu Guidelines and reproduced below.



Landscape Effects

A landscape effect relates to the change on a landscape's character and its inherent values and in the context of what change can be anticipated in that landscape in relation to relevant zoning and policy. The level of effect is influenced by the size or spatial scale, geographical extent, duration and reversibility of landscape change on the characteristics and values within the specific context in which they occur.

Visual Effects

Visual effects are a subset of landscape effects. They are consequence of changes to landscape values as experienced in views. To assess where visual effects of the proposal may occur requires an identification of the area from where the proposal may be visible from, and the specific viewing audience(s) affected. Visual effects are assessed with respect to landscape character and values. This can be influenced by several factors such as distance, orientation of the view, duration, extent of view occupied, screening and backdrop, as well as the potential change that could be anticipated in the view as a result of zone / policy provisions of relevant statutory plans.

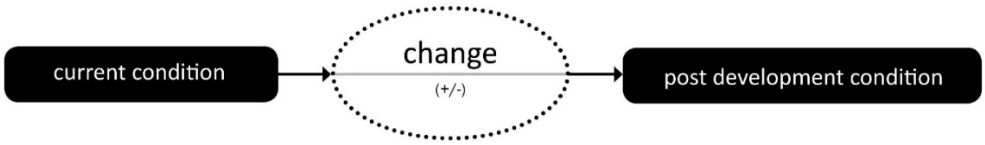
Natural Character Effects

Natural Character, under the RMA, specifically relates to 'the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development'. Therefore, the assessment of natural character effects only involves examining the proposed changes to natural elements, patterns and process which may occur in relevant landscape / seascape contexts.

As with assessing landscape effects, the first step when assessing natural character effects involves identifying the relevant physical and experiential characteristics and qualities which occur and may be affected by a proposal at a commensurate scale. This can be supported through the input of technical disciplines such as geomorphology, hydrology, marine, freshwater, and terrestrial ecology as well as input from tāngata whenua. An understanding of natural character considers the level of naturalness and essentially reflects the current condition of the environment assessed in relation to the seven-point scale. A higher level of natural character means the waterbody and/or margin is less modified and vice versa.

A natural character effect is a change to the current condition of parts of the environment where natural character occurs. Change can be negative or positive. The resultant natural character effect is influenced by the existing level of naturalness within which change is proposed; a greater level of effect will generally occur when the proposal reduces the naturalness of a less modified environment. In short, the process of assessing natural character effects can be summarised as follows:

- Identify the characteristics and qualities which contribute to natural character within a relevant context and defined spatial scale(s), including the existing level of naturalness;
- Describe the changes to identified characteristics and qualities and the consequent level of natural character anticipated (post proposal); and
- Determine the overall level of effect based on the consequence of change.



The Significance of Effects

Decision makers assessing resource consent applications must evaluate if the effect on individuals or the environment is less than minor[32] or if an adverse effect on the environment is no more than minor[33]. For non-complying activities, consent can only be granted if the s104D 'gateway test' is satisfied, ensuring adverse effects are minor or align with planning objectives. In these situations, the assessment may be required to translate the level of effect in terms of RMA terminology.

This assessment has adopted the following scale applied to relevant RMA circumstances[34] (refer to diagram below), acknowledging low and very low adverse effects generally equate to 'less than minor' and high / very high effects generally equate to significant[35].



[32] RMA, Section 95E

[33] RMA, Section 95E

[34] Seven-point level of effect scale. Source: Te tangi a te Manu, Pg. 151

[35] The term 'significant adverse effects' applies to specific RMA situations, including the consideration of alternatives for Notices of Requirement and AEEs, as well as assessing natural character effects under the NZ Coastal Policy Statement.

Appendix 2: Graphic Supplement – Landscape Effects Assessment

Appendix 3: Graphic Supplement – Visual Simulations

Appendix 4: Visual Effects Assessment

The following visual effects assessment has taken into account both public and private viewing audiences, and has been undertaken prior to the Amendments to the Fast-track Approvals Act 2024. Refer to **Section 8.3** for delineated levels of visual effects on these viewing audiences.

Viewing Audience Group A

Figure References:

- *Appendix 2: Figure 6 and Site Context Photograph 1*

Viewing Audiences:

- *Residents[36] and road users along east Otau Mountain Road, located to the north.*

Existing Views

This viewing audience group is located to the north of the Site and obtains short to mid distance (approximately 550m-2.7km from the proposed quarry extent), high elevational views of the Site. This viewing audience group contains rural properties that contain residential houses generally located along the local ridgelines and the south-west facing flanks of the foothills of the Hunua Ranges. These properties tend to have main views towards the Clevedon valley and Tāmaki Strait to the north and west. Views south towards the Site are in many instances intervened by landform and vegetation of the hills north of the Site, including the protected area of pine trees along the Northern Ridge. Existing vegetation within most of the individual properties also curtails views to the south.

Where screening from landform or vegetation is absent, more specifically at 247, 266, 422 and 426 Otau Mountain Road and a section of Otau Mountain Road near number 373, the mid to upper slopes of the Site including the areas of harvested pine plantation are visible. In addition, due to the orientation of the Site, these available views are primarily associated with the north-facing flank of the Site. From these locations, the Site typically forms the midground views and is part of the broader skyline.

Proposed Views

During Stage 1, glimpsed views of the extraction activities will be available from sections of Otau Mountain Road. This includes glimpses of machinery operation and earthworks to establish the benches. Noting that Stage 1 will occur within the approved quarry extent and the SP-QZ, the visual effects on this viewing audience group are considered **very low adverse**. Mitigation plantings to the south-east will be implemented during this stage although no views of the plantings will be available at this stage due to plantings being located on the south-facing flanks of the ridge.

The expansion of quarry will become more visible as works progress to the east on the upper slopes of the ridge during Stage 2. Partial views of quarry benches, machinery operation and earthworks will be available as less screening will be provided by vegetation. It will open up views of the ridge which forms part of the skyline to the south. Despite this, the quarry

[36] Including 109, 124, 171, 184, 202, 203, 222, 233, 238, 246, 247, 256, 266, 373, 422, 426, 450 and 494 Otau Mountain Road.

expansion during Stage 2 will remain largely within the approved quarry extent and SP-QZ. Whilst there will be an evident change in views, the visual effects are considered **very low adverse** during Stage 2.

