

BRIEF ECOLOGICAL NOTES FOR SMOOTH HILL HEARING.

My qualifications experience.

B. Min Tech (Hons)

Independent Ecologist

Conservation Biologist

Post Grad Dip Wildlife Management (Distn)

Onychophora (peripatus) specialist. Nearly 35 years experience. (NZ's expert)

Taxonomic review underway. Multi National/world wide project/IUCN etc.

Urban biodiversity specialist.

Predator prey dynamics. Brodifacoum etc. (over 30 years experience in pest/predator control).

Specialist research/study into effects of 2Gar's (Brodifacoum etc.)

Management plans. Reserve plan and overall peripatus management plan. 1st of its type. Now the 'blueprint' for peripatus management in NZ.

Established biodiversity area/ecosanctuary in Caversham Valley. Amazing area of biodiversity now under threat from the DCC.

Lifetime conservation award from DoC.

NZTA's ecological advisor/translocations/habitat creation/monitoring/all reports etc.

DCC's ecological advisor for over 30 years. Now the DCC will not communicate with me regarding the illegal destruction of biodiversity adjacent to my private ecosanctuary. Stopped fro speaking about it at a public forum.

Ecosystem management specialist/cf. dangerous and outmoded 'single species' management plans.

FROM MUNIRAH'S SUB:

I am a local and have been a residential rates tax payer of this community for over 20 years and until late 2020 had NEVER been made aware of this landfill proposal that has apparently been on the cards for the last 30 years. There has been gross omission of and next to no community communication or consultation in the 20 plus years I have owned my home. I first heard about the proposed landfill from

locals living on Big Stone Road who made the effort and had the courtesy to share information with the rest of the community, via way of a flyer in my letter box.

2. To wildlife – ‘Orc Notification Recommendation Report’ pages 58-61.’ – Construction will result in loss of habitat to lizards. There are potentially 5 lizard species, 4 at risk and declining. ‘All native lizards are protected under the Wildlife Act.’ Native Eastern Falcon breed in the area. The falcon is an at risk / threatened species.-Landfill construction will result in the permanent loss of habitat for avifauna, including regenerating native treeland ...and other forest and plantation used for habitat by the at risk Eastern Falcon. Fish – ‘high loads of suspended sediment can damage fish gills and make them more susceptible to disease or even result in mortality.’ Endangered Longfin Eel and Redfin Bully fish species as well as at risk birds White Heron and Black Stilt) live at the Marsh Otokia Creek provides. Increased rodent populations may result in increased bird mortality.

From the ORC Planner’s Report (Hilary Lennox):

Regarding effects on terrestrial ecology, there is a low degree of confidence with regards to the Applicant’s magnitude and level of ecological effects conclusions. This means that an assessment of the overall offset package is unable to be finalised, and a conclusion is unable to be reached as to whether it is appropriate and will result in no net loss (and a preferable net gain) in ecological/biodiversity values. As described in Section 7.9 of the s95 report, Attachment 1 - DCC responses to pre-hearing questions 18 Mar 22 and Attachment 9 - Updated Appendix 11 - Ecology Technical Review 5 Apr 22, further information has been requested but not supplied to the satisfaction of Mr Markham. Amendments to consent conditions to address these outstanding matters are shown in Attachment 5 - Draft conditions ORC edits 20 Apr 22. Some of these recommendations have already been rejected by the Applicant and so I must proceed on the basis that these recommendations will not be adopted. I do not, therefore, have confidence that adverse effects on ecological values will be adequately avoided, remedied, mitigated, offset or compensated for.

The bird hazard assessment states that without appropriate mitigation, that there is a very high risk to aviation safety from the proposed Smooth Hill Landfill. Mr Markham reviewed the Draft Smooth Hill Bird Management Plan and stated that it provides a good baseline but noted that it doesn’t provide confidence that bird density and populations will be sufficiently controlled. It is important to not let bird populations become established, because if they do become established then they are very hard to control. Proposed methodologies for controlling bird populations onsite include the reduction of the tipping face (active and open landfill area), keeping any grassed areas long to block the birds’ line of sight, daily cover of topsoil to reduce bird attraction, and the processing of certain types of waste before and on arrival at the landfill. Mr Markham considers that it is important not to limit the management plan to a select species of birds (i.e. Black backed Gulls) but define the parameters in what would classify a species and population to need control to zero densities i.e. it is appropriate to include all bird species over 50 grams in body weight as this size and above would cause the greatest risk in terms of bird strike on aircraft. Mr Markham recommended two consent conditions to ensure that bird density and populations will be sufficiently controlled. The applicant was generally agreeable with the first (with minor changes - see proposed condition 65).

