

6 December 2023

Otago Regional Council
c/o Shay McDonald
Senior Consents Planner



Email: Shay.McDonald@orc.govt.nz

Dear Shay

Mt Cooe (RM21.668): Section 92 review of Landscape Mitigation Concept and Effects Assessment Report

Thank you for the opportunity to undertake a Section 92 review for Otago Regional Council ('**ORC**') of the following report:

- *Mike Moore, (27 June 2023) Proposed Expansion Mt Cooe Landfill, Balcultha: Landscape Mitigation Concept and Effects Assessment Report (the '**Assessment**' and accompanying '**Figures 1-14**').*

A brief review of the following reports has also been undertaken where they are relevant to landscape matters and the Assessment above:

- *WSP (21 June 2023) Application for Resource Consent and Assessment of Effects on the Environment: Mt Cooe Landfill, Balclutha, Prepared for Clutha District Council For Submission to the Otago Regional Council, (the '**AAE**').*
- *Appendix S Proposed Conditions of Consent*
- *Appendix V Landfill Management Plan*
- *4Sight Consulting (April 2023) Mt Cooe Landfill Expansion Area: Terrestrial, Wetland, and Waterway Assessment*

Background

Boffa Miskell Limited ('**BML**') were first approached to undertake a preliminary review of a draft of the Assessment as part of a Section 88. A high level desk-top audit (provided 4 May 2023)¹ identified a number of areas of the Assessment where further clarification and analysis was required to enable an assessment of landscape, visual and natural character effects.

Following that preliminary stage, I was able to visit the Site on 17 May 2023, accompanied by Mike Moore and other members of the teams for both the Applicant and ORC.

¹ Boffa Miskell BM230205_01_Landscape_s88_Desktop_Review_20230503.docx

Subsequently, the application for the proposal has been lodged, including the updated Landscape Assessment referred to above. A review of this Assessment found that many of the points of clarification had been addressed. A further memo (provided 6 July 2023) identified a few outstanding gaps and requested clarification on some points to further assist with an understanding of landscape, natural character and visual effects.

The responses to these remaining queries relevant to landscape matters was received by BML on 28-29 November 2023 and subsequently reviewed. The answers were found to be sufficiently addressed to proceed and therefore the purpose of this letter is to answer the table of technical questions provided by you on 26 June 2023.

For the full context, this report should be read in conjunction with the previous memo's, the application, and relevant s92 response (Mike Moore letter section 92, 21 September 2023).

Structure of this report

This peer review/audit is set out using the questions provided by ORC with topic subheadings where needed to assist with clarity. A brief introduction to the Proposal is first provided below for context.

The Proposal

I understand the Assessment and accompanying Figures relate to Clutha District Council's application for water and discharge permits to authorize the continued use and expansion of the Mt Cooee Landfill (the 'Site').

The Site is located on Kaitangata Highway, on the north bank of the Clutha River / Mata-au River on the outskirts of the township of Balclutha in South Otago. Areas of existing fill are to be capped and remediated, whilst a new area for landfill activity, a transfer station area, and a resource recovery area (RRC) are to be developed.

ORC General Questions

- 1. *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?***

Yes, it is considered that the technical information provided is sufficient to review the assessment of effects.

- 2. *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***

No further information is requested.

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

- I agree with the recommendation in the Assessment that Landfill activities should be carried out in accordance with the Landscape Mitigation and Rehabilitation Concept Plan (Figure 14) and as specified in Appendices A – C of the Assessment and my assessment findings are based on the assumption that this mitigation occurs.

- A maximum area be set for the active working face.
- Planting be established as shown in Figure 14 and set out in the Appendices (A-C) in the Assessment. Further to this:
 - There are two areas of proposed screen planting that should be planted in the first planting season following granting of consent: the area located to reinforce landform screening at low point of hill, and the area near the existing entrance that will screen the future RRC Area (Figure 14, Appendix B).
 - The existing trees along Kaitangata Highway (identified in Figure 14) are to be maintained until the existing landfill is capped, topsoiled and planted. Following this stage, they should be removed and replaced with indigenous screen plantings as set out in Appendix B.
- It is further recommended to fence off and undertake enhancement planting of the existing natural wetland on the Site. While it is accepted that existing natural character values may be degraded, taking the opportunity to strengthen those values is important, particularly given the wider relationship of the Site with the Clutha River / Mata-au.

ORC Questions for Landscape, Natural Character and Visual Amenity

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

The Assessment states that it has adhered to current best practice guidance as outlined in Tuia Pito Ora New Zealand Institute of Landscape Architects', Te Tangi a Te Manu – Aotearoa New Zealand Landscape Assessment Guidelines (NZILA, 2022). Further information on the method utilised is provided within the Assessment, primarily in regard to the definition of terms and setting out the 7-point rating scale².

