

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

Site	Bryn Posteg Landfill	Permit Ref	BU77661C	
Operator/Permit holder	Sundorne Products (Ilanidloes) Ltd			
Regime	Installations			
Date of assessment	25/09/2019	Time in	10:25	Out 15:00
Assessment type	Audit			
Parts of the permit assessed	All mentioned below			
Lead officer's name	Ellis, Rhys			
Accompanied by				
Recipient's name/position	David Williams / Tony Webber/ Technical manager/ Site manager	Date issued	24/10/2019	

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
B1 - Infrastructure - Engineering for prevention and control of emissions	C2	2.9.1
C2 - General Management - Management system and operating procedures	X	

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)	31
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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

Thank you for time during the visit and for the general update provided before we went around site.

Odour

Weather was overcast with sunny spells. Wind direction was Northerly. Regulating officers detected a slight gaseous odour off site on the B4518 on the south western side of the boundary. This was noticed at 10:17 before going on site.

Gas management

Thank you for forwarding the draft report for Phase 9D. It is encouraging to see that the gas and leachate data collected is being analysed. It was agreed that as this is draft, you will be forwarding a final copy imminently but incorporating an update on the perimeter well performance and the Leachate dip level data (i.e. dip to water and dip to base) for all Gas Wells. You advised that there is an increased programme of works for SGG for the gas wells and leachate chambers, including a schedule for Monthly well dipping which is very encouraging to hear. This will help to build a pattern and better understanding of leachate behaviour within the cell and its effect on Gas well extraction.

It is recommended that the leachate and gas management plan is updated to include this maintenance / monitoring schedule being carried out by SGG.

ACTION 1 – Operator to forward relevant updated sections of the leachate and gas management plan no later than 2nd December 2019.

Officers undertook readings with the GA2000+ and Gazomat on a selection of gas wells within Cell 9D. The aim was to have an understanding of the performance of the wells and detect any potential emissions. A copy of our readings and comments are provided in Appendix 1 and 2. A summary of findings and observations was discussed with Deborah and David Williams on site.

In summary:

- Gas Engine 1 was down and Gas engine 2 was running intermittently due to a technical issue. The flare was operational. The pressure within the compound was around -30 mbar
- It was observed that many gas collection lines contained a large amount of condensate, particularly in areas of slumping which will inhibit gas extraction (slugging noises was heard on a number of gas lines). Examples of low points in pipework can be seen in photograph 1. Some of these contained condensate.
- Leachate was seen flowing on certain parts of cell 9, an indicator that leachate levels on site might be high.
- Relative pressure within some of the wells was low (Ranging from -18.8 to -8.7mb)
- Well GW309 was under positive pressure (+18.1), This indicates the likely absence of flow and the well may be blocked with perched water. This can lead to fugitive emissions and migration. Please investigate by dipping this well and inserting a pump if deemed necessary
- Gas bubbling was observed on certain surface areas of Cell 9D and around the site entrance to Cell 9D (particularly on the haul road). A reading of up to 25% methane was noted in the haul road on the GAZOMAT. See photos 7 and 8. This is a very high reading and should be addressed by reference to the efficiency of the landfill gas extraction system in this area.
- Spacing between some of the wells in the northern part of cell 9D appeared to be greater than the rest of the cell. It was discussed that the operator should review gas well coverage and zone of influence particularly in the northern part of Cell 9D.
- A drainage pipe has been installed in the vicinity of the entrance of Cell 9D to help with drainage of leachate. Careful monitoring of this pipe should be undertaken to ensure that this pipe does not become a point source emission for gas and odour.
- Gas emissions up to 8% methane noticed on the Leachate concrete chamber (This was the concrete structure above ground and not in the base) RMLP9D.



Photograph 1



Photograph 2



Photograph 3



Photograph 4



Photograph 5



Photograph 6



Photograph 7



Photograph 8

Condition 2.9.1 stipulates that the operator shall take appropriate measures, including, but not limited to, those specified in any approved landfill gas management plan, to:

- (a) Collect landfill gas; and
- (b) Control the migration of landfill gas

NRW acknowledge that the fact that the operator has been carrying out improvement works to some of the gas infrastructure. However, despite these works point source emissions and issues associated with gas management infrastructure are still present on site resulting in breaches of permit condition 2.9.1. Some of the emissions detected were significant as detected in certain areas of phase 9 (particularly the haul road entrance to Phase 9 and around leachate chambers). It is also important to note that the level of emission levels detected could risk causing odours off site.

As highlighted above further improvements are required regarding gas collection. At present it is viewed that additional appropriate measures need to be taken in order to improve landfill gas collection. As a result, a **CCS score of 2** is applied on this occasion.

ACTION 2 It was discussed that the operator should review gas well coverage and zone of influence particularly in the northern part of Cell 9D and update NRW of the outcome of these investigations. This should follow a gas well survey of all wells in this area for perching with leachate. The well spacing should be presented as no area greater than 40m centres (20m overlapping radius). Please provide NRW with timescales for this work no later than 1st November 2019.

