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LEVIN LANDFILL COMPLIANCE AUDIT 2

20 OCTOBER 2022

USE OF THIS REPORT

This report has been prepared by The Catalyst Group at the request of our client for the purposes for which they intended. Where we have relied on information from external sources, we have referenced these sources as appropriate and assumed them to be accurate. If you are unsure about interpretation of the content of this report, or its use beyond that for which the client intended, please get in touch with us at enquiries@thecatalystgroup.co.nz

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CONTRACT REPORT NO:

2022/180
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EXECUTIVE SUMMARY

This audit report for the Levin Landfill has been carried out as a requirement for the PMG under the Levin Landfill Agreement. The audit covers the reporting period of July 2020 to June 2021. Compliance is assessed for the following consents:

- 6009 Discharge of solid waste onto land.
- 6010 Discharge of landfill leachate onto land.
- 6011 Discharge of landfill gas, odour and dust to air.
- 7289 Discharge of liquid waste onto and into land.
- 102259 Discharge of stormwater to land and potentially to groundwater via soakage.

Through review of the material provided and a site visit conducted on 27 July 2022 the Levin Landfill has been assessed as non-compliant. Key areas of non-compliance are as follows.

Failure to provide information and evidence to support compliance.

For a number of conditions the permit holder has not provided sufficient evidence of compliance with the conditions. This has resulted in an inability to assess variable conditions as compliant. The operator is non-compliant with the conditions until an assessment of compliance can be concluded.

Failure to fulfil the purpose of the NLG.

Both the level of transparency and provision of material to the NLG is not sufficient. This has resulted in both non-compliance with the consent conditions and frustration expressed by the community. I understand the Chief Executive – HDC has directed an improved system for disclosure and lodging of documents.

Failure to Comply with Monitoring Schedules

The permit holder has not carried out each monitoring programme for the site in full as required by the conditions. This may result in adverse effects both within the site or outside the site boundary going unnoticed. Failures in the landfill or equipment may fall under the radar without remediation in place.

Lack of Site Maintenance and Provision of Structural Integrity

Maintenance on site has been sufficient in relation to condition requirements. Structural breaches such as erosion slips, and leachate breakout have been evidenced in photographs for the periods. These issues have not been raised and no detail has not been supplied on remedial action carried out.

Failure to Signal Significant Effects on the Receiving Environment

ANZECC exceedances were found in monitoring data. The significance of these exceedances were not reported to the Regional Council therefore no action is taken to address these exceedances.

In preparing this report, I would like to acknowledge the contribution of HDC officers and the community.

TABLE OF CONTENTS

- Executive Summaryiii
- 1. Overview2
 - 1.1 Purpose2
 - 1.2 Independent Assessment2
 - 1.3 The Landfill2
 - 1.4 Scope of Assessment3
 - 1.5 Documents Reviewed3
 - 1.6 Limitations and Assumptions4
- 2. Compliance Assessment5
 - 2.1 Compliance Ratings5
 - 2.2 Key areas of Non Compliance5
 - 2.3 Information required for next audit6
 - 2.4 Comments on Findings7
- Appendix A: Timeline of Report submission relevant to the 2020/21 audit period.....70

Tables:

- Table 1: Consents assessed3
- Table 2: Compliance Ratings5
- Table 3: Compliance Assessment Summary5
- Table 4: Reasons for Non-Compliance5
- Table 5: Information required for Next Audit6
- Table 6: Assessment of conditions for consent 60098
- Table 7: Assessment of conditions for consent 601025
- Table 8: Assessment of conditions for consent 601149
- Table 9: Assessment of conditions for consent 7289.....60
- Table 10: Assessment of conditions for consent 10225965

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15 August 2022	1.0	Draft report subject to feedback from Horowhenua District Council.	Greg Carlyon
20 October 2022	2.0	Final Report after feedback from Horowhenua District Council.	Greg Carlyon



1. OVERVIEW

1.1 Purpose

This report sets out the findings of an external assessment of compliance with conditions of resource consents for the Levin Landfill. It has been completed by Emily Burns. The deliverables associated with this contract are as follows:

1. Tabulate the conditions of consent.
2. Obtain documentation (including the complaints registers) from Horowhenua District Council (HDC), Horizons Regional Council (HRC), and council contractors, for review.
3. Undertake a site visit with a representative of HDC.
4. Produce a report for HDC and the Project Management Group (PMG).
5. Brief council, PMG and NLG as required.

This report has been prepared for the PMG in accordance with the Levin Landfill Agreement 2019.

1.2 Independent Assessment

The Catalyst Group has had long-term associations with the Levin Landfill project. Greg Carlyon, Managing Director/Practice Leader - Planning at The Catalyst Group, is PMG manager for the Levin Landfill Agreement. The conflict issues were addressed with the PMG and his role has been restricted to review for consistency and completeness. The parties agree that any actual or perceived conflicts of interest in relation to the role held by Greg Carlyon is appropriately addressed and recognised through the exercise of the contract and the oversight provided by HDC and the PMG at large.

1.3 The Landfill

The Levin Landfill first existed as a dump on Hokio Beach Road in the 1970's. By the late 1990's, the landfill had reached capacity and plans were in train for a new landfill to be opened at the existing site. Five separate consents were granted for establishment of a new landfill in 1997. The decision to grant these consents was appealed, and a consent order was issued in 2002 allowing construction to begin. Conditions for the resource consents underwent review in 2008, and a decision for these conditions was then notified in 2010.

In accordance with Section 128 of the Resource Management Act 1991 (RMA), a Notice of Review for Levin Landfill's discharge permits was issued on 30 October 2015 by HRC. These are listed in Table 1. A decision on the review was released by the Hearing Commissioners on 18 November 2016. This decision was appealed and raised to the Environment Court who issued a consent order in December 2019. The content of the revised consent conditions is currently in effect.

Discharge permit 106798 authorises HDC to discharge contaminants to air associated with the operation of the gas flare at the landfill. This permit was granted in June 2014 and subsequently amended in July 2015. Given this permit is relatively new, it did not form part of the 2015 review of consent conditions for the remaining discharge permits.

The Levin Landfill is administered by HDC and operated by EnviroWaste Limited.

1.4 Scope of Assessment

Table 1: Consents assessed.

No.	Activity
6009	Discharge of solid waste onto land.
6010	Discharge of landfill leachate onto land.
6011	Discharge of landfill gas, odour and dust to air.
7289	Discharge of liquid waste onto and into land.
102259	Discharge of stormwater to land and potentially to groundwater via soakage.

This compliance assessment does not include an assessment of compliance with discharge permit 106798 relating to the flare as this permit is not within the scope of the Levin Landfill Agreement.

This assessment is confined to assessing compliance with conditions of the consents listed in Table 1. It does not extend to matters outside consents including:

- Whether the landfill operation is consistent with any other National Environmental Standard, or district and regional plan requirements (e.g. compliance with permitted activity standards).
- Any related compliance processes, including the use of enforcement tools.
- The appropriateness of any conditions of consent.
- Matters pertaining to the relationship between the Council and any other party except where requirements are explicitly set out in the consents listed in Table 1.

1.5 Documents Reviewed

The following material has been reviewed:

- Resource consents, including: 6009, 6010, 6011, 7289,102259
- All conditions of consents listed in Table 1
- HRC's decision on the review of conditions, 2016 (the "2016 decisions version")
- Environment Court Consents Order, December 2019 (the "2019 consent order")
- Solid Waste Newsletters (September 2020 - June 2021)
- HDC odour assessment register
- HDC annual and quarterly reporting on discharge permits from July 2020 to April 2021
- HRC compliance reports from 2019//20 and July 2020 - June 2021

- Levin Landfill Agreement, 2019
- Levin Landfill Management Plan
- Levin Landfill Odour Management Plan (April 2021)
- Neighbourhood Liaison Group (NLG) meeting minutes from July 2020 – April 2021
- Pattle Delamore Memos (March 2021 and May 2022)
- Various documents prepared for the PMG

1.6 Limitations and Assumptions

The following challenges, limitations and assumptions have been present for this audit:

Assumptions

- Where the assessment is based on information provided by HDC at the site visit, via email or in quarterly or annual reporting, or within HDC's annual compliance reports, it is assumed that this information is true and correct. Unless otherwise stated, no further steps have been taken to verify this information.
- It is based on a strict interpretation of the conditions of consent, assuming they are accurate and correct.
- The time and date of photographic evidence provided has been assumed to be accurate and correct.

Limitations and Challenges

- The reporting period is historical (see timeline in Appendix A), therefore data and associated issues are not current and cannot be accurately assessed. This is particularly true for the site visit. This has not only made the audit challenging on this front, but has meant that necessary remedial action through these findings will be significantly delayed and outdated.
- It is based on information provided by HDC and stakeholders. All necessary evidence information has not been made available during the assessment process.
- There are high levels of inconsistency and cross over with two compliance reports produced by HRC. According to these reports, both cover the period of July – December 2020, yet differing conclusions are made on compliance. The 2019/20 report relies on the findings of an assessment made by Pattle Delamore (PDP) in April 2021, whereas the 2020/21 reports relies on data from a PDP memo published in May 2022. The assessment periods for the memos is not stated and the May 2022 memo has not been provided for this audit.

