

Technical Report Q

Landscape & Visual Assessment



Boffa Miskell



Redvale Landfill Expansion

Landscape Effects Assessment
Prepared for WM New Zealand

3 July 2026



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For any information regarding this report please contact: Tom Lines Landscape Planner Senior Principal [REDACTED]				
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Executive Summary

This Landscape Effects Assessment has been prepared for WM New Zealand to evaluate the actual and potential landscape and visual effects at a proposed extension to the operational life of the Redvale Landfill, located at Dairy Flat, north of Auckland. The proposal seeks to extend the operation of Redvale Landfill to 2036 through the development of additional landfill airspace within and adjacent to the existing facility, ensuring continuity of critical residual waste disposal capacity for the Auckland region.

The assessment has been undertaken in accordance with *Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines* and is informed by detailed site inspections, visibility modelling, visual simulations, and a comprehensive review of the surrounding landscape context and viewing audiences. It considers the proposal in relation to the baseline environment at 2028, when the landfilling operation are otherwise required to cease under the existing consent conditions. The proposed extension will not increase the maximum consented height of the landfill but will involve a slightly expanded footprint, steeper slopes, and a longer duration of visible landfill activity. These changes will result in a continuation and, in some locations, a modest increase of landscape and visual effects compared with those experienced when landfilling operations cease in 2028. The assessment finds that the surrounding landscape has a demonstrated capacity to absorb such change, given its mixed rural character, modified land use history, enclosing topography to the west, and extensive existing vegetation which mitigates landscape and visual effects.

Landscape effects are assessed as no more than low adverse, with the expanded landform remaining coherent with the existing landfill and surrounding rolling hill country character. Visual effects vary by location and viewing audience. Visual effects during operation are predicted to be moderate from a limited number of residential properties—most notably those in the mid distance along Jean MacKay Place. For most other residential areas, road users, visitors, and workers, visual effects during operation are assessed as low to low-moderate, reducing to very low following completion, grassing, and establishment of rehabilitation planting.

Night-time lighting effects are assessed as very low to low, reflecting the limited lighting requirements and long-established landfill practices and designed to minimise light spill, glare, and sky glow.

With the implementation of existing consented mitigation measures, together with additional mitigation measures such as targeted planting recommendations outlined in this report, the proposal is considered capable of continuing to achieve a well-integrated landscape outcome. Overall, the assessment concludes that the adverse landscape and visual effects associated with the operation of the landfill will be temporary in nature given the limited duration of the proposed extension and will progressively diminish over time following closure, to a low level for landscape effects and very low level for visual effects as rehabilitation planting matures. Ultimately,

landscape effects are anticipated to reduce to a low level, while visual effects are expected to reduce to a very low level

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1.0 Introduction

Boffa Miskell Limited (BML) has been engaged by WM New Zealand (WMNZ) to provide a technical assessment to understand the landscape effects of a proposal to extend the use of Redvale Landfill, north of Auckland (the Project). This report forms part of a suite of technical reports prepared for WMNZ for inclusion in a substantive application for resource consent under the Fast-Track Approvals Act 2024.

This report assesses the actual and potential landscape and visual effects of the Project and is intended to support the Assessment of Environmental Effects (AEE).

Redvale Landfill is currently scheduled to cease accepting waste in December 2028, and due to delays in securing resource consents for the establishment and operation of the replacement Auckland Regional Landfill (ARL), a transition plan is required. The proposal seeks to extend the operation of Redvale Landfill to 2036 through the development of additional landfill airspace within and adjacent to the existing facility, ensuring continuity of critical residual waste disposal capacity for the Auckland region.

The expansion of the existing landfill area will involve the recontouring of the fill profile. Although the final maximum height of the landform will not change from that previously consented, the footprint of the proposed landfill extension¹ will be larger, the slope angle of much of the landform will be steeper and the duration of potential effects while the landfill is in operation will extend by a period of approximately 10 years. As such this landscape assessment is required to accompany the Substantive Application for the Fast-Track Approvals Act 2024.

In undertaking this assessment, the author and peer reviewer 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 have with the surrounding built and natural environment. Additionally, the visual catchment and viewing audiences of the wider area have been identified and considered.

1.1 Assessment Approach

This assessment has been undertaken by a registered landscape architect and 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. A Method Statement is attached as **Appendix 1** to this report.

This landscape effects assessment has considered the Project in the context of the existing environment, the zoning and use of the land surrounding the Site and the relevant planning framework.

The author of this report has reviewed the current plans provided by WMNZ and carried out a desk survey of the baseline landscape and visibility context, prior to visiting the site. This included a review of the current landscape classifications and assessments relevant to the local

¹ Specifically, the Class 2 waste is proposed to be extended beyond the existing landfill footprint, with Class 1 waste remaining within the existing footprint

area. Field survey work was carried out on the 8th of November and the 17th of December 2024 with records made in the form of field notes and photographs.

This report considers direct comparisons with the earlier Landscape and Visual Assessments undertaken by Boffa Miskell Limited listed in the Bibliography, updating the predicted effects in the context of changes to the landscape within or surrounding the site, and the extent of visibility.

1.2 Assessment Area

This site, as shown in **Figure 1, Appendix 2**, is located in the rural lifestyle community of Dairy Flat within the Auckland Region, approximately 5km south-west of Silverdale, 8km north-west of Auckland's urban fringe and approximately 2.6 km west of State Highway 1. It comprises an area of approximately 170ha of which 59ha is permitted for waste.

1.3 Assessment Scope

In summary this assessment covers:

- **Background**
A summary of the background of Redvale Landfill.
- **The Statutory Framework**
A brief outline of the relevant statutory context of the Project
- **Baseline Description**
A baseline description of the receiving environment together with an outline of the likely visibility and viewing audiences of the Project.
- **Description of The Project**
An overview of the phasing strategy to contextualise the current landfill phase and the proposed operation predicted to take place after 2028, with specific regard to any changes in landscape character and predicted visual effects.
- **Assessment of Landscape and Visual Effects**
An updated assessment of the landscape and visual effects; this will assess the effects of the continued operation of the landfill on what is predicted to be the current environment in 2028.
- **Recommendations**
A description of the informed recommendations for mitigating any additional landscape and visual effects over and above the mitigation measures already required for the currently operating landfill. A mitigation plan which is an evolution of the original LA4 Structure Planting Plan is provided in **Appendix 2**.
- **Conclusion**
Concluding comments summarising landscape and visual effects of the Project.

2.0 Background

The Redvale Landfill opened in August 1993 as a sanitary landfill, with consent issued for a 30-year period. The site originally contained a lime quarry which, after 25 years of operation closed in 2005. The Landfill accepts: non-hazardous residential, commercial and industrial solid waste from a catchment area containing over 1.5 million people.

The existing conditions² of consent for the landfill outline the development requirements with regard for landscape and visual mitigation. They provide context for the planting undertaken on site to date, much of which was undertaken in line with the original mitigation planting plan³ which has evolved alongside the various consents associated with the site.

3.0 Statutory Context

The relevant statutory provisions are set out in the accompanying Assessment of Environmental Effects report prepared by Tonkin and Taylor ('the AEE'). In relation to this assessment, the site is zoned Rural – Mixed Rural, which seeks to maintain rural character and amenity while accommodating a mix of rural production, non-residential and lifestyle activities. The surrounding area includes land identified as Future Urban Zone, where some limited activities may be undertaken, but which is generally not intended for urban activities until the site is rezoned for urban purposes. There are no Outstanding Natural Landscapes or Outstanding Natural Features within or adjacent to the site. While a Significant Ecological Area associated with Rangitopuni Stream is located nearby, it lies outside the project footprint.

4.0 Baseline Description

This section outlines the existing environment and the likely condition of the existing environment at the time of the cessation of waste placement for 2028. This forms a basis for which the Project has been assessed against.

4.1 Landscape Characteristics, Attributes and Values

4.1.1 Consideration of Cultural Landscape Values

Mana whenua have associations to the area and we understand those that have a particular interest in the Project include Te Kawerau ā Maki and Ngāti Whātua (includes Ngāti Whātua o Kaipara and Ngāti Whātua Ōrākei). A cultural values assessment has been prepared as part of

² General Conditions for resource consents and permit numbers LAN61338 (NRSI 42575), REG61341 (NRSI 42369), REG61342 (NRSI 42570), REG61343 (NRSI 42572), REG61544 (NRSI 42574)

³ Map 3, Redvale Sanitary Landfill, Visual Evidence, Maps 1-6, Mary Buckland, 1991

the application by James Whetu of Whetū Consulting Group. The report outlines key cultural and environmental values and interests of Mana Whenua and their spiritual, historical, and traditional associations with the project area. Te Kawerau ā Maki hold a statutory acknowledgement over the Rangitōpuni Stream and tributaries, which adjoin the landfill and sit within the landfill catchment, confirming the presence of cultural heritage values requiring recognition, protection, and engagement.

It is also recognised that multiple other Mana Whenua have overlapping rohe and connections—particularly through the downstream link to the Waitematā Harbour—and advocate a collaborative and holistic engagement approach to understand cultural relationships, manage adverse effects, and respond appropriately to shared values across the wider cultural landscape.

WMNZ has been undertaking engagement with mana whenua, and their cultural values and associations with this Site will be considered.

4.1.2 The Surrounding Context

The site is located on the western slopes of a broad valley which extends east, from the site, towards an elevated ridgeline containing East Coast Road and Top Road, see **Figure 1, Appendix 2**.

