

Compliance Assessment Report CAR_NRW0039085

Permit being assessed: BU8819IV.

For: Pwllfawatkin Landfill Site EPR/BU8819IV, held by FCC Waste Services (UK) Limited

At: Pwllfawatkin Landfill Site, Pontardawe, SWANSEA, West Glamorgan, SA8 4RX.

Type of assessment carried out: Report/Data Review, Reason: Routine.

On 16/12/2021.

Parts of permit assessed: 1.1.1 a, 2.3.1 table S1.2,

NRW Lead Officer: Ffion Thomas.

Report sent to: Richard Thomas, Site Manager on 16/12/2021.

1. Summary of our findings (full details in section 4)

Part of permitted activity assessed (criteria)	Assessment result	Permit condition
A1 - Specified by permit	Action only (X)	

Result types are explained in more detail in the 'Important Information' section below.

Total number of non-compliances recorded	Total non-compliance score
0	0

How we use the non-compliance score to calculate your annual fee is explained in the 'Important Information' section below.

2. What action is required?

Criteria	Action needed	Complete by
A1	Summary of FCC ACTIONS in priority order. Forward GMP appendices by 17 January 2022 Submit updated Gas Risk Assessment by 17th January 2022. Confirm previous IC1a submission through operator filing records evidence, if not available IC1a submission is required as matter of priority by 31 January 2022 or date otherwise agreed. Update to the GRA and therefore GMP to include site specific waste inputs as detailed in section 3.3.1 of LFTGN3. Submit updated aftercare plan by 31 January 2022. Submit the updated current review document EMS 3-13-10LNF by 17 January 2022 Update GMP to correct typographical errors and resubmit by 17 January 2022 Enquiry FCC under section 6.1 Enitial technicians are quoted as doing the gas monitoring is this correct? Or is a different contactor used?	17/01/2022

Criteria	Action needed	Complete by

Action criteria codes are listed in the 'Important information' section below.

3. What will happen next?

Any non-compliance we have identified and recorded on this form is an offence. It can result in criminal prosecution and/or suspension or revocation of your permit.

At this time, we do not intend to take any further action.

This statement does not stop us from taking additional enforcement action if further relevant information comes to light or offences continue.

4. Details of our assessment

Pwllfawatkin Gas Management Plan (GMP) Review CAR form

Ffion Thomas undertook a report review of the "FCC Environment Pwllfawatkin gas Management Plan September 2021" and the associated "Integrated Management System Odour Document number EMS 3-13-08LNF, EMS 3-13-21GLNF." Submitted on 19 October 2021

Background

A Gas Management Plan (GMP) is linked to an Operators environmental permit and is a way of showing the regulator that appropriate measures are in place to minimise risk of pollution. The GMP should demonstrate commitment to using all appropriate measures and its content should clearly detail/refer to the measures and procedures to be taken in managing landfill gas, to limit emissions and impact on the environment from Pwllfawatkin landfill during normal operation and during potential abnormal events.

"Guidance on the management of landfill gas" is the overarching guidance and is supported by a number of specific guidance documents. The series comprises:

Guidance on landfill gas flaring

Guidance for monitoring enclosed landfill gas flares

Guidance for monitoring landfill gas engine emissions

Guidance for monitoring trace components in landfill gas

Guidance for monitoring landfill gas surface emissions (in England and Wales);

Guidance on gas treatment technologies for landfill gas engines.

This guidance (Guidance on the management of landfill gas) sets out a structured approach to the management of all gases generated from landfilled waste. It covers the assessment of landfill gas impacts, the implementation of control methods and the monitoring required to demonstrate proper performance of the control measures

The environmental permit issued for the Pwllfawatkin includes a condition to regulate general management, as follows:

1. The activities shall be managed and operated:

- A. In accordance with the management system, which identifies and minimises risk of pollution, including those arising from operations, maintenance, accidents, incidents, and non-conformances and those drawn to the attention of the operator as a result of complaints and
- B. B) by sufficient persons who are competent in respect of the responsibilities to be undertaken by them in connection with the operations of the activities.