2. COMPLIANCE ASSESSMENT

2.1 Compliance Ratings

Table 2: Compliance Ratings

Compliance Rating	Description
Compliant	Fully compliant with the requirements of the condition
Non-compliant	Non-compliant with one or more requirements of the condition
Unconfirmed Non-compliance	Unable to determine full non-compliance until further evidence is supplied.
Not assessed	Not enough information is available to assess compliance with one or more of the conditions
Not applicable	The condition is not currently applicable (e.g. it has already been complied with, or compliance is not required during the timeframe of the assessment).

Table 3: Compliance Assessment Summary

No.	Activity	Compliance Assessment
6009	Discharge of solid waste onto land.	Non-compliant
6010	Discharge of landfill leachate onto land.	Non-compliant
6011	Discharge of landfill gas, odour and dust to air.	Non-compliant
7289	Discharge of liquid waste onto and into land.	Non-compliant
102259	Discharge of stormwater to land and potentially to groundwater via soakage.	Non-compliant

2.2 Key Areas of Non Compliance

Table 4: Reasons for Non-Compliance.

No.	Condition Assessed as Non-Compliant	High Level Reasons for Non-Compliance
6009	2	Lack of evidence on test to deduce the presence of free liquids.
	25	Lack of information supplied in special waste log.
	34	The purpose of the NLG has not been met.
	35	Information is not shared adequately with the NLG.
6010	3	The monitoring programme for shallow aquifer wells has not been followed.

	11a	Failure to report the significance of exceedances.
	11aa	Failure to report the significance of exceedances.
	11d	Acute short-term effects are not provided for in the mass loading calculations.
	11e	Parameters indicate contaminants sourced from the landfill are likely to result in a significant effect.
	14	The compacting density of refuse was above the CAE guidelines.
	15	Inadequate remediation of the unlined landfill.
	28	Leachate breakouts were not flagged as an issue during inspection.
	29	Leachate breakouts were not flagged as an issue during inspection.
6011	5	Methane monitoring has not been conducted according to condition 5. Inspection and monitoring of the biofilter was not carried out in accordance.
	7	Landfill gas monitoring was not carried out in accordance with condition 7.
	8	The complaints log does not contain all the information outlined in condition 8.
	8a	Details of air quality nominee not confirmed.
	8b	Investigation for odour not carried out.
	8c	No notification of odour to HRC.
7289	4	No evidence of free liquids test.
102259	5	No evidence of stormwater system inspection.

2.3 Information Required to Assess Compliance

Table 5: Information Required for Next Audit.

No.	Condition	Information Required to Assess Compliance
6009	1 & 23	Evidence of free liquids test.
	2	Evidence of refuse area.
	6	Evidence of weed spraying.
	14	Provision of the closed landfill aftercare plan.
	15 - 22	Evidence surrounding discharge of offal and dead animals.
	24	Evidence of how biosolids were disposed of.
	32	NLG Attendees.
6010	2	Evidence of no overland flow.
6011	5c	Material and depth of daily cover.
	5d	Information on daily intermediate cover.
	5i	Details of appointment of appropriately qualified person
	5k	Biofilter compliance with limits.
	5n	Evidence consultation on the OMP with the NLG
	5q	Provide data collected from the weather station

No.	Condition	Information Required to Assess Compliance
	8f	Provide the inspections log.
7289	18	Information on site generated sludge.
102259	5	Inspections of stormwater system.

2.4 Comments on Findings

Compliance with a number of conditions is dependent on further provision of material from HDC. Material required on this basis is listed in Table 5. Where this has not been made available or data isn't collected to determine compliance, the condition has been assessed as non-compliant. A request was made by HRC for this information by 1 August 2022. This was subsequent to the HRC compliance report being finalised. I requested this information for review in this audit, but did not receive it. Further provision of data will be required to assess compliance for the next audit.

Through feedback provided and review of the NLG minutes, it has been identified that HDC have not provided for the purpose of the NLG. Information requests have not been responded to and there is a lack of transparency through selective sharing of material and failure to present the significance of monitoring results to the community. This arrangement lacks a foundation of trust and shows an unwillingness to address issues evident on site and engage on effective remediation.

The monitoring programmes were not carried out in full. This was flagged as an issue in the previous compliance audit. The significance of ANZECC exceedances has not been reported by HDC, and as such several conditions in consent 6010 have been assessed as non-compliant. The PDP memo (May 2022) specifically states that "nitrate-nitrogen is above the ANZECC AE 95% species protection level at all sites and shows a small increase downstream..... the pattern of rising concentrations and potential for effects in Hokio Stream should be considered as early warning signs and preparations to manage those effects should be put in place". This analysis iterates the significance of the monitoring results and the likelihood of these contaminants being sourced from the landfill, which has not been reported by HDC.

Maintenance is not carried out on site to extent to which the conditions require. Leachate breakouts have been captured on site. These were not flagged as an issue in the site walkover sheets and no detail is given on whether remediation was carried out.

Table 6 : Assessment of conditions for consent 6009.

Cond. #	Consent Condition	EB Comments	Issues To Flag	Compliance Status
1	<p>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:</p> <ul style="list-style-type: none"> (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. 	<p>The HDC annual report 2020/21 states there was no liquid waste accepted at the landfill during this reporting period.</p> <p>Evidence of the free liquids test has not been provided by HDC.</p> <p>Assessed as non-compliant.</p>	<p>Compliance issues resolved with provision of further information for next audit.</p>	
	General Conditions - Discharge Solid Waste to Land			
2	<p>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:</p> <ul style="list-style-type: none"> (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. 	<p>The compliance rating for this condition is "not assessed" in the HRC report. The community have provided photographic evidence to show that this condition is not being met as exposed refuse was captured in the photo at the end of the day. Evidence of how refuse is limited to 800 square metres has not been provided by HDC.</p> <p>Assessed as non-compliant.</p>	<p>Compliance issues resolved with provision of further information for next audit.</p>	

Cond. #	Consent Condition	EB Comments	Issues To Flag	Compliance Status
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.	<p>The operator conducts site walkovers to assess the level of litter outside of work areas and this is generally picked up at the time.</p> <p>Site walkover sheets for 2020/21 show litter is flagged for picking up during the inspection.</p> <p>Assessed as compliant.</p>		
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.	<p>Site walkover sheets show the landfill is monitored every two weeks for the build-up of litter and other deposits outside the active landfilling area. Litter removal is either ongoing or removed as required on inspection.</p> <p>Photographic evidence has been provided that shows litter deposited outside the active landfill area during the reporting period.</p> <p>Assessed as non-compliant.</p>		
5	The Permit Holder shall regularly inspect for the presence of vermin, birds and other pests take appropriate measures to control them.	<p>The HDC compliance report 2020/21 states the operator is aware of the presence of feral cats and shooting of feral cats and seagulls is carried out regularly as well as bait stations being used.</p> <p>Assessed as compliant.</p>	While on the site visit, I was informed that a bird cannon is used on site as and when required as is shooting but there is no evidence for this.	

Cond. #	Consent Condition	EB Comments	Issues To Flag	Compliance Status
			<p>Members of the community have stated that they have seen a large number of mice and other vermin at their properties which they identify as a possible result of the landfill.</p> <p>There may be value in undertaking further assessment to determine the relationship between offsite observations and landfill influence.</p>	
6	The Permit Holder shall regularly inspect the landfill for noxious weeds, and take appropriate measures to control those noxious weeds.	The HRC compliance report states that the spraying of gorse took place in landfill in November 2020. This was completed by Hayes Spraying limited. I have not received evidence of this. Other noxious weeds are present on site (shown in photographic evidence). Assessed as non-compliant.	Compliance issues resolved with provision of further information for next audit.	
	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.	I have reviewed the Envirowaste hazardous waste permits log. This shows no hazardous waste applications were made. Assessed as compliant.		

Cond. #	Consent Condition	EB Comments	Issues To Flag	Compliance Status
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.	<p>The Levin Landfill Management Plan details a procedure for dealing with hazardous and potentially hazardous materials.</p> <p>No hazardous waste applications were made during the reporting period.</p> <p>Assessed as compliant.</p>		
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.	<p>No applications for hazardous waste disposal have been made.</p> <p>HDC advised me this facility is maintained on site to store potentially hazardous waste.</p> <p>Assessed as compliant.</p>		
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.	No applications for hazardous waste disposal have been made. This condition is not applicable.		
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).	No applications for hazardous waste disposal have been made. This condition is not applicable.		

Cond. #	Consent Condition	EB Comments	Issues To Flag	Compliance Status
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	The old, existing landfill now has capping in place and no solid waste is being sent to it. Accordingly, this condition has not been assessed.		
13	All new fill should be placed on top of at least 2 metres of existing material in the existing landfill.	This condition has not been assessed however I note that HDC should maintain a record of material stored or removed on the old landfill cover. Not assessed.	There is evidence that material is being utilised for offsite works from the closed landfill. The priority at this site should be maintenance of quality of cover, cover depth and contour.	
14	The Permit Holder shall update the Landfill Management Plan in respect of the operations on the lined landfill to the satisfaction of the Environmental Protection 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.	I have reviewed the March 2021 Management Plan for Levin Landfill with regards to the elements listed in condition 14. These are detailed in the Management Plan. Assessed as compliant.	Compliance issues resolved with provision of further information for next audit.	

