

## 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 Philip Jeffery Doolan on behalf of Hastings District Council and  
Napier City Council (Landfill Operation and Management)**

Dated 2 September 2021

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### INTRODUCTION

1. My full name is Philip Jeffrey Doolan. I have been the Solid Waste Engineer for Hastings District Council (**HDC**) since 2013, and am responsible for managing the Ōmarunui Landfill (**Landfill**). In addition to that primary role, I manage five closed landfills and up until late 2019 managed two refuse and recycling transfer stations, as well as the kerbside recycling and refuse collection contracts for HDC.
2. I have 20+ years' experience as a Civil Engineer and worked in the contracting and principal fields. Prior to my employment at HDC, I held various engineering roles, including Senior Project Engineer for Shadforths Civil Engineering Contractors in Queensland, Australia, Department Manager Construction for Fulton Hogan in Napier, and Project Engineer for Carmichael UK. I hold a New Zealand Certificate in Engineering (Civil) and STMs level 1 in Traffic Management.
3. My evidence is given in support of the planning approvals which are being sought to authorise the operation of the Landfill in Area B, specifically:

- (a) An application by HDC and Napier City Council (**NCC**), as owners of the Landfill, for regional consents from Hawke’s Bay Regional Council (**HBRC**); and
  - (b) A notice of requirement by HDC as requiring authority to Hastings District Council in its regulatory capacity to alter Designation D123 – Ōmarunui Landfill in the Hastings District Plan.
4. I refer to HDC in its capacity as requiring authority and applicant, and NCC as applicant, together as the **Applicants**, and the application and notice of requirement together as the **Proposal**.
5. I confirm I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2014. To the extent it is relevant to my evidence as an officer of HDC, my evidence has been prepared in compliance with that Code.
6. I am authorised to give this evidence on behalf of the Applicants.

#### **SCOPE OF EVIDENCE**

7. My evidence provides an overview of how the Landfill operates, and how the expansion into Area B will proceed, in particular:
- (a) Key components of the Landfill site and operations
  - (b) An overview of the process of receiving and disposing of waste at the Landfill
  - (c) Comment on odour management at the Landfill.
8. While I have read the submissions and s 42A reports prepared on the application, all issues are addressed by the evidence of others, and I make no specific comment on those matters.

#### **KEY COMPONENTS OF THE LANDFILL SITE**

9. The landfill site is located within Hastings District off Ōmarunui Road approximately 5 km to the west of Taradale, 13 km south-west of the centre of Napier and 12 km north-west of the centre of Hastings. The site is located to the west of the Tutaekuri River and is between Ōmarunui Road and Swamp Road.
10. The entire Ōmarunui Landfill site, which has been designated for landfill activities under the Hastings District Plan, covers an area of 150 ha. The area currently used

for landfilling is Area D at 10 ha. Area A was the first area used, prior to Area D, and is now fully capped with a grass vegetation cover and is 41ha. An area of approximately 50 ha is currently being used for agro-forestry development, which will be harvested and replanted once the planted trees have reached sufficient maturity. The remainder of the site is stock fenced and leased for stock grazing.

11. There are five valleys on the site, known as Areas A, B C and D that were previously identified for landfilling in the original consent applications in 1984. Valley E was subsequently approved to accept clean fill. Currently landfilling of municipal waste occurs in Area D with Asbestos disposal occurring in Valley E.
12. The Ōmarunui Landfill is well established on this site, having been operated since 1987.
13. As noted, landfilling has been undertaken and completed in Area A which is fully capped with grass vegetation. Landfilling is currently being carried out in Valley D with progressive final capping to final levels that have been reached.
14. Facilities established in relation to Area A and D include:
  - (a) A 1 km long sealed access road from Ōmarunui Road to Area A. An alternative access, via a farm track, exists off Swamp Road within Moteo Valley but is not used.
  - (b) A metalled perimeter road to the north, east, west and south of Area A and D.
  - (c) A kiosk and weighbridge at the landfill entrance.
  - (d) A temporary site office in the compound.
  - (e) A staff room and shower and toilet facility for landfill staff.
  - (f) A lockable alarmed compound to store smaller plant and equipment.
  - (g) A truck wheel wash at the Landfill compound.
  - (h) Permanent 4 m high litter fencing around Area A and D.
  - (i) Various temporary 2 m high litter fencing around the tip face.
  - (j) Farm fencing to the boundaries.