The undulating nature of the landscape becomes more prominent to the west of the site, where the land gains elevation forming an enclosing ridgeline around the site to the west and north. The land here is characteristic of elevated hill country, with prominent forested ridgelines and native vegetation apparent around the smaller streams and gullies. The combination of a low density scattered settlement pattern together with the enclosing topography and vegetation along the ridgelines and gullies contributes to a more intimate and smaller scale landscape to that found east of the site.

The gently rolling landscape to the east of the site opens out to form a landscape dominated by small scale pastoral land use. Here the landscape is characterised by paddocks defined by fence lines and exotic shelterbelts; specimen trees also punctuate the landscape. The Rangitōpuni Stream runs to the south-east of the site and is enclosed by dense often exotic deciduous vegetation.

The settlement pattern also changes to the east with an increased density of rural residential lots. Such residential lots occupy a significant portion of the landscape and form linear communities along the surrounding roads including Dairy Flat Road, Postman Road and further afield, East Coast Road which sits beyond State Highway 1. The density of properties increases around the settlement of Dairy Flat and includes small scale industrial and commercial land use.

The land use across the wider area is predominately agricultural, with some industrial elements contributed by the intensive agricultural/ horticultural land uses (greenhouses) to the south and east of the site. Large buildings and hangers associated with the North Shore Aerodrome (“NSA”) also exist, alongside the aeropark subdivision located further to the north. The lack of vegetation around the airfield also creates a distinctly open landscape.

By 2028, the wider landscape is may reflect the anticipated outcomes of the Mixed Rural Zone and Future Urban Zones, although these are unknown at this time and have not been taken into account in this assessment.

There are however some known projects (including Notices of Requirement and Plan Changes) which may alter the context of the broad environment (refer Appendix 2, Figure 3). Private Plan

Change 103 is Fully Operative as of 8 May 2026 which rezones about 107 ha at Silverdale West for light industry use. This area is however at least 2.7km from the site with limited visibility. Auckland Transport's Designations 1497 and 1489 are also both operative and provide for upgrades to Dairy Flat Highway from Silverdale to Albany, including new walking, cycling, and safety improvements. Viewing audiences along Dairy Flat Highway are already considered as part of the assessment.

By 2028, the surrounding environment will also include a staged development of a surf park at 1350 Dairy Flat Highway, Silverdale, Auckland (Surf Park). Only the first stage of this development has received resource consent which comprises (Stage 1); the construction and operation of a surfing lagoon, restaurant(s), market space, 70 visitor accommodation units consisting of a lodge and eco-cabins; a solar farm; a standard data centre; and associated infrastructure, earthworks and landscaping. This stage of the Surf Park is indicated for completion in late 2027.

4.1.3 The Site

The total Redvale site is approximately 170 ha and is dominated by the existing approximately 59 ha landfill footprint. The balance of the land is utilised for planting, sedimentation ponds, tracks, buildings and structures associated with the landfill. The site bounds Horseshoe Bush Road to the north-west, with Richards Road located approximately 180m to the south. The site is accessed via Landfill Access Road, which connects to Dairy Flat Highway; approximately 300m to the east.

The current vegetation on site is largely a reflection of the Structure Planting Plan and Landscape Mitigation and Restoration Plan (Appendix 4). This planting plan has formed a structural basis for vegetation retention and planting on site.

By 2028, planting would have been undertaken across much of the site with some further planting occurring within 2 years of completing refuse filling. ⁴ If the Project were confirmed however, some of the planting requiring a lead in time would not be established as these areas of planting would be subsequently removed. Some limited planting has occurred on the consented landfill footprint, located on the lower portion of the northern slope adjacent to the perimeter road⁵. Some other areas of planting have been undertaken beyond the consented landfill footprint which will require removal to facilitate the expansion. This includes native colonising species, interplanted naïve climax species⁶ and native riparian species around the Pond 6 batters⁷,

The south-eastern site limits are defined by contextual planting around the buildings and facilities associated with the landfill. This includes a dense screen of semi-mature native planting around the office building and a tall screen of Leyland Cypress around the landfill gas

⁴ Planting phasing in the Landscape Mitigation and Restoration Plan includes planting dates such as; “within 2 years after the fill placement at the Managed Fill site has ceased”, “within 2 years of completing refuse filling to the designed level in the area”, “3 years before refuse placement ceases”, “5 years before refuse placement is ceased”, and “Native Colonising species: 5 years before refuse placement is ceased. Climax species: 5 years after planting the native species.”

⁵ Specifically, the northern portion of Area 33, Refer Appendix 4 Landscape Structure Plan.

⁶ Planting Areas 4 and 9, Landscape Structure Plan, Appendix 4

⁷ Refer Planting Area 5, Appendix 4

treatment/energy facility. Avenue planting along Landfill Access Road provides a formal, park like entrance to the facility.

A large area of mature remnant tree planting, predominately Pine, is located further west along the southern boundary; this has been infilled with more recent pine planting. The planting here connects to a Pine plantation⁸ located to the west of the site.

The western boundary runs along a narrow lane which connects to Horseshoe Bush Road through a wooden fenced / gated entrance. The unnamed lane is lined by a mix of mature native and exotic vegetation which screen the adjacent activities associated with the Baker Tree Services property.

The Northern part of the site is dominated by a shelterbelt of Pine running along the ridgeline, with a dense area of native planting behind, extending north towards Horseshoe Bush Road. A narrow track runs between the native planting allowing access to a sequence of sedimentation ponds.

Further east the planting gives way to an area of low lying native riparian planting which frames a further three sedimentation ponds, the largest being 0.27 ha. This area lies adjacent to the completed eastern slopes of the Landfill, which have been capped and sown with grass.

The grassed completed eastern slopes border the eastern site boundary, here the slopes give way to tall visual screen planting, comprising a mix of mature exotic and native planting. Directly adjacent to the south-eastern boundary is a former trotting club track and the buildings / facilities associated with the Dairy Flat Country Club.

The surface of the landfill comprises areas of disturbed ground, (the extent of which changes on a daily basis) in addition to a series of metalled vehicular tracks, areas of scrub vegetation and a number of grassy banks associated with the filled areas. An approximately 4m high fence, designed to collect and contain litter, is located around the eastern edge of the fill area. There are also a number of pipes associated with the gas extraction and energy operation located across the surface of the capped banks and the active landfill surface.

To the end of December 2025 approximately 85% of the landfill's final volume has been filled and 42% of the final cap has been completed and occupied in grass banks.

Topography

The topography of the site is largely governed by the present operational phase of the landfill; this will continue to be the case until 2028. The landfill has been designed to provide topographic diversity, reflecting the surrounding topography⁹.

The site is enclosed by higher elevated land to the west and north, with the highest point, RL130m, located atop stockpile four, adjacent to the site, see **Figure 3**. The landform around the southern and eastern parts of the site is generally flat; however, the eastern slope of the completed landform forms a noticeable elevation change.

As at 2025, the northern and eastern slopes are largely complete, and form natural appearing slopes to the north and east of the site (**Refer Appendix 2 Viewpoint photos**); they will be completed in line with the final approved contours, as set out in **Figure 5, Appendix 2**. The south and western parts of the site are distinguishable by the sequence of working platforms and steep sided slopes associated with the airspaces of the filling operation.

⁸ Pinus radiata, planted on top of stockpile 4 site.

⁹ Visual Impact Assessment, Proposed Refuse Landfill Redvale Quarry, LA4 Ltd, September 1989

Land use

The site contains a number of buildings located along the southern boundary, these comprise the site management office, the landfill gas treatment/energy facility and various smaller auxiliary structures associated with the running of the landfill and its vehicles. There are no further buildings planned for the site before the current 2028 closure. Around the perimeter of the site lies a network of vehicular paths providing access to the landfill, sedimentation ponds and the boundary planting.

4.2 Visibility

The visibility of the landfill is defined by its visual catchment; this is the area from which the whole or part of the site is visible. The visual catchment is largely defined by the existing topography and above ground screening elements such as buildings, vegetation, and fencing.

A Zone of Theoretical Visibility ("ZTV") analysis has been undertaken to identify the areas from which the final completed contours of the landfill, as of December 2028, is theoretically visible (**Figure 6, Appendix 2**). A ZTV has also been undertaken which represents the proposed final landfill landform of this Project, (**Figure 7, Appendix 2**). A comparison between the two finished landforms has also been prepared to depict the additional areas of visibility associated with the Project to extend the life of the landfill (refer **Appendix 2, Figure 8**).

This analysis is based on the selection of 230 observable points for the consented landfill and 262 points for the Project. The output maps then show the area from which the proposed landform could potentially be seen and the relative number of points visible.

Visibility of 2028 Consented Landfill Landform

The visibility in 2028 will be similar to those observed at present where views of the site are screened to the west and partly to the north by the existing landform ridge which follows the alignment of Horseshoe Bush Road to the north. Views are generally limited to private land, with the majority of visual catchment projected across open farmland.

Although the landfill is within relatively close distance to high use areas such as Dairy Flat Highway, the site is well screened by intervening vegetation and only glimpses or partial views are afforded by passing traffic and from a limited number of properties. Further to the east, although the land rises up above the broad valley which surrounds Dairy Flat Highway and the Rangitopuni Stream, views of the site from these locations are also largely screened by existing vegetation or are very distant.