Cond. #	Consent Condition	EB Comments	Issues To Flag	Compliance Status
	<p>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.</p> <p>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.</p> <p>f. The emergency procedures to be followed in the event of natural emergencies and hazardous waste spills.</p> <p>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.</p> <p>h. Details of measures to avoid nuisance effects on adjacent properties i.e. birds and vermin, as a result of landfill activities.</p> <p>i. Operational, intermediate and final capping requirements.</p> <p>j. Closure and aftercare.</p> <p>k. Procedure to update the management plan, in light of changing circumstances, to continue compliance with Conditions of this Permit.</p> <p>l. A screen planting implementation description.</p> <p>m. Deleted</p> <p>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</p>			

Cond. #	Consent Condition	EB Comments	Issues To Flag	Compliance Status
	<p>Management of Closing and Closed Landfills in New Zealand (May 2001)'. The Closed Landfill Aftercare Management Plan shall require at the least:</p> <p>n. Grading to a final slope on the landfill faces and caps of between 1V:3H (1 in 3) and 1V:40H (1 in 40); o. 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;</p> <p>p. 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> <p>q. 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.</p> <p>r. 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;</p> <p>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</p>			

Cond. #	Consent Condition	EB Comments	Issues To Flag	Compliance Status
	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.	<p>The special waste log 2020/21 indicates that three lots of dead chickens were received as well as one dead cow.</p> <p>HDC has not provided evidence of burial depth.</p> <p>Assessed as non-compliant.</p>	Compliance issues resolved with provision of further information for next audit.	
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	<p>The special waste log does not show disposal of diseased animals has been carried out during this period.</p> <p>Condition not assessed.</p>		
17	Pits for the burial of offal and animals shall be excavated in mature refuse and shall be away from the public tipping area.	No public tipping area exists at the Levin Landfill. Section 5.5.5 of the LMP states that if the contractor excavates and prepares holes for the disposal of offal and dead animals, they will be in a closed previous tipping area and shall be at least 10 metres from any landfill batter slope.	Compliance issues resolved with provision of further information for next audit.	

Cond. #	Consent Condition	EB Comments	Issues To Flag	Compliance Status
		I have not received evidence of this from HDC. Assessed as non-compliant.		
18	Pits for the burial of offal and animals shall be at least 10 metres from any landfill batter slope.	See assessment against condition 17.	Compliance issues resolved with provision of further information for next audit.	
19	Pits for the burial of offal and animals shall not exceed a maximum size of two metres by 15 metres	See assessment against condition 17.	Compliance issues resolved with provision of further information for next audit.	
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.	No information on the burial of these materials has been given by HDC. Section 5.5 point five of the LMP states that material placed in offal holes shall be covered within one hour of being deposited. I have not received evidence of pit sizes. Assessed as non-compliant.	Compliance issues resolved with provision of further information for next audit.	

Cond. #	Consent Condition	EB Comments	Issues To Flag	Compliance Status
21	Pits for the burial of offal and animals shall be demarcated as such and shall be fenced off.	I have not received evidence of pit demarcation from HDC. Assessed as non-compliant.	Compliance issues resolved with provision of further information for next audit.	
22	Any other malodorous wastes not already covered specifically by these conditions shall be covered immediately upon disposal.	No waste that would be considered malodorous was received. Assessed as compliant.		
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.	The biosolids log for the period of July 2020 to June 2021 shows that 1,288.40 tonnes of sludge and 32.70 tonnes of biosolids were accepted by the landfill during the reporting period. HDC has not supplied evidence of the free liquids tests. Assessed as non-compliant.	Compliance issues resolved with provision of further information for next audit.	

Cond. #	Consent Condition	EB Comments	Issues To Flag	Compliance Status
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".	All sludge to landfill was co-disposed. Assessed as compliant.		
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.	No information is given in the special waste log on the location in which the material was placed. Assessed as non-compliant.		
26	Disposal of site-generated sludge from cesspits, 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.	All leachate generated from the newer lined landfill is piped directly to the Levin Wastewater Treatment Plant. Assessed as compliant.		
	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.	Compliance with this condition was confirmed by HRC on the 1 st of July 2013. Further assessment is not required until additional cells are developed. This condition is not applicable.		

Cond. #	Consent Condition	EB Comments	Issues To Flag	Compliance Status
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.	The specifications of the liner system were previously assessed as compliant by HRC. This condition is not applicable.		
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	No discovery of any ancient human remains, or artefacts has been made. This condition is not applicable.		

Cond. #	Consent Condition	EB Comments	Issues To Flag	Compliance Status
	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	<p>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:</p> <ul style="list-style-type: none"> a. Assessing the adequacy of the management plan outlined in Conditions 14 and 29 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 Conditions 14 and 29 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. 	This condition is not applicable. The next review is due in October 2024.		
	Specific Conditions – Neighbourhood Liaison Group (hereinafter “NLG”)			

Cond. #	Consent Condition	EB Comments	Issues To Flag	Compliance Status
32	<p>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:</p> <ul style="list-style-type: none"> a. the Lake Horowhenua Trustees; b. Mr Charles Rudd; c. Ngati Pareraukawa; d. Each of the owners and occupiers of those properties adjoining the Levin Landfill property described as A through to N on Drawing 2181 attached; e. Horowhenua District Council; f. the Manawatu-Wanganui Regional Council; and g. Two representatives of the owners and occupiers of the properties affected by the landfill. 	<p>This matter needs to be addressed through council maintaining a record of invitations to attend the NLG and an attendance register. This matter will be assessed for the 2021/22 period.</p>	<p>Compliance through provision of further information in next audit.</p>	
33	<p>The Permit Holder shall:</p> <ul style="list-style-type: none"> 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 	<p>An independent facilitator was confirmed on 30 July 2020 following the procedure outlined in Condition 33. This was previously assessed as non-compliant.</p> <p>An NLG meeting was convened in September 2020 two months after the confirmation of an independent</p>		

Cond. #	Consent Condition	EB Comments	Issues To Flag	Compliance Status
	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.	facilitator. NLG meetings after this were within the stipulated timeframe. Assessed as compliant.		
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.	The permit holder has not been forthcoming with the significance of the monitoring results and the status of the receiving environment. The purpose of the NLG if fulfilled through trust and transparency. Assessed as non-compliant.	Having sought feedback and reviewed the NLG minutes, it seems consultation on results and strategies on this basis is lacking.	
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 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	Information is not consistently shared with NLG members. Reports and complaints are not shared proactively with group members. The onus is on the operator to provide this. Assessed as non-compliant.		

Cond. #	Consent Condition	EB Comments	Issues To Flag	Compliance Status
	<p>hours, subject to relevant regulations, including health and safety regulations and the Management Plan.</p> <p>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).</p> <p>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.</p> <p>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).</p> <p>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.</p> <p>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.</p> <p>viii. Formally invited to participate in the Permit Holder's Waste Management and Minimisation Plan review process.</p> <p>ix. Provided with a copy of any complaints within 10 workings days of a request by the NLG.</p>			

Cond. #	Consent Condition	EB Comments	Issues To Flag	Compliance Status
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.	This condition has not been assessed as part of this report.		



Table 7 : Assessment of conditions for consent 6010.

Cond. #	Consent 6010 Condition	EB Comments	Issues to Flag	Compliance Status
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.	I have not assessed compliance with this condition.		
2	There shall be no overland flow discharge of leachate beyond the site boundary.	HRC and HDC have engaged on this matter. There is a lack of verifiable evidence and no record of independent investigation. Addressing these matters will provide better data for analysis. This is a fundamental condition.	Compliance through provision of further information in next audit.	
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	A leachate option was selected and endorsed by the PMG and HDC in late 2020. This work was undertaken by Tonkin and Taylor and the broad outcomes presented to the NLG and community stakeholders, however the District council has recently identified it is undertaking a BPO assessment (stated by Asli Crawford). Clarity is required on this matter. Assessed as compliant.	The selected leachate remediation option must be fully implemented by June 2023.	

