

Compliance Assessment Report CAR_NRW0037376

Permit being assessed: RP3733PC.

For: Trecatti Landfill, held by Biffa Waste Services Ltd

At: Trecatti Landfill Site, Fochriw Road, Merthyr Tydfil, Merthyr Tydfil, CF48 4AB.

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

On 31/12/2020.

Parts of permit assessed: Annual returns

NRW Lead Officer: Richard Taylor.

Report sent to: Simon Milford, Site Manager on 23/02/2021.

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

Part of permitted activity assessed (criteria)	Assessment result	Permit condition
E3 - Emissions - Surface water	C3 Minor	S3.3
A1 - Specified by permit	C4 No impact	S3.1
G1 - Monitoring and Records, Maintenance and Reporting - Monitoring of emissions and environment	C4 No impact	1.1.1(a)
B5 - Infrastructure - Plant and equipment	C4 No impact	1.1.1(a)
E2 - Emissions - Land and groundwater	Assessed (A)	
E2 - Emissions - Land and groundwater	C4 No impact	S3.5
E1 - Emissions - Air	C3 Minor	S3.6
F3 - Amenity - Dust/fibres/particulates and litter	Ongoing (O)	S3.12

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

Total number of non-compliances recorded	Total non-compliance score
6	8.4

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
E3	Return to compliance limits	31/03/2021
A1	Readings to comply with permit limits	31/03/2021
G1	Ensure monitoring equipment is serviceable and provide timely results.	Already completed
B5	Ensure equipment is serviceable for monitoring	31/03/2021
E2	Track levels in future monitoring	31/03/2021
E1	Return to compliance limits	31/03/2021
F3	Carry on monitoring in accordance with permit	Already

Criteria	Action needed	Complete by
		completed

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

BIFFA Trecatti RP3733PC

Annual Reports review for 2020.

1,0 Landfill Gas Engines (From MCERTS report)

A total of 5 LFG engines exist on site numbered Engines 1,4,5,6, and 7. There was 1 permit limit breach found at Engine 7 for VOC; s.

Engine 5 - was measured on 4th Aug 2020 with all results within permit limits after correction to standard reference conditions of 101.3kPa, 273K and 5% oxygen.

Engine 4 - was monitored on 4th Aug 2020 and showed an exceedance for NO₂ with a reading of 504mg/m³ against a permit limit of 500mg/m³, however, when the confidence interval of +/-24mg/m³ was applied this was under the permit limit. Readings for CO, VOC and SO₂ complied with permit limits.

Engine 1 - was measured on 4th Aug 2020 and showed results which were all compliant with the permit limits.

Engine 6 – Likewise with Engine 1 was measured on 4th Aug with no permit exceedances.

Engine 7 - was also monitored on 4th Aug 2020, but the permit levels for NO₂, CO, and VOC's were exceeded.

The NO₂ limit of 500mg/m³ with as exceeded with 528mg/m³, with an uncertainty of +/-34mg/m³. This takes the bottom of the range to under the permit limit so is not classed as an exceedance. This was subsequently reassessed on 23/02/21 against the LFTGN08v2 where a maximum uncertainty is given for Nitrogen Oxides at 30% which gives a range which is well within the permit limit at the bottom end.

The permit VOC limit of 1000mg/m³ was reportedly breached with 1309mg/m³ with a confidence interval of +/-47 applied produces a 95% confidence range of between 1262 - 1356mg/m³. This was seen to breach the permit limit and scored as such on the original version of this CAR form sent to site on 12th Feb 2021. However after the site raised the issue of uncertainty limits applied to landfill gas emissions, the score was re-assessed against the landfill Directive technical guidance note 08 version 2 (LFTGN08v2) and found to be within the 40% uncertainty factor which is applied as a blanket rule to landfill gas engines of this type. This

over-ruled the local measured uncertainty factor previously applied and has resulted in the recinding of the previously applied permit limit breach which has now been removed.

2.0 Analysis of Trace Landfill Gas.

Received in accordance with permit conditions. No comment.

3.0 Topographic survey

A map was provided dated 9th July to fulfil the permit requirement.

4.0 T3062900 Settlement drawing

A settlement drawing from Jan 2021 was provided which showed the settlement difference between 15 points over the last year.

