



Llywodraeth Cymru
Welsh Government

Notes for Guidance

Environmental Permitting Guidance – Waste Incineration

March 2016

1. Introduction

- 1.1 This document sets out Welsh Government guidance on how Chapter IV of the Industrial Emissions Directive (IED)¹ applies in relation to Wales. The IED has been transposed in relation to Wales by the Environmental Permitting (England and Wales) Regulations 2010² (“the EPR”). To the extent that Chapter IV of the IED imposes obligations relevant to the permitting of waste incineration and co-incineration plant, the relevant provisions of the EPR are to be found in Schedule 13A.
- 1.2 This Guidance forms part of the suite of Government guidance documents relevant to environmental permitting in relation to Wales. Other documents in that suite of guidance include:
- the Core Guidance for the Environmental Permitting (England and Wales) Regulations 2010, which can be found at:
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/211852/pb13897-ep-core-guidance-130220.pdf
 - the Industrial emissions Directive EPR Guidance on Part A installations, which can be found at:
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/221044/pb13898-epr-guidance-part-a-130222.pdf
 - the environmental permitting guidance for local authorities, which is available at:
<https://www.gov.uk/government/collections/defra-guidance-on-local-authority-pollution-control-lapc-regime>
- 1.3 This guidance does not detail all of the requirements of the Environmental Permitting (England and Wales) Regulations 2010 that may be applicable to the operation of waste incineration plant and waste co-incineration plant. Operators should have regard to other relevant environmental permitting guidance, including the documents listed above, and they should ensure that all applicable regulatory requirements are met. Additionally, operators are encouraged to seek pre-application advice from the regulator in order to facilitate a smooth environmental permit application determination process.

¹ Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) (Recast). See <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:32010L0075>

² S.I. 2010/675 (as amended)

2. What are waste incineration plant and waste co-incineration plant?

The definition of waste incineration plant and waste co-incineration plant

2.1 By virtue of Schedule 13A to the EPR, Chapter IV of the IED applies in relation to 'waste incineration plant' and 'waste co-incineration plant'.

2.2 'Waste incineration plant' is defined in regulation 2 of the EPR as follows:

“waste incineration plant” means a stationary or mobile technical unit and equipment dedicated to the thermal treatment of waste, with or without recovery of the combustion heat generated, through the incineration by oxidation of waste as well as other thermal treatment processes, such as pyrolysis, gasification or plasma process, if the substances resulting from the treatment are subsequently incinerated’

2.3 'Waste co-incineration plant' is defined in regulation 2 of the EPR as follows:

“waste co-incineration plant” means a stationary or mobile technical unit whose main purpose is the generation of energy or production of material products and which uses waste as a regular or additional fuel or in which waste is thermally treated for the purpose of disposal through the incineration by oxidation of waste as well as other thermal treatment processes, such as pyrolysis, gasification or plasma process, if the substances resulting from the treatment are subsequently incinerated’

These definitions reflect those in the IED.

2.4 'Small Waste Incineration Plant' ('SWIPs') are separately defined by regulation 2 as waste incineration plant and waste co-incineration plant with a capacity less than or equal to 10 tonnes per day for hazardous waste or less than or equal to 3 tonnes per hour for non-hazardous waste. This has the effect of making SWIPs a sub-category of waste incineration plant and waste co-incineration plant under the EPR. A small appliance used to burn waste oil ('Small Waste Oil Burner' - 'SWOB') is a SWIP, provided that its capacity is below the relevant threshold in the definition of SWIP in regulation 2. If its capacity is above the relevant threshold, it is a waste incineration plant or waste co-incineration plant.