Cond. #	Consent 6010 Condition	EB Comments	Issues to Flag	Compliance Status								
	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:											
	<p>Table A: Deep Aquifer Wells</p> <table border="1"> <thead> <tr> <th>Location</th> <th>Parameters and frequency</th> </tr> </thead> <tbody> <tr> <td>C20s, E1d, E2d and any other future deep monitoring well unless installed for background monitoring purposes.</td> <td>Quarterly comprehensive for 2 years. Subsequently, conditional Annual comprehensive Quarterly indicator.</td> </tr> <tr> <td>G1d, 2d1 and any other future deep monitoring well installed for background monitoring purposes.</td> <td>Quarterly comprehensive for 1 year Subsequently Annual comprehensive Quarterly indicator</td> </tr> <tr> <td>All monitoring wells where indicator parameters show leachate influence over 3 consecutive sampling rounds</td> <td>Annual pesticide & semi VOC.</td> </tr> </tbody> </table>	Location	Parameters and frequency	C20s, E1d, E2d and any other future deep monitoring well unless installed for background monitoring purposes.	Quarterly comprehensive for 2 years. Subsequently, conditional Annual comprehensive Quarterly indicator.	G1d, 2d1 and any other future deep monitoring well installed for background monitoring purposes.	Quarterly comprehensive for 1 year Subsequently Annual comprehensive Quarterly indicator	All monitoring wells where indicator parameters show leachate influence over 3 consecutive sampling rounds	Annual pesticide & semi VOC.	<p>Bore xd1 was sampled on 12 April 2021. This was not carried out on a quarterly basis.</p> <p>Assessed as non-compliant.</p>		
Location	Parameters and frequency											
C20s, E1d, E2d and any other future deep monitoring well unless installed for background monitoring purposes.	Quarterly comprehensive for 2 years. Subsequently, conditional Annual comprehensive Quarterly indicator.											
G1d, 2d1 and any other future deep monitoring well installed for background monitoring purposes.	Quarterly comprehensive for 1 year Subsequently Annual comprehensive Quarterly indicator											
All monitoring wells where indicator parameters show leachate influence over 3 consecutive sampling rounds	Annual pesticide & semi VOC.											
	Table B: Shallow Aquifer Wells	<p>Sites C1, C2, C2ds, D4, B1, B2, B3s, E1s and E2s were sampled for indicator analysis in July 202, October 2020 and January 2021 with a comprehensive analysis completed for these sites completed in April 2021. This is also the case for sites D5, F1, F2 and F3.</p> <p>Site G1s is required to be sampled for indicator analysis every quarter however I note it also sampled comprehensively on an annual basis.</p>										

Cond. #	Consent 6010 Condition	EB Comments	Issues to Flag	Compliance Status												
	<table border="1"> <thead> <tr> <th>Location</th> <th>Parameters and frequency</th> </tr> </thead> <tbody> <tr> <td>C1, C2, C2ds, D4 B1, B2, B3s, E1s, E2s and any other shallow monitoring well installed in the future.</td> <td>Six monthly comprehensive for 2 years Quarterly indicator Subsequently, conditional Annual comprehensive Quarterly indicator</td> </tr> <tr> <td>D5, F1, F2, F3 and any other shallow monitoring well installed to monitor leachate irrigation areas in the future.</td> <td>Six monthly comprehensive for 2 years Quarterly indicator Conditional Annual comprehensive Quarterly indicator</td> </tr> <tr> <td>G1s and any other shallow background monitoring well installed in the future.</td> <td>Quarterly comprehensive for 1 year Subsequently, conditional Quarterly indicator</td> </tr> <tr> <td>D1, D2, D3r, D6, Xs1, Xs2 and any other Early Detection wells installed in the future.</td> <td>Quarterly comprehensive for 2 years Subsequently, conditional Annual comprehensive Quarterly indicator</td> </tr> <tr> <td>All monitoring wells where indicator parameters show leachate influence over 3 consecutive sampling rounds.</td> <td>Annual pesticide/ semi VOC</td> </tr> </tbody> </table>	Location	Parameters and frequency	C1, C2, C2ds, D4 B1, B2, B3s, E1s, E2s and any other shallow monitoring well installed in the future.	Six monthly comprehensive for 2 years Quarterly indicator Subsequently, conditional 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 Conditional Annual comprehensive Quarterly indicator	G1s and any other shallow background monitoring well installed in the future.	Quarterly comprehensive for 1 year Subsequently, conditional Quarterly indicator	D1, D2, D3r, D6, Xs1, Xs2 and any other Early Detection wells installed in the future.	Quarterly comprehensive for 2 years Subsequently, conditional Annual comprehensive Quarterly indicator	All monitoring wells where indicator parameters show leachate influence over 3 consecutive sampling rounds.	Annual pesticide/ semi VOC	<p>Sites D1, D2, D3r, D6, Xs1 and Xs2 are sampled annually for comprehensive analysis and quarterly for comprehensive analysis.</p> <p>All sites are sampled annually for pesticide and semi-VOC analysis.</p> <p>Sampling of XS1, Xs2 and Xd1 started in November 2020.</p> <p>Assessed as non-compliant.</p>		
Location	Parameters and frequency															
C1, C2, C2ds, D4 B1, B2, B3s, E1s, E2s and any other shallow monitoring well installed in the future.	Six monthly comprehensive for 2 years Quarterly indicator Subsequently, conditional Annual comprehensive Quarterly indicator															
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All monitoring wells where indicator parameters show leachate influence over 3 consecutive sampling rounds.	Annual pesticide/ semi VOC															
	<p>Table A and B conditions: A reduction in sampling frequency at any groundwater point is conditional on:</p> <p>A – Completion of the initial monitoring program</p> <p>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;</p> <p>C – No decline in groundwater quality as determined from indicator parameter trends over a period of four consecutive sampling rounds;</p> <p>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.</p> <p>Sampling frequency for the shallow monitoring wells installed to monitor proposed leachate</p>	<p>The completion of the initial round of monitoring has previously been assessed as completed. I am not aware of any requests to reduce sampling frequency; therefore, this condition is not applicable. The last well to be replaced was done so in 2009.</p>														

Cond. #	Consent 6010 Condition	EB Comments	Issues to Flag	Compliance Status
	<p>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.</p> <p>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;</p> <p>F – A replacement well is to be constructed in a position agreed upon with the Environmental Protection Manager at Horizons Regional Council;</p> <p>G – The replacement well should be installed in a position suitable to act as a near detection well and be classed as an early detection well; and</p> <p>H – The replacement well should be constructed as a nested well (or two separate wells) with screens positioned in both shallow and deep aquifers.</p>			
	<p>Table c – Other water monitoring locations, frequencies, parameters.</p>	<p>The monitoring programme for Table C has been followed. Assessed as compliant.</p>		

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

Table C conditions: A reduction in sampling frequency at the Hokio Stream monitoring locations 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;

No reduction in the sampling frequency has been requested by HDC. This condition is not applicable.

Cond. #	Consent 6010 Condition	EB Comments	Issues to Flag	Compliance Status																																							
	<p data-bbox="338 296 528 316">Table C1: Trigger Values</p> <table border="1" data-bbox="338 328 920 611"> <thead> <tr> <th>Parameter</th> <th>Measure</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Total ammoniacal nitrogen</td> <td>Maximum (g/m³)</td> <td>2.1</td> </tr> <tr> <td>Total ammoniacal nitrogen</td> <td>Average (g/m³)</td> <td>0.400</td> </tr> <tr> <td>ScBOD₅</td> <td>Monthly average (g/m³)</td> <td>2</td> </tr> <tr> <td>Aluminium</td> <td>Dissolved, median concentration (g/m³)</td> <td>0.055</td> </tr> <tr> <td>Arsenic</td> <td>Dissolved, median concentration (g/m³)</td> <td>0.024</td> </tr> <tr> <td>Cadmium</td> <td>Dissolved, median concentration (g/m³)</td> <td>0.0002</td> </tr> <tr> <td>Chromium (Total)</td> <td>Dissolved, median concentration (g/m³)</td> <td></td> </tr> <tr> <td>Copper</td> <td>Dissolved, median concentration (g/m³)</td> <td>0.0014</td> </tr> <tr> <td>Lead</td> <td>Dissolved, median concentration (g/m³)</td> <td>0.0034</td> </tr> <tr> <td>Nickel</td> <td>Dissolved, median concentration (g/m³)</td> <td>0.011</td> </tr> <tr> <td>Zinc</td> <td>Dissolved, median concentration (g/m³)</td> <td>0.008</td> </tr> <tr> <td>Mercury</td> <td>Dissolved, median concentration (g/m³)</td> <td>0.0006</td> </tr> </tbody> </table> <p data-bbox="338 647 931 962">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.</p> <p data-bbox="338 970 931 1158">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) should return to the base case intensive monitoring until conditions J and K are again being fulfilled.</p> <p data-bbox="338 1289 931 1380">Table C conditions: A reduction in sampling frequency at the leachate pond outlet is conditional on:</p>	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	Chromium (Total)	Dissolved, median concentration (g/m ³)		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	<p data-bbox="963 296 1552 355">No reduction in the sampling frequency has been requested by HDC. This condition is not applicable.</p>		
Parameter	Measure	Value																																									
Total ammoniacal nitrogen	Maximum (g/m ³)	2.1																																									
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Cond. #	Consent 6010 Condition	EB Comments	Issues to Flag	Compliance Status
	<p>M – Completion of the initial 2-year monitoring program;</p> <p>N – Good consistency of water sample analysis results, or a clearly identified reason for inconsistent results;</p> <p>O – No decline in water quality over a period of four consecutive sampling rounds.</p> <p>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.</p> <p>Locations:(Unless otherwise stated, locations are described on Figure 4, attached to and forming part of this consent).</p>			
	<p>Table D: Monitoring point locations</p> <p>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 landowner 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.</p>	<p>All monitoring locations shown in Table D are shown on the site plan attached to the annual report.</p> <p>Assessed as compliant.</p>		

