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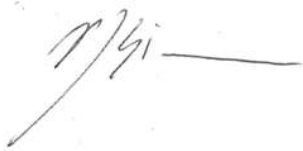
Milbrow Estate

Landscape and Visual Assessment of Rural Residential Subdivision
Prepared for Caland Holdings Ltd

10 March 2026



Document Quality Assurance

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1.0 Introduction

1.1 Scope of the report

Boffa Miskell Limited (BML) has been engaged by Caland Holdings Ltd in December 2021 to undertake a Landscape and Visual Effects Assessment (LVA) for a proposed rural residential subdivision at McFetridge Drive, Hamurana, Rotorua District (otherwise referred to as The Site in this report). The Site is zoned Rural 1, within the Rotorua Lakes District Plan.

The following LVA assesses the landscape and visual effects of the proposed residential land use on the immediate and surrounding landscape.

1.2 Project background

Boffa Miskell Ltd have been involved in the analysis and development of the proposed subdivision design, working in a collaborative approach with the Project Team's Planner, Civil Engineer and the client. The development of the proposed subdivision has been driven by the surrounding landscape characteristics and values. The design development has also included a hui with mana whenua (*Ngāti Rangiwewehi*) where the key values of the area were discussed including heritage connections to the area.

The design response has been focused on maintaining those important values that are identified for the Site, whilst integrating a land use change that is responsive to the Site and its surrounding rural and rural residential character.

1.3 Other Relevant Technical Reports

Several technical reports have been reviewed and informed this assessment and design development.

- Lake Rotorua, Landscape Assessment, 2010, Boffa Miskell Ltd.
- Lake Rotorua Caldera Rim Rural Character Design Guideline, Boffa Miskell Ltd, October 2012.
- Cultural Impact Assessment Report, Te Maru o Ngāti Rangiwewehi Iwi Authority, 7th November 2025

1.4 Assessment Process

This assessment has been undertaken with reference to the Quality Planning Landscape Guidance Note (Boffa Miskell Limited)¹ and its signposts to examples of best practice, including: the UK guidelines for landscape and visual impact assessment² and *Te Tangi at te Manu | Aotearoa New Zealand Landscape Assessment Guidelines*. A full methodology is outlined in **Appendix 1** of this report. In summary, the effects ratings are based upon a seven-point scale which ranges from very low to very high.

In order to understand the Site and its surrounding landscape character, values and qualities a desktop analysis and site visit have been undertaken. The site visit was undertaken on the 18th of January 2022 in fine clear weather conditions. During the site visit the extent of the Site was observed and photographed. Surrounding views from public vantage points were observed and photographed and are documented in the attached *Graphic Supplement*. Photographs were taken with fixed 50mm lens on a Canon 6D Digital SLR Camera, with all photograph positions located with a GPS. Photographs are provided in two formats single frame A3 and panoramas of 'stitched photographs'. At the time of issuing this report, no changes to the environment have been observed and as such no additional site visit photography, to that taken in 2022, has been undertaken.

2.0 Existing Environment

2.1 Wider Landscape Context

Hamurana is sited in the Rotorua District is positioned at the northwestern margin of Lake Rotorua. This landscape is the result of dynamic geological, volcanic and fluvial processes that have created some of the country's most impressive and iconic landscapes, including Lake Rotorua and its geothermal features. The ash laden hillslopes comprise deep incised gully systems that follow fluvial patterns toward Lake Rotorua. A dominant landscape feature of Lake Rotorua is the caldera rim, which provides a backdrop to the north of the Hamurana and extends around the lake in varying degrees of slope and visual prominence.

The landscape patterns are also influenced by human settlement, productive land use, recreation and economic activities, within the settlement of Hamurana and other settlements around Lake Rotorua. Land use within the area comprises agricultural dairy and dry stock, pockets of forestry with rural residential settlements along Tauranga Direct Road and Hamurana Road (along the shoreline of Lake Rotorua).

Hamurana Springs is a well-known natural and tourism attraction for the Rotorua District. Surrounding this is the lakeside settlement of Hamurana. In the past 30 years further subdivision has occurred around the periphery of Hamurana to include North Riding Estate on Tauranga Direct Road. Other land use in the area includes Kaharoa Kennel and Cattery and the Hamurana Play Centre, both sited along Tauranga Direct Road.

Along Hamurana Road the marae of Ngati Rangiwehewehi and its associated urupa are sited and are surrounded with localised residential dwellings.

¹ <http://www.qualityplanning.org.nz/index.php/planning-tools/land/landscape>

² Guidelines for Landscape and Visual Impact Assessment, 3rd Edition, 2013

2.2 Landscape Character Area

The site forms part of the Western Rural landscape character area, noted in the Lake Rotorua Catchment Landscape Assessment (June 2010, Boffa Miskell Ltd) ('Landscape Assessment'). This area is described in the technical landscape study as being defined as:

- *Geological boundaries between unconsolidated material in the east and harder volcanic parent material in the west and northwest.*
- *Hauraki Stream in the north*
- *SH5 and Western Road in the south.*

The Landscape Character area is characterised by:

- *Rolling to moderately steep land Class 6 dominant with significant areas of Class 4 and 4 soils, all with erosion subclass limitations and featuring a series of moderately steep, steep and very steep drainage systems associated with the principal Mamaku Plateau streams that drain to Lake Rotorua.*
- *The variety in topography reflects the underlying parent material that features all base rock types found within the study area. Underlying base rock older than Taupo pumice and unconsolidated tephra are dominant types. These weaker materials are prone to erosion / Dissection resulting in characteristic tightly rolling terrain.*
- *Land cover is dominated by pastoral land uses and includes patterns of rural residential living related to principal roading patterns.*
- *Land cover includes small isolated patches of indigenous vegetation and partially vegetated stream corridors that relate to Komutumutu, Waiteti and Awahou Stream systems and small areas of production forestry.*
- *Seven archaeological sites are located in proximity to the Waiteti Stream.*

Relevant Landscape Management Issues identified:

- *Accommodation of rural residential growth in relation to landscape values / amenity*
- *Landscape change and loss of rural character*
- *Siting, spacing, access and built form of buildings in relation to existing topographic features and vegetation patterns including the application of low impact design principles in relation to water quality, earthworks and stormwater management.*



Figure 1 – Landscape Character Area, Lake Rotorua Landscape Study

2.3 Local Landscape Context

The Site is located at the raised plateau of McFetridge Drive, sited off Jackson Road. The landform comprises a rolling landscape that falls gradually in a southerly direction toward Lake Rotorua. Views toward the Lake and the Site are frequently gained from numerous locations, including along Jackson Road.

The rolling landform forms a series of gully systems and ridgelines that are banked toward Lake Rotorua as part of the wider lake caldera feature. The caldera rim is well defined further east at the northern end of Lake Rotorua, above the settlement of Hamurana. Surrounding the Site, the caldera rim feature is less defined and flattens out further to the north of the Site and Jackson Road.

The land use patterns of the area are dominated by the agricultural land use of mainly dairy and grazing stock. Pockets of productive forestry are found along steeper slopes and further north of the Site. Clusters of rural residential housing are found along Jackson Road, near to the Site and alongside Tauranga Direct Road and Hamurana Road. This pattern is more concentrated around the eastern and northern areas of the Site.

