

Before the Independent Commissioner Hearing Panel

Under the Resource Management Act 1991 (**RMA**)

In the matter of an application by Dunedin City Council to develop a landfill at Smooth Hill, Dunedin.

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**Legal submissions on behalf of Dunedin City Council as Applicant**

11 May 2022

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## **May it please the Commissioners**

- 1 This is an application by Dunedin City Council (**Applicant**) for the consents required to construct and operate a landfill at Smooth Hill, near Dunedin.
- 2 The structure of these submissions is as follows:
  - (a) Project overview;
  - (b) Consents sought;
  - (c) Changes to the Application;
  - (d) Statutory assessment;
  - (e) Effects on the environment;
  - (f) Policy setting;
  - (g) Assessment of alternatives;
  - (h) Proposed conditions;
  - (i) Part 2 of the RMA; and
  - (j) Conclusion.

## **Project Overview**

- 3 The proposal involves the staged construction, operation, closure and aftercare of a class 1 landfill for the disposal of municipal and hazardous waste. There are to be associated upgrades to widen and seal McLaren Gully Road (including its intersection with State Highway 1) and Big Stone Road to improve access to the site.
- 4 The landfill will have a capacity of approximately 2.94 million cubic metres of waste and an expected life at current Dunedin disposal rates of approximately 40 years.
- 5 Smooth Hill will be a compact, modern landfill designed with a liner, leachate collection and disposal system, and small tipping face. The look and functioning of the landfill will be quite different from that which currently operates at Green Island. This will be important piece of infrastructure for the people of Dunedin ensuring that they can dispose of waste locally without being dependent on transportation to municipal waste facilities located outside of Dunedin.

- 6 The landfill will receive waste only from commercial waste companies, or bulk loads in accordance with waste acceptance criteria and procedures. Waste will not be directly received from the public. Instead members of the public and Council's kerbside collection will take general waste to a separate Bulk Waste Transfer facility where it will be deposited, prior to consolidation for transport to landfill. At this stage, putrescible waste and recyclable materials will be removed from the general waste as far as is practicable. This will ensure that as much waste as possible is diverted from the landfill.
- 7 The current development of the proposal for a new landfill at Smooth Hill is a key component of the wider Waste Futures programme which was established in 2018. The goal of the Waste Futures programme is:

To ensure effective reduction and management of solid waste to achieve the goals set out in its Waste Management and Minimisation Plan. Specifically, to identify and procure the best solid waste solution for Dunedin City to enable us to move towards a zero-waste future and a more circular economy.
- 8 The Waste Futures programme has a strong focus on the minimisation of waste, the minimisation of carbon dioxide emissions from waste, cost effective services to ratepayers, the reduction of environmental impacts as a result of waste operations and the provision of refuse collection and kerbside recycling services that meet ratepayer expectations.
- 9 While the Waste Futures programme aims towards achieving a zero-waste future, the reality is that Dunedin currently produces an average of 60,000 tonnes of waste each year. Even with the significant reductions in waste that will be achieved via diversion both at source, and at intermediary sorting facilities, Dunedin will still need a facility to receive solid waste for some years to come.
- 10 The development of the proposal to construct and operate a landfill at Smooth Hill has involved the input of a wide range of experts. These experts have assessed and advised on the technical feasibility of the site, the economic impacts of the landfill project, and the range of possible alternatives to constructing a landfill at Smooth Hill. Where necessary experts have also provided recommendations for appropriately managing effects on the environment.
- 11 These assessments strongly support the conclusion that Smooth Hill presents the preferred option for managing Dunedin's waste in the medium term, and that effects on the environment can be appropriately avoided, and where necessary remedied, mitigated, offset or compensated.

- 12 The Applicant seeks the necessary consents to be granted to enable it to begin planning for the construction and commissioning of the landfill to provide this facility for the future needs of the city.

### **Consents sought**

- 13 The required consents from the Otago Regional Council (ORC) are set out in full in the table at paragraph 36 of Mr Dale's evidence. It is noted that as a result of the redesign of the road realignment works the following consent is no longer required:

Land Use Consent to alter, reclaim, and place structures on, the bed of waterbodies and wetlands for the purpose of road realignment works.

- 14 The required consents from the Dunedin City Council (DCC) are set out in the table at paragraph 44 of Mr Dale's evidence.

### **Changes to the application**

- 15 The original consent application was lodged in August 2020 and was for a landfill with a footprint of 44.5ha, a net waste capacity of 6.2 million cubic metres, and an expected life of 55 years.<sup>1</sup>
- 16 An updated application was lodged in May 2021 that reduced the proposed footprint of the landfill to 18.6 ha, and the net waste capacity to 2.94 million cubic metres.<sup>2</sup> This reduced footprint ensures the landfill does not need to either be located within or require any earthworks within, the swamp wetland that is present on site. The toe of the landfill is now located clear of the wetland. This swamp wetland is to be retained, and improved by weeding, planting, monitoring and ongoing protection. The swamp wetland is to be supported by further restoration work in the upstream connected flaxland and kānuka forest in West Gully 3.
- 17 In addition to this, the road realignment in sections of McLaren Gully Road has been narrowed to avoid any earthworks or other reclamation within the roadside wetlands.

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<sup>1</sup> Boffa Miskell, Smooth Hill Landfill Assessment of Environmental Effects Prepared for Dunedin City Council August 2020.

<sup>2</sup> Boffa Miskell, Smooth Hill Landfill Assessment of Environmental Effects for Updated Design Prepared for Dunedin City Council August 2020 (Updated May 2021).

- 18 These changes have been made to ensure the proposal is consistent with the requirements now contained within the NES-FW to avoid earthworks within natural wetlands (which is now a prohibited activity).

### **Statutory assessment**

- 19 Set out here are the relevant statutory tests that are applicable for this application.
- 20 The applications for resource consents from the ORC and DCC were made under section 88 of the RMA. Consents are required under the National Environmental Standards for Freshwater 2020 (NES-FW), The Regional Plan: Waste (RP Waste), the Regional Plan: Water (RP Water), and the Proposed 2GP.