It is best practice to identify and frame the assessment in response to the statutory context. While I agree with the Assessment that as the proposed works fall within the boundary of the designation and meet the purpose of the designation, the proposed works are not required to be assessed against the provisions of the underlying CDP zone. However, they are useful to understand for context and similarly, it would be useful to understand if there are any relevant provisions in ORC plans and policies that should be considered.

Therefore, the following question of clarification was asked:

Clarify whether there are any provisions in the Regional Policy Statement (Operative and Proposed), Water Plan or Waste Plan or other ORC plans and policy relevant to this landscape assessment and consider effects in this context.

In the response provided, Mr Moore states that he has sought the expert advice from WSP planners who have confirmed that there are no relevant provisions in the Partially Operative Otago Regional Policy Statement 2019, the Proposed Otago Regional Policy

² The Assessment, pp12-13

Statement 2021, the Otago Regional Plan: Water 2004, or the Otago Regional Plan: Waste 2022.

I accept Mr Moore's identification of the Clutha River /Mata-Au margins including his comment that it could be argued that the low-lying settlement pond area of the Site is within the margin. However, given this proximity and relationship of the Site to the margins of the Clutha River, in my view it is helpful to note that the Clutha River /Mata-Au between Balclutha and the sea is identified in the Schedules of the Otago Regional Plan: Water for Otago as having natural ecosystem values and Kai Tahu values.

Mr Moore does consider these values in the main body of the Assessment, noting that it is of important cultural significance and that:

In the wider landscape, the Clutha River / Mata-au is a natural feature of major significance, but its natural character has been highly modified, with its margins characterised by stopbanks and exotic vegetation. The Otago Regional Council (ORC) Natural Character, Riverscape and Visual Amenity Assessment of the Clutha / Mata au assessed the natural character of this lower section of the river as moderate.³

Therefore, overall, it is considered that the Assessment is broadly in accordance with relevant best-practice guidelines.

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

To understand the nature and level of landscape, natural character and visual amenity effects, the relevant characteristics, qualities and values should first be considered.

The Assessment describes and analyses the landscape's attributes and values at different relevant scales which generally provides a sufficient basis through which the level of landscape effects is considered in the 'Landscape effects assessment' section.

There is a degree of confusion around the values of the Clutha River / Mata au. I note that the landscape effects conclusion states, 'The landscape context has no values of particularly recognized significance'⁴ while previously describing the Clutha River / Mata au as having notable physical, associative and perceptual values⁵ and as a natural feature of major significance⁶

However, the Assessment does also state that the river's values are reduced by its modified nature and some further clarification is provided in the Conclusion where it is clearer that the reference is to landscape values of recognised significance *in statutory*

³ The Assessment, p6

⁴ Ibid, p20

⁵ Ibid, p7

⁶ Ibid, p6

documents i.e. 'The river is not identified as an 'outstanding natural feature or landscape', or 'area with high degree of naturalness' in the Otago Regional Plan Water.'⁷

Overall, it is apparent that the Assessment finds that the river:

- has important values,
- is modified,
- is not identified as outstanding or having a high degree of naturalness in the Otago Regional Plan Water, and
- forms part of the wider landscape context, rather than the margins

While I agree with the Assessment that Site is primarily part of the wider landscape context of the Clutha River / Mata-au, as described in the previous answer, I consider the proximity and relationship of the Site to the margins requires natural character effects to be addressed. In my opinion, there is potential for up to low-moderate effects on the natural character of the Clutha River / Mata-au during operation, reducing to low following closure and rehabilitation.

The Assessment also identifies an area of natural wetland on the Site and notes that it retains some natural character value. To assist with understanding the nature and level of natural character (and therefore part of the context to the effects rating), the following question of clarification was asked:

Please refer to findings from the Terrestrial Wetland and Waterway Assessment to support/expand slightly on this identification of natural character value.

In the response provided, Mike Moore states that he considers that the Terrestrial Wetland and Waterway Assessment (TWWA) supports his statements and refers to relevant excerpts from the TWWA. These describe the ecological values of the identified natural wetland as likely to be low due to parts being dominated by exotic species and fauna values appearing low. Also, in discussing the small stream in the southern part of the site, the TWWA states: "The stream is already compromised by stock access and has poor water quality as indicated by the low MCI score for the site."

These references assist in clarifying the extent of natural character values. While further discussion of the nature of the impact on the identified values of the river (albeit modified) would provide a more robust assessment, on balance the context provided is considered to support the overall landscape and natural character effects ratings. Notwithstanding this, my assessment differs to Mr Moore's (see response to Question 7 and Table on p8).

I agree with Mr Moore that while degraded, the natural wetland on the Site retains some natural character value and, in my opinion, the proposed expansion of the landfill will have an adverse impact on that value, particularly on experiential aspects of natural character.

