

Reference Number: 2025/1207

15 April 2025

[REDACTED]
[REDACTED]

Tēnā koe | Dear [REDACTED]

Thank you for your email dated 4 April 2025 requesting under the Local Government Official Information and Meetings Act 1987 (LGOIMA), information relating to landfills. Please see attached a response to your request.

You are entitled to seek an investigation and review by the Office of the Ombudsman. Information about how to make a complaint is available at www.ombudsman.parliament.nz or freephone 0800 802 602.

Horowhenua District Council publishes responses to Local Government Official Information and Meetings Act 1987 (LGOIMA) requests that we consider to be of wider public interest, or which relate to a subject that has been widely requested. To protect your privacy, we will not generally publish personal information about you, or information that identifies you. We will publish the LGOIMA response along with a summary of the request on our website. Requests and responses may be paraphrased.

If you would like to discuss this decision or any of the information provided as part of this request, please contact Daniel Haigh (Group Manager Community Infrastructure) on danielh@horowhenua.govt.nz, or LGOIMAOfficer@horowhenua.govt.nz.

Ngā mihi | Best regards



Ashley Huria
Executive Sponsor

THIS IS A SCANNED DOCUMENT!

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of applications by the Horowhenua District Council for resource consents for the Foxton Beach, Foxton and Shannon landfills.

DECISION OF THE HEARING COMMITTEE

1. THE APPLICATIONS

The Horowhenua District Council lodged with the Regional Council the following resource consent applications:

- a discharge permit to discharge solid waste to land;
 - a discharge permit to discharge any leachate to groundwater; and
 - a discharge permit to discharge any emissions to air -
- for the Foxton Beach, Foxton and Shannon landfills. The District Council also applied for a water permit to divert stormwater from the Shannon landfill.

The applications were supported by a description of the proposal, an assessment of the actual and potential effects, a description of the consultation which had been undertaken, a Proposed Management - and Closure Plan for each landfill, a number of plans, and an assessment of hydrology and impact of leachate at each landfill site which had been undertaken in June 1994.

The District Council has recognised, through its Solid and Hazardous Waste Strategy, that the sites are nearing the end of their life and it intends closing all three sites and opening transfer stations in Shannon and Foxton. Hence, the applicant sought terms of three years for each of the permits allowing the discharge of solid waste to land; and thirty-five years for each of the applications for the discharge of leachate to groundwater and for the discharge of any emissions to air. A consent for the diversion of stormwater at the Shannon landfill for a term of thirty-five years was also sought.

It is thought, by the applicant, that these landfills have been in operation for at least fifteen years.

The applications were notified on 5 October 1994 and submissions closed on 27 October 1994.

2. SUBMISSIONS

Two submissions were received on the applications for the Foxton and Foxton Beach landfills, from Mr C Paton and Mr C Rudd and one on the Shannon landfill, from Mr C Rudd.

Mr Paton expressed concern about any leachate from the landfills and the issues of hazardous waste disposal. Mr Paton expected the Foxton landfill to be shaped to

encourage water to run off the landfill so that only a minimum will be able to enter the landfill hence the quantity of leachate being discharged from the landfill is minimised and spread over a long period of time.

Mr Rudd's submission was concerned with the potential environmental effects of the landfills, particularly on the nearby watercourses, and the requirements for consultation of tangata whenua under the Resource Management Act 1991.

Both submitters indicated they wished to be heard in support of their submissions.

3. PREHEARING MEETING

Prehearing meetings were held, on Thursday 3 November 1994, at each of the landfill sites, between Mr G Boyle of the Horowhenua District Council, staff of the Regional Council, Mr Rudd and Mr Paton. Mr Paton was present for the pre-hearing meetings at Foxton and Foxton Beach landfills only.

Mr Boyle discussed the applications, and concerns of the submitters and Regional Council were reviewed. It was decided to proceed to a hearing of the applications.

4. THE HEARING

- 4.1 The Hearing was held in the Freyberg Lounge of the Levin War Memorial Hall, Queen Street, Levin, on Friday 2 December 1994.
- 4.2 The Hearing Committee consisted of Councillor B Tolhurst, Mr B Rose and Mr P Mahoney. The Committee held delegated authority from the Manawatu-Wanganui Regional Council to conduct the hearing pursuant to Section 100 of the Act to consider and decide the applications.
- 4.3 The applicants evidence was presented by Mr C Boyle, Mr I Rowden, and Mr M Robertson.

Mr Boyle, Manager of Operations of Horowhenua District Council explained to the Committee that the Council has adopted, and is adhering to, a Solid Waste Management Strategy which will ultimately see the closure of the landfills at Shannon, Foxton, and Foxton Beach while retaining the landfill at Levin and constructing new transfer stations in Shannon and Foxton. He stated that the closure of these three landfills, and replacement with two transfer stations, is programmed for completion by June 1995.

In his right of reply Mr Boyle expressed concern about the recommendations of recovery of costs incurred by the Regional Council and felt that the costs were disproportionate to the scale of activities. He proposed that the charges for staff time be half that recommended.

Mr Rowden is an associate in Royds Consulting Limited, Engineering and Environmental Consultants. Mr Rowden suggested a number of changes and deletions to the conditions proposed by Mrs Madden.

Mr Rowden expressed concern that in order to close Foxton Beach landfill as required in the conditions proposed by Mrs Madden, soil would have to be brought in from

areas outside of the immediate area hence introducing "foreign" materials to the site. He suggested the new synthetic geotextiles could be a possibility for use at this site.

The final closure form of Foxton landfill was explained and Mr Rowden felt that given the details provided a closure plan was not necessary.

Mr Rowden felt that the condition allowing for the review of conditions was ultra vires.

Mr Rowden felt a cap on the landfills was not necessary as leachate was already being produced-with little measurable effect.

Mr Robertson is the Environmental Scientist at the Wellington Office of Royds Consulting. His report looked at the potential impact the three landfills could have on the area's water resources.

Mr Robertson felt that given the results of monitoring to date a significant impact on any water resource is unlikely (Foxton Beach and Shannon). He explained that the present concentrations of pollutants in the plumes of the three landfills does not exceed levels which are suitable for stock water. As there is unlikely to be significant effect Mr Robertson felt no mitigation measures are proposed although regular monitoring is proposed to enable continual re-assessment of the impact of the landfills on the ground and surface water systems.

In response to Mrs Madden's draft conditions Mr Robertson proposed a number of alterations and raised some concern at the practicability of some of the conditions.

4.4 Both submitters were present at the Hearing.

Mr Paton, of Foxton Beach, was mainly concerned about the leachate and hazardous wastes. He said that if these concerns were attended to then he would be satisfied. Mr Paton felt that if the landfill was suitably capped and rain directed away from the site leachate would be better for the environment.

Mr Rudd outlined his genealogy and said he was not attending the hearing to speak on behalf of his iwi but was concerned as an individual about the level of consultation which has taken place. He felt that landfill sites should not be sited by water bodies as they can affect seafood, plants and humans being part of the food chain. Mr Rudd felt he may have to take the matter of consultation to the Waitangi Tribunal.

4.5 Mrs Madden, the Solid and Hazardous Waste Officer for the Regional Council, presented her staff report. The report looked at the submissions received, and the processing of the applications. Mrs Madden also discussed the legislation and associated matters, and examined the present activities and their actual and potential impacts on the environment.

It was recommended to the Committee by Mrs Madden that the consents be granted subject to the amended version of conditions detailed in her report. A number of conditions were amended by Mrs Madden as a result of the evidence presented by the applicant, particularly by Mr Rowden and Mr Robertson.

Mrs Madden presented the costs incurred by the Regional Council in processing the applications with a recommendation the Committee recover these costs from the applicant under Section 36 of the Act.

5. EVALUATION

- 5.1 Section 104 of the Act is the principal provision which sets out the matters which the Committee must consider when determining the applications. Sections 105 and 107 are also relevant.

Section 104 provides that:

Subject to Part II, when considering an application for a resource consent and any submissions received, the consent authority shall have regard to -

- a. Any actual and potential effects on the environment of allowing the activity; and*
- b. Any relevant regulations; and*
- c. Any relevant national policy statement, New Zealand Coastal Policy Statement, regional policy statement, and proposed regional policy statement; and*
- d. Any relevant objectives, policies, rules, or other provisions of a plan or proposed plan; and*
- e. Any relevant district or proposed district plan, where the application is made in accordance with a regional plan; and*
- f. Any relevant regional plan or proposed regional plan, where the application is made in accordance with a district plan; and*
- g. Any relevant water conservation order or draft water conservation order; and*
- h. Any relevant designations or heritage orders or relevant requirements for designations or heritage orders; and*
- i. Any other matters the consent authority considers relevant and reasonably necessary to determine the application.*

Items a, c, d, and e are of particular relevance to this case.

In addition to the above, Section 104(3) required that the Committee, when considering an application for a discharge permit, shall have regard to:

"... the actual and potential effects on the environment of allowing the activity, have regard to -

- (a) The nature of the discharge and the sensitivity of the proposed receiving environment to adverse effects and the applicant's reasons for making the proposed choice; and*
- (b) Any possible alternative methods of discharge, including discharge into any other receiving environment"*

5.2 **Actual and Potential Effects on the Environment**

5.2.1 **The Present Environments**

The characteristics of the environment of the Shannon, Foxton, and Foxton Beach landfills were described in assessment of effects provided with the application by Royds Consulting and in the report presented by Mrs Madden.

As these landfills have been in existence for at least fifteen years the sites are already substantially modified.

Foxton Beach: Foxton Beach landfill is located on the northern bank of the Manawatu River between the Manawatu River estuary and the Tasman Sea, approximately one kilometre south-west of the centre of Foxton Beach township. Mrs Madden said that

at the Foxton Beach landfill a typical tip face of twenty metres has been maintained, and that refuse is deposited at the tip face, spread, covered and compacted but that no provision had been made for the control of windblown litter.

The location of the Foxton Beach landfill means that rainfall infiltration on the landfill could drain either to the Manawatu River to the south-east or the sea to the west. Groundwater could therefore be draining anywhere from west to south-east. There are no bores in the vicinity of the landfill and given the proximity of the site to the coast, groundwater use is highly unlikely because of the likelihood of salt water intrusion.

Foxton: The Foxton landfill is situated adjacent to the "Foxton Loop", a meander channel of the Manawatu River, on Stewart Street approximately one kilometre south-west of Foxton township. Landfilling with refuse has been carried out along a strip between the stopbank and the river. A typical tip face of twenty metres is maintained and at least two times weekly, refuse is spread, compacted and covered. The cover material is generally permeable in nature and is imported to the site. No provision is made for the control of windblown litter, dust or odour.

Groundwater under the Foxton landfill is likely to be controlled by the Manawatu River Loop and the drain north-east of the site. Stormwater from the site will discharge to the swampy ground around the site and will be treated by passage through the natural wetland area between the site and the river.

Shannon: Shannon landfill is located in a gully head off Hennessey Road, approximately 1.5 kilometres north-west of the Shannon township centre and is surrounded by rural farmland. Mrs Madden noted that a tip face of about twenty metres is generally maintained and that tipping has occurred at varying distance from the tip face. The refuse is pushed over the tip face and covered at intervals varying from twice weekly to two times per month. The cover material is imported to the site. Provision is made for the control of windblown litter by way of a two metre high fence.

The site drains down to the gully the base of which is poorly drained with extensive reed growth. The gully opens out onto flat farmland downstream of the site and continues as a drain which eventually discharges to the Kara Stream, a tributary of the Tokomaru River.

5.2.2 Effects of the Landfills

A number of effects were identified in the "assessment of effects" prepared as part of the application and in the report by Mrs Madden. The effects identified in the reports were as a result of the following activities: solid waste being discharged onto the land; the co-disposal of hazardous waste; leachate from the landfill being discharged into groundwater and/or into surface water; and emissions being discharged from the landfill into the air. The final physical form of the landfill had a bearing on the effect these activities may have once the landfill is closed.

Discharge of Solid Waste to Ground

In general waste deposited in these landfills has been of a domestic nature from the surrounding rural and urban areas although, particularly at the Foxton and Foxton Beach landfills, whiteware, car bodies and animal carcasses have also been dumped there over the years.

Hazardous wastes in any significant quantities are not accepted at the landfills however household hazardous wastes such as batteries and empty paint cans will inevitably get into the landfill.

Animal carcasses and offal are accepted at Foxton and Foxton Beach landfills which is likely to raise the bacterial counts and ammonia nitrogen levels in particular.

The effects of discharging the refuse onto the ground were outlined by Mrs Madden as being:

- the discharge of contaminants to air;
- contamination of groundwater by landfill leachate;
- change in final landform; and
- windblown litter.

Visits to the Foxton Beach landfill has shown significant quantities of refuse strewn for some distance around the access route to the landfill from Foxton Beach township, around the Manawatu River Estuary, and amongst the adjoining sand dunes.

In her visits to the site Mrs Madden had also noted with some concern the presence of windblown litter in the drain beside the Foxton landfill and stated that this did not sit well with Section 107 of the Resource Management Act 1991 and that regular cleaning of the drain is required.

Discharge to Air

In her report Mrs Madden identified four sources of air discharges from the landfills: landfill gas, dust, fires, and odours typically associated with traditional landfills.

Landfill gas was described by Mrs Madden as being a mixture of methane and carbon dioxide with low levels of nitrogen oxide and other trace gases. Because of the relatively porous nature of the cover material used at each of the landfills, the gas will tend to move upwards through the refuse to the atmosphere rather than migrate laterally to the sides of the landfills. Off-site gas migration is therefore not considered, by Mrs Madden to be a problem at any of the sites.

She did not expect the small volumes of gas being generated by the landfill to cause any problems after the landfill is closed.

Both Foxton and Foxton Beach landfills have offal holes which produce a ripe odour. The dust and odour effects produced by the landfills tend to be site specific and not appear to have an effect beyond the property boundary although some concern has been expressed from the residential properties near to the Foxton landfill.

Mrs Madden said that it is important that fires not be permitted at any of the landfills due to smoke and the risk of a fire entering the landfill, particularly at those sites where little or no compaction has occurred.

As the applicant intends closing these landfills and rehabilitating the sites in the very near future these effects will shortly be eliminated.

Discharges of Leachate

The applicant defined leachate as "the liquid generated within the landfill as the result of the decomposition process" and stated that leachates may contain harmful substances derived from the material deposited in the landfill. Mrs Madden explained that numerous physio-chemical and biological processes govern the production and composition of landfill leachate.

The applicant described the decomposition of the refuse in a landfill as occurring in two stages: the first being a more active stage and lasting five to ten years, and the second stage where the concentration of contaminants being much lower, typically by a factor of ten or more.

The applicant advised that the rate of decomposition is dependent on the amount of moisture and that maintaining active degradation means settlement of completed landfills will occur sooner and gas production will end sooner.

The applicant felt that placing an impermeable cover would be expensive and is not desirable unless there is a clear need to retard stabilisation processes.

Sampling of both the groundwater and surface water at the landfills has been undertaken by the applicant. Monitoring for chemicals typically found in leachate showed the landfills to be producing leachate which is migrating away from the sites.

Foxton Beach: The landfill at Foxton Beach is located some distance from the two main surface water bodies: the Manawatu River and the Tasman Sea. . Four monitoring bores were installed at the Foxton Beach landfill to detect any impact from leachate although given the proximity of the site to the coast significant groundwater use is unlikely because of the potential for salt water intrusion.