There are a number of properties within close proximity of the site which have the potential to view part of the landfill.

Based on the above analysis it is considered that the potential for visual effects would be within a localised radius of approximately 2 kilometres from the landfill landform and this was verified through on-site survey and photography.

Proposed Landfill Visibility (The Project)

Should the landfill operation continue past 2028 then its visibility would remain largely restricted by the topography and above ground elements, to the same viewing area/audience as the existing and future existing (2028) baseline scenarios. This is due to the maximum RL of the top of the landfill remaining the same. While there may be a marginal increase in the visual catchment due to the larger footprint, these areas are limited and are located alongside areas where views are currently attained.

4.3 Viewing Audience

The general viewing audience is likely to remain consistent with the current situation until completion of the landfill, with the exception of stage 1 of the Surf Park due for completion in late 2027. In summary the viewing audiences can be described as:

Residents

- Residential properties in the immediate context less than 2km away from the landfill, include properties along Horseshoe Bush Road, Richards Road, Austin Road, Kahikatea Flat Road (eastern portion), Turley Road, Selman Road, Dairy Flat Highway, Postman Road, Blackbridge Road and Jean MacKay Place.
- Residents beyond 2km from the landfill include Aeropark Drive subdivision, Wilks Road West, Bawden Road, Oregon Park, Bobs Way, Top Road, East Coast Road, Kennedy Road, Green Road, Sunnyside Road, Potter Road and Three Oaks Drive.

Road Users

The location of road users broadly corresponds with the location of identified residential viewing audiences. These include:

- Road users in the immediate context less than 2km away from the landfill. This includes those along Horseshoe Bush Road, Richards Road, Austin Road, Kahikatea Flat Road (eastern portion), Turley Road, Selman Road, Dairy Flat Highway, Postman Road, Blackbridge Road and Jean MacKay Place.
- Road users beyond 2km from the landfill include Wilks Road West, Bawden Road, Oregon Park, Bobs Way, Top Road, East Coast Road, Kennedy Road, Green Road, Sunnyside Road, Potter Road and Three Oaks Drive.

It is recognised that a number of these roads are no exit roads and therefore tend to exclusively service associated residential properties rather than provide for a thoroughfare for broader members of the public. Moreover, generally, these views are only glimpse views, and the landfill operation would generally not be noticeable due to the transient nature of the viewing audiences and existing vegetative cover.

Farm Workers

- Workers in the surrounding farmland and facilities such as the large greenhouse facility off Richards Road are likely to have views of the landfill; however, the views are anticipated to be filtered through existing vegetation.

Visitors

- Visitors and workers include those at the shops and facilities located on the corner of Kahikatea Flat Road and Dairy Flat Highway as well as visitors to the NSA. For the visitors to the Dairy Flat Country Club, the landfill is a prominent feature in the view on approach along the Landfill Access Road.
- Visitors and works of the Surf Park located at 1350 Dairy Flat Highway. If the surf park is completed at the end of 2027, visitors and workers would have been viewing the operating landfill for approximately 1 year when the cessation of waste placement takes place at the end of 2028.

Air

- Pilots and passengers using the North Shore Aerodrome will have clear views over the landfill on approach to landing and after take-off, although this is a public viewing audience, it is a relatively limited and transitional audience.

4.3.1 Selection of Viewpoint Photographs and Visual Simulations

Taking the above into consideration, a range of viewpoints have been selected to represent identified viewing audiences and were chosen based on:

- being publicly accessible; having a reasonably high potential number of viewers or being of particular importance to the viewer(s) affected;
- providing a representative range of viewing distances (i.e. short, medium and long distance views) and elevations;
- representing a range of viewing experiences (i.e. static views and points along sequential routes);
- representing views with different extents of the landfill visible (i.e. an entire landfill face, or just the tops of the landfill).

Table 1: Representative Viewing Audience Viewpoint Photographs

VP No.	Location	Direction of View	Viewpoint Distance to Applicant Landholding and project element (Approx.)	Reason for Selection	Visual Simulation undertaken? (Y/N)
VS1	Horseshoe Bush Road	South-west	290m to Landholding 815m to Landfill	Representative of road users and residents in vicinity.	Yes
VP2	Richards Road (1 of 2)	North	1m to Landholding 315m to Landfill	Representative of road users and residents in vicinity.	No
VP3	Richards Road (2 of 2)	North	800m to Landholding 960m to Landfill	Representative of road users and residents in vicinity.	No
VP4	Austin Road	South-east	1870m to Landholding 1945m to Landfill	Representative of road users and residents in vicinity.	No
VP5	Turley Road	South	1525m to Landholding 1700m to Landfill	Representative of road users and residents in vicinity including	No

				Kahikatea Flat Road and Selman Road.	
VS6	Postman Road	West	1585m to Landholding 1615m to Landfill	Representative of road users and residents in vicinity as well as visitors to NSA.	Yes
VS7	Jean Mackay Place	North	1200m to Landholding 1900m to Landfill	Representative of road users and residents in vicinity.	Yes
VP8	Green Road	North	2380m to Landholding 3160m to Landfill	Representative of road users and residents in vicinity.	No
VP9	Kennedy Road	North	3300m to Landholding 4045m to Landfill	Representative of road users and residents in vicinity.	No
VS10	Potter Road	North	3360m to Landholding 4125m to Landfill	Representative of road users and residents in vicinity.	Yes
VS11	Top Road	West	3260m to Landholding 3645m to Landfill	Representative of road users and residents in vicinity.	Yes
VS12	East Coast Road	West	2980m to Landholding 3175m to Landfill	Representative of road users and residents in vicinity.	Yes

5.0 The Project

Redvale Landfill is one of only two landfill sites in the Auckland region that can receive >350,000 tonnes of waste annually to service the approximately 1.5 million tonnes of waste that the Auckland Region produces each year. Redvale Landfill is currently scheduled to cease accepting waste in December 2028 and due to a delay in obtaining the resource consents required for the establishment and operation of the replacement Auckland Regional Landfill (ARL), WMNZ considers a transition plan is required. To address this potential gap in critical landfill infrastructure for residual waste disposal in the Auckland region, WMNZ is proposing to extend the operation of Redvale to the end of 2036 and develop 4.56 Mm³ of additional airspace at the existing facility. This includes 3.13 Mm³ in additional Class 1 Landfill expansion on top of the existing Class 1 refuse placement area and 1.43 Mm³ of Class 2 Landfill extension. The proposed works include the following:

- **Class 1 landfill expansion:** placement of waste within the existing landfill footprint, involving the removal of final cover and steepening of the final cap slope to accommodate additional waste.
- **Class 2 footprint extension:** extension of the existing landfill to the southwest to accommodate disposal of waste meeting Class 2 landfill waste acceptance criteria (WAC).
- **Relocation of ancillary activities:** the relocation of ancillary activities to allow for the placement of waste.
- **Sediment Retention Ponds:** The removal and filling in of Sediment Retention Pond 6 and the Office Pond while enlarging Pond 1 to capture and treat the stormwater from these catchments.

A full description of the proposal is included in the AEE prepared for the project. In relation to proposed landscape and visual mitigation measures, recommendations forming part of this assessment are outlined in **Section 7.0** of this report. A mitigation plan illustrating these recommendations alongside the existing planting commitments as per the approved LA4 Structure Planting Plan is provided in **Appendix 2**.

5.1 Landfill Phasing

The landfill has been designed to be constructed in phases. An indicative phasing plan has been developed as shown in the AEE. The current phasing layout identifies that the proposed landfill expansion will be constructed across three areas of waste types. These areas will be constructed in a phased approach which is identified on the phasing plan.

Putrescible and non-putrescible wastes will be disposed of in different areas within the Class 1 footprint due to the requirement to maintain a 500 m separation between putrescible waste and sensitive receivers. Class 2 waste will be disposed of within the extension area to the southwest of the existing landfill footprint and within an area in the northern portion of the landfill.

6.0 Assessment of Landscape and Visual 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). The effects described in this assessment are considered with mitigation measures implemented. This includes mitigation measures (planting) as per the current conditions of consent in addition to the recommendations outlined in **Section 7.0** of this report.

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, amenity and on public and private views. 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.

In relation to this Project and our methodology (**Appendix 1**), it is considered that the degree to which landscape and visual effects are generated by a development depends on a number of factors. These include:

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

Change in a landscape does not, of itself, necessarily constitute an adverse landscape or visual effect. Landscape is dynamic and is constantly changing over time in both subtle and more dramatic transformational ways, these changes are both natural and human induced. What is important in managing landscape change is that substantial and / or inappropriate adverse effects are avoided or sufficiently mitigated to ameliorate the effects of the change in land use.

6.1 Effects on Landscape Characteristics, Attributes and Values

Effects of the Current Operation (until 2028)

The key characteristics, attributes and values of the Site are broadly captured within the natural and physical environment, perceptual and associative dimensions. Landfilling activities within the site are an authorised activity until the end of 2028 and therefore effects are anticipated and form part of the baseline condition.

The rural landscape surrounding the site is characterized by a diverse range of activities, including the landfill, which has become a recognizable feature from certain viewpoints due to its operational processes and patterns. This landfilling activity will continue to form part of the receiving environment until the end of 2028.

The overall values of the local landscape are influenced by the landfill's activities, with earthworks, excavation, and waste filling which influences the landscape's sense of intactness. However, these 'industrial' processes align with the site's history of quarrying and are consistent with the findings of the 1984 and 1995 landscape assessments, which identified the area's low sensitivity to change due to its varied land uses.