The Site is surrounded by smaller land holdings to the east, north and south, with larger clusters of smaller land holdings connected to the intersection of Hamurana Road and Tauranga Direct Road.

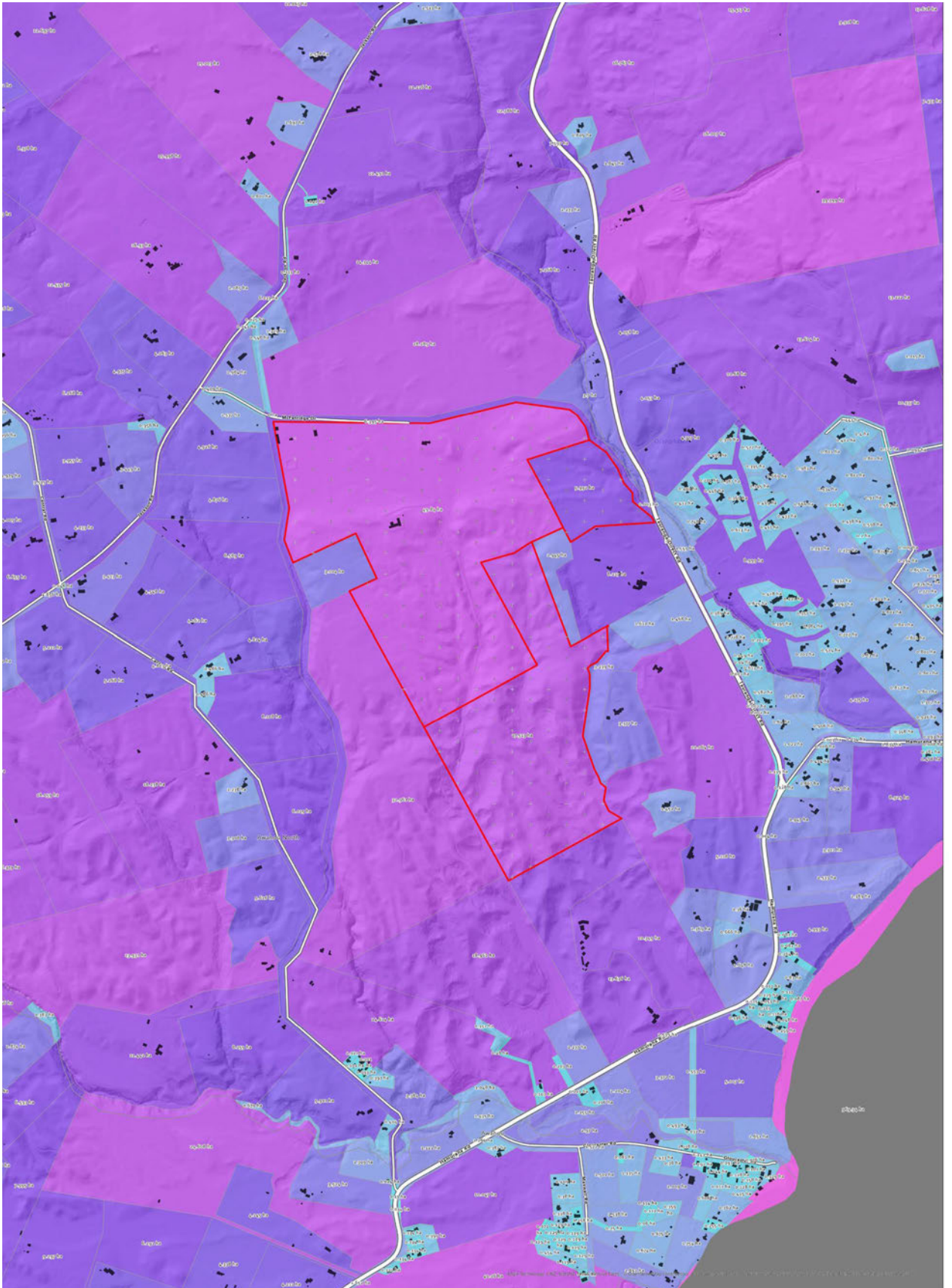


Figure 2 – Land parcels, Refer to Appendix 3 for parcel size details

2.4 Site Description

Refer to Graphic Supplement – Site Appraisal Photographs

The Site is located to the south of McFetridge Drive, extending southward toward Hamurana Road. The Site falls in elevation from 340msl down to 320msl. At the northern end of the Site, a gradually sloping plateau extends either side of McFetridge Drive, creating a wide open space dominated by open paddocks used for stock grazing. The existing farm cottage resides on a small knoll within this plains landscape area. A farm access race extends, from the McFetridge Drive and Jackson Road intersection, in a south easterly direction. This race follows an historic tramline from early native forest harvesting which historically extended through the property down to Lake Rotorua.

At the eastern end of the northern plains, the landform rises to meet a north / south orientated spur which extends along the edge of Tauranga Direct Road and into the adjoining property at 67 Tauranga Direct Road and further south. The flatter landform then rises along an east /west ridgeline which rises 10m above the northern plains. Atop of this escarpment is a highpoint of the Site where the main dwelling of the property is sited. The landform then falls continuously toward the Lake, with two main spurs that extend southward along the eastern boundary and western boundary, separated by a central gully system and a series of gully heads.

The central gully system extends southward down the eastern extent of the Site toward a wetland feature at the northern extent of the Site. An existing farm track follows the gully system in a southerly direction and connects to the eastern and western ridgelines. Another farm track extends in a southern direction over from the farm at the western boundary of the Site, connecting to the western plateau.

Vegetation cover comprises pasture and pockets of larger rural exotic trees, including pine, macrocarpa and willow, at the north-eastern and north-western corners of the Site.

2.5 Visual Catchment

The visual catchment comprises both a localised and wider viewing audience that is dependent on elevation within the Site. The visual catchment includes the viewing audience composition of:

- Residential based views from private dwellings / properties
- Transient views from pedestrians and vehicular users
- Recreation user-based views from reserves and Lake Rotorua

The intervisibility and analysis from the site visit and surrounding visual catchment observations identify the visual catchment to comprise:

Immediate Viewing Audience based from:

- Jackson Road
- McFetridge Drive
- Tauranga Direct Road

Middle Distance Viewing Audience

- Jackson Road
- Tauranga Director Road

Distant Viewing Audience

- Lake Rotorua
- Lake settlement areas, further afield,

The assessment of visual effects addresses the sensitivities of this viewing audience including the specific landscape values associated with the Site and the potential adverse visual effects generated with the change in land use and in turn landscape character.

3.0 Relevant Statutory Provisions

As part of this assessment, there are several planning provisions that are relevant to this project. Specifically, they include:

- The Resource Management Act – notably Section 7c
- Bay of Plenty Regional Policy Statement
- Bay of Plenty Regional Plan
- Rotorua District Plan

Direct analysis against the Rotorua District Plan (RDP) objectives and policies are provided in Section 5.4 of this report. The Site is not identified as an Outstanding Natural Feature or Landscape however comprises part of the Rotorua Caldera area considered in the policies and supporting design guide. The relevant provisions to landscape and visual effects matters and the underlying Rural 1 Zone and part of the Rotorua Caldera comprise:

- Design guidance for the Rotorua Caldera Rim
- Objectives and policies managing effects on rural character and amenity of the Rotorua Caldera.