In her report Mrs Madden explained that because of the site geology and refuse make up, any leachate generated within the landfill will be discharged directly to groundwater. She said that groundwater movement is considered to be influenced by the Manawatu River and adjacent coastal waters.

Analysis of water quality tests indicates that there may be limited impact from leachate on ground water although the results are well within the criteria for livestock watering. Conductivity chloride and iron are all higher in bores nearest the landfill, indicating a dilute leachate.

Mrs Madden said that the effects of leachate discharging to surface water via groundwater are not expected to be significant and due to the dilution factors involved detection of leachate contamination would be extremely difficult.

Mrs Madden agreed with the applicant's statement that based on the effects of the leachate on the groundwater and moisture level retention at this time an impervious layer of material to cap the landfill was not required. She did however express concern about the stability of the landfill after closure.

Foxton: Monitoring of the surface water at the Foxton landfill was carried out by the applicant at a number of points around the site to determine whether there was any significant impact on surface water. The tests did, in some instances, show high

levels of pollution but the applicant thought this could be attributable to other influences such as the naturally poor quality swamp water. The applicant said that the water quality tests show that the water quality is better than the minimum water quality standards for livestock watering and in fact a number of the parameters are well above the guidelines for the protection of aquatic life. There is no evidence of the direct discharge of leachate from the site to surface water.

A monitoring bore was installed by the applicant immediately north of the Foxton landfill to intercept groundwater movement towards the river. Mrs Madden explained that due to the contour of the Foxton landfill and surrounding wetland, the make up of refuse and cover material, leachate may be being discharged to groundwater and then to surface water rather than directly to the Loop. Groundwater movement is likely to be influenced by the tidal waters of the Loop and drain surface water of the landfill.

Analysis of the water sample shows a high level of iron in the groundwater possibly due to the swampy character of natural ground. Mrs Madden explained that the elevated lead and zinc levels found in the groundwater samples indicated contamination from landfill leachate. She said that in order to better understand the effect leachate is having on groundwater a more comprehensive monitoring programme is required.

Mrs Madden also recommended a surface water monitoring programme be undertaken to determine if contamination of surface water, via groundwater, is in fact occurring.

She said that further monitoring of groundwater is required before the decision is made as to whether an impermeable cap is required.

Shannon: Mrs Madden explained that a previous permit (MWT780116) had been held for the discharge of leachate from the Shannon landfill to groundwater but that it had expired on 19 September 1993.

A monitoring bore was recently installed by the applicant at the base of the Shannon landfill, at the head of the gully.

Being located at the head of a gully, drainage from the Shannon landfill is to the base of the gully into the swamp area. The applicant has sampled the water from the drain immediately downstream of the landfill, to determine whether there was any significant impact on the water quality in the gully from the leachate from the landfill.

At time of testing (25 March 1994) there was no evidence of the direct discharge of leachate to surface water, however the results show the water quality in the gully is very poor with a high level of organic pollution. This could be attributable to the swampy character of the gully rather than leachate. Despite this, the water quality is better than minimum livestock watering guidelines.

In August 1994 the land owner reported evidence of leachate to surface water. The applicant says this is the first winter that any discharge has been observed. The applicant considered this to be part of the natural degradation process which occurs in a landfill and follows periods of substantial rainfall during winter months.

On her inspection of the site Mrs Madden noted the presence of a 'spring' flowing from the base of the landfill. Mrs Madden said that, from the Manawatu Catchment Board files, it appeared at some time during the development of the landfill, a subsoil drain to divert groundwater had been put in place under the landfill. Also noted was a

significant amount of iron staining visible in the surface water downstream of the landfill. This suggesting iron was coming out of the solution. The staining was no longer evident after approximately 10 metres downstream. She suggested that the District Council should investigate this discharge and may need to apply for further resource consents.

Closure of Landfills

The intention of the District Council, after dosing the landfills, is to reinstate as far as possible the natural landscape of the particular area at each of the sites.

Foxton Beach: Upon cessation of activities at the Foxton Beach landfill the applicant proposes that the landfill site will be suitably reshaped, compacted, covered with sand and stabilised with suitable native species such as pingao. The applicant intends seeking specialist advise on suitable plant species prior to planting commencing. The final landform will resemble that of the adjoining natural sand dunes. Mrs Madden expressed concern regarding the stability of the final landform should the applicant cover the landfill with sand, particularly given the migratory nature of sand and the use the adjoining areas receive from recreationalists in four-wheel drive vehicles and motocross bikes which could expose the refuse and result in significant environmental effects. In her evidence Mrs Madden recommended precautions be taken to reduce the potential of the contents of the landfill becoming exposed in the future. Such precautions could include covering the landfill with a significant amount of stable, relatively impermeable material such as clay or silt, and overlaying this with sand, and then planting with suitable vegetation.

Foxton: Mrs Madden understood the present Foxton landfill is close to final contour. The applicant said that approximately forty percent of the site will be occupied by the proposed Waste Transfer Station and that the site will be suitably fenced and developed, including screen planting giving the transfer station the appearance of a small orchard or a plant nursery. For the remainder of the area the applicant proposes to cover with sand topped with Moutoa silt and compacted prior to planting in trees.

Shannon: On closure of the Shannon landfill the site will be left approximately level with the adjoining land, or in the event the site is required beyond 30 June 1995 the side may be mounded. Upon closure the intention is that the site will be covered with "not less than 400 mm of well compacted earth, resown with grass and returned to pasture". Stormwater runoff will flow over the site and discharge into the gully. There will be very little infiltration of stormwater into the landfill due to the relatively impervious nature of the cover material. However, the applicant feels it may be necessary to install subsoil drainage above the cover material and below the topsoil to permit the establishment of pasture and to prevent pugging of the surface by stock.

Mrs Madden said that the steepest section of the tip face is approximately 1.3V:1H and that compacting and contouring of the landfill will be required to ensure the landfill is consistent with the gradient of W:3H recommended by the CAE Guidelines and for reasons of slope stability. Mrs Madden expressed concern about the stability and settling of the landfill once closed. She said that once compacted some natural settling will occur but the potential for- 'holes' to develop and cause problems for the livestock, particularly in and around the tipping face.

Stormwater Diversion

A previous consent (MWT780115) for the diversion of stormwater at the Shannon landfill expired on 19 December 1993. The present application relies on the natural lie of the land to divert stormwater around the landfill and tipping face to the wetland area at the base of the landfill. Although no indication of the volume of stormwater to be diverted is given in the application Mrs Madden does not expect it to be significant given the small upper catchment. Mrs Madden supported the proposal to divert excess stormwater to reduce infiltration into the landfill and to reduce erosion off the covered landfill after capping and closure.

5.4 New Zealand Coastal Policy Statement

The New Zealand Coastal Policy Statement applies only to the landfill at Foxton Beach. The most pertinent policies are as follows:

Policy 1.1.3

It is a national priority to protect the following features, which in themselves or in combination, are essential or important elements of the natural character of the coastal environment:

- (a) landscapes, seascapes and landforms, including:
 - (i) significant representative examples of each landform which provide the variety in each region;
 - (ii) visually or scientifically significant geological features; and
 - (iii) the collective characteristics which give the coastal environment its natural character including wild and scenic areas;
- (b) characteristics of special spiritual, historical or cultural significance to Maori identified in accordance with tikanga Maori; and
- (c) significant places or areas of historic or cultural significance.

Policy 1.1.4

It is a national priority for the preservation of natural character of the coastal environment to protect the integrity, functioning, and resilience of the coastal environment in terms of:

- (a) the dynamic processes and features arising from the natural movement of sediments, water and air;
- (b) natural movement of biota;
- (c) natural substrate composition;
- (d) natural water and air quality;
- (e) natural biodiversity, productivity and biotic patterns; and
- (f) intrinsic values of ecosystems.

Policy 1.1.5

It is a national priority to restore and rehabilitate the natural character of the coastal environment where appropriate.

The Committee considers that the activities as proposed are not inconsistent with the provisions of the New Zealand Coastal Policy Statement and the locations of the activities do not fall within the bounds of the Proposed Coastal Plan for the region.

5.5 Proposed Regional Policy Statement

The relevant sections of the Regional Council's Proposed Regional Policy Statement were reviewed in the report of Mrs Madden. The Statement was notified in September 1993. Submissions concerning have been received and it has not yet been approved. Relevant objectives are:

Objective 20 To maintain or enhance coastal water quality.

Objective 26 To minimise the adverse effects of the disposal or unintended discharge of contaminants into or onto land, water or air.

The Committee considers that the activities as proposed are not inconsistent with the provisions of the Proposed Regional Policy Statement.

5.5 District Plan

The sites occupied by the landfills are covered by the Transitional District Plan of the Horowhenua District Council and are all appropriately designated for the landfills.

5.6 Part II of the Act

Part 11 of the Act sets out the purpose and principles of the Act. The purpose of the Act, as defined in Section 5 is to promote the sustainable management of natural and physical resources, Sections 6 to 8 provide for matter of National importance, other matters and the Treaty of Waitangi.

The Committee considers that the proposed activities are not inconsistent with the purpose and principles of the Act. The Committee believes the activities of discharging the leachate to groundwater, the discharges to air and stormwater diversion are sustainable for the terms applied for. It has some concerns, particularly about the discharges of solid waste to land, but feels that the adverse effects on the environment can be mitigated.

From the evidence presented to it the Committee considers that the proposed activities will not be inconsistent with the matters contained in sections 6, 7 and 8.

6. COSTS

Section 36 provides that when an application fee is inadequate to meet the actual and reasonable costs in processing an application the extra costs can be recovered from the applicant. The provision is discretionary. There is no provision in the Act for the recovery of costs from those making submissions.

Costs incurred by the Manawatu-Wanganui Regional Council in the processing of these applications was:

| | |
|---|------------|
| Staff time - 135 hours @ \$40.00 per hour | \$5,400.00 |
| Facility hire and catering | \$ 120.00 |
| Advertising, photocopying and postage | \$ 700.00 |
| Total (excluding GST) | \$6,220.00 |
| Plus GST | \$ 777.50 |
| Total (including GST) | \$6,997.50 |
| Less deposit paid | \$3,000.00 |

TOTAL

\$3,997.50

7. CONCLUSIONS

Having considered the information available to it, the Committee concluded that the resource consents sought by the applicant should be granted for the following reasons:

- a. The Committee is satisfied the principle of sustainable management contained in the Act will not be breached and that any adverse environmental effects will be minimal.
- b. Under Section 108, which provides the statutory authority to include conditions in resource consents, conditions have been attached to each consent and these may be reviewed should the need arise.
- c. The Committee noted the applicant's concerns about the cost of the hearing but felt that, as it covered three landfills, these costs were not unreasonable.
- d. The Committee noted that although the applicant applied for a term of three years for the discharge of contaminant to ground, to allow sufficient time to establish and commence operations at the waste transfer stations, its intention is to close all three landfills by end of June 1995.

In determining the duration for which each landfill should be permitted to continue operating the Committee decided it would be in the best interests of both the local communities and the environment to stagger the closure of the landfills.

The Committee was particularly unhappy with the state of the Foxton Beach landfill. The Committee was disturbed by the amount of windblown litter strewn around the sand dunes, Manawatu estuary and access track and was concerned about whether the applicant could in fact contain the refuse within the landfill area at all times, hence the decision to reduce the term of consent from that applied for.

- e. The Committee accepts the statements made by both the applicant and Mrs Madden in their assessment of effects. The Committee noted that while some effects from the landfills is being experienced by the environment this is a continuation of an already existing situation and the potential effects will not be greater than those experienced at present. In fact with the imminent closure of all three landfills these effects will diminish over time.
- f. Mr Paton's concerns have generally been met by the imposition of conditions relating to the disposal of hazardous waste, monitoring of leachate contamination of natural waters and shaping of the landfills to encourage runoff from the landfills.
- g. With regard to Mr Rudd's concerns about the appropriate locations of landfills, the Committee felt that it is better for the environment to leave the landfills where they are and ensure that they are appropriately closed and capped than to move the contents elsewhere.
- h. The points made by Mr Rudd regarding consultation were considered by the Committee. The Committee considered that the onus for consultation on

proposals lies with the applicant and noted that the Resource Management Act requires that the consent authority notify such iwi authorities and other persons or authorities as it sees appropriate. In its opinion the Committee considers the Regional Council has notified the appropriate iwi authorities.

- i. Conditions have been attached to each consent to ensure any actual or potential effects are minimal in scale and short in duration. A condition allowing for the review of the conditions to deal with any adverse effects on the environment which may arise from the exercise of this permit and which it is appropriate to deal with at a later stage.
- j. The Committee noted the applicant appeared uncertain as to the type of material to be used for capping the Foxton Beach landfill after closure. The Committee has included a condition requiring a cap with at least 400mm of well compacted material but suggests to the Consent Holder that it could /Y, apply for a change of conditions to accommodate any appropriate alternative substances.

8. DETERMINATION

8.1 The Committee pursuant to delegated authority under Section 34 of the Act, grants the following permits, pursuant to Section 105(1)(b) of the Act, to Horowhenua District Council for the Foxton Beach landfill on the property located in the Foxton Beach sand dunes on the north bank of the Manawatu River between that river and the Tasman Sea, with legal description of Part Sections 3 and 6, Block I, Moutere Survey District, and having the Valuation Reference 14330/63000, in the area bounded by map references S24:979-794, S24:981-794, S24:981-795 and S24:979-795:

8.1.1 Discharge Permit Number 4740 to discharge contaminant onto land, subject to the following conditions:

- 1. Charges, set in accordance with Section 36(1)(c) of the Resource Management Act 1991 and Section 690(a) of the Local Government Act 1974, shall be paid to the Regional Council for the carrying out of its functions in relation to the administration, monitoring and supervision of this resource consent, and for the carrying out of its functions under Section 35 (duty to gather information, monitor, and keep records) of the Act.

[Section 36(1)(c) of the Act provides that Council may from time to time fix charges payable by holders of resource consent. The procedure for setting administrative charges is governed by Section 36(2) of the Act and is currently carried out as part of the formulation of the Council's Annual Plan].

- 2. This permit authorises the discharge of solid waste onto the land shown in Plan C4740, which is attached to and forms part of this permit, until 30 June 1995, and the discharge of cover material and sand onto the same landfill until 31 December 1995.

3. The Manawatu-Wanganui Regional Council may review the conditions of the permit at any time within six months following the granting of this permit to deal with any adverse effects on the environment which may arise from the exercise of this permit and which it is appropriate to deal with at a later stage.
4. The discharge of solid waste shall only be onto land as shown in Plan C4740. To this end the Permit Holder shall take all practical measures to avoid the off site discharge of solid waste.
5. If solid waste is discharged to land other than that referred to in Condition 4 of this permit, or to water, the Permit Holder shall ensure the waste is cleared and removed to the landfill area, as soon as practicable.
6. The Permit Holder shall not knowingly allow the disposal of a significant quantity of waste, which, due to, for example, their explosive, flammable, reactive, toxic, corrosive or infectious nature, pose a present or future threat to the environment or persons.
7. Measures shall be undertaken by the Permit Holder to ensure that, after the landfill is closed, the area shown in Plan C4740 is not readily accessible to the general public.
8. Prior to the expiry of this permit, the Permit Holder shall:
 - i) compact the refuse such that any post-closure settlement of the landfill is minimised. Any refuse that cannot be satisfactorily compacted shall be removed from the landfill site; and
 - ii) compact and cover the landfill area with not less than 400mm of well compacted material such that all refuse is completely stabilised and enclosed within the landfill. The landform, contour at the completion of this stage shall not exceed a gradient of 1V:3H on any face; and
 - iii) cover the capped landfill with not less than 300mm of sand, and plant such that the stability of the sand covering layer is assured in the long term.
9. Prior to the expiry of this permit, or within one month following the closure of the landfill, whichever is the sooner, the Permit Holder shall report in writing to the Regional Council of its compliance with Condition 8 of this discharge permit.