Effects of the Project

The project represents a continuation of existing landfill activities and will extend their duration beyond the currently anticipated completion date, while slightly modifying the approved landform through an expanded footprint and steeper slopes, without exceeding the consented maximum height. To enable this expansion, some areas of recently planted native vegetation on the lower slopes and remnant exotic trees will be removed¹⁰; however, planting of the landfill landform is already provided for under the existing consent and will be reinstated following completion of the proposed landform. While the resulting landform will exhibit greater uniformity when considered in isolation, the site sits within a broader landscape of ridges to the north, south and west of similar elevation, and will be perceived in the context of these rather than as a distinct hill. Although the expansion is influenced by a range of engineering requirements (largely maximum slope) that define its form, the overall landform remains strongly influenced by the shape and scale of the existing landfill. The engineered works will integrate with these established contours and the expanded area will read as a coherent extension of the current landform rather than an isolated or abrupt addition. Once landfill operations are complete, the final landform will be progressively softened and naturalised through the establishment of vegetation. This planting will help to visually blend the engineered slopes into the surrounding landscape, reduce the apparent height and more uniform mass of the landform, and be more integrated over time.

On this basis, the effects on local landscape character and quality are assessed as no more than **low** adverse.

6.2 Visual Effects

Visual effects are effects on landscape values as experienced in views. The nature of a view depends on how it is perceived and the extent to which it is valued or not. It includes how the landscape in the view is understood, interpreted and what is associated with it.

The below assessment utilises the viewing audiences identified in **Section 5.3** of this report to describe the type of viewing audiences, the composition of their view and the nature and degree of visual effect in relation to the Project.

The following assessment refers to the **Appendix 2** viewpoint photographs visual simulations.

6.2.1 Viewing Audiences within approximately 2 km

Horseshoe Bush Road

Refer Appendix 2: VS1A to VS1G (Horseshoe Bush Road)

¹⁰ Specifically, the northern portion of Area 33, Planting Areas 4 and 9, and Planting Area 5, Appendix 4 Landscape Structure Plan.

Visibility towards the site along Horseshoe Bush Road, in addition to residential properties alongside it, is variable. A substantial amount of established mitigation planting along the northern boundary of the site already successfully helps to screen the landfill from most sections of the road and adjoining properties. The eastern end of Horseshoe Bush Road, in addition to properties in this area, are afforded views towards the landfill and will continue to do so from 2028 onwards. From these north-east locations, the landfill can be seen across open fields, rising above the screening planting in the north-east corner of the site, and visible against the skyline. The grassy northern slopes help to visually integrate the landfill mass into the surrounding landscape.

From immediate north locations, views from the road are now completely contained by the native planting undertaken along the northern site boundary.

In relation to residents along the north-eastern portion of Horseshoe Bush Road, No's 12, 24, 39 and 85 would have views of the landfill site, primarily of the north and eastern slopes. Road users of Horseshoe Bush Road are also present in this area, where transitory views towards the site are obtained.

These viewing audiences will experience an extended duration of landfilling, particularly on the mid to upper portion of the north-eastern slopes. By 2028 (and as indicated at present), the landfill landform is observed as a grassy hill. The change observed for these viewing audiences will be of the grassy landform being re-earth worked, with grass removed in stages, refuse deposited together with daily cover, in addition to the staged capping, grassing and future establishment of planting. Landfill machinery would be seen again in these views and whilst not completely reintroduced as new elements (as the site remains as a working landfill), the intensity of activities will increase together with the duration.

Whilst views are proximate, the landfill landform is oblique to road users and often slightly offset from the front of residential views. The landform forms part of these views (together with views of fields, tree stands, boundary vegetation), with the north-eastern section being visible. As the landfill operations become visible in their view, effects will be up to **Low-Moderate** adverse, reducing to **Very Low** following grassing and establishment of vegetation on the landform.

Richards Road

Refer Appendix 2: VP2 and VP3 (Richards Road 1/2 and 2/2)

Richards Road runs broadly perpendicular to the west of Dairy Flat Highway along low lying land, before returning south and increasing in elevation as it meets the hillsides to the south of the site. Through the low-lying section of the road, roadside vegetation, within the site (primarily *Cupressus Owensii*), filter views towards the landfill landform. Breaks in some of this vegetation, or vegetation being of a limited height in comparison to the elevated landfill landform does however allow for occasional views. By 2028, as the trees are planted in a single row and some trees appear lesser developed, the density of the foliage may be such that filtered views of the landfill are still possible. It is recommended that further planting in this area is undertaken in line with recommendations outlined in **Section 7.0**. As the road diverts south and climbs in elevation as well as negotiating Rangitopuni Stream, sections of the road corridor do allow for views towards the landfill.

For road users however, the extent of visibility towards the landfill from the length of Richards Road will remain comparable to the expected visibility by 2028 and any such effects for these transient viewing audiences would be no more than **Very Low** as a result of a greater duration of landfill operations within the site.

In relation to residents, those at No. 34 are located in close proximity to the landfill site's southern boundary. This property appears well screened from the landfill by the mature planting

which surrounds the property and it is expected that the landfill would continue to be screened by a similar extent beyond 2028. Residents at 19 and 63 Richards Road are expected to experience a similar degree of visibility towards the site as at present. It is expected that this will include partial views of the upper portion of the landform and lower portions filtered by vegetation with the properties and along the near field boundary of the site. Residents at 87 Richards Road will continue to be more exposed to the landfill landform, with a slight increase in landfill visibility within the property as dwellings are orientated towards the southern boundary.

Views for residents in more elevated portions of Richards Road are expected to remain comparable to that already anticipated up until 2028, with some slight increase in visibility within the property of 264 and 224 in fields in the balance of the landholdings.

With the above in mind, it is anticipated that adverse effects during the continued operation of the landfill would be **Low-Moderate** adverse, reducing to **Very Low** following completion of the landfill, including grassing and planting on the slopes.

Austin Road

Refer Appendix 2: VP4 Austin Road

Viewing audiences along Austin Road are located north-west of the site. The road connects between Horseshoe Bush Road and Kahikatea Flat Road and climbs in elevation to approximately 150msl. This high point, together with one or two other locations allow for elevated views towards the site. Residential properties sit on large lifestyle blocks along the road alignment, either alongside the road or further down the adjoining slopes. Properties on the southern side of the road, in the most elevated locations along the road length are afforded views.

The visibility of the site for these road users and residents is consistent with the visibility anticipated under the current consent. The northern mid to upper flanks of the landfill landform are visible in the distance for these viewing audiences. At present some of these northern flanks are seen as exposed earth areas. Distant litter trap fences can be seen on the top of the landform in addition to machinery. By 2028 the slopes would be established in grass and would be seen as part of the sequence of rolling topography which form part of their overall view.

The project would include the opening up of the completed grassed areas where the slopes would be reworked, refuse deposited in stages.. This would extend the duration of visible activity although it is expected that the duration of visible activity will change as the sections of the landfill are reworked before being capped and grassed as new stages are opened up. It is anticipated that the change to the overall form of the landfill will not be particularly discernible from these northern locations. Overall, it is considered adverse effects could be up to **Low** during the landfill operations (which are similar to that currently observed), reducing to **Very Low** following completion and establishment of planting.

Kahikatea Flat Road, Turley Road and Selman Road

Refer Appendix 2: VP5 Turley Road

Located north of the site, Kahikatea Flat Road partly sits on a ridge between approximately 50msl to 100msl before dropping away as it traverses the topography to the west. Turley Road and Selman Roads both originate from Kahikatea Flat Road and are no exit roads which run roughly perpendicular to Kahikatea Flat Road. Elevation on these roads ranges between RL65m and RL120m for Turley Road and RL95m to RL125m for Selman Road. Together, these roads support large lifestyle blocks and farms across pasture covered fields loosely boarded by tree stands, shelterbelts and some partially vegetated gullies. Residential viewing audiences tend to be focused near to the roads and those south of the road often have the opportunity to

afford elevated views in the direction of the site although vegetation and at times intervening landform (e.g. from the western portion of Turley Road) influence the extent of their views. For road users, roadside vegetation along with established planting within properties also filter views across the landscape and views to the south towards the site are transient and brief.

For those that obtain views, a sequence of broad ridges is visible. Vegetation interspersed across these hills and ridges reduces the readability of the gradients of the underlying topography. Overall, the site, represented by the pasture covered landfill landform, is difficult to discern from these distances with the uppermost portion of the landfill landform set behind, and filtered by vegetation to the north.

Visible change for these viewing audiences, beyond 2028 will be limited overall. For those with fixed views from the most elevated portions, distant activity on the mid to upper portions of the landfill may be visible, however this would take place progressively over time. Further, such change will make up a small portion of the wider panoramic views that tend to be attained. The landform of the landfill will change to what is currently observed, with the steepening of slopes. The height of the landform will remain the same however and continue to relate with the elevation of the hillsides to the south-west. The profile of the landfill will typically be restricted to the eastern edge, which would appear steeper once it is completed. Vegetation established on these slopes in line with the anticipated approach to mitigation on the landfill, will help to visually soften the appearance of uniform slopes.