### **Activity status**

- 21 The activities for which consents are sought are discretionary activities under the Regional Plans and the 2GP. For consent decisions for both ORC and DCC the activity status is discretionary.
- 22 Section 88A of the RMA provides that if an application for a resource consent has been made under section 88 of the RMA and the type of activity for which the application was made is altered after the application was first lodged, the application continues to be processed, considered and decided as an application for the type of activity that it was for at the time the application was first lodged.
- 23 These applications were lodged on 27 August 2020, prior to the NES-FW coming into force on 3 September 2020.
- 24 Under regulations 52 and 54 of the NES-FW the following are non-complying activities:
- (a) vegetation clearance within, or within a 10 m setback from, a natural wetland:
  - (b) earthworks within, or within a 10 m setback from, a natural wetland:
  - (c) the taking, use, damming, diversion, or discharge of water within, or within a 100 m setback from, a natural wetland.
- 25 Applying section 88A, it is submitted that the activities for which consents are sought under this application remain discretionary.

## Section 104

- 26 Section 104(1) of the RMA requires you to have regard to:
- (a) Actual or potential effects on the environment - when assessing the effects, mitigation measures and proposed conditions may be taken into account. Both positive and adverse effects are to be considered;
  - (b) Relevant provisions of the planning documents; and
  - (c) Any other matter considered relevant.

### The existing environment and the permitted baseline

- 27 In completing the assessment under section 104(1)(a) it is important to determine the "environment" against which the proposal is to be assessed.
- 28 In *Queenstown Lakes District Council v Hawthorn Estate Limited* the Court of Appeal held that<sup>3</sup>:

In our view, the word "environment" embraces the future state of the environment as it may be modified by the utilisation of rights to carry out a permitted activity under a District Plan. It also includes the environment as it might be modified by the implementation of resource consents which have been granted at the time a particular application is considered, where it appears likely that those resource consents will be implemented. ...

- 29 This means that the "environment" includes not only the environment as it currently exists, but also as it would exist with permitted activities and/or unimplemented resource consents.
- 30 Section 104(2) provides that when forming an opinion for the purposes of subsection (1)(a), a consent authority may disregard an adverse effect of the activity on the environment if a national environmental standard or the plan permits an activity with that effect. This is the permitted baseline test.
- 31 Therefore once you have determined the environment against which the proposal will be assessed, you can then disregard any effects that are the same as or less than those already permitted on the site.

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<sup>3</sup> *Queenstown Lakes District Council v Hawthorn Estate Limited* [2006] 12 ELRNZ 299, at [84].

- 32 Section 104B of the RMA provides that after considering an application for a discretionary activity, you have a discretion to grant the application, with conditions imposed under s108 RMA, or refuse it.

### **Section 105**

- 33 Section 105 of the RMA sets out the following further matters that you must have regard to in relation to the discharge consents sought from the ORC:
- (a) the nature of the discharge and the sensitivity of the receiving environment to adverse effects; and
  - (b) the applicant's reasons for the proposed choice; and
  - (c) any possible alternative methods of discharge, including discharge into any other receiving environment.

### **Section 107**

- 34 Section 107(1) is also relevant to the discharge consents sought. This section prevents a consent authority from granting a discharge permit that allows the discharge of a contaminant into water if after reasonable mixing, the contaminant or water discharged is likely to give rise the following effects in the receiving waters:
- (a) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
  - (b) any conspicuous change in the colour or visual clarity;
  - (c) any emission of objectionable odour;
  - (d) the rendering of fresh water unsuitable for consumption by farm animals; or
  - (e) any significant adverse effects on aquatic life.

### **Section 176 - designation**

- 35 Section 176 RMA is also relevant to the application to DCC for consents under the 2GP. Section 176 means that where a designation is included in the District Plan then section 9(3) does not apply to a public work undertaken by the requiring authority under the designation.
- 36 The Smooth Hill landfill site was included in a notice of requirement in the District Plan in 1995. It was first notified on 24 July 1995, with the District Plan becoming operative on 19 April 2004, where the designation was

operative. The Smooth Hill designation was again consulted on through the development of the 2GP. There were no appeals against this designation and the designation is now beyond challenge, and is intended to be relied on. This designation (number D659) allows use of the land under section 9 RMA for: "Proposed Smooth Hill Landfill – Proposed Landfilling and Associated Refuse Processing Operations and Activities".

- 37 This means that under the 2GP, land-use consent is not required for the construction and operation of the landfill which can occur in accordance with the operative designation. An outline plan of work will be required to be applied for under the procedures in section 176A.
- 38 The relevant consents from DCC therefore relate to the road upgrade of McLaren Gully Road, and the earthworks relating to those works.
- 39 It is also noted that there are a number of ongoing discussions with landowners that adjoin McLaren Gully Road. Arrangements are being worked on to address the property required to align the legal road to what is physically required for the road widening works. Agreements and transactions under the Public Works Act are being worked through to address the land requirements. It is submitted that the consequential land transactions that need to be concluded are not a relevant consideration for the assessment of the necessary resource consents for the road widening work.

### **Effects on the Environment**

- 40 The section 42A report for the ORC recommended that these applications for resource consent be refused. Firstly it is noted and acknowledged that the report identified a large number of key areas where Ms Lennox and the ORC peer reviewers at Tonkin and Taylor (T&T) were satisfied (in some cases subject to minor refinement) that the Applicant's proposed approach and conditions would result in the effects of the activity being less than minor. These matters include:
  - (a) the landfill design report (see section 6.1.2);
  - (b) landfill stability (see section 6.1.3);
  - (c) air quality (including highly odorous waste, odour and dust beyond the boundary, and LFG flare conditions) (see section 6.1.6);
  - (d) effects from noise (see section 6.1.9);
  - (e) landscape, natural character and visual effects (see section 6.1.10);



- (f) effects on archeological values (see section 6.1.11); and
- (g) effects on the community ( see section 6.1.13).

41 I submit that these areas represent a substantial component of the overall proposal, and signal that the peer reviewers have a high level of satisfaction with the details of these parts of the application.

