

Compliance Assessment Report CAR_NRW0038920

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: Site Inspection, Reason: Routine.

On 26/10/2021 between 10:00 and 13:00.

Parts of permit assessed: 3.4, 3.1, Odour and gas management

NRW Lead Officer: Ffion Thomas, accompanied by Andi Kemp.

Report sent to: Richard Thomas, Site Manager on 09/11/2021.

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

Part of permitted activity assessed (criteria)	Assessment result	Permit condition
A1 - Specified by permit	Assessed (A)	
F1 - Amenity - Odour	Assessed (A)	

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?

No action required.

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

This compliance assessment report form was completed following the site visit on the 26th October where Ffion Thomas and Andi Kemp visited the site.

The purpose of the visit was as a refamiliarization visit to the site, following the return of Ffion Thomas as site regulator after 3 years, and in order to part assess gas and odour management at the site following receipt of odour reports over the summer months of

2021.

An agenda was shared with the operators ahead of the site visit, this was done in order to obtain up to date site documents, the below were requested and received ahead of the visit.

- Odour management plan
 - EMS Odour management and monitoring
- Gas management plan
 - EMS procedure for environmental monitoring
 - EMS Gas monitoring and management
- Leachate Management plan
- Emergency Management Plan

Detailed review of the above management plans will be assessed under separate CAR forms.

An onsite visit of the landfill and gas compound was undertaken.

General landfill management:

Waste was being accepted at the time of the visit into a small tipping face area. The tipping face was sheltered from wind via waste placement bunding assisting in sheltering from the wind.

There was no delay in waste compaction at the tipping face with plant operators active at the face.

Daily cover was in situ available for use at end of day.

The site has progressed since Ffion's last visit (~2018/19) and is now at the second lift within the cell 4 extension sidewall.

Permanent capping has already been placed at this southern and eastern flank tying into the base. Cells 1, 2 and 3 are permanently capped.

There has been an alteration to the final profile, required by planning, which has seen an extra lift to the southern section of cell 2. This results in a nib like addition to the profile which also had permanent capping in place.

ACTION FCC are reminded that permit variation will be required due to the alterations to the site from that first applied. The conceptual model and all associated risk assessments were produced based on 5 cells. The reductions to the sites final profile and reduction in total volumes has resulted in a change to the original engineered plans. FCC are therefore asked to review and where required amend plans and apply to vary the permit to reflect the current and proposed final levels for the site

The next phase of permanent capping was due to commence but delayed due to weather conditions. This work has since commenced as of 3rd November and as stated will be assessed under separate CRA, but to say here that the requirements to promptly cap waste as the landfill progresses is evident and illustrates good management and environmental practices.

FCC also continue with the deployment of temporary engineered capping. Sections of cell 4 have sacrificial temp capping in place and the next phase of capping works will see additional temporary capping engineered assisting with sealing the site for the winter

months, reducing rainwater ingress, therefore reducing leachate volumes and aiding to minimise odour emissions.

This practice has been employed at Pwllfa for a number of years and continues to illustrate good management and environmental practices, illustrated by the reduced leachate volumes generated and therefore reduced off site treatment of leachate wastes.

The gas well observed was sealed (evident by the pooling of rainwater at the bentonite seal) and was active (able to hear the hiss of gas through the well connection pipework) FCC gas contractors Infinis accompanied us on the visit. See below for details but also confirmed that sacrificial horizontal and pin wells were in place along the southern flank of the cell 4 extension to aid in gas management. Permanent wells are also in place and had already been raised in preparation for the next phase of permanent capping. Infinis will be on site during the permanent capping works to allow phased switch off and on of wells as the capping works progress. This will minimise the length of time any well is switched off. It was later confirmed via email that *there are currently have 119 gas wells, horizontal lines or pin wells that we are monitoring at Pwllfawatkin site. This is the number for both phases we are also monitoring for gas seven of the leachate wells.*

A leachate well risers were also visited and noted actively pumping, observed through the sound of the pump kicking on/off)

New leachate holding tanks have been installed and become operational the day before our visit. The new tanks are double skinned, sealed, with automatic shut off valve and telemetry monitoring (at time of CAR form write up is now in place) This improved operation illuminates the previous potential point source of odour from the old leachate holding tank. That area is now in the process of being decommissioned.

Road tanker to remove leachate was observed at the time of our visit. The tank driver appeared to understand the new loading arrangements.

ACTION FCC – as discussed during the visit, notice boards are to be placed at the leachate tank area with clear procedural instructions to ensure any driver can complete the task. Please ensure tanks reverse completely over the drip tray section when filling.

Gas compound and gas management:

Thank you to Infinis for hosting us at the gas compound. Infinis are contracted by FCC to manage the gas utilisation at the site.

There remains 1 gas engine, 1 flare operational at the site. There is a back up flare, but this is not plumbed in with a 6hr rig up time should it be required.

The engine has a 1.3megawatt thermal rating 1065 kilo wat.

