

**To:** Shay McDonald, Senior Consents Planner  
**Council:** Otago Regional Council  
**From:** Rachael Annan, Principal | Landscape Planning Lead  
**CC:** Samantha Iles, Principal Environmental Consultant  
**Date:** 20 November 2023 **Project No.** 13556

**RE:** RM23.185 - Green Island Landfill Landscape Assessment, Technical Review

---

## 1.0 INTRODUCTION

SLR Consulting NZ (SLR) has been engaged by Otago Regional Council (ORC) to conduct a technical review of the resource consent application (including subsequent attachments and request for information (RFI) responses submitted by Dunedin City Council (DCC, the applicant)) for the operation, expansion and closure of the Green Island Landfill.

DCC is proposing to continue to extend the life of the Green Island Landfill to allow acceptance of waste until between December 2029 and March 2023, following which closure operations and landfill aftercare will commence.

The '*Green Island Landfill Closure Landscape Assessment*' was prepared by Boffa Miskell Limited (March 2023). A Section 92 response on landscape matters was provided within the 'Tranche 4' information (October, 2023). Unless otherwise stated, quotes following are from the assessment document.

## 2.0 REVIEW MATTERS

ORC posed the following questions in relation to the Landscape Assessment, which I have responded to in this memo. For clarity, these are addressed in two question groups to help avoid the inherent overlap of some qualitative landscape matters.

*A. Is the technical information provided in support of the application robust, including being clear about uncertainties and any assumptions? Yes, or no. If not, what are the flaws?*

*B. Are there any other matters that appear relevant to you that have not been included? Or is additional information needed? Please specify what additional info you require and why [explain]*

*C. If granted, are there any specific conditions that you recommend should be included in the consent?*

*D. Is the assessment provided by the Applicant in accordance with relevant best-practice guidelines?*

*E. Has the Applicant adequately addressed the potential effects on landscape, natural character, and visual amenity, both during the (expanded) operation and closure of the landfill? Please explain.*

*F. Do you agree with the Applicant's conclusion as the level of adverse effects on landscape values, natural character, and visual amenity? Please explain.*

### 3.0 RESPONSE

#### Review Questions Group A.

Is the assessment provided by the Applicant in accordance with relevant best-practice guidelines?

Is the technical information provided in support of the application robust?

Are there any other matters or additional information that appear relevant to you that have not been included?

Response:

At p.3, the assessment sets out that an approach, and internal peer review, have been undertaken

*'...following the concepts and principles outlined in Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines'*

These are the Tuia Pita Ora, New Zealand Institute of Landscape Architects, best practice guidelines for landscape assessment (TTTM, July, 2022). I generally agree with this statement. However, the following aspects are noted.

In describing the landscape character of the surrounding environment the assessment draws on existing landscape character studies of the wider area (BML 2007; Mike Moore, 2015). This approach though can limit project and place specific consideration derived from the author's own assessment of the receiving environment. This would afford more tailored consideration to inform assessment findings.

Best practice sets out that distinct landscape characteristics form the basis of consideration rather than generic terms, i.e. *'Effects on amenity and landscape values of rivers and wetlands'* (p.38). This is of relevance regarding landscape sensitivity.

*'Sensitivity and capacity (and other such generic parameters) derive from a landscape's specific attributes (the generic depends on the specific) and relate to a certain type of activity (a landscape is sensitive to something).'* (P. 124, TTTM)

I agree with the assessment's general description that the site's character is highly modified and that it is identified as such within a composite landscape setting. However, noting also the time past since the above referenced landscape material was written, aspects such as the extent to which vegetation is established in different areas or more recent development areas can differ from the time of writing (reference material noted above) to that of the current situation.

I also consider that in determining landscape support of the application, the assessment has overtly focused on the level of modification of the adjacent estuary (and stream areas). This can in turn imply a lowering of landscape sensitivity to the proposal as a way of setting out capacity for the development.

Further to this, such a focus does not provide a complete basis for considering natural character. Consistent with TTTM, the assessment methodology's natural character definition notes these two aspects (emphasis added):

*'Natural character effects consider the characteristics and qualities and associated degree of modification relating specifically to waterbodies and their margins, including the coastal environment.'*



The assessment does however, also acknowledge that (emphasis added):

*'Kaikorai Estuary is a key feature adjacent to the Site, modified but recognised as holding important values, including to mana whenua as well as important bird habitat' (p. i)*

*'However, although modified, natural character of the adjacent Kaikorai Stream, Abbotts Creek and Estuary is higher [than that of the site], particularly in regard to the birdlife it supports and scenic qualities present.' (p. 25)*

Relevant identified landscape values associated with the estuary therefore involve sensory (experiential, i.e. scenic) values, associative values (particularly for mana whenua) and bird-life habitat, *despite* the level of landscape modification.