5.0 Annual Report

5.1 Surface Water – 98,752m³ of surface water was reportedly pumped off site during 2020.

Point SWA 81702001 – Discharge point –

Permit substances are pH, SS, AmmNi, and COD. All limits were complied with during 2020. Note – the site had insufficient flow in May, July, and Nov. 2 measures of pH were at the maximum point of 8 during Jan and Dec 2020.

Sample point 81702002 SWB downstream –

Insufficient flow reported in Feb, March, May, Jul and November. A permit limit was exceeded for Suspended solids in Dec 2020 with 106mg/l against a limit of 100mg/l. This was reported to NRW on time.

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1 x breach of permit condition S3.3 for Suspended solids during December 2020 from SWB downstream monitoring point. Cat 3 breach for a permit limit which could have a minor environmental effect.
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Sample point 81702003 SWC Upstream.

Insufficient flow in May, July, and November. No permit limits exceeded.

5.2 Leachate

There were 2 marginal exceedances of leachate well limits in February at Well 1 and Well 4 with readings of 365.12m and 367.9m.

Additionally, there were monitoring failures in March at LW4 and LW5 due to equipment failure. All other measurements from the 8 wells over 12 months were within limits. In perspective 2 / 96 wells were compliant and the site showed a steady trend.

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1 x breach of permit condition S3.1 limit for leachate levels at Wells 1 and 4 in Feb 2020. Combined Cat 4 breach of limit with no environmental effect.
.....

1 x breach for failure to monitor LW4 and LW5 in March 2020 due to faulty equipment. Combined Cat 4 breach with no environmental effect. Permit condition 1.1.1(a).

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5.3 Treated Effluent

82,356m³ of effluent was treated on site during 2020 and released to sewer. All parameters of the site discharge consent were adhered to. The temperatures for Feb and March were omitted due to equipment failure.

Equipment failure is classed as a permit condition noncompliance. The equipment should be fit for purpose for providing monitoring results as required by the permit.

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1 x Cat 4 breach of permit condition 1.1.1(a) for failure to monitor effluent temperatures due to equipment failure in Feb and March 2020.

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5.4 Groundwater

Annual and Quarterly samples were recovered from groundwater boreholes: GW1, GW2, GW4, GW6, GW8, GW11, GW12 & GW13 during this period.

Possible Emission limit exceedances

- 81701110 - 10/09/20 – Mecoprop limit 0.04ug/l – reading '<0.08' This was a possible exceedance, which on checking was a result of double dilution in the monitoring lab where the limit of detection (0.04) was doubled as the water was diluted. This means that reported figure of '<0.08' cannot be classed as a permit breach.
 - 81701120 – 10/09/20 – AmmNi limit 17 mg/l – reading 19mg/l – however, general downward trend observed throughout the year.
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1 x non scoring permit condition S3.5 for trigger level breach of AmmNi to groundwater with 19mg/l against a permit limit of 17mg/l against a 3-year rolling downward trend.

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- 81701212 GW12 29/12/20 Mecoprop exceedance at 0.17ug/l against a permit limit of 0.04ug/l. This is an unexpected spike in the concentration of Mecoprop at this location and needs to be tracked in the next round of monitoring to make sure it does not continue to be higher than the limit or is an indicator of a more permanent presence.
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1 x Cat 4 for a permit limit exceedance of permit condition S3.5 for GW12 for Mecoprop limits with a reading of 0.17ug/l against a permit limit of 0.04ug/l.

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External Boreholes

The site reported a number of set permit limit exceedances throughout 2020.

- BH8171004

CH4 limit 3%vv – reading 22.1%vv Jan, 36% Feb, 3.3% Sept.

CO2 limit 10%vv- reading Jan 2020, 12.4, Feb 12.2.

X 5 permit limit exceedances.

- 8171021

CH4 limit 24.6% - reading Jan 26.7, Feb 28, Mar 28.7, Apr 24.5, Sep 27.5.

CO2 limit 19.2% exceeded in Jan, Feb, Mar, Apr, May, Jun, Jul, Aug and Sep.

X14 permit limit exceedances.

- 8171022

CH4 limit 1% exceeded Jan, Feb, Apr, May.

CO2 limit 10% exceeded Feb, Apr, May

X 7 permit limit exceedances.

- 8171026

CO2 limit 15.9% exceeded in Apr with 16%

X1 permit limit exceedance.

- 8171007

CO2 limit 10% exceeded in Feb, Mar.

X2 permit limit exceedances

- 8171024

CO2 limit 9.7% exceeded in Sep.

X1 permit limit exceedance.