Comment: Does the DCC propose to control all birds to 'zero densities'. Does that mean that it will need to have a falcon extermination plan?

F&B submission. Totally concur.

Lisa Bosshard hits the nail on the head?

Having read the Boffa Miskell report, it is obvious, despite the paucity of the fauna survey (NO INVERTEBRATE SURVEY WHATSOEVER) that the proposed landfill site and surrounding, potentially (should the application be approved) affected area is an amazing area of endemic biodiversity.

The proposed, stupid, 'single species' management plans (for falcons and lizards) are part of an outmoded, dangerous and naïve approach to 'mitigation' which has long since been discredited and discarded in more enlightened countries.

Quite simply, and obviously to any independent ecologist, the adverse ecological/environmental effects of the DCC's 'proposal' on the entire forest/grassland/wetland ecosystem and the amazing fauna that it supports **CANNOT BE MITIGATED FOR.**

By all means, tell the Commissioners that you have sought expert, ecological advice. If they wish to have a 'report' to back this up, I would provide one for them to 'consider' as a part of their 'deliberations' post-Hearing!

With reference to Forest and Bird's very strong and properly referenced legal submission:

Conclusion 13. The ORC's s42A and the Legal Submissions for the Applicant identified that the activity is to be treated overall as a discretionary activity under the relevant regional planning documents. Both the ORC's s42A and the Applicant's legal submissions confirmed that NES-FM, regs 52 and 54 applied to the Application but because the Application was lodged with the ORC before the NES-FM commenced that s88A protected the activity status under the regional planning documents which was discretionary. Forest & Bird submits that the analysis undertaken to reach this conclusion was incomplete and should have included an analysis of s43B(7). Once s43B(7) is analysed and applied the most stringent activity status is non-complying under the NES-FW. **According to the ORC's s42A the Application does not pass through s104D. Forest & Bird submits that as the Application stands it should not be granted.**

FOR ALL OF THE REASONS RAISED BY ALL OF THE SUBMITTERS AS A PART OF THIS DEMOCRATIC PROCESS, THE DCC'S 'APPLICATION' SHOULD NOT BE GRANTED!

From The ORC's 'Submission Form':

Please note that your submission (or part of your submission) may be struck out if the authority is satisfied that at least 1 of the following applies to the submission (or part of the submission):

it is supported only by material that purports to be independent expert evidence, but has been prepared by a person who is not independent or who does not have sufficient specialised knowledge or skill to give expert advice on the matter.

From Boffa Miskel report:

2.2 Limitations and Assumptions • Not all areas of the designation site were surveyed. Vegetation present in an area referred to in Section 3.2.1 as West Gully 1 (see Figure 2) and in areas west of a secondary forestry access road (to the west of the designation site) that fell well outside the proposed landfill footprint (and are located within the Palmer Stream (Taeri River) catchment, rather than the Ōtokia Creek catchment) were not subject to survey. • At the time of preparing an early draft of this report, we had not been granted permission to access private properties outside of the Smooth Hill site (i.e. properties adjacent to / downstream of, or required for accessing, the designation area), so the EclA was initially limited to assessing the potential ecological effects of the proposed regional landfill construction and operation on the ecological values within the designation site.

2.3 Experience and Qualifications of Report Authors This report has been prepared by suitably qualified experts who declare their relevant qualifications and experience as follows:

Samantha King:

Lizard habitats on site 30 Southern grass skink may be persisting at low numbers within the designation site, particularly in rank grassland habitats, along grass margins and in wood and debris piles scattered throughout the site, as well as in grasslands along McLaren Gully and Big Stone Roads. The habitat types of particular interest for this species are Yorkshire fog - cocksfoot grassland (within the designation site, and along roads), large leaved pohuehue / Himalayan honeysuckle – gorse scrub and kānuka forest habitats found within West Gully 2 and 3 outside of the landfill footprint. All other species are less likely to be encountered on site and are therefore referred back to the Lizard Management Plan for more detail.