During Stage 3, the proposed quarry expansion during this stage will be viewed as an extension of Stage 2. While remain largely within the SP-QZ, partial views of quarry benches, machinery operation and earthworks will be available. The expansion towards the south will also affect the sequence of ridges. As such, the visual effects resulting from Stage 3 are considered **low-moderate adverse**.

In latter stages (Stages 4 and 5), the removal of the vegetation within the SEA that forms part of the existing skyline may become visible as extraction progresses upslope. These views are however glimpsed and the change in views are gradual. Views of the upper reaches of the quarry will be limited as intervening vegetation continues to truncate views from these viewing audiences. As extraction progresses further south during Stage 4, views of the mitigation plantings along the southern edge of the quarry may become available as vegetation becomes established, providing a backdrop to the south. The visual effects on this viewing audience group will remain **low adverse** during Stages 4 and 5.

Post closure, the quarry benches on the mid and upper slopes will be planted and will over time soften the engineered landform of the Project. Once planting is established, the quarry benches will be less discernible from this location, reducing to **very low adverse** visual effects.

Viewing Audience Group B

Figure References:

- *Appendix 2: Figure 6 and Site Context Photograph 2*
- *Appendix 3: Figure 1 and VS 1*

Viewing Audiences:

- *Residents[37] and road users along south McNicol Road and eastern end of Whiteside Lane, located to the northwest.*

Existing Views

This viewing audience group is located at the base of the Hunua Ranges foothills to the northwest of the Site and obtains short to mid distance (approximately 330m-1.5km from the proposed quarry extent), low elevational views of the Site. This viewing audience group comprises rural properties that generally contain existing vegetation within the curtilages of the residential houses and along the property boundaries. Existing views along south McNicol Road are largely truncated by intervening landform and vegetation. In some places, notably at 448 and 458 McNicol Road, where the Site is less screened by vegetation, partial views of the existing quarry and the areas of harvested pine plantation to the south are available. 498, 510 and 520 McNicol Road are located on a local hill which have elevated glimpsed views over the existing quarry. Beyond the footprint of the existing quarry, the upper slopes are largely screened by the protected pine trees along the Northern Ridge.

In terms of road users, views on McNicol Road are generally very limited due to intervening landform and vegetation. The Site, primarily the lower to mid slopes, becomes more visible when approaching 448, 458 and 520 McNicol Road. The Site is the most visible when road

[37] Including 384, 400, 414, 426, 438, 448, 458, 498, 510, 520 and 600 McNicol Road and 7 and 8 Whiteside Lane.

users approach the entrance of the Site where it offers short distance partial views of the Site and the existing quarry and associated facilities and infrastructure are clearly visible. Existing vegetation within the Site intervenes most views of the southern portion of the Site.

Proposed Views

Residents on south McNicol Road

From 448, 458, 498, 510 and 520 McNicol Road, aspects of the quarry will become visible primarily during Stages 1 to 3. There will be a change in landform of the foothills that currently dominate views to the northeast. This change in views during Stages 1 and 2, however, will occur largely within the approved quarry extent, resulting in **low adverse** visual effects. Mitigation plantings to the south-east will be implemented during this stage but similar to Viewing Audience Group A, no views of the plantings will likely be available at this stage due to plantings being located on the south-facing flanks of the hill.

The greatest changes in views will occur during Stage 3 when the proposed quarry expansion extends towards the foothills to the south and the sequence of ridges will be affected. While the quarry expansion during this stage remains largely within the SP-QZ, quarrying activities will extend beyond the approved quarry extent, exposing the freshly worked quarry faces on the southern ridge. Considering this, the visual effects will increase to **moderate-high adverse** during Stage 3.

In latter stages (Stages 4 and 5), the proposed quarry expansion on the upper slopes to the east will be partially visible as the extraction activities during previous stages open up views to the south and east. The proposed quarry expansion during these stages will be viewed as extensions of previous stages, continuing to progressively remove the intervening ridgelines of the Site and views of the quarry benches, machinery operation and earthworks will remain evident. As extraction progresses further south during Stage 5, views of the mitigation plantings along the southern edge of the quarry may become available as vegetation becomes established, providing a backdrop and vegetated skyline to the south. Considering this, the visual effects from these locations during Stages 4 and 5 will become **moderate adverse**.

Post closure, the quarry benches on the mid to upper slopes will be planted and will over time soften the engineered landform of the Project and the skyline, reducing the visual effects to **low-moderate adverse**.

Road users of south McNicol Road

Along the section of McNicol Road near number 520, available views of the Project are primarily associated with extraction activities during Stages 1 and 3. Mitigation plantings that occur to the south-east of the Project will unlikely be visible to this viewing audience. During Stage 1, the change in views will be glimpsed and viewed as part of and an extension of the existing quarry while Stage 2 will remain screened by pine trees. Considering that these available views are transient views primarily experienced by road users, it is anticipated that the visual effects during Stages 1 and 2 will be **very low adverse**.

During Stage 3, while the expansion towards to the south will remain largely within the SP-QZ, the proposed quarry expansion will extend beyond the approved quarry extent and affect the sequence of ridges as the southern ridge which originally backdrops the existing quarry and forms part of the skyline will be quarried. Noting views of quarry benches, machinery operation and earthworks will be partial and transient in nature, the visual effects will become **low adverse**.

In latter stages, due to intervening vegetation, any views of the extraction activities will be glimpsed at most. The visual effects on locations near 520 McNicol Road will remain **very low adverse** during Stages 4 and 5.

Post closure, the quarry benches on the mid to upper slopes will be planted and will over time soften the engineered landform of the proposed quarry and the skyline and hence adverse visual effects will remain **very low**.

In terms of the road users of McNicol Road near the Site entrance, this viewing audience will experience the greatest change in views during Stages 1 and 2 as unobstructed views of extraction activities will be available. The primary change in views from this location is associated with the vegetation removal near the Site entrance which opens up views to the east and south. Aspects of the proposed quarry expansion including quarry benches, machinery operation, earthworks and the existing haul road will become more visible. Despite this, any available views of the proposed quarry expansion during Stages 1 and 2 are largely considered anticipated views and will be transient. Based on this, Stages 1 and 2 will result in no more than **very low adverse** visual effects on this viewing audience.

