

Compliance Assessment Report

Report ID:
CAR_NRW0026793

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

Site	Afan Combined Heat And Power Facility	Permit Ref	ZP3032KQ			
Operator/Permit holder	Dwr Cymru Pentwyn Road					
Regime	Waste Operations					
Date of assessment	31/10/2016	Time in	09:30	Out	13:00	
Assessment type	Audit					
Parts of the permit assessed	1.1.1, 4.2					
Lead officer's name	Thomas, Ffion					
Accompanied by						
Recipient's name/position	Andrew Dixon/ Site manager	Date issued	20/12/2016			

Section 1 – Compliance Assessment Summary

This is based on the requirements of the permit under the Environmental Permitting Regulations. 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
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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	0	Total compliance score (see section 5 for scoring scheme)	0
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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

This Compliance Assessment Report (CAR) form has been completed following the pre-arranged site inspection of the Dwr Cymru cyfyngedig, Combined Heat and Power (CHP) facility at Afan waste water treatment works.

The site audit was undertaken by Ffion Thomas (PPC officer of the SW Wales Waste Regulation team) as part of planned routine compliance work. The visit was undertaken on 31 October 2016.

Scope of Visit/Agenda:

- Introductions
- Permit condition 4.2.2 discussion following previous non-compliance
- Condition 1.1.1 – management system and internal procedures.
- Site tour.
- AD exemption
- Actions.

Introductions:

Ffion Thomas met with Andrew Dixon, Andrew explained that following internal re-structuring he was now allocated as the point of contact for the Afan CHP. Ffion Thomas has requested Andrews details and summary of the new structural changes via email on the 19 Dec 2016.

Permit condition 4.2.2 discussion following previous non-compliance:

The CAR form ref NRW0017512 issued on the 28/4/16 included non-compliances related to late reporting, no interpretive report and missing data against condition 4.2.2 On the 5th August 2016 Matthew Griffiths sent a submission meeting the actions of the CAR form.

The submission of an interpretive summary still lacked some of the details that would be expected. Condition 4.2.2 (a) states “a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of the data”

The submission stated:

Please see below an interpretive summary of our submissions for 2015 as well as the required performance indicators. I hope this is what you need but if not we can sit down and go through these in some detail when we meet in September.

Biogas yield will vary year to year based on sludge throughput. If it is a particularly wet winter and there is overflow from Sewers then the sludge is lost and doesn't enter the digestion process and provide biogas. The implication of this is that the biogas fuel for the engines may be more or less, which then affects the hours run of each engine and boiler. If the boilers and engines cannot operate continually at high loading then their efficiency drops off, as such, the performance of the engines and boilers can vary year to year too.

Flare stack usage is reported and will increase when engines are taken away for rebuilds. This happened in 2014 when the engines were taken away for planned re-builds as part of their maintenance. The rebuilds also improve efficiency of the engines by renewing pistons and cylinder heads.

Afan

Parameter	Result
Total Fuel Input (biogas)	3,545 Nm3
Total Fuel Input (natural Gas)	7,104 MWh
Power output -heat	13,450 MWh
Power output- electricity	10,669 MWh
Energy Efficiency	3.0 MWH/m3 biogas
Water usage	m3
Water generated	N/A m3/MWH
Operational time of waste gas burner	(< 876 hrs) < 10% of operational time

Whilst this gives an interpretation of the efficiency and flare stack usage the interpretive review should be looking at all monitoring data. (Table S4.1)

This issue has previously been discussed and findings recorded in CAR form ref 5616 issue 11/6/14. Within

the CAR form a suggested format was included and for ease I copy the details below for your consideration.

DCWW are required to comply with permit condition 4.2.2 (a) by submitting an interpretative review of the data.

Discussions were held to help advise on the content of this review. A summary report is requested, the suggested report format is to include, but not restricted to, the headings/topic areas below:

- **Operations summary** a site update, explaining what activities had been undertaken or changed at the site during the year, including infrastructure changes, maintenance undertaken and any management structural changes.
- **Performance interpretation** a data review with trend analysis against previous operational years and interpretation of the current year's performance. Including an explanation/justification for any variations in trends.
- **Monitoring review** to ensure that monitoring data has been interpreted and any trends assessed, helping to build up the operational performance picture e.g. is full combustion being reached via review of CO emission trends.
- **Conclusions summary** of report findings and recommendations
- **References** provide the opportunity to record updates to the permit operating techniques i.e. supporting information report reference 124348-10/4.50 dated 15/10/09 written by Arup submitted by DCWW with the permit application.