ACTION 3 Site to ensure that low spots within the gas collection infrastructure are designed out and that appropriate methods of dewatering are installed across the site in all cases. Please provide NRW with timescales for these investigations no later than 1st November 2019.

ACTION 4 Operator to forward a final report for Phase 9D incorporating an update on the perimeter well performance and the Leachate dip level data (i.e. dip to water and dip to base) for all Gas Wells. Please forward no later than 1st November 2019.

ACTION 5. Emissions from the leachate chamber infrastructure should be investigated. Other chambers in this cell should also be inspected. Findings and actions should be forwarded to NRW no later than 1st November 2019.

ACTION 6. Officers during the visit were unable to locate the gas tap for well reference 316. Please can you confirm if there is one and if so where is it located. Officers were also unable to sample Gas well 308 due to it being too high to reach, please confirm how this is currently sampled and what measures are to be taken to improve sampling accessibility. Please respond no later than 1st November 2019.

Gas and Leachate Intervention Trench - Phase 1 and Phase 2.

It was advised that this trench has now been installed. Leachate connection from this sump has also been installed and is now pumping. However the gas line remains unconnected and is currently venting. As discussed this should be connected as a matter of urgency. You advised that this work will be completed within the next week.



Photograph 9 - Gas and Leachate Intervention Trench

ACTION 7. An action from the visit was for the operator to connect the gas line from this Intervention Trench and inform NRW when this has been completed. Please could you respond no later than 1st November 2019 on this matter.

ACTION 8. Operator to monitor this unconnected gas line closely in the interim. If elevated gas emissions are detected then site should take necessary measures to alleviate these emissions and this pipe should under no circumstances act as a conduit for oxygen ingress into the extraction system. The operator should also monitor the effectiveness of the new trench in collecting contaminated water within phase 1 and 2.

C1 - Management

Management is the root cause of the majority of the issues noted above. A **CCS score of 2** could be applied under condition 1.1.1 of the permit. However, due to the recent improvement noted on site, and providing the operator continues working on these improvements and the relevant actions are taken within a timely manner (including those highlighted above), then we will not issue a score on this occasion. However, this position might change should further evidence come to light or if relevant actions are not taken by the operator.

Leachate Treatment Plant and associated lagoons.

Both lagoons appeared to have some free board during the visit. The marker boards on the lagoons have not been installed as per Leachate management plan. Please keep NRW updated on this outstanding matter.

It was also explained that given the polluting nature of the substance being stored within this lagoon, previous containment failures and incidents NRW deem this lagoon a high risk and therefore extra safeguards are necessary on site. For example (but not limited to) the operator should consider measures such as high-level alarm and automatic shut offs etc. This will be covered in more detail in response to the operators response to CAR form NRW 0035577.



Photograph 10

ACTION 9

Operator to confirm the timescales for the installation of the marker board and address further comments raised in correspondence

CAR form NRW 0035577 regarding the implementation of extra safeguards etc . Operator to provide an update to NRW by 1st November 2019.

Spreading of brown light liquid on the landfill from a tanker.

Could you please confirm the origin of this material being sprayed and why this operation was being undertaken . The liquid was being sprayed several meters into the air with the risk of creating considerable odour. Its appearance raised questions on whether this was sludge from the leachate treatment plant. Please note that liquid waste should not be deposited within the landfill.

Please respond by 1st November 2019.

Surface water management

A brief update was given on surface water improvement on site. A permit variation is more or less ready to be submitted for the eastern site which will involve automatic dosing. The dosing equipment is yet to be purchased. The next steps for the Western side is dependent on the outcomes of the ongoing investigation to using the Vortex water treatment system on site.

ACTION 10: Please keep NRW updated in regard to this matter.

Permit Variation and Costs.

There was an action for NRW officer to confirm whether NRW could accept a 2 staged permit application submittal and a brief idea of costs. This was discussed with David Williams in a subsequent telephone conversation the following day.

Update on gas engine performance.

Thank you for providing an update on the gas engines on the 8th of October 2019 advising that 'a Finnings engineer was out on site for 2 days last week and has managed to get Engine 2 back up and running, although it is slightly de-rated on power. This is due to a slightly faulty cylinder head, which is scheduled to be replaced on the 17th October.

Engine 1 is still not operational due to a wiring loom fault. A new section of loom is currently being fabricated for it and an engineer has been booked to fit this loom on the 15th October.

As such, all being well, both engines should be fully operational again by the close of play on the 17th October.

ACTION 11: Please provide an update on the above.

EPR Compliance Assessment Report

**Report ID:
CAR_NRW0035854**

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

Site	Bryn Posteg Landfill	Permit Ref	BU7766IC
Operator/Permit holder	Sundorne Products (Ilanidloes) Ltd	Date	25/09/2019

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.

We will now consider what enforcement action is appropriate and notify you, referencing this form.

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			
C2	X	See Actions in CAR Form	01/11/2019
B1	C2	Further improvement are required regarding gas collection	01/11/2019

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.