42 There remain areas that the 42A report identified where the peer reviewers were not currently satisfied with the proposed approach and conditions. These areas have been a key focus for the Applicant's experts in their evidence, and the development of further conditions to address these issues. These issues are:

- (a) *Effects on groundwater and surface water quantity* (see section 6.1.4 of the section 42A report): in relation to which the peer reviewer was unable to draw a confident conclusion regarding the effect of reduced runoff on the hydrology of the swamp and valley floor wetlands;
- (b) *Effects on groundwater and surface water quality* (see section 6.1.5 of the section 42A report): in relation to which the peer reviewers highlighted uncertainty as to the conceptual hydrogeological model and the risk of contamination of the shallow groundwater system. The peer reviewers were also concerned the draft consent conditions regarding surface water monitoring and trigger levels are not sufficiently developed to ensure that adverse effects on groundwater and surface water quality will be adequately avoided, remedied or mitigated;
- (c) *Effects on ecological values* (see section 6.1.7 of the section 42A report): this relates partly to the uncertainty regarding reduced runoff and surface water quantity, and partly to uncertainty in relation to biodiversity offsetting or compensation measures; and
- (d) *Risk of bird strike* (see section 6.1.8 of the section 42A report): this relates to concerns about the risk to aviation safety from possible bird activity at the landfill.

43 Each of these topics are addressed in detail in the sections below.

#### **Effects on groundwater and surface water quantity**

44 The experts on hydrogeology (Mr Kirk), surface water and storm water (Mr Ingles) and ecology (Dr Morris) have provided evidence to address the uncertainty identified in the section 42A report regarding the effect of reduced runoff on the hydrology of the swamp and valley floor wetlands.

- 45 This evidence concludes that the anticipated 20% reduction in stormwater runoff associated with the proposed landfill would be within the range of annual fluctuations in stormwater runoff volumes due to natural climatic variations.
- 46 To ensure that the understanding of the reduced runoff is accurate the Applicant has included a requirement under condition 30 for continuous flow monitoring. This monitoring will be conducted via automated flow recorders at locations downstream of the landfill for 36 months prior to construction, and continuing during operation of the landfill (as required by the Receiving Waters Environment Monitoring Plan (RWEMP) in conditions 33 and 34). The baseline data will be compared to rainfall data collected in accordance with condition 31 to understand the relationship between rainfall and stream flows, and variations in that relationship due to changes in the environment.
- 47 The evidence of Mr Ingles also states at paragraph 58 that the stormwater runoff variations must be considered within the context of wider land use changes, in particular the existing use of the Smooth Hill site for plantation forestry. Mr Ingles notes that the assessments of current runoff volumes have been conducted following harvest of the forestry plantation, but that if the site was re-afforested, as part of an ongoing cyclical process of growth and harvest, the forestry plantation would take significant amounts of water, thereby again reducing runoff. Mr Ingles concludes that comparing the reduction in runoff associated with the proposed landfill to reductions associated with forestry activities, there is likely to be a net increase in runoff volumes if the landfill is constructed.
- 48 Plantation forestry is a permitted activity on the site under Regulation 9 of the Resource Management (National Environmental Standards for Plantation Forestry) Regulations 2017.
- 49 Therefore I submit that forestry is a credible and common place permitted activity in the vicinity of the site, and on the site itself. It is correct therefore for you to disregard any adverse effects of reduced runoff associated with the proposed landfill, because the effects of the existing permitted forestry activities have an equal and potentially greater effect on the downstream environment. Despite this, these effects have still been assessed by the Applicant's witnesses as outlined above, and more detailed surface water monitoring has been proposed to verify the predictions and report to the ORC on surface water flows.

## Effects on groundwater and surface water quality

- 50 The evidence of Mr Ingles and Mr Kirk, and the updated draft consent conditions comprehensively address the peer reviewers' concerns regarding uncertainty as to the conceptual hydrogeological model, and the conditions relating to water monitoring and trigger levels.
- 51 Paragraphs 63-65 of Mr Ingles evidence outline the basis for continuous monitoring of the attenuation basin to provide early warning of a potential issue with leachate contamination, coupled with the setting of conservative trigger levels to ensure that any necessary remedial measures are implemented before any significant discharge to the surrounding environment.
- 52 The following conditions have been updated in response to the peer reviewers' concerns about the baseline monitoring of groundwater quality:
- (a) Updated Condition 27 now provides for seven additional groundwater monitoring wells including two for deep groundwater and five for shallow groundwater. These will provide further site information regarding the shallow groundwater system and the dynamic relationship between groundwater and the wetland. This condition also requires the installation of six wetland piezometers to monitor water levels within the wetland itself;
  - (b) Updated Condition 29 now provides for quarterly baseline groundwater monitoring, and monthly surface water monitoring for the full suite of parameters set out in Attachment 1, for a full 36 months prior to construction commencing; and
  - (c) Condition 30 now provides for high frequency automated monitoring to be used in select locations within the baseline period for the identified parameters, to supplement the monitoring provided for under condition 29.
- 53 Table 1 of Attachment 1 of the updated draft Conditions now includes information regarding units of measures, and analyte fractions of samples for analysis, as well as additional parameters that were requested by the peer reviewers.
- 54 Further at paragraph 82 of his evidence Mr Kirk describes how the baseline monitoring set out in conditions 29 and 30, and development of trigger levels under condition 35 will allow for refinement of the understanding of where and how to best monitor for adverse effects associated with the landfill construction and operation. Importantly, the long term requirements

for wetland, surface water, and groundwater monitoring, use of trigger levels and responses to exceedances will be described in the RWEMP, required under condition 33.

- 55 I submit that the evidence provided by Mr Ingles and Mr Kirk, coupled with the updated draft conditions of consent have addressed the outstanding areas of uncertainty raised in relation to ground and surface water quality and monitoring in the ORC section 42A report.

### **Effects on ecological values**

- 56 The ORC section 42A report describes how the peer reviewers were unable to draw a confident conclusion about the impact of reduced surface runoff on wetland hydrology. This was due to a lack of quantification of:

- (a) effects surface water flows and water level changes;
- (b) the extent to which any effects will be mitigated by soakage from the attenuation basin; and
- (c) uncertainty as to whether the discharge from the attenuation basin's low level outlet will affect wetland hydrology.