ACTION NRW/FCC - Based on thermal input of the one engine being less and 3megawatts, having checked EPR, means FCC can drop the scheduled combustion activity from the permit and have the engine and flare as DAAs.

FCC and Infinis have a joint action plan for the site, which I thank you for sharing. It includes raising wells, pin well placement considerations and future plans. Noted was line 69 and 70 where future review of scrubbing gas at the compound and review of engine emissions is to take place.

ACTION FCC Please keep NRW informed of the joint action plan work, and if scrubbing is identified as an option please consider permit variations required if an abatement system is added.

Through our observations at the time of the visit the gas utilisation plant might be slightly under capacity, understanding there was approx. 650 m³/hr and methane at 50%. The flare was on, though only cranked to 6% and the temperature seen at the time of the visit was 650 deg C (the ideal would be ~1000)

The flare is rated at 2000 m³/hr and the turn down ratio (minimum the flare can run on without losing combustion efficiency and low temperatures) is 5:1, so that means the flare needs at least 400 m³/hr to combust efficiently. Unfortunately, we didn't note the volume, at 6% valve open, was going through the flare so unable to confirm if there could have been a capacity or utilisation issue.

Infinis confirmed that filed balancing was being undertaken weekly. 119 wells are in place in total across the site both phases and discussion were had regards to the distance between wells and zones of influence, suggesting sufficient well density.

ACTION FCC/INFINIS Please could we have a copy of the most recent field data for 1st October to date, Showing the bulk gas flow to the GUP (collected gas) and CH₄ vs CO₂ concentrations.

Recognising the joint action plan has been updated and annual monitoring of surface emissions will be undertaken,

ACTION FCC/INFINIS please also forward the most recent FID surveys for gas flux and data on fixed points, such as well boot seals and evidence of defects repaired. Confirming gas well location on a plan/drawing will also assist in reviewing the gas filed coverage.

ACTION FCC/INFINIS the Gas Risk Assessment needs updating.

Most recent HRA (2016),

On returning to site regulation Ffion undertook a review of the site files and identified that the HRA has yet to be completed.

No further correspondence from that received from FCC 3 July 2019 which indicate an amended version of the HRA will be sent shortly addressing the points raised. **ACTION FCC** Please could you forward the amended version of the HRA and/or updates regards HRA.

Recognising there is a permit variation application being drafted, requesting BH11B limit changes and permit consolidation, could you give an estimated timeframe for this application?

I suggest you also use that application to also address the wording in Table S2 relating to condition 2.8.11, and the same for Table S3 for condition 2.8.12 (appears a typographical error in table titles, should read waste not water treatment).

HRA cycles are set at every 6 years. This would mean Pwllfa's next HRA would be due 2022. Understanding the site is looking to move into aftercare in 2023 I have emailed my landfill specialist summarising the sites position and enquiring if the 6year review cycle

ACTION NRW – confirm HRA review cycle. COMPLETED: email response has been

received and shared to FCC confirming the HRA is due in 2022 reasoning: As parts of the 2016 HRA are still outstanding, along with the ammoniacal N exceedance, I'd recommend FCC concentrate on producing their next review which addresses all these items sooner rather than later, in 2022.

Once the review has been provided, then should it be accepted any subsequent reviews are likely to be shorter in nature

This site visit was the first time Andi Kemp visited and I quote his observation *I thought, overall, a reasonable operator and good working practices.*

On return to the site regulation Ffion Thomas will work closely with FCC and site manager to complete the above actions but thank you for the cooperation shown and continued self-reporting.

Odour report assessment

During the site visit a report was received of an off-site odour complaint. Ffion Thomas(NRW) and Richard Thomas (FCC) Russell Bromage(FCC) conducted an offsite olfactory assessment. Traveling along Rhyd y Fro road with both front car windows fully open Ffion could smell a faint odour near the 30mph signpost just before Cwmgors.

Arriving at the bus layby at the southern end of Rhyd y fro the odour was again picked up by Ffion, faint and intermittent. The assessment continued by walking further north towards cwmgor and no odours were detected except that of pine trees and wood smoke at 2 separate locations.

Whilst the odour report was substantiated having just undertaken compliance assessment on site no permit breach noncompliance was identified at the time of the inspection.

Summary of FCC Actions:

Review and where required amend plans and apply to vary the permit to reflect the current and proposed final levels for the site.

Notice boards are to be placed at the leachate tank area with clear procedural instructions to ensure any driver can complete the task.

If scrubbing is identified as an option, please consider permit variations required if an abatement system is added.

a copy of the most recent field data for 1st October to date, Showing the bulk gas flow to the GUP (collected gas) and CH₄ vs CO₂ concentrations.

forward the most recent FID surveys for gas flux and data on fixed points, such as well boot seals and evidence of defects repaired. Confirming gas well location on a plan/drawing will also assist in reviewing the gas filed coverage.

Gas Risk Assessment needs updating.

Forward the amended version of the HRA and/or updates regards HRA.

END

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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.