

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

Site	Bridgend Engine Works EPR/BL2548IF	Permit Ref	BL2548IF		
Operator/Permit holder	Ford Motor Company Ltd				
Regime	Installations				
Date of assessment	23/03/2018	Time in	10:00	Out	13:00
Assessment type	Audit				
Parts of the permit assessed	See Agenda				
Lead officer's name	Jenkins, Nicholas				
Accompanied by					
Recipient's name/position	Brett James/ Environmental Engineer	Date issued	12/04/2018		

### 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	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

### Attendees

Mark Thomas – Manufacturing & Plant Engineering Area Manager – Ford Motor Company Ltd

Brett James – Environmental Engineer - Ford Motor Company Ltd

Dan Preece – Senior Plant Engineer - Ford Motor Company Ltd

Reece Adams - Plant Engineering Manager - Ford Motor Company Ltd

Steven Robinson – Dunphy Combustion Ltd (Only present during tour of boiler house)

Nick Jenkins – PPC Officer - Natural Resources Wales

### Agenda

1. Overview of plant/including site visit;
2. Discussion of potential deregulation of boiler house;
3. Inspection of software and interlocks;
4. Removal of Ford's diesel storage tank
5. Review of outstanding actions (CAR\_NRW0031139 & CAR\_NRW0032323)

## **1. Overview of plant/including site visit**

The Installation comprises of the “Boiler House” and associated activities of the Ford Bridgend Engine Plant site and covers a small section of the entire site footprint.

The main plant items are Boilers, Gas and Gas - Oil Storage and Distribution and High Pressure Hot Water Circulation System (HPHW). There are a number of additional activities required to either support the process or control potential emissions from the process to include, Demineralisation Plant, Pressurisation Unit, Distribution Pumps, Extraction Fans and a Blow Down Pit.

There are five boilers; boilers 1 to 4 have a net thermal input of 12.7 megawatts each and boiler 5, 3.8 megawatts. (An aggregated total of 54.8 megawatts). The primary fuel is natural gas, whereas gas oil was previously used as a standby fuel this has been phased out. The boilers are used to heat water to supply to the engine works.

The boiler house supplies HPHW re-circulation system to the engine works. The HPHW is circulated by distribution pumps and returns to the boiler plant. The water for the boiler house and the HPHW system is supplied from town's water, which is treated in the demineralisation plant before use. As the HPHW system is a closed loop re-circulation system, little top-up water is required. The system and the boilers are only periodically drained for inspection and maintenance.

Blow down water from the boilers and contaminated waters from bunds and general waste storage areas are discharged to via the wider Ford works system to public sewer. Uncontaminated storm water is collected in the site drainage system of the wider Ford works before discharging into the River Ewenny via an interceptor.

We toured the plant and the permitted installation including the gas oil storage tank, boiler house and operational areas outside of the installation boundary.

## **2. Discussion of potential deregulation of boiler house**

In the penultimate CAR form created following an audit undertaken in January 2017 (CAR\_NRW0032323), Ford had identified that it was considering the decommissioning of its boiler house. This was based on the introduction of local air handling units (AHUs) thus reducing the necessity for the HPHW system for heating the plant. At the time of the audit, Ford explained that it was in the first phase of introducing AHUs (12x2.2kW). Further detail was provided following the March 2018 audit which specified that 10 AHUs, each with an associated modulating gas burner (rated with maximum input 930kW) would be installed in phase one and all are expected to be operated by the end of April 2018.

Phase two and the final phase, will involve the installation of 480 radiant heaters, each with a gas burner

(rated at 32kW) that will inevitably exclude the reliance of the boiler house. The expectation is that once radiant heaters have been commissioned and fully operational the boiler house will become obsolete and will fall out of regulation as a Schedule 1 activity and therefore not require regulation by NRW. A surrender application would be required if this is Ford's preferred option and we would assist where possible, to ensure an application is duly made.

