

Compliance Assessment Report CAR_NRW0037498

Permit being assessed: AP3739KS.

For: Brookhill Landfill Site EPR/AP3739KS, held by Flintshire County Council

At: BROOK HILL LFS PINFOLD INDUSTRIAL ESTATE , BUCKLEY, BUCKLEY, CLWYD, CH7 3PL.

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

On 30/12/2020.

Parts of permit assessed: Q3 & Q4 monitoring returns

NRW Lead Officer: Rebecca Harwood.

Report sent to: Paul Murphy , Site Manager on 12/02/2021.

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

Part of permitted activity assessed (criteria)	Assessment result	Permit condition
E1 - Emissions - Air	C4 No impact	Condition 3.1.7
E2 - Emissions - Land and groundwater	Action only (X)	
G1 - Monitoring and Records, Maintenance and Reporting - Monitoring of emissions and environment	C3 Minor	Condition 3.5.1
E2 - Emissions - Land and groundwater	C3 Minor	Condition 3.1.5
E2 - Emissions - Land and groundwater	C3 Minor	Condition 3.1.5
E3 - Emissions - Surface water	Action only (X)	
G4 - Monitoring and Records, Maintenance and Reporting - Reporting and notification to Natural Resources Wales	C4 No impact	Condition 4.2.4
B1 - Infrastructure - Engineering for prevention and control of emissions	C3 Minor	Condition 2.7.1
B1 - Infrastructure - Engineering for prevention and control of emissions	C3 Minor	Condition 2.7.1
G4 - Monitoring and Records, Maintenance and Reporting - Reporting and notification to Natural Resources Wales	Action only (X)	
G2 - Monitoring and Records, Maintenance and Reporting - Records of activity, site diary/journal/events	Action only (X)	
G4 - Monitoring and Records, Maintenance and Reporting - Reporting and notification to Natural Resources Wales	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
7	20.2

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
E1	Action 1: Continue to monitor and track compliance within off site boreholes	Already completed
E2	Action 2: Review possible causes of increases in ammoniacal nitrogen concentrations and look into correlation with increased ammoniacal nitrogen in the effluent discharge in September (see Section 5).	31/03/2021
G1	Action 3: Ensure all monitoring and sampling is undertaken in accordance with the Permit	31/03/2021
E2	Action 4: Continue to monitor and review	31/03/2021
E2	Action 4: Continue to monitor and review	31/03/2021
E3	Action 5: Please review and monitor COD levels obtained from P4 and reference in the quarterly report.	31/03/2021
G4	Action 6: Ensure all monitoring is submitted within the required timescales stated within the permit.	30/04/2021
B1	Action 7: continue to manage levels by extracting leachate from site	31/03/2021
B1	Action 7: continue to manage levels by extracting leachate from site	31/03/2021
G4	Action 8: Ensure Welsh Water have been informed about the breach of ammoniacal nitrogen and investigate cause. See also Action 2 in Section 2.2 and Action 9 in Section 7.	28/02/2021
G2	Action 9: Ensure waste submitted within the quarterly waste returns is assigned to the correct permit.	30/04/2021
G4	Action 10: Please submit Schedule 5 notifications in accordance with Condition 4.3.1, for any non compliances recorded, with the exception of elevated leachate levels until such point that the leachate levels are fully compliant.	12/02/2021

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.

You are non-compliant with your permit.

At this time, we are issuing you with a warning for the non-compliance recorded above. Warnings may influence future enforcement response for continued or further non-compliance.

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

Q3 July – September 2020 and Q4 October to December 2020 monitoring reviews (*italics text provided*):

1. E1 Landfill gas

No methane breaches were reported for the routine weekly gas monitoring of perimeter boreholes BH1 to BH25 in either Q3 or Q4.

BH6 exceeded its carbon dioxide compliance limit of 1.5% during September with a concentration of 2.3% recorded on 23 September 2020. **This has been scored a CCS4 breach of Permit, Condition 3.1.7.**

Action 1: Continue to monitor and track compliance within off site boreholes.

The average concentrations of methane and carbon dioxide in the in waste GV wells were 49% CH₄ & 33% CO₂ and 46% CH₄ & 33% CO₂ in Q3 and Q4 respectively.

Carbon monoxide concentrations were below 11ppm in all wells in Q3 and Q4.

Hydrogen sulphide concentrations generally remained below the limit of detection except for some low concentrations (1ppm) detected in GV47 and LC05 in both Q3 and Q4.

Advice and Guidance: Table 2.1 in the Q3 and Q4 reports highlight wells with potential air ingress, it would be prudent to check the integrity of the seals of these wells and reseal if necessary.

2. E2 Emissions to land and groundwater

2.1 Groundwater levels

Groundwater levels were recorded monthly and in the main followed seasonal trends.

2.2 Groundwater quality boreholes GW1 – GW8

Q3 2020 - Exceedances for ammoniacal nitrogen >1.7mg/l were observed in GW2A, GW3A and GW4 with maximum concentrations of 49.4mg/l, 71.8mg/l and 55mg/l respectively. The ammoniacal nitrogen levels during Q3 increased and although started to reduce in Q4 remained elevated compared with previous readings.

Action 2: Review possible causes of increases in ammoniacal nitrogen concentrations and look into correlation with increased ammoniacal nitrogen in the effluent discharge in September (see Section 5).

Exceedances for chloride >60mg/l were also observed in GW2A, GW3A and GW4 with maximum concentrations of 96.5mg/L, 136mg/L and 110mg/L respectively.