5.2.2.2 Increased Mortality (via predation) Increased food supplies at landfills can attract rodents and increase local rodent populations (Waste Management Institute New Zealand, 2018). This can have a negative effect on local bird populations given that rodents can prey on nesting birds and / or eggs and chicks, including the eggs and chicks of falcon (Lawrence, 2002). Vermin numbers can be controlled at landfills by prompt and good compaction and application of cover soil. Further control can be achieved by having regular visits by a pest control contractor to trap and poison rodents.

8.0 Conclusions Existing environment: • A range of vegetation types are present within the Smooth Hill landfill designation site, downstream areas, and areas adjacent to roads that may be widened (McLaren Gully Road and Big Stone Road).

These range from highly modified plantation forestry areas of negligible ecological value, to wetland habitats of moderate ecological value, and regenerating / secondary indigenous forest habitat of high

ecological value. No At-Risk, Threatened, or locally uncommon or important plant species, excluding kānuka, were found on site.

- Regenerating forest / treeland / scrub in gullies the designation site contributes to a local mosaic of forest fragment habitats in the wider area, and a range of widespread and common indigenous bird species are present, as well as introduced species.

The At-Risk – Recovering species eastern falcon (of moderate ecological value) is present, and area of kānuka forest is of importance to this species at the site and has been used for breeding. • No indigenous herpetofauna were observed on site as part of this work, but historical records and evidence (scat) of skinks having utilised ‘artificial cover objects’ deployed on site in this study strongly suggest that lizard species are present, most likely Southern grass skink (At Risk – Declining; high ecological value).

Some areas of vegetation that are proposed to be cleared for landfill construction represent typical habitat for this species.

- An interconnected area of regenerating forest / treeland / scrub habitats and flaxland / sedgeland wetland habitats is of ecological significance as significant vegetation and significant habitat of indigenous biodiversity in terms of the proposed Otago RPS and proposed Dunedin 2GP. • No ecological values relating to freshwater habitats, such as streams or lakes, are present (excepting wetland vegetation) within the designation site.

Some wetland habitats receive ephemeral overland flows, but the wetland habitats are unlikely to provide important habitat indigenous fishes.

- Ōtokia Creek Tributary, downstream of the designation site, appears to be perennial for most of the c. 1 km between the site and McLaren Gully Road. This waterway supports a ubiquitous and ‘tolerant’ freshwater macroinvertebrate community, commonly found in similar soft-bottomed, slow-moving waterways within linear wetlands. Shortfin and longfin eels were found to inhabit the large pond, approx. 200-300 m downstream of the designation site, and these species may also inhabit the Ōtokia Creek tributary when sufficient surface water is present. Effects of landfill construction and road widening

- Within the designation site, vegetation clearance during landfill construction and clearance of vegetation types present represents would occur within plantation forestry areas and adjacent exotic grassland only. The landfill proposal assessed in this report does not include any clearance of regenerating forest or wetland areas within the designation site. The ecological effects of vegetation clearance in this area constitute Negligible or very low magnitudes of effect, as the vegetation is almost entirely dominated by exotic species, including weeds, and the total areas cleared are relatively minor in comparison to the extent of similar vegetation types in the wider area and at the level of the ED.

Adverse effects, in terms of vegetation, are of a Very Low overall level of ecological effect, but RPS and 2GP rules require ‘no net loss’ or ‘net gain’ of the significant ecological values of these vegetation types (in that they provide falcon and lizard habitat, see below).

- Vegetation clearance during upgrade of McLaren Gully Road and Big Stone Road would impact plantation forestry areas, exotic rank grassland, gorse scrub, intensively improved crop / pasture farmland areas, and small areas of wetland.

The ecological effects of vegetation clearance associated with the road upgrade constitute Negligible magnitudes of effect and Very Low levels of ecological effect. An iterative road redesign process intended to avoid wetland habitats has resulted in an amended road upgrade proposal that was unable to totally avoid effects to wetlands in places where there is wetland vegetation at the immediate road edge on both sides of McLaren Gully Road. As a result, road widening would lead to 16.5 m²; 0.0017 ha of wetland clearance. These effects, while extremely slight, occur in significant habitat (requiring no net loss / net gain) and cannot be remediated / mitigated at the point of impact (requiring an offset).