Cond. #	Consent 6010 Condition	EB Comments	Issues to Flag	Compliance Status																
	<p>Table E: Comprehensive Analysis List</p> <table border="1"> <thead> <tr> <th>Type</th> <th>Parameters</th> </tr> </thead> <tbody> <tr> <td>Characterising</td> <td>pH, electrical conductivity (EC), alkalinity, total hardness, suspended solids</td> </tr> <tr> <td>Oxygen demand</td> <td>COD, <u>scBOD₅</u></td> </tr> <tr> <td>Nutrients*</td> <td>NO₃-N, NH₄-N, DRP, SO₄</td> </tr> <tr> <td>Metals*</td> <td>Al, As, Cd, Cr, Cu, Fe, Mg, Mn, Ni, Pb, Zn, <u>Hg</u></td> </tr> <tr> <td>Other elements</td> <td>B, Ca, Cl, K, Na</td> </tr> <tr> <td>Organics</td> <td>Total organic carbon, total phenols, volatile acids</td> </tr> <tr> <td>Biological</td> <td><u>Faecal coliformsE₁, colI</u></td> </tr> </tbody> </table>	Type	Parameters	Characterising	pH, electrical conductivity (EC), alkalinity, total hardness, suspended solids	Oxygen demand	COD, <u>scBOD₅</u>	Nutrients*	NO ₃ -N, NH ₄ -N, DRP, SO ₄	Metals*	Al, As, Cd, Cr, Cu, Fe, Mg, Mn, Ni, Pb, Zn, <u>Hg</u>	Other elements	B, Ca, Cl, K, Na	Organics	Total organic carbon, total phenols, volatile acids	Biological	<u>Faecal coliformsE₁, colI</u>	<p>All of the parameters listed here are listed under comprehensive analysis as required for each site in the quarterly reports.</p> <p>Assessed as compliant.</p>		
Type	Parameters																			
Characterising	pH, electrical conductivity (EC), alkalinity, total hardness, suspended solids																			
Oxygen demand	COD, <u>scBOD₅</u>																			
Nutrients*	NO ₃ -N, NH ₄ -N, DRP, SO ₄																			
Metals*	Al, As, Cd, Cr, Cu, Fe, Mg, Mn, Ni, Pb, Zn, <u>Hg</u>																			
Other elements	B, Ca, Cl, K, Na																			
Organics	Total organic carbon, total phenols, volatile acids																			
Biological	<u>Faecal coliformsE₁, colI</u>																			
	<p>Table F: Indicator Analysis List</p> <table border="1"> <thead> <tr> <th>Type</th> <th>Parameters</th> </tr> </thead> <tbody> <tr> <td>Characterising</td> <td>pH, EC</td> </tr> <tr> <td>Oxygen demand</td> <td>COD, <u>scBOD₅</u></td> </tr> <tr> <td>*Nutrients</td> <td>NO₃-N, NH₄-N</td> </tr> <tr> <td>*Metals</td> <td>Al, Mn, Ni, <u>Pb, Hg</u></td> </tr> <tr> <td>Other elements</td> <td>B, Cl</td> </tr> </tbody> </table>	Type	Parameters	Characterising	pH, EC	Oxygen demand	COD, <u>scBOD₅</u>	*Nutrients	NO ₃ -N, NH ₄ -N	*Metals	Al, Mn, Ni, <u>Pb, Hg</u>	Other elements	B, Cl	<p>All of the parameters listed here are listed under indicator analysis as required for each site in the quarterly reports.</p> <p>Assessed as compliant.</p>						
Type	Parameters																			
Characterising	pH, EC																			
Oxygen demand	COD, <u>scBOD₅</u>																			
*Nutrients	NO ₃ -N, NH ₄ -N																			
*Metals	Al, Mn, Ni, <u>Pb, Hg</u>																			
Other elements	B, Cl																			
	<p>Schedule: The sampling regime defined in Tables A to C shall be undertaken based on the following schedule:</p> <p>Q – The first samples for all parameters shall be taken in July 2010.</p> <p>R – Quarterly monitoring referred to in Tables A and B shall be carried out in January, April, July and October.</p> <p>S – Six monthly monitoring referred to in Tables A and B shall be carried out in April and October.</p> <p>T – Annual monitoring referred to in Table A shall be carried out in April.</p>	<p>All sampling was carried out according to the regime listed in conditions 3 Q – T.</p> <p>Assessed as compliant.</p>																		

Cond. #	Consent 6010 Condition	EB Comments	Issues to Flag	Compliance Status
	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.	Viv Bold has offered to witness sampling. Note compliance with the condition requires a good faith approach from the council and representative to offer and undertake training and ensure the programme of assessment and timing is available to the representative. This will be checked for the next reporting period.		
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.	The leachate from the newer lined landfill has been pumped off site to the Levin Wastewater Treatment Plant (WWTP) since 2009. The soil sampling conditions are not applicable.		
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.	The final report was produced by Stantec on behalf of HRC on 30 September 2021. Assessed as compliant.		
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.	The permit holder has employed Stantec to undertake the monitoring programme on behalf of HDC. Horizons have approved Stantec undertaking the programme and producing the subsequent reports. Assessed as compliant.	Note it understood that Stantec is retained by HDC as its landfill advisor and engineering agent. The councils should seek advice as to whether the	

Cond. #	Consent 6010 Condition	EB Comments	Issues to Flag	Compliance Status
			company is able to operate as an independent provider given the actual or potential conflict evident.	
7	The Permit Holder shall inform the Neighbourhood Liaison Group of the identity of the organisation carrying out the monitoring.	The NLG have been informed and are aware that Stantec has been commissioned to carry out the monitoring programme. Assessed as compliant.		
8	The Permit Holder shall meet the costs of the monitoring.	I understand the permit holder has met the costs of the monitoring and Horizons has approved this. Assessed as compliant.		
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.	The results were presented to the NLG at this meeting and before 30 September. Assessed as compliant.		

Cond. #	Consent 6010 Condition	EB Comments	Issues to Flag	Compliance Status
10	All analyses on water quality samples shall be carried out by an IANZ accredited laboratory	Analyses on water quality samples is carried out by Eurofins ELS Ltd, which is an IANZ accredited laboratory. Assessed as compliant.		
11a	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	<p>I have reviewed the Memorandum produced by Pattle Delamore Partners Ltd (PDP) dated 30 April 2021.</p> <p>The HDC report states that there were no exceedances of the ANZECC guidelines for this monitoring period in shallow aquifer monitoring results.</p> <p>I have cross verified reporting and compliance assessments for this according to HDC and Pattle Delamore. The HDC Annual report states that there were no exceedances of ANZECC values, however the Pattle Delamore report states there is an exceedance of Nitrate Nitrogen at bore B2 down gradient of the old landfill. This occurred in July 2020 where concentrations of Nitrate Nitrogen was recorded as 133mg/L, exceeding the ANZECC value of 90 mg/L. In addition, it was also noted that Ammonia concentrations has been rising since 2006, and although this is not subject to exceedance criteria under ANZECC guidelines, it will still have still an effect on surface water quality downgradient of the site.</p> <p>There has been a noted exceedance of ANZECC guidelines for nitrate nitrogen. I am therefore assessing this condition as non-compliant and due to</p>	The reporting from HRC, independent assessments done by PDP and response by HDC can be characterised as lacking clarity and appropriate responses in the context of fundamental conditions of consent. This is further exacerbated by the lack of timely reporting or response.	

Cond. #	Consent 6010 Condition	EB Comments	Issues to Flag	Compliance Status
		<p>the assessment of the contributing effect of the landfill, condition 11(c) is triggered.</p> <p>This situation is best summarised by the following statement. The independent report prepared by PDP as follows ' concentrations of most water quality parameters are significantly elevated in shallow bores. '</p>		
11(aa)	<p>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.</p>	<p>HRC outlined the findings of PDP for the instream concentrations of measured contaminants specifically ammoniacal nitrogen, BOD, nitrate-nitrogen and dissolved boron. These were measured as 43.2mg/L and 57.8mg/L in July and October 2020 respectively at TD1.</p> <p>It was noted that " The Annual Monitoring Reports and the Quarterly Monitoring Reports do not specifically account for exceedances and the significance of some parameters".</p> <p>Assessed as non-compliant.</p>	<p>No verifiable engagement as required by consent. No action taken. No reporting to NLG or PMG. Noted that effects of discharge are toxic to aquatic life. It is difficult to understand the conclusions drawn by the respective authorities in the light of the overwhelming scientific assessment and outcomes described on these matters. It is inappropriate to offset a response to those matters to</p>	

Cond. #	Consent 6010 Condition	EB Comments	Issues to Flag	Compliance Status
			a future time and accordingly find compliance.	
11(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 scBODs), 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	The 24-month sampling for this analysis was completed in April 2022. During the assessment period for this report, it was still ongoing. Condition is not applicable.		
11(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	The leachate remediation option has not been implemented yet. This condition is not applicable.		

Cond. #	Consent 6010 Condition	EB Comments	Issues to Flag	Compliance Status
	<p>as designed. If they are not working as designed the report shall specify corrective works required and a timeframe to implement them</p> <p>ii) The Permit Holder shall promptly complete all recommended corrective works in accordance with the timeframes set out in the review.</p> <p>(iii) The Permit Holder shall provide a copy of the review to the Regional Council and NLG within 5 working days of receipt.</p>			
11(d)	<p>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:</p> <ul style="list-style-type: none"> (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. 	<p>Mass loading calculations are in general accordance with this condition, but they do not consider short term, acute effects of contaminants on the Hokio stream as stated in the PDP report May 2022.</p> <p>I have assessed this condition as non-compliant.</p>		

Cond. #	Consent 6010 Condition	EB Comments	Issues to Flag	Compliance Status
11(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.	<p>The determination of what makes an effect significant is not defined. The groundwater parameters indicate contaminants sourced from the Levin Landfill are having an adverse effect on water quality, as stated in the PDP memo.</p> <p>Requirement to follow condition C is triggered.</p>		
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.	<p>The PDP memo states that parameters tested for deep gravel aquifers are within the Ministry of Health's Drinking Water Standards for New Zealand 2000, except for some exceedances for iron which they have assessed as expected for aquifers in the area.</p> <p>Assessed as compliant.</p>		
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	Sampling of these bores has not been requested by the owners.		