- 57 Paragraphs 49-53 of Dr Morris's evidence consider the possible effects on wetlands from a potential reduction in water level due to reduced surface runoff. Dr Morris assesses the magnitude of the effect of the reduced surface runoff on the swamp wetland to be low, and the magnitude of effects to the upstream sedgeland and downstream valley floor marsh wetland to be neutral/or positive; and negligible respectively. As per Dr Morris' statement in paragraph 94 of his evidence, these effects would primarily result from possible shifts in habitat suitability for a small number of largely exotic plant species, but would not alter the extent, or indigenous plant values, of the swamp wetland.

- 58 Similarly paragraphs 64-65 of Dr Blakely's evidence consider the impact of reduced surface water runoff on freshwater ecological values. Dr Blakely concludes that the magnitude of effect will be less than minor.

- 59 Details regarding the attenuation basin are provided at paragraphs 75-76 of Mr Kirk's evidence. In relation to ecological impacts, Dr Morris states at paragraph 55 of his evidence that if the proposal goes ahead, the sedgeland upstream of the swamp wetland would receive more stable recharge following rain due to gradual runoff/soakage from the attenuation basin potentially resulting in a positive effect for this area and assisting with downstream recharge to the swamp wetland.

- 60 It is submitted that these experts have made evaluations of the potential effects and provided their expert opinions on the levels of likely effects. While described in descriptive terms, and not "quantative" they are nevertheless thoroughly and validly assessed in my submission.
- 61 Both Dr Morris and Dr Blakely emphasize that the updated conditions now include provisions for significant quantifiable ecological monitoring including:
- (a) annual baseline wetland ecology monitoring under the new condition 68. This monitoring will be undertaken by a qualified ecologist and will commence no less than 36 months prior to construction of the landfill. The baseline data will then be used to inform the preparation of the Vegetation Restoration Management Plan (VRMP) required under condition 69; and
  - (b) twice yearly baseline freshwater ecology monitoring is now required under the new condition 70. This monitoring will be undertaken by a suitably qualified freshwater ecologist commencing no less than 36 months prior to construction of the landfill. The baseline data generated through this monitoring will be used to inform the Freshwater and Wetland Monitoring and Management Plan (FWMMP) required under condition 71.
- 62 In paragraph 72 of her evidence Dr Blakely concludes that this "rigorous" baseline and long-term monitoring will ensure that, "should there unexpectedly be any stream habitat loss, it is quantified and appropriately remedied or otherwise managed in accordance with the effects management hierarchy".
- 63 The remaining outstanding matters identified in the section 42A report related to residual ecological effects and the use of specific modelling methods to quantify and measure these effects.
- 64 I note that although not specifically relevant to wetland and freshwater ecology the evidence provided by Dr Sievwright in relation to avifauna, and that provided by Dr King in relation to herpetofauna each address the scope for offsetting of any residual effects of the proposed landfill on eastern falcons and lizards. Draft consent condition 66, which relates to the Eastern Falcon Management Plan (EFMP) now contains a requirement that if mortality of nesting falcon occurs as a result of construction works, a suitable remedial, offset or compensatory action will be implemented. Similarly condition 67, which relates to the Lizard Management Plan (LiMP) requires that the LiMP must include appropriate

methodologies for offsetting or compensating for any residual adverse effects identified through monitoring.

- 65 In relation to wetland ecology, at paragraph 66 of his evidence Dr Morris notes that the only effect on wetland ecology that originally required offsetting was the reclamation of 16.5m<sup>2</sup> of wetland due to road realignment on McLaren Gully Road. Significant technical work has been undertaken to redesign the road realignment so that the roadside wetland area is now entirely avoided. Nevertheless the Applicant still intends to enhance 0.49 ha of the West Gully 4 wetland area.
- 66 Overall, Dr Morris concludes at paragraphs 96 and 97 of his evidence that the adverse ecological effects of the landfill to vegetation and wetland habitats would be either "inconsequential or undetectable in most areas"; and that the requirements of consent conditions for management and restoration plans to be certified and regularly reviewed by an independent peer-review panel in consultation with local rūnanga will ensure that any responses will be appropriate and adapted in accordance with ongoing development of ecological best practice.
- 67 Despite the likelihood of residual effects being extremely low, draft consent condition 65 has also now been updated so that any offset or compensation required to address residual adverse effects remaining after implementation of the EFMP, LiMP and the FWMMP must use methodologies that are transparent, logical, and use accepted ecological principles to derive the related offset/compensation type, and quantum. This demonstrates the Applicant's commitment to using best practice approaches to determine the nature of any offsetting or compensation responses, in the case that they are required.
- 68 I submit therefore that the expert evidence provided, and the draft consent conditions have directly addressed the peer reviewers' outstanding concerns in relation to effects of the proposed landfill on ecological values.

### **Risk of bird strike**

- 69 The issue of appropriately managing birds that could be attracted to the Smooth Hill landfill is a key issue. The prospect of large birds being attracted to the landfill and increasing the risk of bird strike with aircraft is an issue that has had detailed attention and focus to ensure that the risk of bird strike is not increased.
- 70 From the legal point of view, the risk of adding bird strike risk is a relevant consideration as a potential effect of low probability, that has a high

potential impact. This is within the terms of the meaning of effect in section 3(f) of the RMA.

