

Appendix U Landscape and Visual Memo

Memorandum

Subject: ARL Project – Landscape and Visual Effects
Memorandum

Reference
No: BM251153

Author: Tom Lines / John Goodwin

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1 Introduction

WM New Zealand (WMNZ) has engaged Boffa Miskell Limited to prepare a technical memorandum outlining the landscape effects associated with the proposed new solid waste management and disposal facility in the Wayby Valley, north of Auckland (**‘ARL’** or **‘Project’**).

The Project will involve constructing, operating, closing and providing aftercare for a new 24 Mm³ landfill facility and associated infrastructure at Wayby Valley, Wellsford. Ngāti Manuhiri are Project partners and will work with WMNZ on the proposed management and mitigation measures. Once landfilling ceases, the land will be returned to Ngāti Manuhiri as tāngata whenua.

The new landfill will be a Class 1 landfill, as defined in the Technical Guidelines for Disposal to Land (WasteMINZ Technical Guidelines)¹, accepting municipal solid waste. This includes residential and commercial waste, construction and demolition waste, some industrial wastes that meet acceptance criteria, and contaminated soils. Following waste settlement, the landfill cap surface will have a maximum height of 205 m RL.

WMNZ landholdings in the Wayby Valley area comprise a total area of 1020 ha, with the landfill footprint being approximately 60 ha. The WMNZ landholdings have been divided into five general areas; the Eastern Block, the Western Block, the Southern Block, the Waiwhiu Tributary Block and the Waiteraire Tributary Block. The proposed works will involve the following:

- **Site access and operation:** Construction of site access roads, weighbridges, and a vehicle wheel wash.
- **Landfill development:** Major earthworks and the installation of environmental management systems, including a landfill lining system and collection networks for leachate, stormwater, and landfill gas (LFG).
- **Leachate and landfill gas management:** A dedicated leachate management system and a LFG treatment facility, including a LFG flare and a LFG waste-to-energy plant.
- **Support infrastructure:** Facilities for site staff, plant maintenance, and water supply.
- **Terrestrial, freshwater and wetland biodiversity measures:** This includes native revegetation, and a weed and animal pest management programme to offset or compensate for residual adverse effects on terrestrial, freshwater and wetland ecology.

This memorandum provides an outline of the initial findings of the Landscape and Visual Effects Assessment and has been prepared for inclusion in an application for Ministerial referral of the Project under the Fast-track Approvals Act 2024 (**‘FTAA’**). Specifically, this memorandum responds to the requirements under section 3.4 of the Fast-track Approvals Referral Application Form and

¹ Technical Guidelines for Disposal to Land, WasteMINZ, September 2023, Revision 3.1.

section 13(4)(h) of the FTAA. A full description of the draft proposal is included in the accompanying information attached to the application form for the referral.

2 Summary of findings

While the Project will result in adverse effects on natural character, landscape and visual values, these effects are primarily during initial construction and early operational phases, due to stream removal, earthworks, access formation and stockpiling within the Eastern, Western and Southern Blocks. These effects are also generally localised and occur within a wider working rural and forestry landscape.

A comprehensive package of landscape and ecological mitigation and enhancement measures will be proposed, including extensive riparian and wetland planting and restoration, revegetation, screening, and the establishment of a pest-free sanctuary.

With these measures in place, landscape and visual effects are anticipated to substantially reduce over time, with post-closure effects assessed as very low, and the overall level of natural character anticipated to be maintained and potentially enhanced in the long term, subject to implementation and ongoing management.

3 Assessment methodology

This preliminary landscape and visual effects assessment has been undertaken by Tom Lines and peer reviewed by John Goodwin. Both are registered members of Tuia Pito Ora / the New Zealand Institute of Landscape Architects (NZILA).

