

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

In the matter of an application by **Dunedin City Council** for resource consents for the operation, closure and aftercare of the Green Island Landfill, Dunedin.

Statement of evidence of Maurice Richard Dale

4 March 2025

Applicant's solicitors:

Michael Garbett | Rebecca Kindiak

Anderson Lloyd

Level 12, Otago House, 477 Moray Place, Dunedin 9016

Private Bag 1959, Dunedin 9054

DX Box YX10107 Dunedin

p + 64 3 477 3973

michael.garbett@al.nz | rebecca.kindiak@al.nz

**anderson
lloyd.**

Qualifications and experience

- 1 My name is Maurice Richard Dale. I hold the position of Senior Principal and Planner with the environmental consultancy firm Boffa Miskell Limited, based in the firm's Christchurch office. I have been employed by Boffa Miskell since 2010.
- 2 I hold a Bachelor of Resource and Environmental Planning from Massey University (1998). I am also a full member of the New Zealand Planning Institute, a member of the Resource Management Law Association, and am an accredited RMA hearing commissioner.
- 3 I have 26 years' experience working in New Zealand and the United Kingdom in statutory and environmental planning, including environmental effects assessment, policy analysis, and plan preparation and administration.
- 4 I have acted on resource management issues and projects for local and central government, corporates, and private clients, covering a broad spectrum of natural and physical resource management issues in urban, rural, coastal, and marine environments.
- 5 I have extensive experience in the preparation of and assessment of resource consent applications and their associated assessments of effects under the Resource Management Act 1991 (RMA), including landfills, and proposals involving management of large-scale construction activity and interactions with air and freshwater quality, indigenous biodiversity, and mana whenua values.
- 6 I prepared the assessment of environmental effects (AEE) and draft conditions supporting the consent application for the proposal and have been the lead planner on the wider Waste Futures programme of work, including on the separate consent applications for the Smooth Hill landfill, and the Green Island Resource Recovery Park (**RRP**).

Code of conduct

- 7 I have read the Code of Conduct for Expert Witnesses in the Environment Court Practice Note 2023. This evidence has been prepared in accordance with it and I agree to comply with it. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

Scope of evidence

- 8 I have been asked to prepare planning evidence evaluating the proposal against the relevant RMA statutory provisions and documents. My evidence draws on the evaluation provided in the consent application, ORC's s95 and s42A reports and evidence, and the evidence of other experts for DCC.
- 9 My evidence includes:
- (a) A brief description of the proposal;
 - (b) The relevant RMA planning documents, the consents required under those documents, and the activity status of the proposal;
 - (c) A brief description of aspects of the existing environment particularly relevant to the planning evaluation;
 - (d) A summary of the environmental effects of the proposal under s104(1)(a) and (ab) RMA, drawing on the expert evidence;
 - (e) An evaluation of the proposal against the provisions of the relevant planning documents under s104(1)(b) RMA;
 - (f) An evaluation against any relevant s104(a)(c) RMA 'other matters';
 - (g) An evaluation of s105 and 107 RMA relating to discharges;
 - (h) An evaluation against Part 2 RMA;
 - (i) Response to the matters raised in submissions as they relate to planning matters; and
 - (j) Discussion on the draft conditions of consent and term of the consents.
- 10 As directed by the Commissioner, my evidence focuses on any areas of disagreement with the s42A report. An updated track change set of draft conditions based on those in Appendix C of the s42A report is attached to my evidence as **Attachment 1**.
- 11 In preparing my evidence, I have reviewed the following documents:
- (a) The ORC requests for further information, and the DCC's responses to those requests;
 - (b) The ORC s95 RMA notification report;

- (c) All submissions received on the consent application;
 - (d) The ORC s42A report and evidence;
 - (e) The evidence statements of all witnesses advising DCC; and
 - (f) Relevant local, regional, and national planning documents.
- 12 I have visited the Green Island site previously, most recently in April 2021.

Executive summary

- 13 The continued operation, closure, and aftercare of the Green Island landfill, including the existing waste diversion and transfer facilities requires resource consents from ORC under the NES-FW and relevant regional plans. The applications have a discretionary status for the purposes of assessment under section 104 of the RMA.
- 14 Based on the expert evidence for DCC, and changes made to the draft conditions, I consider for the purposes of s104(1)(a) and (ab) RMA that the adverse effects of the proposal on the environment will be of a low magnitude and acceptable. Furthermore, I consider that the proposal will have positive effects with regard to supporting delivery of the wider Council Waste Futures programme.
- 15 I also consider for the purposes of s104(1)(b) RMA, that the resource consent applications will be largely *consistent* with the overall policy direction of the relevant planning documents, and particularly the higher order, contemporary, and settled directions of the NPS-FW, NPS-IB, NZCPS, ORPS, and P-ORPS. The proposal is not *contrary* to any provisions of those planning documents.
- 16 I consider appropriate regard has been given to s104(1)(c) RMA '*other matter's*' including alternative sites and methods, and consider the proposal broadly aligns with the NRMP. The proposal will also not be contrary to the s107 RMA restrictions on the granting of discharge permits (s107 RMA).
- 17 I consider the proposal will achieve the purpose and principles of Part 2 of the RMA, as it accords with the enabling purpose in section 5 of the Act to promote the sustainable management of natural and physical resources, recognises and provides for relevant matters of national importance, has had regard to other relevant matters, and has taken into account the principles of the Treaty of Waitangi.

- 18 I have considered the submissions, and the s42A reports, and conclude that there are no reasons why the proposal could not be approved, subject to the updated draft conditions in **Attachment 1**.

