

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

Site	Tremorfa Anaerobic Digestion Facility	Permit Ref	AB3093CA		
Operator/Permit holder	Kelda Organic Energy (Cardiff) Limited				
Regime	Installations				
Date of assessment	25/09/2018	Time in	10:00	Out	12:15
Assessment type	Audit				
Parts of the permit assessed	As detailed				
Lead officer's name	Griffiths, Toby				
Accompanied by					
Recipient's name/position	Steve Churches/ Site Manager (temporary)	Date issued	10/10/2018		

### 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
A1 - Specified by permit	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.

<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

### Visit of 25th September 2018

Seen: Ian Kemmery, Steve Churches, Rob Brown

#### 1. Introduction

The purpose of the visit was to conduct a compliance inspection and familiarise with the process. The plant has experienced issues recently, which are detailed below. The plant manager is on sick leave, and the site is being temporarily managed by Steve Churches with input from Rob Peacock and Ian Kemmery. The AD plant was previously operated by Kelda water, but is now operated by Dwr Cymru/Welsh Water (DCWW). The site receives material from Cardiff and Vale food waste collections under a contract. There is a single 2 MW(e) engine on site running on the gas produced by the AD process. The resulting digestate is assessed against the PAS 110 quality specification to ensure it is suitable for agricultural use as a fertiliser. The operator uses an Environmental Impact Control Plan (EICP) to manage site aspects.

#### 2. Update on current AD problems

In July, a Schedule 5 document was received by NRW in relation to some gas venting from some of the digester tanks. This process involved releasing residual gasses and pressure, to enable the digester to be emptied of digestate material.

**ACTION1:** DCWW agreed to submit further details of the venting releases, including volumes and gas concentrations. Please forward these to NRW.

The emptying of the primary and secondary digester tanks was required because food waste bags had carried through the system into the digesters causing a blockage. Although the bags are biodegradable, they are found not to degrade well in anaerobic conditions. A press at the front end of the process is designed to remove the bag prior to digestion. However, the press was unable to deal with this type of bag, which then carried through into the process. The issue has affected a significant proportion of the AD process, and waste is being diverted to other AD sites. In the meantime, significant work has been undertaken to rectify the problem and a screen system is being installed to remove the bags after the press. This should be completed in two weeks. The recovered bags are sent for recovery elsewhere. It was noted that previously, bags had been accepted at the energy from waste plant in Cardiff, however this has ceased, forcing the waste to be transported some distance to another site. NRW encourages local solutions to be found to avoid the additional pollution from transport and to promote the circular economy. In the longer term, other types of bag material are being considered.

#### 3. Q1 and Q2 waste returns late and greenhouse gas questionnaire

DCWW were reminded of the requirement to submit this information. [This was subsequently

received on 27<sup>th</sup> September 2018]

#### 4. Permit transfer

As DCWW are now the site operators, a permit transfer is required. It was stated that the application had already been submitted to NRW.

#### 5. Odour management and pest control

All waste is tipped inside a contained reception hall. It was noted that the roller shutter doors were closed after each delivery. Air from the building is extracted via an odour control unit based on woodchip media. The building is kept under negative pressure to prevent odour escaping. There were flies noted inside the reception hall, which were explained by some older waste being stored temporarily. DCWW reported that since encountering issues with flies, they had installed a suppressant spray which automatically fills the hall each night. This was reported to be effective at reducing fly numbers. NRW noted that it was possible to leave a side access door open, which could allow flies and odour to escape from the hall. Fitting a door-closer (if appropriate) would help to ensure that doors are kept closed.

**ACTION 2:** Please review arrangements for the side access doors to ensure they close promptly after each use. Other measures could also be investigated.

Air curtains were specified in the application and are required by the permit within Table S1.2. DCWW stated that the air curtains were not considered appropriate in the final construction. However, given that these were included in the permit application, DCWW need to justify the reasons for not including them. This is a potential non-compliance with the permit under Condition 2.3.1(a) Operating Techniques.

The application also states that *“The media to be used in the biofilter will be clay” and that “Water recirculation is an integral part of the odour control process, as it will maintain the biological activity of the media and thereby maximise the effectiveness of the treatment. The unit will have its own integrated recirculation system.”* Elsewhere in the application, wood-chip is mentioned as the media and it is therefore unclear what the arrangements are.

**ACTION 3:** Please confirm whether or not these statements are an accurate reflection of the arrangements on site and clarify as necessary.

**ACTION 4:** Please confirm biofilter media change frequency and the basis for replacement (e.g. monitoring).

**ACTION 5:** Please provide information to NRW to explain why the air curtains were not installed on site, including supporting evidence and what (if any) any amendments to the odour management plan are required.

#### 6. Containment of liquids

The site is built on a concrete pad and the main tanks contained within a large concrete bunded area. Drainage can be sent either to foul sewer or surface water, after suitable testing, via a manual valve. There is an oil separator on the drainage system, and it also allows for rainwater harvest for use in the process. IBCs of material were also being stored in this area, and NRW recommended that these should be given a dedicated storage location. It was not clear what the tank/bund maintenance regime entailed.

The main process tanks and vessels undergo the statutory pressure tests; however the arrangements for planned maintenance was unclear. A replacement floor is currently being fitted

to tank 1 due to the failure of the building contractor to apply a coating to the concreted. This has allowed corrosion to damage the floor.

**ACTION 6:** Please confirm the inspection and maintenance arrangements for tanks and secondary/tertiary containment including bunds and concrete.

## **7. Monitoring and ELV compliance. See Table S3.1, S3.2 and S3.3.**

The requirements for the annual monitoring of A2 and A5 were discussed and DCWW were aware of this requirement. Live temperature monitoring was seen for both the biofilter and flare and moisture for the biofilter. The flare probe was recording 15C which was the ambient temperature, since the flare was not operating. The operator was unclear of the threshold / setpoints needed to maintain the correct function of the equipment. This should be clarified. Gasses arising from the AD process were monitored live on screen.

**ACTION 7:** Please confirm the set points / thresholds for each of the process controls e.g. temperature, moisture, flow, gas concentration etc.

Site odour checks are carried out on each shift.

**ACTION 8:** These odour checks should to be added to daily check sheet. Staff should be aware of the potential to becoming desensitised to odour from working inside the reception hall. Preferably, the olfactory assessment should be carried out by someone with less exposure to strong odours.

## **8. Conclusion**

Overall, there was evidence of good practise, particularly in monitoring, and the process appeared to be well controlled. The roller doors remained closed when not in use. As the process has only recently been transferred to DCWW, and there has been staff sickness, there are several items where clarification is needed. These are detailed in the actions.

Please respond to the actions by **2nd November 2018.**

END

## EPR Compliance Assessment Report

**Report ID:  
CAR\_NRW0034038**

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Operator/Permit holder	Kelda Organic Energy (Cardiff) Limited	Date	25/09/2018

### 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.

### 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			
A1	X	Please refer to 8 actions in main text	02/11/2018

## 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.