Objective and policies see to manage the effects of activities with sensitive landscape area in the Rotorua caldera to ensure that its character and amenity is maintained. Key policies that must be addressed in the assessment comprise

- NFL- P16
- RURZ – P11
- RURZ – P12
- RURZ – P14
- RURZ-AC1, subclauses: 1, 2, 3, 4, 7, 9, 10, 11, 14, 18, 20 and 29a – j.

3.1 Non- statutory material

The main technical documents that have informed statutory guidance comprises the *Lake Rotorua Catchment Landscape Assessment*, undertaken by Boffa Miskell Ltd in 2010. This document informs and provides detail on the values and characteristics of the character area where the Site resides.

The ³*Rotorua Caldera Rim Rural Character Design Guideline, October 2012, Boffa Miskell Ltd*, has been also considered in the preparation of this assessment and the subdivision design.

The values identified are discussed in the Section 2.2 and the extract from the Landscape Assessment is included in Appendix 2.

4.0 Proposal Description

Refer to Scheme Plan Drawing and Landscape Concept Plan (Appendix 3)

The proposal seeks to develop a rural residential subdivision combined with a land use change to integrate restoration of native vegetation cover across the Site. This proposal would see the inclusion of establishing native vegetation around pockets of residential dwellings to visually integrate, screen and connect the landscape patterns of the Site.

The existing property accommodates two dwellings, the homestead and the managers cottage. The proposed subdivision will introduce an additional 90 dwellings (a total of 92) into the landscape across a 83.26ha site. The Site includes already established and revegetated wetlands and ponds and the proposed subdivision would comprise additional native vegetation to enhance the gully system and stormwater runoff across the Site.

Two large rural residential lots are proposed (Lot 44 and Lot 94 (~10ha each) at the southern end of the site. Extensive revegetation is proposed on both of these sites around existing wetlands and springs. While through the centre and north eastern corner of the site, three large recreation lots are proposed (Lots 91 – 93 (7.1ha). These recreation lots will also be revegetated with walkways throughout. Elsewhere, the focus has been on creating pocketed clusters of housing separated by native vegetation cover. Some of the lots will comprise internal rural views to the north with others comprising lake views to the south.

Integrated to the natural landform and rural patterns is the inclusion of native vegetation cover that is proposed to surround the clusters of dwellings creating enclaves amongst the rural landscape. This element is a core foundation to the successful integration of the subdivision into the rural landscape.

³ (Boffa Miskell Ltd, 2012)



Figure 3 – Landscape Concept Plan

5.0 Assessment of Effects

Landscape and visual effects may result from natural or induced change in the components, character or quality of the landscape. Usually these are the result of landform or vegetation modification or the introduction of new structures, facilities or activities. Such impacts are assessed to determine their effects on character and quality, amenity as well as on public and private views.

In this study, the assessment of potential effects is based on a combination of the nature of the landscape and visibility together with the nature and scale of the development proposal.

Particular effects considered relate to the following:

- Landscape / rural character effects
- Visual amenity effects from public and private locations;
- Potential cumulative effects; and
- Effects in relation to statutory provisions.

The principal elements of the proposal that will give rise to landscape and visual effects are:

- Earthworks associated with landform change to the valued landscape biophysical attributes.
- Inclusion of dwellings into sensitive areas, including the northern portion of the site.
- Change in spatial distribution and land use within the site.
- Introduction of road corridors and stormwater infrastructure into the landscape.
- Vegetation cover change and subsequent vegetation patterns

5.1 Landscape Effects

The current professional practice of conceptualising landscape as three overlapping dimensions provides a bridge between Te Ao Māori and Te Ao Pākehā meanings:

- Physical (the physical environment – its collective natural and built components and processes); and
- Associative (the meanings and values we associate with places); and
- Perceptual (how we perceive and experience places).

A bi-culturally inclusive landscape concept can be envisaged as the three overlapping dimensions and an overlay integrating mātauranga above such as:

- Whakapapa: the genealogy and layers of landscape and people (reflective of an overlap between biophysical and associative dimensions).
- Hikoi: walking and talking with landscape and people - experiencing and perceiving the land in all its entirety (reflective of an overlap of the biophysical and perceptual dimensions).
- Kōrero tuku iho: ancestral knowledge passed down through generations

The key consideration in the assessment of landscape effects are those effects on the factors, values and associations (Tuia Pito Ora New Zealand Institute of Landscape Architects, 2021).

5.1.1 Landscape Character

While landscape assessment methods differ, they are all based on the links between landscape character and values: Character is an expression of the landscape's collective attributes. Values are the reasons a landscape is valued as embodied in its attributes. Effects are the consequences on a landscape's values and resulting from changes to the attributes on which the values depend. Landscape's values are managed through management of such attributes (Tuia Pito Ora New Zealand Institute of Landscape Architects, 2021).

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

Values attributed to this landscape, including the Site are recorded in the Landscape Assessment (Boffa Miskell Ltd, 2010) which are identified in Section 2.2 in this report. Landscape management issues relate to managing land use change from rural residential subdivision on the rural character of an area.

The tangata whenua values of the area are of high value with regard to the historical and contemporary use including the role of the landscape contributing to a food source, water catchment and the supporting ngahere (forest). Further understanding of the mana whenua cultural values attributed to this Site and it's surrounding landscape will be gained and can be used to update this assessment following further engagement. It is important that such cultural values are considered and reflected in appropriate landscape outcomes where possible.

In terms of patterns in the surrounding landscape, the Landscape Assessment identifies the settlement patterns of rural residential development adjoining the main road corridors. Within this area, Hamurana Road and Tauranga Direct Road support this type of development on the lower slopes, below the Caldera Rim feature. Pocketed rural residential development is sited along the eastern side of Tauranga Direct Road and along the southern side of Jackson Road, overlooking the site. Further rural residential settlement is sited on the lake edge at Awahou.

The proposed subdivision will be sited at a similar elevation to the surrounding rural residential subdivision to the north (Jackson Road) and east (Hamurana). For the broader landscape the subdivision is clustered with the Hamurana settlement and that along Jackson Road.

5.1.1 Nature of the Landscapes

The Lake Rotorua Caldera Rim is a defining feature of this broader landscape with the rim feature considered a sensitive area (Refer to Figure 4). The site is set within a change in the caldera rim legibility and distinctiveness, as compared to the northern caldera rim to the east, with the rim extending further northward. The Caldera Rim Rural Character Design Guideline defines the area as being less sensitive than other features of the overall caldera rim (Boffa Miskell Ltd, 2012).

As part of the landscape analysis for this Site, a series of analysis maps were undertaken to reflect the values identified in the Landscape Assessment and Caldera Rim Rural Character Design Guideline, from the site visit and following engagement (to date) with mana whenua. Interpreting this information, the values held relate to the cohesive patterns of the landform and its role in the wider landscape.

