DUNEDIN CITY COUNCIL | kaunihera a-rohe o Ōtepoti

Memorandum

TO:	Kirstyn Lindsay; Consultant Planner
FROM:	Richard Ewans, Biodiversity Advisor
DATE:	11 June 2021
SUBJECT:	LUC-2020-405 – SMOOTH HILL LANDFILL OUTSIDE DESIGNATED AREA – BIODIVERSITY COMMENTS

Hi Kirstyn,

Please find my biodiversity comments on application LUC-2020-405 as follows.

1. The application seeks to establish a landfill at 700 Big Stone Road, Brighton, near Smooth Hill.
2. Specifically, the applicant requires Dunedin City Council (DCC) resource consent for some activities affecting indigenous biodiversity outside the designated landfill area such as the upgrade of access roads. This Memo addresses those activities and potential effects on terrestrial indigenous biodiversity in relation to district plan provisions.
3. I visited the relevant parts of the site accompanied by Luke McKinlay and Phil Marshall (DCC), Tanya Blakely (Boffa Miskell), a consultant engineer and yourself between 10:00am and 12:15pm on 7 October 2020.
4. I have reviewed the relevant parts of the application; specifically the updated Assessment of Environmental Effects (AEE) and Ecological Impact Assessment Report (EIA) received on 1 June 2021, and the Draft Landfill Management Plan (including draft vegetation and lizard management plans) received on 8 June 2021 . Unless otherwise stated below, I concur with the descriptions, assessments and conclusions regarding terrestrial indigenous biodiversity within the project scope outside of the designated area.

<u>Relevant areas and activities</u>

5. Area 1 - The upgrade of access roads (McLaren Gully Road, Big Stone Road and the State Highway 1 intersection) require resource consent for the clearance of approximately 16.5m^2 (0.0017ha) of indigenous wetland vegetation, specifically:
    i. 0.0014ha of (purei) / (Yorkshire fog - cocksfoot) – rautahi sedgeland; and
    ii. 0.0003ha of [purei] - wiwi/ rautahi -exotic grass rushland.
6. Area 2 - The road upgrades will occur in some areas where threatened fauna listed in 2GP Appendix 10A.2 may be present, specifically, southern grass skink in roadside rank exotic grassland.
7. Area 3 - Hydrological changes to the main waterway (Otokia Creek Tributary) 200-300m below the designation site (in the form of reduced water flow from groundwater and runoff from the landfill) may reduce the perennial extent of the waterway and result in conditions that are less favourable to some indigenous wetland plant species.

8. All of Areas 1-3 above were identified in the AEE as significant indigenous vegetation (wetlands, Areas 1 & 3) or likely significant habitat of indigenous fauna (roadside exotic grassland, Area 2).

Site context

9. Wetlands are lands that are transitional between terrestrial and aquatic systems and therefore encompass values in both terrestrial biodiversity and freshwater aspects of land management. Consequently, wetlands are administered by both regional councils such as Otago Regional Council (ORC), and territorial authorities such as DCC.
10. It is estimated that 90% of the extent of pre-human wetlands have been lost in New Zealand, with palustrine wetlands now present on just 1% of New Zealand's land mass. Most wetlands, particularly in lowland environments, are reduced to small remnants and surrounded by developed land. Nationally, 74% of wetlands are less than 10ha in size and therefore protection of small wetlands is critical to the retention of freshwater wetland diversity and extent nationally [1] [2].
11. Wetlands are a national priority for protection on private land[3] and have been reduced from their former extent so extensively that all remaining wetlands in Otago that support indigenous vegetation could be considered ecologically significant under Section 6(c) of the Resource Management Act (RMA).

Area 1 - Roadside wetlands

12. The immediate ecological effect of the proposal on wetlands outside the designated area is the removal of a very small area of roadside wetlands associated with the upgrade of access roads.
13. Following road redesign which avoided wetlands where practicable, approximately 16.5m^2 (0.0017ha) of indigenous wetland vegetation is proposed to be removed in breach of 2GP Rule 10.3.2.2.b.ii - Protected areas (vegetation clearance): indigenous vegetation clearance must not occur within wetlands in the rural, rural residential and recreation zones.
14. Clearance of indigenous wetland vegetation is a Restricted Discretionary activity. Assessment guidance in 2GP 10.5.3.4 includes Objective 10.2.1 and Policies 10.2.1.2 and 10.2.1.7.
15. The proposed mitigation/offset package to enhance 0.49ha of existing wetland modified by invasive weeds within the landfill site is sufficient to ensure no net loss of indigenous biodiversity. This is detailed in the Draft Vegetation Restoration Management Plan.