⁷ Ibid p6

I recommend enhancement planting of the wetland be undertaken to help reduce effects on the natural character of the wetland but also, on the wider landscape context and specifically, the Clutha River / Mata-au.

Also, in regard to understanding the existing environment, the Assessment describes the final height of the new landfill as approximately 7m higher than the natural landform while I note the Design Report (Appendix B, p20) describes the final RL of 36m as some 14m above the general ridgeline. I note that Figure 12c shows the existing ridgeline to the south (as viewed from Kaitangata Highway) ranges approximately from 20m to some 27.5m asl. Therefore, to assist with understanding the nature and level of landscape change (and therefore part of the context to the effects rating), the following question of clarification was asked:

Please confirm the difference between the existing natural landform and proposed additional height including identifying if/where it varies.

In the response provided, Mike Moore states that there has not been surveyed height information to a high degree of detail available for this area, however, in consultation with WSP staff, Mr Moore states that he understands that the maximum current height of the existing landform in this location is approximately 28.5m. The final height of the proposed landfill will be 36m, therefore increasing the height from the current high point by 7.5m.

I note that this explanation assists in clarifying the *minimum* increase. While Mr Moore acknowledges that the height increase will vary across the area, based on Figure 12c, it is worth noting that the variation will be considerably greater in places, hence the importance of the landfill screening process recommended in the Assessment, and the screening planting located immediately to the south of the ridge to assist in softening and partially screening views to the south.

Overall, it is considered that the Assessment provides a clear rationale for the effects findings and distinguishes between physical effects and visual effects which is helpful. Separate assessment tables are provided, describing and rating effects on each of the key visual catchments identified.

6. Are the proposed landform screening and proposed rehabilitation plans appropriate? Please explain.

The Assessment provides a description of 'The proposed landscape mitigation and remediation' which is part of the proposal.

Three key mitigation and remediation measures are described: limits to expansion, final rehabilitation, and screen plantings. This section provides some further information on how the proposed development will be undertaken such as the progressive landform screening approach which appears to limit the location of the active working face.

To provide further clarity on the effectiveness of this aspect of visual mitigation, it was suggested that the Assessment:

Refer to any limits to the size of the active working face, if they are proposed, or use of daily cover to help reduce potential visual effects.

In the response provided, Mike Moore states that daily cover of the fill face with soil is an important operational measure to mitigate adverse effects of the landfill activity, and that he understands that this procedure is consistent with best landfill management practice, is already done, and will continue to be done.

This response assists in clarifying the nature and effectiveness of this aspect of the proposed landscape mitigation.

Mike Moore also states that a maximum area for the active working face would potentially be an effective additional mitigation measure and that he would support a maximum area condition for the working face if this is acceptable to the applicant. The applicant would need to advise what a workable area would be, in accordance with ensuring a daily cover with soil.

I recommend a maximum area be conditioned for the active working face.

The Assessment notes that the development will include other components such as a Resource Recovery Centre (RRC). Some detail on these components are provided but not building heights. The Assessment notes that planting on the Kaitangata Highway frontage will be established to screen and visually soften views of the Resource Recovery Area but the extent to which this will be achieved is not fully clear as a height has not been provided. The s92 review therefore requested:

An indicative or maximum height of the RRC building.

In the response provided, it is noted that building heights for the Resource Recovery Centre have not yet been defined however it is understood from WSP that an indicative height of 4m for the podium and re-use shop / education centre would be reasonable.

This response assists in clarifying the nature and effectiveness of the proposed landscape mitigation.

Overall, I consider the proposed landform screening and proposed rehabilitation plans appropriate. I agree with the recommendation in the Assessment that Landfill activities should be carried out in accordance with the Landscape Mitigation and Rehabilitation Concept Plan (Figure 14) and as specified in Appendices A – C of the Assessment and my assessment findings are based on the assumption that this mitigation occurs.

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

Landscape Effects

The landscape effects section of the Assessment is concluded with the following summary statement:

'Overall, I characterize the landscape effects associated with the existing landfill and proposed works as:

- *Existing effects: Adverse / moderate-high.*
- *Effects associated with the proposed works until finally rehabilitated: Adverse / moderate.*
- *Long term effects (once rehabilitated): Adverse / moderate-low.'*

The section 7c and 7f assessment found that the final form of the landfill will integrate well in this setting with *minimal / neutral adverse effects*, considering the rehabilitation proposed while the overall assessment found that long term effects once rehabilitated will be *adverse / moderate-low*. Therefore, the following request was made:

Please clarify whether the final form of the landfill will integrate in this setting with minimal / neutral effects or whether long term effects will be adverse / moderate-low (or low/minor and less than minor as stated in the AEE pp 62 and 66)

In the response provided, Mr Moore states that he acknowledges that giving a rating to the effects on landform is unhelpfully focused on one aspect and suggests this rating (*minimal / neutral effects*) be disregarded. Mr Moore states that the assessment of relevance is that long term effects (once rehabilitated), will be *adverse / moderate-low (minor)*.