The quarterly analysis suite to include additional metals and volatile organic compounds was not analysed during Q3. Considering the elevated ammoniacal nitrogen levels seen in recent months, and the fact that this was not highlighted to NRW via a Schedule 5 notification **this has been scored a CCS3 breach of Permit, Condition 3.5.1.**

Action 3: Ensure all monitoring and sampling is undertaken in accordance with the Permit.

Q4 2020 - Exceedances for ammoniacal nitrogen >1.7mg/l were observed in GW2A, GW3A and GW4 with maximum concentrations of 38.1mg/l, 75.4mg/l, and 44.3mg/l respectively. Exceedances for chloride >60mg/l were also observed in GW2A, GW3A and GW4 with maximum concentrations of 130mg/l, 132mg/l and 96.8mg/l respectively.

The elevated readings with the groundwater sampling points is an emission limits breach of permit condition 3.1.5. In line with previous non-compliances Q3 and Q4 both attract a CCS3 for groundwater quality.

Action 4: Continue to monitor and review

Annual analysis was undertaken in December 2020.

3. E3 Emissions to surface water

'Surface water samples are taken from three locations, SW2, P2 and P4. Water flows in a northerly direction alongside the outside perimeter fence of the western boundary of the site and accumulates in a pond at SW2 before slowly seeping through a man-made underground bypass drain which runs along the outside of the site towards the northern boundary. P2 is a pond to the west, which collects surface water run-off from the landfill. P4 is in a field to the north west of the site, beyond landfill gas monitoring borehole BH10.'

During both Q3 and Q4 2020 P2 was not sampled (this point is only sampled when there is likelihood of an overflow). There was also no sample in either quarter from SW2.

Monitoring point P4 was sampled in both Q3 and Q4 and although no emission levels are set it is noted that COD levels obtained at this point were above the ELV of 100mg/l set for P2 in August, September and December.

Action 5: Please review and monitor COD levels obtained from P4 and reference in the quarterly report.

4. Deposited dust monitoring

Q3 2020 - Dust monitoring was undertaken between the 2nd September 2020 and 5th October 2020 – there were no exceedances of the ELV. There was a delay in submitting the Q3 dust data and it was not received until 29th January 2021. **A CCS4 breach has been applied for delay in submitting the results in accordance with Condition 4.2.4**

Action 6: Ensure all monitoring is submitted within the required timescales stated within

the permit.

Q4 2020 - Dust monitoring was undertaken between the 9th December 2020 and 14th January 2021 – there were no exceedances of the ELV.

5. B1 Engineering for prevention and control of emissions

5.1 Leachate limits

As discussed with NRW, 'pumped' leachate levels are recorded after pumps are switched off for up to 4 hours before a dip is obtained. Pumped leachate levels are provided for completeness, and to provide additional information regarding the efficiency of the leachate management strategy at the site. During this quarter, 'rest' levels of leachate were also recorded, which reflect the head of leachate after 48 hours of recovery (which has been demonstrated to be sufficient amount of time to reach rest, in accordance with report number 3448-VAU-XX-XX-RP-V-9107.A0-C11.

The results overall indicate relatively stable leachate levels across the site.

The difference between the rest and pumped levels remains around 1m for most wells. This is likely as a result of the ongoing extraction of leachate from gas wells at the site. While the rest leachate levels exceeded the compliance, the leachate head remained below the level of the surrounding groundwater through this period.

Q3 2020 - Leachate limit breaches occurred in 5 Cells: 1 (0.92m), 2 (0.89m), 4 (0.58m), 5 (1.68m) & 6 (2.47m), these are over the 2/3m above base limits. Levels within Cell 3 remained compliant throughout the quarter.

Q4 2020 - Leachate limit breaches occurred in 5 Cells: 1 (1.00m), 2 (0.94m), 4 (0.73m), 5 (1.79m) & 6 (2.55m), these are over the 2/3m above base limits. Levels within Cell 3 remained compliant throughout the quarter.

The elevated levels of leachate are a breach of permit condition 2.7.1. In line with previous non-compliances Q3 and Q4 both attract a CCS3.

Action 7: continue to manage levels by extracting leachate from site.

5.2 Leachate analysis

Annual leachate sampling was undertaken in December 2020.

5.3 Emissions to Sewer

Elevated ammoniacal nitrogen concentrations from the effluent discharge (Final Discharge monitoring point) were recorded in September - 1640mg/l, significantly above the compliance limit of 50mg/l.

Action 8: Ensure Welsh Water have been informed about the breach of ammoniacal nitrogen and investigate cause. See also Action 2 in Section 2.2 and Action 10 in Section 7.

6. Quarterly Waste Returns

Quarterly returns have been submitted as a nil return, however, leachate imports from other sites are being recorded against the Brookhill Transfer Station Permit (BP3391EL), rather than against this permit. The leachate treatment plant is permitted against the Brookhill Landfill Permit (AP3739KS) and therefore all leachate imports need to be recorded here.

Action 9: Ensure waste submitted within the quarterly waste returns is assigned to the correct permit.

7. Reporting - Schedule 5 Notifications

Condition 4.3.1 of the permit requires notification of breaches of the permit to be submitted to NRW without delay. These notifications have not been submitted.

Action 10: Please submit Schedule 5 notifications, in accordance with Condition 4.3.1, for any non compliances recorded, with the exception of elevated leachate levels until such point that the leachate levels are fully compliant.

8. Annual Performance

An extension has been granted for the annual report to be submitted by 28th February 2021.

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.