We expect any standards of industry good practice to be met along with any recommendations in our guidance. If there are gas management issues at your site, and you have already implemented some measures, there may be a case to justify further measures, depending on the severity of the problem and the cost. Even if you are following normal standards and guidance but the impact is unreasonable, then you will have put in place further measures and we will judge with you what is reasonable and to what extent further measures are possible, required or justified.

Pwllfawatkin GMP

The Pwllfawatkin Gas Management Plan follows the principles set out in EA guidance “LFTGN03 Guidance on the management of landfill gas” with all key elements included,

LFTGN03 Guidance on the management of landfill gas [EA EP171](https://www.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/281411/ea-ep171.pdf) ([publishing.service.gov.uk](https://www.publishing.service.gov.uk))

Framework for the Gas Management Plan

The following sections set out the framework for the Gas Management Plan. The key elements of the Gas Management Plan are:

- risk assessment (see Chapter 2)
- control measures (see Chapters 4 and 7)
- operational procedures (see Chapter 7)
- monitoring plan (see Section 3.3.3)
- action plan (see Section 3.3.4)
- aftercare and completion plan (see Section 3.3.5).

However, there are areas that would benefit from improvements. The following are example points that became apparent during this part review.

It remains FCC's responsibility to ensure that all relevant guidance/regulatory notes are adhered within management plans to ensure that the facility employ appropriate methods, including monitoring and contingencies. Any significant risks must be identified within a Gas Risk Assessment and demonstrated that the risk of pollution or harm will be acceptable by taking the appropriate measures to manage these risks.

General updates

The GMP includes appendices and associated EMS procedure. The procedures EMS 3-13-21 Field monitoring, EMS3013-08 LFG management and EMS3-13-10 odour

management have been shared/reviewed.

The associated EMS document number EMS 3-13-10 LNF is branded WGR. **Please consider if updating branding is required.**

The review date of EMS 3-13-10LNF is stated as 18 Dec 08 within the document foot note. **Please submit the updated current review document.**

The GMP appendices A-F have not been shared to NRW. The appendices titles indicate that they cover the requirements of LFGN03 section 3.3.3 page 37 but without submission their assessment and compliance cannot be completed.

3.3.3 Monitoring and sampling plan

The monitoring and sampling plan is an integral part of the overall Gas Management Plan. It allows the performance of the gas management system to be established and assessed against the conceptual site model and provides for developments of the model. This offers increased confidence in environmental protection and the ability to demonstrate that the objectives of the Gas Management Plan are achieved. Further details on monitoring and sampling are given in Chapter 8.

The monitoring and sampling plan should include as a minimum:

- a schedule for specific data collection and frequency of monitoring at all stages of the site (i.e. prior to site development to obtain background data and beyond the closure of the site to demonstrate site completion);
- a layout showing the construction and location of monitoring points in relation to the site, surrounding area, geology, and phasing of operation;
- a description of the measurement techniques and sampling strategy;
- an analysis and testing schedule;
- a methodology for data storage, retrieval and presentation;
- the background and action/trigger values against which collected data will be evaluated;
- the methodology for data interpretation, review and reporting;
- the means of communicating the results of the monitoring and interpretation to the regulator.

Monitoring data will be used by the regulator to verify compliance with the Gas Management Plan and the permit conditions.

ACTION FCC Submit GMP appendices by 17 January 2022

Submit the updated current review document EMS 3-13-10LNF by 17 January 2022

Typographical errors

There are typographical error that need correction,

section 3.0 Landfill gas control measures. *The active landfill gas extraction system connects the gas extraction wells to the landfill gas management compound by the use of pipework and manifolds, as shown on FCC Drawing 5390GI04 'Gas Infrastructure'*

- The drawing should be referenced 5390GI03 to reference the drawing that was submitted.