The response helps clarify the Assessment's conclusions with respect to overall landscape effects and I agree that the proposed expansion will have moderate adverse (more than minor) effects on the landscape during operation. However, I consider that effects following rehabilitation may be Low, which is slightly less than identified. There will be physical effects on the landscape but these will occur within an area that has already been disturbed. The proposed expansion will increase the level and prominence of landfill activity within the receiving landscape over time, intensifying the character of the Site as a modified landfill. Once works are completed, the form and finishing treatment of the landform, including the wider areas of proposed vegetation will mean the Site is more consistent with a rural landscape. However, I recommend the natural wetland is further enhanced with additional wetland planting to strengthen the relationship with the Clutha River / Mata-au and ensure effects can be reduced to less than minor.

Natural Character Effects

I consider the proposed expansion of the landfill will have low-moderate adverse (minor) adverse effects on natural character in relation to the Clutha River / Mata-au and low adverse effects on the identified wetland within the Site. I have set out the matters relevant to assessing natural character in my answer to question 5 above.

Visual Effects

Overall, I broadly agree with the identified levels of effect, noting in some instances I consider visual effects may be slightly less than identified. I consider the context of the existing landfill activity reduces the level of change and contrast that will be experienced in views. I also consider that effects will change over the operational period as the visibility

and prominence of the new landfill increases in later stages. My ratings also assume all the recommended mitigation measures such as the landform screening approach are undertaken.

Effects Comparison

To assist with answering Question 7, I have set out a summary of the comparative level and nature of effects based on NZILA's standard 7-point scale as identified in the table below (where there are differences between the findings of the Assessment and Peer Review, these have been highlighted):

Effects Assessment	Mike Moore Identified Level and Nature of Effects			Boffa Miskell Identified Level and Nature* of Effects		
	During Operation		Post works - following Rehabilitation	During Operation		Post works - following Rehabilitation
	Up to 10 years	10-35 years		Up to 10 years	10-35 years	
Landscape Effects						
Physical effects on landscape	Not stated		'lower magnitude than currently existing' p13	Low-moderate		Low
Landscape effects overall / 'conclusions'	Adverse / moderate		Adverse / moderate-low	Moderate		Low
Section 6(b) effects on ONFLs	'does not impact any identified ONL or ONF', p21		'does not impact any identified ONL or ONF', p21	No effect		No effect
Natural Character Effects						
Wetland	'No effects on this part of the site', p21		'No effects on this part of the site', p21	Low		Very Low
Existing settlement pond area	'positive' (establishment of indigenous plantings), p21		'positive' (establishment of indigenous plantings), p21	Neutral		Positive
Clutha River / Mata-au	'within the landscape context rather than margin', p21		'within the landscape context rather than margin', p21	Low-moderate		Low
Visual Effects						
Kaitangata Highway	Adverse / low	Adverse / moderate	Adverse / low	Low	Low-mod to Moderate	Low
More distant viewpoints across the Clutha River / Mata au	Adverse / very low	Adverse / low	Adverse / very low	Very low	Very low to Low	Very low
Viewpoints to the north (including res.	Approx. 3 years⁸	3-35 years⁹		Approx. 3 years	3-35 years	

⁸ Short term (Until the existing landfill area is rehabilitated), p19 (approx. 3 years), p18

⁹ Medium – long term (for the life of the landfill from the time the existing landfill rehabilitation is complete), p19

properties at 1,5,7 and 9 Arthur Terrace)	Adverse / mod-high	Adverse / mod to mod-low	Adverse / low	Moderate	Low-mod to Moderate	Low
Differences between the findings of the Assessment and Peer Review have been highlighted.						
*All effects are adverse unless otherwise stated.						

The level of overall landscape effects and natural character effects on the wetland and on the Clutha River / Mata-au could be reduced by undertaking enhancement planting of the natural wetland.

8. Please identify any parties that you consider to be adversely impacted by the continued operation of the landfill including the proposed expansion to a minor or more than minor degree. Please explain how they are affected.

I consider that residents at 1, 5, 7, 9 and 15 Arthur Terrace and 36 Golfers Drive may be adversely impacted by the proposal up to a moderate (more than minor) degree during the operational life of the proposal due to their proximity and potential for elevated views over the Site and taking into consideration the existing landfill activity on the Site. Effects will reduce to less than minor once the proposed landfill is closed and rehabilitated.

Yours sincerely

BOFFA MISKELL LTD



Sue McManaway

Principal: Landscape Planner