Cond. #	Consent 6010 Condition	EB Comments	Issues to Flag	Compliance Status
	<p>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.</p>			
14	<p>Any currently active and future lined landfill area shall be closed and remediated by:</p> <ul style="list-style-type: none"> (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 x 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 	<p>The density for this period was 0.92 tonnes/m³ and inconsistent with condition 14.</p> <p>Assessed as non-compliant.</p>		

Cond. #	Consent 6010 Condition	EB Comments	Issues to Flag	Compliance Status
	<p>and maintain the ongoing integrity of the landfill cap.</p> <p>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.</p>			
15	<p>The Permit Holder shall close and remediate the existing unlined landfill by April 2011 by:</p> <p>(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);</p> <p>(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;</p> <p>(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;</p> <p>(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;</p> <p>(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</p>	<p>15(a)HDC has not provided evidence on the grading of the final slope. Rainwater ponding has been shown in photographic evidence and this was noted on the site visit. Assessed as non-compliant.</p> <p>15(b) Water ponding was shown in photographic evidence and noted on the site visit. Assessed as non-compliant.</p> <p>15(c)HDC has not supplied evidence of the capping for the unlined landfill. Assessed as non-compliant.</p> <p>15(d)The grass cover is patchy and not maintained. Assessed as non-compliant.</p> <p>15(e)Ten monitoring points were established in 2014. These have shown settlement at the Southern end of the landfill. Assessed as compliant.</p> <p>15(f) An annual report was produced by Geotech for this purpose. Assessed as compliant.</p>		

Cond. #	Consent 6010 Condition	EB Comments	Issues to Flag	Compliance Status
	(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.	Final remediation has not yet occurred. This condition is not applicable.		
	Specific conditions – Discharge leachate to ground from lined landfill			
	Environmental Effects			

Cond. #	Consent 6010 Condition	EB Comments	Issues to Flag	Compliance Status
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.	This condition is no longer applicable as leachate is now piped to the Levin WWTP.		
18	The rate of application of leachate irrigated to land shall not exceed 200 kg Nitrogen/hectare per year	This condition is no longer applicable as leachate is now piped to the Levin WWTP.		
19	There shall be no ponding or runoff of leachate on or beyond the irrigation areas	This condition is no longer applicable as leachate is now piped to the Levin WWTP.		
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.	This condition is no longer applicable is leachate as now piped to the Levin WWTP.		

Cond. #	Consent 6010 Condition	EB Comments	Issues to Flag	Compliance Status
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.	This condition is no longer applicable as leachate is now piped to the Levin WWTP.		
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.	This condition is no longer applicable as leachate is now piped to the Levin WWTP.		
	Process management			
23	The daily volume of leachate irrigated to land shall be metered and recorded	This condition is no longer applicable as leachate is now piped to the Levin WWTP.		

Cond. #	Consent 6010 Condition	EB Comments	Issues to Flag	Compliance Status
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.	This condition is no longer applicable as leachate is now piped to the Levin WWTP.		
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.	This condition is not applicable.		
	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: (a) A map showing areas to be irrigated; (b) Design of the recirculation, treatment and irrigation systems; (c) Contingency measures in case of failures in the irrigation system; (d) Criteria for installing aerators in the leachate pond; (e) Assessment of options for recirculating leachate over the lined landfill;	This condition is no longer applicable as leachate is now piped to the Levin WWTP.		

Cond. #	Consent 6010 Condition	EB Comments	Issues to Flag	Compliance Status
	(f) Assessment of groundwater profile beneath the irrigation area and effects leachate irrigation will have on groundwater; (g) Groundwater and soil monitoring programme, including a map showing sampling locations; and (h) Any other relevant matter			
27	The Permit Holder shall keep a log of: (a) The dates and times of leachate irrigation; (b) The total volume of leachate irrigated daily; (c) The volumes of leachate irrigated to specific areas; (d) Weather and ground conditions during irrigation; (e) Observations made during the weekly inspections of the pump, irrigation system and irrigation areas; and (f) 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.	This condition is no longer applicable as leachate is now piped to the Levin WWTP.		
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.	I have reviewed the walkover sheets for the reporting period and no leachate breakouts are recorded or flagged as an issue. Photographic evidence dated 20 November 2020 appears to show a leachate breakout with the flow line in the sand. This would suggest that breakouts are not being recorded or inspection is not thorough enough to pick them up. Assessed as non-compliant.		

Cond. #	Consent 6010 Condition	EB Comments	Issues to Flag	Compliance Status
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.	The site walkover sheets notes a leachate breakout on 18 December 2020. This not marked as an issue and no remedial action is recorded. Assessed as non-compliant.		
	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: (a) Assessing the adequacy of monitoring outlined in Conditions 3 and 4 of this consent; and/or (b) 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: (c) Modification of monitoring outlined in Conditions 3 and 4 of this consent; (d) Deletion or changes to Conditions 11(a) –(e), 12, 13, 14, 24, 27, 28 and 29 of this consent; (e) Addition of new conditions as necessary, to avoid, remedy or mitigate adverse effects on the environment surrounding the Levin Landfill.	The next review is due in October 2024.		

Cond. #	Consent 6010 Condition	EB Comments	Issues to Flag	Compliance Status
31	<p>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:</p> <p>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.</p> <p>The review of conditions shall allow for the:</p> <p>(b) Deletion or changes to Conditions 11(a) – (e) of this consent;</p> <p>(c) Addition of new conditions as necessary, to avoid, remedy or mitigate adverse effects on the environment surrounding the Levin Landfill.</p> <p>The review of conditions shall have regard to:</p> <p>(d) The nature of the discharge and the receiving environment; and</p> <p>(e) The financial implications for the applicant of including that condition; and</p> <p>(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.</p>	<p>A review has not been initiated.</p> <p>This condition is not applicable.</p>		

Table 8 : Assessment of conditions for consent 6011.

Cond. #	Consent Condition	EB Comments		Compliance Status
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.	This condition has not been assessed as part of this report.		
	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.	No complaints for dust have been received. Assessed as compliant.		
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).	The complaints log shows four odour complaints for the reporting period. None of these were assessed to be objectionable or offensive odour. Not all complaints have been investigated and the NLG minutes suggests complaints weren't picked up on the register.	Feedback from the NLG and meeting minutes suggest there was objectionable odour beyond the boundary. This was not assessed, therefore non-compliance is likely but cannot be fully determined.	
4	If an appropriately experienced officer of the Manawatu-Wanganui Regional Council or a suitably qualified independent expert considers that an objectionable odour beyond the boundary has occurred, having regard to: (i) a consideration of the FIDOL factors; and/or	No odour has been assessed as objectionable beyond the site boundary. Not applicable.	I have reviewed the odour complaints register for this reporting period. During the	

Cond. #	Consent Condition	EB Comments		Compliance Status
	<p>(ii) receipt of complaints from neighbours or the public having considered (i); and/or</p> <p>(iii) relevant written advice or a report from an Environmental Health Officer of a territorial authority, then and the permit holder receives a request from the Manawatu-Wanganui Regional Council to provide them with a written report, then the report shall specify;</p> <p>(a) the activities that were occurring on the site at the time;</p> <p>(b) the cause or likely cause of the event and any factors that influenced its severity;</p> <p>(c) the nature and timing of any measures implemented by the permit holder to avoid, remedy or mitigate any adverse effects; and</p> <p>(d) the steps to be taken in future to prevent reoccurrences of similar events should this be necessary. The permit holder shall provide its report for items (a), (b) and (c) within five days and for item (d) within 20 days of request. When notification of an alleged objectionable odour is delayed such that investigation by the permit holder is compromised, the report should as far as practicably include the information required by (a) – (d).</p>		<p>reporting period, a Horizons officer attended site for two out of the four recorded complaints.</p> <p>Upon attending site, the officer did not detect any odour on both occasions.</p> <p>For three out of the four odour complaints recorded, the register states that HDC was not informed at the time of complaint. This hinders investigation into levels of odour on site during the time the complaint is made. It also means that HDC are not able to investigate the possible source or carry out any mitigatory measures. Odour detection is transient therefore</p>	