With the above considered, it is anticipated that effects will be **Low** adverse during times of landfill activity (particularly observing areas of earthworks, refuse and machinery), in the northern and north-western portions of the landform. These effects will reduce to **Very Low** adverse following the establishment of grass on the slopes in addition to vegetation.

Dairy Flat Highway

Dairy Flat Highway lays east of the site and runs in a broad north to south direction to the east of the site before reorientating to a northwest/south-east orientation to the south-east of the site. Once a State Highway (SH17), it was designated as Urban Route 31 in 2012 as there was no need to maintain both SH1 and SH17 as most long-distance traffic was utilising State Highway 1 (SH1). Dairy Flat Highway remains, however, an important connection across Dairy Flat. Auckland Transport has two designated projects planned for upgrading Dairy Flat Highway.¹¹ However, the exact timeline for these upgrades is currently uncertain, though they are expected to be completed within the next 30 years.

For road users along Dairy Flat Highway, the landfill is not easily identifiable within views, with the mature trees in the immediate context of the road corridor, and around the landfill itself providing a good degree of screening; any views of the landfill are therefore filtered, with the uppermost portion at times, partially visible. Residents accessed from Dairy Flat Highway are in low lying positions and views from properties along the Dairy Flat Highway, adjacent to the landfill, are well contained by the vegetation around Rangitopuni Stream, and private amenity planting. In winter there may be filtered views towards the eastern slopes given a number of tree stands and shelterbelts contain deciduous species. Visibility towards the landfill is attained in some of the more open areas between Dairy Flat Highway and Postman Road which are primarily characterised by open fields and occasional dwellings.

The Project will result in a slight increase in the extent of visibility when compared to the visibility of the landfill in 2028. It is expected that this is due to the steepening of slopes, as the landfill height will remain unchanged. This increase in visibility however would be limited and broadly

¹¹ Designations 1497 and 1489.

occurs around areas where the landfill landform already characterises views. With the visibility of the landfill typically focused on the mid to upper slopes in already filtered views overall, the extent of change within the views while landfilling activities is being undertaken is expected to be limited and in this sense, the duration of time that activity will be visible will be restricted to the stage(s) and area(s) which are visible. With the steepening of slopes the landform will appear as a more engineered solution than observed at present however this would only be noticeable where the profile of the landform is observed. Further, planting along the eastern slopes, in a naturalised pattern will in time assist in visually softening the appearance of the steeper slopes. With the above considered, residents and road users are anticipated to experience up to **Low** adverse effects as part of the continued landfill operation on the site, entailing the steepening of slopes through new earth worked and refuse quadrants. Following grassing and establishment of vegetation, effects will reduce to **Very Low** adverse.

Postman Road

Refer Appendix 2: VS6A to VS6G (Postman Road)

Postman Road is located east of the landfill and for much of the alignment runs broadly parallel with Dairy Flat Highway, before returning and intersecting with Dairy Flat Highway at its southern end. Postman Road connects into Wilks Road to the north and Dairy Flat Highway to the south. Road users obtain oblique views towards the landfill, which are primarily focused on the northern section of the road corridor, in the immediate vicinity of the NSA. Views from residential properties tend to be limited to the western side of the road and focused just south of the NSA. Planting through the fields intersect with much of the views for other viewing audiences although it is accepted that for some, the upper most portion of the landfill may be discernible.

For those with views, the outlook contains open pastoral farmland with shelterbelt planting and vegetation around Rangitopuni Stream forming a continuous line of planting in the mid-ground and screening the lower eastern slopes of the landfill. The elevated landfill slopes are visible above the vegetation and form a foothill to the higher ground in the west.

By 2028, the landfill will be seen as a grassy landform prior to establishment of the proposed planting. Visual change beyond 2028 to completion will be similar to what is currently observed in relation to landfilling activities, including earthworks, refuse and earthwork machinery, albeit of an evolved shape featuring steeper slopes than seen at present. For road users, it is considered that effects would be no more than **Very Low**, particularly given the short duration they would observe the view as they travel along the road and the restricted section of the road that views are attained. Residential viewing audiences would have fixed views towards the site and for some, views may be 'focused' to the west, in the direction of the landfill. The opening up of grassed areas for accepting refuse will mean that effects associated with these activities will continue, albeit undertaken in sections rather than the entire landform being reworked at once. With this considered, adverse effects are anticipated to be up to **Low-Moderate** when sections are being reworked, reducing to **Very Low** once grassing and planting is established.

Blackbridge Road and Jean MacKay Place

Appendix 2: VS7A to VS7G Jean MacKay Place

Blackbridge Road runs perpendicular to Dairy Flat Highway and services Jean MacKay Place in addition to other local roads. Lots along this road are often boarded by vegetation (e.g. shelterbelts) which will impact on the extent of the landfill that is visible. For road users, roadside vegetation heavily filters and obscures views.

Jean MacKay Place, accessed from Blackbridge Road is located south of the landfill and is a reasonably short, no exit road servicing a collection of reasonably elevated rural lifestyle

properties at approximately 70m RL, a greater elevation than those along the northern side of Blackbridge Road. Many of these properties take advantage of the northern sloping aspects of their respective land parcels and obtain north facing views which include the existing landfill and the site.

The landfill landform clearly features in views for viewing audiences along Jean Mackay Place in particular, this is partly due to their elevation and absence of substantial vegetation in the foreground of their outlooks. Views from properties along Blackbridge are more influenced by boundary vegetation, although partial views will be attained. For those viewing audiences with views, these will include visible areas of earthworks and refuse in addition to activity through moving vehicles/ machinery. These viewing audiences essentially gain a broadside view of the landfill, with both the southern and southeastern sides for some, being visible.

By 2028, the remaining areas of the landfill will have been capped and regrassed, with the landfill reading as a landform broadly connecting to the elevated land to the west (left of the view), and contextually relating to more distant ridges to the north-east occupied by Selman and Wilks Road.

The Project will result in areas of established grass being opened up and areas undergoing earthworks, refuse deposited followed by daily cover and capping of each quadrant. Viewing audiences would observe these activities on the southern and south-eastern slopes which will be similar to those seen at present, thereby extending the duration of visible landfill activity on the site. The change in landform will also be noticeable, with the apparent 'flattening' of the ridge and steepening of slopes – which will both be visible through reading the profile of the landfill. The landform will however continue to appear as an extension of the rising topography to the west and relate to the elevated land to the north of the site. With the above in mind, for the extended duration of the landfill operation and change in landform, viewing audiences along Blackbridge Road will experience adverse effects of up to **Low-Moderate**. It is expected that those from Jean MacKay Place would experience adverse effects up to **Moderate** adverse due to the more uninterrupted and elevated views of the profile of the landfill operations. Effects are expected to reduce to **Very Low** following grassing and establishment of vegetation which will assist in visually integrating the landform overall.

Visitors and Workers of the Surf Park

Once completed in late 2027, visitors and workers of stage 1 of the Surf Park would experience generally west-facing views towards the landfill site that are comparable to those available from locations along Dairy Flat Highway. Views from within the Surf Park will be partially filtered to varying degrees by intervening land uses and vegetation (both within the Surf Park itself and to the west of Dairy Flat Highway); however, the outlook from the Surf Park will typically comprise an agricultural context, with shelterbelt planting and riparian vegetation associated with the Rangitopuni Stream forming a continuous vegetated corridor. This vegetation will screen the lower eastern slopes of the landfill. The upper landfill slopes remain visible above the vegetation and read as a foothill element set against the higher land to the west.

By 2028, the landfill is anticipated to present as a grass-covered landform prior to the implementation of the proposed planting programme. Thereafter, visual changes through to completion would be consistent with those associated with ongoing landfill operations, including earthworks, waste placement, and the intermittent presence of heavy machinery. Over time, the landfill landform would become more defined, with steeper slopes than those currently apparent.

Viewpoints within the Surf Park will be generally fixed and recreational in nature, with views typically oriented westward towards the landfill site. As grassed areas are progressively opened for waste disposal, associated visual effects would occur but would be confined to actively

managed areas rather than occurring across the full extent of the landform simultaneously. Having regard to this, the predicted overall adverse visual effects for Surf Park visitors and workers is assessed as **Low-Moderate** during periods of active landfill operations, reducing to **Very Low** once grass cover and proposed planting are established.

Visitors and Workers at shops, facilities and within greenhouses and farmland

This group includes a broad range of viewing audiences who are either visitors or workers of surrounding commercial enterprises or facilities. These include but are not limited to those at Dairy Flat Community Hall, Dairy Flat School as well as business such as Massimo's Italian Cheeses as well as Greenhouse facilities (e.g. 35 Richards Road) which all tend to be internal activities taking place in buildings. Workers on farms are also considered who may afford more open views from outdoor locations. These viewing audiences are likely to be more focused on the activities of these facilities rather than external factors beyond their respective boundaries.

Views from these facilities are variable but broadly either do not have views, or views are either heavily filtered or limited to the upper portions of the landfill.

These viewing audiences would collectively observe the reworking of the grassy landform, with grass being removed in stages, refuse being deposited alongside daily cover, and the gradual capping, grassing, and future planting of the area. Landfill machinery will once again be visible in these views. While these elements are not entirely new—since the site remains an active landfill—the intensity and duration of activities will increase as areas are reworked in quadrants. With the above in mind, it is considered that the adverse effects on these viewing audiences would be no more than **Low**, reducing to **Very Low** following grassing and planting.