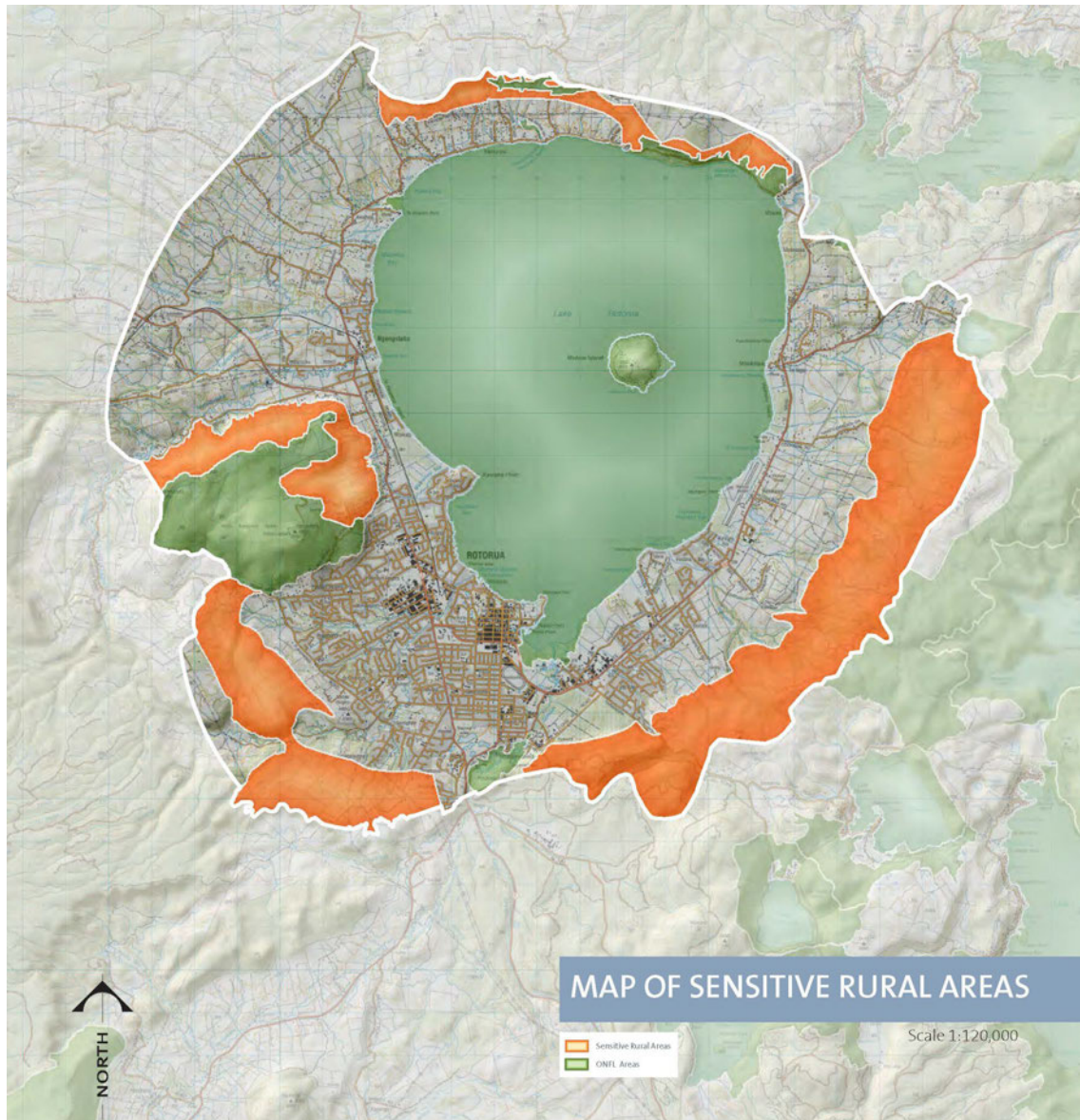


Figure 4 – extract from *Rotorua Caldera Rim Rural Character Design Guideline*, October 2012

The greatest landscape values are attributed to the northern plateau that resides in a flatter landform that is unique feature of the area (*Refer Figure 4*). The northern half of the Site comprises a high degree of landscape value attributed to the pastoral rural character unique to this confined area. The southern half of the Site comprises a varied landform deeply incised with gullies that extend down to the lake edge. This area comprises a mixture of land uses with values attributed to the natural hydrological patterns, biotic patterns, heritage features and trails. This area of landscape has a moderate degree of landscape value with the ridges of spurs forming dominant features of this landscape.

