

Horowhenua District Council

to vary a consent allowing the discharge of contaminants to air associated with flaring of landfill gas at the Levin Landfill subject to the attached condition schedule

Application Reference: APP-2013016220.01
Granted Date: 29 July 2015
Review Date: July 2015, 2024, 2034
Expiry Date: 24 May 2037

Application Summary

Application Reference	APP-2013016220.01
Purpose of Application	To vary the consent allowing the discharge contaminants to air associated with flaring of landfill gas at the Levin Landfill. They have applied to alter the dates by which they need to install a new flare along with other conditions requiring reporting to commence by certain dates.

Background

The consent for the discharge of contaminants to air associated with flaring of landfill gas at the Levin Landfill was originally granted to Horowhenua District Council (HDC) in June of 2014.

It allows for the operation of a flare at the landfill site to burn landfill gas rather than allowing it to oxidise and seep through the cap. While HDC are not obliged under national standards to undertake this activity they chose to for the environmental and financial benefits from the Emissions Trading Scheme. It is also acknowledged that there are possible odour mitigation benefits in operating a flare.

At the time of granting the applicant proposed to upgrade the flare that had been installed as part of the trial. They proposed to do this by 1 December 2014 and commence monitoring thereafter.

The applicant has since reviewed the use of the flare and is currently undertaking testing to determine if it is worthwhile keeping a flare on the landfill. As such they have requested that condition 4 of the consent is varied to allow them to install a new flare on or before 1 June 2016.

The applicant has advised that the existing candlestick flare has broken, and that the owner of the flare is not intending to repair it. However, they would like the ability to use the existing flare if it is repaired prior to the installation of the new flare.

Activity Summary

The following summarises the activities that are associated with this Resource Consent, please refer to the applicable section for individual activity details.

Activity Summary	Variation to Consent
Discharge to Air , vary a condition of consent allowing the discharge of contaminants to air associated with flaring of landfill gas at the Levin Landfill	106798

Assessment Summary

The application has been assessed against the following:

1.1 Policies, Plans, Objectives & Rules

The application has been assessed against the following Regional Policies, Plans, Objectives & Rules:

Policy, Plan or Rule Name

One Plan (2014) – Regional Policy Statement

Objective	Policy
7-1	7-1
7-2	7-2
	7-3
	7-7

One Plan (2014) – Regional Plan

Objective	Policy
15-1	15-2

The application to vary this consent has been assessed against the objectives and policies identified above. As the application is for a variation the rules of the One Plan are not considered – rather it has been processed in accordance with Section 127 of the Resource Management Act 1991.

The application to change the consent conditions is in relation to the delay in installation of the new flare. I consider that the proposed variation is consistent with the objectives and policies of the One Plan (2014).

1.2 Environmental Effects

The effects of this variation have been assessed with regard to actual and potential adverse environmental effects, the following outlines the conclusions and considerations:

Potential Environmental Effects

The original application was assessed by Harold Barnett, Manawatu-Wanganui Regional Council's Environmental Scientist.

Comment has been sought from Stuart Standen, Manawatu-Wanganui Regional Council's Consents Monitoring Officer with regard to the monitoring conditions.

Air Quality

Mr Barnett made the following comments on the original application:

- a. Based on the contaminants present in the Levin landfill, it is expected that the flared gas will contain CO₂, PM₁₀, NO₂, SO₂. Mr Barnett is satisfied that these contaminants in combination with background concentrations of contaminants, will not result in any exceedances of ambient air quality guidelines or the National Environmental Standards for Air Quality Regulations 2004 (NESAQ). Gas capture reticulation and the flaring regime will need to be assessed and if necessary, upgraded in the future.
- b. The landfill gas flare is located in a rural area well away from residential dwellings so effects on these types of properties are considered to be negligible.
- c. Because of its size, the landfill does not have to comply with the National Environmental standards for landfills. However, there is an environmental benefit (and financial benefit from the Emissions Trading Scheme) to capturing and flaring landfill gas as opposed to allowing gas to oxidise within the landfill and seep through the cap. It is noted that care will need to be taken when flaring is intermittent to ensure flashbacks or accidents do not cause a fire within the landfill cells.
- d. Development and compliance with an Operation and Management Plan will allow the flare to be operated and maintained both safely and efficiently to ensure the adverse effects of the discharge are mitigated.

