Natural Resources Wales permitting decisions

3C Waste Limited

Decision Document

(Llanddulas Landfill Site)

Contents

Bespoke Permit Variation

The application permit variation number is: EPR/BU0800IZ/V013.

The applicant /operator is: 3C Waste Limited.

The Installation is located at: Llanddulas Landfill Site, Abergele Road, Llanddulas, Conwy, North Wales, LL22 8HP.

We have decided to issue the variation for Llanddulas Landfill Site operated by 3C Waste Limited.

We consider in reaching that decision we have taken into account all relevant considerations and legal requirements and that the permit will ensure that the appropriate level of environmental protection is provided.

Purpose of this document

This decision document:

- explains how the application has been determined;
- provides a record of the decision-making process;
- shows how all relevant factors have been taken into account;
- justifies the specific conditions in the permit other than those in our generic permit template.

Unless the decision document specifies otherwise we have accepted the applicant's proposals.

Key issues of the decision

How we reached our decision

Receipt of Application

The application for a normal variation was submitted to Natural Resources Wales on 14 January 2022. The application was duly made on 11 February 2022.

As part of the Operators original variation application, they requested that they were issued with a consolidated permit, using the modern style permit template for the landfill sector. During the determination, the Operator was asked to re-confirm that they sought a consolidated permit, bringing their attention to the additional hourly rate charge applicable for this additional task. The Operator subsequently withdrew their request and the determination process was able to continue, with the preparation and issue of a non-consolidated variation notice to incorporate the changes requested by the Operator.

Confidential information

No claim for commercial or industrial confidentiality was made by the Operator.

Consultation

There was no requirement to carry out a consultation on this application, as this is a normal variation, and the site is not registered as a Site of High Public Interest (HPI Site).

Legislation

The variation will be issued, under Regulation 20 of the EPR. The Environmental Permitting regime is a legal vehicle which delivers most of the relevant legal requirements for activities falling within its scope.

We address the legal requirements directly where relevant in the body of this document. NRW is satisfied that this decision is consistent with its general purpose of pursuing the sustainable management of natural resources (SMNR) in relation to Wales and applying the principles of SMNR. In particular, NRW acknowledges that it is a principle of sustainable management to take action to prevent significant damage to ecosystems. We consider that, in granting the Variation Notice a high level of protection will continue to be delivered for the environment and human health through the operation of the Facility in accordance with the permit conditions. NRW is satisfied that this decision is compatible with its general purpose of pursuing the sustainable management of natural resources in relation to Wales and applying the principles of sustainable management of natural resources.

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Natural Resources Wales
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29 Newport Road
Cardiff
CF24 0TP
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The Facility

The regulated facility comprises of a landfill site, which is permitted to accept non-hazardous wastes; a biological leachate treatment plant; and three gas engines. The landfill site consists of 3 main phases: Phase 1, Phase 2 and Phase 3.

The wastes authorised to be deposited in the landfill consist of a specified range of household and non-hazardous industrial and commercial waste with a total quantity of approximately 5.2 million tonnes, including previously deposited waste under superseded waste management licences. The maximum quantity of waste that is permitted to be deposited in the landfill in any given year is up to 600,000 tonnes.

The Llanddulas Landfill Site is reaching completion. There are parts of Phase 3A, Phase 2C and Phase 2B left to be capped, with a small area of temporary capping also remaining on Phase 2A. Phases 1A, 1B, 1C and Phase 3 Cell 1 (Phase 3(1)+Extension) are all non-operational and are permanently capped.

The site

Llanddulas Landfill Site is located to the immediate south-west of Llanddulas village, approximately 5 km to the east of Colwyn Bay. Surrounding land use comprise of agricultural grassland and open pasture immediately adjacent to the site's western and southern boundaries, while development associated with Llanddulas village is present along the site's north-eastern boundary. Llanddulas Landfill Site lies within the 'Llanddulas Limestone and Grwyth Castle Wood' Site of Special Scientific Interest (SSSI).

Proposed Changes

The Operator has requested to make a number of changes to the monitoring schedules and monitoring parameters currently referenced within the permit. The Operator requested the following changes to be made:

- reduce the frequency of leachate level monitoring on capped areas from 'Monthly' to 'Quarterly' (Table S4.1 within the permit);
- remove 'Tributyl tin' and 'Trifluralin' from the list of parameters for groundwater quality monitoring (Table S4.4 within the permit);
- remove the trigger level limits for potassium for groundwater quality (Table S4.4 within the permit);
- remove trigger levels for upgradient boreholes: GWBH34 and GWBH35 (Table S4.4 within the permit);
- reduce the frequency of permit gas borehole monitoring from 'Fortnightly' to 'Monthly' (Table S4.5 within the permit);
- reduce the frequency of leachate quality sampling from Quarterly to Annually on capped cells (Table S4.8 within the permit);
- remove 'Copper' and 'Zinc' from the list of parameters required by leachate quality (Table S4.8 within the permit);

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- reduce the frequency of surface water quality monitoring from ‘Weekly’ to ‘fortnightly’ for the Dulas Spring sample reference point (Table S4.9 within the permit); and
- reduce the frequency of landfill gas in ambient air FID monitoring from ‘Monthly’ to ‘Quarterly’ (Table S4.11within the permit).

On 1 April 2022 the registered office address for 3C Waste Limited changed from Ground Floor West 900 Pavilion Drive Northampton Business Park Northampton NN4 7RG to 3 Sidings Court White Rose Way Doncaster DN4. The permit has thus also been updated to reflect the change of registered office address.

