

## Before Hawkes Bay Regional Council and Hastings District Council

In the matter of            the Resource Management Act 1991

And

In the matter of            Application by Hastings District Council and Napier City Council to  
Hawke's Bay Regional Council for resource consents authorising the  
operation of Area B at Ōmarunui Landfill (**consent application**)

And

In the matter of            A notice of requirement by Hastings District Council to Hastings  
District Council for alteration of designation for the Ōmarunui  
Regional Landfill (**NoR**)

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### Statement of evidence by Andrea Lesley Brabant on behalf of Hastings District Council and Napier City Council

Dated 2 September 2021

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#### INTRODUCTION

1. My full name is Andrea Lesley Brabant. I am a Technical Director – Planning at Tonkin and Taylor Limited (**T+T**). I hold the qualification of Bachelor of Planning (Hons) from Auckland University. I am a full member of the New Zealand Planning Institute. I am also a member of the Resource Management Law Association and a certified Resource Management Act 1991 (**RMA**) hearings commissioner.
2. I am a qualified planner with twenty years' experience in New Zealand and have been employed as a planner at T+T for 10 years. At T+T, I am the Manager of the National Planning team of over 30 staff, as well as holding the role of Technical Director – Planning. This role helps to drive technical leadership at the company and within the marketplace.
3. I have been involved in the following projects that are waste related:
  - (a) Preparation of district and regional resource consent applications and subsequently preparation and presentation of expert evidence for the

consenting of the Rotorua Refuse Transfer Station for Transpacific Industries (prior to it being sold to Waste Management).

- (b) Preparation of resource consent applications for the consenting of scrap metal facilities for CMA Recycling in Tauranga and Auckland.
- (c) Preparation of the Assessment of Environmental Effects report and resource consent application for the Redvale Earthfill at the Redvale Landfill.
- (d) Review of relevant provisions, preparation of submissions, expert conferencing, mediation and expert evidence on the Proposed Auckland Unitary Plan on behalf of Waste Management with specific emphasis on those policies and rules relating to the Auckland region's waste infrastructure.
- (e) Preparation of assessment of environmental effects report, expert conferencing and expert evidence in a joint Council hearing and in the Environment Court for the re-consenting of the Redvale Landfill in Auckland.
- (f) Preparation of evidence and expert conferencing for the Northern Corridor Improvements project heard by the Board of Inquiry relating to Waste Management; Rosedale Refuse Transfer Station.
- (g) Review of relevant provisions, preparation of submissions and further submissions on the Second Generation Dunedin District Plan for Waste Management with specific emphasis on waste infrastructure.
- (h) Preparation of assessment of environmental effects reports and strategic advice on Colson Road Landfill in New Plymouth to convert the site to a special waste only facility for New Plymouth District Council.
- (i) Preparation of notices of requirement and variations to existing consents for Central Landfill in New Plymouth for New Plymouth District Council.
- (j) Preparation of assessment of environmental effects and expert evidence for a new cell at Tirohia Landfill in the Waikato for Waste Management.
- (k) Technical review and advice in relation to resource consents and alterations to the existing designation at Whitford Landfill for Waste Disposal Services Ltd (which is a joint venture between Waste Management and Auckland Council).

- (l) Preparation of assessment of environmental effects, resource consent and private plan change application and expert evidence for the new proposed Auckland Regional Landfill at Wayby Valley in Auckland for Waste Management.
  - (m) Strategic advice on Southern Landfill for Wellington City Council.
  - (n) Strategic advice on Spicer Landfill for Porirua City Council.
4. This evidence relates to planning approvals which are being sought to authorise the operation of a landfill at Ōmarunui Regional Landfill (**Landfill**) in Area B, specifically:
- (a) Application by Hastings District Council and Napier City Council, as owners of the Landfill, for regional consents from Hawke’s Bay Regional Council (**HBRC**); and
  - (b) A notice of requirement by Hastings District Council as requiring authority to Hastings District Council (**HDC**) to alter Designation D123 – Ōmarunui Landfill in the Hastings District Plan.
5. I refer to Hastings District Council in its capacity as requiring authority and applicant, and Napier City Council as applicant, together as the **Applicants**, and the application and notice of requirement together as the **Proposal**.
6. I have been engaged by the Applicants to provide planning advice in relation to the Proposal.
7. In preparing this statement of evidence I have read the application documents and the submissions received on the Proposal. I have also read the section 42A reports prepared by Mr McKay on the NoR, and that prepared by Mr Shirras in relation to the consent applications.
8. I visited the site on 29 July 2021 and was taken over the entire site. I have also visited the surrounding areas including those of submitters.

#### **CODE OF CONDUCT**

9. I confirm that I have read the Expert Witnesses Code of Conduct contained in the Environment Court of New Zealand Practice Note 2014. My evidence has been prepared in compliance with that Code in the same way as I would if giving evidence in the Environment Court. In particular, unless I state otherwise, this evidence is within

my sphere of expertise and I have not omitted to consider material facts known to me that might alter or detract from the opinions I express.

## SCOPE OF EVIDENCE

10. My evidence addresses the following matters:
  - (a) Provide an overview of the Project.
  - (b) Summarise the regulatory framework that governs the proposed activities for the new landfill area, including identifying the consent requirements.
  - (c) Outline the assessment of effects of the Project, including those raised through submissions and of concern to the local community.
  - (d) Make an overall assessment of the proposal against the provisions of s104, 104B and 181 of the RMA and the relevant provisions of other statutory documents.
  - (e) Discuss the proposed environmental management measures to avoid, remedy or mitigate the Project's potential adverse effects.
  - (f) Respond to matters raised in submissions.
  - (g) Respond to matters in the section 42A Report that relate to the planning aspects of the Project.
  - (h) Consider the proposed consent conditions, including any changes to those conditions that I recommend.
  
11. By way of summary, in my opinion the application should be granted consent subject to the imposition of appropriate conditions of consent in relation to the relevant regional consents and that the alteration to designation should be approved. I have formed this opinion having regard to the technical expertise provided by the applicant's consultants, as well as the expertise provided by HBRC and HDC's experts and the strategic importance of developing, operating and enabling essential waste infrastructure for the greater benefit of the wider population.

## EXECUTIVE SUMMARY

12. This evidence addresses the planning matters and assessment relating to the resource consent applications and alteration to designation for the development and operation of Area B at Ōmarunui Landfill by Hastings District Council and Napier City Council.
13. The overall application has been considered as a discretionary activity under the regional provisions. Separately a Notice of Requirement relating to the alteration to the designation has been lodged.
14. The proposal results in a range of potential adverse effects that are able to be appropriately avoided, remedied or mitigated to ensure that effects are minor and often less than minor. This has been achieved through careful design and construction methods and robust consent conditions including management plans. I note that the HBRC section 42A report also agrees and reaches a conclusion of minor adverse effects and a recommendation of grant of consent. The report from HDC also supports the alteration to the designation.
15. Specific areas of concern for submitters are those relating to air discharges and particularly the potential for odour effects. There is also concern around water quality, cultural effects and windblown litter.
16. Overall the provision of essential infrastructure is important to the functioning of the Hawke's Bay region, as discussed in the evidence of Mr Jarvis. However, infrastructure facilities cannot be established without causing effects due to their size, locational requirements and operation. In my view, this does not mean that essential infrastructure projects should be prevented outright from obtaining consent, as the purpose they serve is far wider than an individual one and offers multiple benefits. That said at the same time I consider that they must be able to demonstrate they have managed their resulting effects to an appropriate level. I consider that Ōmarunui Area B is able to be developed and operated in a way that manages those effects appropriately, while also providing an essential facility, such that grant of consent, subject to the conditions proposed, can be supported.

## OVERVIEW OF THE PROJECT – PLANNING

17. The Applicants propose to construct and operate a new landfill cell, named Area B, at the site owned and operated by HDC and NCC in Ōmarunui, Hawkes Bay. The proposed area is intended to provide additional air space at the site, as the existing Area D is

nearing capacity. The new area is expected to provide approximately 3.5 million m<sup>3</sup> of airspace. At this stage, based on current filling rates, it is expected that the new cell will be full in approximately 30 years.

18. Work was undertaken in order to determine the best option for the siting of a new area within the existing designation. This has been followed up by the preparation of extensive technical reports to determine whether a new area can be safely developed and in order to inform the design of the new landfill area.
19. The Project will include a site establishment and initial construction phase, followed by an operational phase which includes operational construction works. The initial construction phase is expected to last approximately 1-2 years before the new area is ready for accepting waste.
20. The physical aspects of the Project are outlined in full in the AEE and summarised in the section 42A reports. Various aspects are addressed in more detail in the evidence of the Applicants' other witnesses as applicable to their qualifications and experience. I provide below a brief summary of the main elements of the subject site and the Project below.
21. In summary:
  - (a) The Ōmarunui landholdings are contained within one legal title and are currently used for the operation of the existing landfill and ancillary activities. The total area of the site encompasses an area of approximately 145ha and is accessed via Landfill Access Road, which comes directly off Ōmarunui Road.
  - (b) The site itself does not contain any particular physical or land use features other than the landfill, with the remainder of the site in pasture or planting. The entire site is part of a designation (D123) for the purpose of the Ōmarunui Regional Landfill Site. The designation is subject to conditions (contained in Appendix 24 of the Hastings District Plan) which are set out as the "Ōmarunui Landfill Management Plan". Two planning overlays apply to the site, which are the Rural Landscape Character Area and the Rural Strategic Management Area.
  - (c) The landholdings have some existing streams and tributaries but none within the proposed footprint.
  - (d) Land use in the locality is predominantly made up of horticulture and farming.

- (e) The footprint of the proposed landfill cell has no recorded archaeological sites.

## CONSENT REQUIREMENTS – REGIONAL CONSENTS

22. Overall, consent is required for the Project as a discretionary activity under the Hawke’s Bay Regional Resource Management Plan (**Regional Plan**). The consent requirements have been comprehensively described in Section 9 of the AEE and I do not repeat them here.
23. The application includes new regional consents, a s127 variation to the existing air discharge consent and leachate irrigation consent and the alteration to designation. Due to the integrated nature of the operation of the Project, the technical assessments prepared to support lodgement of the application and the evidence prepared for the hearing relates to both the alteration to designation and the regional consents being sought for the Project. However, ultimately separate decisions from the Commissioners are required on all applications. There are separate sets of designation and regional consent conditions proposed for the Project. I have approached my assessments on an integrated basis.
24. The RMA requires that a discretionary activity is considered under ss 104 and 104B. Section 104(1)(a) of the RMA requires that when considering an application for resource consent and any submissions received, the consent authority must consider, amongst other things, any actual and potential effects on the environment of allowing the activity including its positive effects. Conditions may be imposed under s 108, in accordance with s 108AA.
25. Since lodgement of the application and prior to notification, the Resource Management (National Environmental Standards for Freshwater) Regulations 2020 (**NES-F**) have been gazetted and introduced. Therefore, consideration now has to be given to this regulation.

## ALTERATION TO DESIGNATION

26. The site is designated for the purpose of the Ōmarunui Regional Landfill Site. The designation is subject to conditions which are contained in Appendix 24 of the District Plan. Under these conditions the designation allows for the disposal of waste within Area A and Area D and part of Area C, but not currently within Area B. This application proposes an alteration to the designation to provide for waste disposal in Area B.

27. The designation conditions specify that certain information is to be provided to enable the use of Area B for waste disposal – this information has been provided in the AEE documentation and through evidence and therefore fulfils the requirements of the designation and provides sufficient information to support an alteration to the designation under s181 of the RMA.

#### **SUMMARY OF ASSESSMENT OF EFFECTS ON THE ENVIRONMENT**

28. Section 104(1)(a) of the RMA requires that, when considering an application for resource consent and any submissions received, the consent authority must consider, amongst other things, any actual and potential effects on the environment of allowing the activity, including its positive effects. Under s181 of the RMA, an alteration to designation shall be considered as if it were a requirement for a new designation and therefore s168A applies. This section requires effects on the environment to be considered. The following commentary in my evidence regarding effects is intended to cover all the requirements under both s104 and 168A of the RMA relating to assessment of effects on the environment.
29. An extensive assessment of the Project's actual and potential effects (including its positive effects) on the environment has been completed and reported on in the AEE that accompanied the applications. Further assessments have been undertaken since then in response to the Council's further information requests, which are further detailed in the technical evidence on behalf of HDC.
30. The following section of my evidence summarises my assessment of the key actual and potential effects of the Project, including positive effects. Further detail regarding the Project's effects is provided in the evidence of HDC's other corporate and expert witnesses, and I have relied on that evidence where appropriate in preparing my assessment below. Where relevant, I have identified where there have been updates to the effects assessments since the lodgement of the application and my supporting AEE.
31. The key adverse effects I have addressed under the sub-headings of 'construction effects' and 'operational effects'. Where adverse effects have been identified, I describe the measures that have been proposed to mitigate these effects. In drawing these conclusions, I have relied on the Technical Reports attached to the AEE and the evidence of the relevant experts.



32. In addition, further information on effects on the environment and measures to avoid, remedy or mitigate adverse effects has been included in responses to requests for further information by HBRC and HDC.

### **POSITIVE EFFECTS**

33. I consider that the construction and operation of the Project will deliver positive effects as described in section 10.2 of the AEE.
34. In my view, the most significant positive effect the Project delivers is the provision of critical waste infrastructure for the Hawkes Bay region. This infrastructure serves the wider public good and enables the safe and efficient functioning of residential and business activities.
35. In this regard, I note that operations at the existing Ōmarunui Landfill were deemed 'essential services' under the Health Act 1956 during the recent COVID-19 'lockdowns' and as such continued to provide essential waste services to the Hawkes Bay region during that period. The functioning and growth of the region cannot be supported if there is no infrastructure in place to deal with the waste generated. The new landfill area will also contribute to the economy more generally as an employer and purchaser of goods and services.
36. The new landfill area is designed and will be operated so that the waste is appropriately contained. This avoids the potentially significant adverse effects associated with uncontrolled disposal of waste which can be seen in some overseas countries and at older 'rubbish dumps' in New Zealand that were poorly located, designed and operated. It also assists in avoiding the illegal dumping of waste.
37. Another positive effect of the Project is the use of biomass to generate renewable energy and feed this back to the national grid. Ōmarunui Landfill currently has a Renewable Energy Centre at the site which captures LFG and converts it into electricity to feed back to the national grid. I consider this is a positive effect and is a step towards helping New Zealand achieve its emissions reduction and climate change goals.
38. The Project will provide a centralised, contained and controlled location for disposal of residual waste which cannot be diverted or recycled. In addition to this, I consider that it is an efficient use of an existing physical resource, with the proposed Area B able to utilise existing landfill infrastructure on site which avoids the need to re-develop. I expand on this further in my evidence below. I consider this is particularly important,

as the environmental effects will be significantly less by utilising the existing landfill site, when compared to developing an entirely new facility at another location with no existing infrastructure. I note that these positive benefits are acknowledged in the submissions of Warrick Frogley and Progressive Leathers and by Mr McKay in his s42A report.<sup>1</sup>

## POTENTIAL ADVERSE EFFECTS

39. A landfill operation has the potential to create adverse effects due to the nature and scale of its operation. The potential for adverse effects generally falls under two distinct components – those related to the initial construction of the facility and those related to its operation. The initial construction effects are one-off and finish with the completion of construction. Conversely, the operational effects continue and have to be managed over the life of the landfill.
40. Construction effects include those related to clearance of land and vegetation; establishment earthworks; sediment generation; removal or modification of ecological habitats; loss of water courses, construction traffic; and construction noise.
41. During the operational stage, many of the potential adverse effects of construction are no longer relevant. Instead, the way the landfill is operated and the management of the waste become critical. For landfill operations generally, there is the potential for effects associated with:
  - operational traffic and noise
  - leachate generation and management
  - operational stormwater
  - air discharges
  - visual effects and landscape changes
  - operational earthworks and sediment generation; and
  - stockpile management.