6.2.2 Viewing Audiences beyond approximately 2km

Residents within NSA Aeropark subdivision

Residents in the Aeropark subdivision obtain similar west facing views towards the site as those attained from along Postman Road. Neighbouring residential properties within the subdivision may impact on these views to some degree, however views from properties would include open pastoral farmland with shelterbelt planting and vegetation around Rangitopuni Stream forming a continuous line of planting in the mid-ground and screening the lower eastern slopes of the landfill. The elevated landfill slopes are visible above the vegetation and form a foothill to the higher ground in the west.

By 2028, the landfill will appear as a grass-covered landform before the planned planting begins. After this, visual changes leading to project completion will resemble current landfill operations, including earthworks, waste disposal, and the use of heavy machinery. However, the landform will develop a more defined shape with steeper slopes than those presently visible. Viewers will generally have a fixed perspective of the site, with some focusing more towards the west where the landfill is situated. As sections of grassed areas are gradually opened for waste disposal, the associated visual effects will persist but will be confined to managed sections rather than affecting the entire landscape at once. Considering this phased approach, the adverse visual effect is expected to be **Low-Moderate** during active site work, decreasing to **Very Low** once grass cover and planting are in place.

Wilks Road West

Residents and road users along Wilks Road West are north of the site and obtain elevated views in the direction of the landfill. This road serves a mix of large lifestyle properties and

farms, spread across open pastureland and loosely framed by tree stands and shelterbelts. Residential viewpoints are primarily concentrated near the road, with those to the south often obtaining elevated perspectives toward the site.

For those with panoramic views, a series of broad ridges can be seen. Vegetation scattered across these hills and ridges softens the contours of the underlying terrain, making its natural slopes less distinct. The landfill itself, covered in pasture, broadly blends into the wider landscape from a distance.

Beyond 2028, noticeable changes for viewers will be limited given the distance of the observer. While those with elevated, fixed viewpoints may have the opportunity to see landfilling activity on the mid-to-upper sections of the landfill, this will occur gradually and in localized areas rather than through large-scale exposure of land for refuse disposal. Additionally, any such changes will make up a small fraction of the broader panoramic views available from these vantage points.

The landfill's form will evolve, with steeper slopes becoming more prominent. However, its overall height will remain consistent, continuing to align with the elevation of nearby south-western hills. The most visible transformation will occur along the eastern edge, which will take on a steeper profile once completed. To mitigate visual impacts, vegetation will be established on these slopes, softening their uniform appearance.

Considering these factors, the visual effects during active landfill operations—particularly in the northern and northwestern areas—are expected to be **Low** adverse, mainly due to earthworks, machinery, and exposed refuse. Once grass and vegetation have been re-established, these effects will diminish further, reducing to a **Very Low** adverse over time.

Kennedy Road, Green Road, Sunnyside Road, Potter Road, and Three Oaks Drive

Refer Appendix 2: VP8 Green Road, VP9 Kennedy Road VS10A to VS10G Potter Road

More distant viewing audiences to the south include those on north facing slopes Kennedy and Green Road (with the roads broadly on a north to south axis), Sunnyside and Potters Road (with the roads on an east to west axis) as well as portions of Three Oaks Drive.

Roadside vegetation along verges and within properties often restricts views towards the landfill however at times, clear views are attained with the landfill featuring in the centre of the view from Kennedy and Green Roads and more oblique views from along Sunnyside Road, Potter Road and Three Oaks Drive.

From within residential properties, elevated views towards the landfill are attained and for both viewing audiences, the view has a relatively high scenic value of views across a rural landscape featuring large swathes of vegetation extending out towards the horizon. The landfill is seen in the context of the rolling topography and observed alongside other ridges of similar elevation and grade. At present, much of the slopes have been established in grass, although landfill activities remain evident through areas involving earthworks and lighter hues of areas of exposed refuse. By 2028 the landfill will have been fully grassed prior to planting and feature as rounded landform in a rural context. Whilst the lack of vegetation on landfill will be noticeable in comparison to the dense vegetation cover across the balance of the view this is easily lost in the context of the wider view and the forested backdrop.

Visual change beyond 2028 to completion will be similar to what is currently observed in relation to landfilling activities, including earthworks, refuse and earthwork machinery, albeit of an evolved shape featuring steeper slopes that seen at present. The project will increase the

duration of visibility of the operational southern and western aspects of the landfill; however considering the distance, the complexity of the view and the limited viewing audience any adverse effect on visual amenity is considered to be **Low** reducing to **Very Low** once the landfill has been regressed and established in vegetation.

Bawden Road, Oregon Park, Bobs Way, Top Road and East Coast Road

Refer Appendix 2: VS11A to VS11G Top Road, VS12A to VS12G East Coast Road

These viewing audiences are located east of the project site and typically obtain elevated views towards the west. No exit roads such as Oregon Park, Bobs Way and Top Road are considered to primarily service local residents (rather than commercial businesses or as a through road). Bawden ties into East Coast Road (to the east) and Dairy Flat Road (to the west). East Coast Road remains as a well-used arterial corridor servicing residents and business, which run alongside SH1.

Residential viewing audiences tend to be focused along Oregon Park, Bobs Way, Top Road, Bawden Road and East Coast Road. The development pattern along these roads is typically large lot development with dwellings often orientated with northern or western aspects, toward the site. Much of this land is zoned as Future Urban and therefore in time, there is an expectation that viewing audiences will increase. In the meantime, however any change is expected to be limited in relation to the current condition.

For those who attain an outlook, the view is an open panorama across the Dairy Flat landscape. For those along Bawden Road, Oregon Park, Bobs Way and Top Road the view includes gently undulating pastoral farmland intersected by shelterbelt planting and small wood lots. The distant horizon contains scattered trees and dense forested knolls, leading towards Riverhead Forest in the south. Electricity pylons and transmission lines run across the view in the foreground of Top Road views, adding an urban element and State Highway 1 forms a prominent man-made element in the view to the north.

From East Coast Road the current view is an open panorama across a large part of Dairy Flat and the hills beyond. The elevated position of the viewing audience together with the open nature of the airfield allow for distant, uninterrupted views of the upper eastern landfill slopes; the exposed clay of the worked landfill contrasts against the finished green eastern banks. Views of the landfill are seen in the context of the disturbed ground east of the airfield and the numerous urban elements, including; SH1, communications masts, and a cluster of large hangers and buildings, including recent residential development associated with the NSA.

By 2028, the eastern face will have been fully grassed, and therefore current distant views of landfill activities would not feature in the view. The proposed staging of the project would mean that sections of the landfill would be worked on before being capped and regressed as the next area is opened up. Works in the lower portion of the site where the perimeter road is to be raised by approximately 2m would not be particularly discernible given the distance, scale of works and existing planting around the landform. Therefore, the key changes in the view would be the continuation of landfilling activities (as presently observed). The change in the shape of the landform is unlikely to be particularly discernible from these eastern locations, and it is considered that the overall form will continue to relate to and tie into the sequence of ridges to the north and south.

Overall, it is considered adverse effects would be up to **Low** for viewing audiences as a result of the increased duration of landfill activities until grassing and planting is established. By this time, these effects would reduce to **Very Low** adverse.

6.3 Night-Time Lighting Effects

Night-time lighting associated with the extended operation and proposed expansion of Redvale Landfill has the potential to give rise to visual amenity effects through three primary mechanisms:

- Light spill, where artificial light extends beyond the operational area into surrounding land uses;
- Glare, where luminaires are poorly oriented or directly visible to receptors, creating annoyance or visual discomfort; and
- Sky glow, where multiple or poorly controlled light sources contribute to a diffuse brightening of the night sky, reducing levels of natural darkness.

The landfill is proposed to operate between 6:00 am and 6:00 pm, Monday to Saturday, and as such artificial lighting will be required during hours of darkness outside daylight periods, particularly during winter months. The approach to lighting will continue to prioritise safety-critical operational needs only, with all lighting minimised in extent, duration, and intensity.

In practical terms, lighting is required only in the following locations to enable safe operation of the facility:

- the site entrance and internal access road;
- the office area and staff car park; and
- the active landfill working face.

Lighting associated with the site entrance and access road will remain unchanged and confined to the existing street lighting along the southern side of Landfill Access Road. Similarly, lighting within the office area and staff car park will remain minimal and consistent with current operations. These areas are centrally located within the landfill site, are relatively low-lying, and are visually contained by surrounding landform and vegetation, which collectively limits the outward visibility of light sources from nearby rural and residential properties.

Lighting at the landfill working face will be provided via portable lighting rigs and will continue to operate in a manner consistent with existing and historic landfill operations. These lights will be used only when and where required and will be fitted with directional, downward-facing luminaires focused directly onto the tipping area. This approach reduces the potential for light spill and glare by limiting direct views of the light source from surrounding properties. The constrained extent and temporary nature of this lighting, combined with its controlled orientation, means it will not contribute materially to sky glow or result in noticeable degradation of night-time darkness in the wider area.

From surrounding viewpoints, particularly during winter months, the presence of limited night-time lighting associated with landfill operations will not be out of context when considered against the site's established and long-standing use as an operational landfill.

Overall, the continued use of low-level lighting, downward-directed luminaires, shielding, and careful orientation of portable light sources will effectively avoid or minimise adverse effects related to light spill and glare, while also ensuring that contributions to sky glow remain negligible. While temporary lighting at the working face may be intermittently visible to some

surrounding residents, it will not be of sufficient brightness or duration to create glare, nor will it occur at a scale capable of altering the perceived darkness of the night sky.