### 3. Inspection of software and interlocks

The previous operator monitoring assessment (undertaken 13/07/17) had raised a concern regarding the ambiguity of the software system associated with the derating of boiler 4. The action following this report was for NRW to attend annually to assess whether any changes had been made to the low NOx burner that would bring the total aggregated thermal input to a level greater than 50MW. The implications from an environmental permitting point of view is that going above 50MW will invoke the large combustion plant directive.

On attendance at the boiler house we were met by Steven Robinson of Dunphy combustion (Dunphy). Dunphy is responsible for maintaining the modulating gas burners on boilers 4 and 5 when specific maintenance issues cannot be rectified by Ford's in-house team or during KAN Development's routine service visits. Dunphy is also responsible for overriding any settings on the burners for specific tests.

Dunphy gave us an overview of the software and how limited access can be gained to the system using a simple passcode. From this menu it is possible to change the O<sub>2</sub> trim  $\pm 2\%$  but nothing else. A further six figure passcode which can be generated by Mr Robinson via his laptop will allow changes to all the parameters of the burners. The request for the passcode nor the changes to the parameters of the burners would be flagged but it is unclear as to why Ford would request this action from its contractor. In addition, the boilers have not operated together for many years and with the installation of the direct gas fired AHU within the 'Dragon' section of the plant, Ford outlined that it is unlikely that it will ever have the demand for simultaneous firing of all boilers.

We understand there is the consideration of the aggregated thermal input however, the onus for adherence to this action should not sit with NRW rather Ford through its own procedures and operating instructions. **Recommendation – Ford to implement an assurance methodology to certify the operation of the bypass software for the burners on boilers 4 and 5.**

### 4. Removal of gas oil storage tank

Ford has a 700,000-litre single skin, stainless steel tank which was primarily used to store its secondary fuel source to power the boiler in the permitted installation. Ford's reliance on gas oil has diminished as natural gas has been the only source of fuel used in the boiler house since 2010 (based on annual returns). The tank currently sits within a concrete bund.

As the need for gas oil has been removed, so too has the requirement for the tank and its associated operations i.e. bund and pipework. We toured the location of the tank and the connections to the boiler house to understand the environment around the assets. Ford is currently carrying out additional sampling in and around the tank and pipeline to verify some of its soil and groundwater results and in preparation for the decommissioning.

Although we would have no concerns regarding the decommissioning and removal of the tank we would request that the whole process is completed to relevant guidelines including but not restricted to the ones outlined in the following link:

<http://www.netregs.org.uk/environmental-topics/pollution-prevention-guidelines-ppgs-and-replacement-series/guidance-for-pollution-prevention-gpps-full-list/>

Ford explained that it has existing procedures and operational techniques for similar processes and we would encourage Ford to review and amended where necessary to ensure the environment is protected.

For further assistance regarding pollution prevention methods while undertaking the decommissioning process, please contact Hannah Jenkins in our Bridgend - Natural Resource Management team on 03000 653262.

##### **5. Review of outstanding actions (CAR\_NRW0031139 & CAR\_NRW0032323)**

CAR\_NRW0031139 15 February 2017 - All actions completed

CAR\_NRW0032323 18 October 2017 – In an email dated 18 December 2017, Ford provided evidence that it had considered and where appropriate, implemented measures to complete all the actions and recommendations outlined in the CAR report.

Where Ford was asked to re-evaluate its air emission sampling locations and to justify its continued use of temporary platforms it advised that it had requested a quotation for a project proposal to manufacture, supply and install five platforms.

The quotation was discussed in the audit and subsequently was provided. We cannot see the environmental benefit of installing 5 monitoring platforms and 4 individual concrete pads based on the likelihood that the boiler plant will be decommissioned with the completion of phase two of the alternative heating project. **However, our approval is based on dates that we now request from Ford, that will specify the decommissioning of the boiler house and the submission of a permit surrender. We would request this timeline no later than 11 May 2018.**

[END]

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## EPR Compliance Assessment Report

**Report ID:  
CAR\_NRW0033100**

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

Site	Bridgend Engine Works EPR/BL2548IF	Permit Ref	BL2548IF
Operator/Permit holder	Ford Motor Company Ltd	Date	23/03/2018

### 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			

## 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.