8.1.2 Discharge Permit Number 4741 to discharge any leachate to ground water for a term expiring on 19 January 2030, subject to the following conditions:

1. Charges, set in accordance with Section 36(1)(c) of the Resource Management Act 1991 and Section 690(a) of the Local Government Act 1974, shall be paid to the Regional Council for the carrying out of its functions in relation to the administration, monitoring and supervision of this resource consent, and for the carrying out of its functions under Section 35 (duty to gather information, monitor, and keep records) of the Act.

[Section 36(1)(c) of the Act provides that Council may from time to time fix charges payable by holders of resource consent. The procedure for setting administrative charges is governed by Section 36(2) of the Act and is currently carried out as part of the formulation of the Council's Annual Plan].

2. The Manawatu-Wanganui Regional Council may review the conditions of the permit at any time within six months following the 1st, 5th, 10th, 15th, 25th anniversary of the granting of this permit for the following purposes:
 - i) deal with any adverse effects on the environment which may arise from the exercise of this permit and which it is appropriate to deal with at a later stage; and
 - ii) to assess the adequacy of the Monitoring Programme outlined in Conditions 4, 5, and 6 of this discharge permit, so as to incorporate into the permit any modification of the Monitoring Programme which may be necessary to deal with any adverse effects on the environment arising from the management of the landfill.
3. There shall be no contamination of adjoining land by leachate.
4. The Permit Holder shall implement the following Groundwater Monitoring Programme, within three months of the granting of this permit.
 - (i) At six monthly intervals samples shall be taken from monitoring bores FB1A, FB1B, FB2, and FB3 as shown in Plan C4741, which is attached to and forms part of this permit, and analysed for the following parameters:
 - pH
 - Conductivity
 - Ammoniacal nitrogen
 - Nitrate-nitrogen
 - Faecal Coliforms
 - Chloride
 - Sulphate
 - Cadmium
 - Chromium (III)
 - Copper
 - Iron
 - Lead
 - Manganese
 - Nickel
 - Sodium
 - Zinc
 - Temperature
 - (ii) The Permit Holder shall monitor for ground water level in monitoring bores FB1A, FB1B, FB2, and FB3 as shown on Plan C4741 for the duration of this discharge permit.
5. All water quality analyses shall be undertaken by a Laboratory with independent accreditation for those parameters measured.
6. The Permit Holder shall report the results of its previous financial year's monitoring to the Regional Council by 31 July of each year, for the duration of this discharge permit.
7. Should any of the parameters of Condition 4 in monitoring bores FB1A FB1B, FB2 or FB3 consistently exceed the Australian and New Zealand Environment and Conservation Council Water Quality Guidelines for Livestock Watering the Permit Holder shall report to the Regional Council as soon as practicable on the significance

of the result and in consultation with the Regional Council determine if further investigation or remedial measures are required.

8.1.3 Discharge Permit Number 4742 to discharge any emissions to air for a term expiring on 19 January 2030, subject to the following conditions:

1. Charges, set in accordance with Section 36(1)(c) of the Resource Management Act 1991 and Section 690(a) of the Local Government Act 1974, shall be paid to the Regional Council for the carrying out of its functions in relation to the administration, monitoring and supervision of this resource consent, and for the carrying out of its functions under Section 35 (duty to gather information, monitor, and keep records) of the Act.

[Section 36(1)(c) of the Act provides that Council may from time to time fix charges payable by holders of resource consent. The procedure for setting administrative charges is governed by Section 36(2) of the Act and is currently carried out as part of the formulation of the Council's Annual Plan].

2. The Manawatu-Wanganui Regional Council may review the conditions of the permit at any time within six months following the 1st, 5th, 10th, 15th and 25th anniversary of the granting of this permit to deal with any adverse effects on the environment which may arise from the exercise of the permit and which it is appropriate to deal with at a later stage.
3. There shall be no noxious, offensive or objectionable odour beyond the property boundary.
4. Burning of waste or any other material at the landfill is not permitted.
5. If fires occur at the landfill they shall be extinguished as quickly as possible. Following any such fire the Site Manager shall make a report to the Regional Council on the cause of the fire and review procedures to reduce the possibility of a recurrence.

8.2 The Committee pursuant to delegated authority under Section 34 of the Act, grants the following permits, pursuant to Section 105(1)(b) of the Act, to Horowhenua District Council for the Foxton landfill on the Stewart Street property, Foxton, with legal description of Lot 1 DP 14663 and Section 591 SO 21809, Block V, Mount Robinson Survey District and having the Valuation Reference 14770/29700. in the area bounded by map references S24.024-782, S24:031-781, S24:031-782 and S24:024-783:

8.2.1 Discharge Permit Number 4743 to discharge contaminant onto land, subject to the following conditions:

1. Charges, set in accordance with Section 36(1)(c) of the Resource Management Act 1991 and Section 690(a) of the Local Government Act 1974, shall be paid to the Regional Council for the carrying out of its functions in relation to the administration, monitoring and supervision of this resource consent, and for the carrying out of its functions under Section 35 (duty to gather information, monitor, and keep records) of the Act.

[Section 36(1)(c) of the Act provides that Council may from time to time fix charges payable by holders of resource consents. The procedure for setting administrative charges is governed by Section 36(2) of the Act and is currently carried out as part of the formulation of the Council's Annual Plan].

2. This permit authorises the discharge of solid waste to the land shown in Plan C4743, which is attached to and forms part of this permit, until 30 June 1996, and the discharge of cover material onto the same landfill until 31 January 1997.
3. The Manawatu-Wanganui Regional Council may review the conditions of the permit at any time within six months following the granting of this permit to deal with any adverse effects on the environment which may arise from the exercise of this permit and which it is appropriate to deal with at a later stage.
4. The discharge of solid waste shall only be to land as described in Plan C4743. To this end the Permit Holder shall take all practical measures to avoid the off site discharge of solid waste.
5. If solid waste is discharged to land other than that referred to in Condition 4 of this permit, or to water, the Permit Holder shall ensure the solid waste is cleared and removed to the landfill area, as soon as practicable.
6. The Permit Holder shall not knowingly allow the disposal of a significant quantity of waste, which, due to, for example, their explosive, flammable, reactive, toxic, corrosive or infectious nature, pose a present or future threat to the environment or persons.
7. The Permit Holder shall in consultation with the Regional Council determine details of thickness and permeability of final cover within six months of the granting of this permit, or one month prior to landfill closure, whichever is the sooner.
8. The final landform contour shall not exceed a gradient of 1V:3H.
9. Within one month of the closure of the landfill or within one month prior to the expiry of this permit the landfill shall be capped with a final cover.
10. Prior to the expiry of this permit, or within one month following the closure of the landfill, whichever is the sooner, the Permit Holder shall report in writing to the Regional Council of its compliance with Condition 9 of this discharge permit.

8.2.2 Discharge Permit Number 4744 to discharge any leachate to groundwater for a term expiring on 19 January 2030, subject to the following conditions:

1. Charges, set in accordance with Section 36(1)(c) of the Resource Management Act 1991 and Section 690(a) of the Local Government Act 1974, shall be paid to the Regional Council for the carrying out of its functions in relation to the administration, monitoring and supervision of this resource consent, and for the carrying out of its functions under Section 35 (duty to gather information, monitor, and keep records) of the Act.

[Section 36(1)(c) of the Act provides that Council may from time to time fix charges payable by holders of resource consent. The procedure for setting administrative charges is governed by Section 36(2) of the Act and is currently carried out as part of the formulation of the Council's Annual Plan].

2. The Manawatu-Wanganui Regional Council may review the conditions of the permit at any time within six months following the 1st, 5th, 10th, 15th, 25th anniversary of the granting of this permit for the following purposes:
 - i) deal with any adverse effects on the environment which may arise from the exercise of this permit and which it is appropriate to deal with at a later stage; and
 - ii) to assess the adequacy of the Monitoring Programme outlined in Conditions 5, 6, and 7 so as to incorporate into the permit any modification of the Monitoring Programme which may be necessary to deal with any adverse effects on the environment arising from the management of the landfill.
3. There shall be no contamination of adjoining land by leachate.
4. The discharge, after reasonable mixing, shall not result in any of the following effects in the Foxton River Loop or in adjacent drains:
 - i) The production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
 - ii) Any conspicuous change in the colour or visual clarity;
 - iii) Any emission of objectionable odour;
 - iv) The rendering of fresh water unsuitable for consumption by farm animals; or
 - v) Any significant effect on aquatic life.
5. The Permit Holder shall implement the following Groundwater and Surface Water Monitoring Programme within three months following the granting of this permit.
 - (i) At six monthly intervals samples shall be taken from sites F1, F2 and F6, and monitoring bore F5 as shown on Plan C4744, which is attached to and forms part of this discharge permit, and analysed for the parameters listed in this condition:

pH
Conductivity
Ammoniacal nitrogen
Nitrate-nitrogen
Faecal Coliforms
Chloride
Sulphate
Cadmium
Chromium (III)
Copper
Iron
Lead
Manganese
Nickel
Sodium
Zinc
Temperature
 - iii) The Permit Holder shall monitor for groundwater level in monitoring bore F5 as shown on Plan C4744 at six monthly intervals.

6. All water quality analyses shall be undertaken by a Laboratory with independent accreditation for those parameters measured.
7. The Permit Holder shall report the results of its previous financial year's Groundwater and Surface Water Monitoring Programme to the Regional Council by 31 July of each year, for the duration of this discharge permit.
8. Should any parameters tested for under Condition 5 in monitoring bore F5 consistently exceed the Australian and New Zealand Environment and Conservation Council Water Quality Guidelines for Livestock Watering the Permit Holder shall report to the Regional Council on the significance of the result and in consultation with the Regional Council determine if further investigating or remedial measures are required.

8.2.4 Discharge Permit Number 4745 to discharge any emissions to air for a term expiring on 19 January 2030, subject to the following conditions:

1. Charges, set in accordance with Section 36(1)(c) of the Resource Management Act 1991 and Section 690(a) of the Local Government Act 1974, shall be paid to the Regional Council for the carrying out of its functions in relation to the administration, monitoring and supervision of this resource consent, and for the carrying out of its functions under Section 35 (duty to gather information, monitor, and keep records) of the Act.

[Section 36(1)(c) of the Act provides that Council may from time to time fix charges payable by holders of resource consent. The procedure for setting administrative charges is governed by Section 36(2) of the Act and is currently carried out as part of the formulation of the Council's Annual Plan].

2. The Manawatu-Wanganui Regional Council may review the conditions of the permit at any time within six months following the 1st, 5th, 10th, 15th and 25th anniversary of the granting of this permit to deal with any adverse effects on the environment which may arise from the exercise of this permit and which it is appropriate to deal with at a later stage.
3. There shall be no noxious, offensive or objectionable odour beyond the property boundary.
4. There shall be no discharge of offensive or objectionable dust beyond the property boundary.
5. Burning of waste or any other material at the landfill is not permitted.
6. If fires occur at the landfill they shall be extinguished as quickly as possible. Following any such fire the Site Manager shall make a report to the Regional Council on the cause of the fire and review procedures to reduce the possibility of a recurrence.

8.3 The Committee pursuant to delegated authority under Section 34 of the Act, grants the following permits, pursuant to Section 105(1)(b) of the Act, to Horowhenua District Council for the Shannon landfill on the Hennessey Road property, Shannon, with legal description of Part Manawatu-Kukutauaki 2D6, Block XII, Mount Robinson Survey District and having the Valuation Reference 14760/35700, in the area bounded by map references S24:159-704, S24:160-704, S24:160-706 and S24:159-706:

8.3.1 Discharge Permit Number 4746 to discharge contaminant onto land, subject to the following conditions:

1. Charges, set in accordance with Section 36(1)(c) of the Resource Management Act 1991 and Section 690(a) of the Local Government Act 1974, shall be paid to the Regional Council for the carrying out of its functions in relation to the administration, monitoring and supervision of this resource consent, and for the carrying out of its functions under Section 35 (duty to gather information, monitor, and keep records) of the Act.

[Section 36(1)(c) of the Act provides that Council may from time to time fix charges payable by holders of resource consent. The procedure for setting administrative charges is governed by Section 36(2) of the Act and is currently carried out as part of the formulation of the Council's Annual Plan].

2. This permit authorises the discharge of solid waste on to the land shown in Plan C4746, which is attached to and forms part of this permit, until 30 June 1997, and the discharge of cover material onto the same landfill until 18 January 1998.
3. The Manawatu-Wanganui Regional Council may review the conditions of the permit at any time within six months following the granting of this permit to deal with any adverse effects on the environment which may arise from the exercise of this permit and which it is appropriate to deal with at a later stage.
4. The discharge of solid waste shall only be to land as shown in Plan C4746. To this end the Permit Holder shall take all practical measures to avoid the off site discharge of solid waste.
5. If solid waste is discharged to land other than that referred to in Condition 4 of this permit, or to water, the Permit Holder shall ensure the solid waste is cleared and removed to the landfill area, as soon as practicable.
6. The Permit Holder shall not knowingly allow the disposal of a significant quantity of waste, which, due to, for example, their explosive, flammable, reactive, toxic, corrosive or infectious nature, pose a present or future threat to the environment or persons.
7. The final landform. contour shall not exceed a gradient of 1V:3H on any face.
8. Prior to the expiry of this permit, the landfill shall be compacted, covered over with not less than 400mm compacted earth. Pasture shall be established over the final covering surface of the landfill.
9. Prior to the expiry of this permit, or within one month following the closure of the landfill, whichever is the sooner, the Permit Holder shall report in writing to the Regional Council, of its compliance with Conditions 7 and 8 of this discharge permit.

8.3.2 Water Permit Number 4747 to divert stormwater for a term expiring on 19 January 2030, subject to the following conditions:

1. Charges, set in accordance with Section 36(1)(c) of the Resource Management Act 1991 and Section 690(a) of the Local Government Act 1974, shall be paid to the Regional Council for the carrying out of its functions in relation to the administration, monitoring and supervision of this resource consent, and for the carrying out of its

functions under Section 35 (duty to gather information, monitor, and keep records) of the Act.

[Section 36(1)(c) of the Act provides that Council may from time to time fix charges payable by holders of resource consent. The procedure for setting administrative charges is governed by Section 36(2) of the Act and is currently carried out as part of the formulation of the Council's Annual Plan].

2. The Manawatu-Wanganui Regional Council may review the conditions of the permit at any time within six months following the 1st, 5th, 10th, 15th, 25th anniversary of the granting of this permit to deal with any adverse effects on the environment which may arise from the exercise of this permit and which it is appropriate to deal with at a later stage.
3. The Permit Holder shall be solely responsible for any necessary erosion prevention measures along the length of all drainage and diversion channels. To this end, all channels shall be designed to preclude excessive channel erosion at peak velocities.

