

This form will report compliance with your permit as determined by an NRW officer

Site	Hafod Quarry Landfill	Permit Ref	PP3139GB		
Operator/Permit holder	Cory Environmental (Central) Ltd				
Regime	Installations				
Date of assessment	17/10/2018	Time in	09:20	Out	13:13
Assessment type	Audit				
Parts of the permit assessed	3.3.1				
Lead officer's name	McClymont, James				
Accompanied by	Ellis, Rhys				
Recipient's name/position	Ian Craven/ Area Manager	Date issued	23/10/2018		

Section 1 – Compliance Assessment Summary

This is based on the requirements of the permit under the Environmental Permitting Regulations or the licence under the Water Resources Act 1991 as amended by the Water Act 2003. A detailed explanation is captured in "Compliance Assessment Report Detail" (Section 2) and any actions you may need to take are given in the "Action(s)" (section 4). This summary details where we believe any non-compliance with the permit has occurred, the relevant condition and how the non-compliance has been categorised using our Compliance Classification Scheme (CCS). CCS Scores can be consolidated or suspended where appropriate, to reflect the impact of some non-compliances more accurately. For more details of our CCS scheme, contact your local office.

Permit conditions and compliance summary	CCS Category	Condition(s) breached
E1 - Emissions - Air	C3	3.3.1

KEY: See Section 5 for breach categories, suspended scores will be indicated as such.
A = Assessed or assessed in part (no evidence of non-compliance), **X** = Action only,
O = Ongoing non-compliance, not scored.

Number of breaches recorded	1	Total compliance score (see section 5 for scoring scheme)	4
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If the Number of breaches recorded is greater than zero, please see Section 3 for our proposed enforcement response

Section 2 – Compliance Assessment Report Detail

This section contains a report of our findings and will usually include information on:

- The part(s) of the permit that were assessed (eg. Maintenance, training, combustion plant, etc)
- Where the type of assessment was 'Data Review' details of the report/results triggering the assessment
- Any non-compliances identified
- Any non-compliances with directly applicable legislation
- Details of any multiple non-compliances
- Information on the compliance score accrued inc.
- Details of advice given
- Any other areas of concern
- Any actions requested
- Any examples of good practice
- A reference to photos taken

Cell 4 gas field audit, 17/10/2018. Audit results are appended.

A drive-around the site was undertaken prior to entering site. A slight waste odour was detected on New Hall Road, to the North East of the site.

Prior to the audit a meeting was held in the site office between Ian Craven and Graham Ball (of Enovert) and James McClymont and Rhys Ellis (of NRW). During the meeting, several updates regarding the site were provided by Enovert, including:

- A new leachate holding tank has been proposed to collect leachate from Cells 3 & 4, to be located next to the existing holding tanks. The existing tank at the SE corner of site will be retained to store leachate from Cells 1 & 2 only;
- A round of trace gas monitoring is to be undertaken this month (October 2018) using the methodology provided in LFTGN04;
- Landfill gas engine number 1 was, on the day of the audit, running at 900 kW but had been averaging 810 kW recently. Gas flow at this engine on the day of the audit was 530 m³, however, there has been a variance in gas flow recently;
- Engine 2 broke down 2 - 3 weeks ago and has been dismantled. There are plans to replace this with a smaller engine;
- The landfill gas cooling unit in the gas plant has been removed from site;
- Two of the Type 2 wells on the top of the western flank of Cell 4 are now at height and will be converted to Type 1 wells and sealed with bentonite;
- KOP 11 now has an electric pump to remove condensate;
- The eductor trial continues on site. A trial undertaken on the 1st of August at Pin Well 40 removed 800 litres in 1 hour. A new wellhead has been designed to allow an educator to be installed permanently;
- Liquid is now being collected in a perforated pipe buried at the northern end of Cell 4. The liquid drains to a sump and this is pumped to a holding tank. The liquid level is monitored by site via a mobile app by Peel Pumps;
- According to Graham Ball the Type 2 wells are continuing to perform reasonably well. Some of these wells have been dipped to base but others cannot be as they have moved at depth.