Focusing on these key localised landscape values, and referencing specific provisions would have also helped contribute to a more robust assessment of effects in relation to Statutory Provisions (from p. 37 of the assessment). More specific reference to distinct reconsidered natural character provisions of RPS would be anticipated and discussed with regard to local estuary and stream characteristics. This is of particular importance given the RMA and underlying Otago Regional Policy Statement weighting to such matters.

The approach of basing the development area's form and location on protecting lower adjacent Clariton Avenue neighbours views towards Pukemakamaka/Saddle Hill (also noted for its value to mana whenua) is also understood (p.9). However, more discussion regarding the weighing up of this approach and related landscape values against the outcomes of the proposed development area and its proximity to Kaikorai Stream and Estuary (as a regionally significant wetland) would have provided greater clarity. Alongside this is the consideration of the proposal as an appropriate landscape outcome in proximity to these water bodies.

Ultimately, this has become an agreed point. This is largely due to discussion and understanding of the proposal, its relationship to these adjacent water bodies, mitigating factors and other project outcomes gained by visiting the site and surrounds, albeit that underlying assessment rationale provided was considered to be limited. The effects discussion and resultant recommendations could also have more appropriately drawn on greater place specific consideration of the relationship between the proposal area and these adjacent highly valued areas.

The landscape assessment would have provided more robust findings from further analysis of the relationship between the application site (and development area) with the adjacent estuary; possibly including related cross sections and photographs. These matters warranted greater emphasis in the assessment, and also involving greater reference to relevant matters of the cultural impact assessment (or iwi management plans), and also to the ecological assessment findings.

It was from visiting the site (and project discussions held there), more than reading the assessment, that the sense of separation between the development area and these adjacent highly valued areas is understood, and appreciated as appropriate with regards to this application. In the same way, the overall landscape findings support for the project arrived at by the assessment has been appreciated and supported.



### Review Questions Group B.

Has the Applicant adequately addressed the potential effects on landscape, natural character, and visual amenity, including being clear about uncertainties and any assumptions?

Do you agree with the conclusions regarding the level of adverse effects on landscape values, natural character, and visual amenity?

And do you recommend any specific conditions that should be included in the consent?

Response:

Additional Information has been provided in the S92 Response. This has been checked and summarised in Appendices 1 to this memo, p. 7.

The S92 Response included computer modelled images from viewpoint locations, which have been provided where surrounding dwellings are closer to the site than the adjacent road (as a representative public viewpoint). While this can provide an appropriate alternative solution, these are provided as annotated screen shots (file names indicate the address view depicted). There is however, no supporting methodology information given such as if the comparative focal length is known or the height these are taken at above ground level. Such information could have also confirmed any relevant limitations of this modelling.

It is understood, from discussions onsite that DCC (landfill management/communications staff) have a level of communication established with surrounding neighbours. On this basis, it would seem a reasonable approach to visit these closer neighbours for viewpoint and visual simulations photography.

#### Issues Remaining - Recommended Conditions

The assessment heavily relies on a mitigation strategy of the '**Vegetation Management and Restoration Plan**'. This document is not yet available in its final form and is understood that this is to be provided through partnership and engagement with mana whenua. It is acknowledged that a draft version has been provided with the S92 response. This document is both relied on by the assessment and not yet available to confirm outcomes sought.

Overall, it appears that the management plan also has two roles:

- Providing vegetative mitigation (landscape character and visual amenity), and;
- Responding to cultural values.

There are also tensions in this; that cultural outcomes are effectively documented and achieved, but also that landscape mitigation, including visual amenity outcomes are provided for. The ability and opportunity to align these outcomes will follow on from a clear appreciation of them both.

It is anticipated that there may be alignment between ecological values (habitat health and function, i.e. for valued bird life) and outcomes sought by mana whenua.



*A Vegetation Management and Restoration Plan is proposed to continue the effective ongoing visual screening with potential long-term visions for the Site, after closure, in mind. It is also recommended to plan for a gradual transition to predominantly native plantings over time as set out in) the Cultural Impact Assessment (Aukaha 2023) and in collaboration with mana whenua. (p.10)*

Given the focus of landscape relevant policy matters and values associated with the estuary, the assessment makes limited reference CIA findings; referenced directly only once, as quoted above.

The assessment sets out that over time exotic trees could gradually be felled and removed. The typically greater height of exotic trees to native species needs to be accounted for. If direct replacement is sought, a considerable amount of time is required for legacy scale native trees to reach a comparative height.