The proposal

- 19 The existing 14 resource consents for the operation of the Green Island Landfill expired on the 1st of October 2024.¹ The proposal involves obtaining replacement and additional resource consents for the continued operation, closure, and aftercare of the landfill, including the existing waste diversion and transfer facilities. The proposal is described in detail in the AEE and summarised in the s95 and s42A reports and is not repeated here.
- 20 For clarity, the ongoing operation of the Organics Receiving Building (**ORB**) forms part of the consent application for the landfill. The other existing waste diversion and transfer facilities are to be redeveloped into a new RRP to support DCC's new kerbside collection system; divert organic, recyclable, and hazardous material; and ultimately support the transport of residual general waste to Smooth Hill.
- 21 The construction and operation of the RRP was separately authorised by outline plan of works and resource consents granted by DCC as consenting authority and ORC in September 2024 and January 2025 respectively.² The RRP is not reliant on the replacement resource consents for the landfill, except that surface water monitoring related to the discharge of stormwater from the RRP to the Kaikorai Stream is to occur in accordance with the replacement resource consent conditions for the landfill given that the discharges utilise the same discharge infrastructure.³
- 22 As noted in the s95 report⁴, the existing operation of the landfill occurs in accordance with detailed procedures outlined in a Landfill Development and Management Plan (**LDMP**). The LDMP subsumes and cross references to a separate Landfill Operations Plan (**LOP**) maintained by the landfill operator (Waste Management Ltd) which more specifically addresses the day-to-day operational management of the landfill.

¹ Applications were made prior to 1 April 2023 to enable the landfill to continue operate while the new consents were determined pursuant to s124 RMA.

² References OUT-2024-3 and LUC-2024-137, and RM24.143.

³ As required by condition 11 of RRP resource consent RM24.143.05.

⁴ Section 3.9, s95 report

- 23 The LDMP was most recently updated in September 2023. It is proposed that the LDMP be further updated upon issuing of the replacement resource consents to reflect the proposed landfill operation described in the consent application, align with the conditions of consent, and thereafter be reviewed and updated annually.
- 24 Prior to closure of the landfill, a Landfill Closure Management Plan (**LCMP**) is proposed to be prepared setting out the finalised requirements for the closure and ongoing aftercare of the landfill, effectively replacing the LDMP.
- 25 Later in my evidence I also refer to the development of an Adaptive Management Plan in the event that there is evidence of leachate migration to the Kaikorai Stream.

Resource consent application for the Green Island Landfill

Resource consents required from ORC

- 26 I agree with the s42A report that resource consents are required for the project under the following planning documents:⁵
- (a) Resource Management (National Environmental Standards for Freshwater) Regulations 2020 (**NES-FW**).
 - (b) Regional Plan: Waste for Otago (**RP-Waste**).
 - (c) Regional Plan: Water for Otago (**RP-Water**).
 - (d) Regional Plan: Air for Otago (**RP-Air**).
- 27 I agree with the description of the proposed activities, and the associated NES-FW and regional rules triggered by them in the s42A report.
- 28 I also agree that the various activities should be bundled, such that the proposal overall has a **discretionary activity** status. This is except for the consent sought to take groundwater and connected surface water⁶. I agree with the s42A report that as a **controlled activity**, bundling that activity with the other activities would be contrary to the statutory limitations applicable to making decisions on consent applications for controlled activities.

⁵ Section 5, s42A report

⁶ Reference RM23.185.02

- 29 I agree with the s42A report that a separate resource consent may be required for the installation of the recommended new monitoring wells under the NES-FW given their proximity to natural wetlands.⁷ This will be applied for separately in advance of those wells being installed.

Resource consents required from DCC

- 30 The landfill site is designated in the Partially Operative Dunedin City District Plan (**2GP**) for the purpose of *landfilling and associated refuse processing operations and activities*.
- 31 Applications for outline plan of works and resource consents under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (**NES-CS**) will be submitted separately to DCC's consenting authority where any new physical works are required for the continued operation, closure, and aftercare of the landfill.

The site and existing environment

- 32 The application site and existing environment are described in detail in section 7 of the AEE and summarised in the s95 report, and not repeated here. Specific aspects are further described in the evidence of the other experts for DCC.
- 33 The s42a report, provides clarification regarding the proximity of the landfill site to the coastal marine area (**CMA**) and coastal environment.⁸ I agree the site is not located within the coastal environment, but there is potential for indirect effects on the coastal environment, and specifically the tidal Kaikorai Estuary.
- 34 Activities that can be carried out as of right or with respect to future resource consents that have been granted (where it is likely they will be given effect to) form part of the existing and reasonably foreseeable future environment upon which effects of the proposal should be assessed.
- 35 I note the recently consented RRP now forms part of the existing environment for the purposes of assessing and determining the consent application. I consider that any assessment of the effects from the ongoing operation of the landfill should therefore be cumulative of the effects of the authorised RRP.

⁷ Section 6.1.2.5, s42A report.

⁸ Section 4, s42A report.

36 In that regard I note that the assessment and determination of the RRP consent application was itself cumulative of the effects of the existing landfill operation but excluded the proposed landfill operation included in the application for replacement resource consents, and which includes various infrastructure and operational improvements to better manage adverse effects.

Permitted baseline (s104(2) RMA)

37 I agree with the s95 report that the permitted baseline is not relevant to this proposal, and that it does not require further consideration in the assessment of adverse environmental effects under s104(1)(a).⁹

Environmental effects (s104(1)(a) and (ab) RMA)

38 An assessment of environmental effects under section 104(1)(a) and (ab) of the RMA is contained in section 8 of the AEE and effects have been further assessed in the ORC s95 and s42A report and evidence. Here I summarise the environmental effects conclusions reached in the expert evidence for DCC in response.

Landfill design

39 The s42A report based on the evidence of Mr Elliot and Ms Freeman, recommends additional conditions aimed at increasing the grade of the final landfill cap, reducing leachate head, management of stormwater runoff, increased ability to capture and treat landfill gas (**LFG**), increased frequency of surface methane (**ISM**) monitoring, and increased understanding of the risk posed by landfill fires, and subsoil migration of LFG. Subject to the recommended conditions being adopted, the s42A report concludes any adverse effects can be managed appropriately in terms of landfill design.¹⁰

40 Table 2 of the s42A report lists the conditions recommended by Mr Elliot, which have been translated into recommended consent conditions in Appendix C of the report. These recommendations have been considered in the evidence of **Mr Roberts, Ms Mains, Ms Wood, Ms Eldridge, and Mr Dixon** respectively. The following sections summarise their response on the areas of disagreement.