During Stage 3, views of the expansion towards the ridges to the south will be glimpsed to partial due to screening from the elevated landform that forms the northeastern portion of the ONF. While some views of the southeastern portion of the quarry expansion may be visible and extended quarry benches will be experienced, any visual effects resulting from Stage 3 will remain **low adverse** due to the transient nature of views.

In latter stages (Stages 4 and 5), this viewing audience will continue to experience views of the extended quarry benches to the east. The progressive removal of indigenous vegetation within the SEA will also be visible from this location. Although at the same time, proposed mitigation plantings to the south-east will become established and visible to this viewing audience, providing a more naturalised skyline on the upper slopes. Noting that this change in views will be gradual and the transient nature of views, the adverse visual effects resulting from Stages 4 and 5 will remain **very low**.

Post closure, the quarry benches on the mid to upper slopes will be planted and will over time soften the engineered landform of the Project and visually connect to the new plantings along the edge of the quarry, forming a broader vegetated skyline. Visual effects will therefore remain **very low adverse**.

In summary, this viewing audience group will have **very low to low adverse** visual effects during Stages 1 and 2. The greatest effects relate to Stage 3 and will result in up to **moderate-high adverse** visual effects particularly for some properties on McNicol Road (number 448, 458, 498, 510 and 520). The visual effects during Stage 4 will remain **moderate-high adverse** and reduce to **moderate adverse** during Stage 5. Post Closure, mitigation plantings on quarry benches will eventually soften the engineered landform of the quarry, reducing adverse visual effects to **very low to low-moderate**.

Viewing Audience Group C

Figure References:

- *Appendix 2: Figure 6 and Site Context Photograph 3*
- *Appendix 3: Figure 1 and VS 2*

Viewing Audiences:

- *Residents and road users along Highridge Road, southern end of Monument Road, north McGregor Road, north Sky High Road and Bridle Way, located to the southwest.*
- *Visitors to Wairoa Gorge Scenic Reserve.*

Existing Views

This viewing audience group is located to the southwest of the Site and obtains short to mid distance (approximately 1 to 2.1km from the proposed quarry extent), elevated views of the Site. This viewing audience group comprises rural properties that contain residential houses generally located on local ridgelines. These properties tend to have main views over the Clevedon valley to the north. Due to the orientation of the Site being open towards the west, open oblique views of the Site are available, notably from properties on Highridge Road and along the northern section of Highridge Road. Existing views northeast comprise the existing quarry and the harvested pine areas, which forms a prominent visual attribute and outlook to the northeast.

Partial views of the Site are also available on McGregor Road and Bridle Way[38] where views northwest towards the Site are less screened by vegetation. From these locations, available views of the Site are from a distance of 1.8-2.5 km away.

Along Sky High Road, views towards the Site are very limited and are largely screened by intervening landform and vegetation, with the exception of 151 and 259 Sky High Road where glimpses of the Site may potentially available.

Proposed Views

Due to the nature of views being open towards the Site from these viewing audiences (notably Highridge Road, 14, 14A, 26, 42A, 54 & 56 McGregor Road and 3, 6, 7, 8 & 12 Bridle Way), all stages of the Project will be clearly visible. During Stages 1 and 2, this viewing audience will partially observe the implementation of mitigation plantings particularly within the riparian margins and upper catchment of Stream 3 which visually connect the existing native vegetation and provide a more naturalised outlook to the south. Noting that Stages 1 and 2 will occur largely within the approved quarry extent and the SP-QZ, of which a change in view to a working quarry is anticipated and is largely consistent with the underlying zoning, the visual effects during these stages are considered **low adverse**.

The greatest change in views will occur during Stage 3 of the Project as the quarry will expand southward across the foothills that were covered by pine plantation, although being recently cleared. While proposed quarry expansion during this stage is largely within the SP-QZ, views of the quarry benches, machinery operation and earthworks will be open and evident. The visual effects are therefore considered **moderate-high adverse** during Stage 3.

In latter stages (Stages 4 and 5), the quarry expansion will appear as the extensions of Stage 3 as extraction progresses upslope. This will result in a gradual change of views over a period of 20 years, with mitigation plantings becoming established and provide a more naturalised outlook to the south. Despite this, views of extraction activities will remain open and evident. Considering this, the adverse visual effects on this viewing audience during Stage 4 will remain **moderate-high**, reducing to **moderate adverse** during Stage 5 as quarrying activities progress eastwards away from this viewing audience group.

Post closure, the quarry benches on the mid to upper slopes will be planted and will over time soften the engineered landform of the Project and visually connect to the new plantings along

[38] Including 14, 14A, 26, 42A, 54 & 56 McGregor Road and 3, 6, 7, 8 & 12 Bridle Way.

the edge of the quarry, forming a broader vegetated skyline. The visible extent of the quarry benches will reduce. As such, the visual effects will reduce to **low-moderate adverse**.

For other viewing audiences within this group[39], views of the Site will remain very limited due to intervening landform and vegetation and any visual effects will be no more than **very low adverse**.

In terms of visitors to Wairoa Gorge Scenic Reserve, views towards the Site are well contained by established vegetation within the reserve. Any visual effects of the proposed quarry extension on these users are therefore considered **neutral**.

Viewing Audience Group D

Figure References:

- *Appendix 2: Figure 6 and Site Context Photographs 4 – 6*
- *Appendix 3: Figure 1 and VS 3 – 4*

Viewing Audiences:

- *Residents and road users south of Tourist Road and Quinns Road, including those along a section of McNicol Road (between Tourist Road and Whiteside Lane), Chesham Lane, Whiteside Lane, Pioneer Road, south Monument Road, Munros Road, located to the northwest.*

Existing Views

This viewing audience group is located to the northwest of the Site and comprises a mix of low elevation and elevated mid to long distance (approximately 1.2-4.4km from the proposed quarry extent) views southeast to the Site. This viewing audience group comprises rural properties that generally contain existing vegetation within the curtilages of the residential houses and have large and open paddocks within these broader properties. From this viewing audience group, the Site and the broader Hunua Ranges foothills are typically viewed in the background with a mix of open paddocks, houses and vegetation in the front and midground.