This process also needs to account both for the value the surrounding community may place on areas of exotic or specimen tree planting, and also the potential habitat provided by established exotic tree species. While some exotic trees may be a nuisance factor there are also species and specimen trees from which amenity value is derived. They can contribute to the rural character of scenic outlooks.

In summary, this document and mitigation strategy provided should both focus on key landscape values and outcomes as well as effective landscape mitigation.

The following matters are recommended conditions (regarding the proposed Vegetation Management and Restoration Plan).

The following matters should be confirmed (by relevant technical review):

- The effectiveness of the management plan in relation to ecological restoration and habitat health;
- Alignment with mana whenua outcomes sought derived from partnership discussions and the CIA;
- An effective approach to landscape character and visual amenity outcomes for surrounding residents (which draws on community consultation), including review of planting plans and schedules, and;
- Planting implementation shall be signed off by a landscape architect, arborist or other suitably qualified expert, with subsequent monitoring of vegetation health (and any replacement required).



DRAFT

#### 4.0 CONCLUSION

Concerns raised in this technical review are not fatal flaws in confirming support for assessment findings. Agreement with final conclusions reached has been arrived at by having read the assessment, and then visiting the site and surrounds and having the opportunity to discuss the project there.

As noted in the preceding section, the BML landscape assessment relies on the yet to be provided Vegetation Management and Restoration Plan. The preceding recommendation should be incorporated.

The management report will need to clearly demonstrate a mitigation approach responsive to the project's magnitude (scale), and *place specific* landscape values. Technical review of the final management plan is also recommended.

Regards,

**SLR New Zealand**

Author



**Rachael Annan,**  
**Registered Landscape Architect**  
Principal | Landscape Planning Lead

Peer Review / QA



**Melissa Davis,**  
**Registered Landscape Architect**  
Landscape Architecture Manager



---

#### Confidentiality

This document is confidential and may contain legally privileged information. If you are not a named or authorised recipient, you must not read, copy, distribute or act in reliance on it. If you have received this document in error, please notify us immediately and return the document by mail.

---



# Appendix 1

Landscape Related RFI Matters - Summary	
S92 Questions	Notes on Feedback supplied
1. Q49: Please provide and reference (in the assessment) photographs taken from within the site to demonstrate the comparative existing landscape character, and as a relevant basis for effects discussion. These should also illustrate reciprocal views to relevant surrounding locations.	Supplied as screen shots - Computer modelled
2. Q50: Photographs and graphics should set out the existing and proposed extent of the borrow pit area, with accompanying reference in text (Figure 7 - Staging Plan does not clarify this point).	Supplied via screenshots
3. Q51: Figure 1 (graphic supplement) does not illustrate the access route into the site (or other key roads) as stated at p. 13. Please add these in, aligning with assessment descriptions.	Provided in Draft Vegetation Restoration Plan Framework, Figure 1
4. Q52: Please provide a visual simulation for Viewing Location E, noted in the assessment as having higher visual effects than locations A and B from where simulations are provided.	Screenshots supplied showing final height of borrow pit extension
5. Q53: Figure 3 - Topography Plan (of the graphics supplement) requires annotation of landscape features as described in text, p. 16-17. For clarity, please also provide LIDAR contours (or similar) for the surrounds illustrating comparative information for the landscape setting. We note the final contours shown on Fig 3 within the assessment, however this is too small a view of the surrounding area.	Updated topography plan supplied
6. Q54: Figure 4 – Illustrative Cross Section (within the assessment) lacks horizontal dimensions, please provide these for greater clarity.	Spot heights added to cross section: existing height and proposed extension
8. Q55: Some relevant views from dwellings are closer to the site than their representative public viewpoints provided. Further focus has been given in relation to Clariton Avenue properties. We request further consideration in relation to other Viewing Areas/ Locations. As observed while visiting the site and surrounds, this is particularly sought for properties in the vicinity of Blanc Ave, Wavy Knowes Drive and Paterson Street (and roads just above). ZTV analysis may be necessary to address the viewshed more broadly, and through development stages.	Screenshots supplied showing final height of borrow pit extension
9. Q56: 'The Vegetation Management and Restoration Plan' is referenced in the text as both being proposed and recommended. This document needs to be provided to ascertain its effectiveness for mitigation and enhancement.	High level objectives supplied
10. Q57: Please provide a concluding statement on the appropriateness of the application to be integrated into this landscape setting (with reference to Te Tangi a te Manu). Please clarify the concluded finding on landscape effects, described as limited.	Concluding statement provided