8.3.3 Discharge Permit Number 4748 to discharge any leachate to groundwater for a term expiring on 19 January 2030, subject to the following conditions:

1. Charges, set in accordance with Section 36(1)(c) of the Resource Management Act 1991 and Section 690(a) of the Local Government Act 1974, shall be paid to the Regional Council for the carrying out of its functions in relation to the administration, monitoring and supervision of resource consents, and for the carrying out of its functions under Section 35 (duty to gather information, monitor, and keep records) of the Act.

[Section 36(1)(c) of the Act provides that Council may from time to time fix charges payable by holders of this resource consent. The procedure for setting administrative charges is governed by Section 36(2) of the Act and is currently carried out as part of the formulation of the Council's Annual Plan].

2. The Manawatu-Wanganui Regional Council may review the conditions of the permit at any time within six months following the 1st, 5th, 10th, 15th, 25th anniversary of the granting of this permit for the following purposes:
 - i) deal with any adverse effects on the environment which may arise from the exercise of this permit and which it is appropriate to deal with at a later stage; and
 - ii) to assess the adequacy of the Monitoring Programme outlined in Conditions 5, 6, 7, and 8 of this permit, so as to incorporate into the permit any modification of the Monitoring Programme which may be necessary to deal with any adverse effects on the environment arising from the management of the landfill.
3. There shall be no contamination of adjoining land by leachate.
4. The discharge shall not result in any of the following effects on water within the stream channel beyond the property boundary as shown on Plan C4748 which is attached to and forms part of this permit:
 - i) The production of any conspicuous oil or grease films, scums or foams or floatable or suspended materials;

- ii) Any emission of objectionable odour;
 - iii) A conspicuous change in colour or visual clarity;
 - iv) The rendering of fresh water unsuitable for consumption by farm animals;
 - v) Any significant adverse effect on aquatic life.
5. The Permit Holder shall implement the following Groundwater and Surface Water Monitoring Programme within three months following the granting of this permit.
- i) At six monthly intervals samples shall be taken from sites S1 and S3, and monitoring bore S2 as shown on Plan C4748 and analysed for the following parameters:
 - pH
 - Conductivity
 - Ammoniacal-nitrogen
 - Nitrate-nitrogen
 - Faecal Coliforms
 - Chloride
 - Sulphate
 - Cadmium
 - Chromium (III)
 - Copper
 - Iron
 - Lead
 - Manganese
 - Nickel
 - Sodium
 - Zinc
 - Temperature
 - ii) The Permit Holder shall monitor for ground water level in monitoring bore S2 as shown on Plan C4748 for the duration of this discharge permit.
6. All water quality analyses shall be undertaken by a Laboratory with independent accreditation for those parameters measured.
7. The Permit Holder shall report the results of its previous financial year's Groundwater and Surface Water Monitoring Programme to the Regional Council by 31 July of each year, for the duration of this discharge permit.
8. Should any parameter tested for in Condition 5 in monitoring bore S2 or sites S1 or S3 as shown on Plan C4748 consistently exceed the Australian and New Zealand Environment and Conservation Council Water Quality Guidelines for Livestock Watering the Permit Holder shall report to the Regional Council on the significance of the result and in consultation with the Regional Council determine if further investigation or remedial measures are required.

8.3.4 Discharge Permit Number 4749 to discharge any emissions to air for a term expiring on 19 January 2030, subject to the following conditions:

1. Charges, set in accordance with Section 36(1)(c) of the Resource Management Act 1991 and Section 690(a) of the Local Government Act 1974, shall be paid to the Regional Council for the carrying out of its functions in relation to the administration, monitoring and supervision of this resource consent, and for the carrying out of its functions under Section 35 (duty to gather information, monitor, and keep records) of the Act.

[Section 36(1)(c) of the Act provides that Council may from time to time fix charges payable by holders of resource consent. The procedure for setting administrative charges is governed by Section 36(2) of the Act and is currently carried out as part of the formulation of the Council's Annual Plan].

2. The Manawatu-Wanganui Regional Council may review the conditions of the permit at any within six months following the 1st, 5th, 10th, 15th and 25th anniversary of the granting of this permit to deal with any adverse effects on the environment which may arise from the exercise of the permit and which it is appropriate to deal with at a later stage.
3. There shall be no noxious, offensive or objectionable odour beyond the property boundary.
4. There shall be no discharge of offensive or objectionable dust beyond the property boundary.
5. Burning of waste or any other material at the landfill is not permitted.
6. If fires occur at the landfill they shall be extinguished as quickly as possible. Following any such fire the Site Manager shall make a report to the Regional Council on the cause of the fire and review procedures to reduce the possibility of a recurrence.

- 8.4 **The Committee, pursuant to delegated authority under Section 34 of the Act, resolves that the Manawatu-Wanganui Regional Council shall recover from the applicant reasonable costs amounting to \$3,997.50, this being the costs incurred in the processing of the applications.**

W.G. TOLHURST
CHAIRMAN

Without prejudice

Amended set of conditions to be Appendix 1 to the Agreement between Heka, the s274 parties and HDC

1. These conditions are based on the commissioner's decision. The red text reflects changes by the commissioners.
2. Agreed changes are in yellow highlight.

Discharge Permit 6009

Consent is granted to the Horowhenua District Council to **discharge solid waste to land** at the Levin landfill, Hokio Road, Levin, legally described as Lot 3 DP 40743 Blk II Waitohu Survey District, for a term expiring 35 years from the commencement of the consent subject to the following conditions:

1. This permit does not authorise the disposal of liquid waste to land at the Levin Landfill.

Liquid waste is defined as:

Septic tank waste, grease trap waste, sewage and any material that contains free liquids.

The presence of free liquids may be determined by either of the following methods, whichever is most practicable at the time:

- i. The "Paint Filter Test"; or
- ii. Material which may be loaded, transported and deposited at the landfill without the risk of free liquid seeping from the material, and without the risk of having the deposited material flow under gravity down any slope on the landfill shall be deemed to not contain free liquids.

General Conditions – Discharge Solid Waste to Land

2. The Permit Holder shall take all practicable measures to avoid the discharge of waste from within the landfill to surrounding land. To this end, the Permit Holder shall ensure:
 - a. The amount of refuse exposed at any one time is confined in dimension to 800 square metres of tipping face; and
 - b. Exposed refuse is covered at the end of each day that refuse is received at the landfill.
3. If refuse is discharged from within the active landfill areas to land outside the legal boundary of the landfill property, the Permit Holder shall ensure that such waste is cleared and removed to the landfill as soon as practicable.
4. The Permit Holder will monitor the landfill at least once every two weeks for the build-up of litter, paper and other deposits outside the active landfilling areas, and remove such material as required.
5. The Permit Holder shall regularly inspect for the presence of vermin, birds and other pests take appropriate measures to control them.
6. The Permit Holder shall regularly inspect the landfill for noxious weeds, and take appropriate measures to control those noxious weeds.

Hazardous Material

7. The Permit Holder shall not allow the disposal of waste of an explosive, flammable, reactive, toxic, corrosive or infectious nature, to an extent that the waste poses a present or future threat to the environment or the health and the safety of people.
8. The Permit Holder shall develop and implement a procedure for the landfill operator, such that potentially hazardous material, as listed in Annex 1 attached to and forming part of

this permit, will not be accepted for disposal at the Levin landfill without specific authorization. The Operations Manager of the Horowhenua District Council, or some other designated person, is able at their discretion to accept quantities of such wastes. The waste shall be accompanied by a Hazardous Waste Manifest, as listed in Annex 1, which will form part of the permanent record and shall be reported by the Regional Council by **30 September** each year for the term of this Permit.

9. The Permit Holder shall maintain a secure facility for any small quantities of hazardous waste, pending a decision on treatment, disposal or transfer to another facility.
10. Hazardous waste stored at the facility described in Condition 9 shall be stored in a sealed and bunded area to avoid adverse effects from spills.
11. Any hazardous waste accepted for disposal shall be disposed within an adequate volume of mature refuse, in accordance with Centre for Advanced Engineering's Landfill Guidelines (2000).

Monitoring and Reporting

Specific Conditions – Discharge Solid Waste to Land at Existing Landfill

12. No solid waste shall be disposed to the existing landfill, after two years from the commencement of this consent.
13. All new fill should be placed on top of at least 2 metres of existing material in the existing landfill.
14. The Permit Holder shall update the Landfill Management Plan in respect of the operations on the lined landfill to the satisfaction of the **Regulatory Manager at the Regional Council before November 2019**. The Landfill Management Plan shall include, but not be limited to:
 - a. The specific conditions contained herein, related to the operation, management and monitoring of the landfill.
 - b. A description of the development and maintenance of the landfill.
 - c. A description of how the consent will be exercised in a manner to ensure compliance with the consent and the conditions thereof and the Resource Management Act 1991.
 - d. A description of how the consent will be exercised to minimise adverse effects on the environment.
 - e. A description of the hazardous waste acceptance criteria, including the criteria set out.
 - f. The emergency procedures to be followed in the event of natural emergencies and hazardous waste spills.
 - g. The methods of controlling dust and odour emissions including the criteria for assessing when, and how regularly, roadways and the landfill are dampened by water or otherwise.
 - h. Details of measures to avoid nuisance effects on adjacent properties i.e. birds and vermin, as a result of landfill activities.
 - i. Operational, intermediate and final capping requirements.

- j. Closure and aftercare.
- k. Procedure to update the management plan, in light of changing circumstances, to continue compliance with Conditions of this Permit.
- l. A screen planting implementation description.

The Permit holder shall prepare a Closed Landfill Aftercare Management Plan in respect of the closed **unlined** landfill (Area "A") to the satisfaction of the Environmental Protection Manager at the Regional Council within six months of the completion of the review of the consent conditions. The Closed Landfill Aftercare Management Plan shall include, but not be limited to those aspects that are detailed in Appendix E of the MfE publication entitled 'A guide for the Management of Closing and Closed Landfills in New Zealand (May 2001)'. The Closed Landfill Aftercare Management Plan shall require at the least:

- m. Grading to a final slope on the landfill faces and caps of between 1V:3H (1 in 3) and 1V:40H (1 in 40);
- n. Ensuring the final landfill surface is sloped to promote run-off toward the outside of the landfill footprint and prevent surface water ponding on the landfill cap;
- o. Ensuring the landfill cap incorporates a layer at least 700 mm thick. All material added to the existing cap to bring the thickness up to 700 mm, or for future cap maintenance purposes, is to have a permeability of not greater than 1×10^{-7} m/s.
- p. Establishing and maintaining a grass or tussock vegetation cover on the capped landfill consistent with an ongoing ability to monitor and maintain the integrity of the landfill cap as per Condition 15 (d) of Consent 6010.
- q. Monitoring the landfill cover on an annual basis to identify areas of differential settlement slope stability issues, erosion and changing vegetation patterns, including a topographic survey to ensure Conditions 14(n) to (q) continue to be met;

The Permit holder shall submit an annual report to the Regional Council by **30 September** each year for the duration of this Permit documenting the condition of the unlined landfill and any maintenance carried out during the previous year. The annual report shall address but not be limited to those aspects listed in Conditions 14(n) to 14(r) above. The annual report shall include a plan of the unlined landfill specifically documenting the shape of the closed landfill and any changes during the previous year related to Condition 14(q) [The annual report can be written in conjunction with the annual report required as part of Condition 15 (f) for Consent Number 6010]

Specific Conditions – Discharge of Offal and Dead Animals to Land

- 15. Offal waste shall be immediately buried in depth of 0.6 metres upon delivery.
- 16. All animals disposed of as diseased animals under the Animal Act 1967 shall be immediately buried to a depth of at least 1 metre.
- 17. Pits for the burial of offal and animals shall be excavated in mature refuse and shall be away from the public tipping area.
- 18. Pits for the burial of offal and animals shall be at least 10 metres from any landfill batter slope.
- 19. Pits for the burial of offal and animals shall not exceed a maximum size of two metres by 15 metres.

20. The immediate cover material of all offal and animals shall be a minimum depth of at least 100 millimetres unless these conditions specify otherwise. Pits shall be filled to within one metre of the prior refuse surface level and reinstated with appropriate compaction with previously removed refuse or other suitable material.
21. Pits for the burial of offal and animals shall be demarcated as such and shall be fenced off.
22. Any other malodorous wastes not already covered specifically by these conditions shall be covered immediately upon disposal.

Specific Conditions – Discharge of Biosolids and Sludges to Land

23. Biosolids, sludges and similar materials which do not contain free liquids may be accepted at the landfill as solid waste. This shall include dewatered municipal wastewater treatment plant solids, dewatered processing plant solids and dewatered agricultural wastes.

The presence of free liquids may be determined by either of the following methods, whichever is most practicable at the time:

- i. The “Paint Filter Test”; or
 - ii. Material which may be loaded, transported and deposited at the landfill without the risk of free liquids seeping from the material, and without the risk of having the deposited material flow under gravity down any slope on the landfill shall be deemed to not contain free liquids.
24. If not co-disposed of within the landfill, the biosolids, sludges and similar materials shall be applied to the landfill surface in accordance with the 1992 Ministry of Health Guidelines for the “safe use of sewage effluent and sewage sludge on land”.
 25. The Permit Holder shall maintain records of:
 - a. The type of waste received;
 - b. The volume of waste received;
 - c. Source of waste; and
 - d. The location in which the material was placed.
 26. Disposal of site-generated sludge from cess-pits, leachate ponds or other site activities that contain free liquids is acceptable to facilitate site operation, provided this does not adversely affect landfill stability or face operations.

Specific Conditions – Discharge Solid Waste to Land at Lined Landfill

27. Design specifications and a set of construction drawings for the lined landfill shall be forwarded to the Regional Council (Environmental Protection Manager) for certification, to ensure compliance with the conditions of this consent and all related consents, at least three months prior to the intended construction of the lined landfill begins.
28. The Permit Holder shall construct the liner system for all new cells to include the following elements:
 - a. A smooth base constructed from insitu materials the level of which is above the winter groundwater level.

- b. A geosynthetic clay liner (GCL) a minimum of 5mm thick, with a coefficient of permeability not exceeding 3×10^{-11} m/s. The Permit Holder shall supply documentation from the manufacturer demonstrating quality control procedures ensuring that 95 % of the GCL meets the coefficient of permeability standard required.
- c. A synthetic flexible membrane (high density polyethylene, HDPE with a minimum thickness of 1.5 mm, or polypropylene, PP with a minimum thickness of 1.0 mm).
- d. A protective layer of sand 100 mm thick on the base overlain by a 300 mm thick gravel drainage layer, and on the side slopes **a confining layer of gravel 300 mm thick, lain on top of a protective geo fabric and geo-grid, appropriately designed for the site conditions.**
- e. Provision for the collection of leachate from the liner and reticulating to a treatment system outside the landfill area.
- f. An alternative to any of the above as agreed from time to time, in writing, between the Permit Holder and the consent authority.

29. Deleted.

- 30. If any ancient human remains or artefacts are discovered during any earthworks activity associated with the construction and maintenance of the landfill, then works shall cease, and the Consent Holder shall immediately inform the Environmental Protection Manager of the Regional Council and relevant **tangata whenua**. Further work in the vicinity of the find shall be suspended while relevant **tangata whenua** carry out their procedures for the removal of taonga. The Environmental Protection Manager of the Regional Council will inform the Consent Holder when work can recommence in the vicinity of the find.
- 31. The Regional Council **may** initiate a review of Conditions 2, 8, 14(a) to (m), 28, 32, 33 and 34 of this permit **during the month of October in 2024, 2029 and 2034**. The reviews shall be for the purpose of:
 - a. Assessing the adequacy of the management plan outlined in Condition 14 of this consent; and/or
 - b. Assessing the effectiveness of Conditions 2, 8 and 28 of this consent.
 - c. Assessing the effectiveness of the NLG outlined in Conditions 32, 33 and 34.