⁹ Section 6.1, s95A report

¹⁰ Section 6.1.2.3, s42A report

- 41 The evidence of **Mr Robert's** considers that final cap grades can be improved as sought by Mr Elliot to achieve a minimum of 4% over most of the landform, however the final grades cannot be confirmed until final waste volumes are known. I agree with Mr Robert's that the proposed consent conditions contemplate this by requiring the design of the final cap to be provided to ORC for certification. Recognising that process, the conditions in **Attachment 1** have been amended to require a grade of 4% or greater to be achieved "*as far as practicable*".¹¹
- 42 Mr Robert's considers that existing and proposed measures for leachate extraction and progressive installation of the final cap are expected to reduce leachate head in the landfill. Unless continued monitoring demonstrates that the leachate head would compromise the stability of the landfill or is having adverse environmental impacts, Mr Roberts and **Ms Mains** evidence do not support a leachate pumping trial as recommended by Mr Elliot. Recognising that, the reference to a trial has been removed from the conditions in **Attachment 1**, noting such a trial could be one outcome of the implementation of an Adaptive Management Plan if there is evidence of leachate migration to the Kaikorai Stream occurring.¹²
- 43 The evidence of **Ms Wood** considers that runoff from areas of intermediate cap that are not at risk of contamination from waste material should be able to be directed to the sedimentation ponds for treatment, rather than the leachate collection system as sought by Mr Elliot. Ms Wood also notes the there is no benefit of additional assessment of overflows from the Northern Leachate Pond, and that current measures ensure water levels within the pond are effectively managed. The conditions in **Attachment 1** have been amended accordingly.¹³
- 44 The evidence of **Ms Eldridge** considers that:
- (a) With the recent installation of the new flare, the LFG management system has sufficient capacity to destroy all LFG captured on site.
 - (b) The timing for installation of LFG extraction wells is dependent on the timing of filling and capping in each area, and that stating specific timeframes for installation of the new infrastructure may conflict with other critical landfill activities. Similarly, the connection of the wells to the extraction system is dependent on ensuring adequate depth of

¹¹ Schedule A, general condition 37(a)

¹² Schedule B, deleted conditions 1 and 2A, general condition 54.

¹³ Schedule F, deleted condition 7 and condition 9(c).

waste. Extraction wells are therefore recommended to be installed and connected as “*soon as practicable*”.

- (c) A 5,000ppm rather than 1000ppm limit for surface emission monitoring is appropriate as it aligns with the National Environmental Standard for Air Quality (**NES-AQ**), and 5,000ppm is therefore recommended as the trigger for any remedial action rather than a trigger of between 500ppm and 1000ppm.
- (d) Surface emissions monitoring procedures should align with NZ regulatory requirements and should not be undertaken during strong winds. Furthermore, landfill cap damage from significant rainfall events is more appropriately identified by daily walkovers rather than emissions monitoring.
- (e) There is no need to update the LFG Risk Assessment (**LFGRA**) within three years of consent due to the negligible to low risk, the lateral extent of the waste not changing, operation of the LFG extraction system, and the monitoring wells continuing to monitor and provide evidence of any change to the risk profile.

45 The conditions in **Attachment 1** have been amended accordingly.¹⁴

46 The evidence of **Mr Dixon** confirms that the fire risk assessment requested by Mr Elliot was provided to ORC, which concludes the residual risk rating for landfill fire sources was low given the proposed management measures. Mr Dixon recommends on the basis of feedback received from Fire and Emergency New Zealand, that the site water cart should be fitted with a water cannon that can project water “*as far as reasonably practicable*”, rather than 50m. The requirement has updated in the conditions in **Attachment 1** accordingly.¹⁵

47 Based on the evidence for DCC, I consider that any adverse effects relating to landfill design can be appropriately managed, so they are acceptable.

Stability effects

48 The s42A report concludes based on the evidence of Dr Trani, that there is a good level of agreement in relation to the anticipated adverse geotechnical effects. Subject to the recommended conditions being adopted, including those requiring the new section of the pipe in the

¹⁴ Schedule G, deleted conditions 8 and 10, conditions 11, 13, 26 – 29.

¹⁵ Schedule B, condition 39(a).

leachate trench to be designed with resilience to a ULS seismic event, the s42A report concludes any adverse effects can be managed appropriately.¹⁶

- 49 The evidence of **Ms Fellows** confirms there are no areas of disagreement on geotechnical matters, however, considers that the leachate pipe rather than the trench should be designed with resilience to a ULS seismic event, and the condition detailing the operating levels of the leachate head within 40m of the landfill margin should be reinstated to ensure slope stability. The conditions **Attachment 1** have been amended accordingly.¹⁷
- 50 Based on the evidence of Ms Fellows, I consider any adverse stability effects can be appropriately managed, so they are acceptable.

Flooding and sea level rise effects

- 51 The s42a report concludes based on the evidence of Mr Baker, that there are no areas of disagreement in relation to the potential adverse effects from climate change induced flooding, sea level rise, or diversion of flood flows by the defence against water. Subject to the consent conditions proposed by the applicant being adopted, the s42A report concludes any adverse effects can be managed appropriately.¹⁸
- 52 The evidence **Ms Wood** confirms there are no areas of disagreement on flooding and sea level rise effects. I therefore agree with the s42A report that any adverse effects can be managed appropriately, so they are acceptable.