- (k) Lined storage ponds for leachate, the main pond being at the toe of the Area A and a secondary storage pond being located at the top of Area A. Surplus leachate from the bottom pond is pumped to the top pond.
  - (l) A leachate pumping system which draws leachate from the bottom of Valley D and pipes this into the main leachate pond at the toe of Valley A.
  - (m) Leachate irrigation system which consists of fifty portable irrigation pods which can be connected up to the landfills internal pump system to irrigate leachate onto the closed Valley A cap during the summer months for disposal through evaporation.
  - (n) Stormwater retention ponds, wetland and discharge structure at the toes of the Area A and D landfill.
  - (o) Gas collection and destruction flare system on the first bench above the toe of Valley A landfill.
  - (p) Gas to energy engine which creates approx. 1MW of power through the destruction of landfill gas.
  - (q) 6 x 10 K ltr tanks for fire-fighting purposes.
  - (r) 6 x 10 K ltr tanks for site potable water supply.
  - (s) An established borrow area in Area B for winning liner and temporary and final capping soils for Area D.
  - (t) A fogco misting system on the litter fence on the western edge of valley D.
15. If the site has a surplus of leachate then this is tankered off site and disposed of into the industrial waste line at the HDC sewage treatment plant in Clive Hastings.
  16. The Landfill operation team at landfill is made up of a team of 8 permanent staff including Solid Waste Engineer, Solid Waste Operation Supervisor, Solid Waste Forman and 4 Solid Waste operators and Kiosk operator
  17. HDC also engages a Plant Management Contractor to carry out larger earth moving requirements on site when required and this contractor also works with Landfill staff on the daily operation of the tip face.

18. From time to time the Landfill will engage in temporary staff to go around the site and collect any windblown litter especially when there has been a spate of high winds which can pick up lighter plastics and blown them onto the various fences around the site.

#### **WASTE PROCESSES AT THE LANDFILL**

19. It is largely my responsibility, as the Landfill's Solid Waste Engineer, to ensure operations at the Landfill comply with the consent conditions, including the Ōmarunui Landfill Operations and Maintenance Manual (O&M Manual) which is a requirement of the regional consents. Compliance is largely ensured by the processes that are adopted for accepting and managing waste at the Landfill, the process for which is described in broad terms below.
20. The O&M Manual is an overarching document used by Landfill management staff that outlines the overall preferred management of the Landfill operation. This document can be picked up by a new staff member or HBRC as the consent controller and it gives a good guide to what is on site, how it works and the purpose of this. There is a master copy of the O&M Manual kept on HDC HPRM record management system and there is also a hard copy of this document kept in the Landfill temporary site office, which the landfill operational management team have access to.
21. Any changes to the O&M Manual are forwarded through to HBRC for certification in accordance with the conditions of the regional resource consents.
22. In addition to compliance with the O&M Manual, monitoring and testing is carried out consistently through the year and reported to HBRC on receipt of results. There is also an annual report submitted independently every November which outlines the annual testing and results. From this report HBRC will note each consent condition as compliant or non-compliant. To date Ōmarunui Landfill has been fully compliant in these annual reports.
23. By way of an outline of day-to-day operations at the Landfill, I provide the following summary.
24. As the Landfill is closed to the public, customers are required to have an account to dispose of waste to landfill.

25. To gain an account to use Ōmarunui landfill, customers will first call Hastings District Council and will be put through to the Waste Minimisation team who send out an Hastings District Council Credit application form and instructions to call the Solid Waste Engineer. We then ascertain what they are wanting to dispose to landfill and the frequency they wish to use the site and the size of truck they are wanting to use. Depending on frequency, material and size of truck, applications may be approved either for access to the landfill or the transfer station, or they may be referred to an established waste cartage contractor who has an existing account and approval to use the site.
26. Once an initial enquiry is screened in this way, a Disposal Facility information and Application form must be completed to confirm the category of wastes that a customer wishes to bring in. At this time, clear information is provided as to waste that is not accepted at a Class A landfill I- . Trucks used to bring the waste to site must have their registration number recorded have a tare weight of 8 tonne or more and must be owned by the account-holding customer.
27. Approved customer's truck information is loaded into the Weightrax accounts software which is used at landfill. The Weightrax system is the computer software used at the kiosk and it allows the kiosk operator to record the registration of the vehicle, which is logged against the customer, and notes the materials that they have indicated that they would be bringing to site. When trucks arrive at the site, their in-weight is recorded, and the out weight is measured on exit. If the registration comes to site and is not loaded into the system then this vehicle is turned away and operator told to call the HDC waste team. The weighbridge and Kiosk have CCTV cameras to help with investigations if an incident occurs on site.
28. Before the drivers of vehicles are allowed on site they have to carry out the landfill site induction which points out important aspects of the site, where they are to go on site and any Health and Safety issues they need to be aware of. A copy of their driver's license is taken for identification and to make sure they are licensed to drive the truck they are operating along with a copy of the signed induction form. This is kept on record for the year until the next induction roll out. This is carried out at the Kiosk on the drivers first time on site.
29. Customers that have indicated they will bring waste to site other than special wastes can come to site and dispose of their material during the day between the times of