2.5 In our view the definitions suggest that in order to fall within Chapter IV of the IED, the plant requires a degree of technical sophistication, in the absence of which it is not waste incineration plant or waste co-incineration plant. For example, a device that does nothing more than provide physical containment

for what would otherwise be an open bonfire may lack the necessary degree of technical sophistication. In our view a small appliance used to burn waste oil (Small Waste Oil Burner – ‘SWOB’) will be sophisticated enough to be considered to be a Small Waste Incineration Plant (SWIP) or, if its capacity is sufficiently large, a waste incineration plant or waste co-incineration plant.

- 2.6 Article 42(1) of the IED prescribes that the Chapter IV provisions apply to waste incineration and co-incineration plant ‘...*which incinerate or co-incinerate solid or liquid waste.*’
- 2.7 If the substance to be incinerated is not waste, the plant in which it is burned or otherwise thermally treated cannot be waste incineration plant or waste co-incineration plant. This includes circumstances in which waste has been recovered to the extent that it has ceased to be a waste prior to its incineration in waste incineration plant or waste co-incineration plant.
- 2.8 Waste, within the context of the Chapter IV provisions, is defined by reference to point 1 of Article 3 of Directive 2008/98/EC (‘the Waste Framework Directive’) as ‘...*any substance or object which the holder discards or intends or is required to discard.*’ It should be noted that Chapter IV of the IED applies specific provisions to waste incineration plant and waste co-incineration plant incinerating or co-incinerating hazardous waste (as defined in point 2 of Article 3 of Directive 2008/98/EC).
- 2.9 The reference to Article 3 is also used in the definition of waste that is provided in the EPR for the purposes of Schedule 13A.
- 2.10 In our view if the burning of a small quantity of waste in an appliance is incidental to a process that is not waste incineration or waste co-incineration it does not fall within the scope of the provisions of Schedule 13A of the EPR. Examples might include:
- The melting of scrap metal in electric arc furnaces; and
 - The cleaning of paint from jigs.

The physical scope of waste incineration plant and waste co-incineration plant

- 2.11 Article 42(1) also defines the physical scope of waste incineration plant and waste co-incineration plant as ‘...*all incineration lines or co-incineration lines, waste reception, storage, on site pretreatment facilities, waste-, fuel-, and air-supply systems, boilers, facilities for the treatment of waste gases, on-site facilities for treatment or storage of residues and waste water, stacks, devices and systems for controlling incineration or co-incineration operations, recording and monitoring incineration or co-incineration conditions.*’

2.12 Additionally, Article 42(1) defines the physical scope of pyrolysis, gasification and plasma waste incineration plant and waste co-incineration plant as '*...both the thermal treatment process and the subsequent incineration process.*'

3. How are the provisions of Schedule 13A to the EPR applicable to different types of waste incineration plant and waste co-incineration plant?

3.1 Schedule 13A to the EPR applies to waste incineration plant, waste co-incineration plant and SWIPs to which Chapter IV of the IED applies (except those operated as domestic activities in connection with a private dwelling).

3.2 By virtue of Schedule 13A to the EPR, outside of the specific exclusions described in this section, waste incineration plant and waste co-incineration plant incinerating solid or liquid waste will be subject to the provisions of Chapter IV of the IED. The environmental permits for such plant will include conditions that reflect the requirements of Chapter IV. This includes the additional technical provisions, including maximum emission limit values, set out in Annex VI to the IED. It should be noted that Chapter IV of the IED applies specific provisions to waste incineration plant and waste co-incineration plant incinerating or co-incinerating hazardous waste (as defined in point 2 of Article 3 of Directive 2008/98/EC).

Waste incineration plant and waste co-incineration plant excluded by virtue of the type of waste incinerated

3.3 Within Chapter IV of the IED, Article 42(2) prescribes that waste incineration plant and waste co-incineration plant burning specific waste types are **not** subject to the provisions of Chapter IV. These waste types are as follows:

- Vegetable waste from agriculture and forestry;
- Vegetable waste from the food processing industry, if the heat generated is recovered;
- Fibrous vegetable waste from virgin pulp production and from production of paper from pulp, if it is co-incinerated at the place of production and the heat generated is recovered;
- Cork waste;
- Wood waste with the exception of wood waste that may contain halogenated organic compounds or heavy metals as a result of treatment with wood

preservatives or coating and which includes, in particular, such wood waste originating from construction and demolition waste.