- 71 The Applicant has adopted a range of methods that it has offered to appropriately address this issue.
- 72 The first approach is that the DCC has adopted and funded a four bins plus one kerbside collection system. This system will be in effect long before the establishment of the Smooth Hill landfill. This enables putrescible food waste to be separated at the collection point. All waste is then delivered to a sorting facility where putrescible waste is removed for composting. Waste that is contaminated with putrescible material and cannot be further separated will be quarantined and then treated as special waste to be taken to Smooth Hill for disposal. This requires pre-booked deliveries to Smooth Hill to ensure cover is available at the tip face for immediate cover. This approach is intended to both enable recycling of putrescible material into compost, as well as reducing both the volume of waste, and the putrescible content of it going to Smooth Hill. The methodology for this has been explained in Mr Henderson's evidence and is attached as Annexure 3 to the proposed conditions.
- 73 Secondly, the Applicant has engaged Mr Philip Shaw to provide advice and evidence on this issue. Mr Shaw is an internationally regarded expert in the field of aircraft and wildlife collision risk mitigation. Mr Shaw has prepared a risk assessment, evidence and is an author of the bird management plan for Smooth Hill. The Applicant has adopted all of Mr Shaw's recommendations. This results in a cascading set of obligations that are tied to the operation of the Smooth Hill landfill. The key bird management conditions are in proposed conditions 73 – 83. Other conditions are also relevant to on site bird management and address the methods to receive and cover waste (for example the odour management system in conditions 40 – 46, and the waste acceptance conditions 89- 99). In summary, key methods for bird management include:
- (a) Treating the risk of bird strike as an area-wide issue rather than just relating to Smooth Hill. This results in the bird management plan reducing the numbers of black back gulls currently feeding at the Green Island landfill, at the airport and importantly preventing them from establishing at Smooth Hill;
  - (b) At Smooth Hill, there is a detailed bird management plan proposed, that is locked into the conditions of consent. This requires managing birds exceeding 50 g to zero densities daily. There are escalating obligations should birds arrive. These steps have clear objective

thresholds and require escalating interventions including using lethal methods, installation of wires above the active landfilling area, bailing waste, and ultimately if those methods prove unsuccessful netting the active landfilling area. These methods have been recommended by Mr Shaw and adopted by the Applicant as part of its proposal; and

- (c) In addition to this the Applicant has been working with Dunedin International Airport Limited. This has resulted in the Applicant volunteering a range a further conditions in addition to those recommended by Mr Shaw to ensure that the Airport is engaged in the role of monitoring and potentially escalating the steps in the conditions should an unexpected risk to aviation eventuate. This is contained in conditions 82 and 83. Even though this involves the participation of a third-party to the consent, the Applicant has volunteered this condition to ensure that the Airport has an active role to monitor the bird management plan and is involved in any urgent changes to the on-site management regime.

- 74 Overall it is the evidence of Mr Shaw that, assuming they are implemented well, this combination of measures could have an overall reduction in aviation risk as he sets out in his conclusion (paragraph 127). It is therefore submitted that the evidence of Mr Shaw and his work should be given significant weight in evaluating how the proposal has been designed, and the conditions that are volunteered to ensure that this potential risk is appropriately managed. This will ensure that the risk to aviation is not increased by the operation of the Smooth Hill landfill.

#### **Shut down condition recommended by the section 42A report?**

- 75 It is noted that the section 42A report (in paragraph 6.1.8), based on the advice of Mr Markham, recommends a further condition that if birds are not managed to zero densities over three consecutive days, then the landfill operation must cease, until such time as zero densities are reached over five consecutive days.
- 76 The consequence of this condition is that the landfill operation could be shut with one days' notice (on the 4<sup>th</sup> day after 3 days of more than zero birds). The landfill would be required to remain shut for at least five further days. In those five or more days the waste would still continue to be collected and would need to be stored elsewhere, or diverted to alternative class one landfill facilities. Such an urgent logistical challenge is impractical. This condition is therefore opposed.
- 77 Further a shutdown condition of this nature is not justified when the full range of conditions are considered. Mr Shaw's recommended escalating



steps to manage any birds arriving on site appropriately addresses the potential risk to aviation while not causing the potential disruption from shutting down the landfill. It is therefore submitted that the collective force of these bird management conditions will ensure that the Smooth Hill landfill will not increase the risk to aviation safety from bird strike.

- 78 It is accepted that this issue is of sufficient importance to ensure that increasing risk of bird strike is avoided. This is not an appropriate type of issue to offset or compensate for such a risk. Overall it is the Applicant's position that it has sufficiently achieved this threshold and this issue can be appropriately managed in the range of ways proposed.

### **No putrescible waste?**

- 79 It is noted that Dunedin International Airport Ltd take the position that all residual putrescible waste or odorous waste (other than from wastewater treatment facilities) should be prevented from disposal at Smooth Hill.
- 80 The proposed conditions require that contaminated putrescible waste and highly odorous waste both have special booking and disposal requirements, including the need for immediate cover (conditions 43 and 75).
- 81 DCC has considered in detail whether it is prepared to offer to exclude this residual putrescible material from the landfill, as has been sought. DCC is not able to do so. The reason being that DCC considers that it is in best interests of the Dunedin community and local businesses to have the ability for a disposal facility for municipal waste material in the district, rather than having to truck it out of the district on all occasions to another class 1 landfill. The Smooth Hill landfill is designed to a class 1 standard with a liner, leachate collection and gas destruction management systems to enable it to be available to accept class 1 waste.
- 82 Where class 1 waste includes highly odorous or contaminated putrescible material, the conditions and methodology proposed require that this material is pre-booked and immediately covered. This will address any residual risk of this putrescible content being available as a food source for birds. This is obviously in addition to the bird management conditions to ensure this material is not adding to the risk of bird strike.
- 83 It is submitted that these detailed and tight conditions proposed by the Applicant do ensure that the proposed operation of the Smooth Hill landfill does not increase the risk of bird strike as set out in the evidence of Mr Shaw.

## Positive effects

- 84 Overall the primary positive effect of the proposal is the provision of a class 1 landfill that can accept disposal of municipal and hazardous waste. This provides an ongoing municipal waste disposal facility of this type for the future use of the citizens of Dunedin.
- 85 In addition the landfill proposal will make a major financial contribution to the local Dunedin economy.
- 86 Mr Akehurst states at paragraph 22 of his evidence that the proposed expenditure on the landfill will filter through the local economy generating \$22.9 million in net additional value add in the Dunedin economy over 35 years (in \$2016 terms).
- 87 Further Mr Akehurst states at paragraph 23 of his evidence that the activity generated by the development and operation of proposed landfill is expected to be equivalent to over 813 full time job equivalents across the 35 years of operation, or an average of 34 full time jobs each year (within Dunedin City).
- 88 The proposal also provides for ecological benefits.
- 89 The VRMP required under condition 69 provides for enhancement of two connected areas:
- (a) a 'Smooth Hill Reserve' that includes the swamp wetland, and the upstream connected flaxland and kānuka forest in West Gully 3. In this area, potential changes in vegetation composition in the 'swamp wetland' will be mitigated by weeding, planting, monitoring, and ongoing protection, within the swamp wetland itself; and
  - (b) a wetland offset area of 0.49 ha of similar wetland habitat that sits within the landfill site and is upstream of and connected to the swamp wetland (it is generally located below West Gully 4). While an offset is no longer required because adverse effects to roadside wetlands via road realignment have been fully avoided by the updated road design, the Applicant intends to undertake the restoration actions in this area anyway as planned in accordance with the draft VRMP.
- 90 It is submitted that the positive effects of the proposal are significant. The landfill will provide a critical piece of infrastructure for the people of Dunedin while also adding value to the Dunedin economy and providing 34 full time job equivalents each year over its lifetime.