In avoiding, remedying or mitigating adverse effects on the environment surrounding the Levin Landfill, the review of conditions shall allow for:

- d. Modification of the management plan outlined in Condition 14 of this consent;
- e. Deletion or changes to Conditions 2, 8 and 28 of this consent;
- f. Deletion or changes to Conditions 32, 33, and 34; and
- g. Addition of new conditions as necessary.
- h. An alternative to any of the above as agreed from time to time, in writing, between the Permit Holder and the consent authority.

To avoid, remedy or mitigate adverse effects on the environment surrounding the Levin Landfill.

Specific Conditions – Neighbourhood Liaison Group (hereinafter “NLG”)

32. The Permit Holder shall establish an NLG. Members of the NLG will suggest available and suitably qualified nominees for an independent facilitator in advance of or at the first meeting. The list of nominees must be limited to six nominees. The Permit Holder will confirm that the list of nominees contains suitably qualified people for the facilitator role. The NLG will appoint an independent facilitator from the list of nominees confirmed by the permit holder at that same meeting. In the event consensus cannot be reached an independent facilitator will be appointed from the list of nominees by a majority vote of community NLG representatives as identified in (a) to (d) and (g).

The following parties shall be eligible to be members of the NLG with one representative each at NLG meetings:

- a. the Lake Horowhenua Trustees;
- b. Mr Charles Rudd;
- bc. Ngati Pareraukawa;
- ed. Each of the owners and occupiers of those properties adjoining the Levin Landfill property described as A through to N on Drawing 2181 attached;
- de. Horowhenua District Council;
- ef. the Manawatu-Wanganui Regional Council ; and
- g. Two representatives of the owners and occupiers of the properties affected by the landfill.

Advice Note:

Technical advisors as appointed by any member(s) of the NLG may be invited to NLG meetings if the NLG member(s) consider it reasonable to assist the discussions with the NLG (at the members own cost).

The Permit Holder's staff and contractor shall be able to attend and participate in watch the NLG meetings and assist on the invitation of the permit holder's representative.

At the invitation of the Permit Holder and/or NLG, other parties may attend NLG meetings as jointly agreed by both the Permit Holder and NLG.

The representatives on the NLG are responsible for reporting back to their members and interested parties. The permit holder will make (unless confidential) the reports and information provided to the NLG and the minutes of the NLG available on its website.

The permit holder is responsible solely for the reasonable costs of administering the NLG, such as providing a venue, the facilitator's costs and drafting up of minutes.

The facilitator will be paid in accordance with level 2 of the fees range for members under Cabinet Office circular (12) 6: "Fees framework for members appointed to bodies in which the Crown has an interest".

33. The Permit Holder shall:

- a. Convene one meeting by the end of June 2019 to appoint an independent facilitator in accordance with clause 32.

- b. Convene a further meeting within two months of the appointment of the independent facilitator.
 - c. Thereafter convene a meeting at intervals of six months for the following 18 months; and
 - d. Thereafter convene a meeting at intervals of no more than twelve months unless all NLG representatives agree that changes to the intervals are acceptable.
34. The purpose of the NLG is to create a forum in which the Permit Holder, Horizons Regional Council and community can engage for the purpose of reviewing and sharing perspectives on monitoring results, and where appropriate, discuss strategies for maintaining or improving the landfill operation, consistent with the consent conditions.
35. The Permit Holder shall:
- a. Supply notes of each meeting to the Group Members;
 - b. Forward an annual report to members and to the Regional Council and the District Council; and
 - c. Forward any other information to the Group Members, in accordance with the conditions of the consents; and
 - d. The Permit Holder shall ensure the NLG members are:
 - i. Able to advise the Permit Holder of potential members of the NLG, such new members to be at the agreement of the Permit Holder.
 - ii. Given the opportunity to inspect the operations on site on the occasion of NLG meetings, and/or on such other occasions as are agreed by the Permit Holder and Landfill Operator. The Permit Holder and the Landfill Operator shall not unreasonably withhold such agreement. The Permit Holder shall grant the NLG members access to the landfill property, during working hours, subject to relevant regulations, including health and safety regulations and the Management Plan.
 - iii. Consulted by the Permit Holder as a group prior to any change of conditions pursuant to section 127 of the Resource Management Act 1991 (and/or any consequential amendments).
 - iv. Provided by the Permit Holder with a copy of all monitoring reports and other documentation relating to the non-commercially sensitive, environmental operation of the landfill, at the same time as such reports are provided to the Regional Council in accordance with the resource consents.
 - v. Able to raise with the Permit Holder, as necessary, any matter which the NLG member believes the Permit Holder should address in order to meet the conditions of the consent(s).
 - vi. Able to provide written suggestions to the Permit Holder on possible improvements to, or concerns about, the landfilling operations that are formally acknowledged and considered by the Permit Holder at or before the next NLG meeting.
 - vii. Given reasons from the Permit Holder for any comments from the NLG representatives at the annual meeting on environmental and monitoring

results in relation to environmental mitigations at the Levin landfill being rejected.

viii. Formally invited to participate in the Permit Holder's Waste Management and Minimisation Plan review process.

ix. Provided with a copy of any complaints within 10 workings days of a request by the NLG.

Charges

36. Charges, set in accordance with section 36(1)c of the Resource Management Act 1991, and section 690 A of the Local Government Act 1974, shall be paid to the Regional Council for the carrying out of its functions in relation to the administration, monitoring and supervision of this resource consent and for the carrying out of its functions under section 35 (duty to gather information, monitor, and keep records) of the Act.

[**Note:** Section 36(1)c of the Act provides that Council may from time to time fix charges payable by holders of resource consents. The procedure for setting administrative charges is governed by section 36(2) of the Act and is currently carried out as part of the formulation of the Council's Annual Plan.]

DISCHARGE PERMIT 6010

Consent is granted to the Horowhenua District Council to **discharge landfill leachate onto and into land** at the Levin landfill, Hokio Beach Road, Levin, legally described as Lot 3 DP 40743 Blk II Waitohu Survey District, for a term expiring 35 years from the commencement of the consent subject to the following conditions:

1. Charges, set in accordance with section 36(1)c of the Resource Management Act 1991, and section 690 A of the Local Government Act 1974, shall be paid to the Regional Council for the carrying out of its functions in relation to the administration, monitoring and supervision of this resource consent and for the carrying out of its functions under section 35 (duty to gather information, monitor, and keep records) of the Act.

[**Note:** Section 36(1)c of the Act provides that Council may from time to time fix charges payable by holders of resource consents. The procedure for setting administrative charges is governed by section 36(2) of the Act and is currently carried out as part of the formulation of the Council's Annual Plan.]

General Conditions – Discharge leachate to ground

2. **There shall be no overland flow discharge of leachate beyond the site boundary.**

2A **By the end of April 2021 the Permit Holder must complete an assessment of leachate remediation options (and a BPO) to:**

- (a) **cease, or if cessation is not feasible, materially reduce the discharge of leachate to the Tatana Drain and Hokio Stream; or**
- (b) **if neither of the options in (a) are feasible then options to offset effects within the Hokio catchment and if that is not feasible or possible options to compensate effects within the Hokio catchment or outside of it (either option through an ecological package).**

The Permit Holder must provide a draft of the assessment to the NLG representatives and Horizons Regional Council for comments. The Permit Holder shall decide on an option that is feasible to implement, applying the hierarchy above from the assessment. The Permit Holder must notify the Regulatory Manager of Horizons Regional Council which option it selects, and provide a copy of the final assessment. The selected leachate remediation option must be fully implemented by June 2023.

3. The Permit Holder shall commence the following monitoring programme:

Table A: Landfill Groundwater Monitoring Locations, Parameters, and Frequency – Deep Aquifer Wells

| Location | Parameters and frequency |
|---|--|
| C2dd, E1d, E2d and any other future deep monitoring well unless installed for background monitoring purposes. | Quarterly comprehensive for 2 years. <i>Subsequently, conditional</i> Annual comprehensive Quarterly indicator. |
| G1d, Xd1 and any other future deep monitoring well installed for background monitoring purposes. | Quarterly comprehensive for 1 year <i>Subsequently</i> Annual comprehensive Quarterly indicator |
| All monitoring wells | Annual pesticide / semi VOC |

Table B: Summary of Landfill Groundwater Monitoring Locations, Parameters and Frequency – Shallow Aquifer Wells

| Location | Parameters and frequency |
|---|---|
| C1, C2, C2ds, D4 B1, B2, B3s, E1s, E2s and any other shallow Compliance monitoring well installed in the future. | Six monthly comprehensive for 2 years Quarterly indicator <i>Subsequently, conditional</i> Annual comprehensive Quarterly indicator |
| D5, F1, F2, F3 and any other shallow monitoring well installed to monitor leachate irrigation areas in the future. | Six monthly comprehensive for 2 years Quarterly indicator <i>Conditional</i> Annual comprehensive Quarterly indicator |
| G1s and any other shallow Background monitoring well installed in the future. | Quarterly comprehensive for 1 year <i>Subsequently, conditional</i> Quarterly indicator |
| D1, D2, D3r, D6, Xs1, Xs2 and any other Early Detection wells installed in the future. | Quarterly comprehensive for 2 years <i>Subsequently, conditional</i> Annual comprehensive Quarterly indicator |
| All monitoring wells | Annual pesticide/ semi VOC |

Groundwater levels are to be measured and recorded during each sampling procedure.

Conditions: A reduction in sampling frequency at any groundwater monitoring point is conditional on:

- A. Completion of the initial monitoring program;
- B. Good consistency of groundwater sample analysis results, or a clearly identified reason for inconsistent results that excludes the contaminant source being landfill operations, stored waste or leachate;
- C. No decline in groundwater quality as determined from indicator parameter trends over a period of four consecutive sampling rounds;

- D. If a well being monitored on a conditional frequency becomes non-compliant with condition C, the monitoring frequency for that well should return to the initial monitoring frequency until conditions B and C are again being fulfilled.

Sampling frequency for the shallow monitoring wells installed to monitor proposed leachate irrigation areas as defined in Table B may begin on the conditional basis, however the frequency is to revert to the unconditional frequency if leachate irrigation begins and continues from that date as if the monitoring well had been newly installed.

If site management planning indicates any early detection monitoring well is likely to become buried or otherwise destroyed within the following year as a result of normal operations:

- E. This must be communicated to the regional council as soon as practicable;
- F. A replacement well is to be constructed in a position agreed upon with the Environmental Protection Manager at Horizons Regional Council;
- G. The replacement well should be installed in a position suitable to act as an early detection well and be classed as an early detection well; and
- H. The replacement well should be constructed as a nested well (or two separate wells) with screens positioned in both shallow and deep aquifers.

Table C: Other Water Monitoring Locations, Frequencies and Parameters

| Location | Parameters and frequency |
|----------------------|---|
| HS1 | Monthly comprehensive for comparison purposes with HS1A. Monitoring to be discontinued after 2 years |
| HS1A, HS2, HS3 | Monthly comprehensive for 2 years Subsequently, conditional Six monthly comprehensive Quarterly indicator |
| TD1 | Six monthly comprehensive Quarterly Indicator |
| Leachate Pond Outlet | Monthly comprehensive for 2 years Six monthly pesticide / semi VOC Subsequently, conditional Six monthly comprehensive Quarterly indicator Annual pesticide / semi VOC |

Conditions: A reduction in sampling frequency for the Hokio Stream monitoring locations (HS1A, HS2 and HS3) after April 2021 is conditional on:

- I. No significant increases in the concentrations between monitoring sites HS1A and HS3, for parameters exceeding the Trigger values contained in Table C1 at Site HS3;
- J. To determine whether there is a significant increase in contaminant levels the consent holder shall engage a suitably qualified freshwater scientist to assess the 24 month water quality monitoring results obtained for the Hokio Stream against the trigger values specified in Table C1, after 24 months of monthly data collection. Should any of the trigger values be exceeded at the downstream monitoring site (HS3 as per Fig. X) the consent holder shall propose a statistical analysis approach to the Regional Council for certification. The analysis shall be run, for the parameter(s) exceeding the relevant trigger value, on the last 24 consecutive samples to determine if there are any significant increases in concentrations between upstream and downstream. This analysis shall be

provided to the Regional Council within 3 months following the completion of the 24 month monitoring period

Table C1: Trigger Values

| Parameter | Measure | Value |
|---------------------------|---|--------|
| Total ammoniacal nitrogen | Maximum (g/m ³) | 2.1 |
| Total ammoniacal nitrogen | Average (g/m ³) | 0.400 |
| ScBOD ₅ | Monthly average (g/m ³) | 2 |
| Aluminium | Dissolved, median concentration (g/m ³) | 0.055 |
| Arsenic | Dissolved, median concentration (g/m ³) | 0.024 |
| Cadmium | Dissolved, median concentration (g/m ³) | 0.0002 |
| Copper | Dissolved, median concentration (g/m ³) | 0.0014 |
| Lead | Dissolved, median concentration (g/m ³) | 0.0034 |
| Nickel | Dissolved, median concentration (g/m ³) | 0.011 |
| Zinc | Dissolved, median concentration (g/m ³) | 0.008 |
| Mercury | Dissolved, median concentration (g/m ³) | 0.0006 |

- K. Following the initial 24 month monitoring period, there shall be no significant increases in concentrations between monitoring sites HS1A and HS3 for parameters exceeding the Trigger values contained in Table C1 at Site HS3. The consent holder shall use a statistical approach certified by the Regional Council to determine whether there has been a significant increase in concentrations, based on samples collected over the previous 36 month period.
- L. If the Hokio Stream monitoring locations are being sampled on a conditional frequency and **do not meet** condition K, the monitoring frequency for all three monitoring locations (HS1a, HS2 and HS3) **shall** return to the base case intensive monitoring until conditions J and K are again being fulfilled.

Conditions: A reduction in sampling frequency at the leachate pond outlet is conditional on:

- M. Completion of the initial 2 year monitoring program;
- N. Good consistency of water sample analysis results, or a clearly identified reason for inconsistent results;
- O. No decline in water quality over a period of four consecutive sampling rounds.
- P. If the leachate pond outlet is being sampled on a conditional frequency and becomes non-compliant with condition O, the monitoring frequency should return to the base case intensive monitoring until conditions N and O are again being fulfilled.

If existing analysis records indicate that the water quality at a monitoring location complies with the requirements permitting a shift to a conditional sampling schedule, this may be done immediately. If the site complies, sampling for these parameters can be instigated following the base schedule while sampling for the other parameters can be continued based on the conditional schedule.

Locations: (Unless otherwise stated, locations are described on Figure 4, attached to and forming part of this consent, **with some of the additional monitoring sites added in the 2015 review shown in Figure X attached to this consent**).