Within the eastern portion of this viewing area (including Quinns Road, McNicol Road, Whiteside Lane, Chesham Lane and east Tourist Road), available views of the Site are primarily associated with the north-facing flanks of the Site. Views of the existing quarry are largely screened by the protected pine trees along the Northern Ridge. Beyond the footprint of the existing quarry, the hills to the south and upper slopes of the Site are also visible, including the area of SEA that is proposed to be removed.

Moving west along Tourist Road and on Pioneer Road and Monument Road, the Site becomes more open and less screened by the Northern Ridge pine trees. Some of these views on Pioneer Road and Monument Road[40] are also elevated as these roads climb uphill, albeit these views are in many instances truncated by vegetation particularly along southern portion of Monument Road.

On Munros Road, while being elevated, views are largely screened by vegetation and landform. Available views of the Site are primarily associated with the upper slopes of the Site.

[39] Including 616, 647 & 670 Monument Road, 7, 36, 42 & 56A McGregor Road, 143, 150, 151, 162, 177, 192 & 194 Sky High Road and 1, 2, 4, 5, 10 & 12 Bridle Way.

[40] In particular 19, 28, 30, 31, 33, 35, 36, 40, 46, 50 & 95 Pioneer Road and 326, 341, 360, 390, 400, 423, 428, 430, 450, 490, 496, 520, 528, 535, 536, 575, 581, 585, 594, 610 & 611 Monument Road.

Proposed Views

Eastern portion of viewing area (Quinns Road, McNicol Road, Whiteside Lane, Chesham Lane and east Tourist Road)

For the viewing audience within the eastern portion of this viewing area, glimpsed views of the extraction activities will be available during Stages 1 and 2 as the proposed quarry expansion will be largely screened. In addition, the expansion during these stages will be largely within the approved quarry extent and the SP-QZ and is considered an anticipated view. The visual effects on this viewing audience during Stage 1 are considered **very low adverse** and **low adverse** during Stage 2. Mitigation plantings to the south-east will be implemented during Stage 1 although no views of these plantings will be available from these locations.

The greatest change in views will occur during Stage 3 when the extraction activities progress south towards the southern ridge that originally backdrops the existing quarry and forms part of the skyline. While this occurs largely within the SP-QZ, partial views of the quarry benches, machinery operation and earthworks will be available. Considering this, the visual effects during Stage 3 are considered **low-moderate adverse**.

The expansion upslope to the north (Stages 4 and 5) will be observable where views of quarry benches, machinery operation, earthworks and the removal of indigenous vegetation on the upper slopes (which forms part of the skyline) will be available. Noting that this change in views will be gradual (i.e. a period of 20 years) and that mitigation plantings along the southern edge of the quarry will become established and visible to this viewing audience, forming a vegetated backdrop to the south. Considering available views from these locations are glimpsed, the visual effects on the viewing audience in the eastern portion of this viewing area will remain **low-moderate adverse** during Stage 4 and reduce to **low adverse** during Stage 5.

Post Closure, plantings on quarry benches on the mid to upper slopes will be implemented. Over time, these plantings will soften views of the north-facing benches and connect the vegetated skyline to the east. Based on this, the visual effects will reduce to **very low adverse**.

Central portion of viewing area (Pioneer Road and Monument Road)

In terms of the viewing audience on Pioneer Road and a section of Monument Road (notably 326, 341, 360, 390, 400, 423 and 450 Monument Road), there will be elevated partial to open views of the proposed quarry expansion where the Site is less screened by intervening landform and vegetation. From these locations, the quarry benches, machinery operation and earthworks will be visible and evident throughout all stages.

During Stage 1, the proposed quarry expansion will occur largely within the approved quarry extent and will be seen as an extension of the existing quarry, resulting **very low adverse** visual effects. During this stage, mitigation plantings implemented to the south-east will remain screened by landform.

As extraction progresses upslope during Stage 2, the removal of local ridges will also alter a very localised extent (i.e. Site scale) of the ridge sequence of the broader foothills. During this stage, mitigation plantings become established and will become visible particularly to the east. Considering that the expansion during this stage remains largely within the approved quarry extent and the SP-QZ, Stage 2 will result in **low adverse** visual effects.

During Stage 3, this viewing audience will experience views of the extended quarry benches, machinery operation and earthworks as extraction progresses southward across the foothills. Whilst the proposed quarry expansion during this stage will remain largely within the SP-QZ, this change in views will be evident, and will occur beyond the approved quarry extent. Based on this, the visual effects resulting from Stage 3 are considered **moderate adverse**.

As the Project progresses to Stages 4 and 5, this viewing audience will continue to experience views of the extended quarry benches, machinery operation and earthworks on the upper slopes of the Site. The removal of indigenous vegetation on the upper slopes will also be visible and the sequence of ridges will continue to change, albeit over a 20-year period. As the Project progress towards Stage 5, mitigation plantings along the southern edge of the quarry will become visible and form backdrop to the quarry. As such, the visual effects resulting from Stage 4 will remain **moderate adverse**, reducing to **low-moderate adverse** during Stage 5.

Post Closure, plantings on quarry benches on the mid to upper slopes will be implemented. Over time, these plantings will soften views of the engineered quarry benches and connect the broader vegetated skyline. Based on this, the visual effects will reduce to **low adverse**.

Western portion of viewing area (Tourist Road, west of Monument Road and Munros Road)

For the viewing audience within the western portion of this viewing area (a section of Tourist Road west of Monument Road and on Munros Road), views of the Site will be in many instances largely screened by intervening vegetation and landform. Where views do available, partial to open views of the Site will be available due to the orientation of the Site being open towards the northwest. From these locations, any visible extent of the Site will be viewed at a distance of over 3km.

During Stages 1 and 2, the change in views is primarily associated with the quarry benches and earthworks on the upper slopes of the proposed quarry expansion while the lower slopes will remain largely screened by intervening landform and vegetation. Also noting that the quarry expansion during this stage will occur largely within the approved quarry extent and the SP-QZ, any visual effects resulting from Stages 1 and 2 are considered no more than **very low adverse**.