8.00 am and 4.00pm Monday to Friday and 9.00am to 12.00pm on Saturdays. Trucks disposing of waste are not allowed on site outside of these hours.

30. On arrival on the weighbridge the drivers are asked what materials they are bringing to site. Most trucks will only bring in one type of material i.e. Transfer Station waste or wheelie bins and bags. Trucks that bring in a variety of material, like the skip bins trucks, are questioned on what material they are bringing in. If they are bringing in special wastes then the Hazardous Waste manifest must accompany the load or have previously been received by the landfill kiosk operator. A number is given which is put in the order number field in Weightrax and on the Hazardous waste manifest for reference later if there is a query.
31. Truckloads of recyclable materials, green waste contaminated soils and cleanfill are not accepted at the site. Truckloads of tyres are similarly not accepted, as there are alternatives waste disposal options in Hawkes Bay for these products.
32. Municipal wastes other than special wastes can come to site without any other procedures being required for acceptance.
33. Special wastes have a particular procedure. Customers wanting to bring in special wastes are required to get permission from the Solid Waste Engineer before this is accepted, i.e. Contaminated Soils or Asbestos. This is usually done through a phone call. If test results are required i.e. for contaminated soils, then these are to be submitted to the Solid Waste engineer and these levels are checked off against contamination acceptance levels for Class A landfills as per MFE list and levels indicated on the MFE website.
34. If this material can be accepted, then a Hazardous Waste manifest is sent out to the customer to fill in and this form is to be signed and handed to the kiosk by the driver or emailed back to the kiosk operator once it has been signed before coming to site.
35. Asbestos waste needs to be transported to site as per the WorkSafe regulations and Ōmarunui Landfill procedures for asbestos wastes.
36. For asbestos wastes the kiosk operator will inspect the truck to make sure that it is presented as per the landfill requirements. Any load that is not correctly presented and safely wrapped is turned away at the kiosk and told to come back when the fault has been remedied. If approved, the hazardous waste manifest is given to the driver to take up to the tip face for the landfill operator to sign once unloaded.

37. If the truck carrying asbestos is compliant then the kiosk operator will call up to the Landfill staff to meet the truck in Area E and to unload it in the asbestos disposal area, where it is unloaded and forklifted down into its final position ready for covering. The hazardous waste manifest is then signed by the landfill staff to say that it has been disposed of appropriately and given back to the driver to take back to the kiosk operator to finalise the form.
38. For contaminated soils this material can come to site in the back of tip trucks and disposed of at the tip face and the hazardous waste manifest signed by the landfill staff to say that it has been disposed of and then this given back to the driver to take down to the kiosk.
39. A copy of this Hazardous Waste manifest form is given back to the customer along with the transaction receipt docket for their records. This is then saved into Council's HPRM records system along with any lab result etc. that make up the approval process.
40. Charges are levied for waste disposal as follows:

Item	2021/22 charge rate (excludes GST)
<p><b>Municipal refuse</b></p> <p>A minimum charge of \$260 (excludes GST) applies to municipal refuse.</p>	<p>\$142.00 per tonne or part thereof (<i>made up of \$76 base cost, plus \$20 Levy, plus \$46 ETS</i>)</p>
<p><b>Special Wastes</b> as follows:</p> <ul style="list-style-type: none"> <li>• Semi liquid waste</li> <li>• Offal</li> <li>• Hazardous waste</li> <li>• Contaminated waste</li> <li>• Putrescible waste</li> <li>• Vehicle parts</li> </ul> <p>A minimum charge of \$270 (excludes GST) applies to the special wastes listed above.</p>	<p>\$180.00 per tonne or part thereof</p>
<p><b>Special Waste</b> as follows:</p> <p>Tyres (whole) – permitted only with the prior approval of the Group Manager, Asset Management.</p>	<p>\$590.00 per tonne or part thereof</p>
<p><b>Special Waste</b> as follows:</p> <p>Tyres (processed) – permitted only with the prior approval of the Group Manager, Asset Management.</p>	<p>\$440.00 per tonne or part thereof</p>