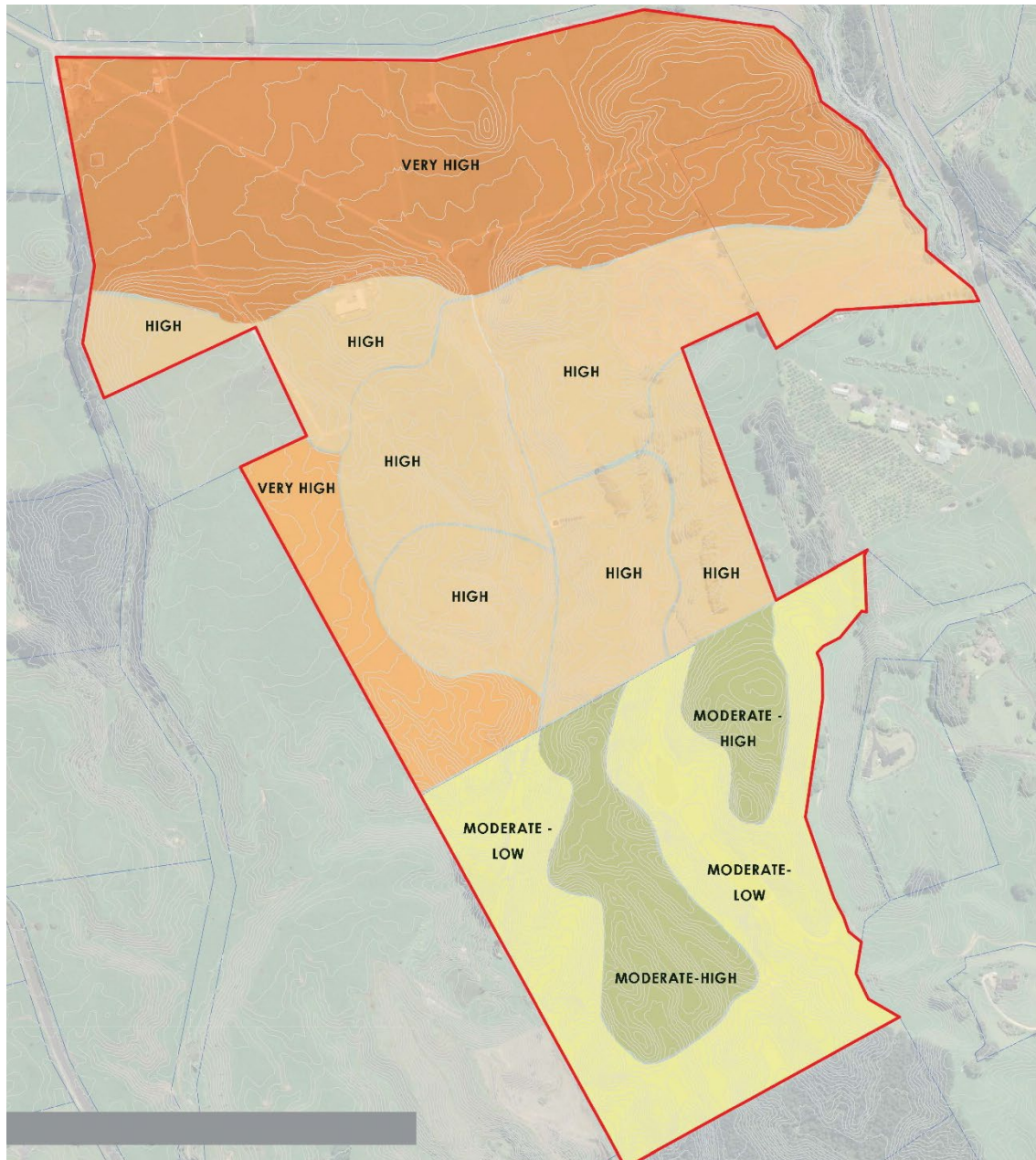


Figure 5 – Landscape Values, Refer to Appendix 3

The elevation and expressiveness of the open plateau at the northern end of the Site is important to retain the open rural character of this landscape area. These have informed the subdivision design development directly from the landscape analysis inclusive of engagement with mana whenua (which, at the time of writing this assessment, is continuing).

Applying this analysis (*Refer to Figures 6 and 7*) the development of the design response to strengthen the values attributed to the expressive and formative areas through protection of key features of the site from built development. These features weave across the landscape to bind together the underlying values, retaining the expression of the formative landform processes of the underlying valleys and reinforcing the historical use of the Site associated with rail tracks through the Site.

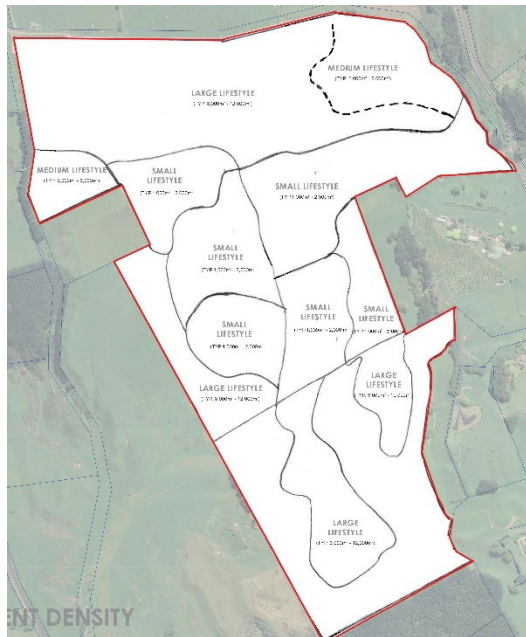


Figure 6 – Lifestyle sizes

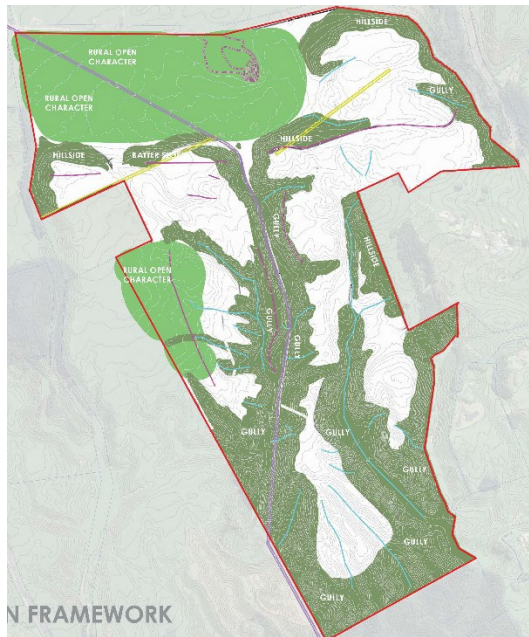


Figure 7 – Character Areas

5.1.1 Cultural Landscape

The Cultural Impact Assessment⁴ (CIA) provides an understanding of the cultural landscape through the lens of a cultural impact assessment. The report identifies that the proposed subdivision is located within an area of cultural and environmental sensitivity for Ngāti Rangiwewehi. The report highlights the need to protect culturally significant and highly visible landscapes, including natural landforms, gully systems, wetlands, and watercourses. It states that subdivision design should maintain the existing rural landscape character, including the use of housing clusters separated by native vegetation to reflect the natural patterning of the site.

Restoration and enhancement of indigenous vegetation is identified as an important expectation. The CIA report recommends re-establishing eco-sourced native planting in areas disturbed by development, particularly around gully systems, wetlands, and stream corridors. Ongoing monitoring of plant establishment is required over several growing seasons to ensure successful restoration and to support the ecological and landscape values of the area.

The CIA report outlines that earthworks should be kept to the minimum necessary to reduce changes to natural landforms. It also notes the potential for cultural material to be present within the landscape, requiring the involvement of cultural monitors and an archaeologist approved by Ngāti Rangiwewehi. These measures aim to ensure that physical changes to the landscape do not compromise areas of cultural or historical importance.

The CIA identifies the potential new roading and stormwater infrastructure would alter the natural hydrological and visual character of the area. It encourages the use of green infrastructure, including bioswales, permeable surfaces and rain gardens, and emphasises avoiding impacts on wetlands and springs. These approaches are intended to help maintain natural drainage patterns and reduce erosion or contamination of waterways that form key features of the landscape.

The introduction of new dwellings is expected to increase lighting across the area, and the CIA

⁴ Cultural Impact Assessment Report, Te Maru o Ngāti Rangiwewehi Iwi Authority, 7th November 2025

sought further information on measures to avoid light spill affecting the rural night environment. These matters are also addressed in the visual amenity sections of this report. The CIA report also highlights the need for further assessment of how stormwater soakage and increased impermeable surfaces may affect groundwater systems linked to Pekehāua Puna. This relationship is considered important both regarding landscape biophysical effects and associative effects

Overall, the landscape-related outcomes emphasise a need for development to respond to natural features, maintain rural character, manage earthworks and infrastructure carefully, and ensure that changes do not adversely affect landforms or water systems that are significant to Ngāti Rangiwewehi.

5.1.2 *Physical effects*

Proposed earthworks on the Site are anticipated as predominantly minor earth shaping within the lots and more substantive earthworks to form the road accessways. Avoidance of significant modification to the sensitive upper plateau along the northern edge of the property will be provided with some minor shaping to accommodate overland flow paths for stormwater and accessways. The intention with the earthworks is to retain the underlying natural landform ensuring the subtle changes in landform remain legible.

The degree of modification to the landform is intentionally minimal within the pastoral rural plains landscape area and controlled in areas with high and very high landscape values. The proposed scheme plan seeks to introduce a significant framework of native vegetation cover. This approach strengthens the recognition of the biophysical characteristics of the site and connects with the characteristics of the nearby rural residential zones, whilst improving the indigenous vegetation cover.