Effects on groundwater

- 53 The s42A report concludes based on the evidence of Mr Baker, that there remains uncertainty about whether, and to what extent, leachate may be migrating offsite and entering surface water, but considers it likely based on the potential for deeper leachate to migrate below the base of the trench, and that typical leachate indicators have been observed in some deep wells outside the trench.
- 54 Recognising this uncertainty, the s42A report recommends additional/changes to conditions requiring the installation of extra monitoring wells, the quarterly monitoring of certain metals, and that

¹⁶ Section 6.1.2.3, s42A report

¹⁷ Schedule A, general condition 24.

¹⁸ Section 6.1.2.4, s42A report

specific monitoring trigger levels are set. The report also recommends an Adaptive Management Plan should be developed if groundwater monitoring indicates that offsite mitigation of leachate is occurring. Subject to the recommended conditions being adopted, the s42A report concludes that adverse groundwater effects can be managed appropriately.

- 55 The evidence of **Ms Mains** for DCC considers that the monitoring and the available evidence indicates that the leachate trench is effective in managing leachate from the landfill, and that the surface water monitoring does not suggest that discharges from the landfill into the Kaikorai Stream have resulted in contaminant impacts in surface water that are readily discernible from those that are associated with the broader catchment.
- 56 Ms Mains supports an additional monitoring well cluster at the southwest edge of the site as sought by Mr Baker but considers with this well cluster and the well at BH103 there is sufficient spatial coverage such that additional deep wells are not required at this time.
- 57 Ms Mains considers proposed monitoring, triggers and adaptive management associated with the residual uncertainty of leachate migration is best captured within the LDMP, LCP, and also an Adaptive Management Plan if there is evidence that leachate migration to the Kaikorai Stream is occurring. In that regard, Ms Mains notes that there are mitigation measures available that could be employed to intercept or form a barrier to leachate flow if required.
- 58 Ms Mains considers that some of the recommended groundwater monitoring parameters in the conditions are not necessary or are not applicable to groundwater, and that trigger levels should only be set for contaminants of concern. The conditions in **Attachment 1** have been amended accordingly.¹⁹
- 59 Based on the evidence of Ms Mains, I consider that any adverse effects on groundwater can be appropriately managed, so they are acceptable. On that basis I consider that installation of engineering measures to avoid or significantly minimise migration of leachate is not necessary, noting the Adaptive Management Plan will enable this to occur if there is evidence of leachate migration occurring.

¹⁹ Schedule A, general conditions 44 – 50.

Effects on surface water

- 60 The s42A report concludes based on the evidence of Dr Wilson, that stormwater discharges and sediment are well managed; where data is available contaminants are typically below relevant guideline levels; and leachate discharges, if occurring, are presumably of small volume. The report concludes water quality within the receiving environment is likely to be maintained in the short term and following landfill closure, water quality may improve.²⁰
- 61 The s42A report recommends additional/changes to conditions requiring quarterly monitoring of certain metals, total suspended solids, and microbiological contaminants, and that specific trigger levels are set. Subject to the recommended conditions being adopted, the s42A report concludes that adverse surface water effects can be managed appropriately.
- 62 The evidence of **Ms Wood** for DCC considers the landfill management approach is well designed and implemented and closure will further reduce the risk of water quality impacts associated with stormwater runoff. The risk of impacts to surface water quality from groundwater discharge is low and is supported by the monitoring data collected over a long period of time.
- 63 Ms Wood does not support monitoring of the Northern Leachate Pond and considers some of the recommended monitoring parameters and trigger levels in the conditions are unnecessary or do not relate to contaminants of concern. Ms Wood considers that there would be benefit in separating surface water monitoring from the ground water monitoring so that it is more tailored, and Table A1 containing trigger levels should be removed from the conditions and instead captured in the monitoring within the LDMP and LCP. The conditions in **Attachment 1** have been amended accordingly.²¹
- 64 Based on the evidence of Ms Wood, I consider that any adverse effects on surface water can be appropriately managed, so they are acceptable, noting again the conditions require an Adaptive Management Plan be developed if monitoring provides evidence that leachate migration to the Kaikorai Stream is occurring.

²⁰ Section 6.1.2.6, s42A report

²¹ Schedule A, general conditions 44 – 50.

Effects on terrestrial and freshwater ecology

- 65 The s42A report concludes based on the evidence of Ms Morrison, that there are no significant areas of disagreement in relation to the potential adverse effects on avifauna, terrestrial ecology, or aquatic ecology. Adverse ecological effects will be low to very low.²²
- 66 The s42A report recommends in addition to the changes to groundwater and surface water conditions discussed above, that conditions be imposed requiring avoiding disturbance of native nesting birds, and minor changes to the Vegetation Management and Restoration Plan (**VMRP**) related conditions. Subject to the recommended conditions being imposed, the s42A report concludes that adverse effects on terrestrial and aquatic ecology values can be managed appropriately.
- 67 The evidence of **Dr Blakely** confirms there are no areas of disagreement on aquatic ecology matters. Dr Blakely is supportive of continued groundwater and surface water monitoring, and development of an Adaptive Management Plan if there is evidence of leachate migration to the Kaikorai Stream occurring.
- 68 I agree with the s42A report that any adverse effects on ecology can be appropriately managed, so they are acceptable, noting I consider the changes to the conditions recommended in the s42 report (referred to in paragraph 66) are appropriate.²³

Bird hazards and Pests

- 69 The s42A concludes the assessment remains the same as in the s95 report, being that adverse effects related to bird hazard and pest plants and animals will be addressed by the proposed conditions requiring the implementation of the Southern Black Backed Gull Management Plan, and the management of other pests. Subject to those conditions being imposed, the s42A report concludes that adverse bird hazard and pest effects can be appropriately managed.²⁴
- 70 Recognising that acceptance, no specific evidence has been provided by DCC on those matters. I agree with the s42A report that any adverse effects can be appropriately managed, so they are acceptable.