Cond. #	Consent Condition	EB Comments		Compliance Status
			<p>action must be taken as soon as practically possible when a complaint is made. This is especially true of complaints that HRC were unable to attend.</p> <p>HRC have not considered an objectionable odour to be present at the time of the assessment, therefore a report has not been requested.</p>	
5	<p>The Permit Holder will also ensure that:</p> <p>(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.</p> <p>(b) Any building constructed on the landfill site is adequately ventilated.</p> <p>(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).</p> <p>(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 lifts of waste or final cover for more than three</p>	<p>5(a) Sampling for landfill gas was undertaken on a monthly basis. This is assessed as compliant.</p> <p>5(b) Buildings on site have roller doors and windows and can therefore be adequately ventilated. This is assessed as compliant.</p> <p>5(c) There is insufficient evidence given by HDC to assess this condition as compliant. Assessed as non-compliant.</p>	<p>The District Council has decommissioned the biofilter. It has a formal resolution of support for this action from the NLG and is addressing the change of conditions directly with the regional council.</p>	

Cond. #	Consent Condition	EB Comments		Compliance Status
	<p>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.</p> <p>(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.</p> <p>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).</p>	<p>5(d) There is insufficient evidence given by HDC to assess this condition as compliant. Assessed as non-compliant.</p> <p>5(e) Monthly methane surface monitoring was not commenced until April 2021 by Envirowaste. Assessed as non-compliant.</p> <p>5(f) During the reporting period, the Methane results were above the trigger level of 200ppm for the temporary capped levels. Assessed as non-compliant.</p> <p>5(h) The design of the biofilter has not been reviewed. This condition is not applicable.</p> <p>5(i) HDC has not provided evidence of appointment or assessment of the bio-filter performance. Assessed as non-compliant.</p> <p>5(j) Daily visual inspections were not carried out on a consistent basis by HDC. Weekly recording of the pH was not carried out. Assessed as non-compliant.</p>		

Cond. #	Consent Condition	EB Comments		Compliance Status
	<p>(f) Surface concentrations of methane, as determined by monitoring carried out by condition 4 shall not exceed the following trigger levels: (i) 100 parts per million (ppm) for permanently capped areas (ii) 200 ppm for temporary capped areas; and (iii) 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.</p> <p>(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</p> <p>(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 biofilter. The bio-filter must be designed by a suitably qualified and experienced person.</p> <p>(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 (j) below.</p> <p>(j) The Permit Holder shall maintain the biofilter, in good working order, and shall measure and record the following parameters:</p> <ul style="list-style-type: none"> • Daily visual inspection of the state of the biofilter 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: 	<p>5(k) HDC has not provided information on biofilter compliance with these limits. Assessed as non-compliant.</p> <p>5(l) Landfill gas was collected and the flare was installed for discharge. Assessed as compliant.</p> <p>5(m) The OMP was submitted to Horizons on 3 February 2020 within the timeframe. Assessed as compliant.</p> <p>5(n) Formal evidence consultation with the NLG has not been provided. Assessed as non-compliant.</p> <p>5(o) Monitoring was not carried out in full. Assessed as non-compliant.</p> <p>5(p) Monitoring was not carried out according to condition requirements. Assessed as non-compliant</p> <p>5(q) No data collected from the weather station was provided to HRC.</p>		

Cond. #	Consent Condition	EB Comments		Compliance Status
	<ul style="list-style-type: none"> • Weekly recording of pressure across the biofilter bed; • Weekly monitoring and recording of the biofilter media moisture content • Monthly monitoring and recording of the pH of the bio-filter media: • Quarterly raking and loosening of the biofilter media, or as otherwise required, to reduce the potential for short-circuiting, clogging of the bed, compaction and weed growth. <p>(k) The Permit Holder must ensure that the bio-filter and bed complies with the following limits at all times</p> <ul style="list-style-type: none"> • 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 metres 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. <p>(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.</p> <p>(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:</p> <ul style="list-style-type: none"> (i) Material Design specifications and procedures for the application of daily and intermediate cover and temporary and final capping; (ii) Procedures for the documentation and handling of special and/or malodorous wastes (e.g. sewage sludge, animal carcasses); (iii) Methodology for monthly field odour monitoring; 	Assessed as non-compliant		

Cond. #	Consent Condition	EB Comments		Compliance Status
	<p>(iv) Methodology for monthly surface monitoring for methane;</p> <p>(v) Methodology for bio-filter monitoring;</p> <p>(vi) Odour control practices relating to the leachate pond;</p> <p>(vii) Odour control practices for the working face of the landfill;</p> <p>(viii) Locations of odour control/treatment equipment (e.g. bio-filter and flare);</p> <p>(ix) The odour complaints investigation and recording procedure;</p> <p>(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;</p> <p>(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;</p> <p>(xii) The resource consent conditions relevant to discharges to air at the landfill;</p> <p>(xiii) Staff training requirements to ensure compliance with consent conditions;</p> <p>(xiv) Timing of audits and inspections and reporting to Council.</p> <p>(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.</p> <p>(o) Subject to the conditions of consent. the Permit Holder shall carry out its operations in general accordance with the OMP;</p> <p>(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: Collected in general accordance with the Good Practice Guide for Air Quality Monitoring</p>			

Cond. #	Consent Condition	EB Comments		Compliance Status
	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 mis. (q) The Permit Holder shall provide the ManawatuWanganui 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.			
6	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.	Section 4.8 of the LLMP prohibits the lighting of fires at the landfill and states that burning loads will not be accepted for disposal. No complaints about fire have been submitted. Assessed as compliant.		
7	The Permit Holder shall take all practicable steps to avoid, remedy or mitigate significant adverse effects of the discharge of landfill gases to air.	HDC did not carry out monitoring of landfill gas until April 2021. Reasonable steps were not taken by the HDC to avoid, remedy or mitigate significant adverse effects of the discharge of landfill gases to air. Assessed as non-compliant.		
8	The Permit Holder shall keep a record of any complaints received. The complaints record shall include the following, where possible: (i) Names and addresses of complainant; (ii) Nature of complaint; (iii) Date and time of the complaint and alleged event;	The complaints log does not contain all the information outlined in condition 8. Assessed as non-compliant.		

Cond. #	Consent Condition	EB Comments		Compliance Status
	<p>(iv) Weather conditions at the time of the event; and</p> <p>(v) the activities that were occurring on the site at the time. In response to a complaint and upon request by the Regional Council, the Permit Holder shall keep a record of the following information in its complaint record:</p> <p>(vi) the cause or likely cause of the event and any factors that influenced its severity;</p> <p>(vii) 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.</p> <p>(viii) The steps to be taken in future to prevent reoccurrences of similar events should this be necessary. Complaint records shall be made available within 5 days of a request by the Regional Council</p>			
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 land line telephone number, a cell phone number, and email address of the liaison person, shall be provided to the ManawatuWanganui 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.	HDC has not confirmed the details of the air quality nominee. Assessed as non-compliant.		
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.	Investigation was not carried out for each odour complaint within 24 hours. Assessed as non-compliant.	The permit holder was not informed of three out of the four complaints received. Investigation could not be carried out within 24 hours to determine possible causes and respond effectively.	

Cond. #	Consent Condition	EB Comments		Compliance Status
8C	The Permit Holder shall notify a Manawatu-Wanganui Regional Council Consents Monitoring Officer and the MidCentral 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.	The odour assessments log shows odour was detected and assessed as not objectionable 'at any location'. Assessed as compliant.		
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).	Odour assessments are undertaken at or beyond the site boundary in accordance with the odour management plan. Assessed as compliant.		
8E	The Permit Holder consent 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.	The permit holder has carried out weekly walkover inspection according to the requirements of condition 8E. Assessed as compliant.		
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 a summary in the Annual Report.	HDC has provided the inspection log. An odour log has been provided. Assessed as non-compliant		
9	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: (a) 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 (b) The review of conditions shall allow for changes and	This condition is not applicable.		

Cond. #	Consent Condition	EB Comments		Compliance Status
	amendments to Conditions 4 and 7 of this consent to avoid, remedy or mitigate adverse effects of discharges to air from the Levin Landfill.			



Table 9 : Assessment of conditions for consent 7289.

Cond. #	Consent Condition	EB Comments	Issues to Flag	Compliance Status
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.	This condition has not been assessed for compliance in this report.		
2	Liquid wastes shall only be placed at the Levin Landfill as a contingency to normal disposal.	Liquid waste was not disposed of at the landfill during the reporting period. Assessed as compliant.		
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	Liquid waste was not disposed of at the landfill during the reporting period. This condition is not applicable.		
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	HDC has not provided evidence of the free liquids test. Assessed as non-compliant.	Further provision of material required.	

Cond. #	Consent Condition	EB Comments	Issues to Flag	Compliance Status
	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. Each nominated member of the Neighbourhood Liaison Group shall be notified in writing by post.	Liquid waste was not disposed of at the landfill during the reporting period. This condition is not applicable.		
6	The maximum annual volume of liquid waste discharged shall not exceed 150 cubic metres (150 m ³) in any calendar year. (Calendar year is defined as being over any 12 month or 365-day period.)	Liquid waste was not disposed of at the landfill during the reporting period. This condition is not applicable.		
7	Subject to Condition 6, the volume of liquid waste discharge shall not exceed 75 cubic metres (75 m ³) during any seven-day period.	Liquid waste was not disposed of at the landfill during the reporting period. This condition is not applicable.		
8	Subject to Condition 6 and 7 the maximum daily volume of liquid waste discharged shall not exceed 20 cubic metres (20 m ³).	Liquid waste was not disposed of at the landfill during the reporting period. This condition is not applicable.		
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	Liquid waste was not disposed of at the landfill during the reporting period.		