Wood cannot be taken to include paper and card. Some fibreboard manufacturing processes may not use chemicals containing halogens or heavy metals. However, if any wood waste used in the manufacture of the fibreboard has been contaminated prior to entering the manufacturing process, the final fibreboard product may also be contaminated and the exclusion may therefore not be applicable;

- Radioactive waste;
- Animal carcasses as regulated by Regulation (EC) No. 1774/2002;
- Waste resulting from the exploration for, and the exploitation of, oil and gas resources from off-shore installations and incinerated on board the installations.

3.4 The above list is reflected, in part, in the activity description set out in Part B(a) of Section 5.1 of Part 2 of Schedule 1 to the EPR. Section 4 of this guidance document discusses how waste incineration plant and waste co-incineration plant can fit activity descriptions set out in Part II of Schedule 1 to the EPR; Section 5 of this guidance document explains the implications.

3.5 It should be noted at this point that the activity described in Part A(1)(c) of section 5.1 of Part 2 of Schedule 1 to the EPR (*'The incineration, other than incidentally in the course of burning landfill gas or solid or liquid waste, of any gaseous compound containing halogens'*) falls outside the scope of the provisions of Chapter IV of the IED because it relates to gaseous waste. Schedule 13A will therefore not apply to waste incineration plant and waste co-incineration plant meeting this activity description. This means that environmental permits for such activity will not include conditions that reflect the requirements of Chapter IV and Annex VI of the IED.

Other exclusions

3.6 Experimental plant used for research, development and testing in order to improve the incineration process and which treat less than 50 tonnes of waste per year are not subject to Chapter IV of the IED. In practice, the limitation of throughput to less than 50 tonnes of waste per year for incinerators means the exclusion will only apply to test rigs.