²² Section 6.1.2.7, s42A report

²³ Schedule B, conditions 43 – 46

²⁴ Section 6.1.2.8, s42A report

Effects on air quality

- 71 The s42A report concludes, based on the evidence of Ms Freeman, that there is low potential for offsite effects resulting from landfill gas and flare/engine combustion emissions, but that offsite odours from the landfill may be offensive or objectionable on some occasions. The report considers the odour effects of the landfill will be more than minor on sensitive receptors.²⁵
- 72 The s42A report recommends additional/changes to conditions, requiring field odour monitoring and associated adaptive management, monitoring of biogas composition and flow rates at the flare/engine, and annual independent review of odour management. Subject to the recommended conditions being imposed, the s42A report concludes any adverse effects on air quality can be managed appropriately.
- 73 The evidence of **Mr Stacey** considers reduced waste volumes and putrescible waste entering the landfill, progressive capping, and proposed measures to reduce the potential for odours, will ensure offsite odours will not be at a frequency, duration and intensity that results in offensive or objectionable effects. While odour may still be noticed at times, it is likely to be infrequent and of a low intensity. Mr Stacey considers pollutant concentrations from combustions are expected to comply with air quality standards at receptors, and dust emissions are unlikely to cause off-site adverse effects.
- 74 Mr Stacey considers that Schedule G, recommended condition 4 should be amended to align with Ministry for the Environment guidance to recognise that it is reasonable for odour to be observed beyond the boundary, providing that it does not result in nuisance effects. Mr Stacey also recommends changes to conditions relating to assessment of RRP complaints as part of the annual review of complaints, and the frequency of sulphide monitoring of the LFG feed into the flare and engine. I have amended the conditions in **Attachment 1** accordingly.²⁶
- 75 Based on the evidence of Mr Stacey, I consider that any adverse effects on air quality can be appropriately managed, so they are acceptable.

²⁵ Section 6.1.2.9, s42A report

²⁶ Section F, conditions 4, 32 and 34.

Effects on landscape character, visual amenity, and natural character

- 76 The s42A report concludes based on the evidence of Ms Morrison, that there are no areas of disagreement in relation to potential landscape, visual, and natural character effects. Adverse effects will be low to very low. Reference is made to the potential for changes to the landfill cap grade as recommended by Mr Elliot, with the understanding that no increase in height above the proposed 31.5m amsl will occur.²⁷
- 77 The s42A report recommends minor changes to the VMRP related conditions. Subject to the recommended conditions being imposed, the s42A report concludes that adverse landscape, visual and natural character effects will be managed appropriately.
- 78 The evidence of **Ms McManaway** for DCC confirms there are no areas of disagreement on landscape matters, including the proposed conditions. I therefore agree with the s42A report that any adverse effects can be appropriately managed, so they are acceptable, noting also that the process which requires the design of the final cap to be provided to ORC for certification will enable confirmation that the final grade ensures landscape effects remain acceptable.

Effects on human health

- 79 The s42A report concludes based on the evidence of Mr Elliot, Mr Baker, and Ms Freeman, that potential adverse effects on human health are expected to be minimal subject to the recommended consent conditions being imposed.²⁸
- 80 The evidence of **Ms Dodd** considers that based on the available data, the Human Health and Environmental Risk Assessment (**HHERA**) found that an impact of the landfill on the water quality within Kaikorai Stream was not readily discernible in the available dataset. Ms Dodd notes the HHERA was an interim rather than definitive study because of gaps in the available data set and considers that additional data should be collected to support a robust characterisation of the health and environmental risks associated with the discharges from the landfill.

²⁷ Section 6.1.2.10, s42A report

²⁸ Section 6.1.2.11, s42A report

- 81 The evidence of **Mr Stacey** considers the pollutant concentrations from the combustion of LFG in the flare and engine will comply with health-based air quality standards and guidelines at locations where people could be exposed.
- 82 Based on the evidence of **Ms Dodd** and **Mr Stacey**, I agree with the s42A report that potential effects on human health are expected to be minimal, and therefore acceptable, noting the recommended conditions require the HHERA be reviewed in three years informed by additional monitoring data.²⁹

Economic and social effects

- 83 The evidence of **Ms Graham** and **Mr Henderson** describes the economic and social benefits of the proposal, including the role that the continued operation of the landfill plays in the context of the Council's wider Waste Futures programme which is aimed at ensuring effective reduction and management of solid waste. Continued operation of the landfill will ensure Dunedin's waste disposal needs can be met until Smooth Hill landfill is ready to receive waste. Following closure, plans for future use of the site will occur in collaboration with the community and mana whenua which capitalise on the recreational and open space opportunities offered.
- 84 The social effects of the proposal are further described in the Social Impact Assessment Report prepared by GHD that accompanied the consent application.³⁰ That report concludes that while extending the operational life of the landfill will result in the continuation of some minor negative impacts for the community, such as odour, those effects can be managed. Furthermore, the eventual closure of the landfill will have significant positive effects for the community.
- 85 The 42A report concludes that subject to the recommended conditions being imposed, including the formation of a Community Liaison Group, adverse effects on the community can be appropriately managed. Some changes are proposed to the conditions in the expert evidence for DCC, however on the basis of the evidence for DCC, and the Social Impact Assessment Report, I agree that adverse effects on the community can be managed appropriately.

²⁹ Schedule A, condition 58.

³⁰ Appendix 15 of the AEE.