The greatest change in views will be resulting from Stage 3 as extraction extends towards the hill to the south. This will result in a change in the sequence of ridges of the broader foothills, albeit at a very localised extent and being gradual. The extended quarry benches and earthworks during these stages will continue to be visible, and the visual effects resulting from this stage are considered **low adverse**.

During Stages 4 and 5, in addition to quarry benches and earthworks, the removal of indigenous vegetation will be visible. These will also result in a further change in the sequence of ridges in the north, although remain at a localised extent. Views of the broader foothills backdrop and the skyline will be largely maintained. Also considering this change in views during these stages will be gradual (over a period of 20 years), the visual effects will remain **low adverse**.

Post Closure, plantings on quarry benches on the mid to upper slopes will be implemented. Over time, these plantings will soften views of the engineered landform and connect the vegetated skyline along the ridgeline. Based on this, the visual effects will reduce to **very low adverse**.

In summary, the visual effects of the Project on this viewing audience group will be **very low to low adverse** during Stages 1 and 2, increasing to **low to moderate adverse** during Stage 3 and remaining **low to moderate adverse** in Stage 4, reducing to **low to low-moderate adverse** during Stage 5. Within plantings implemented on the quarry benches, the adverse visual effects will reduce to **very low to low**.

Viewing Audience Group E

Figure References:

- *Appendix 2: Figure 6 and Site Context Photographs 7 – 8*

Viewing Audiences:

- *Residents[41] and road users north of Tourist Road and Quinns Road, and east of Papakura-Clevedon Road, located to the west. These also include north McNicol Road, a section of Monument Road (between Clevedon Showgrounds Reserve and Tourist Road), Rossbern Lane, Ashford Rise, northeastern end of Otau Mountain Road, Taitaia Lane, Holdens Road and south of Clevedon-Kawakawa Road.*
- *Visitors to the Clevedon Showgrounds Reserve, McNicol Homestead, Clevedon Kawakawa Road Esplanade and Clevedon Wharf Reserve.*

Existing Views

This viewing audience group is located to the northwest of the Site and obtains mid to long distance (approximately 2.4-5.1km from the proposed quarry extent), low elevation views of the Site. Existing views of the Site are similar to that experience in Viewing Audience Group D.

Within the eastern portion of this viewing area (including McNicol Road, northern end of Otau Mountain Road, Ashford Rise and Rossbern Lane), these rural properties generally comprises residential houses that have existing vegetation within the curtilage and along property boundaries, with a few exceptions on Rossbern Lane and the northern portion of McNicol Road. Due to the orientation of the Site, views of the Site from this viewing audience are primarily associated with the north-facing flanks of the Site which are partially to largely screened by intervening vegetation and the protected pine trees along the Northern Ridge. Any available views of the Site are likely to be glimpsed to partial and relate to the upper slopes of the Site.

Moving west along Monument Road, northern side of Tourist Road, Taitaia Lane and eastern side of Papakura-Clevedon Road, the Site becomes more open towards this viewing audience due to its orientation. Despite this, views of the Site are in many places truncated by intervening vegetation. Where visible, views of the Site are primarily associated with the upper slopes of the Site, including the upper reaches of the existing quarry. These views also tend to be glimpsed to partial. From these locations, the Site is typically viewed together with the broader Hunua Ranges foothills in the background, with large and open paddock, rural residential houses and intervening vegetation in the fore and midground.

Proposed Views

Eastern portion of viewing area (McNicol Road, northern end of Otau Mountain Road, Ashford Rise and Rossbern Lane)

Within the eastern portion of this viewing area along and east of McNicol Road, glimpses of the quarry benches and earthworks on the upper slopes will be available during Stage 1. Given extraction activities will occur largely within the approved quarry extent, any visual effects are

[41] Including 1-14, 16, 18 Benjamin Place, 1, 9, 12, 17, 19, 69, 90, 100, 112, 124, 128, 132, 136, 150, 172, 178, 180, 183, 184, 187-189, 191, 192, 195-197, 200, 203, 207, 210, 211, 215, 217, 219, 235, 240, 241, 254, 272 McNicol Road, 1A, 1-9, 11 Munro Oak Lane, 1, 3-7, 9 Rossbern Lane, 1-3, 46, 47, 55, 73, 75 Taitaia Lane, 1A, 1-11 Tuawa Lane, 62, 94, 100, 102, 107, 108, 110, 110A, 112, 120, 122A-C, 124A-D, 126, 142, 144, 146, 148, 150, 155, 160-162, 164, 166-169, 171, 195, 208, 210, 212, 214, 229, 232, 234 Monument Road, 2, 24, 50, 66, 66A, 110, 116, 118, 122, 132, 262, 268, 274, 280, 296, 328, 334 Tourist Road, 164, 184, 190, 250, 260 Papakura-Clevedon Road, 20, 29, 30 Otau Mountain Road, 32, 34 Quinns Road, 40, 82 Chesham Lane, 70, 74, 80, 106, 167 Holdens Road and 51, 69, 75, 81, 243 Clevedon-Kawakawa Road.

considered **very low adverse**. Mitigation plantings to the south-east will be implemented during Stage 1 although no views of these plantings will be available from these locations due to the location of plantings being on the south-facing flanks.

During Stage 2, the quarry benches and earthworks resulting from this stage will be viewed as an extension of Stage 1 and will be largely truncated by the Northern Ridge protected pine trees. Extraction upslope will however affect a localised extent of the sequence of ridges. In the meanwhile, mitigation plantings at the overburden site will become more established during this stage, connecting the vegetated skyline to the east. Also noting that the proposed quarry expansion during Stage 2 will remain largely within the approved quarry extent and the SP-QZ where views of a working quarry are not unanticipated. The visual effects resulting from Stage 2 will therefore remain **very low adverse**.