Table D: Monitoring Point Locations

| Monitoring group | Monitoring point | Location |
|---------------------|-------------------|--|
| Shallow groundwater | B1 | |
| | B2 | |
| | B3s | |
| | C1 | |
| | C2 | |
| | C2ds | |
| | D1 | |
| | D2 | |
| | D3r | |
| | D4 | |
| | D5 | Lined landfill area groundwater bore |
| | D6 | Lined landfill area groundwater bore |
| | E1s | |
| | E2s | |
| | F1 | Groundwater bore downflow from irrigation area |
| | F2 | Groundwater bore downflow from irrigation area |
| | F3 | Groundwater bore downflow from irrigation area |
| | G1s | South Eastern boundary of the site (proposed location) |
| | Xs1 | Adjacent to Hokio Stream, opposite the landfill access road |
| | Xs2 | Adjacent to Hokio Stream, near the HS2 monitoring site |
| Deep groundwater | C2dd | |
| | E1d | |
| | E2d | |
| | G1d | South Eastern boundary of the site (proposed location) |
| | <u>Xd1</u> | |
| Hokio_Stream | HS1A | Hokio Stream – upstream site up-gradient of landfill groundwater plume (Refer Fig X) |
| | HS1 | Hokio Stream – opposite landfill access road (refer Fig. X) |
| | HS2 | Hokio Stream – alongside landfill (Refer Fig. <u>2X</u>) |
| | HS3 | Hokio Stream at or about 50 metres downstream of landfill property boundary(Refer Fig. <u>2X</u>) |
| | | |
| Tatana Drain | TD1 | South-western corner of Tatana Drain |
| Soils | Refer Condition 5 | In land disposal area |
| Leachate | | Pond outlet |

Alternative Sampling Sites: Some of the sampling sites are located on land that is not owned by the consent holder. Sampling at these sites is subject to the land owner approval. If that approval is not given, then samples must be collected from the nearest suitable and accessible site, as agreed to with the Regulatory Manager at the Regional Council.

Parameters: The comprehensive and indicator parameter lists referenced in Tables A, B and C are presented in Tables E and F.

Table E: Comprehensive Analysis List

| Type | Parameters |
|----------------|--|
| Characterising | pH, electrical conductivity (EC), alkalinity, total hardness, suspended solids |
| Oxygen demand | COD, scBOD₅ |
| Nutrients* | NO ₃ -N, NH ₄ -N, DRP, SO ₄ |
| Metals* | Al, As, Cd, Cr, Cu, Fe, Mg, Mn, Ni, Pb, Zn, Hg |
| Other elements | B, Ca, Cl, K, Na |
| Organics | Total organic carbon, total phenols, volatile acids |
| Biological | E. coli |

* Analyses performed for nutrients and metals are for dissolved rather than total concentrations.

Table F: Indicator Analysis List

| Type | Parameters |
|----------------|--|
| Characterising | pH, EC |
| Oxygen demand | COD, scBOD₅ |
| *Nutrients | NO ₃ -N, NH ₄ -N |
| *Metals | Al, Mn, Ni, Pb, Hg |
| Other elements | B, Cl |

* Analyses performed for nutrients and metals are for dissolved rather than total concentrations.

Schedule: The sampling regime defined in Tables A to C shall be undertaken based on the following schedule:

- Q. The first samples for all parameters shall be taken in July 2010.
 - R. Quarterly monitoring referred to in Tables A and B shall be carried out in January, April, July and October.
 - S. Six monthly monitoring referred to in Tables A and B shall be carried out in April and October.
 - T. Annual monitoring referred to in Table A shall be carried out in April.
 - U. The Permit Holder shall invite NLG to nominate a representative who shall, at the person's own cost, be permitted to observe the quarterly and six monthly monitoring referred to in Table C.
4. The Permit Holder shall monitor soils in the irrigated areas. The first soil samples from an irrigation area shall be taken in the first year that leachate is irrigated to land in that area and shall be taken prior to irrigation. Thereafter, samples shall be taken on the schedule provided in Table H.

Table H: Soil Monitoring Locations, Parameters, and Frequencies

| Location | Parameters and frequency |
|------------------------------|---|
| All soil sampling locations. | Background prior to irrigation Six monthly metals and other elements for 2 years |

| | |
|--|----------------------------------|
| | Annual pesticide / semi VOC |
| | <i>Subsequently, conditional</i> |
| | Annual metals and other elements |

Parameters: The analysis parameters applied for soil monitoring are presented in Table I:

Table I: Irrigated Soil Analysis List

| Type | Parameters |
|----------------|--|
| Metals | Al, As, Cd, Cr, Co, Hg, Ni, Pb, Zn |
| Other elements | Cl, B |
| Organics | Pesticides to screen concentrations Semi-volatile organic compounds |

Schedule: The sampling regime defined in Table H shall be undertaken based on the following schedule:

- A. Six monthly monitoring referred to in Table H shall be carried out in April and October.
- B. Annual monitoring referred to in Table I shall be carried out in April.

The first samples required by the schedule in Table H shall be taken during April or October immediately following the start of irrigation, whichever comes first.

Soil sample sites shall be chosen in consultation with the Regional Council. Soil samples shall be obtained from two locations within each leachate irrigation area, with the sampling locations separated by at least 50 m. In addition, a soil sample shall be obtained from one location down gradient from each leachate irrigation area, with the sampling point selected at a low point between dunes. Each soil sample shall consist of a continuous soil core obtained from the surface to a depth of 0.2 m.

Conditions: A reduction in soil sampling frequency for the sites located within a leachate irrigation area, based on the mean of the analysis results for the two sites, is conditional on:

- C. Completion of the initial two year monitoring program.
 - D. Good consistency of soil sample analysis results.
 - E. No continuous increase in contaminant concentrations in soils as determined from parameter trends for the majority of the metals tested over four consecutive sampling rounds.
 - F. If a leachate area being monitored on a conditional frequency becomes non-compliant with condition E, the monitoring frequency for that area should return to the base case intensive monitoring until conditions D and E are again being fulfilled.
 - G. Pesticides or semi-volatile organic compounds being below the screen detection limits in the leachate collected from the lined landfill during the previous two sampling rounds.
5. The results of monitoring under Conditions 3 and 4 of this Permit shall be reported to the Regional Council by **30 September** each year for the duration of this Permit.
 6. The Permit Holder shall ensure the above monitoring programme is undertaken by either the Regional Council, or, an independent organisation approved by the Environmental Protection Manager of the Regional Council.
 7. The Permit Holder shall inform the Neighbourhood Liaison Group of the identity of the organisation carrying out the monitoring.

8. The Permit Holder shall meet the costs of the monitoring.
9. The Permit Holder shall report the results of the monitoring to the Neighbourhood Liaison Group by 30 September each year for the duration of the Permit.
10. All analyses on water quality samples shall be carried out by an IANZ accredited laboratory.
11.
 - (a) Should any shallow aquifer groundwater parameters tested for under Condition 3 of this consent exceed the Australian and New Zealand Environment and Conservation Council Water Quality Guidelines (2000) for Livestock Watering, the Permit Holder shall report to the Regional Council as soon as practicable on the significance of the result and, where the change can be attributed to landfill leachate then Condition 11(c) applies.
 - (aa) Should any surface water parameters tested for under Condition 3 of this consent, including the Tatana Drain location, exceed the Australian and New Zealand Environment and Conservation Council Water Quality Guidelines (2000) for 95 per cent protection levels for Aquatic Ecosystems the Permit Holder shall report to the Regional Council as soon as practicable on the significance of the result. Where the change can be attributed to landfill leachate the Consent Holder shall consult with the Regional Council to determine if further investigation or remedial measures are required.
 - (b) In the event that the statistical analysis completed under Condition 3J shows a significant increase between upstream and downstream results in the Hokio Stream for any parameter exceeding the trigger exceeding the Trigger values contained in Table C1 at Site HS3 (except for scBOD₅), an investigation into the risk of significant effects due to the parameter(s) exceeding the water quality targets or trigger values at the HS3 monitoring site shall be undertaken. This investigation shall be consistent with the ANZECC guidelines framework and should consider, but not be limited to, water chemistry aspects (such as pH, water hardness, dissolved versus total concentrations etc.), and biological aspects. The Permit Holder shall report to the Regional Council, within 3 months of the date the report under condition 3J was submitted to the Regional Council, on the significance of the result and, where the change can be attributed to landfill leachate then Condition 11(c) applies.
 - (c) In the event that a significant effect associated with the landfill leachate is reported pursuant to Conditions 11(a), 11(b) or 11(e) then:
 - (i) The Permit Holder must appoint an independent expert to promptly review the works implemented under condition 2A in light of the findings of the monitoring and identify whether they are working as designed. If they are not working as designed the report shall specify corrective works required and a timeframe to implement them.
 - (ii) The Permit Holder shall promptly complete all recommended corrective works in accordance with the timeframes set out in the review.
 - (iii) The Permit Holder shall provide a copy of the review to the Regional Council and NLG within 5 working days of receipt.
 - (d) The Permit Holder shall annually review the data derived from the groundwater monitoring program and evaluate contaminant mass load projections for discharges from the landfill to the Hokio Stream. The contaminant mass load projections shall be based primarily, but not exclusively, on the monitoring data obtained for the “B”, “C” and “X” series

bores indicated in Table D of this discharge permit. The annual report required under Condition 5 shall include the following information:

- (i) A summary of the methodology used to calculate the mass load projections.
 - (ii) The calculated mass loads transported in the groundwater and comparable mass loads in the Hokio Stream.
 - (iii) An analysis of the implications of the mass load calculations with respect to ensuring discharges from the landfill would not result in a decline in the water quality in the Hokio Stream under Condition 3.
- (e) Should the groundwater parameters tested for under Condition 3 of this consent, and subsequent evaluation and indicative assessment of contaminant mass loads under Condition 11(d) of this consent indicate that contaminants sourced from either the closed or active areas of the Levin Landfill are likely to result in a **significant effect associated with the landfill leachate as identified through an investigation** under Condition 3, then **Condition 11(c) applies.**
12. Should any parameters tested for under Condition 3 of this consent from the deeper gravel aquifer (bores identified as C2dd, E1, E2, the proposed G1d and any other monitoring bore intersecting the deep gravel aquifer), exceed the requirements of the Ministry of Health's Drinking Water Standards for New Zealand 2000, the Permit Holder shall report to the Regional Council as soon as practicable on the significance of the results and, where the change can be attributed to landfill leachate, consult with the Regional Council to determine if further investigation or remedial measures are required.
13. Sampling of the groundwater wells within a 1.5 km radius down-flow or across-flow from the landfill property boundary is to be carried out by the Permit Holders representative upon receiving a written invitation from the bore owners. The frequency of sampling is to be decided through discussion between the bore owner and the Permit Holder. Initial analyses from individual bores are to be tested for the parameters in the Comprehensive Analysis List in Condition 3. Subsequent testing may be performed based on the Indicator Analysis List in Condition 3. Should analysis of water obtained from any groundwater wells used for human drinking water show concentrations of parameters which exceed the requirements of the Ministry of Health's Drinking Water Standards for New Zealand 2000, or repeated sampling from a specific bore indicates a decrease in water quality, the Permit Holder shall report to the Regional Council and the bore owner as soon as practicable on the significance of the results. Where the exceedance or decreasing water quality can be attributed to landfill leachate, the Permit Holder shall consult with the Regional Council and the bore owner to determine if further investigation or remedial measures are required.
14. Any currently active and future lined landfill area shall be closed and remediated by:
- a) Compacting refuse to such an extent and consistent with CAE guidelines of 600-800 kg/m³, to ensure post closure settlement is minimised as far as practicable; and
 - b) Grading to a final slope of less or equal to 1V:3H (1 in 3) on any face; and
 - c) Ensuring the landfill cap incorporates a layer at least 700 mm thick with a permeability of no greater than 1×10^{-7} m/s, or has a material and layer structure that reduces rainwater infiltration to the waste to an equivalent extent; and
 - d) Establishing and maintaining a grass or tussock vegetation cover on the capped landfill, unless it can be demonstrated to the Regional Council's satisfaction that a different vegetation cover can produce clear benefits through reducing infiltration to

the covered waste. Any vegetation cover should be consistent with an ongoing capacity to monitor and maintain the ongoing integrity of the landfill cap.

In-situ refuse density shall be determined through annual calculation based on information derived from topographic surveys of the landfill and borrow areas, and from weighbridge records. The survey shall be carried out within one month of the anniversary of the previous survey.

Specific Conditions – discharge leachate to ground from existing landfill

15. The Permit Holder shall close and remediate the existing unlined landfill by April 2011 by:
- a) Grading to a final slope on the landfill faces and caps of between 1V:3H (1 in 3) and 1V:40H (1 in 40);
 - b) Ensuring the final landfill surface is sloped to promote run-off toward the outside of the landfill footprint and prevent surface water ponding on the landfill cap;
 - c) Ensuring the landfill cap incorporates a layer at least 700 mm thick. All material added to the existing cap to bring the thickness up to 700 mm, or for future cap maintenance purposes, is to have a permeability of no greater than 1×10^{-7} m/s;
 - d) Establishing and maintaining a grass or tussock vegetation cover on the capped landfill consistent with an ongoing ability to monitor and maintain the integrity of the landfill cap. The vegetation is to be managed to exclude tree species that can potentially develop root systems capable of disrupting the landfill cap and thereby enhancing rainwater infiltration;
 - e) Monitoring the landfill cover on an annual basis to identify areas of differential settlement slope stability issues, erosion and changing vegetation patterns, including a topographic survey to ensure Conditions 15(a) to (d) continue to be met; and
 - f) The Permit holder shall submit an annual report to the Regional Council by **30 September** each year for the duration of this Permit documenting the condition of the unlined landfill and any maintenance carried out during the previous year. The annual report shall address but not be limited to those aspects listed in Conditions 15(a) to (e) above. The annual report shall include a plan of the unlined landfill specifically documenting the shape of the closed landfill and any changes during the previous year. [The annual report can be written in conjunction with the annual report required as part of Condition 14 for Consent Number 6009].

The area of the existing landfill to be remediated is defined as Area A on Figure 1 attached.

16. Within one month following the remediation of the Levin landfill, the Permit Holder shall report in writing to the Regional Council of the Permit Holder's compliance with Conditions 14 and 15 of this permit.

Specific Conditions – Discharge leachate to ground from lined landfill

Environmental Effects

17. There shall be no disposal of leachate sludge from the pond onto irrigation areas. Leachate sludge shall be disposed of in accordance with Condition 26 of consent number 6009 and Condition 18 of consent number 7289.
18. The rate of application of leachate irrigated to land shall not exceed 200 kg Nitrogen/hectare per year.

19. There shall be no ponding or runoff of leachate on or beyond the irrigation areas.
20. Subject to Condition 19 of this permit, application of leachate on to soil shall not exceed 50 millimetres per day. Notwithstanding, the maximum rate of application shall not exceed 5 millimetres per hour.
21. There shall be no discharge of offensive or objectionable odour at or beyond the legal boundary of the Levin Landfill property as shown on Figure 1 resulting from leachate irrigation.
22. Should the quality of leachate being irrigated exceed the STV parameters set out in the Australian and New Zealand Environment and Conservation Council Water Quality Guidelines (2000) for metals in Irrigation Water the Permit Holder shall report to the Regional Council as soon as practicable on the significance of the result and in consultation with the Regional Council determine if further investigation or remedial measures are required.

Process Management

23. The daily volume of leachate irrigated to land shall be metered and recorded.
24. The Permit Holder shall make regular and at least weekly, inspections of the irrigation system, including pumps, pipes, irrigators and vegetation to ensure that the system is operating efficiently and that vegetation is in good health.
25. The Permit Holder shall have carried out the works described in Condition 14(a) to (d) of this permit to rehabilitate:
 - a. Any lined landfill area within four months following the closure of that lined landfill area, if the landfill area is closed before 35 years from the granting of this consent.
 - b. Any lined landfill area before 35 years from the granting of this consent.