Area 2 – Roadside lizard habitat in exotic grasslands

16. Rank exotic grassland along the roadsides may support southern grass skink, a species classified as At Risk – Declining. No survey was carried out to establish or quantify the

[1]Ausseil A., Chadderton WL, Gerbeaux P, Stephens RTT, Leathwick JR. 2011. Applying systematic conservation planning principles to palustrine and inland saline wetlands of New Zealand. Freshwater Biology 56. 142-161.

[2]Myers SC, Clarkson BR, Reeves PN, Clarkson BD. 2013. Wetland management in New Zealand: Are current approaches and policies sustaining wetland ecosystems in agricultural landscapes? Ecological Engineering 56. 107-120.

[3]Ministry for the Environment. 2007. Protecting our Places – Information about the Statement of National Priorities for Protecting Rare and Threatened Biodiversity on Private Land. Ministry for the Environment, Wellington. 51 pp.

presence of this species in these grasslands in the ecological assessment work carried out for the proposal.

17. The clearance of exotic grass in this area does not breach any 2GP performance standards, however the site has been identified as likely significant habitat of indigenous fauna. Therefore consideration of Objective 10.2.1 and Policies 10.2.1.2 (and/or corresponding Operative Plan Objective 16.6.2 and Policy 16.3.3) is important.
18. The Draft Lizard Management Plan describes a detection and salvage regime for lizards along the roadsides prior to construction. As part of the Draft Lizard Management Plan, the use of salvage as a mitigation tool and the salvage regime are proposed be reviewed prior to road widening works.
19. Provided the detection and salvage regime is sufficiently robust to identify and relocate a high proportion of lizards present, particularly southern grass skink, adverse ecological effects should be low.

<u>Area 3 - Riparian wetland along Otokia Creek Tributary between Designation Site and McLaren Gully Road</u>

20. A reduction in water flow into the Otokia Creek Tributary below the designation site may result in medium-long term changes to the structure and composition of riparian wetland vegetation, with potential reduction or localised loss of some indigenous wetland species that prefer wetter conditions.
21. It is likely a reduction in flow would only effect the riparian wetland vegetation 2-300m below the designation site. Below this point a large pond is likely to moderate and ensure continuous flow, and the East Gully tributary enters the waterway slightly further downstream.
22. It is noted that this effect is difficult to predict or quantify accurately due to the number of other variables affecting hydrology. The most likely effect (if any occurs) is a minor loss of purei, which may be replaced naturally with rautahi or another indigenous species such as flax or wiwi. However, exotic species may also replace purei, potentially creating a contravention of 2GP Rule 10.3.2.2.b.ii.
23. The proposed mitigation/offset package to enhance 0.49ha of existing wetland within the landfill site is likely to be sufficient to ensure no net loss of indigenous biodiversity in this context.

<u>Ecological management measures</u>

24. The proposed Draft Conditions of Consent – Ecology are appropriate and require DCC approval for the final versions of the Vegetation Restoration Management Plan and Lizard Management Plan prior to any construction works.
25. The final version of the Lizard Management Plan may require external review by an expert herpetologist acting for Council for specific sections. Changes resulting from the proposed review of lizard salvage as a mitigation tool and the salvage regime should be incorporated into the final version of Lizard Management Plan prior to submission for DCC approval. Alternatively, a further condition could be included requiring DCC approval of any changes to the salvage regime post-review, should the review be proposed to take place after the final version of Lizard Management Plan has been submitted for approval.

26. The Draft Vegetation Restoration Management Plan contains plantings of *Coprosma robusta*. This species is subject to conjecture as to whether or not it is native to the Dunedin area. It would be more appropriate to replace this species with the very similar *Coprosma lucida,* which is more widely accepted as native to the Dunedin area.

Conclusions

27. The revised proposal has avoided almost all of the original wetland loss proposed in the original application outside of the designation site. Remaining adverse ecological effects outside of the designation site are overall low to very low.
28. Identified uncertainties around the potential effects on roadside grass skink populations (if any), and reduced water flow on indigenous wetland plant species below the designation site, are sufficiently addressed by the proposed ecological mitigation/offset measures, subject to approval of the final versions of the Draft Vegetation Restoration Management Plan and Draft Lizard Management Plan.
29. The proposed ecological conditions in conjunction with the ecological mitigation/offset measures detailed in the Draft Vegetation Restoration Management Plan and Draft Lizard Management Plan are sufficient to ensure no net loss of terrestrial indigenous biodiversity for the activities proposed outside of the designation site.
30. The Vegetation Restoration Management Plan should be adjusted to replace *Coprosma robusta* with *Coprosma lucida* for Zones B, C.2, D and E.

Kind regards,

Richard Ewans
Biodiversity Advisor