## **Overall conclusion on effects on the environment**

- 91 I submit that overall the anticipated effects of the construction and operation of the landfill on the surrounding environment are, as stated at paragraph 98 of the evidence of Mr Dale, minor and acceptable.
- 92 The evidence provided by a broad range of experts, as well as the updated draft consent conditions, comprehensively address the outstanding areas of uncertainty and concern identified by the peer reviewers and set out in the s 42A report.
- 93 Assessment of anticipated effects on the environment has been extensive and thorough. These assessments cover all aspects of the proposal, and in all cases have taken a conservative approach, so that no possible effect, no matter how remote has been dismissed without due consideration.
- 94 This is reflected in the draft consent conditions that require the implementation of best practice management standards, including extensive baseline monitoring to inform the development of targeted management plans. This will ensure that any actual effects are identified early and responded to rapidly.
- 95 Finally the proposal offers significant benefits to the people of Dunedin, not only in the form of the provision of a class 1 landfill, but also valuable contributions to the local economy, and restoration of the wetland environment in the highly modified environment at Smooth Hill.

## **Perceived risks**

- 96 A number of submitters expressed concerns that the proposed landfill would cause degradation of the local environment near the Smooth Hill site, including contamination of Ōtokia Creek and Brighton Beach. Many of these submitters noted that fears about this contamination would reduce their enjoyment of local outdoor recreational opportunities such as walking, cycling, swimming and surfing.
- 97 The RMA defines the environment as including:
- (a) Ecosystems and their constituent parts, including people and communities; and
  - (b) All natural and physical resources; and
  - (c) Amenity values; and

- (d) The social, economic, aesthetic, and cultural conditions which affect the matters stated in paragraphs (a) to (c) or which are affected by those matters.
- 98 Therefore, effects on the environment may include actual or potential effects on people and communities near the proposal, or the social, economic, aesthetic, and cultural conditions enjoyed by those people and communities.
- 99 Perceptions of risk are not themselves effects on the environment. The Environment Court considered such fears in *Shirley Primary School v Christchurch City Council* ultimately stating that "we have found that such fears can only be given weight if they are reasonably based on real risk"<sup>4</sup>.
- 100 I submit that the body of expert evidence provided clearly shows that there are robust processes in place to ensure that the local environment at Smooth Hill is not to be degraded and that local waterways, the ocean and Brighton Beach will not be contaminated. It is submitted, based on all the expert evidence, that such effects are not predicted to arise at all. Concerns or fears that they might, while genuinely held, do not amount to a "real risk", or evidence of an actual effect on the environment. Such concerns expressed by submitters cannot be given weight in the assessment of effects under section 104. The focus in an RMA context such as this has to be on evidence of actual effects.

### **Effects on property values**

- 101 A number of submitters also expressed concerns about the impact that the proposed landfill may have on the value of nearby properties.
- 102 The Courts have not considered effects on property values to be a relevant consideration per se in determining whether a resource consent should be granted. The physical effects of an activity on the environment are the primary consideration. Any effect on property prices is simply a (potentially imperfect) reflection of any actual environmental effects. The Environment Court has observed that to consider both the physical effects on the environment as well as any indirect effect on property prices would risk "double-weighting" of the effects on the environment. In *Chen v Christchurch City Council*<sup>5</sup> the Court stated:

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<sup>4</sup> *Shirley Primary School v Christchurch City Council* [1999] NZRMA 66 (EnvC) at [193]

<sup>5</sup> *Chen v Christchurch City Council* C102/97, page 18.

Valuation evidence as to the reduction in property values because of interference with views needs to be carefully used because it can lead to 'double-weighting'. A valuation is simply another expert opinion of the adverse effect (loss) being assessed by the Council or Commissioner (or Court).

- 103 The relevance of impacts on property prices was considered recently in *City Rail Link Limited (CRRL) (Successor to Auckland Transport) & Ors v Auckland Council*, which affirmed the previous decision in *Bunnik v Waikato District Council* Environment Court decision A42/96<sup>6</sup>. The key passage from this judgement stated<sup>7</sup>:

If property values are reduced as a result of activities on adjoining land, the devaluation would reflect the effects of that activity on the environment. The correct approach is to consider those effects directly rather than market responses because the latter can be an imperfect measure of environmental effects.

- 104 It is therefore submitted that the focus of this hearing has to be on direct environmental effects. Future market responses are not a measure of direct effects that are being assessed by relevant experts. It is expert evidence on environmental effects that should remain the focus, in my submission.

### **Policy Setting**

- 105 The relevant provisions of the planning documents are set out in the evidence of Mr Dale.
- 106 It is noted that the section 42A report and Mr Dale analyse the relevant provisions of the statutory documents in detail. A key issue is that these assessments are informed by the level of effects and the analysis of the topic area experts. It is submitted that once all the evidence is considered, the proposal will need to be assessed in light of the overall policy setting.
- 107 For example in terms of the potential risk of bird strike, it is acknowledged that the partially operative RPS contains directive policies to protect the airport infrastructure (being of national or regional significance) by restricting the establishment of activities that may result in reverse sensitivity effects, and avoiding significant effects on the functional needs of such infrastructure (Policy 4.3.5 PORPS).

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<sup>6</sup> *Bunnik v Waikato District Council* Environment Court decision A42/96.

<sup>7</sup> *City Rail Link Limited (CRRL) (Successor to Auckland Transport) & Ors v Auckland Council*, [2017] NZEnvC 204, at [63].