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<sup>1</sup> Section 42A report Alteration to Designation HDC, para 8.5-8.9.

42. I have set out below a table that summarises my opinions, based on the relevant technical evidence, of the range of potential effects of the development of the Project and their subsequent effects ratings before mitigation and after mitigation. I have done this to enable a clear understanding of the overall effects of the proposal from a holistic perspective and to give context to the following sections and any subsequent assessment under section 104(1).

**Table 1: Summary of effects**

Potential Effects	Potential Effects before any measures	Effects following mitigation
Geotechnical	Minor	Less than minor
Hydrogeology	More than minor	Less than minor
Air Quality	More than minor	Minor
- Odour	More than minor	Minor
- Human Health	Minor	Less than minor
- Dust	Minor	Less than minor
Sediment	More than minor	Less than minor
Stormwater	More than minor	Less than minor
Leachate	More than minor	Less than minor
Traffic	Minor	Minor
Noise	Minor	Less than minor
Landscape and visual	Minor	Minor to Less than minor
Rural character	Minor	Less than minor
Freshwater Ecology	Minor	Less than minor
Cultural	See commentary below	

### Construction effects

43. As discussed in the evidence of Mr Bryce and in the AEE, in order to have the new landfill area ready for the receipt of waste, there is a substantial amount of initial construction activity that must be completed. As a stand-alone component of the landfill area development, the construction phase can result in potential effects, which I will discuss in turn below.

## Geology

44. The underlying geology is a critical component when selecting a site for landfill development and is an important consideration under the WasteMINZ Technical Guidelines. There are two key aspects to the site geology in relation to landfill design and construction, firstly the suitability of the underlying geology for containment of leachate (therefore preferably a low permeability soil) and secondly the stability of the geology to ensure there are no slope failures. The geology of the proposed landfill Area B footprint includes marine sandstones and limestones with deposits of colluvium and alluvium present on the slope margins and valley floors. As discussed in the evidence of Mr Yule, the alluvium is proposed to be removed to mitigate the risk of localised settlement and liquefaction on the liner system. Mr Yule states that most of the landfill area is within cut bedrock with sufficient strength and therefore settlement of the basegrade under the weight of the refuse is considered to be a low risk.
45. In relation to site stability, while the site has some areas of potential historical instability, these will be managed during the landfill design and construction process as set out in the evidence of Mr Bryce and Mr Yule. The site is also not close to any active faults with the nearest active fault being over 6km away. The evidence presented by Mr Yule confirms the suitability of the site from a geological perspective from both a containment and stability perspective and I adopt his assessment for the purposes of my evidence.

## Construction Earthworks and Sediment Control

46. The establishment of the new landfill area at Ōmarunui will require initial earthworks to establish stormwater ponds; haul roads; stockpiles and initial liner and cell construction.
47. The initial construction earthworks have the potential to generate sediment which needs to be appropriately managed to ensure waterways are protected. For the Project, the potential sediment loads from the initial construction work are predicted to be greater than sediment loads associated with on-going operation on a per annum basis. Measures to be adopted include ensuring any stormwater which comes into contact with waste to be treated as leachate; keeping leachate separate from on-site stormwater; development and implementation of a Stormwater Receiving Environment Monitoring Plan (SREMP) and provision of stormwater and sediment treatment for all discharges from the landfill.

48. As described in the evidence of Mr Van de Munckhof, project-specific Erosion and Sediment Control Plans (**ESCP**) will be prepared for each area of work which outlines mitigation measures. These measures include the requirement to develop site specific erosion and sediment control plans, the use of an adaptive plan which includes proactive monitoring of rainfall and weather, monitoring of the inlet and outlet of key sediment control devices and receiving environment monitoring with triggers. As outlined in the evidence of Mr Van de Munckhof, the measures proposed will ensure that potential effects are no more than minor. I adopt Mr Van de Munckhof's assessment and I note that this conclusion is also supported by HBRC's technical peer reviewer.

### **Groundwater effects**

49. Groundwater effects relating to the construction phase of the Project are largely related to effects on groundwater quantity and levels associated with taking and diverting water. Excavations required during the construction of the landfill may extend below the water table in some places and therefore could affect both perched and shallow groundwater, however this is not expected.

50. There is the potential to divert groundwater as the basegrade and liner are established on site, as the new area is expected to extend below the shallow groundwater seeps present on site. Groundwater drained during the dewatering process is proposed to be discharged to the stormwater ponds, treated and then discharged to the stream. This aids with offsetting any potential stream depletion effects from the dewatering. Evidence provided by Mr Reynolds concludes that the quantities of groundwater to be diverted are expected to be relatively small across the Project footprint. The excavation required for construction of the landfill cell will not extend into the deeper regional aquifer. Due to the small volumes of groundwater which may be diverted during construction, the effects of take and diversion are expected to be less than minor. I rely upon this expert opinion and adopt it for the purposes of my evidence.

### **Freshwater ecology**

51. The construction of the new landfill area at Ōmarunui, and in particular the development of the landfill cell footprint and any associated discharges, has the potential to generate potential adverse effects on freshwater environments. Mr Miller identifies that there are no particular ecological values present within the Area B footprint and therefore his evidence focusses instead on the proposed landfill

discharges. Proposed stormwater discharges will ultimately end up in the Upokohino Stream after passing through the sediment treatment pond and polishing wetland.

52. As explained in Mr Miller's evidence, the ecological value of the Upokohino Stream is low and the stream has a low sensitivity as a receiving environment in its current condition. Despite this, if sediment controls are not properly established on the site, it could result in fine sediment entering the Upokohino Stream and causing a further decline in water quality and associated negative effects on fish and macroinvertebrate communities. Therefore, as outlined in the evidence of Mr Van de Munckhof stormwater treatment devices are proposed during both the construction and operation phase of the project to capture and treat sediment before discharges are released to the stream.
53. Ecological measures and controls are proposed to address any potential effects of the Project on freshwater ecology. It is recommended during the construction phase that monitoring is undertaken of the Upokohino Stream.

#### **Construction traffic**

54. In order to establish the new landfill area and have it ready to accept waste, a 1-2 year construction period is proposed. As part of the initial construction works, construction vehicles and workers will have to access the site and will create additional traffic around the site beyond what is currently occurring in the area.
55. Most construction vehicles will remain on-site, with short peaks in construction traffic occurring periodically, during delivery of materials or plant to the site. Therefore, it is considered that traffic effects will be minimal and can largely be internalised on site.

#### **Construction noise**

56. Due to the separation distances from the majority of construction areas to surrounding receivers, construction noise is expected to readily comply with the construction noise standards under the District Plan at all times. This is confirmed in the Noise assessment provided as part of the AEE (Appendix O, page 10).

#### **Landscape and visual effects**

57. The Project will involve construction over a period of 1-2 years. This will result in changes to landscape character, which has been assessed in the evidence of Mr Bray.

58. The key change to landscape character relates to natural character, as a result of changes in rural character due to cell construction. In some areas, there will be improvements to landscape character due to the proposed revegetation and mitigation planting.
59. During the construction phase of the Project there will be visual effects from the proposed earthworks and clearance activities. However, visibility will be reduced by topography and built elements in the landscape that may screen views. Furthermore as confirmed in the evidence of Mr Bray, no existing dwellings have views of the proposed Area B and therefore the construction phase of the project should be well screened. The site is also located within a working landscape. I consider that effects can be appropriately managed during the construction phase.

### **Operational effects**

60. There are potential effects that will not occur during construction but result from the operational phase of the Project. These effects are less noticeable but occur over a longer period of time.
61. The key operational effects of the Project relate to leachate generation, air discharges, traffic, cultural values, landscape and visual, and noise. I will discuss each of these in turn below. Where relevant, I rely upon the expert evidence of the various technical experts in relation to particular effects.

### **Traffic effects**

62. The Project will result in traffic movements to and from the site during the operational life of the proposed landfill cell.
63. As the site is not proposed to be open to the public, the predominant traffic movements in and out of the site will be from refuse trucks and vehicles and staff.
64. HDC has also engaged with the appropriate division of HDC that is in charge of the roading network regarding the Project. As there are no changes proposed to the existing traffic generation or access to the site, it is considered the effects related to traffic will be no different to what currently occurs at the site.

## Air discharges

65. The potential air quality effects of a landfill generally fall into two categories – amenity effects associated with odour and dust, and potential human health effects associated with LFG generation and combustion.
66. I have been involved in the consenting and provision of planning advice in relation to a number of landfills. One of the key issues that is always at front of mind is the management of air discharges.
67. While residential waste only comprises a percentage of the waste that will go to Ōmarunui, the management of this type of waste is at the forefront of landfill operational procedures with regards to odour management. In addition, Ōmarunui landfill accepts occasional odorous loads, specifically in the form of animal pelts, which need careful management. The procedures for managing odorous loads are outlined in the evidence of Mr Pene, Mr Jarvis and Mr Doolin, and include a number of measures to prevent the escape of odour emissions beyond the landfill boundary. These include the use of daily cover; limiting the working face of the landfill and use of odour suppressant sprays. These measures are set out in the Operation and Maintenance Manual (**O&M Manual**), which is required by the proposed conditions to be updated, and are addressed through the proposed conditions of consent.
68. I rely upon the expert opinion of Mr Pene, who concludes that the potential odour effects of the Project on sensitive receivers will be minor. HBRC's air quality expert has agreed with this conclusion.
69. Combustion and LFG generation can result in human health effects if not appropriately managed. The combustion of LFG in the generators and flares will generate exhaust containing a number of contaminants. These products within the exhaust have the potential to cause adverse health effects if they are not effectively managed and people are exposed to them at sufficiently high concentrations. LFG can also contain low concentrations of volatile organic compounds.
70. I rely upon this advice and the evidence of Mr Pene, which indicates that effects from combustion of LFG are expected to be negligible.



## **Groundwater and leachate**

71. The key aspect of groundwater in relation to the operational phase of the Project is the risk of leachate escaping through the landfill lining system to groundwater and any potential contaminant migration in groundwater that may result.
72. Modelling has been undertaken, as described in the evidence of Mr Reynolds. This modelling was done on a conservative basis utilising maximum leachate concentrations data from HDC between 2001 and 2018. The modelling demonstrates that, even if a worst case scenario of leachate concentrations is assumed (which are not anticipated for the Project), and assuming that there is seepage of leachate through the landfill lining system (which is highly unlikely), concentrations of contaminants in groundwater will be below guideline values. In addition, Mr Bryce has set out in his evidence that the composite lining system will include a low permeability barrier, which is designed with the intention of fully preventing leachate from migrating outwards or down into the underlying groundwater. Mr Bryce also explains that the lining system is to be constructed under strict quality assurance oversight.
73. Based on the evidence of Mr Reynolds, I consider that the effects of discharges of contaminants to groundwater from leachate will be less than minor. This is further supported by the evidence presented by Mr Bryce in relation to the landfill lining system, which sets out the basis of the liner system and its ability to ensure extremely effective containment of leachate.

## **Landscape effects**

74. Landscape effects relating to the ongoing operation of the Project will likely result from the continued development of the different stages of the landfill cell and the use of stockpiles throughout the life of the landfill cell.
75. As the Project progresses through stages of landfill cell construction, there will be the potential for varying views of the cell, however as noted in the evidence of Mr Bray there are no views of the proposed landfill area from existing dwellings. However, I note that the main waste footprint will predominantly be located behind existing or proposed screening planting and topography. Furthermore, there are only a small number of receptors located within close proximity of the site. Therefore, any views to the site are generally from a significant distance and are somewhat removed. As Mr Bray states in his evidence, during the construction phase of the Project there may be

some low landscape effects but these are temporary in nature and are generally well separated from most viewing points. For on-going operations, Mr Bray considers that the landscape effects will be low as by this stage the landscape screening and mitigation planting will be in place.

### **Noise effects**

76. During the operation of the new landfill cell, there will be a number of potential noise sources. Primarily these relate to earthworks from the construction of new landfill cell stages, operation of the flares and generators and operations at the tipping face and stockpile areas. These potential noise sources will be the same as what is currently experienced at the landfill and are not expected to be noticeable.

### **Cultural effects**

77. The Project has the potential to have cultural effects due to the disturbance of land and eco-systems that are within the rohe of Ngāti Pārau.
78. Both the Regional Plan and District Plan recognise the importance of mana whenua involvement in projects through specific objectives and policies set out in the plans.
79. In addition to this, the new National Policy Statement for Freshwater Management (NPS-FM) has made recent updates within this space and sets a framework for managing freshwater on the basis of Te Mana o Te Wai.
80. HDC have focussed their iwi engagement with Ngāti Pārau Trust, as it is acknowledged that they are mana whenua for area. I acknowledge that Ngāti Pārau Trust have lodged a submission on the resource consent application and have raised a number of areas of concern through this submission. Subsequently they have provided a CVA which addresses these concerns and provides an overall position on the proposal confirming they do not oppose it.
81. HDC have sought to engage with mana whenua throughout the process in order to understand what they can do to understand and then avoid, remedy or mitigate potential cultural effects. The details of this engagement are set out in the evidence of Mr Jarvis.
82. The Project will not have direct effects on any known sites of wāhi tapu identified under the District Plan or ArchSite. However, these mechanisms do not necessarily cover all sites of significance to mana whenua so cannot be relied upon as a comprehensive or

definitive list. The CVA provided does not identify any wāhi tapu sites that will be directly affected by the proposed Area B.