On this basis, the potential effects of night-time lighting on visual amenity are assessed as very low in relation to light spill and sky glow, and no more than low in relation to glare.

6.4 Viewing Audience Assessment Summary

The table below provides a summary of the likely effects of the Project on the viewing audiences identified above. Where multiple viewing audiences are identified in one location (e.g. road users and residents), the greatest visual effect for the viewing audience group has been listed in Table 2.

Table 2: Summary Of Visual Effects During Site Operation And Closure

Viewing Audience Location	Level of Adverse Effect During Operation	Level of Adverse Effect Following Closure of Landfill and establishment of grassing and planting on landform
Horseshoe Bush Road	Low-Moderate	Very Low
Richards Road	Low-Moderate	Very Low
Austin Road	Low	Very Low
Kahikatea Flat Road, Turley Road and Selman Road	Low	Very Low
Dairy Flat Highway	Low	Very Low
Postman Road	Low-Moderate	Very Low
Blackbridge Road	Low-Moderate	Very Low
Jean MacKay Place	Moderate	Very Low
Surf Park	Low-Moderate	Very Low
Visitors and Workers within 2km	Low	Very Low
Aeropark Subdivision	Low-Moderate	Very Low
Wilks Road West	Low	Very Low
Kennedy Road, Green Road, Sunnyside Road, Potter Road and Three Oaks Drive	Low	Very Low
Bawden Road, Oregon Park, Bobs Way, Top	Low	Very Low

Road and East Coast Road		
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7.0 Recommendations

Based upon the above analysis there are a number of measures which will help to mitigate the effects associated with the extended visibility of the operating landfill. It is recommended these measures be included as additions to the Structure Planting plan which details mitigation planting to be carried out on site. The implemented Structure Planting Plan, in addition to the measures below, have been taken into account when considering the landscape and visual effects assessment. The updated mitigation plan incorporating the below planting recommendations is located in **Appendix 2**.

These measures are:

- Continue infill/replacement screen planting regime where plant failure/die back has been identified. Most notably these areas are around the boundary of the landholding along Richards Road; and supplementary planting to the north near Horseshoe Bush Road where existing planting is either over mature or showing signs of tree failure. Planting in these areas will strengthen the visual screening and integration of the landfill in years to come.
- Revise selected areas of planting on the landfill face—within the proposed expansion footprint—from exotic/native tree species to shallow-rooting native colonising species.
- Convert a limited area of exotic tree planting to native tree screen planting.
- Replace portions of existing vegetation (including exotic tree and pond plantings) with shallow-rooting native colonising species on the landfill face.

Low level lighting, downlights, light shields and directional lighting should also continue to be utilised to assist in managing light spill, glare and potential impacts on sky glow.

8.0 Conclusion

In summary, the above analysis demonstrates that the existing landfill operation is visually well integrated into the surrounding landscape, primarily through mitigation planting and the surrounding topography.

The proposal to extend the life of the landfill operation will lengthen the time when the landfill operation is visible and postpone the completion of the grassed and planted final landform.

With progressive grassing and naturalised planting, together with supplementary perimeter planting the adverse effects of the Project on the local landscape character and quality will be

low, with the only residual effect relating to the extended duration in which the landfill alters the perceived quality of the wider landscape from a limited number of viewpoints.

In relation to visual effects, moderate adverse effects during operation are expected to be from residential properties at Jean Mackay Place during the landfill operation. Moderate-Low effects are anticipated for residents along Horseshoe Bush Road, Richards Road, Postman Road, Blackbridge Road and the Aeropark Subdivision, as well as visitors to the Surf Park. Other viewing audiences during operation are anticipated to experience up to Low adverse effects. Once the landfill is completed and grassing and planting on the landform is undertaken, effects are considered to reduce to Very Low for all viewing audiences.

Ultimately the Project will continue to achieve a well-integrated outcome and in years to come, the rehabilitation planting will mature and assist in integrating the landfill structure into the local landscape context.

Bibliography

December 2011: Boffa Miskell ("BML") was commissioned by Trans Pacific Industries limited (TPI) to undertake a technical review of a proposed Managed Fill site within their current landholding, which was granted consent in 2011. The managed fill site, which is approximately 5.9 ha is located adjacent and to the west of the existing refuse landfill, and will be incorporated into become part of the proposed 7.4 ha 'Class 2' extension of the refuse landfill.

June 2012: BML was commissioned by TPI to undertake an assessment of landscape and visual effects for a proposed Earthfill Landform to the north- east of the site. The earth fill was granted consent later in 2012.

November 2013: BML prepared an assessment of landscape and visual effects for TPI to extend the operating period of the refuse landfill from 2023 when the previous consent was due to expire. The finished landform height, contours and proposed end use remained the same.

March 2020: BML prepared a landscape and visual effects assessment of a Project to replace an existing Leachate Evaporator Unit (LEU) with a BeneVap BV3000 LEU.

March 2021: BML prepared a landscape and visual effects assessment of a proposed alternative location for a new BeneVap BV3000 LEU to replace.

April 2021: BML prepared an assessment of landscape and visual effects for an extension to the managed fill operation to align this with the approved extension to the refuse landfill until December 2028.

May 2021: BML prepared an assessment of landscape and visual effects associated with delaying the removal of a temporary stockpile to be used in the final capping of the refuse landfill to align with the December 2028 refuse landfill consent expiry date.

Appendix 1: Assessment Method

Landscape Effects Assessment Method

15 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 Project. 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 Project 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 Project 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 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 Project may occur requires an identification of the area from where the Project 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.

Zone of Theoretical Visibility

As an initial step in the visual analysis, a Zone of Theoretical Visibility (ZTV) mapping exercise was undertaken of the site in its context to determine the likely extent of visibility in the wider landscape. ZTV mapping represents the area that a development may theoretically be seen - that is, it may not actually be visible in reality due to localised screening from intervening vegetation, buildings or other structures. In addition, ZTV mapping does not convey the nature

or magnitude of visual impacts, for example whether visibility will result in positive or negative effects and whether these will be significant.

Following the ZTV analysis, field work is used to determine the actual extent of visibility of the site, including the selection of representative viewpoints from public areas. This stage is also used to identify the potential 'viewing audience' e.g. residential, visitors, recreation users, and other groups of viewers who can see the site. During fieldwork, photographs are taken to represent views from available viewing audiences.

The viewing audience comprises the individuals or groups of people occupying or using the properties, roads, footpaths and public open spaces that lie within the visual envelope or 'zone of theoretical visibility (ZTV)' of the site and Project. Where possible, computer modelling can assist to determine the theoretical extent of visibility together with field work to confirm this. Where appropriate, key representative viewpoints should be agreed with the relevant local authority.

The Significance of Effects

Decision makers assessing resource consent applications must evaluate if the effect on individuals or the environment is less than minor¹² or if an adverse effect on the environment is no more than minor¹³. 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 circumstances¹⁴ (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 significant¹⁵.



¹² RMA, Section 95E

¹³ RMA, Section 95E

¹⁴ Seven-point level of effect scale. Source: Te tangi a te Manu, Pg. 15

¹⁵ 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

AUCKLAND REGIONAL LANDFILL TRANSITION PROJECT - REDVALE

APPENDIX 2 - GRAPHIC SUPPLEMENT

4 JUNE 2026





FIGURES

- FIGURE 1: Site Context
- FIGURE 2: Elevation Map
- FIGURE 3: Statutory Context
- FIGURE 4: Site Plan
- FIGURE 5: Site Topography with Consented Landfill Contours
- FIGURE 6: Expected Consented Landfill Visibility
- FIGURE 7: Expected Project Visibility
- FIGURE 8: Consented Landfill vs Project Visibility Comparison
- FIGURE 9: Consented Landfill vs Project Visibility Comparison (Enlargement)
- FIGURE10: Viewpoint Plan
- FIGURE 11: Landscape Mitigation Planting

VISUAL SIMULATIONS

- VS 1A: View from Horseshoe Bush Road looking Southwest - Panorama FoV90 (Existing View vs (Proposed View showing ARL-TP Redvale & consented planted Stockpile 4)
- VS 1B: View from Horseshoe Bush Road looking Southwest - Panorama FoV90 ((Proposed View showing ARL-TP Redvale & consented planted Stockpile 4 vs Proposed at completion with grassing of slopes)
- VS 1C: View from Horseshoe Bush Road looking Southwest - Panorama FoV90 (Proposed at completion with grassing of slopes vs Proposed at completion with grassing and planting)
- VS 1D: View from Horseshoe Bush Road looking Southwest - Single Frame FoV40 (Existing View)
- VS 1E: View from Horseshoe Bush Road looking Southwest - Single Frame FoV40 (Proposed View showing ARL-TP Redvale & consented planted Stockpile 4)
- VS 1F: View from Horseshoe Bush Road looking Southwest - Single Frame FoV40 (Proposed View at completion with grassing of slopes)
- VS 1G: View from Horseshoe Bush Road looking Southwest - Single Frame FoV40 (Proposed View at completion with grassing and planitng)

- VP 2: View from Richards Road (1 of 2) - Single Frame FoV40 (Existing View)
- VP 3: View from Richards Road (2 of 2) - Single Frame FoV40 (Existing View)
- VP 4: View from Austin Road - Single Frame FoV40 (Existing View)
- VP 5: View from Turley Road - Single Frame FoV40 (Existing View)