Following the meeting, all parties conducted a gas field audit. This began with a visit to the gas compound, where the suction and gas quality at the engine was recorded, see appended results. A walkover survey of the active Cell 4 was then undertaken, including a visual assessment, and the measurement of point source methane emissions using a Gazomat (operated by NRW) and landfill gas concentrations within gas wells with a GA2000 gas analyser (also operated by NRW).

The main findings of the audit are detailed below:

The location of the buried perforated pipe leachate drain at the northern end of Cell 4 was inspected. This drain ends with a sump above which a mild localised leachate odour was noted,

however this is an improvement on the open leachate ditch which preceded. Two points in this area were noted where gas was seen to be bubbling through standing surface water. Readings were taken with the Gazomat, at 8000 ppm (0.8 %) and 30,000 ppm (3.0 %) respectively - similar to the readings detected here during the previous audit in May 2018 (see CAR_NRW0033288).

Several of the Type 2 wells have been lifted since the previous audit. Significant methane emissions were detected at the bases of four of the Type 2 wells, including at HF000W080 - 130,000 - 260,000 ppm, HF000W081 - 230,000 - 390,000 ppm, HF000W083 - 20,000 to 60,000 ppm and HF000W086 - 14,000 ppm. In discussions with Graham Ball and Ian Craven it was determined that the 90 mm collector lines to these wells, which are buried, are likely to have been damaged due to the weight of waste following several lifts. The issues with these wells was noted by Enovert during their balancing exercise on the 15th of October, and an action to replace the collector lines had already been determined. The new lines should mean that suction can be applied to these wells, which will minimise the methane concentrations detected at the base.

Gas wells HF000W063 and HF000W064 were previously Type 1 wells, which have been converted to Type 2. Emissions at the bases of these wells were low - 40 ppm and 36 ppm respectively. A slight negative differential pressure was recorded in well HF000W064 (-0.02 mb). As ascertained previously, due to the design of the Type 2 wells very careful management is required because when they do not receive extraction they can become point sources for the emission of methane.

Non-compliance

Permit condition 3.3.1 states that fugitive emissions of substances (excluding odour, noise and vibration) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures have been taken to prevent or where that is not practicable, to minimise, those emissions.

Methane emissions were detected at the bases of Type 2 wells HF000W080, HF000W081, HF000W083 and HF000W086, which are considered to have the potential to have an environmental impact. An action plan to replace the collector lines to these wells was already in place prior to the audit.

The above is deemed a breach of condition 3.3.1 and has been scored a Category 3 breach of the permit requirement.

On the day of the audit at 15:29 an e-mail was received by James McClymont from Ian Craven outlining the action plan in place to address the issues identified above. See below:

1. Gas well HF000W080 has had a new 90mm collection line connected this afternoon and will be back under extraction by the end of the day.
2. 200 metres of 180mm main has been ordered and will delivered on Friday. This will be butt fused together and used to provide improved suction alongside the lower access road of Cell 4.
3. The gas wells which had already been identified as requiring further investigation, due to potential flow line blockages, will be rerouted to the new 180mm collection main during the week commencing 22nd October 2018.
4. Type 2 well connectors on the well heads will be spun round to ensure no condensate is holding within the pipes, restricting flow.
5. Type 2 wells on top of the western flank of Cell 4 will be converted to Type 1 wells and sealed with bentonite, by the end of November 2018. This will enable other wells within Cell 4 to be converted into Type 2 wells and be built up as the waste level rise within the lower areas of the cell.

Action 1: Operator to undertake the actions listed above, and feed back to NRW upon their completion by the 30th of November 2018.

Action 2: Operator to undertake a Gazomat survey around the bases of wells HF000W080, HF000W081, HF000W083 and HF000W086 and any other Type 2 wells which receive a new collection line. Please forward the results to NRW within 1 week of work completion. If emissions persist then actions to repair will be required, and further scoring may be considered.