[Note: "lined landfill area" is defined as a distinct "cell" or stage of the landfill.]

Monitoring and Reporting

26. A plan of the leachate irrigation system shall be prepared to the satisfaction of the Regional Council's Environmental Protection Manager nine months prior to placement of refuse on the lined landfill. The plan shall include:
 - i. A map showing areas to be irrigated;
 - ii. Design of the recirculation, treatment and irrigation systems;
 - iii. Contingency measures in case of failures in the irrigation system;
 - iv. Criteria for installing aerators in the leachate pond;
 - v. Assessment of options for recirculating leachate over the lined landfill;
 - vi. Assessment of groundwater profile beneath the irrigation area and effects leachate irrigation will have on groundwater;
 - vii. Groundwater and soil monitoring programme, including a map showing sampling locations; and
 - viii. Any other relevant matter.

27. The Permit Holder shall keep a log of:
- The dates and times of leachate irrigation;
 - The total volume of leachate irrigated daily;
 - The volumes of leachate irrigated to specific areas;
 - Weather and ground conditions during irrigation;
 - Observations made during the weekly inspections of the pump, irrigation system and irrigation areas; and
 - Repairs and maintenance carried out on the irrigation system.

Copies of this log shall be forwarded to the Regional Council's Environmental Protection Manager on 28 February and 31 August of each year that the irrigation system is operated.

28. The Permit Holder shall inspect the landfill for leachate break out, settlement and other adverse environmental effects at least once per month until such time as discharge of refuse to the landfill ceases. Thereafter, the frequency of inspection shall be determined in consultation with the Regional Council.
29. The Permit Holder shall record the date, time, observations and any remedial action as a result of Condition 28. The record shall be made available to the Regional Council on request.

Review

30. The Regional Council **may** initiate a publicly notified review of Conditions 3, 4, 11(a)-(e), 12, 13, 14, 24, 27, 28 and 29 of this Permit **during the month of October in 2024, 2029 and 2034**. The reviews shall be for the purpose of:
- Assessing the adequacy of monitoring outlined in Conditions 3 and 4 of this consent; and/or
 - Assessing the effectiveness of Conditions 11(a) – (e), 12, 13, 14, 24, 27, 28 and 29 of this consent, in avoiding, remedying or mitigating adverse effects on the environment surrounding the Levin Landfill.

The review of conditions shall allow for the:

- Modification of monitoring outlined in Conditions 3 and 4 of this consent;
 - Deletion or changes to Conditions 11(a)–(e), 12, 13, 14, 24, 27, 28 and 29 of this consent;
 - Addition of new conditions as necessary, to avoid, remedy or mitigate adverse effects on the environment surrounding the Levin Landfill.
31. The Regional Council may initiate a publicly notified review of Conditions 11 (a)–(e) of this Permit at any time outside those reviews required by Condition 30. The review shall be carried out pursuant to section 128 (1)(a)(i) of the Resource Management Act 1991 and shall be for the specific purpose of:
- Assessing the need and appropriateness of implementing a mitigation or remediation plan as the best practicable option to remove or reduce any adverse effect on the water quality of the Hokio Stream.

The review of conditions shall allow for the:

- b. Deletion or changes to Conditions 11(a)–(e) of this consent;
- c. Addition of new conditions as necessary, to avoid, remedy or mitigate adverse effects on the environment surrounding the Levin Landfill.

The review of conditions shall have regard to:

- d. The nature of the discharge and the receiving environment; and
- e. The financial implications for the applicant of including that condition; and
- f. Other alternatives, including a new condition requiring the observance of minimum standards of quality of the receiving environment, having regard to the need to be satisfied that including that condition is the most efficient and effective means of removing or reducing that adverse effect.

DISCHARGE PERMIT 6011

Consent is granted to the Horowhenua District Council to **discharge landfill gas, odour and dust to air** at the Levin landfill, Hokio Road, Levin, legally described as Lot 3 DP 40743 Blk II Waitohu Survey District, for a term expiring 35 years from the commencement of the consent subject to the following conditions:

1. Charges, set in accordance with section 36(1)c of the Resource Management Act 1991, and section 690 A of the Local Government Act 1974, shall be paid to the Regional Council for the carrying out of its functions in relation to the administration, monitoring and supervision of this resource consent and for the carrying out of its functions under section 35 (duty to gather information, monitor, and keep records) of the Act.

[**Note:** Section 36(1)c of the Act provides that Council may from time to time fix charges payable by holders of resource consents. The procedures for setting administrative charges are governed by section 36(2) of the Act and is currently carried out as part of the formulation of the Council's Annual Plan.]

Environmental Effects

2. The Permit Holder will ensure dust is controlled on access roads and on the landfill, if necessary, by watering or other methods.
3. There shall be no objectionable or offensive odour or dust beyond the boundary of the site.

Advice note: Odour investigations for the purpose of determining compliance with this condition shall be carried out in accordance with good practice measures outlined in the Ministry for the Environment Good Practice Guideline for Assessment and Management of Odour (MfE, 2016).

4. The Permit Holder will also ensure that:

- a. Groundwater monitoring wells shall be sampled for landfill gas when groundwater samples are taken from the wells. As a minimum, sampling shall be undertaken for methane, carbon dioxide and oxygen.
- b. Any building constructed on the landfill site is adequately ventilated.
- c. The Permit Holder must place daily cover over the entire operational fill area to a depth of at least 150 mm by the end of each operating day. Daily cover material may comprise a mixture of sand soil or mulched woody material or alternative daily cover options specified in the WasteMINZ Technical guidelines for the Disposal to Land (WasteMINZ, August 2018).
- d. The Permit Holder must ensure that intermediate cover is placed as soon as practicable over daily cover for any area that will not receive additional waste or final cover for more than three months. The Permit Holder must apply intermediate cover no later than two weeks after the last application of daily cover. The Permit Holder will strive, at all times, to minimise the active areas of the landfill for the purpose of reducing odour generation.

The depth of intermediate cover, including daily cover, over the waste shall be a minimum of 300 mm and must comprise of uncontaminated soil, and/or a mixture of sand and mulched woody material.

The Permit Holder shall apply a temporary cap on top of the intermediate cover within three months of an area last receiving fill. The temporary cap shall comprise

of a layer of compacted cohesive soil with a thickness of at least 200 mm for a combined thickness of 500 mm including the daily and intermediate cover. Alternatively, the temporary cap could comprise of a compacted layer of clay with a thickness of at least 50 mm that achieves the methane surface concentration requirements of condition 4f.

Advice Note: This condition is additional to Condition 14c of Permit 6010, which addresses the final landfill cap (only). Some remediation of the temporary cap may be required to meet the requirements of Condition 14c.

- e. The Permit Holder must carry out monthly methane surface monitoring for all areas of the landfill with, a temporary or permanent cap, and the bio-filter bed. The monitoring of surface emissions for methane shall be undertaken utilizing emission testing methods that have been given prior written certification as to their appropriateness by the Manawatu-Wanganui Regional Council's Regulatory Manager. The monitoring of surface emissions shall not be undertaken during or immediately after heavy rainfall or during strong wind speed conditions, and the meteorological conditions at the time of the monitoring shall be provided in the monitoring report.

Advice note: Favourable meteorological conditions for methane surface monitoring include those where weather and ground conditions are dry with less than 0.5 mm of rain having fallen for at least two days, and instantaneous wind speed should be less than 25 km per hour (ideally 5 to 10 km per hour).

- f. Surface concentrations of methane, as determined by monitoring carried out by condition 4(e) shall not exceed the following levels:
- 100 parts per million (ppm) for permanently capped areas;
 - 200 ppm for temporary capped areas; and
 - 5,000 ppm for onsite buildings and structures.

An exceedance of the above levels requires remedial action to be undertaken within 24 hours and retesting within 24 hours of remediation being completed. If the second round of testing results in a continued exceedance at the same location then an action plan shall be developed and implemented to reduce methane concentrations below the specified levels. The Permit Holder shall provide details of the action plan to the Manawatu-Wanganui Regional Council within 48 hours of the retest.

- g. The Permit Holder shall include records of surface emission monitoring for methane must be included in the Annual Report required by Condition 39 of Discharge Permit 6009 and must also be provided to Manawatu-Wanganui Regional Council on request.
- h. Within six months of the commencement date of the decision of the 2015 review of conditions, the leachate collection chamber must be vented to a bio-filter. The bio-filter must be designed by a suitably qualified and experienced person.
- i. The Permit Holder must appoint an appropriately qualified person to undertake a comprehensive assessment of the bio-filter performance on an annual basis. The assessment shall include, but not be limited to, an evaluation of the media size distribution and composition and effectiveness in removing contaminants, and a review of any measurements or records relating to the parameters at (i) below.

- j. ____ The **Permit** Holder shall maintain the biofilter **in good working order, and shall measure and record the following parameters:**
- Daily visual inspection of the state of the bio-filter bed, particularly for signs of any short-circuiting, clogging of the bed, compaction and weed growth.
 - Daily inspection of the inlet gas fan and ductwork and any maintenance;
 - Continuous display of differential pressure for the biofilter **fan discharge;**
 - Weekly recording of pressure across the bio-filter bed;
 - Weekly monitoring and recording of the bio-filter media moisture content;
 - Monthly monitoring and recording of the pH of the bio-filter media;
 - Quarterly raking and loosening of the bio-filter media, or as otherwise required, to reduce the potential for short-circuiting, clogging of the bed, compaction and weed growth.
- k. The **Permit** Holder must ensure that the bio-filter and bed complies with the following limits at all times:
- Pressure drop across the bio-filter **air distribution system** shall be less than **150** mm water gauge;
 - Bio-filter media moisture content shall be between 40-60% moisture content;
 - The air flow rate shall not exceed **35 m3/hr @25°C, 1** per **cubic** metre of bio-filter media;
 - The pH of the filter material shall be **maintained at or above pH 4 in the lower 1/3rd layer of the bed and at or above pH 5 in the upper 2/3rds layer of the bed;**
 - An even distribution of gas flow through the filter bed; and
 - There shall be no short circuits of untreated air through and filter bed.
- l. As soon as practicable and no later than 12 months of the commencement date of the 2015 review of conditions, the Permit Holder shall install a landfill gas collection system and flare on the site. The gas collection and flare shall be maintained and used at all times.

Advice Note: HDC holds Discharge Permit 106798 for discharges from the flare.

- m. Within 2 months of the commencement date of the 2015 review of conditions, the Permit Holder shall prepare an Odour Management Plan (OMP) **and provide it to the Regional Council's Regulatory Manager for technical certification. The OMP must include:**
- Material specifications and procedures for the application of daily and intermediate cover and temporary and final capping;**
 - Procedures for the documentation and handling of special and/or malodorous wastes (eg sewage sludge, animal carcasses);**
 - Methodology for monthly field odour monitoring;
 - Methodology for monthly surface monitoring for methane;

- v. Methodology for bio-filter monitoring;
 - vi. Odour control practices relating to the leachate pond;
 - vii. Odour control practices for the working face of the landfill;
 - viii. Locations of odour control/treatment equipment (e.g. bio-filter and flare);
 - ix. The odour complaints investigation and recording procedure;
 - x. The phasing of the Landfill construction and operation (filling), including the design and collection efficiency of the existing and proposed gas collection system (GCS). This shall also include a description of the thickness and type of cover and capping material used at different phases of the landfill development;
 - xi. The operational procedures regarding the use of the bio-filter and the flare and GCS, including maintenance and breakdown procedures and methods to be followed to prevent a significant discharge of odour;
 - xii. The resource consent conditions relevant to discharges to air at the landfill;
 - xiii. Staff training requirements to ensure compliance with the resource consent conditions;
 - xiv. Timing of audits and inspections and reporting to Council.
- n. The Permit Holder must consult the NLG during the development of the Odour Management Plan and at any time the OMP is reviewed. The views of the NLG must be incorporated where appropriate and practicable. Where the NLG comments and views are not incorporated, the outstanding issues, and reasons why they have not been incorporated, must be provided to Manawatu-Wanganui Regional Council's Regulatory Manager at the same time the Odour Management Plan is provided.
- o. Subject to the conditions of consent, the Permit Holder shall carry out its operations in general accordance with the OMP;
- p. The Permit Holder shall collect meteorological data from an on-site weather station. The data recorded shall consist of wind direction, wind speed, air temperature, barometric pressure, relative humidity and rainfall. The meteorological monitoring shall be:
- i. Collected in general accordance with the Good Practice Guide for Air Quality Monitoring and Data Management, Ministry for the Environment, 2009, or subsequent updates.
 - ii. Continuous for the duration of the consent comprising, 1 min data, collected and averaged to 10-min and 1-hour time periods.
 - iii. At a point that is representative of local wind conditions across the site.
 - iv. The wind speed and direction instrumentation shall be able to operate reliably down to a maximum wind speed threshold of 0.5 m/s.
- q. The Permit Holder shall provide the Manawatu-Wanganui Regional Council with information collected from the weather station referred to in condition 4(p). The data shall be in a suitable data file format that allows the Manawatu-Wanganui

Regional Council to upload it on a data management system. The data shall be provided on a monthly basis, and as soon as possible upon request.

5. There shall be no deliberate burning of waste or other material at the landfill. If fires occur at the landfill they shall be extinguished as quickly as possible.
6. The Permit Holder shall take all practicable steps to avoid, remedy or mitigate significant adverse effects of the discharge of landfill gases to air.

Monitoring and Reporting

7. The Permit Holder shall keep a record of any complaints received. The complaints record shall include the following, where possible:
 - a. Names and addresses of complainant;
 - b. Nature of complaint;
 - c. Date and time of the complaint and alleged event;
 - d. Weather conditions at the time of the event; and
 - e. the activities that were occurring on the site at the time.

In response to a complaint and upon a request by the Regional Council, the Permit Holder shall keep a record of the following information in its complaint record:

- f. the cause or likely cause of the event and any factors that influenced its severity;
- g. Any action taken in response to the complaint including the nature and timing of any measures implemented by the permit holder to avoid, remedy or mitigate any adverse effects; and.
- h. The steps to be taken in future to prevent re-occurrences of similar events should this be necessary.

Complaint records shall be made available within 5 days of a request by the Regional Council.

The Permit Holder shall also keep a record of landfill gas monitoring results including:

- a. Date and time of sampling;
- b. The concentrations of gasses detected.
- c. Weather conditions at the time of sampling.

The monitoring results shall be made available to the Regional Council on a quarterly basis.

8A The Permit Holder shall nominate a liaison person to manage any air quality complaint received. The name and contact details, which will include a landline telephone number, a cell phone number, and email address of the liaison person, shall be provided to the Manawatu-Wanganui Regional Councils Regulatory Manager. The Permit Holder shall ensure a liaison person is available to respond to odour or dust complaints in a reasonable manner as per condition 8B below.

8B The Permit Holder shall ensure any complaint received from a member of the general public regarding odour or dust originating from the landfill site is investigated as soon as practicable and within 24 hours of the complaint being received, or at a time mutually agreeable with the party making the complaint.