Section 4.1 **System description** *Landfill gas control is based on an active gas extraction system incorporating a high temperature flare stack and three gas engines.*

- There is only 1 engine at Pwllfawarkin.

Section 5.5 **GAS FLARE AND ENGINE MONITORING** *One landfill gas engine is installed at the Site to generate electricity for the national grid. The emissions monitoring of the gas flares will be undertaken in accordance with the LFTGN 08, 2004 and relevant Permit conditions*

- Should read gas engine to align with LFTGN 08 Guidance for monitoring landfill gas engine emissions

Action FCC; please update to correct typographical errors and resubmit by 17 January 2022

Enquiry FCC under section 6.1 Enitial technicians are quoted as doing the gas monitoring is this correct? Or is a different contactor used?

Objectives of GMP

The objectives/purpose and scope of the GMP have been defined and includes all elements considered essential within LFGN03, however the below comments are made as additional recommendations.

The following headings and extracts copied below in italics can be found in Guidance note LFGTN03 Guidance on the management of landfill gas.

(GAS) Risk Assessment

2.1 A risk-based strategy. The Agency's strategy for the future regulation of landfill gas is based on environmental outcomes. This places great emphasis on emissions monitoring and compliance assessment. The strategy augments, but does not replace, the existing philosophy of best practice regulation of landfill gas infrastructure, which retains a key role. At a fundamental level, this strategy requires an understanding and quantification of landfill gas through risk assessment and the development of a conceptual model of the site. The conceptual model and proposed level of risk assessment should be the subject of early pre-application discussions with the regulator. The risk assessment approach involves:

- *the assessment of potential impacts on local environment, health and amenity;*
- *the development of a Gas Management Plan. The Gas Management Plan includes:*
- *management options, procedures and collection efficiency determination;*
- *emissions monitoring and assessment from various parts of the landfill gas infrastructure.*

The feedback of monitoring and assessment information enables the validation/improvement of both the conceptual model and the Gas Management Plan. This provides opportunities for improvements based on environmental outcomes.

2.2 Risk assessment framework

The regulator requires the use of a structured approach to the assessment of the risks posed by a landfill to human health, the environment and local amenity. This is a pre-requisite for the permitting of all landfills under PPC and a fundamental part of preparing a Gas Management Plan. The ongoing assessment of risk for operational sites will be a requirement for the maintenance of a PPC permit.

The permit conditions IC1a required the submission for approval a review of the landfill gas risk assessment. A submission was made on the 1/5/2013 but NRW response dated 9/10/13 rejected the submission. Due to NRW filing system and staff changes in 2014 NRW have not been able to confirm receipt or approval of any FCC re-submissions. As a result, no permit breach can be confirmed at this time, however NRW have requested updated GRA submission.

Section 2 of the GMP

The GMP section 2.0 quotes predicated gas generation rates of 3570m³/HR, but in section 4.4 quotes the gas generation rate circa 550m³/hr

GRA/GMP review - Section 2 of the GMP Landfill Gas Risk Assessment states “In accordance with Agency guidance LFTGN 03, 2004, this risk assessment will be updated and reviewed on a regular basis. The risk assessment forms the basis upon which each aspect of the Gas Management Plan is defined, and as such changes to the risk assessment will be subsequently incorporated into the Gas Management Plan”

The last dated risk assessment on NRW file is dated April 2013.

FCC and their sub-contractors Infinis have been previously asked for an update to the Gas Risk Assessment but no submission received to date.

ACTION FCC – Confirm previous IC1a submission through operator filing, if not available IC1a submission is required as matter of priority.

Submit updated Gas Risk Assessment by 17th January 2022.

Framework for the Gas Management Plan

3.3.1 Waste inputs The type of waste deposited at the site will form the basis for the estimation of gas production, while the estimation of the source term will determine the type and extent of gas management at the site. Although the principles and many of the techniques to manage and control landfill gas are generic across the range of site

categories, individual Gas Management Plans must be based on the site-specific conditions and circumstances.

