

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

Site	Ffridd Rasmus Landfill Areas 1 & 3	Permit Ref	GP3330BY		
Operator/Permit holder	Gwynedd Council				
Regime	Installations				
Date of assessment	11/10/2017	Time in	09:30	Out	11:30
Assessment type	Site Inspection				
Parts of the permit assessed	Various				
Lead officer's name	Ross, Stuart				
Accompanied by	Roberts, Anthony				
Recipient's name/position	Steven Edwards/ Operations Manager	Date issued	03/11/2017		

### 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
A1 - Specified by permit	A	
B1 - Infrastructure - Engineering for prevention and control of emissions	A	
C2 - General Management - Management system and operating procedures	A	
F1 - Amenity - Odour	A	

**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>0</b>	<b>Total compliance score</b> (see section 5 for scoring scheme)	<b>0</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

### Ffridd Rasus (Area 3)

This Compliance Assessment Report follows a site meeting to discuss landfill gas management at the site, an inspection of the new gas turbine and a brief inspection/walkover survey of Areas 2 and 3.

- Since the installation of the gas turbine April/May 2017 Gwynedd Council has reduced the extraction of the field, aiming to achieve gas field recovery and to improve the long term yield. During this period the operator has diligently checked for fugitive emissions from the landfill surface and for any indications of lateral migration. No evidence of lateral migration has been detected but emissions from the landfill surface / discrete features have been detected.

- Gwynedd Council commissioned AMEC to complete a walkover fugitive emissions survey June 2017 which identified fugitive emissions from a number of features. Gwynedd Council subsequently completed and documented a number of repairs to gas collection wells, leachate wells and the HDPE capping membrane. A follow up survey was completed to assess the effectiveness of the repairs and no emissions were detected.

- During the audit NRW completed a short walkover survey and detected LFG emissions from a number of well bases and the capped area that was subject to investigation following AMEC's June survey. The findings of the NRW and AMEC surveys are in contrast to the findings of NRW's previous fugitive emissions surveys post capping (refer previous Compliance Assessment Reports) whereby emissions were generally absent. This likely reflects the change in field operation.

Unfortunately due to the challenging weather conditions during the audit not all results were recorded in my pocket note book. The results that were noted are as follows;

Location / Description	CH4	Comments / Actions
KOP on spur 7	2%	Loose clip on reducer – requires attention.
Riser 3/1	Background	
GW C24 – well head base	400ppm	Check bentonite seal and re-balance
LCP03 - well head base	70ppm	Check bentonite seal and re-balance
Cell 3 South East Cap (At surface of disturbed capping soils following prior membrane exposure)	Elevated emissions (result not recorded)	Ensure gas wells in vicinity are not flooded and operating effectively. Monitor cap surface during emissions surveys. If emissions persist consider options to improve landfill gas control in this area.

- During the survey of Area 3 the landfill gas wells and collection pipework appeared to be in good condition and pipework falls were adequate.

- The gas field is currently operating under slight positive pressure (+0.2mbar at the compound) with assistance from the blower. The fugitive emissions described above may indicate that the current level of landfill gas extraction being applied to the landfill is not sufficient to control the volumes of gas being generated. However, it may also be that landfill gas extraction is being impeded locally due to perched leachate within the waste mass. Highly enriched raw gas at the compound (66.4% CH<sub>4</sub>) may be indicative of flooded collection wells.

**ACTION** – LFG collection wells should be dipped to identify the depth of liquid and to calculate the length of available slotted pipe. Where wells are suffering from significant flooding pumps should be installed to reduce liquid levels. Please provide NRW with a summary of your findings and proposed actions by 15th December 2017.

- We regard to current site operations, we recommend that as a minimum annual fugitive methane emissions surveys are completed to allow for a more comprehensive assessment of gas field performance.

- A well sealing programme is vital and should be guided by fugitive emissions survey findings (e.g. Gazomat survey) or gas well O<sub>2</sub> content.
- We recommend that maintenance checks are completed on knock out pots (if not already) to ensure they are functioning effectively.
- We recommend that checks are completed on Area 2 collection pipework for falls and water blockages and that well seals are intact, particular where wells which show a proximal high oxygen reading when switched on.
- Since the installation of the gas turbine the flare has not been routinely operational. The existing 500m<sup>3</sup>/hr flare capacity is too large and consideration must be given to changing the burner configuration or for the flare only to be used in a standby capacity in manner that prevents excessive suction being applied to the field on switch over and the associated adverse impact on the gas field.
- As agreed, Gwynedd Council shall write to NRW with proposals for the operation of the flare including in the event of gas turbine failure i.e. contingency plans including timescales prior to flare ignition, flare hire arrangements and monitoring of perimeter gas wells etc.
- Gwynedd Council must give careful consideration to matching LFG utilisation capacity to the gas field yield.
- If Gwynedd Council were to conduct a methane flooding trial then a monitoring protocol will be required for external wells between the landfill and occupational buildings.
- Gwynedd council are completing weekly site maintenance checks, twice monthly balancing, twice weekly perimeter wells monitoring and weekly gas volume and quality checks at the flare. Flare/turbine telemetry is in place to detect and alert personnel to plant failure and response arrangements are in place.
- Gas Quality at compound (pre booster)  
CH<sub>4</sub> % 66.4  
CO<sub>2</sub> % 29.6  
O<sub>2</sub> % 0.2  
BAL % 3.7  
CO ppm 1  
H<sub>2</sub>S ppm 24  
Pressure +0.2mbar
- NRW will return to site within the next 6 months to re assess the issues covered in this report.

## EPR Compliance Assessment Report

**Report ID:  
CAR\_NRW0032391**

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Operator/Permit holder	Gwynedd Council	Date	11/10/2017

### 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.

### 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			

## 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](mailto: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.