The assessment has been prepared with reference to recognised best practice guidance, specifically Te Tangi a te Manu – Aotearoa New Zealand Landscape Assessment Guidelines (NZILA, 2022);

This preliminary assessment has been prepared in the context of the relevant statutory provisions of the Auckland Unitary Plan – Operative in Part ("AUP") and the Resource Management Act 1991 ("RMA"). It has included the rating of effects based on the proposed project and the professional judgements of the author. In undertaking this preliminary assessment, a combination of desktop analysis and field-based investigation has been undertaken. This has included:

- Mapping of the Project site and statutory context, including AUP zoning and overlays;
- Review of relevant regional and local landscape assessments;
- Site visits to the WMNZ landholding and selected off-site locations representative of key viewing audiences.

Field work was undertaken between 2018 and 2020 and informed the preparation of material including visibility mapping and a suite of visual simulations prepared as part of the resource consent process². While this field work, mapping and analyses may require updating to reflect refinements to the Project or changes in surrounding land cover and land use, they remain appropriate for informing an assessment of effects for the purposes of this Fast-track referral application.

4 Site and project context

A general description of the site and surrounding locality is included in the accompanying information as part of the referral application. Below is a summary of the landscape context and site characteristics.

The WMNZ landholdings are located within the Wayby Valley, approximately 6 km southeast of Wellsford and within a wider landscape characterised by rolling hill country, plantation forestry,

² Lodged in 2019

pastoral farming and areas of indigenous vegetation. The landholding occupies a transition between the pastoral lowlands associated with the Hōteu River and the forested hill country of the Dome Forest.

The surrounding landscape is dynamic and has been modified by historical and ongoing land uses, particularly plantation forestry, which involves cyclical harvesting and replanting resulting in regular and noticeable changes to landform appearance and vegetation cover. An Outstanding Natural Landscape (ONL Area 32) also forms part of the Project context and is characterised by steeply dissected hill country comprising a sequence of prominent ridgelines supporting mature remnant forest. While its overlay remains relevant, it sits outside the Project footprint.

In relation to cultural landscape values, the site sits within a wider cultural landscape of significance to tangata whenua, encompassing named hills, ridgelines and waterways with associated mauri. The Hōteu awa and its tributaries form an interconnected catchment, and nearby features such as Tohitohi ō Reipae—while outside the Project footprint—may fall within certain sightlines associated with the proposed activities.

The Project landholding can be divided into several distinct catchments reflecting landform, landcover, land use and proposed activities (refer Figure 1, 2 and 3, Appendix 1):

Waiwhiu Block

Located east of the Wilson Road ridgeline, extending down to the Waiwhiu Stream and the boundary of the WMNZ landholding. This block does not contain any landfill-related activities and will remain in production forestry, providing a consistent forestry backdrop and buffer to the eastern extent of the site.

Eastern Block

Characterised by two dominant north–south oriented ridge and valley systems extending from a ridge which backdrops the proposed landfill (‘Dividing Ridge’) in the west to the elevated Wilson Road ridgeline in the east. The proposed landfill is located within one of the central valleys. The block contains a network of secondary ridges, gullies and small valleys and is currently managed as plantation pine forest.

Western Block

Extends from the margins of Te Awa o Hōteu across river flats and rises eastward to the Dividing Ridge, marking the transition between pastoral farming and forestry. The block contains multiple streams, watercourses and wetlands, including two wetlands identified in the AUP as Wetland Management Areas and Significant Ecological Areas.

Southern Block

Comprises a westward-oriented valley extending from the Waiteraire Stream adjacent to State Highway 1, with gullies rising to the Middle Ridge to the north and Sunnybrook Ridge to the south. The stream corridor is located within a Natural Stream Management Area and supports regenerating native vegetation and exotic species.

Waiteraire Tributary Block

Located at the head of a southwest-oriented valley extending from the Wilson Road Ridge and predominantly covered in plantation pine forest. The block includes areas of native forest and wattle associated with stream tributaries draining to Sunnybrook Reserve, the Waiteraire Stream and Te Awa o Hōteu. No landfill activities are proposed in this block, which will remain largely in forestry use.

4.1 Visual Catchment

The visual catchment of the Project is strongly influenced by the valley landform in which the landfill is proposed to be located, as well as surrounding ridgelines, plantation forestry and existing indigenous vegetation. The proposed landfill footprint is largely contained within Wayby Valley, which limits off-site visibility from locations to the north and east. The main visual catchment will be to the northwest and west of the landholding

Visibility is more likely from elevated rural properties to the west of the site, sections of Wayby Valley Road, and from parts of State Highway 1 where distant and intermittent views may be obtained. Distant views may also be available from elevated areas within Wellsford township approximately 3–4 km to the northwest.