83. The biodiversity and ecology of the Upokohino Awa will be protected as outlined in the evidence of Mr Van de Munckhof and Mr Miller through the implementation of measures to capture contaminants (leachate and sediment) and remove or treat them. This is supported by HBRC's technical experts and, in my view, will ensure that the Project results in no more than potential minor adverse effects.
84. A broad range of environmental management and mitigation measures are proposed as part of the Project to ensure that the adverse effects of the works are avoided, remedied or mitigated. I consider that this results in an overall acceptable outcome on all potential effects of the Project, many of which have been raised by mana whenua as their principal areas of concern.

#### **SECTIONS 104 AND 104B AND 168A RMA**

85. Section 104(1)(b) and section 168A(3) requires the Project to be assessed against the relevant provisions of the following statutory documents:
  - (a) NES-AQ.
  - (b) NES-F.
  - (c) National Environment Standards for Contaminated Land 2011.
  - (d) National Policy Statement for Renewable Electricity Generation 2011.
  - (e) NPS-F.
  - (f) Hastings District Plan.
  - (g) Hawke's Bay Regional Plan.
  - (h) Hawke's Bay Regional Policy Statement (**RPS**).
86. In accordance with the requirement of section 104(1)(c), regard must also be had to any other matter considered relevant and reasonably necessary to determine the application. Other matters which I consider relevant include:
  - (a) Resource Management (Energy and Climate Change) Amendment Act 2004 and Climate Change Response Act 2002.

- (b) Waste Minimisation Act.
- (c) Hastings Joint Waste Management and Minimisation Plan.
- (d) Iwi Management Plans

87. I assess the Project against these relevant documents in turn below.

#### **NES-AQ**

88. The NES-AQ places restrictions on discharges of a number of combustion derived contaminants as well as on discharges to air from landfills over 1 million tonnes and is therefore relevant to this application. The NES-AQ requires landfills with more than 200,000 tonnes of waste in place and a design capacity greater than 1 million tonnes to collect LFG and either flare it or use it as a fuel to produce energy.
89. The proposed Ōmarunui Landfill Area B is in excess of this capacity and includes the collection of LFG and the conversion of this LFG to renewable energy through generators. For the above reasons and as set out in the evidence of Mr Pene Area B is able to meet the requirements of the NES-AQ.

#### **NES-F**

90. The NES-F was gazetted on the 3 September 2020. It introduces new national environmental standards for the management of freshwater. At the time of lodgement the NES-F was not in force and therefore was not considered as part of the AEE and application documents. However, as the application was not notified before the gazette date and has subsequently been notified on 19 January 2021, the NES is relevant under section 42 of the RMA and must be considered as part of this hearing process.
91. The project footprint area does not contain any water courses or wetland features and therefore the NES-F is not relevant to this application.

#### **NES for Contaminated Land**

92. The NES – Contaminated Land came into effect in 2012 and applies to the assessment and management of the actual or potential adverse effects of contaminants in soil on human health from five activities, including soil disturbance. The primary focus of this standard is to protect human health rather than the environment, and therefore it

places an onus on measures and controls to adhere to during works that could expose workers to contaminants and restrictions on the use of the land.

93. As the Project is the development and operation of a landfill area which in of itself entails the acceptance of waste and potentially contaminated material, the development and operation of the site will include measures to protect human health.

#### **NPS-REG**

94. The NPS-REG recognises the importance of renewable energy and will help New Zealand achieve the Government's target of 90% of electricity being from renewal sources by 2025.
95. Biogas is considered a source of renewable energy. As an example of this technology, the Redvale Landfill in Auckland is the largest provider of renewable energy in the region. The existing Ōmarunui Landfill already produces biogas and Area B will also produce renewable energy through the capture and conversion of LFG. Therefore I consider that the proposal directly achieves the purpose of the NPS-REG.

#### **NPS-FM 2020**

96. On 3 September 2020, the NPS-FM came into force. It replaces the NPS-FW 2014 (amended 2017), which was the relevant NPS at the time this application was lodged and is what was assessed as part of the AEE.
97. As the new NPS was gazetted following lodgement of the application it therefore was not considered in the AEE or application documents as at that time it was still in draft form. However, as the new NPS-FM is now relevant to this hearing, I have made an assessment within this evidence of the new provisions. The Regional Plan does not yet give effect to the NPS-FM and the requirement to do so is still sometime away, with notification of clauses to that Plan to give effect to the NPS-FM only required by December 2024. In addition, the NPS-FM is more specifically directed at providing national direction for regional plan making processes, rather than for individual consent applications. Overall, to the extent there may be any conflicts between the HBRP and the NPS-FM, I consider the HBRP is the more relevant set of provisions in the context of this application.
98. The NPS-FM takes a step beyond where the previous NPS-FM left off in regards to freshwater management. It sets out to elevate the importance of managing freshwater

resources and moves from considering and recognising Te Mana o te Wai to giving effect to it. In addition it imposes more stringent national bottom lines, seeks to improve degraded water bodies and maintain or improve others and provides for more protection of wetlands and streams by seeking to avoid any further loss or degradation.

99. The NPS-FM has one objective and a number of policies. The objective requires:

- (a) ... natural and physical resources are managed in a way that prioritises:
  - (i) first, the health and well-being of water bodies and freshwater ecosystem
  - (ii) second, the health needs of people (such as drinking water)
  - (ii) third, the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future.

100. The NPS-FM 2020 has 15 policies, of which the following are of particular relevance:

*Policy 2: Tangata whenua are actively involved in freshwater management (including decision making processes), and Māori freshwater values are identified and provided for.*

*Policy 3: Freshwater is managed in an integrated way that considers the effects of the use and development of land on a whole-of-catchment basis, including the effects on receiving environments.*

*Policy 6: There is no further loss of extent of natural inland wetlands, their values are protected, and their restoration is promoted.*

*Policy 7: The loss of river extent and values is avoided to the extent practicable*

*Policy 8: The significant values of outstanding water bodies are protected.*

*Policy 9: The habitats of indigenous freshwater species are protected.*

*Policy 13: The condition of water bodies and freshwater ecosystems is systematically monitored over time, and action is taken where freshwater is degraded, and to reverse deteriorating trends.*

*Policy 15: Communities are enabled to provide for their social, economic, and cultural wellbeing in a way that is consistent with this National Policy Statement.*

101. The Project has been designed in order to avoid effects on freshwater where at all possible, while remedying and mitigating effects. This is consistent with the effects management hierarchy set out in Subpart 3 of the NPS-FM, which requires this approach in relation to wetlands and rivers.

102. The objective of the NPS-FM sets out to prioritise the health and well-being of freshwater systems, which I consider points to a focus on water quality as a starting point. As set out in the expert evidence, the design of the new landfill area and the

associated management plans and measures will ensure the water quality of freshwater systems is maintained. The proposed sediment control measures and adaptive monitoring regimes look to ensure the water quality is maintained and monitored over time. As part of the design of the project, water bodies and identified areas of ecological value were avoided.

103. I also note that HDC's technical evidence sets out how the assessment of freshwater effects has been done on a whole-of-catchment basis. Specifically, it has considered the potential for effects beyond the site by considering freshwater systems as part of the wider catchment rather than just on a site-wide basis. This is consistent with the approach outlined in the NPS-FM as set out in Policy 3, which requires a whole of catchment approach and which is further supported through the introduction of Freshwater Management Units ("FMU") which requires Councils to identify and consider water bodies and their catchments when considering values, managing effects and setting outcomes. I consider that the project results in no loss of stream length which directly achieves Policy 7, while ensuring there is no reduction in water quality.

104. I note that Mr Shirras agrees with this in his s42A report.

105. I consider that the proposal is not contrary to the outcomes sought in the NPS-FM.

### **Hastings District Plan**

106. The site is located within Hastings District and is subject to the provisions of the Hastings District Plan, which manages land use within the district. The Hastings District Plan became 'Operative in Part' in March 2020. The only remaining section which is not yet operative is section 16.1 and Appendix 50, meaning section 12.4 relating to Waahi Tapu sites under the 2003 plan is still operative.

107. The District Plan sets out objectives, policies and rules to assist the Council to carry out its functions under the RMA. Under this plan the underlying zoning of the site is the general Rural zone. The site is designated under the District Plan as D123 – which is for the purpose of the Ōmarunui Regional Landfill site. The designation is subject to conditions (which are contained in Appendix 24 of the District Plan). These conditions are described as the 'Ōmarunui Landfill Management Plan'. HDC have applied to alter Designation 123 to allow for waste disposal in Area B of the designation.

108. The objectives and policies relating to the underlying Rural zone are concerned with maintaining and enhancing rural character, to enable the flexible use of land, ensure

that the productive nature of the land is not diminished and managing environmental effects. The issues and areas of concern when developing a landfill area from a district perspective tend to focus on amenity issues associated with the land use and the potential to affect the surrounding community and any deviations from what might be considered to be the existing experienced amenity within a zone or locality. This is generally experienced through noise, odour, traffic and visual effects. These need to be considered in the context of the rural zone and what is reasonable within that environment.

109. I consider the other key objectives and policies within the District Plan are those relating to noise, and mana whenua. I have set out below my assessment of the proposal against these key provisions of the plan.

### **Rural Zone**

110. The site is located within the rural zone and is mainly comprised of pastoral land, plantation forestry and the existing operating landfill activities making up the main activities on the site. The landscape character within the wider locality is predominantly horticultural with limited buildings. The landfill retains this open appearance and comprises only minimal built structures with the existing office facilities. I consider that the rural character of the area is modified and is a 'cultural landscape' as opposed to a natural one. It has for a long period of time supported not only rural activities but also industrial type activities with the presence of the landfill. The presence of these activities over a significant period of time plays an important role in shaping the character of the area. It is my opinion that the landfill operation and specifically the extension of filling into Area B, is not out of character with the rural area as the landfills' presence forms part of the character. This is discussed further in the evidence of Mr Bray.
111. The site has been used for landfill activities for over 30 years and the addition of waste placement within Area B was anticipated with this area being notated in the designation as being a future landfilling area. I consider the objectives and policies of the zone are able to support the extension of filling into Area B. Specifically those of relevance include:
- (a) 5.2 – Objective RZ02 – *“Retention of the natural and rural character and amenity values of the Rural Zone”*.



- (b) Policy RZP4 - *“Require that any new development or activity is complementary to the amenity of the Zone which predominantly comprises open pastoral characteristics with low scale and sparsely located buildings”.*
- (c) Objective RZO3 - *“To enable the flexible use of land while not limiting the ability of land uses relying on the productivity of the land or soils to undertake their activities”.*
- (d) Policy RZP10 - *“Provide for industrial and commercial activities in the Rural Zone with limits on scale to protect soil values and maintain rural character”.*

112. As outlined above, the development of Area B will still retain an open rural character, with no new buildings proposed as part of the development. Furthermore, on closure of the landfill cell the site will be grassed over and planted where possible, which will ensure it retains an open rural character and will be capable of accommodating future rural or recreational activities and potentially some forms of rural production.

### **Renewable Energy**

113. 23.1.3 – Objective REO1 - *“To enable the sustainable use and development of Renewable Energy Resources across the Hastings District”.*
114. The proposal will include gas capture infrastructure which will feed into the existing renewable energy infrastructure on the site. This facility converts LFG into energy and feeds back into the national grid. I consider the proposal finds direct support in the objectives and policies relating to renewable energy.

### **Mana Whenua**

115. The Ōmarunui Landfill landholdings and specifically the footprint of Area B does not contain any scheduled archaeological sites or identified sites of significance to mana whenua.
116. As set out in the CVA provided by Ngāti Pārau Trust the site itself does not contain any sites of specific significance to mana whenua, however the surrounding area contains a number of sites of significance. This includes the Tūtaekuri River and Upokohino Stream.
117. The Upokohino Stream is degraded due to historical land use activities within the locality. The proposal for Area B includes measures to protect the streams and monitor

them. This should ensure the mauri of the stream and its ability to support life is not compromised by the proposal.

### **Hawkes Bay Regional Policy Statement**

118. The RPS sets the high-level strategic objectives and policies that seek to achieve integrated management of natural and physical resources across the region. Regional and District Plans that sit below this document must give effect to the RPS.
119. In my review of the RPS provisions I note that the objectives and policies are concerned with managing effects, but also with supporting and enabling regionally significant infrastructure to operate efficiently to support the population.
120. I consider that the Ōmarunui Landfill is regionally significant infrastructure within the Hawkes Bay Region. It provides a pivotal role in the safe and efficient functioning of the urban and rural environment. Allowing the establishment of the new landfill area provides for the on-going waste demands of the region, while utilising existing on-site resources. I consider this would be an efficient use of an existing physical resource. It is also directly consistent with the objectives and policies of the RPS.
121. I consider that by extending the operational life of the Landfill, the objectives of the RPS will be able to be met and the Landfill will be able to help cater for the ongoing need for waste disposal to landfill (including any possible future growth) while ensuring that the existing resource is utilised.
122. In relation to managing effects, the existing Area D landfill area, and the proposed new Area B, operates under strict conditions and procedures to manage potential effects from landfilling activities. These come in the form of conditions of consent that govern the operation of the landfill and the associated and approved O&M Manual. The O&M Manual is a living document that is certified by Council, and updated from time to time as required by the conditions.
123. Managing adverse effects of discharges to the environment is one of the key aspects of operating a successful landfill. The evidence from HDC's technical experts explains how the Area B operation will manage its discharges. This is through a combination of having physical systems in place which prevent discharges from occurring, and follow-up procedures which remedy or mitigate effects in the event that a discharge occurs. I rely on the advice of these experts that these systems are appropriate and that they will result in any adverse effects from potential discharges from the Landfill being no more

than minor. Based on this advice I consider that the Landfill operation is consistent with the objectives and policies relating to maintaining water quality, sediment control and managing environmental effects that are contained in the RPS.

### **Regional Resource Management Plan**

124. In my view, the Project requires consideration under the Regional Resource Management Plan for the discharge of contaminants to groundwater, discharge of contaminants to surface water, stormwater discharge, large scale earthworks and sediment discharge, and the take and diversion of groundwater. The details of the consents sought under this planning document is outlined in the AEE document that formed part of the application.

125. The HBRC reporting officer, Mr Shirras, agrees with the planning assessment undertaken in the AEE. He states a detailed assessment of the Objectives and Policies of the Regional Plan is provided in the AEE. He concludes that he has reviewed the AEE assessment and he agrees that the construction, operation and maintenance of the new area aligns with these provisions.

### **OTHER MATTERS – SECTION 104(1)(C)**

126. In accordance with the requirement of section 104(1)(c), regard must also be had to any other matter considered relevant and reasonably necessary to determine the application. Other matters which I consider relevant include:

- (a) Resource Management (Energy and Climate Change) Amendment Act 2004 and Climate Change Response Act 2002.
- (b) Waste Minimisation Act.
- (c) Hastings Joint Waste Management and Minimisation Plan.
- (d) Iwi Management Plans

### **Resource Management (Energy and Climate Change) Amendment Act 2004**

127. The Resource Management (Energy and Climate Change) Amendment Act 2004 removed the power of regional Councils to consider the impacts of greenhouse gas discharges to air on climate change when making rules in regional plans or determining air discharge consents, except where necessary to implement a national environmental standard. However, following the Resource Management Amendment Act 2020, this

restriction will be removed from 31 December 2021 and the effects of activities on greenhouse gas emissions will be able to be considered.