In total there were 30 permit limit exceedances to permit limits in the external boreholes. The gas extraction system is fully maintained, monitored and infrastructure added frequently to ensure the maximum flow off site through the engines and flares is maintained. As there was no negative effect on the environment the exceedances are combined into a Cat 4 breach of permit condition S3.6.

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1 x Cat 3 breach of permit condition S3.6 for exceeding permit limits for Landfill gas from external boreholes with a minor environmental effect during 2020 with 31 limit exceedances.

Gas Compound

Total gas used in the engines was 16,751,613 m3 with 270,414 m3 flared off. This is approximately 1.6% of the time used and therefore did not qualify the flare stack for individual monitoring during 2020.

Dust and Asbestos monitoring.

There was one exceedance of the deposited dust from D1 on 09/07/20 at D1 where the 200mg/m2 day figure was breached with 420mg/m2 day. At the time the wind was at a steady 15mph from the East to West direction. There was no declared malfunction for this reading at the time of the exceedance. The weather conditions were drizzly, and the position of the monitor was upwind of the prevailing wind. In these circumstances we will not score a permit breach but record it as a non-scoring breach of permit conditions without applying a score under these circumstances.

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1 x non-scoring breach of permit condition 'table S3.12' where the daily dust limit was measured at 420mg/day against a limit of 200mg/day at monitoring point D2. Wind source from opposite direction.

Biogene Results.

Biogene is an operation located entirely within the landfill site and is subsumed into the site permit. All emissions except to air are treated by onsite infrastructure and the wider site infrastructure. Therefore, any breach of permit limits for surface water are picked up by the wider permit. There are 2 SW points which are monitored monthly. (there is an error in the site annual report at 6.0 'Biogene' which states that there are 3. Of these, the site exceeded the pH limits as follows.

- SW1, SW2 Parameters 6-8pH -14 exceedances to pH with the maximum at 8.8 from Oct at SW2.
- Suspended solids limit 100mg. – x 1 exceedance at 110mg/l in Oct at SW1.
- Ammoniacal Nitrogen limit 5mg/l – x2 exceedances with a maximum 10mg/l in July at SW1.

There was no discharge to surface water for Biogene water. The results are recorded above for completeness only.

Summary of permit limit exceedances.	Detail of exceedances	Scoring exceedances
Surface Water SWB downstream. Ref permit condition S3.3	1 x permit limit exceedance for Suspended solids in Dec 2020 with 106mg/l against a limit of 100mg/l.	1 x Cat 3 scoring breach
Leachate levels. Ref Permit condition S3.1	1 x breach of permit limits for leachate levels at Wells 1 and 4 in Feb 2020. Combined Cat 4 breach of limit with no environmental effect.	1 x Cat 4 scoring breach with no environmental effect.
Leachate monitoring equipment failure. Ref permit condition 1.1.1(a)	1 x breach for failure to monitor LW4 and LW5 in March 2020 due to faulty equipment.	1 x Cat 4 scoring breach with no environmental effect.
Treated Effluent Ref permit condition 1.1.1(a)	1 x Cat 4 breach of permit condition 1.1.1(a) for failure to monitor effluent temperatures due to equipment failure in Feb and March 2020.	1 x Cat 4 scoring breach with no environmental effect.
Groundwater trigger level. Ref permit condition S3.5.	1 x non scoring permit condition S3.5 for trigger level breach of AmmNi to groundwater with 19mg/l against a permit limit of 17mg/l against a 3 year rolling downward trend.	1 x non scoring breach of trigger level.
Groundwater permit limits	1 x Cat 4 for a permit limit	1 x Cat 4 scoring breach. GW12 to

Ref Permit condition S3.5.	exceedance of permit condition S3.5 for GW12 for Mecoprop limits with a reading of 0.17ug/l against a permit limit of 0.04ug/l.	be tracked for long term migration of mecoprop.
Landfill Gas External boreholes. Permit condition S3.6.	1 x Cat 3 breach of permit condition S3.6 for exceeding permit limits with a minor environmental effect during 2020 with 31 limit exceedances.	1 x Cat 3 combined score for 31 exceedances of permit limits.
Dust and Asbestos. Ref permit condition S3.12	1 x non-scoring breach of permit condition 'table S3.12' where the daily deposited particulate was measured at 420mg/day against a limit of 200mg/day at monitoring point D2 with the wind coming from an offsite location.	1 x non scoring emission limit breach of permit condition S3.12.
		Total 12.4 points

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.