The main public and private viewing audiences located within the visual catchment which attain views of the landholding are identified as being:

- Public viewing audiences – primarily people on roads (within Wellsford, on SH1, Wayby Valley Road, SH16 and local roads in between); within parks / open space areas close to the Wellsford Township (including the Warkworth Golf and Squash Club) and walkers from Tohitohi ō Reipae (the Dome) summit lookout on Te Araroa Trail.
- Private viewing audiences – these include residents within Wellsford Township, residents within dwellings and farmland in Wayby Valley, Robertson Road, Rustybrook Road, Wayby Station Road, Prictor Road, SH1 and SH16, as well as Kraack Road, and properties adjacent to Springhill Farm.

5 Assessment of potential effects

Based on the proposal and the information available, an assessment of potential landscape and visual effects has been undertaken and summarised below.

5.1 Natural Character Effects

In relation to Natural Character Effects, the Project will facilitate removal of stream habitat within the Eastern, Western and Southern Blocks of the WMNZ landholding and would therefore result in adverse effects on existing biophysical and experiential attributes (i.e. human responses/ experiences to the abiotic and biotic condition).

An Effects Management Package is proposed to address these effects and manage impacts on streams, wetlands and associated landscape values across the landholding. This includes wetland and riparian planting along stream margins, with these areas proposed to be fenced from stock and managed in perpetuity. A pest exclusion–fenced area is also proposed to support stream, wetland and terrestrial habitats. In addition, further stream and riparian protection and enhancement is proposed beyond the WMNZ landholding within the wider Hōteo catchment.

When the effects on stream and wetland elements, patterns and processes are considered in the context of the existing modified land use and landscape character of the wider landholding, and having regard to the mitigation and enhancement measures outlined within this initial assessment (to be refined and confirmed through subsequent detailed assessment and design stages if the referral is accepted and a substantive application is subsequently lodged), it is considered that the overall level of natural character can be maintained. The extent of any improvement/enhancement will be informed by the detailed design, implementation, and the long-term management of the proposed measures.

5.2 Landscape Effects

Initial Construction

Initial construction works will result in adverse effects on the physical landscape, primarily associated with stream removal in the Eastern and Southern Blocks, access road formation in the Southern Block, and earthworks and stockpiling in the Western Block. These effects are anticipated to range from **moderate** adverse (stream loss and major landform modification) to **low to low-moderate** adverse (landform and vegetation change), noting that most vegetation removal involves plantation pine or wattle. Native revegetation following earthworks is anticipated to result in medium-term **beneficial** effects.

During this phase, adverse effects on landscape character are anticipated to be **moderate** in the Southern Block, **low to low-moderate** in the Western Block, and **low** in the Eastern Block, where forestry activities will largely continue unchanged. Overall, having regard to the scale of the landholding and the surrounding rural and forestry context, construction-phase effects on landscape character are anticipated to be **low to moderate**.

Ongoing Operations

During operation, most landform disturbance will have been completed, with effects largely associated with landfill staging, stockpiling and clay borrow activities within the Eastern and Western Blocks. These activities will result in up to **low-moderate** adverse effects on the physical landscape over the operational life of the landfill. As native planting matures, **beneficial** effects are anticipated, assisting in integrating built elements and access infrastructure into the wider landscape and delivering wider ecological and landscape benefits, including through the establishment of the Wayby Sanctuary.

As the landfill rises above western ridgelines it will become more visible; however, screen planting, native revegetation and the ongoing forestry context are anticipated to contain effects on landscape character at a **low** level overall.

Post-Closure

Following closure and full revegetation, no further adverse effects on the physical landscape are anticipated. The final landform will read as a broad elevated ridge below the Wilson Road ridgeline, vegetated with low-scale indigenous planting. While distinct from adjacent plantation forestry, the landform and vegetation will reflect other indigenous areas within the landholding and contribute to the broader mosaic of productive and protected landscapes. Overall, post-closure landscape effects are anticipated to be **very low**, with long-term **beneficial** effects on landscape pattern and character.