The magnitude of change varies throughout the Site with the change to the landscape values being low in the southern part and limited in the high value landscape areas. The approach of retaining the underlying natural landform patterns, with minor shaping, avoidance of highly sensitive areas, strengthening of the vegetation patterns all contribute toward maintaining the biophysical features of the landscape whilst introducing sympathetic housing within this context. The nature of this effect on the biophysical values varies from adverse to positive when considering the native vegetation patterns and landform changes attributed to dwellings and road infrastructure proposed.

Overall, the direct biophysical landscape effects of the proposal when considering the enhancement of native vegetation cover and reduction of pastoral rural features, are low-moderate adverse in nature. Over time the enhancement indigenous plantings to the gully and escarpment areas, and throughout the Site, will enhance the biotic flora and fauna as habitat establishes. It is considered that if managed appropriately in perpetuity, the physical condition will improve through the biotic elements in the main, reducing the long-term adverse effects further.

5.1.3 *Landscape character effects*

The landscape analysis and vegetation framework identified surround enclaves of rural residential scaled development. These areas will reside in cohesion with the adjoining subdivision at North Riding Estate. Smaller lifestyle blocks are identified in the internally confined spurs and ridgeline areas within the Site, with larger lots within the northern pastoral plains area. This area contains predominantly larger open pastoral areas to retain the legibility and dominance of the open plains character and the east west escarpment feature for the wider landscape.

The proposed development takes into account the underlying zoning of rural and remains highly responsive to the landscape characteristics and values. Methods of integrating the residential land use into the Site, as detailed below, are responsive to the landscape characteristics and values within the Site. The density and scale of development is focused on flatter area avoiding substantial earthworks with a specific site design controls that manage building placement, scale, colour, form and domestication of the lots. The approach requires a cohesive protection of vegetation covenants that strengthen the landscape patterns and create smaller enclave communities. The enclaves respond to landscape characteristics and include design controls that relate to restrictions to the building areas, building height, form and colour and vegetation requirements. These measures alongside a cohesive vegetation management response are critical measures to the integration of the land use change in this rural landscape.

The character of the rural pastoral landscape to the north, south and west of the Site will see a change particularly at the western and north-eastern boundaries of the Site. The placement of dwellings and lots respond to the rural character of the northern pastoral character area, western pastoral character and the vegetated gully network further south.

The nature of the landscape change along the western boundary is one that changes from open pastoral grazing to strong vegetation patterns with clusters of housing. This pattern creates a clear change to the natural patterns by reinforcing the natural land formations whilst the undulating boundary creates pockets of open space with all but one dwelling screened from the east by the native vegetation cover.

The northern rural plains open space is maintained with the pockets of rural residential housing sited to the eastern and western edges of the area. The change will reduce the extent of rural open space with the central northern plains area maintained. The clustering of rural residential housing focused on the eastern boundary and its interface with the Tauranga Direct Road and North Riding Estate. The western pocket of rural residential subdivision comprises larger lots (Lots 82 - 92) with large rural trees integrated into the lots supporting the open rural pastoral character of the space. The siting of the western pocket interfaces with existing farm buildings and reinforces the heritage tramway corridor that forms the proposed road access into the site.

Further south the eastern and western pockets of housing form clusters of 5 – 8 dwellings surrounded by enclaves of native vegetation. A series of walking trails connect the clusters through the gully networks to the roads traversing the parent lot through a series of easements. These two pockets are internally focused to the Site and provide similar patterns to that of the nearby North Riding Estate to the east. The patterns of housing follow the landform with an increase in density of housing compared to that of the typical rural land parcel sizes. The proposed subdivision brings a distinct character to the housing compared to that of North Riding Estate, with large areas of native vegetation cover, shrouding the clusters of lots and visually integrating the landform into the Site. The change in character will occur with a new bush lot subdivision as compared to the pastoral rural open landscape. This marries into the lower slopes of the Site and southern boundary and the patterns of land development to the east.

Further detail on these measures is addressed in Section 6.0 within this report. In order to provide more certainty to these outcomes a landscape concept plan has been prepared which outlines the extent of landscape vegetation treatment recommended within the proposed subdivision.

The change in land use will generate an adverse nature of effect attributed with the loss of open pastured land. The integration of dominant vegetation patterns connecting the natural patterns of the landscape will provide a key connection to the natural patterns as compared to the human land use patterns. The introduction of 91 new dwellings introduces a moderate change to the landscape character with the loss of open pastoral rural land use. The integration of the design approach follows the approach provided at North Riding Estate, integrating the Site with the Hamurana Rural residential area and the natural patterns of the landscape.

The proposal introduces 91 new dwellings into the landscape which creates a noticeable and defined land use change. Whilst the surrounding land use remains rural and broadly open the connectivity to the nearby North Riding Estate and other rural residential development will be separated. Overall, the effect on the landscape character will be of a moderate adverse degree. Over time, as the vegetation patterns begin to dominate the patterns, over some 10 years, the degree of effect will reduce to low-moderate. The vegetation patterns and their connection to the surrounding landscape patterns and natural patterns of the Site are integral to the success of the landscape mitigation. Equally the placement of the Site in proximity to the Hamurana Rural Residential development forms a logical placement of this type of land use change as compared to other rural areas within the local context.

5.2 Visual Amenity

Visual amenity effects are influenced by a number of factors including the nature of the proposal, the landscape absorption capability and the character of the Site within the surrounding area. Visual amenity effects are also dependent on distance between the viewer and the proposal, the complexity of the intervening landscape and the nature of the view. These effects influence the perception of rural character appreciated by the surrounding visual catchment.

Whilst set on a sloping landform facing Lake Rotorua, the visibility of the Site varies as a result of landform, public road access and vegetation cover. Intervisibility mapping prepared details that views from Jackson Road residents and the road are available around the Site. The mapping considers the views between the Site and the surrounding landscape, void of vegetation patterns.

Field work assessment photographed the Immediate Viewing Audience as being from Jackson Road dwellings to the north and west and from immediate neighbouring properties to the east, accessed off Tauranga Direct Road.

Middle distance views are confined largely to Hamurana Road and views from the lake itself. Typically these views are some 1.2 to 1.5km from the site subdivision area.

Further distant views of the Site are gained from varying vantage points from State Highway 33 on the eastern side of Lake Rotorua. Whilst these views comprise an understanding of the wider landscape patterns, the viewing distances and legibility of the components of the subdivision will not be easily discernible from some 10 - 15km away.

It is acknowledged that during the field assessment, access to private property was not acquired. It is accepted practice that representative viewpoints from public vantage points are an acceptable means of assessing the visual effects attributed to the change in landscape character.

Visual effects are a subset of landscape effects. They are consequences of change on landscape values as experienced in views. They are one technique to understand landscape

effects. It is important to emphasize, particularly when considering the underlying zone, that visibility alone is not an effect. Landscape values are integral to views. Landscapes are experienced visually. It is not the change to a view that is an effect, but what such changes mean in terms of landscape values. The changes may relate (say) to an expression of the landscape's biophysical well-being, or a meaning associated with it, or its aesthetic qualities.

The purpose of the visual effects component of this assessment is to inform the overall landscape effects and understand the effects on the sensory and associative qualities of the landscape.