It is considered that the delay in the installation of the new flare, will be less than minor, as the consent holder will still be required to adhere to conditions of consent. HDC have advised that the current flare is broken, and will not be repaired, therefore flaring will cease until the new flare is installed (if it is installed). HDC is not required to operate a flare under the Resource Management (National Environmental Standards for Air Quality) Regulations 2004. Therefore the delay is not considered to cause any adverse effects.

Monitoring

Mr Standen agrees with the applicant's request to postpone the commencement of a number of monitoring requirements set out in conditions. The monitoring was intended to commence once the new flare is installed, therefore delaying the commencement of these specific monitoring conditions is accepted.

Other matters

The consent document has had some changes made in order to allow it to be merged into the Manawatu-Wanganui Regional Councils new electronic consenting system 'IRIS'. Changes include some of the consent conditions being renumbered, cross references within conditions being corrected and conditions being ordered under new headings. Approval was gained from the applicant for this to occur.

Recommendation

It is recommended that the resource consent variation application by **Horowhenua District Council** for the activities identified in the activity summary be granted for the following reasons subject to the conditions outlined in the applicable condition schedule:

- a. the variation has been assessed by Stuart Standen, Manawatu-Wanganui Regional Council and the original application by Harold Barnett, Manawatu-Wanganui Regional Council. Based on their advice I am satisfied the proposed variation will have less than minor actual or potential adverse effects on the environment; and
- b. the variation is consistent with relevant Objectives and Policies of the One Plan; and
- c. the variation is consistent with the purpose and principles of the Resource Management Act 1991.



Sara Cook

CONSULTANT CONSENTS PLANNER

Decision

The Manawatu-Wanganui Regional Council Regulatory Manager (pursuant to delegated authority), grants a variation to the resource consent for the reasons stated in the recommendation, to **Horowhenu District Council** under sections 104, 104B and 127 of the Resource Management Act 1991 to:

Activity Summary

Discharge to Air, vary a consent allowing the discharge of contaminants to air associated with flaring of landfill gas at the Levin Landfill

for a term expiring on **24 May 2037** subject to the conditions outlined in the applicable condition schedule.



Greg Bevin

REGULATORY MANAGER

29 July 2015

1. Activity, Discharge to Air (Flared Landfill Gas)

The following details the location, classifications and conditions associated with the activity.

Activity Type	Discharge to Air
Activity Class	Discretionary Activity
Primary Activity Purpose	Emissions, Airborne Contaminant, Burning or Incineration
Replaces Consent	106798

Location

The following summarises the authorised location for the consented activity.

Activity Location Description	Hokio Beach Road, Levin
Valuation Number	14810/140.00
Legal Description	Lot 3 DP 40743
Map References	NZTopo50 BN33:871-025 / Northing 1787083 Easting 5502487

Classifications

The following summarises the classifications associated with the application activity.

Groundwater Management Zone	Horowhenua
Water Management Zone	West Coast Catchment, Lake Horowhenua, Hokio
Estuary Management Zone	Not Affiliated with Coastal Marine Area
Associated River	HOKIO STREAM

Condition Schedule

Descriptive Specification

1. The consent holder shall undertake the activity in general accordance with the consent application including all accompanying plans and documents first lodged with Manawatu-Wanganui Regional Council on 19 December 2014, and the original application lodged 30 August 2013 and further information received:
2. Emails received on 17 April 2015, 24 April 2015, 23 June 2015 and 30 June, confirming timeframes, changes requested to monitoring conditions and status of existing flare.

Where there may be inconsistencies between information provided by the applicant and conditions of the resource consent, the conditions of the resource consent apply.

Advice Note: Any change from the location, design concepts and parameters, implementation and / or operation may require anew resource consent or a change of consent conditions pursuant to section 127 of the Resource Management Act 1991.