- 108 Based on the expert evidence of Mr Shaw, it is the Applicant's position that reverse sensitivity effects will not arise, and that significant adverse effects on the functional needs of the airport will not arise. The evidence of the Applicant is therefore submitted to support the finding that the application is consistent with the overall direction of these relevant provisions.
- 109 Mr Dale has assessed all the relevant policy provisions in light of the Applicant's evidence, and the section 42A report.
- 110 One of the other important and consistent themes throughout the NPS-FW, RPS, proposed RPS and the RP Water is the recognition and provision for Kāi Tahu cultural values. Assessment of these relevant policies is contained in the section 42A report and in the evidence of Mr Dale. It is also noted that Te Rūnanga o Ōtākou have provided a submission in support of the application as well as evidence on the application.
- 111 The evidence of Mr Ellison on behalf of Te Rūnanga o Ōtākou is specifically acknowledged. It is important to recognise that the evidence of Mr Ellison supports the site selection of Smooth Hill as a preferred option, as well as identifying that disposal of waste out of the district is unacceptable to mana whenua. Mr Ellison also identifies that incineration of waste is not supported (paragraph 33). It is submitted that this evidence should be attributed significant weight in the evaluation of how the proposal is viewed by mana whenua as expressly explained by Mr Ellison in paragraph 55 of his evidence.
- 112 The Applicant acknowledges this evidence and notes that it relies on it as support to the evaluations that have been reached by Mr Dale in his evidence. It is further noted that Ms Yvonne Takau has provided planning evidence on behalf of Te Rūnanga o Ōtākou. This evidence is consistent with and complimentary to that of Mr Dale in relation to the policies guiding the assessment of effects on cultural values.
- 113 It is submitted that the evidence on behalf of Te Rūnanga o Ōtākou deserves significant weight, and is the primary evidence that should be relied on in terms of potential effects of the proposal on cultural values, and how the application is weighed under the policy framework.
- 114 The Applicant relies on all the experts' evidence that has informed Mr Dale's assessment of the proposal under the policy setting. Mr Dale's evidence concludes that the proposal will be consistent with the overall policy direction (paragraphs 140 - 142). It is submitted that this conclusion deserves significant weight in your evaluation, and can reasonably be relied on when you evaluate the proposal under section 104(1)(b). It is noted that

the section 42A report for the ORC will need to be updated in light of all the evidence to be submitted and considered at the hearing.

### **Assessment of alternatives**

115 In addition to the requirement under s105, an applicant is required under clause 1(b) of Schedule 4 of the RMA to provide a description of possible alternatives to the proposal if it is likely to have significant adverse effects. Given the experts' assessments and conditions proposed, I submit that this proposal will not have significant adverse effects. Nevertheless, this issue is addressed.

116 The High Court has provided direction as to the relevance and consideration of evidence of alternatives in *Meridian Energy Limited v Central Otago District Council*.<sup>8</sup> Here the Court stated:

...(c) Meridian is not obliged to go beyond a description of any possible alternative locations for undertaking the proposed wind farm (in terms of cl 1(b) of sch 4). As indicated at [93] these locations will need to be within the CODC district. Given the size of the Meridian proposal and its potential impact on the environment, we anticipate that a reasonably detailed description of alternative sites would be provided by Meridian.

(d) Any further evidence concerning alternative locations will form part of the Court's s 104 analysis of the Meridian proposal (not part of the s 7(b) assessment). The inquiry will be whether, if the same or a similar wind farm could be placed on any identified alternative site/s, it would generate less adverse effects on the environment. That consideration will, however, need to be weighed against any diminution in the benefits of the project (for example, poorer quality of mean wind velocity, distance from the grid etc), and any other relevant considerations such as the availability of the alternative site/s to Meridian.

(e) As the Environment Court acknowledged, and our analysis of the other wind farm cases demonstrates, consideration of alternative sites is relatively unusual. While it will be for the Environment Court to undertake any further analysis of the evidence before it, we emphasise that consideration of alternative sites should not be pushed too far. We have rejected the proposition that Meridian must

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<sup>8</sup> *Meridian Energy Limited v Central Otago District Council*, [2011] NZLR 482 at [148]

demonstrate that the Hayes site is “the best”. Rather than being a search for “the best” site, consideration of alternative sites is only part of the evaluation of the merits of the application in the context of s 104 and the focus needs to be on the merits of Meridian’s proposal.

- 117 In the case of this application, as set out in the evidence of Mr Henderson, the initial selection of the Smooth Hill site involved an extensive site selection process undertaken in 1992 by engineering consultancy Beca.
- 118 Through this process thirty two potential sites were assessed against ecological, physical, social and economic criteria.<sup>9</sup> This assessment identified an extension of the existing Green Island landfill, and designation of the site at Smooth Hill as the two best options for management of Dunedin’s municipal waste.
- 119 As noted at paragraph 49 of Mr Coombe’s evidence, the assessment criteria applied in the Beca Steven report cover the same matters as the current WasteMINZ (2018) landfill design guidelines.
- 120 As described in the evidence of Mr Henderson, further work to identify and assess options for managing Dunedin’s solid waste has been undertaken as part of the Waste Futures programme. The following options have been assessed through this process and are outlined below:
- (a) export of waste out of district;
  - (b) establishment of a new waste to energy facility; and
  - (c) enlarging the footprint of the current Green Island landfill.
- 121 Export of waste out of district would involve accepting the inherent risks of relying on other landfills to accept waste, including uncertainties about capacity, waste acceptance criteria, transport risks, and resource consent constraints on receiving landfills. Further while this option would involve low capital costs, operating costs would most likely be relatively high due to transport costs, and waste disposal at a combination of existing out-of-district landfills (‘export’) and local clean fills. The Applicant was also cognizant of concerns raised by mana whenua, regarding the export of waste out-of-district.
- 122 The establishment of a waste to energy (incineration) facility was determined to have high indicative capital and operating costs and would

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<sup>9</sup> Beca Steven, Dunedin City Council Refuse Landfill Study Site Selection Report, 16 January 1992.



be reliant on securing large proportions of combustible waste (including from out of district) to be viable. Acceptance of non-local waste was unlikely to be culturally acceptable. Further, ash produced by the facility would still require disposal to landfill.