As detailed above, the Operator also initially requested that the above changes are incorporated into a consolidated permit using NRW’s modern permit template for the landfill sector. The Operator has subsequently withdrawn this request, therefore a Variation Notice has been prepared to incorporate the changes agreed by NRW.
As part of the Operators response to additional information requested under a Schedule 5 Notice, the Operator also subsequently withdrew their request to remove potassium trigger level limits from Table S4.4.

Technical Assessment

This section of the decision document considers the potential environmental impacts and risks posed by changes proposed by the Operator.

Leachate Monitoring Frequency

The Operator has requested to make changes to both the frequency of leachate level and leachate quality monitoring, as well as an adjustment to the list of parameters within the leachate quality to be monitored. NRW has assessed these requests, and a summary of our assessment and decision is provided below.

In line with LFTGN02, NRW agree that the monitoring frequency for leachate levels and leachate quality can be reduced from monthly to quarterly for leachate levels, and annually for leachate quality for non-operational capped areas of the site. We agree that the reduction in monitoring frequency is proportionate and that an appropriate level of environmental protection will continue to be provided as a result. As phase 3A, 2A, 2B and 2C remain yet to be fully capped, monitoring frequencies for these areas, for leachate levels and leachate quality are to remain as currently stated within the permit. This decision has been made giving consideration to the following factors:

- the 2020 HRA review has shown previously collated data for leachate levels as being consistently been below the limit of 2 metres, and that there is little fluctuation within the recorded levels;
- the 2020 HRA review has also demonstrated consistency in leachate quality within previously collated data; and

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- The reduction in monitoring frequencies for leachate levels and leachate quality is also in line with LFTGN02 guidance and standard industry practice.

The reduction in frequency has also been discussed and pre-agreed with the regulating officer for the site.

Table S4.1 has therefore been update to reflect this.

Leachate Quality Monitoring

The Operator has also requested that Zinc and Copper be removed from the suite of parameters for monitoring leachate, as these two parameters are not considered the best indicators of leachate quality. The 2020 HRA Review has shown that copper and zinc concentrations remain low and fairly similar to the concentrations since the first HRA review. The original 2003 HRA source term showed higher concentrations, however these are considered as a result of using data for total rather than dissolved metals. NRW agree that these parameters can be removed from the leachate quality monitoring suite, on basis that the remaining determinands provide sufficient indicators to appropriately monitor leachate quality.

Table S4.8 has therefore been update to reflect this.

Groundwater

The Operator has requested that groundwater trigger levels for upgradient boreholes GWBH34 and GWBH35 be removed from the permit. Setting trigger levels for upgradient boreholes is unusual as the levels recorded would not indicate any pollution sourced from the landfill itself. Groundwater quality is are still to be monitored in upstream boreholes to provide early warning system for other pollutants not of landfill origin, which might affect downgradient results. NRW are in agreement that the trigger levels for the upgradient boreholes GWBH34 and GWBH35 can be removed from Table S4.4.

As Tributyl Tin (TBT) and trifluralin are no longer a monitoring requirement in the permit for leachate quality, NRW agree with the Operator that these parameters do not identify potential leachate indicators in the groundwater. Evidence submitted by the Operator in the form of the 2020 HRA review shows that there have been no occurrences of trifuralin above detection limit since 2013. There was one occurrence of tributyl tin at 0.00322 mg/l in GWBH36 during 2015, but no subsequent results above detection limit, suggesting that this is an anomaly.

Table S4.4 has therefore been update to reflect this.

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Surface Water

The Operator has requested that the frequency of surface water quality monitoring is reduced from ‘Weekly’ to ‘fortnightly’ for the Dulas Spring sample reference point. Justification has been provided in which NRW agree that reducing monitoring at this point from weekly to fortnightly still provided a conservative monitoring regime when compared with LFTGN02 guidance which recommends monthly surface water monitoring.

The ‘Monitoring Review’ report ref. 5152-CAU-XX-XX-RP-V-0302.A0.C1, submitted with the variation application provided suitable justification for amending the monitoring frequency of chloride and ammoniacal nitrogen from ‘weekly’ to ‘fortnightly’.

Further justification was subsequently provided within the applicants response to the Schedule 5 Notice, justifying a reduction in frequency for all of the other parameters listed against the Dulas Spring sample reference point (Reducing the frequency of monitoring of pH, electrical conductivity, temperature and flow (in addition to ammoniacal nitrogen and chloride) from ‘weekly’ to ‘fortnightly’.

Table S4.9 has therefore been update to reflect this.

Landfill Gas

The Operator has requested that the frequency for monitoring of landfill gas in external boreholes be reduced from fortnightly to monthly. This was agreed in principle with the regulating officer for the site, subject to the Operator providing sufficient justification for their request, in light of recent permit breaches in some of the monitoring wells.

Additional justification was provided by the Operator as part of their response to the Schedule 5 Notice. The Operator also confirmed that they will continue to manage landfill gas in line with the Landfill Gas Management Plan for the site which details the control measures, management and actions in place” should potential breaches of trigger limits be detected.

Given the consistency in monitoring data collected over previous years, NRW agree that the reduction in monitoring frequency is proportionate and that an appropriate level of environmental protection can continue to be provided with a reduced monitoring frequency.

Table S4.5 has therefore been update to reflect this.

The Operator has requested that the frequency of FID monitoring for methane in ambient air be reduced from Monthly to Quarterly. The reduction in frequency has been discussed and was agreed with the regulating officer for the site, prior to the submission of the variation application based on consistency and lack of exceedances over long term monitoring already undertaken.

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Table S4.11 has therefore been update to reflect this.

Table S1.2 has been amended as a result of the application made by the operator and the additional technical justification and assessments submitted.

Finally, Table S1.2 has been update to reference updated management systems and operational techniques as stated within this variation application.

OPRA

There are no changes to the Opra score for the site, as a result of this variation. The OPRA score at permit issue remains 117.

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