- VS 6A: View from Postman Road looking Southwest - Panorama FoV90 (Existing View vs Proposed View showing ARL-TP Redvale & consented planted Stockpile 4)
- VS 6B: View from Postman Road looking Southwest- Panorama FoV90 (Proposed View showing ARL-TP Redvale & consented planted Stockpile 4 vs Proposed at completion with grassing of slopes)
- VS 6C: View from Postman Road looking Southwest- Panorama FoV90 (Proposed View at completion with grassing of slopes vs Proposed at completion with grassing and planting)
- VS 6D: View from Postman Road looking Southwest - Single Frame FoV40 (Existing View)
- VS 6E: View from Postman Road looking Southwest - Single Frame FoV40 (Proposed View showing ARL-TP Redvale & consented planted Stockpile 4)
- VS 6F: View from Postman Road looking Southwest - Single Frame FoV40 (Proposed View at completion with grassing of slopes)
- VS 6G: View from Postman Road looking Southwest - Single Frame FoV40 (Proposed View at completion with grassing and planting)

- VS 7A: View from Jean MacKay Place looking Northwest - Panorama FoV90 (Existing View vs Proposed View showing ARL-TP Redvale & consented planted Stockpile 4)
- VS 7B: View from Jean MacKay Place looking Northwest - Panorama FoV90 (Proposed View showing ARL-TP Redvale & consented planted Stockpile 4 vs Proposed at completion with grassing of slopes)
- VS 7C: View from Jean MacKay Place looking Northwest - Panorama FoV90 (Proposed at completion with grassing of slopes vs Proposed at completion with grassingand planting)



VISUAL SIMULATIONS continued

VS 7D:	View from Jean MacKay Place looking Northwest - Single Frame FoV40 (Existing View)
VS 7E:	View from Jean MacKay Place looking Northwest - Single Frame FoV40 (Proposed View showing ARL-TP Redvale & consented planted Stockpile 4)
VS 7F:	View from Jean MacKay Place looking Northwest - Single Frame FoV40 (Proposed View at completion with grassing of slopes)
VS 7G:	View from Jean MacKay Place looking Northwest - Single Frame FoV40 (Proposed View at completion with grassing and planting)
VP 8:	View from Green Road - Single Frame FoV40 (Existing View)
VP 9:	View from Kennedy Road - Single Frame FoV40 (Existing View)
VS 10A:	View from Potter Road looking Northwest - Panorama FoV90 (Existing View vs Proposed View showing ARL-TP Redvale & consented planted Stockpile 4)
VS 10B:	View from Potter Road looking Northwest - Panorama FoV90 (Proposed View showing ARL-TP Redvale & consented planted Stockpile 4 vs Proposed at completion with grassing of slopes)
VS 10B:	View from Potter Road looking Northwest - Panorama FoV90 (Proposed at completion with grassing of slopes vs Proposed at completion with grassing and planting)
VS 10D:	View from Potter Road looking Northwest - Single Frame FoV40 (Existing View)
VS 10E:	View from Potter Road looking Northwest - Single Frame FoV40 (Proposed View showing ARL-TP Redvale & consented planted Stockpile 4)
VS 10F:	View from Potter Road looking Northwest - Single Frame FoV40 (Proposed View at completion with grassing of slopes)
VS 10G:	View from Potter Road looking Northwest - Single Frame FoV40 (Proposed View at completion with grassing and planting)
VS 11A:	View from Top Road looking Northwest - Panorama FoV90 (Existing View vs Proposed View showing ARL-TP Redvale & consented planted Stockpile 4)
VS 11B:	View from Top Road looking Northwest - Panorama FoV90 (Proposed View showing ARL-TP Redvale & consented planted Stockpile 4 vs Proposed at completion with grassing of slopes)
VS 11C:	View from Top Road looking Northwest - Panorama FoV90 (Proposed at completion with grassing of slopes vs Proposed at completion with grassing and planting)
VS 11D:	View from Top Road looking Northwest - Single Frame FoV40 (Existing View)
VS 11E:	View from Top Road looking Northwest - Single Frame FoV40 (Proposed View showing ARL-TP Redvale & consented planted Stockpile 4)
VS 11F:	View from Top Road looking Northwest - Single Frame FoV40 (Proposed View at completion with grassing of slopes)
VS 11G:	View from Top Road looking Northwest - Single Frame FoV40 (Proposed View at completion with grassing and planting)
VS 12A:	View from East Coast Road Rd looking Southwest - Panorama FoV90 (Existing View vs Proposed View showing ARL-TP Redvale & consented planted Stockpile 4)
VS 12B:	View from East Coast Road Rd looking Southwest - Panorama FoV90 (Proposed View showing ARL-TP Redvale & consented planted Stockpile 4 vs Proposed at completion with grassing of slopes)
VS 12C:	View from East Coast Road Rd looking Southwest - Panorama FoV90 (Proposed at completion with grassing of slopes vs Proposed at completion with grassing and planting)
VS 12D:	View from East Coast Road Rd looking Southwest - Single Frame FoV40 (Existing View)
VS 12E:	View from East Coast Road Rd looking Southwest - Single Frame FoV40 (Proposed View showing ARL-TP Redvale & consented planted Stockpile 4)
VS 12F:	View from East Coast Road Rd looking Southwest - Single Frame FoV40 (Proposed View at completion with grassing of slopes)
VS 12G:	View from East Coast Road Rd looking Southwest - Single Frame FoV40 (Proposed View at completion with grassing and planting)



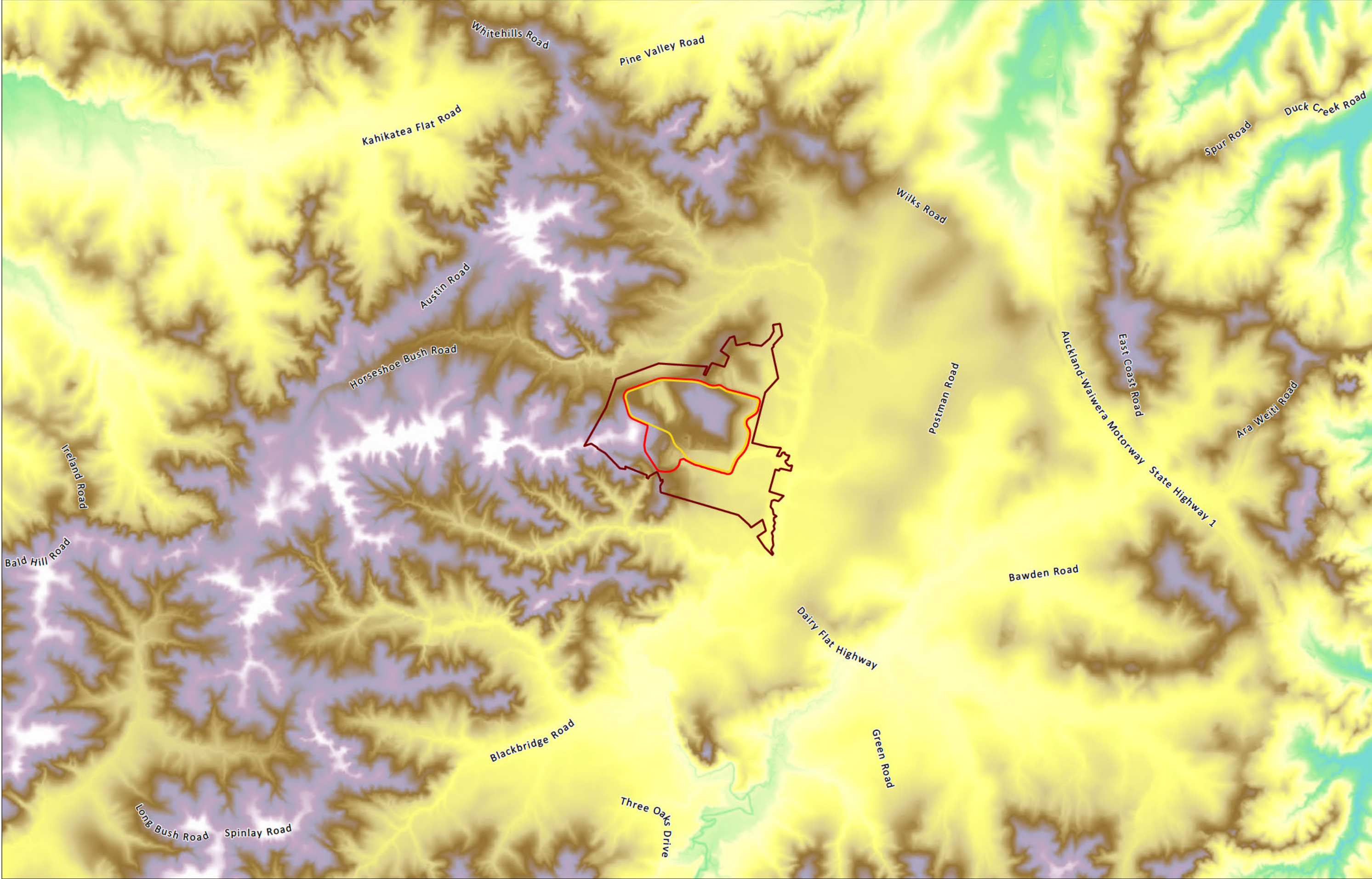


Figure 2