An offset proposal outlined in the draft Vegetation Restoration Management Plan results in a substantial net gain in terms of wetland habitat. • Finalisation and implementation of the draft Vegetation Restoration Management Plan is required to mitigate (or offset, as applicable) the adverse effects of landfill construction and road widening (vegetation clearance) and the potential adverse downstream effects of landfill construction (change in vegetation composition in a swamp wetland) and to offset the adverse effects of road widening (vegetation clearance) on significant wetlands to effect 'no net loss' or 'net gain.' These effects can be managed on site through such Plans by expansion and enhancement of similar habitats to those impacted, outside the landfill footprint. An area of wetland vegetation in East Gully, and a further area west of the designation area, but within the land to be acquired by DCC, is available and these areas could be enhanced and expanded as required to mitigate or offset wetland loss associated with landfill construction.

- Downstream effects on wetlands are uncertain and may constitute a low to moderate level of ecological effect (without mitigation at the point of impact or offset in the locations described above) due primarily to a reduction in water supply (runoff) from the designation site. With mitigation / offsetting in place, effects are likely to be positive (net gain) in terms of wetland habitat, as existing wetland habitats contain extensive areas of exotic species and remediation / creation of higher quality wetland habitat has a high likelihood of success. However, the downstream buffering effects of the existing wetland to Otokia Creek may be reduced. This may constitute up to a low level of ecological effect even with creation (offset) of similar habitat elsewhere. Therefore, if future land purchases for the Smooth Hill landfill are considered, acquiring an area of land immediately downstream of the designation site that contains a large wetland pond (above the East Gully confluence) would allow this wetland to be enhanced and managed to: o Mitigate any wetland loss in that area; and 67 Any such enhancement / management would be additional to what has been accounted for in Section 7.0 and has not been considered in the assessment of impact management measures or residual effects.

- o Avoid or minimise potential effects on the freshwater values further downstream, as this pond is likely to be contributing to the perennial flows (and, therefore, freshwater habitats) downstream. • In order to mitigate adverse effects on avifauna and herpetofauna due to landfill construction, to enhance these ecological values, and to avert future losses associated with a potential influx in mammalian pests due to landfill operation, preparation and implementation of plant and animal pest control (as detailed in the draft Landfill Management Plan) is required. • As the proposed landfill is located close to the Dunedin International Airport, a separate draft Bird Strike Management Plan has been prepared pertaining to requirements for managing the risk of aircraft bird strike from avifauna attracted to the site by landfill operation.

- Construction during the breeding period, or direct impacts to important areas of eastern falcon habitat may have adverse effects on this species at the site. Finalisation and implementation of a brief draft Falcon Management Plan outlining best practices to minimise these effects should lead to negligible

effects to eastern falcon at the site. • Indigenous lizard species are protected by the Wildlife Act 1953 and Southern grass skink is of conservation concern. To minimise impacts to lizard species that may be present on site, further surveys may be required, and a draft Lizard Management Plan has been developed and will be implemented.

This plan describes the appropriate measures to manage effects on lizards primarily by salvage and translocation away from the site of impact, and through predator control efforts as part of the plant and animal pest control (as detailed in the draft Landfill Management Plan) .

- This report has recommended that a Vegetation Restoration Management Plan be prepared. This plan describes the fencing, weeding, and plantings of indigenous vegetation measures required to avoid / mitigate / offset the ecological effects of landfill construction and road widening, particularly in relation to wetlands and herpetofauna. A single location for these activities has been recommended, incorporating slopes between West Gully 1 and 3 centred on West Gully 3 and the swamp wetland within the designation site currently used for plantation forestry.

Consolidating the areas proposed for habitat mitigation is intended to simplify the process of pest control, fencing and plantings, and to create a single large area of enhanced indigenous habitat. However, because enhancement measures in the swamp wetland cannot be both a mitigation for adverse effects to the swamp wetland itself and an offset for road widening wetland impacts, it is suggested that an offset for the road impacts wetland habitat enhancement, due to a need to incorporate naturally wet areas, would occur in East at the base of West Gully 4 nearby. (within the designation site), and in other existing wetland areas within the land to be acquired by DCC (just to the west of the designation site).

- Successful implementation of the measures recommended in the draft Lizard, Bird Strike, Falcon, and Vegetation Restoration Management Plans as part of the landfill proposal constitute overall Low, Very Low or Net Gain levels of ecological effect.