[Condition 1 amended as per variation APP-2013016220.01 dated 29 July 2015]

3. The discharges authorised by this consent shall be restricted to the discharge of contaminants including Methane, CO₂, PM₁₀, NO₂, SO₂ and odour from the operation of a gas flare at the Levin Landfill on land legally described as Lot 3 DP 40743 at approximate map reference NZTopo50 BN33:871-025.

Pre-Development Assurance

4. The landfill gas flare shall be designed, operated and monitored in accordance with the requirements of the United States EPA Code of Federal Regulations 40 CFR Part 60, Subpart A – General Provisions, Section 60.18 (1997) and shall have the following minimum specifications:
 - (i) flame arrestor and back flow prevention devices, or similar equivalent system, approved in writing by the Manawatu-Wanganui Regional Council's Regulatory Manager acting in a technical certification capacity, to prevent flashback;
 - (ii) a continuous automatic ignition system; and
 - (iii) **a temperature detection system to detect circumstances when temperature drops below 750°C.**

Environmental Standards

5. There shall be no objectionable or offensive odour, dust or particulate matter (PM₁₀), including smoke, as a result of the operation of the flare to an extent where it causes an adverse effect at or beyond the property boundary.

Advice Note: Dust and odour will only be considered offensive or objectionable, after a Manawatu-Wanganui Regional Council officer has considered the Frequency, Intensity, Duration, Offensiveness and Location of the odour (i.e. the FIDOL Factors).

6. The consent holder shall ensure that the replacement flare is installed by **1 July 2016** and shall notify the Manawatu-Wanganui Regional Council's Regulatory Manager in writing within **two working days** of the flare being installed. The replacement flare maybe installed prior to this date.

Advice Note: The Manawatu-Wanganui Regional Council's Regulatory Manager or team representative can be contacted on 0508 800 800 or by emailing compliance.shared@horizons.govt.nz.

[Condition 6 amended as per variation APP-2013016220.01 dated 29 July 2015]

Operational Restrictions

7. The consent holder shall ensure that any combustion of landfill gases are only undertaken via the flare, except under the following circumstances:
 - (i) in the event of combustion equipment failure; or
 - (ii) for combustion equipment maintenance purposes.

Advice Note: Condition 7 only applies when the flare is being used. This consent is solely for the discharge of contaminants associated with flaring of landfill gas. When the flare is not in use, the restrictions imposed by this consent do not apply.

[Condition 7 amended as per variation APP-2013016220.01 dated 29 July 2015]

8. The consent holder shall operate the gas collection system in a manner that ensures the rate of extraction of landfill gas is maximised, while the risk of landfill fires due to over extraction is minimised.

[Condition 8 added as per variation APP-2013016220.01 dated 29 July 2015]

9. To achieve compliance with condition 8 the consent holder shall ensure the landfill gas extraction system is operated to minimise oxygen ingress, and the extraction system shall be shut down if oxygen concentrations exceed 4 per cent.

[Condition 9 added as per variation APP-2013016220.01 dated 29 July 2015]

Post-Development Assurance

10. **2 months** prior to the installation of the new flare, the consent holder shall provide an Operation and Management Plan to Manawatu-Wanganui Regional Council's Regulatory Manager. The operation and management plan shall include but not be limited to the following:
 - a. Detail on the type, design specifications and timing of installation of the new flare;
 - b. Procedures for regular inspections (both visual and maintenance inspections) of the flare, landfill gas collection field and any associated equipment;
 - c. Scheduled maintenance events for the flare, landfill gas collection field and associated equipment for the upcoming 12 month period;
 - d. Details of procedures for the design and installation of the landfill gas collection field;
 - e. Procedures for the connections of landfill gases to the flaring unit, monitoring and reporting of the flow rates and composition of the gases;
 - f. Detail on the flaring regime/s;
 - g. Detail on the planned contingency measures for dealing with malfunctions, repair and incidents; and
 - h. Records of the details of all maintenance events or any system malfunction (i.e. date, time, what was done, what went wrong, who repaired it and how

[Condition 10 amended as per variation APP-2013016220.01 dated 29 July 2015]

11. The consent holder shall review the Operation and Management Plan annually in the month of **June** (commencing June 2017) and provide the Regulatory Manager with an updated version of any subsequent revisions or amendments to the Operation and Management Plan within one month of the amendment(s) being made.