EPR Compliance Assessment Report

**Report ID:
CAR_NRW0034079**

This form will report compliance with your permit as determined by an NRW officer

Site	Hafod Quarry Landfill	Permit Ref	PP3139GB
Operator/Permit holder	Cory Environmental (Central) Ltd	Date	17/10/2018

Section 3 – Enforcement Response

You must take immediate action to rectify any non-compliance and prevent repetition. Non-compliance with your permit conditions constitutes an offence and can result in criminal prosecutions and/or suspension or revocation of a permit. Please read the detailed assessment in Section 2 and the steps you need to take in Section 4 below.

In respect of the above non-compliance you have been issued with a warning. At present we do not intend to take further enforcement action. This does not preclude us from taking additional enforcement action if further relevant information comes to light or offences continue.

Section 4 – Action(s)

This section summarises the actions identified during the assessment along with the timescales for when they will need to be completed.

Criteria Ref.	CCS Category	Action required/advised	Due Date
See Section 1 above			
E1	C3	See comments section	30/11/2018

Section 5 – Compliance notes for the Operator

To ensure you correct actual or potential non-compliance we may

- Advise on corrective actions verbally or in writing
- Require you to take specific actions verbally or in writing
- Issue a notice
- Require you to review your procedures or management system
- Change some of the conditions of your permit
- Decide to undertake a full review of your permit

Any breach of a permit condition is an offence and we may take legal action against you

- We will normally provide advice and guidance to assist you to come back into compliance either after an offence is committed or where we consider that an offence is likely to be committed. This is without prejudice to any other enforcement response that we consider may be required.
- Enforcement action can include the issue of a formal caution, prosecution, the service of a notice and/or suspension or revocation of the permit.

See our Enforcement and Civil Sanctions guidance for further information

This report does not relieve the site operator of the responsibility to

- Ensure you comply with the conditions of the permit at all times and prevent pollution of the environment
- Ensure you comply with other legislative provisions which may apply

Non-compliance scores and categories

CCS category	Description	Score
C1	A non-compliance that could have a major environmental effect	60
C2	A non-compliance which could have a significant environmental effect	31
C3	A non-compliance which could have a minor environmental effect	4
C4	A non-compliance which has no potential environmental effect	0.1

Operational Risk Appraisal (Opra) - Compliance assessment findings may affect your Opra score and/or your charges. This score influences the resource we use to assess permit compliance.

Section 6 – General information

Data protection notice

The information on this form will be processed by the Natural Resources Wales (NRW) to fulfil its regulatory and monitoring functions and to maintain the relevant public register(s). The NRW may also use and/or disclose it in connection with:

- Offering/providing you with its literature/services relating to environmental matters
- Consulting with the public, public bodies and other organisations (eg. 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 its service
- Freedom of Information Act/Environmental Regulations request

The NRW may pass it on to its agents/representatives to do these things on its behalf. You should ensure that any persons named on this form are informed of the contents of this data protection notice.

Disclosure of information

The NRW will provide a copy of this report to the public register(s). However, if you consider that any information contained in this report should not be released to the public register(s) on the grounds of commercial confidentiality, you must write to your local area office within fifteen working days of receipt of this form indicating which information it concerns and why it should not be released, giving your reasons in full.

Customer charter

What can I do if I disagree with this compliance assessment report?

If you are unable to resolve the issue with your site officer, you should firstly discuss the matter with officer's line managers using the informal appeals procedure. If you wish to raise your dispute further through our official Complaints and Commendations procedure, phone our general enquiry number 0300 065 3000 (Mon to Fri 08.00 – 18.00) and ask for the Customer Contact team or send an email to enquiries@naturalresourceswales.gov.uk. If you are still dissatisfied you can make a complaint to the Public Services Ombudsman for Wales. For advice on how to complain to the Ombudsman phone their helpline on 0845 607 0987.

Welsh Language

If you would like this form in Welsh please contact your Regulatory Officer.