The following should be identified: • waste types – the quantities and types of waste to be disposed of, and the rates and methods of filling; • landfill gas source – the estimated nature and the anticipated quantity of gas that could be generated during each phase of development (i.e. operational, closure and post-closure); • landfill gas risk assessment – this forms the basis of the Gas Management Plan as it evaluates the risks to receptors. It should be prepared using the approach set out in Chapter 2.

The GMP does not contain details of waste inputs. Without an updated GRA it is not possible to confirm if and how waste inputs have been considered.

ACTION FCC update to the GRA and therefore GMP to include site specific waste inputs as detailed in section 3.3.1 of LFTGN3.

Aftercare

Section 7 of the GMP states *AFTERCARE AND COMPLETION PLAN* The Aftercare and Completion Plan for the Site is defined within the response to Question B2.11 of Form IPPC Landfill Part B – Application for a Permit, submitted as part of the PPC Permit application documentation (2004).

In accordance with Section 2.11.4 of the site PPC Permit (Ref BU8819IV), the Site Aftercare and Completion Plan shall be subject to review at least every 4 years.

NRW review of archive files has not identified an updated Aftercare and Completion Plan for Pwllfawatkin since 2004.

ACTION FCC Submit updated aftercare plan by 31 January 2022.

Summary of FCC ACTIONS in priority order.

Forward GMP appendices by 17 January 2022

Submit updated Gas Risk Assessment by 17th January 2022.

Confirm previous IC1a submission through operator filing records evidence, if not available IC1a submission is required as matter of priority by 31 January 2022 or date otherwise agreed.

Update to the GRA and therefore GMP to include site specific waste inputs as detailed in section 3.3.1 of LFTGN3.

Submit updated aftercare plan by 31 January 2022.

Submit the updated current review document EMS 3-13-10LNF by 17 January 2022

Update GMP to correct typographical errors and resubmit by 17 January 2022

Enquiry FCC under section 6.1 Enitial technicians are quoted as doing the gas monitoring is this correct? Or is a different contactor used?

END.

If you have any queries about this report, or to discuss completion of any actions, please contact the NRW Officer named above.

Important information

Legal status of this report

Your permit is issued to you under the Environmental Permitting Regulations. You have a responsibility to comply with the conditions of your permit and prevent pollution/harm of the environment. You must also ensure that you comply with any other relevant legislation that may apply to your site's operations.

This report explains the findings of our assessment and any action you are required to take. We categorise non-compliance using our guidance for assessing non-compliance at regulated sites.

When we find potential non-compliance/s we will normally give you advice on how to maintain compliance.

To correct non-compliance, we may:

- require you to take specific actions
- issue a notice
- review the conditions of your permit.

Any advice and guidance we give will be without prejudice to any other enforcement response that we consider may be required.

Assessment results and non-compliance categories (used in section 1):

Assessment result	Description
Assessed (A)	Assessed or assessed in part, no evidence of non-compliance found
Action only (X)	Action only relating to the activity assessment
Ongoing (O)	Ongoing non-compliance, not scored

Non-compliance category	Description	Score
C1 Major	Potential to have a major, serious, persistent and/or extensive impact or effect on the environment, people and/or property	60
C2 Significant	Potential to have a significant impact or effect on the environment, people and/or property	31
C3 Minor	Potential to have a minor or minimal impact or effect on the environment, people and/or property	4
C4 No environmental impact	Non-compliance at a regulated site that cannot foreseeably have any impact on the environment, people and/or property	0.1

How we use assessment scores

The number and severity of non-compliances recorded in a year will affect your annual subsistence fee the following year. A non-compliance factor is added to your site's Operator

Performance Risk Appraisal (OPRA) score when we calculate your fee to reflect the additional resource we use to assess permit compliance.