<p><b>Special Waste</b> as follows:</p> <ul style="list-style-type: none"> <li>• Polystyrene</li> </ul> <p>A minimum charge of \$254 (excludes GST) applies to Polystyrene.</p>	<p>\$1,350.00 per tonne or part thereof</p>
<p><b>Special Waste</b> as follows:</p> <ul style="list-style-type: none"> <li>• Out of District Waste</li> </ul>	<p>\$230.00 per tonne or part thereof</p>

41. The list of wastes received at the site is classified into the above categories, and is then further broken down into categories for Commercial Wastes Hastings District Council and Napier City Council wastes and this data is used by the Waste minimisation teams for reporting requirements to MFE.
42. Once the truck with refuse to dispose reaches the Landfill tip face at Valley D they will be greeted by the Tip face operator who will direct them back on to the tip face and into position to be tipped out.
43. The waste is then pulled away from the tip face using a 20-tonne excavator and placed in piles for the 50 tonne compactor to drive past and push the waste out into a thin layer where it will generally run back and forwards over this rubbish 6-8 times to get optimum compaction. The compactor is equipped with the latest GPS technology which can track the number of passes, the compaction of the material and the level at which the waste is at compared to design. The compactor operator can see this on a screen that is in the cab and allows for efficient working of the tip face.
44. The tip face is kept clean from debris by the tip face operator who pushes any leftover materials tipped off using the loader to keep the tip area free of hazards for customers.
45. Landfill permanent plant on site includes a 50-tonne compactor with GPS survey data. The landfill has just purchased a new compactor that is due to arrive on site in October 2021. This will take over the main compaction and pushing duties and the existing compactor will be used as the backup machine when the new one has maintenance programmed. This will make the site more resilient.
46. We have a 12-tonne loader which is used to keep the tip face clean and help load materials onto trucks. We have a watercart which is used on site for dust control on the unsealed roads and for fighting small fires if they are to break out.

47. We also have access to a number of contractor plant items when required on site ie excavators, Bulldozers and dump trucks also.
48. The tip face staff will keep an eye on what come out the back of the trucks looking for any larger items that may be prohibited to landfill. If something is seen, it is lifted back up onto the tip face and loaded onto the truck to be taken off site and disposed of correctly. We have a CCTV camera trailer which overlooks the tip face operation so if there is an issue and it is not picked up straight away then we can have a look at the footage and determine which truck it came from and contact that customer to come and rectify the situation.
49. Once the truck has finished disposal, they will move forward off the tip face and get out and clean off any other debris off the back of their trucks before moving off the tip face and back down to the kiosk.
50. On the way back to the Kiosk there is a site truck wheel wash which is situated next to the landfill compound. This prevents dirt and debris being dragged out onto the main road, which is 1 km away. The truck will then go back over the weighbridge and be weighed out - this then gives the weight of refuse disposed and the transaction can be completed by the kiosk operator and a copy of the transaction docket given to the driver if they wish to have a copy.
51. Windblown litter is constantly collected from around the site by HDC staff and removed from the high litter fences promptly. The landfill staff routinely drive along the verge of Ōmarunui Road heading east towards to the golf course and back to site collecting all litter that is evident on the side of the road, whether this be from a refuse truck or some other source. This litter collection is routinely done on a Friday, or as required.
52. At the start of the day, Landfill staff and contractors working on the tip face and active waste disposal area will attend a toolbox meeting, where a discussion is held as to agree on the area the rubbish will be disposed of for the day. Staff start work on the tip face at 7.30 in the morning. This gives them time to remove and excavate the 100mm thick daily cover put on the night before into stockpiles next to the area they will place rubbish before the site opens at 8.00am.
53. During the day, the material that comes to site for disposal is moved to its final position by excavators or the 50-tonne compactor used to compact the rubbish. As

noted earlier, the compactor and Excavator have GPS equipment which records the movements over the rubbish to ensure optimum compaction is gained and to make sure that the level of the rubbish is within the designed limits especially as we move towards the end of the life of Valley D and start installing final capping to completed fill areas.

54. At the end of the working day the area where rubbish has been pushed for the day will have the morning's stockpiled soil spread back across the freshly laid waste area using an excavator or bulldozer, giving it a good cover to prevent windblown litter escaping. These stockpiles are monitored throughout the week and fresh soil excavated and carted over to the disposal area from the borrow site in Area B as and when required.