5.3 Visual Effects

Construction Phase

Visual effects are anticipated to be greatest during initial construction due to exposed earthworks prior to vegetation establishment. For nearby and elevated residential locations, including lower Wayby Station Road and properties along SH1 (within approximately 2–3 km), visual effects are anticipated to be up to **moderate** adverse. For other residents within approximately 3–4 km, including areas around Robertson Road, effects are anticipated to be **low to moderate** adverse. From more distant locations, including Wellsford township and SH16, visual effects are anticipated to be **low**. Visual effects for transient viewers, including motorists and golf course users, are anticipated to be **very low**.

Operations (Years 1–5)

As earthworks are grassed and planting establishes, visual effects for most viewing audiences are anticipated to reduce to **low** adverse. For nearby residential properties at 1237A and 1282 SH1 and along lower Wayby Station Road, visual effects are anticipated to reduce to **low to low-moderate**

adverse, reflecting intermittent operational activity and increasing vegetation screening. Visual effects for the people travelling in the area are anticipated to be **very low**.

Operations (Years 5–35)

During later operational phases, landfill activities may become more visible from some elevated locations with clear views towards the Wilson Road ridge, including properties on Kraack Road. For these locations, visual effects could be up to **low-moderate** adverse. From more distant locations, including Wellsford, visual effects are anticipated to remain **low**, given distance, vegetation establishment and the surrounding forestry context.

Post-Closure

Following closure and full revegetation, visual effects are anticipated to be **very low**, with the landholding continuing to be experienced as part of a working rural and forestry landscape.

Night-Time Lighting

Night-time lighting will be limited to operational safety requirements and designed to minimise spill, glare and sky glow. For most viewing audiences, night-time visual effects are anticipated to be **very low**. From a small number of elevated properties on Kraack Road, intermittent **low to low-moderate** adverse effects may occur during later operational phases.

5.4 Mitigation and management measures

A comprehensive package of landscape and ecological mitigation measures is proposed to manage and minimise adverse effects on landscape character, visual amenity and natural character. These measures focus on avoiding sensitive landscapes and ecosystems, careful siting of operational areas away from streams and indigenous vegetation, and the use of bridges to maintain watercourse natural character. Extensive native revegetation, riparian and wetland planting, together with screening and early-establishment planting on ridgelines and slopes, will assist in integrating the project into the wider rural and forestry landscape. A pest-free sanctuary and associated habitat enhancement measures will provide long-term ecological and landscape benefits, while operational controls, building design, signage and lighting are intended to ensure that landscape and visual effects remain appropriately managed.

6 Conclusions

The assessment concludes that while the Project will generate adverse effects on natural character, landscape and visual amenity—particularly during construction and certain operational phases—these effects are generally limited in extent, occur within a highly modified rural and forestry context, and reduce over time as rehabilitation and planting establish. Landscape and visual effects are assessed as low to low-moderate overall during operation, with post-closure effects anticipated to be very low.

Having regard to the scale of the landholding, the existing landscape character, and the proposed mitigation and enhancement measures, it is concluded that the Project will maintain and, over time, may enhance, the overall level of natural character and achieve long-term landscape integration and improvement.

7 Applicability

This technical memorandum has been prepared by Boffa Miskell Limited for the exclusive use of our client WMNZ, with respect to the particular brief given to us, and it may not be relied upon in other contexts or for any other purpose, or by any person other than our client, without our prior written agreement.

We understand and agree that WMNZ will submit this technical memorandum to the Environmental Protection Authority in support of a referral application under the Fast-track Approvals Act 2024 for the works described herein, and that the Environmental Protection Authority will rely on this technical memorandum for the purpose of assessing that application.

Memorandum prepared by:



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Tom Lines
NZILA Registered Landscape Architect

Memorandum reviewed by:



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John Goodwin
NZILA Registered Landscape Architect

Appendix 1: Figures