- 8C The **Permit** Holder shall notify a Manawatu-Wanganui Regional Council Consents Monitoring Officer and the Mid-Central District Health Board's Medical Officer of Health as soon as practicable after becoming aware of any offensive or objectionable odour emanating beyond the boundaries of the landfill site. An explanation as to the cause of the incident, details of any remedial and follow-up actions taken and the wind speed and wind direction measured at the landfill at the time of the incident shall also be provided to the Regional Council Consents Monitoring Officer.
- 8D The **Permit** Holder must undertake monthly field **investigations** of ambient odour at **locations beyond the site boundary that are downwind of the landfill and located between the landfill and residential houses**, until such time as discharges of refuse to the landfill ceases. Thereafter the frequency of investigations shall be determined in consultation with the Manawatu-Wanganui Regional Council. The monitoring shall be undertaken **in accordance with good practice as specified in the Ministry for the Environment Good Practice Guide for Assessing and Managing Odour (MfE, 2016)**.
- 8E The **Permit** Holder must carry out a weekly walkover site inspection of all the landfill surfaces, including the area around the biofilter and leachate pond. The purpose of the walkover site inspection is to check for odour, cracks in the landfill surface and integrity of gas collection or leachate pipework.
- 8F The **Permit** Holder shall maintain a log of all other inspections, investigations and actions taken in accordance with all monitoring and odour inspection conditions of this consent. The **inspection and investigation** log shall be made available to the Manawatu-Wanganui Regional Council on request and submitted in summary **form** in the Annual Report.
8. The Regional Council **may** initiate a publicly notified review of Conditions **4, and 7** of this permit **during the month of October in 2024, 2029 and 2034**. The reviews shall be for the purpose of:
- Assessing the effectiveness of Conditions **4, and 7** of this consent in avoiding, remedying or mitigating adverse effects **of discharges to air from the Levin Landfill**.
 - The review of conditions shall allow for **the changes and amendments** to Conditions **4, and 7** of this consent **to avoid, remedy or mitigate adverse effects of discharges to air from the Levin Landfill**.

DISCHARGE PERMIT 7289

Consent is granted to the Horowhenua District Council to **discharge liquid waste onto and into land** at the Levin landfill, Hokio Road, Levin, legally described as Lot 3 DP 40743 Blk II Waitohu Survey District, for a term expiring 35 years from the commencement of the consent subject to the following conditions:

1. Charges, set in accordance with section 36(1)c of the Resource Management Act 1991, and section 690 A of the Local Government Act 1974, shall be paid to the Regional Council for the carrying out of its functions in relation to the administration, monitoring and supervision of this resource consent and for the carrying out of its functions under section 35 (duty to gather information, monitor, and keep records) of the Act.

[**Note:** Section 36(1)c of the Act provides that Council may from time to time fix charges payable by holders of resource consents. The procedure for setting administrative charges is governed by section 36(2) of the Act and is currently carried out as part of the formulation of the Council's Annual Plan.]

2. Liquid wastes shall only be placed at the Levin Landfill as a contingency to normal disposal.
3. For the purposes of this Permit, contingency conditions are circumstances where liquid waste is unable to be treated and disposed of at its regular location, for reasons of either, unforeseen events, breakdown or temporary closure for maintenance purposes.
4. Liquid wastes are defined as the following:
 - a. Septic tank waste ("septage");
 - b. Grease trap waste;
 - c. Sewage; and
 - d. Any material that contains free liquids.

The presence of free liquids may be determined by either of the following methods, whichever is most practicable at the time:

- i. The "Paint Filter Test"; or
 - ii. Material which may be located, transported and deposited at the landfill without the risk of free liquid seeping from the material, and without the risk of having the deposited material flow under gravity down any slope on the landfill shall be deemed to not contain free liquids.
5. The Permit Holder shall notify the Regional Council's **Regulatory Manager** as soon as practicably possible after receiving notification of the intention to dispose of waste at the landfill under the terms of this consent, or as soon as practicable following urgent disposal in accordance with Condition 3.

The Permit Holder shall detail the reason for the discharge, volume of discharge and timing of the discharge.

6. The maximum annual volume of liquid waste discharged shall not exceed 150 cubic metres (150 m³) in any calendar year. (Calendar year is defined as being over any 12 month or 365 day period.)
7. Subject to Condition 6, the volume of liquid waste discharge shall not exceed 75 cubic metres (75 m³) during any seven day period.

8. Subject to Condition 6 and 7 the maximum daily volume of liquid waste discharged shall not exceed 20 cubic metres (20 m³).
9. The liquid material shall be placed in trenches which are no more than 2m wide, 1.5m deep and 5m long which are excavated in compacted refuse which is at least six months old and located within a lined landfill area.
10. Only one trench shall be open at any one time.
11. Trenches shall be at least 10 metres from any landfill batter slope.
12. The open trench shall be open for no longer than two weeks.
13. Trenches shall be filled with liquid wastes to a depth of not less than 1m below the prior refuse surface level and reinstated with appropriate compaction with previously removed refuse and cover.
14. The location of placement and cumulative volume will be identified on a site plan which shall be made available to the Regional Council upon request.
15. The location and placement shall be appropriately signed and fenced.
16. The Permit Holder will ensure odours, vermin and flies are not generated from or do not accumulate in open trenches.
17. The Permit Holder shall maintain records of:
 - a. The type of liquid waste received;
 - b. The volume of liquid waste received;
 - c. The source of liquid waste; and
 - d. The location in the landfill in which the material was placed.
18. In addition to the material that is accepted on the basis set out above, the consent holder may dispose of site-generated sludges that contain free liquids from cess-pits, leachate ponds or other site activities to facilitate site operation, provided this does not adversely affect landfill stability or face operations. The disposal of such materials is not to be included within the quantity restrictions as set out in Conditions 6, 7 and 8 of this permit.
19. The Regional Council **may** initiate a publicly notified review of Conditions 5, 9, 12 and 17 of this permit **during the month of October in 2024, 2029 and 2034**. The reviews shall be for the purpose of:
 - a. Assessing the adequacy of the monitoring conditions outlined in Conditions 5 and 17; and
 - b. Assessing the effectiveness of Conditions 9 and 12 of this consent,in avoiding, remedying or mitigating adverse effects on the environment surrounding the Levin Landfill.

The review of conditions shall allow for the:

 - c. Modification of monitoring outlined in Conditions 5 and 17;
 - d. Changes to Conditions 9 and 12 of this consent; and
 - e. Addition of new conditions if necessary,

to avoid, remedy or mitigate adverse effects on the environment surrounding the Levin Landfill.

DISCHARGE PERMIT 102259

The Team Leader Consents of the Manawatu-Wanganui Regional Council (trading as horizons.mw) has considered this non-notified application. On 15 May 2002 the Team Leader pursuant to delegated authority under section 34 of the Resource Management Act, grants Discharge Permit 102259 pursuant to section 105 of the Act, to Horowhenua District Council to **discharge stormwater to land and potentially to groundwater via ground soakage** from the Levin landfill, Hokio Beach Road, Levin, subject to the following conditions.

1. This Permit shall be for a term of 35 years from the date of commencement of Levin Landfill Consents 6009 – 6011 and 7289.
2. Pursuant to section 125(1) of the Resource Management Act 1991, this Permit shall not lapse within its duration of 35 years.
3. The activities authorised by this Permit shall be restricted to the discharge of stormwater to land via ground soakage originating from the existing fill site or any part of the new lined landfill that has had, or is intended to have, refuse placed beneath or upon it, as shown on Plan C102259 attached to and forming part of this Discharge Permit.
4. All works and structures relating to this Discharge Permit shall be designed and constructed to conform to best engineering practices and shall at all times be maintained to a safe and serviceable standard.
5. The Permit Holder shall inspect the stormwater system once a day when the site is in use to ensure the speedy recovery of any litter or refuse and shall remove any litter as soon as practicable.
6. The Permit Holder shall ensure the stormwater soakage ponds are inspected regularly and maintained to optimise their performance at all times. This shall include de-sludging or remediating the ponds as required.
7. Deleted
8. There shall be no runoff or existing discharge of stormwater beyond the property boundary that has originated on any landfill area or new lined landfill area that has had, or is intended to have, refuse placed on it.

Management – Existing Landfill

9. As far as practically possible, the Permit Holder shall ensure that all stormwater from the existing landfill area is directed to the centralised soakage area as shown on the latest version of the Stormwater Plan.

Management – New Landfill

10. Where it is practical and economical to do so, the Permit Holder shall ensure that within the operational landfill cell the minimum amount of stormwater shall be allowed to come into contact with refuse. This shall be effected by constructing impermeable barriers, diversion drains or bunds on the side slopes and within the base of the landfill.
11. There shall be no contamination of stormwater with leachate. Leachate includes any stormwater within an operational cell that is not separated from refuse by a barrier as defined in Condition 10.
12. The Permit Holder shall ensure that a suitable stormwater soakage area is available for a given design storm and the area of the operational cell from which the stormwater is collected.

13. Areas designated for stormwater discharge to land and their catchment and reticulation system shall be identified and located on site plans and their dimensions submitted for approval by horizons.mw's Team Leader Compliance prior to their use.

Monitoring

14. The Permit Holder shall monitor groundwater quality in at least one upgradient and one downgradient bore of the existing landfill stormwater soakage area, and at least one upgradient and two downgradient bores of the new landfill area. The location and number of bores is to be determined in consultation with horizons.mw's Team Leader Compliance. Groundwater samples shall be taken quarterly in January, April, July and October for the term of this Discharge Permit, beginning in October 2002, and analysed for the following parameters:
- PH
 - Conductivity
 - Ammonia-N
 - Nitrate-N
 - Sodium
 - Boron
 - Chloride
 - Iron
15. Monitoring bores required in Condition 14 of this Discharge Permit can be incorporated into the monitoring programme of other Levin Landfill Consents (6009-6011 and 7289), providing the information sought is obtained at the frequency specified and reported as required for this Permit.
16. The results of monitoring under Condition 14 of this permit shall be reported to Horizon Manawatu's Team Leader Compliance by 31 August each year for the duration of this Permit beginning 31 August 2003. The annual report shall be supplemented by the raw water quality analysis data being forwarded to the Regional Council as soon as practically possible following the receipt of laboratory analysis certificates.
17. If a laboratory is used for water quality analyses which does not have independent accreditation for the parameters measured, then on each sampling occasion duplicate samples from at least one sampling location shall be analysed by a laboratory with independent accreditation for the parameters measured. Continued analysis by the unaccredited laboratory shall be at the discretion of horizons.mw.
18. Should any groundwater parameters tested for under Condition 14 of this consent exceed the Australian and New Zealand Environment and Conservation Council Water Quality Guidelines (2000) for Livestock Watering, the Permit Holder shall report to horizons.mw's Team Leader Compliance as soon as practicable on the significance of the result, and where the change can be attributed to the landfill operation, consult with horizons.mw's Team Leader Compliance to determine if further investigation or remedial measures are required.
19. The Regional Council **may** initiate a publicly notified review of all conditions of this Permit **during the month of October in 2024, 2029 and 2034**. The reviews shall be for the purpose of:
- i. reviewing the effectiveness of these conditions in avoiding or mitigating any adverse effects on the environment; and/or

- ii. reviewing the adequacy of the monitoring programme required by this discharge permit.

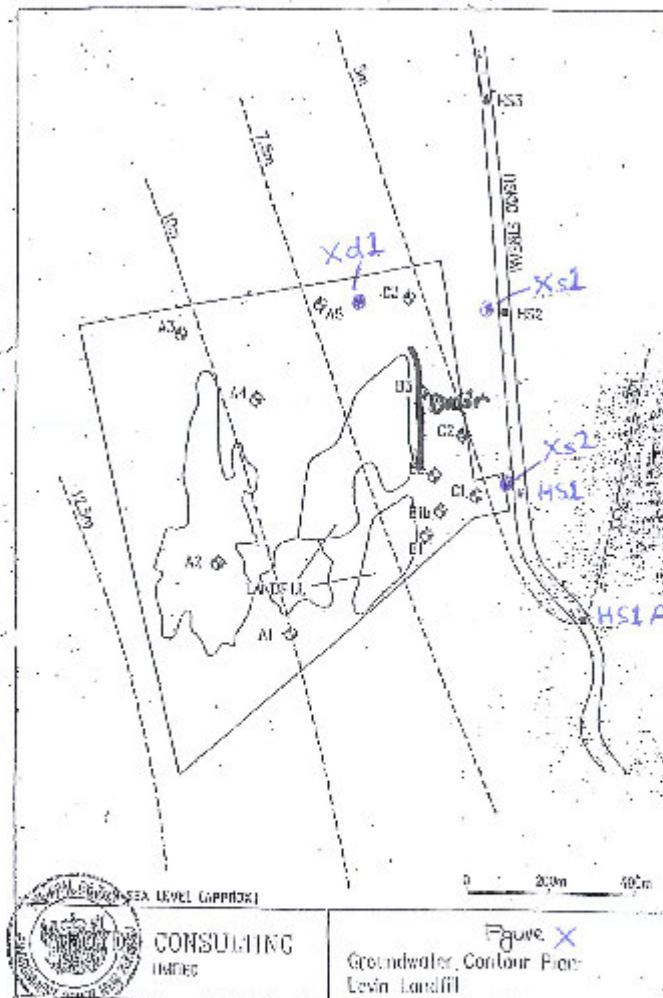
The review of conditions shall allow for:

- i. the deletion or amendment to any conditions of this permit; and
- ii. the amendment or addition of new conditions as necessary to avoid, remedy or mitigate any adverse effects on the environment

If necessary and appropriate, the review provided for under this condition shall require the Permit Holder to adopt the best practicable options to avoid, remedy or mitigate any significant adverse effects on the environment.

- 20. Charges, set in accordance with section 36(1)c of the Resource Management Act 1991, and section 690 A of the Local Government Act 1974, shall be paid to horizons.mw for the carrying out of its functions in relation to the administration, monitoring and supervision of this resource consent and for the carrying out of its functions under section 35 (duty to gather information, monitor, and keep records) of the Act.

[Note: Section 36(1)c of the Act provides that horizons.mw may from time to time fix charges payable by holders of resource consents. The procedure for setting administrative charges is governed by section 36(2) of the Act and is currently carried out as part of the formulation of horizons.mw's Annual Plan.]



Extra Groundwater Monitoring Points and
Hakio Stream Monitoring Points added
by the 2015 review labelled by hand.

| Name of each landfill/dump/tip | Physical address of that facility | The Latitude and Longitude for the facility as a point. (Transverse mercator) | | Current status of the facility | Resource consents related to the facility | Size in hectares of the facility |
|-----------------------------------|-----------------------------------|--|---------------|--------------------------------|--|----------------------------------|
| Levin Landfill site (3 landfills) | 665 Hōkio Road Levin | | | Closed | Levin Landfill resource consent Oct 2024 | 72 Total site size |
| Area A1 | 665 Hōkio Road Levin | Y 5500279.79 | X- 1787310.86 | Closed | | 0.74 |
| Area A2 | 665 Hōkio Road Levin | Y- 5502699.29 | X- 1787075.66 | Closed | | 0.95 |
| Area A3 | 665 Hōkio Road Levin | Y-5502288.39 | X-1787298.26 | Closed | | 0.53 |
| Foxton Landfill | Purcell Street Foxton | Y 5516524.3 | X 1792920.67 | Closed | Horowhenua DC Small Landfills Resource Consents 1994 | 0.93 |
| Foxton Beach Landfill | Coastal Dune - Foxton Beach | Y 5518099 | X 1787985 | Closed | Horowhenua DC Small Landfills Resource Consents 1994 | 0.96 |
| Shannon Landfill | 24 Hennesey Road | Y 5508414.39 | X 1805786.85 | Closed | Horowhenua DC Small Landfills Resource Consents 1994 | 0.67 |