During Stage 3, extraction activities will progress south towards the ridge that originally backdrops the existing quarry and forms part of the skyline. The extended quarry benches and earthworks resulting from this stage will be visible to this viewing audience and there will be an alteration of the ridge sequence. It is however noted that the change in the sequence of the ridges will be very localised (i.e. at a Site scale) and the broader skyline of the foothills will largely remain. Considering this, the visual effects during Stage 3 are considered **low-moderate adverse**.

In latter stages, the proposed quarry expansion will extend eastward onto the upper slopes of the Site, outside of the SP-QZ. Views of quarry benches, earthworks and the removal of indigenous vegetation on the upper slopes (which form part of the skyline) will be available. At the same time, mitigation plantings established during Stage 1 will become increasing visible, providing a vegetated backdrop the quarry. As such, the visual effects during Stage 4 are considered **low-moderate adverse**, reducing to **low adverse** during Stage 5.

Post Closure, plantings on the mid to upper quarry benches will further soften the engineered landform of the Project and extend the vegetated skyline, as well as reduce the visible extent of exposed quarry faces. As such, adverse visual effects will be **very low to low**.

Similar views can also be obtained from McNicol Homestead, on which visual effects are considered **very low adverse** during Stages 1 and 2. Visual effects during Stage 3 will increase to **low adverse** when extraction extends beyond the currently approved quarry extent and changes the sequence of skyline, and will remain **low adverse** during Stage 4. As mitigation plantings become more established, visual effects will reduce to **very low adverse** during Stage 5 and Post Closure.

Central and western portion of the viewing area (Monument Road, northern side of Tourist Road, Taitaia Lane and eastern side of Papakura-Clevedon Road)

For the viewing audience within the central and western portion of this viewing area (along Monument Road, Taitaia Lane and the eastern side of Papakura-Clevedon Road), the proposal will become more visible due to the orientation of the Site being open towards northwest. Despite this, any available views will be mid to long distance, from 3-5km away from the proposed quarry extent.

During Stage 1, the change in views is primarily associated with the quarry benches and earthworks on the upper slopes of the proposed quarry expansion. During Stage 2, the proposed quarry expansion will extend further upslope. The expansion during this stage will also alter the sequence of ridges at a very localised extent. On the other hand, mitigation plantings at the overburden site will become more established and extend the vegetated skyline to the northeast. Also noting that these stages are largely within the approved quarry extent and

the SP-QZ, the visual effects during Stages 1 and 2 are therefore considered **very low adverse**.

During Stage 3, this viewing audience will experience longer distance views of the extended quarry benches and earthworks as extraction activities progress towards the ridge to the south. The lower slopes of the quarry will remain screened by intervening vegetation. Considering the above, the visual effects resulting from Stage 3 are considered **low-moderate adverse**.

During Stages 4 and 5, in addition to quarry benches and earthworks, the removal of indigenous vegetation will be visible. These will also result in a further change in the sequence in ridges to the north, although occurring gradually over a period of 20 years. As the mitigation plantings become more established, this vegetation will become increasing visible and form a vegetated backdrop to the proposed quarry. Based on this, the visual effects during Stage 4 will remain **low-moderate adverse** and reduce to **low adverse** during Stage 5.

Post Closure, plantings on quarry benches on the mid to upper slopes will be implemented. Over time, these plantings will soften views of the engineered landform and reduce the visible extent of exposed quarry faces, as well as extend the vegetated skyline. Based on this, the visual effects will **very low to low adverse**.

From Clevedon Showgrounds and Reserve and Clevedon Kawakawa Road Esplanade, similar views, as described above, can be obtained and are considered to have **very low adverse** visual effects during Stages 1 and 2. While the greatest degree of visual change will occur during Stage 3, visual effects are considered **low adverse** due to the transient nature of views. Visual effects will remain **low adverse** and reduce to **very low adverse** during Stage 5 and Post Closure when mitigation plantings become increasingly established.

From Clevedon Wharf Reserve, no views of the Site are available due to intervening landform and vegetation; therefore any visual effects are considered **neutral**.

In summary, the proposed quarry expansion will generate no more than **very low adverse** visual effects during Stages 1 and 2, increasing to **low-moderate adverse** during Stages 3 and 4 and reducing to **low adverse** during Stage 5. Adverse visual effects will become **very low to low adverse** post closure.

Viewing Audience Group F

Figure References:

- *Appendix 2: Figure 6 and Site Context Photographs 9 – 10*
- *Appendix 3: Figure 1 and VS 5*

Viewing Audiences:

- *Residents and road users within Clevedon Village, including new residential development in the southern reaches of the village (Clevedon Meadows and Conmara Estate), located to the northwest.*
- *Users of Clevedon Tennis Club, Clevedon Bowling Club and Clevedon School.*

Existing Views

This viewing audience group is located to the northwest of the Site and obtains long distance (approximately 4-5.7km from the proposed quarry extent), low elevational views of the Site. Existing views towards the Site are similar to that experience in Viewing Audience Group E.

At the fringes of Clevedon Village, views are characterised by large open farmland in the fore and midground, with the Site (including the upper slopes of the existing quarry) forming part of the broader visual backdrop to the southeast. From these locations, the Site is often less screened by intervening vegetation and built structures where long distance, partial to open views are available.

Within the village, views of the existing quarry and the Site are typically truncated by built development (i.e. residential houses) in Clevedon village. Where views are available, it is primarily associated with the upper slopes of the existing quarry and the Site.

The protected pines along the Northern Ridge also provide some screening to the northern extent of the Site.

Proposed Views

For viewing audience at the fringes of Clevedon Village, extraction activities during Stage 1 will be viewed as an extension of the existing quarry of which the change in views during this stage will be less detectable due to the long viewing distances (i.e. over 4km away from the proposed quarry expansion). Also considering Stage 1 will occur within the approved quarry extent and the SP-QZ, the visual effects resulting from Stage 1 are therefore considered **very low adverse**.

During Stage 2 as the Project progresses upslope, this viewing audience will observe views of the extended quarry benches and earthworks. The sequence of ridges will be altered at a very localised extent, which will be hardly detectable due to the gradual change over a 10-year period and the long viewing distance. The protected pine trees along the Northern Ridge will continue to provide some screening to the northern portion of the of the proposed quarry expansion. Based on this, the visual effects resulting from Stage 2 will remain **very low adverse**.