Cond. #	Consent Condition	EB Comments	Issues to Flag	Compliance Status
	at least six months old and located within a lined landfill area.	This condition is not applicable.		
10	Only one trench shall be open at any one time.	Liquid waste was not disposed of at the landfill during the reporting period. This condition is not applicable.		
11	Trenches shall be at least 10 metres from any landfill batter slope.	Liquid waste was not disposed of at the landfill during the reporting period. This condition is not applicable.		
12	The open trench shall be open for no longer than two weeks	Liquid waste was not disposed of at the landfill during the reporting period. This condition is not applicable.		
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.	Liquid waste was not disposed of at the landfill during the reporting period. This condition is not applicable.		
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.	Liquid waste was not disposed of at the landfill during the reporting period. This condition is not applicable.		

Cond. #	Consent Condition	EB Comments	Issues to Flag	Compliance Status
15	The location and placement shall be appropriately signed and fenced.	Liquid waste was not disposed of at the landfill during the reporting period. This condition is not applicable.		
16	The Permit Holder will ensure odours, vermin and flies are not generated from or do not accumulate in open trenches.	Liquid waste was not disposed of at the landfill during the reporting period. This condition is not applicable.		
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	Liquid waste was not disposed of at the landfill during the reporting period. This condition is not applicable.		
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	No sludge was generated on site during this reporting period. Assessed as compliant.		
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 review shall be 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	This condition is not applicable until October 2024.		

Cond. #	Consent Condition	EB Comments	Issues to Flag	Compliance Status
	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.			



Table 10: Assessment of conditions for consent 102259.

Cond. #	Consent Condition	EB Comments	Issues to Flag	Compliance Status
1	This Permit shall be for a term of 35 years from the date of commencement of Levin Landfill Consents 6009 – 6011 and 7289.	The consent is still within term. Assessed as compliant.		
2	Pursuant to section 125(1) of the Resource Management Act 1991, this Permit shall not lapse within its duration of 35 years.	The consent has not yet lapsed. Assessed as compliant.		
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.	It is stated the stormwater is discharged to a central dune depression to the West of the access road. Assessed as compliant.	It was noted on site that stormwater is discharged to the East of the side done from the flare to a stormwater pond. This is shown as a proposed area of discharge for in the HDC report. I am unable to determine when this started. Evidence of this new existing discharge pond is needed for the next audit along with an updated site plan to show this.	
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.	Design and construction has previously been assessed as compliant. Maintenance is carried out through weekly inspections. Assessed as compliant.		
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.	HDC has not provided information on daily inspections. Assessed as non-compliant.	Further provision of material required.	

Cond. #	Consent Condition	EB Comments	Issues to Flag	Compliance Status
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.	Site walkover sheets show the soakage ponds are inspected. Assessed as compliant.		
7	Deleted	N/A		N/A
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.	Evidence has not been supplied to show that all stormwater went to the centralized dune depression and not to the East of the flare during that time.		
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.	Evidence has not been supplied to show that all stormwater went to the centralized dune depression and not to the East of the flare during that time.	Evidence of stormwater directed to the centralized dune depression is required as well as clarification of the length of time stormwater has been discharged to the site East of the flare.	
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 affected by constructing impermeable barriers, diversion drains or bunds on the side slopes and within the base of the landfill.	All stormwater falling on the active landfill is treated as leachate. Assessed as compliant.		
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.	Contamination of stormwater has been indicated from data, and leachate breakouts have been evidenced on site. This is likely non-compliant, but cannot be fully determined.	Surface water testing off site is indicative of leachate contamination. It cannot be concluded if this was via contaminated stormwater.	
12	The Permit Holder shall ensure that a suitable stormwater soakage area is available for a given	Stormwater from the operational cell was treated as		

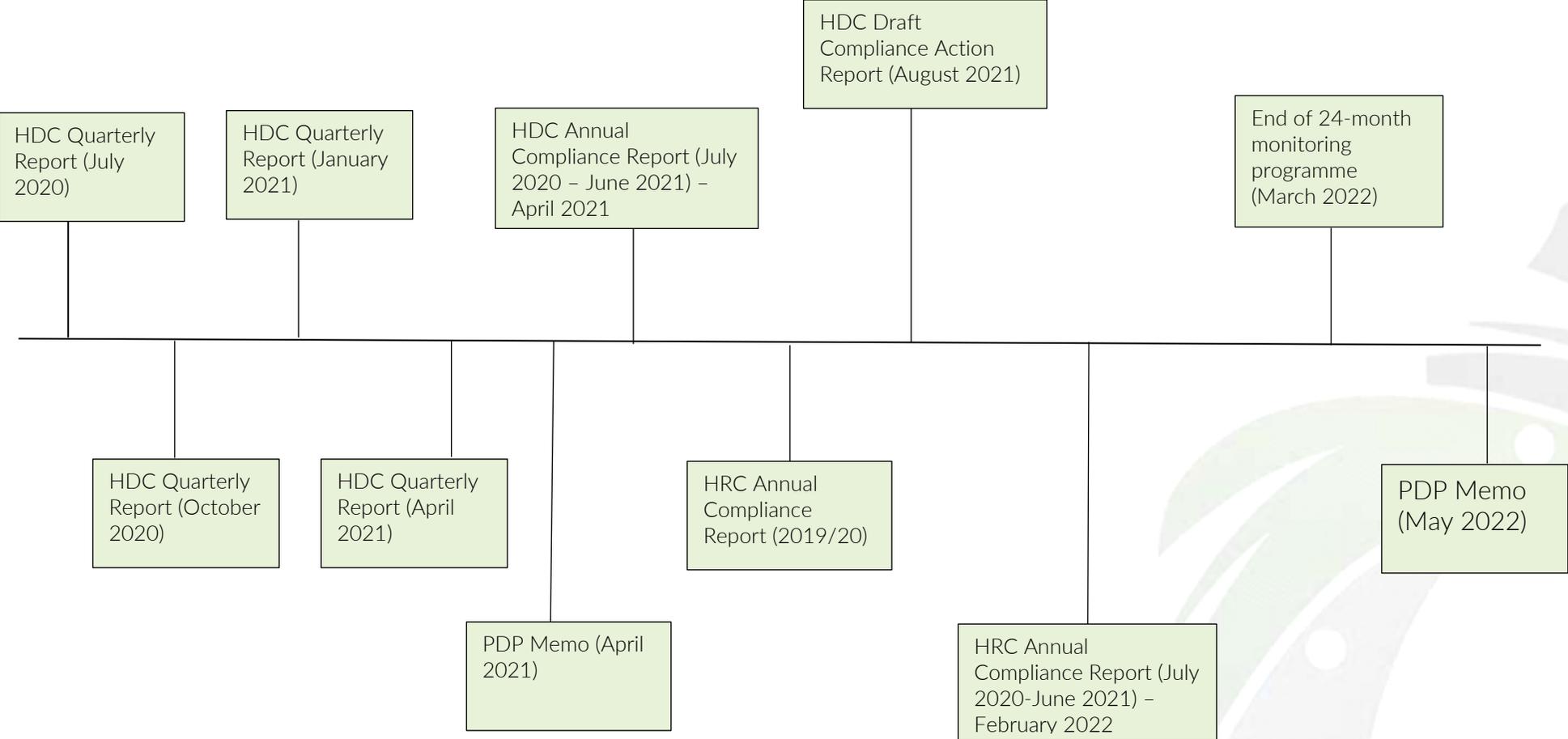
Cond. #	Consent Condition	EB Comments	Issues to Flag	Compliance Status
	design storm and the area of the operational cell from which the stormwater is collected.	leachate and piped to the Levin WWTP. Assessed as compliant.		
13	Areas designated for stormwater discharge to land and their catchment and reticulation system shall be identified and located on site plans and their dimensions submitted for approval by Horizons' Team Leader Compliance prior to their use.	HRC has previously identified this condition as being compliant. This condition is therefore no longer applicable.		
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' 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: <ul style="list-style-type: none"> • PH • Conductivity • Ammonia-N • Nitrate-N • Sodium • Boron • Chloride • Iron 	HDC confirmed bores hydraulically upgradient and hydraulically downgradient are monitored. Parameters in Condition 14 are analysed and results are presented in the quarterly reports. Assessed as compliant.		
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.	Sampling of the monitoring bores required in Condition 14 is undertaken as part of the monitoring programme for the other Levin Landfill consents. Assessed as compliant.		
16	The results of monitoring under Condition 14 of this permit shall be reported to Horizon	Results are forwarded to Horizons on a quarterly basis.		

Cond. #	Consent Condition	EB Comments	Issues to Flag	Compliance Status
	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.	Assessed as compliant.		
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.	Samples are analysed by Eurofins ELS Ltd laboratory which is holds an IANZ accreditation for the parameters required. Assessed as compliant.		
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' 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' Team Leader Compliance to determine if further investigation or remedial measures are required.	Median values taken for monitoring bores across the period did not exceed ANZECC 2000 LDW values. Assessed as compliant.		
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	This is not applicable until October 2024.		

Cond. #	Consent Condition	EB Comments	Issues to Flag	Compliance Status
	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.	I have not assessed compliance with this condition as part of this reporting.		

APPENDIX A

Timeline of Report Submission Relevant to the 2020/21 Audit Period





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