128. As it stands, I note that there is no relevant national environmental standard for restricting greenhouse gas emissions developed, and therefore consideration of the effects of climate change can only be considered to the extent that the use of renewable energy will reduce discharges into air or greenhouse gases in total. As Area B will capture landfill gas and use it to produce renewable energy it has a positive benefit in this regard.
129. The Climate Change Response Act 2002 sets out a framework to enable New Zealand to meet its international obligations under the United Nations Framework Convention on Climate Change and the Kyoto Protocol. The legal framework for the Emissions Trading Scheme (ETS) falls under this Act. The applicant complies with their requirements under the ETS scheme and will continue to do with Area B.

#### **Waste Minimisation Act 2008**

130. The objective of this Act is to encourage a reduction in the amount of waste New Zealanders generate and dispose of. It aims to lessen the environmental harm of waste as well as encouraging better use of materials. The Act does not discourage landfills as an appropriate means to dispose municipal solid waste that is not otherwise diverted or re-used. Of particular relevance is the waste disposal levy, which applies to a range of facilities including class 1 municipal landfills. The levy is then distributed for waste minimisation projects and initiatives.
131. As the operator of a class 1 landfill, the applicant collects the waste disposal levy on behalf of the Government. Area B will contribute to the levy, which in turn will be utilised to help with investing in additional schemes to minimise waste.

#### **Hastings Joint Waste Management and Minimisation Plan**

132. Under the Waste Minimisation Act, Council is required to prepare and update a Waste Minimisation and Management Plan. This sets out the objectives, policies and methods for achieving waste minimisation and management within Hastings. The plan specifies some targets including a reduction in recyclables and organics going to Ōmarunui Landfill with an ultimate goal of working towards zero waste.

133. The new landfill area at Ōmarunui will be flexible in the quantities of waste volumes it can accommodate in any given year and does not require waste volumes to continue to rise in order to operate effectively. Therefore, I consider the landfill will be well equipped to accommodate falling waste volumes if that is achieved through the plan.

#### **Iwi Management Plans**

134. As identified in the s42A report from Mr McKay there are three relevant Iwi Management Plans that apply to the subject area. These plans all make specific mention of water and protecting water quality and water bodies. As set out in my evidence the proposal has measures proposed through both the design and operation of the landfill that protect and maintain water quality.

#### **SECTIONS 105 AND 107 - DISCHARGE PERMIT REQUIREMENTS**

135. Section 105(1) of the RMA requires the consent authority to have regard to the nature of the discharge and the sensitivity of the receiving environment, the applicant's reasons for the proposed choice and possible alternative methods of discharge. Section 107(1) restricts the granting of discharge permits in certain circumstances, namely if, after reasonable mixing, the contaminant or water discharged (either by itself or in combination with other contaminants or water) is likely to give rise to the effects set out therein.

136. The matters identified in Sections 105(1) and 107(1) have been addressed in Section 13.3 of the AEE and are discussed in the evidence of Mr Van de Munckhof and Mr Miller. Based on the evidence of Mr Van de Munckhof, the proposed stormwater diversion and discharge is the most appropriate option as it takes into account topographical and space constraints. Downstream water quality will be maintained through the implementation of erosion and sediment control measures, and stormwater management measures.

137. I therefore consider that requirements identified above have been met and note that the Officer's Report reaches the same conclusion.

#### **CONSIDERATION OF PART 2 – PURPOSE AND PRINCIPLES**

138. Traditionally an analysis of the consistency of an application with Part 2 of the RMA has been fundamental to the overall assessment of applications for resource consent. Section 104(1) of the RMA requires that consideration of applications for resource

consent be 'subject to Part 2'. Until recently this has been considered to require an 'overall broad judgement' approach in the form of a fulsome Part 2 analysis.

139. The Court of Appeal's decision on *RJ Davidson Family Trust v Marlborough District Council* [2018] NZCA 316 allows for the decision maker to refer back to Part 2 when deciding applications for resource consent under s104 in some circumstances. In relation to the District Plan, recent Environment Court decisions have confirmed that plan has been recently and competently prepared so there is generally no need to resort to Part 2 (e.g. *Endsleigh Cottages Ltd v Hastings District Council* [2020] NZEnvC 64). The Regional Plan is less recent and has not yet been amended to give effect to the NPS-F, however I still consider it to largely address all relevant Part 2 matters. However I acknowledge that is for the decision maker to determine.
140. The AEE provided an assessment of Part 2 for completeness and I summarise this below.
141. The proposed landfill area will enable people and communities to provide for their social, economic and cultural wellbeing and for their health and safety by providing a sanitary and contained facility for the disposal of waste.
142. The life supporting capacities of air, water, soil and ecosystems will be protected by robust operating practices and monitoring regimes, consistent with best practice.
143. Potential adverse effects from the ongoing operation of the new landfill area will be avoided, remedied or mitigated through landfill design, construction management measures, and operational procedures (particularly as set out in the proposed conditions of consent and the management plans including the overall O&M Manual.
144. In regards to section 6 of the RMA, the preservation of the natural character of the Upokohino Stream is a key matter of importance as is the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga. The proposed design of the landfill area has sought to avoid effects on these water features, while the proposed conditions of consent seek to ensure the natural character is retained. In relation to s6(e), a CVA has been provided which outlines some of the key known sites of significance to Ngāti Pārau and offers support to the application.
145. In relation to section 7 of the RMA I consider that 7(a), 7(b) and 7(c) are relevant to the application. The Cultural Values Assessment prepared by Ngāti Pārau indicates how the proposal provides for its role as kaitiaki of the area. Mr Jarvis's evidence refers to this

report and identifies steps being taken to support and enhance this role, including taking steps towards having a mana whenua seat as part of the Landfill Committee. Amenity values will be maintained due to the buffer distances, proposed future landscaping and managing measures and conditions of consent and the proposal constitutes the efficient use of an existing physical resource, with the site already set up with all of the ancillary features necessary for operation of a landfill.

146. Section 8 of the RMA requires those exercising powers or functions under the RMA to take into account the principles of the Treaty of Waitangi. As set out in the consultation record and the evidence of Mr Jarvis engagement and consultation with tangata whenua, particularly Ngāti Pārau, has been on-going and will continue to be. Other matters in relation to cultural effects have been addressed earlier in this evidence.

## CONDITIONS

147. The RMA allows for conditions to be imposed on resource consents (section 108), subject to certain limits (s 108AA). In my experience, conditions play an important role in defining the scope of the authorised activities, and in appropriately managing the adverse effects of those activities. They are also important in providing certainty to the councils, stakeholders and affected landowners (and the applicant) about the authorised activities, the effects that they will generate and how these will be avoided, remedied, mitigated, offset or compensated.
148. Through the evidence presented the various methods proposed or undertaken by HDC to avoid, remedy, or mitigate adverse effects on the environment have been described, including:
- (a) A design development approach through which:
    - (i) where possible, adverse effects have been avoided, through refining the size/footprint of the proposed landfill and ancillary activities and locating the footprints, where practicable, away from areas of significance; and
    - (ii) other design measures have been adopted to remedy, mitigate or offset adverse effects (such as stormwater ponds and polishing wetland).
  - (b) Proposed resource consent conditions that require HDC to undertake and implement the measures described in the evidence to manage effects, and which provide also for monitoring the success of the measures.

- (c) Management plans will be prepared and certified by the relevant council, to describe in detail the methods that will be implemented to address the effects of the Project.
149. Recognising the importance of a robust framework of conditions in managing potential adverse effects, I have worked with HDC and the Project's team of specialists to develop a suite of proposed resource consent conditions to manage the adverse environmental, cultural and social effects associated with the Project. The initial draft set of conditions were attached to the AEE.
150. The HBRC s42A Report included some amendments to the Applicants' initial set. Further amendments have then been made by the Applicant project team and this revised 'Evidence Set' is attached to my evidence as **Appendix A**. The amendments reflect conditions typically imposed in respect of applications for resource consents and are intended to address matters raised in submissions and feedback from key stakeholders. I consider the evolution of the proposed consent conditions since lodgement to further strengthen the framework for managing adverse effects from the Project.
151. In my opinion, the suite of proposed updated recommended conditions will serve to ensure that the actual and potential adverse environmental effects of the Project will be appropriately managed during construction and operation of the proposed Landfill.

#### **COMMENT ON SUBMISSIONS**

152. I have read the submissions lodged on the Project and I address those relevant to planning aspects below.
153. There are a total of 8 submissions that were received on the Regional Council application and 16 submissions received on the District Council application relating to the designation. In responding to submissions, I have responded in relation to themes that are raised rather than responding to individual submissions. I note also that while people submitted separately on either the regional consent applications or the alteration to designation application, many of the issues raised have been included across both. In its corporate and other expert evidence, the Applicants have sought to respond to submitters and each of the concerns that they raise. I endorse this approach and have relied on this evidence in addressing the submissions in my evidence below.



## **Odour**

154. A number of submitters have raised concerns regarding odour at the site, largely in relation to the existing site and odours experienced from the current operation and concerns about on-going odour management with the new landfill area. Specifically a number of people have raised concerns that Area B will be closer to sensitive receptors and could result in an increased risk of experiencing odours. HDC is committed to the Project being a world-class facility with the latest technology and engineering to help improve operation and minimise effects. In the evidence of Mr Pene, the methods to manage odour are clearly set out and are also supported by the HBRC s 42A report. They conclude that under normal operating conditions the potential odour effects will be no more than minor. I rely upon their expert opinion.

## **Freshwater Ecology**

155. The details around the existing freshwater ecology at the site and surrounds are set out in the evidence of Mr Miller. He confirms that the receptor streams near the site generally lack riparian buffers, have been influenced by land use practices such as unrestricted stock access and are of low ecological value in their current state. These findings have been reflected in the low SEV scores undertaken by expert ecologists, poor macroinvertebrate health and low freshwater fish diversity. A number of submitters have raised concerns about the project resulting in a reduction in water quality, changes to flow regimes and Tipene Cottrell has raised concerns around effects on tuna, fish and traditional kai and resource gathering. As addressed by Mr Miller and Mr Van de Munckhof, mitigation measures are proposed to address water quality and to maintain stream habitats through treatment devices and on-going monitoring.

## **Groundwater**

156. Many submitters have raised concerns around potential effects on groundwater and in turn the potential for this to affect their drinking water. The proposed Area B will be constructed using a lining system that is designed to contain all leachate and contaminants and meets the standards of the WasteMINZ guidelines. The installation is subject to a quality assurance process and extensive monitoring is proposed for early detection of any potential contaminant leakage. If leakage is detected there are steps that can be taken to prevent discharge from travelling. The details are outlined in the evidence of Mr Reynolds.

## Litter

157. Concerns around wind-blown debris have been raised in submissions in relation to the existing operation on site. There is concern that this could continue with the operation of Area B. There is a procedure in place for managing and collecting wind-blown litter. Litter fences are in operation at the site and regular litter patrols are undertaken. The management of litter will be clearly articulated and set out in the Landfill Operation Plan, and specific reference to management of wind-blown litter as part of the O&M Manual has been put forward by the Applicant.

## Cultural

158. There are two submissions that raise cultural concerns. Largely these concerns have focussed on the risk to freshwater habitats particularly the Upokohino Stream and the effects on the mauri of the stream and its ability to provide for the gathering of kai. This also includes the link between the stream and the Roto Kare Lake. Specific water quality concerns have been addressed through the evidence of Mr Miller, Mr Reynolds and Mr Van de Munckhof and conditions of consent are proposed to protect and monitor water quality.

159. HDC have engaged with Mana Whenua throughout the process and continue to do so. As discussed above, recently a Cultural Values Assessment (CVA) was provided by Ngāti Pārau Trust, one of the submitters. In this CVA they set out the values, interests, historic connections and concerns the hapū holds in relation to the proposed expansion and landfilling within Area B. Freshwater environments including the Tūtaekurī River, Upokohino Stream and Te Roto Kare are specifically mentioned due to the special place they hold for mana whenua for swimming; harvesting of kai; recreational use and maintaining ancestral, spiritual and physical links. The protection of these areas are of paramount importance. They also acknowledge the important role that the Ōmarunui Regional Landfill plays in the wider community and they support the applications to expand into Area B. HDC wish to keep engaging with Mana Whenua on an on-going basis, and establish an enduring and meaningful relationship and partnership relating to the care of the entire Ōmarunui Landfill landholdings.

## **HBRC SECTION 42A REPORT**

160. I have read the section 42A report and provide my response to the council officers' recommendations and conclusions below. I note that I have addressed many matters raised by Mr Shirras in my evidence above.

161. In the HBRC report, Mr Shirras reaches a conclusion that consent can be granted subject to the inclusion of appropriate conditions of consent. Importantly, I note that Mr Shirras considers that overall the potential adverse effects of Area B are no more than minor. I concur with his conclusions in relation to effects (which, as with mine, draw on the advice received from the technical experts for the applicant and the Regional Council). Mr Shirras concludes that the proposal is consistent with the objectives and policies and that the application meets the purpose of Part 2 of the RMA. I agree.

## **HDC SECTION 42A REPORT**

162. In the HDC report, Mr McKay reaches a conclusion that the alteration to the designation can be confirmed and that the proposed changes to the designation conditions are appropriate (subject to some minor changes in wording). He reaches this conclusion on the basis of the site having a long history of landfilling which provides a key service as regionally significant infrastructure. Utilising Area B would be an efficient use of an existing resource and effects are able to be managed appropriately to be internalised on site.

163. I agree with his summary and conclusions.

## **CONCLUSION**

164. In summary, it is my opinion that consent for the construction and operation of Area B at Ōmarunui Landfill should be granted with the inclusion of appropriate conditions of consent (as attached as Appendix A to my evidence). I also consider that the alteration to the existing designation (D-123) should be confirmed with the proposed changes to the designation conditions as set out in the evidence of Mr Bray.

165. I have formed that opinion because effects arising from the proposal can be appropriately addressed through the proposed management plans and conditions of consent and designation and because the proposal is not contrary to the objectives and policies of the relevant planning documents and in fact finds direct support in many of them.

166. I consider that the grant of consents and alteration to designation would be in accordance with the overall purpose and principles of the RMA and the promotion of sustainable management.

**Andrea Lesley Brabant**  
2 September 2021

## APPENDIX A: DRAFT RECOMMENDED CONSENT CONDITIONS

Note, for clarities sake, these draft conditions will be continued to be reviewed and revised prior to the hearing. A copy of the revised draft conditions will be circulated prior to the commencement of the hearing.