6Matters of national importance

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall recognise and provide for the following matters of national importance:

(a)

the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development:

(b)

the protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development:

(c)

the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna:

(d)

the maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers:

(e)

the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga:

(f)

the protection of historic heritage from inappropriate subdivision, use, and development:

(g)

the protection of protected customary rights:

(h)

the management of significant risks from natural hazards.

Section 6(f): inserted, on 1 August 2003, by [section 4](#) of the Resource Management Amendment Act 2003 (2003 No 23).

Section 6(g): replaced, on 1 April 2011, by [section 128](#) of the Marine and Coastal Area (Takutai Moana) Act 2011 (2011 No 3).

Section 6(h): inserted, on 19 April 2017, by [section 6](#) of the Resource Legislation Amendment Act 2017 (2017 No 15).

7. Other matters

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall have particular regard to—

(a)

kaitiakitanga:

(aa)

the ethic of stewardship:

(b)

the efficient use and development of natural and physical resources:

(ba)

the efficiency of the end use of energy:

(c)

the maintenance and enhancement of amenity values:

(d)

intrinsic values of ecosystems:

(e)

[Repealed]

(f)

maintenance and enhancement of the quality of the environment:

(g)

any finite characteristics of natural and physical resources:

- (h) the protection of the habitat of trout and salmon:
- (i) **the effects of climate change:**
- (j) the benefits to be derived from the use and development of renewable energy.

David (Benson-Pope) – Here is an ‘excerpt’ from your email to me of 30 January 2022 (my birthday, ironically, and your birthday ‘present’ was most unwelcome, as I had thought much better of you):

“I have discussed your concerns with colleagues and the planning staff.

The advice I have received (and with which I agree) is that the decision re notification was made appropriately and in accordance with the usual process.”

Me: If that’s what you “agree” with, David, then the “usual process” is an absolute sham/disgrace, and ‘flies in the face’ of any semblance of democracy. I will reserve a special response for you at the end of the full transcript of my email to yourself, Steven Walker, and the three DCC ‘senior planners’ I included in my response to you on 30/01/2022. That comes at the end of this document. Feel free to ‘skip’ straight to it, if you want to. The fact that there has never been a response/an acknowledgement of the essential information I provided (Doc 1, pp 6,7) from any of you is disgraceful/totally disrespectful/defies ‘belief’ (well, my ‘system’ of such things, at least)/has resulted in so much ecological destruction/tells a ‘story’ in itself.

My email ‘response’ to all of you has now been widely circulated. Many hundreds, most probably thousands of people have read it. Who do you think they agree with?

From Munirah’s submission:

How in the last 30 years has there not been more investigation before now to research other waste management options and put into place more robust waste reduction and management systems? This community has grown and evolved a lot in the last 20 + years. The proposed development does not align with the DCC Zero Waste Targets. If the DCC achieve their Zero Waste Target, what are they going to do with a giant new landfill? I would propose that DCC: A. Focus on reducing waste and extend the life of Green Island landfill through better management. B. Export waste to another landfill – i.e. the AB lime landfill in Winton that already takes 20% of Dunedin’s rubbish so that the DCC can buy themselves some time to investigate alternate sites and / or disposal methods / achieve the zero waste initiatives.

This is the 21st Century. Everything is changing so rapidly with waste management. New options. Better technology etc.

We must look to the future, and employ the ethic of stewardship, for the benefit of our environment and for future generations.

Not go back to the dark ages of waste disposal of the last Century.

The current DCC simply cannot seem to adjust its' way of 'thinking'. As an 'organisation' it is simply not capable of thinking, and this is clearly not in its' DNA.

There only ever seems to be 'Plan' A. There is no Plan 'B'.

Actually, there is no PLANET B. And the ORC, through this process, has a duty under the ETHIC OF STEWARDSHIP to stop the DCC from continuing to do its' best to destroy the only Planet we have got.

FOR ALL OF THE IMPORTANT, VALID, LEGAL, ENVIRONMENTAL, SOCIAL, ECONOMIC ETC. ETC. RAISED THROUGHOUT THIS HEARING PROCESS, THE DCC'S APPLICATION MUST BE DECLINED, IN ITS ENTIRETY.