5.2.1 Immediate Viewing Audience

Refer to Graphic Supplement

The degrees of visual sensitivity for the viewing audience varies depending on the proximity and visual connection to the Site. Views from dwellings to the north and west will experience the most apparent change to their southerly visual outlook. The introduction of dwellings in the northern plains area will be the most apparent visual change to this outlook for the dwellings at 3 and 6 McFetridge Lane and 61, 72, 73, 93A, 102, 116, 146 and 146A Jackson Road.

The design response seeks to integrate native vegetation cover along the western boundary and integrate large rural tree planting around the cluster of dwellings in the northern plains area. This is not to screen in its entirety the proposed land use but to provide a cohesive connection to the vegetation patterns and clusters of housing.

For the viewing audience to the north there will remain an elevated view over the northern portion of the Site across the plains landscape and toward the lake. Many of the dwellings here have orientated the visual outlook toward Lake Rotorua, with the water view and intermediary rural landform being key components of the outlook. Given this, the sensitivity to visual change in the rural character is will be higher for this viewing audience.

Western based views may also be gained toward the Site from 27 and 30 Jackson Road, 260 Central Road and in part from potentially 182, 184 and 188 Central Road, however the latter are unclear due to landform and vegetation obscuring the views. For these views from the west toward the Site, the visual outlook is more fragmented and focused away from the Site. Vegetation and landform along with housing placement ensures potential views are largely focused away from the property. This viewing audience has pocketed but not dominant views of the Site due to the orientation of the visual outlook and intervening landscape elements.

For the viewing audience to the immediate east, at 67 and 21A and 21B Tauranga Direct Road, the dwellings are orientated away from the Site with views of the eastern boundary of the property. The visual outlook is direct due to the proximity of the site, with the views orientated away or past the main subdivision area of the site.

The visual change with the subdivision will vary for this viewing audience with 67 Tauranga Direct Road comprising views to the northern based dwellings. Based on the recognised visual outlook and the representative view from the roads and reverse views from within the Site toward the property. For the views from Jackson Road south into the northern plains area of the Site, the visual change will be of a moderate to high degree, noting that the views across the remainder of the Site further south are limited due to the topography and intermediary vegetation cover.

The clustering of housing to the western and eastern edges with the retention of the open plains within the centre of the northern area, retains a composition of the overall plains landscape, of which these properties overlook. The aesthetic coherence of the rural pastoral landscape will remain intact with the clustering of dwellings framing this area. Integration of native and exotic treed vegetation visually screens and reinforces the pastoral character of the northern plains area, whilst connecting the natural patterns through native vegetation around the clusters of housing.

The degree of visual effect for the Jackson Road and McFetridge Drive viewing audience will be moderate adverse in the short term. This will gradually reduce with the growth of vegetation, to a low-moderate degree, over a 5-year period, with the effect related to the partial loss the open pastoral rural character for this viewing audience.

The degree of visual effect for the Tauranga Direct Road and Central Road viewing audience will be low-moderate adverse in the short term. This too will gradually reduce to low, over a 5 year period, as the visual mitigation measures, including native planting, grows to provide the visual integration and screening outcomes sought.

5.2.2 Middle Distance Viewing Audience

Refer to Viewpoint 15

Views from Hamurana Road are restricted to a limited number of places along Hamurana Road. Views of the Site are limited due to the rising terrain and intermediary vegetation. This viewing audience has a lower sensitivity, due to the orientation, topography and vegetation. This is influenced by the context of the view, the viewing distance and the transient nature of the viewing audience from the road and lake users. Private dwelling views will have similar albeit fixed views.

Visual change will largely be experienced from the lake, within 1km of the shoreline (to remain within the middle distant viewing range). These views will see the Site as part of a nearby cluster of housing with North Riding Estate and the surrounding rural residential development of Hamurana. This connection to the surrounding rural residential development and proximity to Hamurana and the limited nature of views, the overall degree of adverse visual effect for this viewing audience, from the varying viewpoints, will be low-moderate.

5.2.3 Distant Viewing Audience

Views from across Lake Rotorua from State Highway 33 and nearby residential dwellings are some 10km away. The subtle components of the proposed subdivision will be indiscernible to the viewing audience from this distance. In the context of this view the proposed subdivision will be seen as part of the Hamurana settlement pattern alongside North Riding Estate. Overall, the visual effect experience by this viewing audience will be low to very low adverse, with regard to the experience of the rural character of this landscape.

5.2.4 Summary of Visual Effects

Overall, the visual effects represent those sensory values attributed to the experience of the proposed subdivision in this landscape. The potential adverse effects are focused to the immediate neighbouring properties to the north, east and west, associated dwellings and road corridors, with a potential for moderate adverse visual effects in the short term (0-3/5years).

The design response seeks to maintain the rural landscape characteristics of the broader landscape and the natural patterns, whilst integrating a change in land use. The medium to long term effects will gradually reduce from moderate to low-moderate over a 5 year period.

Middle distance and distant viewing audiences appreciate the landscape patterns and the wider Hamurana landscape. The sensory cohesion of the Site will be retained and enhanced with housing set amongst the landscape patterns and features with a clustering of the proposal in the broader landscape to the land use patterns of Hamurana. The protection of the escarpments, gully systems and the open plains to the north are important components of the overall integration of the subdivision into the broader landscape.

Provision	Compliance	Commentary
		residential area. Some cumulative effects will occur.
RURZ – P11 Ensure land use change does not create adverse effects on rural character and amenity values	No	Change does generate adverse effects, the degree of effects are of a moderate-low degree once mitigated. This equates to a minor adverse effect (Refer Appendix 1).
RURZ – P12 1. Diverse land uses	Yes	Retains grazing, native restoration and housing.
2. Maintain the diverse landscape types	Yes	Minimal change to landscape types
3. A low density of buildings and generous separation distances between dwellings and other buildings	No, in part	Density is increased and applies a clustering approach with separation through by natural landforms (Gullies)
4. Buildings that are subordinate to the surrounding landscape	Yes	Building design guides and placement retain buildings sub-ordinate to the surrounding landscape features in the broader landscape and within the site.
5. An open vegetated landscape	Yes in part	The distinctive plains area is retained with the rolling landscape changed to include dwellings amongst vegetation patterns.
6. No continuous ribbons of residential development along roads	Yes	Clustered housing approach is applied to avoid ribbon development.
7. Low levels of artificial light	Yes	Design controls in place along with native vegetation cover to minimise light pollution
8. Unobtrusive and limited signage	Yes	No signage proposed.
9. Minimal earthworks or changes to landform associate with new subdivision, use or development	Yes	Subdivision design relies on natural landform to minimise disruption to natural patterns.
RURZ – P14 Manage the adverse effects of rural lifestyle living on the working rural area by:		
1. Requiring separation between dwellings and other buildings on adjacent rural sites	Yes	Dwelling sites are staggered and offset from rural

Provision	Compliance	Commentary
3. Providing landscaping to ensure rural character is maintained	Yes in part	boundaries with integrated native vegetation cover Rural character will change to integrate rural residential character, with the lower section remaining in dominant rural character. The northern area retains the distinct plains rural character and native vegetation cover changes from a pastoral landscape to a native bush cover, also found in the rural landscape.
4. Managing visual impact of new buildings on the landscape.	Yes	Integration of native vegetation cover and clustering approach minimises the visual dominance the subdivision will have on the broader rural landscape.
The assessment criteria set out in RURZ-AC1 is considered and applied in the following assessment with the following subclauses relevant to landscape and visual effects: RURZ-AC1, subclauses: 1, 2, 3, 4, 7, 9, 10, 11, 14, 18, 20 and 29a – j.	Addressed	This assessment criteria applicable to a landscape assessment has been addressed in the assessment within this report.