### Solid Waste Consent

This consent covers the following:

- Discharge of contaminants to land and water for Area B
- Diversion and discharge of stormwater for Area B
- Diversion and discharge of drainage water for Area B

1. The consent holder shall undertake all operations generally in accordance with any drawings, specifications, statements of intent, proposed mitigation measures and other information supplied to the Regional Council in relation to this resource consent. Specifically, this includes the following documents:
  - a. Resource consent application to change conditions of consent, received by Regional Council December 2019, including Omarunui Landfill – Area B – Assessment of Effects on the Environment, dated December 2020.
  - b. Omarunui Landfill – Area B: Further Information (s92 RMA), report prepared for Hastings District Council by Tonkin & Taylor, August 2020.
  - c. Omarunui Landfill – Area B: Further Information (s92 RMA), report prepared for Hastings District Council by Tonkin & Taylor, September 2020.
  - d. Omarunui Landfill Operations and Maintenance Manual prepared by Stantec Ltd for Hastings District Council updated in accordance with condition 5 below.

Where a conflict arises between any conditions of this consent and the application documentation, the conditions of this consent prevail.

### Peer Review Panel

2. The consent holder shall establish and retain, at its own cost, an Independent Peer Review Panel, to review the design and construction of all stages of the Area B landfill as well as the ongoing operation and aftercare of Area B. The Independent Peer Review Panel shall comprise at least two persons who together shall be:
  - Independent of the Consent Holder
  - Experienced in landfill design, construction and management
  - Experienced in landfill geotechnical, landfill gas, groundwater and surface water aspects
  - Recognised by their peers as having such experience, knowledge and skill
  - Approved in writing by Hawke's Bay Regional Council.
3. Prior to commencing the construction of a new landfill stage, the Consent Holder shall submit a design report and design drawings for the relevant stage to the Peer Review Panel for certification that it meets the requirements of the consent. The Peer Review Panel shall communicate this certification to Council.
4. The Peer Review Panel shall prepare an annual report for Hawke's Bay Regional Council to be submitted to Council (Manager Compliance) prior to 1 March each year, on the adequacy of the following matters in relation to meeting the requirements of the consents:
  - Any management or monitoring plans reviewed during the year

**Commented [AD1]:** Council change - Agreed by Applicants

**Commented [AD2]:** Council change - Agreed by Applicants

**Commented [TB3]:** Applicant's change - incorrect reference

**Commented [LA4]:** Applicants' change

**Commented [LA5]:** Council change - Agreed by Applicants

- Any designs reviewed during the year
  - Construction activities undertaken including:
    - Site preparation, including hydrogeological and geotechnical issues
    - Liner construction
    - Leachate collection system installation
    - Landfill gas collection system installation
  - Landfill operation including
    - Water control, including stormwater and leachate management
    - Waste compaction, including method and degree
    - Waste acceptance
    - ~~Cover material used~~
    - Daily and intermediate cover material used
    - Landfill gas collection system
    - Leachate collection and irrigation
  - Monitoring and records
  - Rehabilitation.
- This report shall be based on:
- A review of the landfill annual monitoring report
  - Review of designs submitted during the year
  - Review of construction QA reports
  - Any further enquiries and inspections required by the Peer Review Panel to allow them to undertake their duties.

**Commented [LA6]:** Council change - Agreed by Applicants

**Commented [LA7]:** Council change - Agreed by Applicants

#### Operation and Maintenance Manual

5. Within three months of the commencement of this consent (acceptance of waste into Area B) the consent holder shall update the Omarunui Landfill Operations and Maintenance Manual (O & M Manual) and submit the updated version to Hawke's Bay Regional Council for certification, to confirm that the activities undertaken in accordance with the O & M Manual will achieve the objectives of the O&M Manual and compliance with the relevant consent conditions.
6. The O & M Manual shall address how the following matters will meet any limits or restrictions set out by the consent conditions:
  - Site access, security and sign in
  - Landfill emergency procedures
  - Contingency plans, including management and offsite disposal of leachate
  - Monitoring and reporting
  - Complaints register
  - The use of daily and intermediate cover
  - Bird control
  - Wheel cleaning
  - Litter control including collection of off-site litter originating from the landfill
  - Pest control
  - Weeds and noxious plants
  - Management procedures for the working face
  - Waste compaction
  - Landfill fires
  - Natural disasters
  - Stormwater and sediment control including inspection based monitoring for cyanobacterial blooms.
  - Waste acceptance

**Commented [LA8]:** Council change - Agreed by Applicants

**Commented [LA9]:** Council change - Agreed by Applicants

**Commented [LA10]:** Applicants' Change

**Commented [LA11]:** Applicants' change - see evidence of Dean Miller, para 55

- Leachate control and spray drift monitoring procedures
- Odour control
- Landfill gas management
- Health and safety.

#### Waste disposal

7. The discharge of solid waste and leachate onto or into land is authorised only on the area of the site identified as landfill Area B shown on the Figure XXX provided as Attachment 1. The extent of waste shall be generally as shown on Figure XXX with allowance for reasonable variations that may result from the detailed design of the landfill.
8. The total airspace volume of waste deposited in Area B of the Omarunui Landfill during the term of this consent shall not exceed 3.5 Million m<sup>3</sup> calculated between the base of the landfill and the post settled ~~top of the landfill~~ envelope.

**Commented [LA12]:** Council change – Agreed by Applicants

#### Design and construction

9. The lining system for the landfill shall, as a minimum, comprise one of the following lining systems:
  - a. For base areas, flatter than 1V:4H, from top to bottom:
    - o 300 mm drainage aggregate leachate collection layer;
    - o Protection geotextile;
    - o 1.5 mm HDPE geomembrane;
    - o GCL ( $k \leq 3 \times 10^{-11}$  m/s); and
    - o Selected compacted soil layer, 600 mm thickness, comprising predominantly silt or sandy silt soils with a permeability  $k$  likely expected to be in the range of  $1 \times 10^{-6} < k < 1 \times 10^{-8}$  m/s.
  - b. For side slope areas, steeper than 1V:4H, from top to bottom:
    - o 300 mm drainage aggregate leachate collection layer;
    - o Protection geotextile;
    - o 1.5 mm HDPE geomembrane;
    - o GCL ( $k \leq 3 \times 10^{-11}$  m/s); and
    - o Selected compacted soil layer, 300 mm thickness, comprising predominantly silt or sandy silt soils with a permeability  $k$  likely expected to be in the range of  $1 \times 10^{-6} < k < 1 \times 10^{-8}$  m/s.

~~For both lining systems types, an Electric Leak Location survey shall be undertaken on all sections of completed lining system and any leakage found from this survey shall be repaired. For the lining systems described in condition 9a and 9b an Electric Leak Location survey shall be undertaken on all sections of completed lining system and any defects found from this survey shall be repaired.~~

**Commented [LA13]:** Council change – opposed by Applicants. Amended wording to improve clarity (refer para 75 of Tony Bryce's evidence)

10. The consent holder may use an alternative lining system comprising one of the following:
  - a. Type 1 Lining system, from top to bottom
    - 300 mm layer of leachate drainage material
    - Protection geotextile
    - 1.5 mm HDPE geomembrane
    - 600 mm compacted soil (clay) with a coefficient of permeability  $k < 1 \times 10^{-9}$  m/s
  - b. Or Type 2 lining system, from top to bottom:
    - 300 mm layer of leachate drainage material
    - Protection geotextile
    - 1.5 mm HDPE geomembrane

- Geosynthetic clay liner (GCL) ( $k \leq 3 \times 10^{-11} \text{ m/s}$ )
- 600 mm compacted soil with a coefficient of permeability  $k < 1 \times 10^{-8} \text{ m/s}$

**Commented [LA14]:** Council change – Agreed by Applicants

~~For both lining systems types, an Electric Leak Location survey shall be undertaken on all sections of completed lining system and any leakage found from this survey shall be repaired.~~

**Commented [LA15]:** Council change – Opposed by Applicants (refer to Para 75 of Tony Bryce's evidence)

~~Lining systems which include a GCL, i.e. either a Type 2 Lining System or the lining system described in Condition 9, shall cover a minimum of 20 percent of the total landfill footprint.~~

**Commented [LA16]:** Refer to amendments in condition 10a and Tony Bryce's evidence (para. 76)

~~The Consent Holder may use an alternative lining system demonstrated to provide equivalent or better performance compared with the specified systems. Use of an alternative lining system shall be subject to prior written approval of the Peer Review Panel and Hawkes Bay Regional Council.~~

**Commented [LA17]:** Council change – Opposed by applicants (duplication of Condition 11)

10a [The combination of lining systems adopted shall be such that a GCL is incorporated into the lining system over a minimum of 50 percent of the total Area B footprint area.]

**Commented [TB18]:** Applicant's change (refer to Para 77 of Tony Bryce's evidence)

- The Consent Holder may use an alternative lining system demonstrated to provide equivalent or better performance compared with the specified systems. Use of an alternative lining system shall be subject to prior written approval of the Peer Review Panel and Hawkes Bay Regional Council.
- The installation of the lining system shall be subject to independent quality assurance (QA), to include the soil and geosynthetic components of the lining system and the electric location survey. On completion of each stage of lining system construction a QA report shall be prepared and shall include all of the test results, a description of the observations undertaken and certification that the lining system has been installed in accordance with the specification. This report shall be submitted to the PRP.
- The design leachate head shall not exceed 300 millimetres on the base liner. This requirement does not apply in sump areas.
- Final cover and capping shall be constructed to the following minimum specification, from the top of waste to the surface.
  - Intermediate cover immediately over the waste. ~~The interim cap layer shall be at least 500 mm of compacted soil ( $1 \times 10^{-6} < k < 1 \times 10^{-8} \text{ m/s}$ );~~
  - 600 mm of compacted soil ( $k > 1 \times 10^{-8} \text{ m/s}$ ,  $k < 1 \times 10^{-6} \text{ m/s}$ )
  - 300 mm soil growth layer
  - 100 mm topsoil (grassed)
- Permanent stormwater infrastructure shall be designed to manage at least a 1% annual exceedance probability (AEP) design rainfall event. The diversion channels shall be designed such that if this capacity is exceeded the preferential (secondary) flow path is away from the landfill ~~cells and any associated infrastructure.~~ Permanent stormwater infrastructure is infrastructure that forms part of the permanent works on site or temporary works that will be in service for greater than 5 years.
- Temporary stormwater infrastructure ~~that is intended to be used for less than two years~~ shall be designed to manage ~~at least a 120% AEP design rainfall event. flood if it is to be left in place~~

**Commented [TB19]:** Council change – Opposed by applicants. Refer Para 78 of Tony Bryce's evidence

**Commented [TB20]:** Council change agreed by Applicants but amended to reflect the intent of Council's change

**Commented [LA21]:** Council change – Agreed by Applicants



~~for less than two years, and shall be designed to manage a 20% AEP design flood if it is to be left in place longer than two years and less than 5 years. Temporary stormwater infrastructure that is intended to be used for greater than two years shall be designed to manage at least a 10% AEP design rainfall event.~~ The ~~system stormwater infrastructure~~ shall be designed such that if this capacity is exceeded the preferential (secondary) flow path is away from waste fill areas.

**Commented [TB22]:** Council change – Agreed by Applicants

17. The Area B Stormwater Pond shall be designed to ~~treat a 1 in 2 year storm event to~~ remove at least 75% of suspended solids ~~for the inflows from at least a 50% AEP design rainfall event.~~

**Commented [TB23]:** Council change – Agreed by Applicants

18. Any outflow of water from the ~~stormwater pond Area B Stormwater Pond~~ shall be effectively dispersed to prevent scouring.

**Commented [LA24]:** Council change – Agreed by Applicants

19. In the event of any archaeological site or waahi tapu being uncovered during the exercise of this consent, activities in the vicinity of the discovery shall cease. The consent holder shall contact the Council (Manager Compliance) to obtain contact details of the relevant tangata whenua. The consent holder shall then consult with the relevant local hapu or marae and the Heritage New Zealand Pouhere Taonga, and shall not recommence works in the area of the discovery until the relevant Heritage New Zealand Pouhere Taonga and tangata whenua approvals to damage, destroy or modify such sites have been obtained.

#### Waste acceptance

20. Medical wastes shall be accepted only in accordance with NZS 4304:2002, Healthcare Waste Management.

21. Asbestos waste shall be accepted only in accordance with the Health and Safety at Work (Asbestos) Regulations 2016.

22. The following wastes shall not be accepted for disposal at the landfill:

a. Any waste marked with an asterisk on the NZ Waste List (L Code), with the following exceptions:

- i. solid wastes which, following testing using the ~~ESEPA USEPA~~ Toxicity Characteristic Leaching Procedure (TCLP) result in leachable concentrations of contaminants less than the leachable concentration values listed in Attachment 2; or
- ii. solid wastes which, following testing for total concentration, result in total concentration values less than the screening criteria listed in Attachment 2; or
- iii. any waste identified with an asterisk on the L Code identified as containing asbestos – if they are labelled, packaged and disposed in accordance with the requirements laid out in the Health and Safety at Work (Asbestos) Regulations 2016; or
- iv. small quantities of waste products containing potentially hazardous components that are not likely to have adverse effects on the environment, such as can reasonably be expected to be contained in the municipal waste stream.

**Commented [LA25]:** Council change – Agreed by Applicants

b. Any liquid waste. For waste to be considered non-liquid it must meet one of the following requirements:

- i. Contains a solids content of at least 20% and liberates no free liquids

- ii. Liberates no free liquids when tested in accordance with the USEPA Paint Filter Liquids Test (USEPA Method 9095A 1996) and liberates no free liquids when transported.
  - c. Wastes or substances classified as explosive, flammable, oxidising or corrosive under the Hazardous Substances and New Organisms Act 1996
- 23. To minimise the potential for hazardous waste to be disposed of at the landfill the following measures shall be taken:
  - a. Notice shall be clearly posted at the landfill entrance to identify the hazardous wastes that are not accepted at the landfill; and
  - b. Random inspections of incoming loads for the presence of hazardous waste shall be undertaken on a frequency of no less than 1 in 50 loads.
- 24. The consent holder shall maintain a record of each load of material accepted at the landfill including:
  - a. Date and time material is deposited
  - b. Quantity;
  - c. Cell Number and Location; and
  - d. Description of material

These records shall be made available on request at the time of a site inspection made by the Council.