Effects on mana whenua values

- 86 The effects on cultural values are addressed in the Cultural Impact Assessment (CIA) prepared by **Aukaha** on behalf of Te Rūnanga o Ōtākou. Conditions of consent have been proposed which ensure Te Rūnanga o Ōtākou's aspirations to manage effects on and incorporate mana whenua values and restore mahika kai and biodiversity consistent with the Cultural Impact Assessment are provided for.
- 87 Te Rūnanga o Ōtākou submitted on the consent application, accepting the need for continued waste disposal at the landfill, but raising concerns as to whether the leachate interception trench, and the sufficiency of the groundwater monitoring well network in relation to areas of highest risk to groundwater. They sought further investigation of the potential for leachate migration, and measures to avoid or mitigate any impacts.
- 88 Following the release of the s42A report, Aukaha has confirmed on the basis of ORC's recommended conditions, that its concerns have been addressed, and Te Rūnanga o Ōtākou no longer wishes to be heard. Recognising that, any effects on mana whenua values are considered acceptable.
- 89 Notwithstanding, DCC is continuing to engage with Aukaha on the acceptability of the proposed changes to conditions in its evidence, and to inform any subsequent response or evidence they choose to table or present to the hearing.

Summary of effects assessment

- 90 Based on the above assessment, I agree with the s42A report that the adverse effects of the proposal on the environment will be well managed, and therefore of a low magnitude, and acceptable, and further consider that the ongoing operation of the landfill will have positive effects with regard to supporting delivery of the wider Council Waste Futures programme.

Assessment against the relevant planning documents matters (s104(1)(b) RMA)

- 91 An assessment against the relevant planning documents that fall within the scope of the resource consents applied for under section 104(1)(b) of the RMA is contained in section 7.0 of the AEE and they have been further assessed in the ORC s42A report.³¹ I agree with the s42A report that the

³¹ Sections 6.2 and 6.3, s42A report.

following planning documents are relevant in respect of these consent applications:

- (a) National Policy Statement for Freshwater Management 2020 (**NPS-FW**).
- (b) National Policy Statement for Indigenous Biodiversity 2023 (**NPS-IB**).
- (c) New Zealand Coastal Policy Statement 2010 (**NZCPS**).
- (d) National Environmental Standards for Sources of Human Drinking Water 2007 (**NES-DW**).
- (e) National Environmental Standard for Measuring and Reporting of Water Takes (**NES-WT**).
- (f) National Environmental Standard for Freshwater 2020 (**NES-FW**).
- (g) National Environmental Standards for Air Quality 2004 (**NES-AQ**).
- (h) Operative Regional Policy Statement 2019 (**ORPS**).
- (i) Proposed Otago Regional Policy Statement 2021 (**P-ORPS**).
- (j) Regional Plan: Waste for Otago 1997 (**RP-Waste**).
- (k) Regional Plan: Water for Otago 2004 (**RP-Water**).
- (l) Regional Plan: Air for Otago 1998 (**RP-Air**).

92 I note the current regional plans in particular pre-date and do not yet fully give effect to the higher order policy contained in the NPS-FW, NPS-IB, ORPS, and P-ORPS. Furthermore, while the P-ORPS is intended to replace the ORPS, parts of the P-ORPS remain subject to High Court or Environment Court appeals that are yet to be resolved. I consider this results in a highly fragmented policy framework which results in conflicting and therefore uncertain policy direction against which to assess the project.

93 Recognising that, I agree with the s42A report that:

- (a) significant weight should be given to those provisions in the P-ORPS that are beyond appeal over the equivalent provisions in the ORPS; and
- (b) less weight should be given to the provisions of the P-ORPS that remain subject to appeal, except where they clearly align with the with

the higher order settled directions of the NPS-FW, NPS-IB, and NZCPS; and

- (c) more weight should be given to the higher order, contemporary and settled directions of the NPS-FW, NPS-IB, NZCPS, ORPS, and P-ORPS, rather than the outdated regional plans.

94 The s42A report assessment of the proposal against the planning documents concludes:

- (a) Regulations 7 and 8 of the NES-DW do not preclude the granting of consent, and there is no requirement to place an emergency notification condition upon the discharge permit.
- (b) Conditions requiring the measuring and reporting of water takes are required to be imposed to give effect to the NES-WT.
- (c) Regulation 45B(6) of the NES-FW does not preclude the granting of consent on the basis the effects on natural wetlands will be managed in accordance with the effects management hierarchy.
- (d) Regulations 11, 20, and 21 of the NES-AQ does not preclude the granting of consent, and the consent application is otherwise consistent with the NES-AQ.
- (e) The proposal is *consistent or partially consistent* with the relevant provisions of the NPS-FW, NPS-IB, NZCPS, ORPS, P-ORPS, RP-Waste, RP-Water, and RP-Air, with the exception that it is *inconsistent* with policies 1 and 12 of the NPS-FW, and *inconsistent* in the short term but *consistent in the long term* with objectives 3.3.2 and 3.3.3 of the RP-Waste.

95 I agree with the above conclusions of the s42A report, except for the differences discussed in my evidence that follows.

Measurement of Water Takes under the NES-WT

96 The s42A report considers NES-WT measurement and reporting requirements apply because leachate and groundwater are indistinguishable at the point the water is taken, and the proposed rate of take is between 5 L/s and 20 L/s. Measurement and reporting requirements consistent with the regulations are therefore recommended in Schedule C, proposed condition 5. The s42A report notes that to the best of ORC's

knowledge there is no reason why the requirements would be unable to be complied with.³²

- 97 The evidence of Ms Mains considers that detailed monitoring of flows is not warranted as the groundwater take is very small, in the order of 1-2 L/s, with a negligible effect on surface water flows. I note this rate of groundwater take is below the 5L/s threshold where monitoring and recording in accordance with the NES-WT requirements apply.
- 98 Further to the above, I note that the average 5 L/s and maximum 20 L/s rate of take in Schedule C, condition 3(b) captures not only the take of groundwater and leachate via the trench, but also stormwater runoff that is directed to the leachate collection system. I consider the NES-WT regulations are not intended to capture stormwater discharges, and on that basis, I consider condition 3(b) should be deleted, which is reflected in the amended conditions in **Attachment 1**.³³
- 99 As per Ms Main's evidence, Schedule B, condition 17 already includes a requirement to measure and report leachate pumped volumes as part of the annual report, which she considers appropriate for the scale of the activity.