- 123 Enlarging the footprint of the existing Green Island landfill was determined to be possible, however the resource consenting would be costly and technically challenging, partly because such an extension would require landfilling waste over the main sewer pipework into the Green Island Wastewater Treatment Plant. An inability to meet class 1 landfill standards was also identified as a major obstacle for this option.
- 124 It is submitted that all obligations under section 105 and clause 1(b) of Schedule 4 of the RMA have been fulfilled and documented in the application and evidence.

### **Proposed conditions**

- 125 Below are various comments and an outline of the Applicant's position on recommended conditions

#### *Proposed ORC conditions*

#### *Lapse date*

- 126 The application expressly sought a 10 year lapse date on all the consents sought. This was addressed on page 77 of the assessment of environmental effects. The reason for a longer lapse date than the default 5 years, is to enable the monitoring to be established and completed, detailed design to be completed, a business case settled, costed and approved and then a construction and operator contract arranged. For a large infrastructure project like this there is a lot of work to complete prior to giving effect to the consents. It is submitted that 10 years is appropriate to enable the commencement of the works, and to allow for any contingencies or delays in any of these steps.

#### *Term of consents*

- 127 Mr Dale has summarised the term of the resource consents sought in paragraph 36 of his evidence. For the ORC consents for discharge and water permits a term of 35 years is sought and for land-use consents, an unlimited duration. The only difference to this is for the water permit to take and use ground water that is intercepted by the ground water collection system. This is limited to a consent duration of 6 years. This is consistent with the directive policy established under Plan Change 7 and policy

10A.2.2 of the RP Water. A term of 6 years for such a large project creates a risk, but given the clear policy direction arising from Plan Change 7, the Applicant has decided it will need to bear this risk.

#### *Overview of conditions*

128 A wide range of changes and additions have been recommended to the proposed conditions since the application was lodged. These are attached to Mr Dale's evidence. The Applicant has adopted the recommendation of the section 42A report to establish a peer review panel to review detailed design and management plans. It is accepted this is an appropriate way to ensure that the design and plans are consistent with the terms of the consent and accord with good practice, prior to being submitted to the ORC. The report of the peer review panel is also required to be maintained on the DCC's website. This is an appropriate supervision of the consent and reporting to the Otago Regional Council and the community on the development, operation and compliance of the landfill with the obligations in the conditions. This is addressed in conditions 3 - 7.

#### *Landfill fire prevention and response*

129 A detailed set of conditions has been recommended by Mr Dixon to address the potential risk of landfill fire. These conditions are 100-110. The overall approach is to minimise the active landfilling area, maintain active surveillance during operating hours and covering waste each day. In addition there is an obligation to maintain a stockpile of a cover material adjacent to the landfill stage, as well as maintaining fire-fighting water supply. The methods and procedures are to be contained in a fire preparedness and response plan developed in consultation with Fire and Emergency New Zealand and submitted to the independent peer review panel for review and certification, prior to lodgement with the ORC.

130 While landfill fires can never be entirely avoided given the material deposited, they are commonly identified and extinguished at the landfill face before there is any material risk of spread.

#### *Section 107 RMA*

131 The limitations in section 107 of the RMA have been addressed by Mr Dale in paragraphs 153-155 of his evidence.

132 Mr Dale has recommended a change to condition 35 to ensure trigger levels established for suspended solids from flood events do not cause conspicuous change in colour or visual clarity after reasonable mixing in the downstream receiving waters. This will ensure that the obligations in

section 107 are achieved and that the discharge of stormwater will not contravene the limits in this section.

#### *Summary on conditions*

133 Overall the set of conditions are considered appropriate to manage all material risks that the landfill presents at this site. These conditions will ensure the landfill can be operated safely without having unacceptable effects on the environment. The applicant will keep the conditions under review during the hearing and is open to any changes or alterations where these can improve and provide clarity to address issues arising at the site.

#### *DCC conditions for the road upgrade*

134 Mr Dale has also recommended revisions to the DCC proposed conditions for the road upgrade. It is important to note that all work must be designed and constructed under the supervision of a suitably experienced chartered professional engineer. There is a procedure for the detailed design to be submitted to the DCC transport manager for review and certification prior to any construction commencing. This certification is to ensure that the detailed design complies with the consent. As built plans must also be certified by the engineer that work is completed in accordance with the approved design (conditions 3, 12–14).

#### **Part 2 of the RMA**

135 It is submitted that the relevant statutory documents that have been evaluated by Mr Dale, and in the section 42A report cover the issues and are appropriate to guide your evaluation. Therefore it is submitted that recourse to Part 2 in this case is not required, nor will it identify any new or different guidance.

#### **Conclusion**

136 The planning for a landfill located at Smooth Hill has been in the DCC's contemplation for many decades. This has been reflected in the designation of this site for a landfill since 1995. The DCC now seeks the required consents to enable it to complete detailed design, construct, and then operate the landfill.

137 It is acknowledged that consent applications for landfills are often challenging and require a range of issues to be sensitively and appropriately addressed. The Applicant has engaged a wide variety of specialist independent experts to shape its application, and to recommend appropriate ways to design, construct, and operate the Smooth Hill landfill.

A detailed set of conditions has been recommended by those experts. These conditions have been accepted and volunteered by the DCC as Applicant.

138 It is my submission that the detailed evidence on behalf of the Applicant supports the conclusion that the proposed landfill is well designed and can be operated consistent with the direction in the relevant planning documents. The conditions volunteered are onerous, but appropriate to ensure that key environmental risks, including in particular the management of birds, and the risk of bird strike, are properly addressed. The environmental effects for such a large infrastructure project are sensitively and appropriately managed to a level that justifies resource consents being granted.

139 It is submitted that you should feel confident to be able to make the decision to grant these consents to enable this infrastructure to be planned, constructed and operated as sought.

Dated this 11th day of May 2022

A handwritten signature in black ink, appearing to read "M. Garbett", is written above a horizontal line.

Michael Garbett  
Counsel for the Applicant