**Commented [LA26]:** Council change - opposed by Applicants. Refer Para 79 of Tony Bryce's evidence

#### Operation

- 25. The working face of the daily waste cell shall be kept to a practicable minimum and shall not exceed 1,5200 m<sup>2</sup>.
- 26. Daily cover shall be placed over the entire working face (excluding areas of inert waste) by the end of each operating day and no refuse shall remain exposed overnight. Daily cover shall be a nominal 150 mm thickness of soil, but may also be one of a number of non-soil alternative daily cover (ADC) options of an appropriate thickness where it can be demonstrated that they achieve a comparable level of control with respect to discharges of odour or dust to air, vermin, birds, litter, and visual effects. An equivalent alternative daily cover may be used with the prior certification of the Council.
- 27. Daily and intermediate cover shall be removed by cutting windows through the previous layer of daily cover before refuse placement at the start of each day.
- 28. The consent holder shall take all practicable measures to prevent windblown litter from leaving the active landfilling area. The consent holder shall monitor the site for build-up of litter, paper, plastics and other deposits outside the active landfilling area and remove any such material on at least a weekly basis.
- 29. The level of leachate in the leachate collection pond accepting leachate from Area B shall be managed so that there is at least 1,000 mm freeboard, in order to provide sufficient available capacity to allow for storage during wet weather and potential mechanical failure.
- 30. Any stormwater infrastructure, including ~~D~~ diversion channels and cut-off drains, shall be maintained to minimise infiltration into and run-on of stormwater ~~on~~ into the landfill from areas outside the landfill footprint.

**Commented [LA27]:** Applicants' change - changed for consistency purposes

**Commented [TB28]:** Applicant's change - added to apply to all temporary cover situations

**Commented [LA29]:** Council change - Agreed by Applicants

**Commented [LA30]:** Council change - Agreed by Applicants

31. All stormwater run-off from exposed surfaces shall be treated in the ~~stormwater detention pond~~ Area B Stormwater Pond.

**Commented [LA31]:** Council change – Agreed by Applicants

32. The Consent Holder shall be responsible for the structural integrity and maintenance of the ~~stormwater treatment ponds~~ Area B Stormwater Pond and for any erosion control and energy dissipation works that become necessary as a result of the exercise of this consent. All channels shall be engineered to prevent excessive channel erosion at peak velocities.

**Commented [TB32]:** Council change – Agreed by Applicants

#### Limit Conditions

33. There shall be no objectionable discharge of dust beyond any legal boundary of the subject property.

34. ~~There shall be no offensive or objectionable discharge of odour beyond any legal boundary of the subject property. When assessing whether odour is offensive or objectionable, the Council shall follow the procedures outlined in the Hawke's Bay Regional Resource Management Plan (October 2015, section 6.1.4, pp. 117-118). There shall be no offensive or objectionable discharge of odour beyond any legal boundary of the subject property.~~

**Commented [LA33]:** Council change – Agreed by Applicants

35. No stormwater that has come in contact with ~~refuse any waste material~~ shall be discharged as stormwater, but will be considered as leachate and shall discharge into the leachate ~~treatment/disposal management~~ system.

**Commented [LA34]:** Council change – Agreed by Applicants

**Commented [LA35]:** Council change – Agreed by Applicants

36. The discharge of water from Area B Stormwater Pond shall not cause the clarity in the Upokohino Stream to decrease by more than 20%.

37. The discharge of water from the Area B Stormwater Pond shall not cause any conspicuous oil or grease films, scums or foams, or floatable or suspended material in the Upokohino Stream 50 metres downstream.

#### Monitoring

38. All sample analysis shall be carried out by an independently accredited laboratory. The results of the sampling shall be forwarded to the Council (Manager Compliance) within one month of the sampling results being received.

#### Leachate:

39. The consent holder shall record daily the volume of leachate that has been pumped to the Area B leachate pond and the level of leachate in the pond. The record shall be forwarded to the Council (Manager Compliance) each month.

40. The consent holder shall collect a sample of leachate discharged from Area B in ~~January~~, April, ~~July~~ and October each year and analyse for the determinands set out in Groups 1 and 2, Attachment 3. Results shall be forwarded to the Council (Manager Compliance) within one month of sampling.

**Commented [TB36]:** Council change – opposed by Applicants. Refer Para 80 of Tony Bryce's evidence

41. The consent holder shall collect a sample of leachate discharged from Area B in April each year and analyse for the determinands set out in Group Three, Attachment 3. Results shall be forwarded to the Council (Manager Compliance) within one month of sample results being received.

#### Groundwater:

42. The consent holder shall measure and record water quality in groundwater monitoring wells at bores BC5, BC6, BC7A (until removed as part of landfill construction), BH9, BC9, BC10, and

BC14 during the months of January, April, July and October each year and analyse for the determinands set out in Group One, Attachment 3.

43. The consent holder shall sample the wells specified in condition **Error! Reference source not found.** during the month of April, each year and analyse for the determinands set out in Group Three, Attachment 3.
44. The consent holder shall sample the wells specified in condition 42 during the months of April, and October each year and analyse for the determinands set out in Groups Two, Attachment 3.
45. The consent holder shall measure and record water level in the wells specified in condition 42 during the months of January, April, July and October each year.
46. Results of monitoring required by conditions 42, 43, 44, 45 shall be forwarded to the Council (Manager Compliance) within one month of sample results being received.
47. ~~The Baseline water quality monitoring for all monitoring sites wells shall be established by the consent holder, listed in condition 42 shall be undertaken to establish trigger levels. Trigger levels for those Groups 1 and 2 determinands relevant to potential landfill leachate effects on water quality in downgradient surface water ways shall be established by the consent holder. When each determined listed in conditions 42 and 43 have been analysed on ten occasions the consent holder shall develop trigger levels for all determinands, set as two standard deviations from the mean calculated from the ten baseline samples. The criteria for setting the trigger levels shall be two three standard deviations of the groundwater quality data from the mean calculated from at least ten baseline samples collected prior to waste being accepted at the site, unless alternative trigger levels are agreed with the Council (Manager Compliance) in writing.~~

48. The consent holder shall review all sample results within two weeks of receipt of results and:

- a. Compare Group 1 and Group 2 determinands with trigger levels (as defined in condition 47) to the trigger levels established in condition 47.
- b. Compare Group 3 determinands to relevant drinking water standards or water quality guidelines.

The consent holder shall then undertake the below actions:

- c. If any of the samples exceed any trigger levels or drinking water standards or relevant water quality guidelines the following shall be undertaken:
  - i. A second sample shall be immediately taken from the affected site and analysed for the determinands which have exceeded the trigger levels;
  - ii. Results shall be forwarded to the Council (Manager Compliance) within one week of receipt of results.
- d. If the second sample does not exceed the trigger levels or relevant standards or guideline levels the consent holder shall advise the Council (Manager Compliance) of possible explanations and implications for the exceedances(s).
- e. Should the second sample exceed the relevant trigger levels or relevant standards or guideline levels, a risk assessment report shall be produced by a suitably qualified and experienced independent advisor and provided to the Council (Manager Compliance)

**Commented [LA37]:** Applicants' change - see evidence of Tony Reynolds, para 101

within four weeks of receipt of the second sample results. The assessment shall include the following:

- i. Assessment of the likely source(s) of the contaminant(s) causing the observed trigger level exceedances(s).
  - ii. Risk to the environment.
  - iii. Risk to aquifer users.
  - iv. Proposed remediation measures to be undertaken to minimise the above effects (if necessary).
- f. Undertake reasonable measures to minimise any effects identified in (c).

**Commented [LA38]:** Applicants' change – see evidence of Tony Reynolds, para 100

49. To ensure the ground water samples are representative, ~~before sampling any well it should be purged of three times the well volume or by pumping at a low rate until the conductivity of the purged water stabilised~~ all samples shall be collected using the purge method or low flow sampling methodology and criteria as outlined in the relevant National Environmental Monitoring Standard or equivalent document.

**Commented [LA39]:** Council change – Applicants oppose. This is a standard procedure that would be expected to be included in a monitoring management plan and not a condition of consent

50. The groundwater shall be measured from the top of the casing, and recorded to the nearest 0.01 of a metre, at the time of sampling required by Conditions 42,43,44 and 45. A record of the date, time and water level in each groundwater monitoring well must be kept and results forwarded to the Council as specified in condition 46.

51. The consent holder shall install and maintain groundwater monitoring wells in a satisfactory condition. In the event of a groundwater monitoring well being destroyed or unsuitable for groundwater sampling the consent holder shall replace it with a new well in the same general location, unless otherwise agreed in writing by the Council (Manager Compliance).

*Note: This consent does not authorise the drilling of additional bores. A specific "Bore Permit" must be obtained for each bore by the holder of this consent or their agent.*

52. All sampling shall be carried out by a person suitably qualified and experienced in sampling procedures as authorised by the Council (Manager Compliance).

#### Stormwater:

53. The consent holder shall continuously monitor the inlet flow and the outlet flow to the ~~stormwater pond~~ Area B Stormwater Pond for electrical conductivity (mS/m).

**Commented [LA40]:** Council change – Agreed by Applicants

54. If continuous monitoring results obtained at the pond outlet show electrical conductivity has exceeded the approved trigger level, then a grab sample of the stormwater shall be taken at the point of discharge (outlet) and analysed for the following parameters:

- Temperature °C
- pH;
- Total Ammoniacal Nitrogen; gN/m<sup>3</sup>,
- COD; and gO/m<sup>3</sup>,
- Chloride gCl/m<sup>3</sup>.

55. If the results of any samples obtained from ~~stormwater pond system~~ the Area B Stormwater Pond show ~~that~~ leachate contamination or contamination by other pollutants associated with the consent holder's operations ~~is occurring~~, then the discharge from the ~~stormwater ponds outlet~~ Area B Stormwater Ponds shall be ceased immediately. The following shall then occur:

- Further testing of the stormwater shall be undertaken to characterise the contamination;

- Downstream testing (of the Farm Drain and Upokohino Stream) shall be conducted to determine whether any contamination has been discharged from or escaped the stormwater pond;
- An investigation shall be undertaken to determine the source of the contamination;
- Measures shall be put into place to prevent further contamination; and
- Discharges of stormwater from the relevant treatment device Area B Stormwater Pond shall not recommence until electrical conductivity at the point of discharge no longer indicates that contamination is occurring the presence of leachate contamination or other pollutants associated with the consent holder's operations.

**Commented [LA41]:** Council change – Accept by Applicants subject to the proposed changes in green.

56. The Consent Holder shall sample water at a point entering the Area B stormwater Treatment pond and the discharge outlet from the Area B treatment pond once a month when flow is present and determine the following: collect water samples from both the point entering and discharging from the Area B Stormwater Pond. Water samples shall be collected when a flow is present, and at least monthly. The following shall be assessed:

If contamination is shown in the SW pond downstream monitoring in the Farm Drain (in addition to Upokohino Stream) has been proposed by Council. The farm drain is likely to be of very poor quality and there will no baseline data for determining potential additional contamination.

- Estimate of flow at the time of sampling
- pH
- Conductivity
- Absorbance
- Total Organic Carbon
- Chloride
- Potassium
- Ammoniacal nitrogen
- Nitrate nitrogen
- Total phenols
- Total suspended solids
- Total and dissolved heavy metals (AL, AS, B, Cd, Cr, Co, CU, Fe, Pb, Mn, Ni, Hg, Zn).

**Commented [LA42]:** Council change – Agreed by the Applicants

Monitoring of the Upokohino Stream, for the purpose of determining compliance with Condition 36 55 for visual clarity, shall be undertaken at the same time as the Area B Stormwater Pond sampling specified in Condition 56.

**Commented [LA43]:** Council change – Agreed by the Applicants

57. If runoff from areas of landfill cap on which leachate is being irrigated discharge to water diverted via the by-pass from the Area B site the consent holder shall sample at monthly intervals and analyse the following; The Consent Holder shall collect stormwater runoff from areas where leachate is irrigated onto land. Water shall be collected immediately upstream of the by-pass around the Area B Stormwater Pond; samples shall be collected at least at monthly intervals and when water is flowing. The consent holder shall sample at monthly intervals when water is flowing and analyse for the following:

**Commented [LA44]:** Council change – Agreed by the Applicants. Cross referencing corrected to condition 36

- Conductivity
- Ammoniacal nitrogen
- Chloride
- pH
- COD

**Commented [LA45]:** Council change – Agreed by the Applicants subject to edits in green

**Advice Note:** Routine sampling shall start once leachate irrigation commences. Should the runoff be from areas recently irrigated with leachate (within the last XX14 days), then monitoring shall include the full suite of parameters as outlined in Condition 56.

**Commented [LA46]:** Council change – Agreed by the Applicants

**Commented [LA47]:** Council change – Agreed by the Applicants

57b. If the monitoring at the by-pass shows that leachate contamination or other pollutants associated with the consent holder's operations is occurring, then the untreated discharge

of stormwater runoff from areas of landfill cap on which leachate is being irrigated to the bypass shall cease immediately. The following shall then occur:

- Further testing of stormwater runoff shall be undertaken to characterise the contamination;
- Downstream testing shall be conducted to determine whether any contamination has been discharged to downstream surface water bodies (the Farm Drain and Upokohino Stream);
- An investigation shall be undertaken to determine the source of the contamination;
- Measures shall be put into place to prevent further contamination; and

The diversion of runoff from areas of landfill cap on which leachate has been irrigated shall not recommence until subsequent sampling indicates that contamination is no longer occurring.

**Commented [LA48]:** Council change – Agreed by the Applicants subject to edits in green.

58. The consent holder shall undertake a programme of baseline monitoring to characterise water quality conditions in the Upokohino Stream receiving environment the prior to construction commencing. As a minimum the baseline monitoring programme shall include:

- a. Establishment of water quality monitoring sites on the Upokohino Stream upstream of the discharge point to the stream, 50 m downstream of the discharge point and 500 m downstream of the discharge point.
- b. Collection of water quality samples from the above sites on six ten occasions, three five targeting dry weather and three five targeting wet weather conditions.
- c. Analysis of water quality samples by an IANZ accredited laboratory for the following parameters:
  - Suspended solids
  - Turbidity
  - pH
  - Conductivity
  - Total Organic Carbon
  - Chloride
  - Potassium
  - Ammoniacal nitrogen
  - Nitrate nitrogen
  - Total phenols
  - Total suspended solids
  - Heavy metals (AL, AS, B, Cd, Cr, Co, CU, Fe, Pb, Mn, Ni, Hg, Zn).

**Commented [LA49]:** Applicants' change. Changed for consistency with condition 59(b)

59. The Consent Holder shall prepare Stormwater Receiving Environment Monitoring Plan (SREMP) for technical certification, by an independent and suitably qualified freshwater ecologist, following completion of the baseline monitoring. The SREMP shall include but not be limited to:

- a. The results of the baseline monitoring undertaken in accordance with Condition 4658.
- b. The baseline water quality for all monitoring sites listed in condition 58 shall be undertaken used to establish trigger levels. Trigger levels for suspended sediment effects on water quality in Upokohino Stream shall be established by the consent holder. The criteria for setting the trigger levels shall be two standard deviations of the baseline data from the mean calculated from at least ten-baseline samples collected prior to construction, unless alternative trigger levels are agreed with the Council (Manager Compliance) in writing.
- c. Construction phase monitoring of the Upokohino Stream comprising water quality sampling at the three Upokohino Stream sites sampled in the baseline monitoring programme and the discharge from the stormwater treatment system. Samples shall be collected at

**Commented [LA50]:** Council change – Agreed by the Applicants

**Commented [LA51]:** Council change – Agreed by the Applicants subject to edits in green.

approximately quarterly intervals when a discharge is occurring and analysed for total suspended solids and turbidity.