The greatest change in views will occur during Stage 3 when this viewing audience will observe a larger extent of the quarry faces as extraction extends towards south. The visual effects resulting from Stage 3 are therefore considered **low adverse**.

During Stages 4 and 5, a gradual and localised change of the sequence of ridges will be observed as earthworks and the removal of the indigenous vegetation on the upper slopes occur. The Northern Ridge protected pines will continue to provide some screening to the expansion to the east. The quarry benches resulting from previous stages will remain observable. Despite this, views of the broader foothills backdrop will remain legible and dominant. As a result, the visual effects will be **low adverse** during Stages 4 and 5.

For viewing audience within Clevedon Village, any views of the Project will be largely screened by intervening vegetation and built structures, particularly during Stages 1 and 2. Visual effects resulting from these stages will be **neutral**.

From Stages 3 to 5, aspects of the proposed quarry expansion may become more visible as the upper slopes of the Site are less screened. Whilst the quarry benches, earthworks and a change in ridge sequence may be detectable, this change in views will be gradual over a period of 30 years. The visual effects on this viewing audience will be no more than **very low adverse**.

Due to the distance from the Site, any views of mitigation plantings to the south-east of the proposed quarry will be indiscernible across all stages from this viewing audience group. However, plantings on the mid to upper quarry benches will be implemented. Over time when this vegetation becomes established, the engineered landform of the Project will be softened and will reduce the visible extent of the exposed cut faces. Visual effects will remain **very low adverse**.

Viewing Audience Group G

Figure References:

- *Appendix 2: Figure 6 and Site Context Photographs 11 – 13*

Viewing Audiences:

- *Residents and road users along Creightons Road (up to the intersection with Jones Road), Cherrington Road, east of a section of Jones Road (before the intersection with Garvie Road) and Brodie Road, located to the west*

Existing Views

This viewing audience group is in the hill country located to the west of the Site and comprises long distance (approximately 4.4-5.4km from the proposed quarry extent), high elevational views of the Site. This viewing audience group comprises rural properties that generally contain residential houses located along local ridgelines. Existing views of the Site are similar to that experience in Viewing Audience Group C, albeit from a longer distance. Existing views east comprise a rural hill country outlook that composes large rural lifestyle properties and associated farmland in the fore and midground. Some of these areas, in particular the gullies, are densely vegetated. Infrastructure including transmission towers and powerlines are also visible from a distance. These are backdropped by the foothills of Hunua Ranges, including the Site. The available views of the Site are primarily associated with the upper slopes of the Site whereas the lower slopes are in many places screened by intervening vegetation and landform.

Proposed Views

During Stage 1, any views of the proposed quarry expansion will be glimpsed at most and will be viewed as an extension of the existing quarry. During latter period of this stage, this viewing audience may observe the implementation of mitigation plantings particularly within the upper catchment of Stream 3 which visually connect the existing isolated areas of native vegetation on the mid and upper slopes. Considering that Stage 1 will also occur largely within the approved quarry extent, the visual effects resulting from Stage 1 are considered no more than **very low adverse**.

The greatest change in views will occur during Stages 2 and 3 as aspects of the Project including quarry benches and earthworks will become visible. These views are partial to open yet long-distance. During Stage 3, this viewing audience will observe a larger extent of the quarry faces as extraction activities extend gradually towards south. Despite this, these change in views will be observed from a long distance. In the meanwhile, the mitigation plantings will become more established, creating a more naturalised outlook and enclosure to the Project in the south. The visual effects are therefore considered **low adverse**.

In latter stages (Stages 4 and 5), quarry benches, earthworks and the removal of indigenous vegetation will be observable as previous stages open up views to the east. Available views associated with the expansion upslope will be less detectable due to the long viewing audience and the gradual change for over a 20-year period. Views of the broader Hunua Ranges foothills backdrop will remain legible and prominent. The visual effects during Stages 4 and 5 will remain **low adverse**.

Post Closure, plantings on the mid to upper quarry benches will be implemented. Over time when vegetation becomes established, it will soften and reduce the visible extent of the exposed quarry faces. The adverse visual effects will be **very low**.

Viewing Audience Group H

Figure References:

- *Appendix 2: Figure 6 and Site Context Photographs 14 – 15*

Viewing Audiences:

- *Residents and road users west of Papakura-Clevedon Road, south of West Road and the area up to Hamlin Road, Village Way and Altitude Road to the east, located to the west of the Site. These include a section of Papakura-Clevedon Road (between the intersection with West Road to the north and Heard Road to the south), Clevedon-Takanini Road, Parish Line Road, Burnside Road, north Aidens Way, north Church Road, north Ardmore Quarry Road, north Peterson Road, Mullins Road, Bullens Road, Hamlin Road, Village Way and Altitude Road.*
- *Users of Ardmore Airport and Ardmore School.*

Existing Views

This viewing audience group is located to the west of the Site within the Clevedon valley and obtains long distance (approximately 4.6-9km of the proposed quarry extent), low elevational views of the Site. Views to the southeast comprise intervening shelterbelts and windbreak vegetation associated with horticultural land use of this area. Where vegetation is absent to completely screen views, existing views to the east primarily comprise large rural farmland and lifestyle properties in the fore and midground, backdropped by the foothills of Hunua Ranges including the Site. These available views of the Site are primarily associated with the upper slopes of the Site and are typically partial.

Viewing audiences within the southern part of this group, notably along Papakura-Clevedon Road, Aidens Way, Church Road, Ardmore Quarry Road and Peterson Road, views of the Site will be further intervened by the hills to the south and southeast. No to glimpsed views of the Site are available from these locations.

Proposed Views

While the Project are largely screened by intervening vegetation and landform from most of this viewing audience, where there are views of the Site, the change in views resulting from the proposed quarry expansion will be observable. It is noted that any available views will be long distance.

During Stage 1, the proposed quarry expansion will be observed as an extension of the existing quarry and the visual effects on this viewing audience are considered no more than **very low adverse**.