#### **ODOUR MANAGEMENT AT THE LANDFILL**

55. I am aware that there have been odour complaints recently relating to the disposal of sheep pelts at the Landfill, and I therefore address this in particular. Sheep pelts are classed as a special waste at Ōmarunui Landfill, and the procedure for their acceptance is as set out above. The customer is required to obtain approval from the Solid Waste Engineer to bring this material to site.
56. Prior to late 2019 we were not receiving much of this waste to landfill as the waste producers had markets for the skins and pelts to be sold on. The small amount that they could not sell were being taken to Bio Rich Composting in Awatoto, Napier as this product can actually be composted down and does not need to come to Landfill for disposal. Ōmarunui Landfill had minimal pelts turning up at landfill for disposal and those that were received were mixed in with other wastes received to make compaction of the rubbish more efficient.
57. In the later end of 2019 Ōmarunui started to see a little bit more of this material coming to site due to Bio Rich not accepting this material in high quantities. The overflow was now getting sent to Ōmarunui Landfill.
58. In early 2020 when the Covid pandemic hit the world, this basically stopped the markets for the sale of skins and pelts. We went from getting 6-7 tonnes per day to upwards of 50 tonnes per day. This material was being transported to landfill from two customers and in some instance was arriving in a putrid state.

59. The increase in this product coming to site has caused a number of operational issues.
60. First, we were getting an increasing smell over time due to the breaking down of the skins and pelts. Secondly, there was an increase in H<sub>2</sub>S Hydrogen Sulphide Gas in the active Landfill area Valley D, due to the breakdown of these materials.
61. In March 2021 we carried out our annual Air Quality Testing which provides an indication of what gas, bacteria and fungi are in the air, for the health and safety of our staff. At this time, H<sub>2</sub>S gas was found to be considerably higher than in previous years.
62. We had a small number of odour complaints from neighbours which were not normal to our operation. When these were phoned through to the HDC call centre we would investigate these concerns straight away, including visiting the area where the complaint had come from if a name and/or address was provided (which is not often). If an address is provided, we generally visit the site and have a conversation with them, including undertaking a 'sniff test' to see if the odour can be verified. One complaint made to the Hawkes Bay Regional Council (HBRC) was upheld, and HDC were given an Infringement Notice.
63. The source of the odour was considered to be sheep skins and pelts.
64. Since this has become an issue, and on receipt of the infringement notice, Ōmarunui staff have put in place some more stringent rules after taking a report to the Joint Landfill committee and getting their approvals to implement changes regarding the acceptance of this sort of wastes.
65. If we get an odour complaint we inform the HBRC pollution hotline, which triggers them to come and investigate it independent of Ōmarunui Landfill. They will usually email or call back. This is then recorded into the Council's Infrastructure Database which has a page where complaints can be registered.
66. We have spoken to both the Landfill customers and clients that generate the waste, and have placed restrictions on volumes of skins and pelts that can be brought to the Landfill per day (9 tonnes per customer) and the time this needs to be delivered by. Closing off receipt of pelts earlier in the day allows time for staff to ensure there is good coverage of this material later in the day, so that the pelts are not exposed to air for longer than necessary, and have less opportunity to cause an odour issue.

67. I understand that customers with pelt waste are now generally sending a truck and trailer load out of town each day, so that the Landfill does not have to deal with excessive volumes.
68. In order to address the H2S issue, we have connected all gas wells that we have on site up to the gas collection system. These have been put under negative pressure which assists with avoiding odour. The working areas where these wells cannot be connected to the system have caps installed to prevent gaseous odours being emitted into the atmosphere through venting wells.
69. We have also upgraded our fogco deodorising system so that this can be triggered to turn on when the winds are not in a favourable direction or blowing towards our closest neighbours.
70. With the increase in H2S we have purchased considerable amounts of PPE for staff and are investigating gas and smell monitoring equipment to be installed to the boundaries of the site for increased insurance that we are operating the site without impact to neighbours.
71. We keep in touch with our customers around these products and recently the volume of skins and pelts being received at landfill has started decrease.
72. All these measures have led to a decrease in smell coming from the site.

## **CONCLUSION**

73. As Area D comes to the end of its life, we are looking to expand into Area B. I believe the Landfill's operational systems are well established and can be adapted easily to move towards the next stage, subject to the new version of the O&M Manual that will be developed under the proposed conditions of consent.

**Philip Doolan**  
**2 September 2021**