- d. Operational phase monitoring of the Upokohino Stream comprising water quality sampling at the three Upokohino Stream sites sampled in the baseline monitoring programme and the discharge from the stormwater treatment system. Samples shall be collected at approximately quarterly intervals when a discharge is occurring and analysed for the parameters listed in Condition 4758(c) above.
- e. Annual instream sediment quality and macroinvertebrate monitoring undertaken at the established Upokohino Stream sites. Sediment samples shall be analysed by an IANZ accredited laboratory for total recoverable heavy metals (AL, AS, B, Cd, Cr, Co, CU, Fe, Pb, Mn, Ni, Hg, Zn).
- f. The anticipated adaptive management responses should the monitoring identify adverse effects in the Upokohino Stream and consider the potential for adverse effects in downstream receiving environments (Tutaekuri River and Lake Te Rotokare) due to the stormwater discharge.
- g. ~~The adaptive management plan should include an algal cyanobacteria bloom response plan, this response plan should outline steps the Applicant will do in the event of an algal bloom including testing and mitigation/management.~~
- h. Reporting and review SREMP review requirements.

**Commented [LA52]:** Council change – Agreed by the Applicants

**Commented [LA53]:** Council change – Agreed by the Applicants subject to changes in green.

**Commented [LA54]:** Council change – opposed by Applicants. See evidence of Dean Miller, para 55 and recommended addition to Condition 6

#### Subsoil drainage:

60. The consent holder shall sample the discharge from the subsoil drains beneath the lining system (if installed) at the downstream extent of the drainage system, prior to mixing with surface water. Sampling shall occur during the months of January, April, July and October each year and analysed for the following:
  - a. Electrical conductivity; mS/m
  - b. Temperature °C
  - c. pH;
  - d. Total Ammoniacal Nitrogen; gN/m<sup>3</sup>,
  - e. Nitrate Nitrogen; gN/m<sup>3</sup>
  - f. Total Nitrogen; gN/m<sup>3</sup>
61. All sampling shall be carried out by a person suitably qualified and experienced in sampling procedures as authorised by the Council (Environmental Regulation Section). The results of the sampling shall be forward to the Council (Environmental Regulation Section) within one month of the sampling results being received.

**Commented [LA55]:** Council change –opposed by Applicants. Refer to Para 80 in tony Bryce’s evidence

#### Reporting

62. The Consent Holder shall provide to the Council an Annual report by 30 November each year providing the following:
  - a. Surface water monitoring results for the year as required by Conditions 21 and 22 55, 56 and 57 with a comparison of the results with trigger levels and any relevant water quality guidelines;
  - b. An interpretation of the surface water monitoring results, including compliance with Condition 22; and
  - c. Contingency measures undertaken to address any exceedances over the reporting period.
  - d. Leachate monitoring results for the previous year’s results (November to October) as required in conditions 40 and 41.
  - e. Groundwater monitoring results for the previous year (November to October) as required with a comparison of the results with trigger levels and any relevant drinking water standards or water quality guidelines;

**Commented [LA56]:** Council change – accepted by Applicants

**Commented [LA57]:** Council change – accepted by the Applicants



- f. An interpretation of the results;
- g. Contingency measures undertaken to address any exceedances over the reporting period.

**Closure**

- 63. Not less than six months prior to completion of filling Area B the consent holder shall provide the Council (Manager Compliance) for approval a Closure and Aftercare Plan addressing at least the following issues:
  - a. Responsibilities for aftercare;
  - b. Final contours;
  - c. Capping and revegetation;
  - d. Operation and management of leachate management systems;
  - e. Responsibilities for ongoing monitoring, including groundwater and landfill capping.

### Air discharge consent – LFG combustion from Areas A, B and D.

1. The consent holder shall undertake all operations generally in accordance with any drawings, specifications, statements of intent, proposed mitigation measures and other information supplied to the Regional Council in relation to this resource consent. Specifically, this includes the following documents:
  - a. Resource consent application to change conditions of consent, received by Regional Council December 2019, including Omarunui Landfill – Area B – Assessment of Effects on the Environment, dated December ~~2020~~ 2019.
  - b. Omarunui Landfill – Area B: Further Information (s92 RMA), report prepared for Hastings District Council by Tonkin & Taylor, August 2004.
  - c. Omarunui Landfill – Area B: Further Information (s92 RMA), report prepared for Hastings District Council by Tonkin & Taylor, September 2020.
  - d. Omarunui Landfill Operations and Maintenance Manual prepared by Stantec Ltd for Hastings District Council updated in accordance with condition 2 below.

Commented [LA58]: Applicants' change

Commented [LA59]: Applicants' change

Commented [LA60]: Applicants' change

### Operation and Maintenance

2. Within six months of the commencement of this consent the consent holder shall update the Landfill Operations and Maintenance Manual to ensure that it is consistent with the conditions of this consent and shall provide certification of such actions to Council. In particular, the O&M Manual shall describe:
  - a. Weather monitoring
  - b. The process and timing for installing landfill gas collection systems, to provide extraction as soon as practicable, including methods to achieve compliance with condition 5.
  - c. Contingency measures to respond to odour events
  - d. Management of putrescible and odorous wastes
  - e. Typical contingency measures for responding to exceedances of trigger levels
3. The consent holder shall cover the refuse at the landfill at the end of each working day.
4. The consent holder shall install and maintain a landfill gas collection and combustion system that meets the flaring requirements in the Resource Management (National Environmental Standards Relating to Certain Air Pollutants, Dioxins and Other Toxics) Regulations. ~~The consent holder shall maximise the quantity of landfill gas collected, taking account of the nature of the final capping.~~
5. ~~The consent holder shall design, install and manage the landfill gas collection system to optimise the gas collection quantity as early as possible from placement of waste.~~
6. The concentration of methane at the surface of landfill area with intermediate or final cover shall not exceed 5,000 parts of methane per million parts of air in accordance with Regulation 26(2)(a) of the Resource Management (National Environment Standards for Air Quality) Regulations 2004 (NESAQ).
7. The principal flare shall be operated and maintained in accordance with protocols set out in Regulation 27 of the Resource Management (National Environmental Standards Relating to Certain Air Pollutants, Dioxins, and Other Toxics) Regulations 2004.
8. A principal flare ~~shall~~ must be operated ~~and operated~~ at all times unless it has malfunctioned or is shut down for maintenance or all of the gas is being utilised for generating electricity.

Commented [LA61]: Council change – Accepted by Applicants

Commented [LA62]: Council change – Accepted by Applicants

Commented [LA63]: Council change – opposed by Applicants. Covered by Condition 6, bullet point 4 in the Air Discharge conditions for Area B

Commented [LA64]: Council change – Accepted by Applicants

Commented [LA65]: Council change – Accepted by Applicants

9. A backup flare must be operated if, and only if, a principal flare is not operating and the gas is not being utilised for generating electricity. The system for the backup flare must comply with [NESAO](#) Regulation 27 (3) a-d.

**Commented [LA66]:** Council change – Accepted by Applicants

10. The consent holder shall ensure that maintenance of the [landfill gas](#) collection and destruction system occurs at least every six months. This maintenance shall ensure that all mechanical, electrical and process components of the system are functioning properly. The results of these maintenance checks shall be forwarded to the Hawke’s Bay Regional Council (Environmental Regulation) within one month of the maintenance check being carried out.

**Commented [LA67]:** Council change – Accepted by Applicants

#### Monitoring

11. A walkover site inspection within the landfill footprint shall be undertaken no less frequently than weekly. Any evidence of actual or potential landfill gas leaks, such as odour, cracks in the landfill surface, gas bubbles, leaks in the gas extraction system or vegetation damage shall be investigated. Where necessary remedial action shall be undertaken as soon as practicable to minimise fugitive gas discharges.

12. The Consent Holder shall carry out continuous landfill gas monitoring as follows: At the inlet to the flare or gas engine:

- a. Gas flow rate
- b. Methane (%)
- c. Carbon dioxide (%)
- d. Oxygen (%)

Within the flare:

- e. Temperature of combusted gas within the flare

#### Reporting

13. The consent holder shall provide to the Council an Annual report by 30 November each year providing the following:

- a. Landfill gas monitoring results for the year as required in condition [12](#);
- b. An interpretation of the results; and
- c. Contingency measures or action taken to address any fugitive gas discharges, [and/or optimise landfill gas capture rates.](#)

**Commented [LA68]:** Council change – Accepted by Applicants

**Commented [LA69]:** Council change – Accepted by Applicants

14. The consent holder shall nominate a person who is responsible for the maintenance of the [landfill](#) gas collection and destruction system and the return of information (as required by condition 13). The consent holder shall advise the Hawke’s Bay Regional Council (Environmental Regulation) who this person is within two months of the commencement of this consent. If the nominated person changes then the Regional Council shall be notified of this change within ten working days of the change occurring.

**Commented [LA70]:** Council change – Accepted by Applicants

## Draft amendments to Air Discharge Consent AUTH-113990-03

Deletions are shown as ~~strike through~~, additions are underlined.

### Purpose

To discharge the following contaminants into the air from Areas A and D of the Omarunui Landfill:

- i. Odour and landfill gas derived from the decomposition of refuse, and
- ii. Dust,
- iii. ~~The products of controlled combustion of landfill gas.~~

### General

1. The consent holder shall undertake all operations generally in accordance with any drawings, specifications, statements of intent, proposed mitigation measures and other information supplied to the Regional Council in relation to this resource consent. Specifically, this includes the following documents:
  - a. Omarunui Landfill Development: Assessment of Effects on the Environment, report prepared for Hastings District Council by Tonkin & Taylor, April 2004.
  - b. Omarunui Landfill Development: Further Information (s92 RMA), report prepared for Hastings District Council by Tonkin & Taylor, August 2004.
  - c. Landfill Procedures Manual LFP 13, LFP 19 & LFP 12, Hasting District Council and Napier City Council: Omarunui Landfill Operations and Maintenance Manual prepared by Hastings District Council updated in accordance with condition 6 below.
  - d. ~~Resource consent application to change conditions of consent, received by Regional Council on 15 July 2013, including Assessment of Environmental Effects of Proposed Change of Consent Conditions, dated 10 July 2013, T&T Ref: 23254.004, addressed to Martin Jarvis, prepared by Brent Kennedy, Senior Environmental Scientist of Tonkin and Taylor Limited.~~
  - e. [...]

Where a conflict arises between any conditions of this consent and the application, the conditions of this consent will prevail.

### Limit Conditions

2. There shall be no objectionable discharge of dust beyond any legal boundary of the subject property. The consent holder shall operate the landfill in such a manner that the generation of dust is kept to a practicable minimum.
3. There shall be no offensive or objectionable discharge of odour beyond any legal boundary of the subject property. When assessing whether odour is offensive or objectionable, the Council shall follow the procedure outlined in the Proposed Regional Resource Management Plan (June 2010, section 6.1.4 pages 143-1445).
4. The concentration of methane in monitoring probes outside the landfill footprint shall not exceed 1.25% by volume.
5. The concentration of methane at the surface of the landfill areas with intermediate or final cover shall not exceed 0.5% by volume.

### Operation and Maintenance

6. Within six months of the commencement of this consent the consent holder shall update the Landfill Procedures Manual Omarunui Landfill Operations and Maintenance Manual to ensure that it is consistent with the conditions of this consent and shall provide certification of such actions to Council.

**Commented [LA71]:** Applicants' change - reference updated to O & M Manual

**Commented [LA72]:** Applicants' change - out of date reference.

**Commented [LA73]:** Applicants' change - updated to refer to O & M manual

7. The consent holder shall cover the refuse at the landfill at the end of each working day.
8. The consent holder shall maximise the quantity of landfill gas collected, taking account of the nature of the final capping.
9. ~~The flare shall be operated and maintained in accordance with protocols set out in Regulation 27 of the Resource Management (National Environmental Standards Relating to Certain Air Pollutants, Dioxins, and Other Toxics) Regulations 2004 (Attachment 2). Any electricity generator shall comply with clauses (a) to (c) of Regulation 27.~~
10. ~~A principal flare must be operated at all times unless it has malfunctioned or is shut down for maintenance of the gas is being utilised for generating electricity.~~
11. ~~A backup flare must be operated if, and only if, a principal flare is not operating or the gas is not being utilised for generating electricity. The system for the backup flare must comply with Regulation 27 (2) a-d (Attachment 2).~~
12. ~~The consent holder shall ensure that maintenance of the collection and destruction system occurs at least every six months. This maintenance shall ensure that all mechanical, electrical and process components of the system are functioning properly. The results of these maintenance checks shall be forwarded to the Hawke's Bay Regional Council (Environmental Regulation) within one month of the maintenance check being carried out~~

#### **Monitoring**

13. The consent holder shall ensure the surface emissions of landfill gas are monitored during the months of January, April, July and October for percentage (%) methane. Sampling shall be undertaken generally in accordance with the sampling protocols set out in the Ministry for the Environment National Environmental Standards: Control of Landfill Gas 2004 (Attachment 3).
14. ~~The consent holder shall carry out landfill gas monitoring at a point incoming to the flare during the months of January, April, July and October and record the following:~~
  - a. ~~Date and time that monitoring started and finished~~
  - b. ~~Gas flow rate~~
  - c. ~~Gas pressure Barometric pressure~~
  - d. ~~Methane (%)~~
  - e. ~~Carbon dioxide (%)~~
  - f. ~~Oxygen (%)~~
  - g. ~~Gas temperature~~
  - h. ~~Ambient temperature~~
15. A maximum of five monitoring probes shall be installed at representative locations outside of the landfill footprint area in order to assess compliance with condition 13.
16. The consent holder shall measure and record methane concentrations in each of the monitoring probes outside the landfill footprint area during the months of January, April, July and October to demonstrate compliance with condition 13.

#### **Reporting**

17. The consent holder shall provide to the Council an Annual report by 30 November each year providing the following:

- a. Landfill gas monitoring results for the year as required in condition 13;
- b. An interpretation of the results; and
- c. Contingency measures or action taken to address any fugitive gas discharges.

18. The consent holder shall nominate a person who is responsible for the maintenance of the gas collection and destruction system and the return of information (as required by condition 13). The consent holder shall advise the Hawke's Bay Regional Council (Environmental Regulation) who this person is within two months of the commencement of this consent. If the nominated person changes then the Regional Council shall be notified of this change within ten working days of the change occurring.