The greatest change in views will occur during Stages 2 and 3 as extraction activities progress upslopes and towards the south as the Site is orientated towards this viewing audience group. Partial to open views of quarry benches and earthworks will be available. This change in views will however be gradual (i.e. over a period of 20 years). It is also noted that Stage 2 will occur largely within the approved quarry extent, and therefore visual effects during Stage 2 will remain **very low adverse**. While being long distance views, Stage 3 will occur outside of the approved extent. As a result, the visual effects during Stage 3 are considered **low adverse**.

In latter stages (Stages 4 and 5), quarry benches, earthworks and the removal of indigenous vegetation will be noticeable as previous stages open up views to the east. These changes in views are however less discernible due to the long viewing distance and that changes will be gradual (over a period of 20 years). Views of the broader foothills backdrop will remain legible

and prominent. The Site will be viewed as part of a wider working rural landscape. Based on this, the visual effects during Stages 4 and 5 will be **low adverse**.

Due to the distance from the Site, any views of mitigation plantings to the south and east of the proposed quarry will be indiscernible across all stages from this viewing audience group. However, plantings on the mid to upper quarry benches will be implemented. Over time when this vegetation becomes established, the engineered landform of the Project will be softened and will reduce the visible extent of the exposed cut faces. Any adverse visual effects will be **very low**.

Viewing Audience Group I

Figure References:

- *Appendix 2: Figure 6 and Site Context Photographs 16 – 18*

Viewing Audiences:

- *Residents and road users along Twilight Road, West Road, Tyldens Road, eastern end of Fitzpatrick Road, and west of Clevedon Village. This also includes users of Clevedon Scenic Reserve, in particular the lookout, located to the northwest.*

Existing Views

This viewing audience group is located to the northwest of the Site and obtains long distance (approximately 5-7km from the proposed quarry extent), low elevational views of the Site. These views, in general, are associated with the upper slopes of the existing quarry and the Site while the views of the lower slopes are screened by intervening vegetation.

From more elevated sections of West Road, Twilight Road, Fitzpatrick Road and Tyldens Road (as travelling into Clevedon valley from the northwest), open views of the Site are available. These views are typically observed within the context of rural pastoral and horticultural land use in the fore and midground, backdropped by the broader foothills of Hunua Ranges including the Site.

Users of Clevedon Scenic Reserve will experience long distance (approximately 6.6km from the proposed quarry extent), high elevational views of the Site from the lookout point. From this location, views of the Site are open and are viewed together with the broader Hunua Ranges in the background, with the Clevedon valley in the fore and midground.

Proposed Views

During Stage 1, the proposed quarry expansion will be in many instances screened by intervening vegetation. Where views are available, the Project will be viewed as an extension of the existing quarry. Considering the long viewing distance and that the quarry expansion during this stage is largely within the approved quarry extent, the visual effects resulting from Stage 1 will be no more than **very low adverse**.

As extraction activities progress upslopes and extends to the south during Stages 2 and 3, partial to open views of the extended quarry benches and earthworks can be observed by this viewing audience. While the greatest change in views will occur during these two stages, the proposed quarry expansion during Stage 2 will remain largely within the approved quarry extent as anticipated views. Based on this, the visual effects resulting from Stage 2 will remain **very low adverse,** with Stage 3 increasing to **low adverse**.

In latter stages (Stages 4 and 5), the extended quarry benches further upslopes, earthworks and the removal of indigenous vegetation will be observable, albeit being a gradual change in views over a 20-year period. The visible extent of the Project will remain primarily associated with the quarry benches resulting from Stages 2 and 3. Views of the broader foothills backdrop will remain legible and prominent. Based on this, the visual effects during Stages 4 and 5 will be **low adverse**.

For viewing audience located on the elevated sections the viewing area[42], aspects of the proposed quarry expansion including quarry benches and earthworks will be observable across all stages. Noting that extraction activities during Stages 1 and 2 will largely occur within the approved quarry extent, the change in views to a working quarry is not unanticipated. These available views are also long distance; therefore, the visual effects are considered **very low adverse**.

During Stage 3, this viewing audience will observe a larger extent of the quarry faces as extraction progresses to the south, increasing the visual effects to **low-moderate adverse**.

In latter stages (Stages 4 and 5), quarry benches, earthworks and the removal of indigenous vegetation will be noticeable. These changes in views are however less discernible due to the long viewing distance and that changes will be gradual (over a period of 20 years). Views of the broader foothills backdrop will remain legible and prominent. The Site will be viewed as part of a wider working rural landscape. Based on this, the visual effects during Stage 4 will remain **low-moderate adverse**, reducing to **low adverse** during Stage 5.

Similarly, users of the Clevedon Scenic Reserve will observe aspects of the proposed quarry expansion across all stages due to its elevated location. However, considering the transient nature of this viewing audience, any visual effects resulting from the proposed quarry expansion will be no more than **very low adverse**.

Due to the distance from the Site, any views of mitigation plantings to the south and east of the proposed quarry will be indiscernible across all stages from this viewing audience group. However, plantings implemented on the mid to upper quarry benches will over time soften the engineered landform and reduce the visible extent of the exposed cut faces of the Project when vegetations become established. In lower elevational areas, these quarry benches plantings will provide an extension to the vegetated skyline. Considering this, adverse visual effects will be **low to very low**.

[42] This includes 124, 186 & 191 Twilight Road, 16 Tyldens Road, 169, 175, 177, 179, 181, 190, 285, 315 & 317 West Road and 183 Fitzpatrick Road.

Together. Shaping Better Places.

Boffa Miskell is a leading New Zealand environmental consultancy with nine offices throughout Aotearoa. We work with a wide range of local, international private and public sector clients in the areas of planning, urban design, landscape architecture, landscape planning, ecology, biosecurity, Te Hīhiri (cultural advisory), engagement, transport advisory, climate change, graphics, and mapping. Over the past five decades we have built a reputation for creativity, professionalism, innovation, and excellence by understanding each project's interconnections with the wider environmental, social, cultural, and economic context.



www.boffamiskell.co.nz

Whangarei	Auckland	Hamilton	Tauranga	Wellington	Nelson	Christchurch	Queenstown	Dunedin
09 358 2526	09 358 2526	07 960 0006	07 571 5511	04 385 9315	03 548 8551	03 366 8891	03 441 1670	03 470 0460