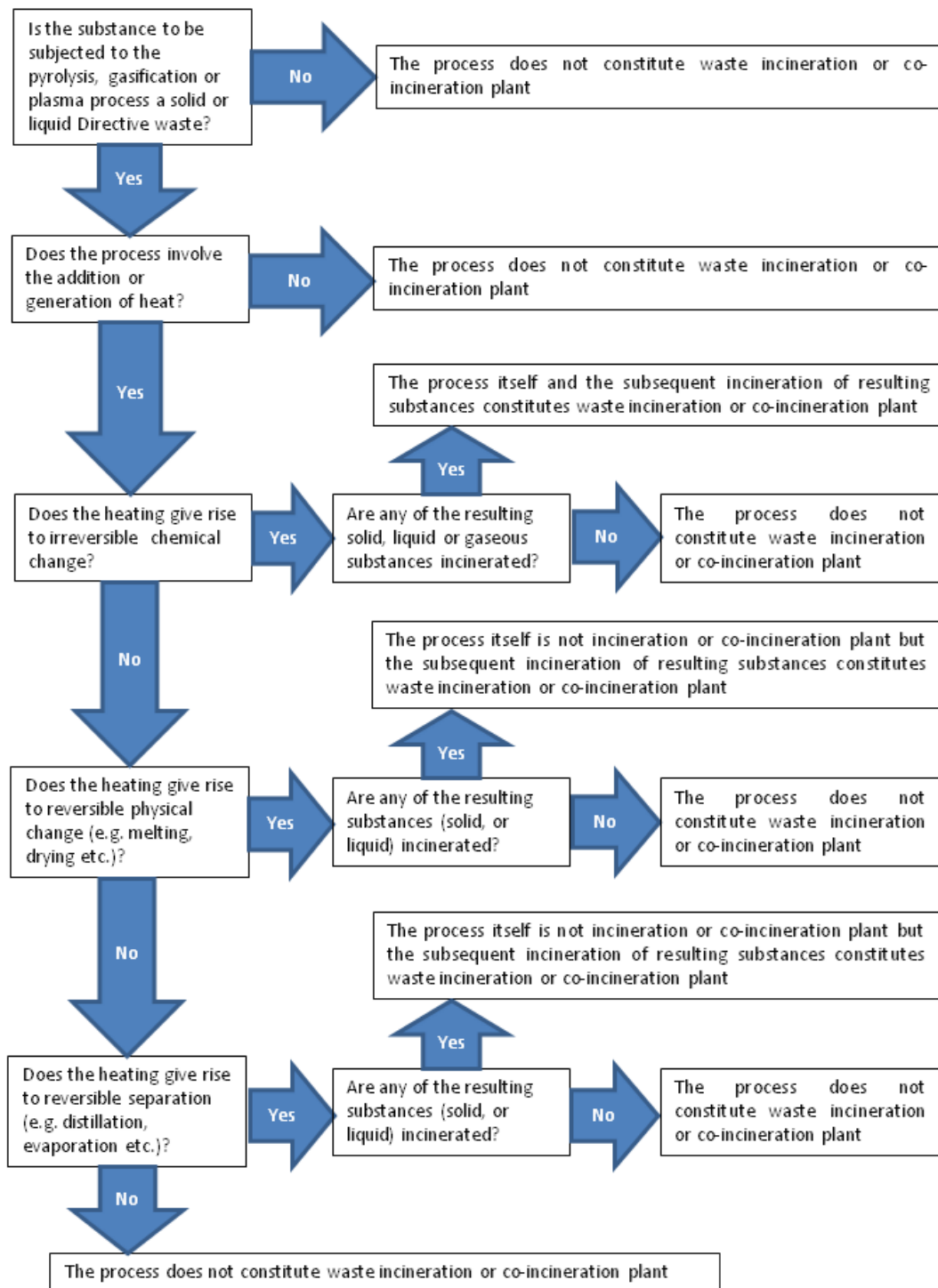
3.7 Some pyrolysis/gasification plants that meet the definition of waste incineration plant or waste co-incineration plant will also not be subject to the requirements of Chapter IV of the IED, by virtue of an exclusion set out in Article 42(1). This provides that such plant is excluded from the scope of Chapter IV *'...if the*

gases resulting from the thermal treatment of waste are purified to such an extent that they are no longer a waste prior to their subsequent incineration and they can cause emissions no higher than those resulting from the burning of natural gas.'

Figure 1 on the following page provides a practical illustration of how the provisions of Chapter IV apply in respect of pyrolysis, gasification and plasma processes.

Figure 1

Determining whether pyrolysis, gasification and plasma processes constitute waste incineration plant or waste co-incineration plant subject to Chapter IV of the IED



4. How are Schedules 1 and 3 to the EPR applicable to different types of waste incineration plant and waste co-incineration plant?

- 4.1 In some cases a Small Waste Incineration Plant ('SWIP') will not meet the criteria of an activity description in Schedule 1 or 3; it will simply be a SWIP (as defined in regulation 2 of the EPR). Regulation 8 of the EPR defines a SWIP as a type of 'regulated facility'. 'Regulated facilities' require an environmental permit.
- 4.2 In other cases waste incineration plant and waste co-incineration plant will meet the criteria of a Part A(1), Part A(2) or Part B activity description set out in Part 2 of Schedule 1 (in which case an 'installation' exists) or an activity description in Part 1 of Schedule 3 (in which case an 'exempt waste operation' exists). 'Installation' is defined in regulation 2 of the EPR as a type of 'regulated facility' and so it requires an environmental permit. 'Exempt waste operation' is defined in regulation 5 of the EPR. It is a type of 'exempt facility' and therefore does not require an environmental permit. Further detail is provided in the following sections.