19 The consent holder shall log all odour complaints received. The log shall include:

- a. The date and time of the complaint;
- b. The nature of the complaint;
- c. The name, telephone number, and address of the complainant;
- d. Weather information (an estimate of wind speed and direction);
- e. Details of key operating parameters at the time of the complaint.

Complaints shall be reported to the Council immediately and the log of complaints shall be made available to the Council on request.

## Draft amendments to Leachate Discharge Consent AUTH-122021-01

Deletions are shown as ~~strike through~~, additions are underlined

1. The consent holder shall undertake all operations generally in accordance with any drawings, specifications, statements of intent, proposed mitigation measures and other information supplied as part of the application for this resource consent. Specifically this includes the following documents:
  - a. Report: "Omarunui Landfill Leachate Irrigation: Assessment of Effects on the Environment", prepared for Hastings District Council by Tonkin & Taylor, February 2016, Job no. 24488.3000 and as modified by the report Omarunui Landfill Area B – Assessment of Effects on the Environment, dated December 20~~2019~~.
  - b. Site Plan: "~~Area A Leachate Irrigation Omarunui Landfill~~ Omarunui Landfill Area B Development Leachate Irrigation Areas", Drawn by: Tonkin + Taylor, Dwg No. 1000647.1000-31 Project No. 24488.300, attached as Appendix 1.

Where a conflict arises between any conditions of this consent and the application, the conditions of this consent will prevail.

2. All works and structures relating to this consent shall be installed and maintained to conform to best engineering practices.
3. After completion of installation of the leachate system (irrigation system), the consent holder shall provide the Council (Manager Compliance) with an 'as built' plan of the fixed components of the leachate discharge system and a site plan that clearly shows its location, layout and all setback distances from the surface water bodies detailed by Condition 4.
4. The consent holder shall ensure that no leachate is applied using surface irrigation within 10 metres of any stormwater drain, overland flow paths or other surface water body.
5. Leachate shall be applied at a rate and in a manner which does not cause ponding within the leachate irrigation area or run-off from the leachate irrigation area to the extent that it causes the contamination of surface water (including stormwater).
6. The consent holder shall update the Omarunui Landfill Operation and Maintenance Manual to describe the operation of the leachate irrigation system in accordance with this consent. In particular, the O&M Manual shall describe:
  - a. Procedures for avoiding run-off to surface water drains
  - b. Procedures for the control of irrigation to prevent wind drift of leachate to surface water drains.
  - c. The use of soil moisture probes as a management tool for operating the irrigation field to inform the level of irrigation that is appropriate on any day.
7. The consent holder shall prepare and submit to the Council (Manager Compliance) a leachate irrigation monitoring and record keeping plan. This plan shall, to the satisfaction of the Council (Manager ~~Resource Use Compliance~~), include but not be limited to the following monitoring and record keeping:
  - a. Measurement and recording of ~~daily rainfall~~ weather conditions at the site, including temperature, rainfall, barometric pressure wind velocity and wind direction;
  - b. Volume of leachate ~~pumped from the reservoir~~ irrigated each day;
  - c. Records of areas irrigated each day;
  - d. Visual inspections for any overland flow (that may contaminate stormwater) in the irrigation area each day.

Commented [LA74]: Applicants' change

Commented [LA75]: Council change – Accepted by Applicants

- e. Visual inspections of the leachate irrigation system to ensure it is being maintained to prevent leachate leakages and the irrigation pods are calibrated to ensure that application rates are appropriate to prevent ponding.
  - f. Annual soil permeability and soil sodium concentration monitoring within the irrigation area and non-irrigated area. The frequency of this monitoring will be reviewed after three years upon which it may be reduced with agreement from Hawke's Bay Regional Council. This monitoring shall include:
    - i. A representative composite sample collected at 6 locations within the irrigated area and assessed for ESP (exchangeable sodium percentage) and compared to non-irrigated areas.
    - ii. At least 6 3 cores collected for top soil and 6 3 cores for subsoil  $K_{sat}$  and  $K_{40}$  analysis and compared to non-irrigated areas.
  - g. Monitoring of surface drains once per month during rainfall downstream of irrigation areas.
  - h. Sampling of any flow in stormwater drains that occurs during dry weather conditions.
8. For the duration of the discharge, the consent holder shall undertake monitoring and record keeping in accordance with the monitoring plan submitted in accordance with condition 6 and this information shall be made available to Council upon request.
  9. In the event that monitoring undertaken in accordance with the monitoring plan, required by condition 7, indicates that leachate has entered stormwater, the consent holder shall:
    - a. Take all practicable steps to prevent any further contamination of the stormwater system occurring; and
    - b. Report to the Council, in writing and within 7 days of obtaining the monitoring data which identified the event, describing the manner and cause of the event and the steps taken to control it and prevent its recurrence.
  10. That where contaminants associated with the discharge of leachate to land accidentally escape to water the consent holder shall:
    - a. Immediately take all practicable steps to contain and then remove the contamination from the environment; and
    - b. Immediately notify the Council of the escape; and
    - c. Report to the Council, in writing and within 7 days, describing the manner and cause of the escape and steps taken to control it and prevent its recurrence.
  11. The consent holder shall ensure that any staff member of contractor engaged to operate the leachate irrigation system is made aware of the conditions of this consent.
  12. The consent holder shall ensure that any Standard Operating Procedures and/or any process procedures manual for the landfill will be updated and amended to reflect the requirements of this consent. Prior to the discharge commencing, the consent holder shall provide confirmation in writing to the Council (Manager Compliance) that these actions have been undertaken.
  13. The consent holder shall engage an independent, suitably experienced and qualified person to undertake an assessment of emerging contaminants (in soil and runoff) every 5 years.

**Commented [TB76]:** Council change – opposed by Applicant. Provides appropriate means for reviewing frequency.

**Commented [TB77]:** Council change – accepted by Applicant except permeability samples to number 3 in each layer in accordance with the Applicant's s92 response.

**Commented [LA78]:** Council change – Accepted by Applicants



Leachate Monitoring Determinands referred to in Conditions Above:

<b>GROUP ONE</b>		
<b>Determinand</b>	<b>Units</b>	<b>Detection limit</b>
Dissolved Oxygen	g/m <sup>3</sup>	on site
pH (field and laboratory)		0.2
Conductivity (field and laboratory)	mS/m	0.1
Absorbance	AU	0.002
Chloride	g/m <sup>3</sup>	0.5
Potassium	g/m <sup>3</sup>	0.05
Total Organic Carbon	g/m <sup>3</sup>	0.5
Ammoniacal Nitrogen	g/m <sup>3</sup>	0.01
Nitrate-Nitrogen	g/m <sup>3</sup>	0.002
Volatile fatty acids (total)	g/m <sup>3</sup>	0.5
Chemical Oxygen Demand (COD)	g/m <sup>3</sup>	6.0
Alkalinity (as CaCO <sub>3</sub> )	g/m <sup>3</sup>	1
<b>GROUP TWO</b>		
<b>Determinand</b>	<b>Units</b>	<b>Detection limit</b>
Biochemical Oxygen Demand (BOD <sub>5</sub> )	g/m <sup>3</sup>	1.0
Sodium	g/m <sup>3</sup>	0.02
Calcium	g/m <sup>3</sup>	0.05
Magnesium	g/m <sup>3</sup>	0.02
Sulphate	g/m <sup>3</sup>	0.5
Sulphide	g/m <sup>3</sup>	0.002
Total Kjeldahl Nitrogen	g/m <sup>3</sup>	0.1
Dissolved Reactive Phosphorus	g/m <sup>3</sup>	0.004
Total Phosphorus	g/m <sup>3</sup>	0.004
Total Phenols	g/m <sup>3</sup>	0.002
Total CN	g/m <sup>3</sup>	0.001
Al (See Footnote for method) <sup>a</sup>	g/m <sup>3</sup>	0.003
As (See Footnote for method) <sup>a</sup>	g/m <sup>3</sup>	0.001
B (See Footnote for method) <sup>a</sup>	g/m <sup>3</sup>	0.005
Cd (See Footnote for method) <sup>a</sup>	g/m <sup>3</sup>	0.00005
Co (See Footnote for method) <sup>a</sup>	g/m <sup>3</sup>	0.0002
Cr (See Footnote for method) <sup>a</sup>	g/m <sup>3</sup>	0.0005
Cu (See Footnote for method) <sup>a</sup>	g/m <sup>3</sup>	0.0005
Fe (See Footnote for method) <sup>a</sup>	g/m <sup>3</sup>	0.02
Mn (See Footnote for method) <sup>a</sup>	g/m <sup>3</sup>	0.0005
Ni (See Footnote for method) <sup>a</sup>	g/m <sup>3</sup>	0.0005
Pb (See Footnote for method) <sup>a</sup>	g/m <sup>3</sup>	0.0001
Hg (See Footnote for method) <sup>a</sup>	g/m <sup>3</sup>	0.00008
Se (See Footnote for method) <sup>a</sup>	g/m <sup>3</sup>	0.001
Zn (See Footnote for method) <sup>a</sup>	g/m <sup>3</sup>	0.001
<b>GROUP THREE</b>		
Volatile Organic Compounds (VOC)	g/m <sup>3</sup>	0.003 – 0.02 <sup>b</sup>
Semi Volatile Organic Compounds (SVOC)	g/m <sup>3</sup>	0.003 – 0.02 <sup>b</sup>
Pentachlorophenol (PCP) (leachate only) <sup>c</sup>	g/m <sup>3</sup>	0.0003
Polychlorinated biphenyls (PCB) (leachate only) <sup>c</sup>	g/m <sup>3</sup>	0.0001
Organonitrogen & Organophosphorus (ONOP) pesticides (leachate only) <sup>c</sup>	g/m <sup>3</sup>	varies



## Proposed Air Discharge Consent for Area B - AUTH-127503-01

### Purpose

To discharge the following contaminants into the air from Areas B of the Omarunui Landfill:

- i Odour and landfill gas derived from the decomposition of refuse, and
- ii Dust.

### General

- 1 The consent holder shall undertake all operations generally in accordance with any drawings, specifications, statements of intent, proposed mitigation measures and other information supplied to the Regional Council in relation to this resource consent. Specifically this includes the following documents.
  - a Resource consent application to change conditions of consent, received by Regional Council December 2019, including Omarunui Landfill – Area B – Assessment of Effects on the Environment, dated December 202019.
  - b Omarunui Landfill – Area B: Further Information (s92 RMA), report prepared for Hastings District Council by Tonkin & Taylor, August 2020.
  - c Omarunui Landfill Operations and Maintenance Manual prepared by Hastings District Council updated in accordance with condition 6 below.

Commented [LA79]: Applicants' change

Commented [LA80]: Applicants' change

Where a conflict arises between any conditions of this consent and the application, the conditions of this consent will prevail.

### Limit Conditions

- 2 There shall be no objectionable discharge of dust beyond any legal boundary of the subject property. The consent holder shall operate the landfill in such a manner that the generation of dust is kept to a practicable minimum.
- 3 Beyond the boundary of the site there shall be no offensive or objectionable odour caused by discharges from the landfill operations on the site.

#### Advice Note:

When assessing whether odour is offensive or objectionable, the Council shall follow the procedure outlined in the Hawke's Bay Regional Resource Management Plan (June 2010, section 6.1.4 pages 117-118).

- 4 The concentration of methane in monitoring probes outside the landfill footprint shall not exceed 1.25% by volume.
- 5 The concentration of methane at the surface of the landfill areas with intermediate or final cover shall not exceed 0.5% by volume.

### Operation and Maintenance

- 6 Within six months of the commencement of this consent the consent holder shall update the O & M Manual to ensure that it is consistent with the conditions of this consent and shall provide certification of such actions to Council. In particular, the O&M Manual shall include procedures relating to the following:
  - Advance notification, identification and management of odorous and putrescible waste loads.
  - Tipping and placement of waste at the active working face, including minimisation of working face area, exclusion of odorous waste where practicable and application of daily cover.

- Application and maintenance of cover materials to minimise odour emissions from filled areas.
  - Installation, operation and maintenance of landfill gas collection and treatment systems, including timing of installation to provide extraction as soon as practicable.
  - Collection, storage and recirculation of leachate.
  - Monitoring of landfill operations to minimise untreated odour and landfill gas releases.
  - Contingency measures to respond to release of odour or landfill gas events.
- 7 The working face of the daily waste cell shall be kept to a practicable minimum and shall not exceed 1,200 m<sup>2</sup>.
- 8 Daily cover shall be placed over the entire working face (excluding areas of inert waste) by the end of each operating day and no refuse shall remain exposed overnight. Daily cover shall be a nominal 150 mm thickness of soil, but may also be one of a number of non-soil alternative daily cover (ADC) options of an appropriate thickness where it can be demonstrated that they achieve a comparable level of control with respect to discharges of odour or dust to air, vermin, birds, litter, and off-site visual effects. An equivalent alternative daily cover may be used with the prior certification of the Council.
- 9 Daily cover shall be removed by cutting windows through the previous layer of daily cover before refuse placement at the start of each day.
- 10 The consent holder shall install a gas collection and flaring system in accordance with *Resource Management (National Environmental Standards Relating to Certain Air Pollutants, Dioxins and Other Toxics) Regulations 2004*. The consent holder shall maximise the quantity of landfill gas collected, taking account of the nature of the final capping.

#### **Monitoring**

- 11 The consent holder shall ensure the surface emissions of landfill gas are monitored during the months of January, April, July and October for percentage (%) methane. Sampling shall be undertaken generally in accordance with the sampling protocols set out in the *Ministry for the Environment National Environmental Standards: Control of Landfill Gas 2004* (Attachment 3).
- 12 The consent holder shall measure and record methane concentrations in each of the monitoring probes outside the landfill footprint area during the months of January, April, July and October to demonstrate compliance with condition 11.

#### **Reporting**

- 13 The consent holder shall provide to the Council an Annual report by 30 November each year providing the following:
- a Landfill gas monitoring results for the year as required in condition 12;
  - b An interpretation of the results; and
  - c Contingency measures or action taken to address any fugitive gas discharges.
- 14 The consent holder shall nominate a person who is responsible for the maintenance of the gas collection and destruction system and the return of information (as required by condition 11). The consent holder shall advise the Hawke's Bay Regional Council (Environmental Regulation) who this person is within two months of the commencement of this consent. If the nominated person changes then the Regional Council shall be notified of this change within ten working days of the change occurring.
- 15 The consent holder shall log all odour complaints received. The log shall include:
- i The date and time of the complaint;

- ii The nature of the complaint;
- iii The name, telephone number, and address of the complainant, where available;
- iv Weather information (an estimate of wind speed and direction);
- v Details of key operating parameters at the time of the complaint.

Complaints shall be reported to the Council immediately and the log of complaints shall be made available to the Council on request