What are suspended scores?

In line with our guidance, we may suspend scores for up to six months to allow time for remedial action to be taken. Suspended scores will be re-instated if the action is not completed.

Full list of Industry and Waste action criteria (used in section 1 and 2):**A: Permitted activities**

- A1 Specified by permit

B: Infrastructure

- B1 Infrastructure – Engineering for prevention and control of emissions
- B2 Infrastructure – Closure and decommissioning
- B3 Infrastructure – Site drainage engineering (clean and foul)
- B4 Infrastructure – Containment of stored materials
- B5 Infrastructure – Plant and equipment

C: General management

- C1 General management – Staff competency/training
- C2 General management – Management system and operating procedures
- C3 General management – Materials acceptance
- C4 General management – Storage, handling, labelling and segregation

D: Incident management

- D1 Incident management – Site security
- D2 Incident management – Accidents, emergency and incident planning

E: Emissions

- E1 Emissions – Air
- E2 Emissions – Land and groundwater
- E3 Emissions – Surface water
- E4 Emissions – Sewer
- E5 Emissions – Waste

F: Amenity

- F1 Amenity – Odour
- F2 Amenity – Noise
- F3 Amenity – Dust/fibres/particulates and litter
- F4 Amenity – Pests/birds and scavengers
- F5 Amenity – Deposits on road

G: Monitoring and records, maintenance and reporting

- G1 Monitoring and records, maintenance and reporting – Monitoring of emissions and environment
- G2 Monitoring and records, maintenance and reporting – Records of activity, site diary/journal/events
- G3 Monitoring and records, maintenance and reporting – Maintenance records
- G4 Monitoring and records, maintenance and reporting – Reporting and notification to Natural Resources Wales

H: Resources efficiency

- H1 Resource efficiency – Efficient use of raw materials
- H2 Resource efficiency – Energy efficiency

Enforcement response

Any permit condition non-compliance is an offence and we may take legal action against you. Action we take can include prosecution, serving a notice on you and/or suspension or revocation of your permit. See our Enforcement and Sanctions Guidance for further information.

Data protection notice

You should make sure that anyone named in this report knows that the information it contains will be processed by Natural Resources Wales to fulfil its regulatory and monitoring functions and to maintain the relevant public register(s).

We may also use and/or disclose the report in connection with:

- offering or providing you with our literature or services relating to environmental matters
- consulting with the public, public bodies and other organisations (e.g. Health and Safety Executive, local authorities) on environmental issues
- carrying out statistical analysis, research and development on environmental issues
- providing public register information to enquirers
- investigating possible breaches of environmental law
- assessing customer service satisfaction and improving our service
- Freedom of Information Act or Environmental Information Regulations requests.

We may also pass it on to our agents or representatives to do these things on our behalf.

Disclosure of information – this report will be available to view on-line

If you think this report contains commercially confidential information that should not be placed on our public register, you must contact your local Natural Resources Wales office within **fifteen working days** of receiving this report, using the contact details in the accompanying email or letter. You must give a full explanation of why it should not be added to our public register, including specifying which information is commercially confidential. We will assess your request and respond to you within 20 working days to let you know if we agree to your request.

What do I do if I disagree with the report or have a complaint?

If you disagree with this compliance assessment report, you should contact the lead officer without delay to discuss your concerns.

If you are unable to resolve the issue with the lead officer or their line manager you should contact our Customer Contact team on 0300 065 3000 (Monday to Friday 08:00 – 18:00), or email enquiries@naturalresourceswales.gov.uk for details of how to raise your dispute further through our Complaints and Commendations procedure.

If you are dissatisfied with our response, you can contact the Public Services Ombudsman for Wales by phone on 0300 7900203 or by email at ask@ombudsman.wales

Welsh Language Standards

We are committed to establishing Natural Resources Wales as a naturally bilingual organisation. We will provide compliance reports in your preferred language.