5.3.1 Summary of Effects on Statutory Provisions

Overall, the proposed development has responded to the discretionary assessment criteria set out for the proposed subdivision. The change in character is the critical matter of consideration with the change from open pastoral landscape to a vegetated landscape with clusters of housing. The degree of effects will be low-moderate adverse, with mitigation, which translates to an RMA term of *Minor*. Avoidance of adverse effects is not achievable and the integration of the proposed subdivision is reliant on its position in the broader landscape and the methods it has applied to integrate the outcomes sought in the Rotorua District Plan.

6.0 Recommendations

Responding to the sensitive landscape values in different parts of the Site, requires comprehensive management of the values that are implemented and managed on an ongoing basis. The following recommendations are relied upon to integrate the development into the Site and to maintain and enhance the values of this landscape.

Recommendations:

1. A **Landscape Management Plan** is prepared by a registered⁵ Landscape Architect to ensure the landscape values and outcomes assessed are successfully implemented. The Landscape Management Plan must include the following:
 - Identification of community enclave areas and individual property requirements
 - Detailed landscape planting implementation and maintenance requirements
 - Identification of public and private realm vegetation management.
 - Identification of building and site design controls for each community enclave and individual properties.
 - Inclusion of the following design controls within the LMP

Design Control

Vegetation:

- All planting shall be undertaken in accordance with the Landscape Concept Plan, Boffa Miskell Ltd, August 2022
- Implementation of native bush and exotic tree cover in a comprehensive nature, identifying areas within private land.
- Identification of managed view corridors through native bush planting shall be shown and shall remain subservient to the landscape and visual mitigation outcomes.

Buildings & Structures:

- **Placement:** All buildings must be located within the Defined Building Area, including ancillary buildings, garden sheds and other buildings.
- **Height:** All buildings shall be single storey and a maximum height of 5m from registered ground level.
- **Coverage:** Building coverage shall not exceed 500m².

Building Form:

- Buildings shall have a profile that is congruent with the landscape patterns, ie the horizontal profile runs across the slope, avoiding significantly cantilevered buildings structures over the slope.
- Design roofs that integrate buildings into the landscape and use a sheltering form with deep overhangs of more than 800mm.
- Use building modulation to break the length of a building facade by changing direction, stepping in and out of the main facade, balconies, eaves, pergolas and other structures.
- Recess large areas of glazing below wide eaves and dividing glazing with walls, pergolas and the like.

⁵ Registered Landscape Architect of Tuia Pito Ora New Zealand Institute of Landscape Architects

Design Control
- Use of dark tinted glass, but not mirror glazing, is required. - Use window joinery, doors and balustrades that have a reflectance value of less than 30% and are dark or naturally coloured. - Ancillary Buildings: Garages, boat storage, and other ancillary buildings associated with the house shall be contained within the house site and shall be a comparable quality to that of the main building on the site.
Materials and Colour: - Select materials that respond to the natural landscape and native vegetation immediately surrounding the subject site. - Select colour palettes that have a reflectance value of less than 25% for roofs and 30% for walls (Refer to the Resene British Standard 5252 Range as a guide only. All colours and materials must be approved at building consent). - Roofing: Roof materials shall be coloured using recessive colours with a reflectance value of no greater than 25%. Grass or green roofing consistent with the surrounding vegetation patterns and colours is acceptable. - Use natural material finishes such as stone and timber which will weather naturally. - Apply dark oxide colouring to concrete materials to reduce reflectivity of the material. - Timber cladding and other natural elements (stone) naturally weathered or stained dark. - Painted timber, blockwork or other materials may be used and must contribute to receding the building into the landscape. - The reflectance value of surfaces, including joinery, gutters, downpipes, cladding and roofing materials shall be no greater than 30% for walls and 25% for roofs.
Earthworks: - Minor earthworks to recontour some areas of the subdivision is provided for access, roads and stormwater management and will integrate and reflect the natural landform of the existing site and its immediate surrounds. - Re-contouring all embankments surrounding driveways and building platforms into the natural landform shall occur to avoid visually exposed cut banks greater than 1.5m in height. - All cut embankments, between 0.5m and 1.5m in height, shall be planted against to visually screen the exposed soil. Planting shall be organic in shape and form and avoid emphasising straight unnatural lines within the landscape.
Hard Surfaces - Providing all driveways with flush kerb with either rip rap, grass or planted swales for stormwater management. - Providing asphaltic concrete, dark coloured concrete or exposed dark tinted aggregate concrete driveway surfaces. - Impervious outdoor areas, including patio, outdoor entertainment areas and turning areas (within the driveway), all located within Defined Building Areas.
Road corridors - Providing all roads with flush kerb with either rip rap, grass or planted swales for stormwater management. - Public footpaths shall be avoided on the street realm

Design Control
- Kerb and channelling on the public and private road network shall be avoided. Flat kerb, mountable kerb, swale and flush kerbing with dark oxide, or no kerbing, is appropriate.
Fencing: - Fencing is avoided on the proposed road boundaries and where possible on side boundaries, where vegetation can be used to demarcate boundaries. - Using post and 3 - 5 rail or preferably post and wire fencing and vegetation to demarcate boundaries of properties to reflect the rural character of the wider area. Post and panel urban fencing shall be avoided. - Avoidance of a gated subdivision feel with the inclusion of open road frontages to properties with vegetation forming the demarcation of boundaries.
Lighting and Utilities - All exterior lighting should be contained within the Defined Building Area and shall be down lights only. - All utilities and services shall be located below ground. No above ground wiring will be permitted. Aerials, satellite dishes and other utilities shall be maintained within the nominated building height plane for each property. - Downward facing bollard lighting is acceptable along the accessway corridor and to demarcate driveway entrances. - Street lighting shall be avoided.

To provide certainty to the outcomes of the proposed subdivision it is recommended a Landscape Management Plan is prepared to ensure the above recommendations are implemented at subdivision and building consent phases of the site development.

7.0 Conclusions

Overall, the proposed subdivision responds to the landscape qualities and values of the area whilst providing for a new rural residential housing area alongside Hamurana. The inclusion of rural residential lots enables the appropriate response to the landscape values and enables the inclusion of the vegetation framework.

The overall proposal settles into the surrounding landscape including the adjoining rural residential areas whilst protecting and enhancing elements of the landscape that contribute to the identified landscape values of the area. The potential adverse landscape effects on the landscape character will be moderate and reduce to low-moderate and low for the wider landscape catchment degree reducing overtime as the framework vegetation develops. Design measures and controls recommended will also contribute to ensuring the dominance of built form is avoided across this landscape. This in turn enabling the overall subdivision to settle into the landscape amongst the landform and vegetation, avoid dominating the key landscape features of the site.

8.0 Bibliography

Boffa Miskell Ltd. (2010). *Lake Rotorua Catchment Landscape Assessment*. Auckland : Boffa Miskell Ltd.

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