Discussion was held over the submission date and Andrew enquired if it would be possible to alter the submission date to 31 March as this would align the reporting with internal procedures and the DECC, now known as the Department for Business, Energy and Industrial Strategy (BEIS) requirements to report on renewables generation and capacity.

An action was assigned to Ffion Thomas to check the permit details and see if an "otherwise agreed in writing" option was in place to agree a change of submission date.

Ffion Thomas confirmed via email to Andrew Dixon on the 19/12/16 that the permit condition did allow for "otherwise agreed" and requested that Andrew submit a written request, stating the date you wish to submit the report, and justification for the request.

ACTION DCWW: submit a written request, stating the date you wish to submit the report required by condition 4.2.2 and justification for the request.

Condition 1.1.1 – management system and internal procedures.

A discussion was held related to the fact that DCWW has updated its internal procedures which are relevant for the permit.

A request to share the most up to date Environment Management plan and any associated relevant procedures to meet condition 1.1 was made.

It was also discussed that if these procedures met accredited standards, e.g. ISO140001, then this may impact the site's original OPRA score. Ffion agreed to send over details of the EP OPRA scheme and

suggested that Andrew Dixon review and submit an updated OPERA profile. This may have implications on the sites subsistence fees.

On the 19th December 2016 Ffion Thomas emailed Andrew Dixon including details regarding OPRA, for ease the relevant section is copied below:

I was also actioned with forwarding to you information regarding updating your EOPRA profile, should any of your procedures change the profile scoring. Please find link below giving guidance on the opira scheme

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/301776/LIT_6663.pdf

Attached is the spreadsheet to be completed.(the email contained the attachment)

ACTIOPN DCWW forward the sites Environment Management Plan and any relevant associated procedures to demonstrate compliance with condition 1.1.1

Site tour.

A short tour was undertaken of the facility. The site is in good operational condition with the engines running smoothly. Good housekeeping was evident and the gas CHP engines appeared in good working condition. Andrew explained the routine maintenance is undertaken 1 day per 3 months at 2,000 running hours. Every 2 and ½ years there is a major rebuild. Edena were employed since 2013 as the sub contractors and employed to undertake the remote servicing and rebuilds. The plant is now 6 years old in 2014 the last rebuild was undertaken. The next is scheduled for late 2017/ early 2018.

One ongoing problem was identified with the ingress of iron rich dust into the engines. This dust is generated by the Tata steel works and with the Afan CHP site being located within the works the air includes this dust. The iron enrichment has the negative effect of corroding the engines. DCWW are investigating into options for filtration systems however the cost benefit against routine maintenance and rebuilds is a limiting factor. The target payback of any filtration system would be 10 years.

Ffion Thomas agreed to forward any information she found that may be of assistance to this point. To date Ffion has not found any relevant advice advice that already recovered by DCWW. This will be ongoing.

The siloxane plant installed in 2014 continues to show benefit the engine operations. The intake flow is reduced by the plant but this has shown not to be negative overall.

The permit only covers the CHP engines, as so an inspection of the AD was not undertaken however discussion was held regarding the wastes received. The advanced digestion does not receive sludge from external sites. The satellite sites undertake a preparation prior to transportation and as so a “cake” is received at Afan. At DCWW all sludge goes through advanced treatment before application to farm land or to the Afan AD facility.

(no inspection of the STW was undertaken as again outside of the EPR permit)

The typical total throughput of the site is 12,000tons dry solid a year. The plant is designed to be able to take 20,000 so there is plenty of head room.

AD exemption

The AD site has a T21 exemption registered which allows the recovery of waste at waste water treatment works. Future changes of regulation may see the AD plant at Afan coming under permitted regulation. DCWW are advised that should they wish to review their permit and operation to seek a consistent permitted approach at their 3 facilities (Cardiff and Five fords) they are welcome to do so and pre-application advice can be arranged.

Actions Summary

ACTION DCWW: submit a written request, stating the date you wish to submit the report required by condition 4.2.2 and justification for the request.

ACTIOPN DCWW forward the sites Environment Management Plan and any relevant associated procedures to demonstrate compliance with condition 1.1.1

END

EPR Compliance Assessment Report

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Operator/Permit holder	Dwr Cymru Pentwyn Road	Date	31/10/2016

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 reports should not be released to the public register(s) on the grounds of commercial confidentiality, you must write to your local area office within twenty 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.