Consistency with Other National and Regional Planning Documents

- 100 I largely agree with the s42A report assessment as to the consistency with the various other national and regional planning documents.³⁴
- 101 With specific regard to those provisions noted in the s42A report which the proposal is *partially consistent* or *inconsistent* with, I note the following areas of disagreement with the s42A report:
- (a) NPS-FM Policy 1 and P-ORPS objective LF-WAI-O1 – on the basis of **Ms Mains** and **Ms Wood's** evidence that the leachate trench is effective in managing leachate from the landfill, and that the surface water monitoring does not suggest that discharges from the landfill into the Kaikorai Stream have resulted in contaminant impacts in surface water that are readily discernible from those that are associated with the broader catchment, I consider the proposal will protect the health of freshwater and preserve the balance between

³² Section 6.3.5, s42A report

³³ Schedule C, deleted condition 5

³⁴ Section 6.3.6 and Appendix B, section 42A report.

water, wider environment, and community in a way that gives effect to Te Mana o te Wai.

Noting some uncertainty however exists, and applying a precautionary approach, I consider the proposal to be *partially consistent* in the short term, rather than *inconsistent* with these provisions as reflected in the s42A report, recognising the additional monitoring and associated adaptive management approach embedded in the proposed conditions.

- (b) OPRS Policy 5.4.1, P-ORPS policy AIR-P4, and RP-Air policy 8.2.8 – on the basis of **Mr Stacey’s** evidence, I consider that offsite odour will be managed such that it will not be at a frequency, duration and intensity that results in offensive or objectionable effects, and significant adverse effects of odour those discharges will be avoided. I therefore consider the proposal to be *consistent* rather than *partially consistent* in the short term and *increasingly consistent over time* with these provisions, as reflected in the s42A report.
- (c) P-ORPS Policy LF-FW-P7 – I consider this policy is intended to primarily provide direction for the setting of environmental outcomes, attribute states, environmental flows and levels, and limits in regional plans, and does not provide useful direction for the assessment of resource consents. To the extent it could be relevant, I however agree with the s42A report the proposal is *partially consistent* with this provision.

102 Overall, I consider the degree to which any partial consistency or inconsistency with the planning documents is lessened given the expert evidence for DCC and the proposed changes to conditions in **Attachment 1**.

103 Any remaining inconsistency with the NPS-FM and P-ORPS generally reflects the more directive wording of those more contemporary provisions over equivalent provisions in earlier, and to some extent outdated, planning documents. In that regard I note the AIR objectives and policies of the P-ORPS remain subject to challenge by way of appeal, and therefore as noted in paragraph 93(b) above, I consider that less weight should be given to those provisions in the overall assessment over the equivalent provisions in the ORPS.

Summary

- 104 Based on my assessment, I consider the proposal will be largely consistent with the various provisions of the relevant planning documents, and in particular the higher order, contemporary, and settled directions of the NPS-FW, NPS-IB, NZCPS, ORPS, and P-ORPS.
- 105 While the proposal will not be fully consistent, I consider the level of inconsistency is not significant, noting in most cases that any inconsistency will occur in the short-term while the landfill is still operating. Importantly, I consider the proposal will not be contrary to any provisions of the planning documents, that could weigh against the granting of consent.

Other relevant matters (s104(1)(c) RMA)

Consideration of the Kāi Tahu ki Otago Natural Resources Management Plan 2005 (NRMP)

- 106 The s42A report considers the proposal will be consistent with the provisions of the NRMP.³⁵ I agree with that assessment. Mitigations and conditions of consent have been proposed which ensure Te Rūnanga o Ōtākou's aspirations to incorporate mana whenua values and restore mahika kai and biodiversity values consistent with the Cultural Impact Assessment are provided for in a way that achieves the objectives and policies of the NRMP.

Consideration of Alternatives

- 107 The s42A report provides a summary of the assessment of alternatives contained in the consent application and concludes continued landfilling at Green Island is preferable to the alternative options of incineration and out-of-district disposal and that there are no feasible alternative discharge methods and alternative receiving environments.³⁶
- 108 I agree with the s42A report, noting also **Mr Henderson's** evidence that the additional capacity provided at Green Island will ensure there is a viable option for the continued disposal of waste until the commencement of waste operations at Smooth Hill.

³⁵ Section 6.4.1, s42A report

³⁶ Section 6.4.3, s42A report

Value of Investment (s104(2A) RMA)

- 109 The evidence of **Mr Henderson**, notes that the Green Island Landfill currently represents a substantial \$14m “book value” investment in Dunedin’s waste disposal system, including land, buildings, and supporting infrastructure.

Matters relating to discharges (s105 and s107 RMA)

- 110 I have considered s105(1)(c) regarding any possible alternative methods of discharge in the context of s104 ‘*other matters*’ above, and don’t repeat that assessment here.
- 111 S107(1) RMA provides that a consent authority must not grant a discharge permit, if after reasonable mixing, the contaminant or water discharges is likely to give rise to various effects in the receiving waters, including (among others) any conspicuous change in the colour or visual clarity.
- 112 The s42A report considers that the data available does not suggest the landfill would be a significant contributor of contaminants to the Kaikorai Stream or estuary that would be likely to cause any of the effects listed in s107(1) RMA.³⁷ I agree with that assessment, and agree that even if such effects did occur, circumstances justify granting consent under s107(2) and (2A) given the existing nature of the landfill, the lack of practicable alternative locations, and based on the evidence no significant adverse effects on aquatic life exist or are likely.