Advice Note: Updated versions of the Operation and Management Plan can be made available to the Regulatory Manager by emailing to compliance.shared@horizons.govt.nz.

[Condition 11 amended as per variation APP-2013016220.01 dated 29 July 2015]

12. The consent holder shall ensure that the activity is undertaken in accordance with the Operation and Management Plan provided in accordance with Condition 10 and any subsequent amendments provided under Condition 11 at all times for the duration of this consent.

[Condition 12 amended as per variation APP-2013016220.01 dated 29 July 2015]

Monitoring Provision

13. The consent holder shall notify the Manawatu-Wanganui Regional Council's Regulatory Manager **two working days** prior to:
- (i) **The commencement of flaring from the existing flare; and**
 - (ii) **The commencement of flaring from the replacement flare required under condition 6.**

[Condition 13 added as per variation APP-2013016220.01 dated 29 July 2015]

14. The consent holder shall maintain a record dates and duration of all flare outages (due to equipment failure or maintenance) in excess of 48 hours and for any occasion for which landfill gas was discharged un-combusted. A copy of this record shall be forwarded to the Manawatu-Wanganui Regional Council's Regulatory Manager **annually** in the month of June, commencing **June 2016** or on request.

[Condition 14 amended as per variation APP-2013016220.01 dated 29 July 2015]

15. The consent holder shall, once every month sample each extraction wellhead and at the flare for each of the following parameters:
- (i) gas flow rate;
 - (ii) methane (percentage);
 - (iii) carbon dioxide (percentage);
 - (iv) oxygen (percentage);
 - (v) nitrogen (percentage);
 - (vi) carbon monoxide (parts per million);
 - (vii) hydrogen sulphide (parts per million);
 - (viii) gas pressure;
 - (ix) barometric pressure; and
 - (x) Temperature.

The sampling required under this condition 15 is only required if flaring is occurring from the existing flare. Sampling is to occur at the frequency outlined in the condition.

Advice Note: The sampling required by condition 15 only requires the consent holder collect one sample of gas and analyse it for the listed parameters once month.

[Condition 15 amended as per variation APP-2013016220.01 dated 29 July 2015]

16. The results of the sampling required by Condition 15 shall be provided to the Manawatu-Wanganui Regional Council's Regulatory Manager within one month of monitoring being undertaken.

[Condition 16 amended as per variation APP-2013016220.01 dated 29 July 2015]

17. The consent holder shall maintain a log of all complaints (including those received via third parties including the Manawatu-Wanganui Regional Council) regarding dust, odour or other contaminants as follows:
- (i) Time and type of complaint including details of the incident, e.g. duration, location and any effects noted;
 - (ii) Name, address and contact phone number of the complainant (if provided);
 - (iii) Where practicable, the weather conditions including wind direction at the time of the incident;
 - (iv) The likely cause of the complaint and the response made by the consent holder including any corrective action undertaken;
 - (v) Future actions proposed as a result of the complaint; and
 - (vi) The response from the consent holder to the complainant.
18. A copy of the complaint log required by Condition 17 shall be forwarded to the Manawatu-Wanganui Regional Council's Regulatory Manager **annually** in the month of June, commencing **June 2014** and be made available on request.

[Condition 18 amended as per variation APP-2013016220.01 dated 29 July 2015]

Review

19. The Manawatu-Wanganui Regional Council, under section 128 of the Act, may initiate a review of all conditions of this resource consent during July in the year(s) 2015, 2024 and 2034 for the purpose of reviewing the effectiveness of these conditions in avoiding or mitigating any adverse effects on the environment. The review of conditions shall allow for:
- a. deletion or amendments to any conditions of this resource consent to ensure adverse effects are appropriately mitigated; or
 - b. addition of new conditions as necessary, to avoid, remedy or mitigate any unforeseen adverse effects on the environment; or
 - c. if necessary and appropriate, the adoption of the best practicable options to avoid, remedy or mitigate any adverse effects on the environment.