

**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	01/05/2018	Time in	10:00	Out	13:00
Assessment type	Audit				
Parts of the permit assessed	Cell 4 gas field				
Lead officer's name	McClymont, James				
Accompanied by	Ellis, Rhys				
Recipient's name/position	Ian Craven/ Area Manager	Date issued	04/05/2018		

### 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.

<b>Number of breaches recorded</b>	<b>1</b>	<b>Total compliance score</b> (see section 5 for scoring scheme)	<b>4</b>
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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, 01/05/2018. Audit results are appended.**

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, the measures being taken by Enovert, regarding landfill gas and leachate management in Cell 4, were discussed. These measures include:

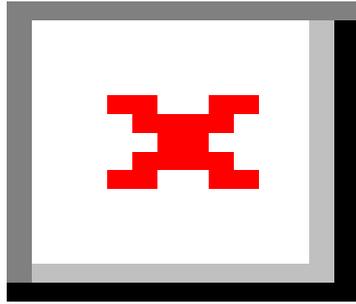
- The construction of a clay bund at the toe of Cell 4;
- Two leachate collection sumps at the toe of Cell 4, to manage leachate in this area. The collected leachate is then pumped to the leachate holding tank;
- A proposed small temporary leachate storage lagoon, at the toe of Cell 4;
- The use of a venturi design leachate extraction system which is being used to remove blockages and reduce leachate levels in gas wells. Removed leachate is pumped to IBCs, which are then emptied to leachate holding tanks;
- Gas extraction has been re-instated at the pins wells in Cell 4;
- Twice weekly balancing of Cory Type 2 gas wells;
- At least monthly Gazomat emissions readings across Cell 4, including at Cory Type 2 gas wells.

At the time of the audit, one of the landfill gas engines was in operation, Engine 2. The flow was recorded as 636 m<sup>3</sup>/h, with the engine running at 1147 kW. Graham Ball outlined that Ofgem have been informed of the site's intention to use the second engine. Graham Ball outlined that the extraction system vacuum will dictate when Enovert are in a position to utilise both engines simultaneously.

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). Enovert also took measurements using their own Gazomat.

The main findings of the audit are detailed below:

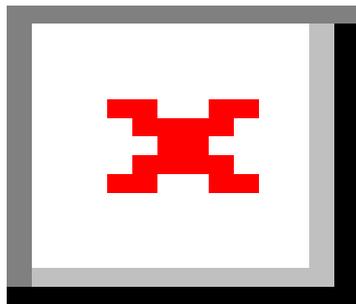
A clay bund has been constructed to contain the small leachate outbreaks at the toe of Cell 4 batter. See figure below:



**Figure 1: Clay bund and leachate sump at the toe of Cell 4**

The two leachate sumps, used to collect the leachate, from where it is pumped, were observed. It appeared that the leachate was all being contained within the engineered area. The concentrated leachate was odorous locally, but this odour was not detected offsite on the day of the audit.

There were methane emissions at the toe of the batter, ranging between 2000 ppm (0.2 %) and 30,000 ppm (3 %). These were visible as bubbles in the leachate. This is an improvement on the emissions detected during the previous audit, on the 15/02/2018, with a maximum concentration of 260,000 ppm (26 %). Ambient concentrations of methane were also improved, from the 1000 ppm detected in February 2018, to generally <100 ppm detected during this audit.



**Figure 2: Area where methane emissions were detected at the toe of Cell 4**

Several of the Cory Type 2 gas wells have been lifted since the audit in February 2018, and Type 1 wells 63 and 64 have been converted to Cory Type 2. Methane emissions above 1000 ppm were detected at the bases of Cory Type 2 wells 83 (60,000 ppm / 6 %) and 85 (4000 ppm / 0.4 %).

Gas well 63 had recently been damaged during tipping operations. This well was not safely accessible during the audit, however, Ian Craven stated that this well would be repaired

immediately.

**Action 1:** Confirm that gas well 63 has been repaired, and provide evidence to NRW by 31/05/2018.

### **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 toe of Cell 4, and at the bases of Cory Type 2 wells 83 and 85, which are considered to have the potential to have a minor environmental impact.

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

**Action 2:** Ensure that all gas wells are adequately sealed to minimise methane emissions, and that leachate continues to be adequately managed in Cell 4.

NRW intends to complete a site gas field audit during Quarter 2 (July - September). Any emissions from the toe of Cell 4 will be re-assessed, and the gas wells will be audited to assess the effectiveness of their seal to the waste mass and the efficacy of extraction.

## EPR Compliance Assessment Report

**Report ID:  
CAR\_NRW0033288**

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Site	Hafod Quarry Landfill	Permit Ref	PP3139GB
Operator/Permit holder	Cory Environmental (Central) Ltd	Date	01/05/2018

### 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	31/05/2018

## 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.