Purpose and principles of sustainable management (Part 2 RMA)

- 113 In the decision *RJ Davidson Family Trust v Marlborough District Council* [2018] NZCA 316 the Court of Appeal reconfirmed the pre-eminence of Part II matters in the consideration of resource consents. In particular, the Court of Appeal held in Davidson that the High Court erred in holding that the Environment Court was not able or required to consider Part 2 of the RMA. That is, recourse to Part 2 is retained in appropriate situations.
- 114 In this instance where the planning framework (i.e. NPS-FW, NPS-IB, NZCPS, ORPS, P-ORPS, RP-Water, RP-Waste, and RP-Air) has been introduced at separate times and with a different emphasis, it is unclear whether a coherent environmental outcome is completely provided for in the planning documents for the consents sought. Accordingly, out of

³⁷ Section 10.2, s42a report

caution, I have considered Part 2. This is intended to assist the overall evaluation of the proposal, to assess the merits and reach a fair appraisal.

- 115 On the basis of my assessment above, the proposal will enable Dunedin's future waste management needs to be met and consequently will support social and economic well-being, and health of the community. It will do this in a way that sustains the potential of natural and physical resources; safeguards their life supporting capacity; and avoids, remedies, and mitigates adverse effects on the environment. Accordingly, it accords with the enabling purpose in section 5 of the Act to promote the sustainable management of natural and physical resources.
- 116 In regard to section 6 'matters of national importance', the proposal '*recognises and provides for*' the preservation of the natural character of the wetlands and rivers; and protection of areas of significant indigenous vegetation and fauna. It also recognises and provides for the relationship of Māori with ancestral lands, waters, and taonga. In regard to section 7 '*other matters*', the proposal has had particular regard to and will support the efficient use and development of natural and physical resources, and the maintenance of the quality of the environment and amenity values.
- 117 Section 8 of the Act requires the principles of the Treaty of Waitangi to be '*taken into account*'. Kāi Tahu cultural values (including mauri, whakapapa, and mahika kai), customary uses, relationships to resources, areas of significance, and protection of wāhi tupuna identified in the CIA have been taken into account.
- 118 Given the above, I consider the proposal will achieve the purpose and principles of Part 2 RMA.

Response to matters raised in submissions

- 119 The matters raised in the submissions have been addressed in the other expert evidence for DCC. None of the submissions raise any planning matters specifically requiring a response.

Proposed conditions (s108 and 108AA RMA)

- 120 As referred to throughout my evidence, the recommended conditions attached to the s42A report have been updated and are included as **Attachment 1**.
- 121 I also note the following additional amendments to the proposed conditions have been made:

- (a) Schedule A, general condition 35 has been amended to require final capping of landfilling stages 1 – 3 “*as soon as practicable but no later than 2 years*” following receipt of final waste, recognising **Mr Robert’s** evidence that some flexibility is required to allow for the final waste volumes and construction windows.
- (b) Schedule A, general condition 36 has re-ordered the final capping layers from top to bottom for improved clarity, and consistency with other landfill related management documents.
- (c) Schedule A, general condition 54 has been amended to more clearly link the triggering of the preparation of an Adaptive Management Plan to the detection of adverse effects on water quality directly attributable to landfill leachate entering the Kaikorai Stream, and to provide a comprehensive list of requirements to be included in that plan.
- (d) Related to the above, schedule A, general conditions 55 and 56 have been added requiring the Adaptive Management Plan to be certified by ORC, and thereafter implemented in accordance with the timeframes in the plan.
- (e) Schedule A, general condition 62(b) has been amended to delete the requirement for as-built construction reports and surveys for upgrades to the LFG collection network and leachate management system to be provided in the Annual Report. General conditions 23 and 25 already require the designs to be provided to ORC for certification and for a Construction Quality Assurance (CQA) report to be provided to ORC following completion.
- (f) Schedule A, general condition 63. The existing bond document that attaches to the conditions has been included in Attachment B of the general conditions. The bond is void while DCC owns the land and is compliant with the consent and indemnifies the ORC for enforcement costs in the event of default.
- (g) Schedule B, condition 3 has been amended to provide a 12-month transition period for the transfer of operations between Green Island and Smooth Hill, recognising **Mr Henderson’s** evidence. It also allows for continued acceptance of some materials needed to complete the final landfill cap.
- (h) Schedule B, conditions 38 and 39 have been amended to provide updated timeframes for installation of a thermal camera and water tanks for fire detection and response.

- (i) Schedule B, condition 42(a). The requirement for a Fire Risk Assessment has been deleted, recognising the evidence of **Mr Dixon** that such an assessment has been completed and provided to ORC.
- (j) Schedule G, condition 8 has been deleted given the new LFG flare was installed in January 2025.

Term of consent (s123 RMA)

122 The s42A report recommends that all resource consents be granted for a 35-year term, except for:³⁸

- (a) Water permit RM23.185.02 for the taking of groundwater and connected surface water, which is recommended to be subject to a 6-year term consistent with policy 10A.2.3 of the RP-Water.
- (b) Land use consent RM23.185.07 for the construction of a defence against water, which is recommended to be subject to an unlimited term.

123 I agree with the s42A report that the terms of consent are appropriate for the reasons provided.

Conclusion

124 Overall, I consider based on the technical assessments and DCC's expert evidence, the updated draft conditions, and my evaluation of the relevant RMA provisions for the consent application, that:

- (a) The environmental effects of the proposal will be of a low magnitude and acceptable given the proposed measures to manage adverse effects, and positive effects will be generated (s104(1)(a), (ab) RMA);
- (b) The proposal overall will be largely *consistent* with the provisions of the relevant national and regional statutory planning documents (s104(1)(b) RMA);
- (c) Appropriate regard has been given to '*other matters*' including alternative sites and methods, and the proposal broadly aligns with the NRMP (s104(1)(c) RMA);
- (d) The proposal is not contrary to the restrictions on the granting of discharge permits (s107 RMA); and

³⁸ Section 14, s42A report

(e) The proposal will achieve the purpose and principles of Part 2 of the RMA.

125 I have considered the submissions, and the s42A reports, and conclude that there are no reasons why the proposal could not be approved, subject to the updated draft conditions in **Attachment 1**.

Maurice Richard Dale

4 March 2025

Attachment 1 – Updated Draft Conditions