Schedule 1 – Installations

(a) Waste incineration plant and waste co-incineration plant that are Part B activities under Part 2 of Schedule 1

- 4.3 In relation to waste incineration plant and waste co-incineration plant that fall within the SWIP definition, there are two possibilities here. Those SWIPs meeting the criteria set out in Part B(a) of Section 5.1 of Part 2 of Schedule 1 to the EPR will be Section 5.1 Part B(a) activities in addition to being SWIPs. It should be noted at this point that Section 5.1 Part B(a) SWIPs are not subject to the provisions of Schedule 13A because the Section 5.1 Part B(a) activity description reflects, in part, the excluded waste types set out in Article 42(2) of the IED (see paragraph 3.3 of this guidance document for a discussion of this list).
- 4.4 Those SWIPs meeting the criteria set out in Part B of Section 1.1 of Part 2 of Schedule 1 will be Section 1.1 Part B activities in addition to being SWIPs. For example, a small appliance used to burn waste oil (Small Waste Oil Burner – 'SWOB') will be a Section 1.1 Part B activity in addition to being a SWIP, provided that its rated thermal input is less than 3 megawatts. In contrast to Section 5.1 Part B(a) SWIPs, Section 1.1 Part B SWIPs will be subject to the requirements of Schedule 13A.

(b) Waste incineration plant and waste co-incineration plant that are Part A(2) activities under Part 2 of Schedule 1

4.5 Those SWIPs meeting the criteria set out in Part A(2) of Section 6.8 of Part 2 of Schedule 1 to the EPR will be Section 6.8 Part A(2) activities in addition to being SWIPs.

(c) Waste incineration plant and waste co-incineration plant that are Part A(1) activities under Part 2 of Schedule 1

4.6 A plant that meets the criteria set out in Part A(1) of section 5.1 of Part 2 of Schedule 1 will be a Part A(1) activity in addition to being waste incineration plant or waste co-incineration plant.

4.7 The co-incineration of waste in a waste co-incineration plant may, in some cases, be more appropriately classified under a Part A(1) activity description set out elsewhere in Part 2 of Schedule 1. Examples might include the co-incineration of waste in the course of producing cement clinker in accordance with the activity description set out in section 3.1 Part A(1) of Part 2 of Schedule 1.

4.8 It should be noted at this point that the activity described in Part A(1)(c) of section 5.1 of Part 2 of Schedule 1 to the EPR (*'The incineration, other than incidentally in the course of burning landfill gas or solid or liquid waste, of any gaseous compound containing halogens'*) falls outside the scope of the provisions of Chapter IV of the IED because it relates to gaseous waste. Schedule 13A will therefore not apply to waste incineration plant and waste co-incineration plant meeting this activity description. This means that environmental permits for such activity will not include conditions that reflect the requirements of Chapter IV and Annex VI of the IED.

Schedule 3 – Exempt waste operations

(d) Waste incineration plant and waste co-incineration plant that are exempt waste operations under Part 1 of Schedule 3

4.9 Some smaller SWIPs may not meet the criteria of any activity description set out under Part 2 of Schedule 1, but instead may meet the terms of the activity description set out in Part 1 of Schedule 3 ('Disposal by incineration (D6)' or 'Burning of waste as a fuel in a small appliance (U4)'). It should be noted that the D6 exempt waste operation description includes a requirement for the waste to be of a type described in Article 42(2)(a)(i) or (iii) of Chapter IV of the IED (which are excluded waste types). Similarly, the U4 exempt waste operation description includes a requirement for the waste to be one or more of the types listed in the table at sub-paragraph (2) of the description, which

accords with the waste types described at Article 42(2)(a)(i) of Chapter IV of the IED. This means that these exempt waste operations are not subject to the requirements of Schedule 13A to the EPR (see paragraph 3.3 of this guidance document for a full list of the waste types that are excluded by Chapter IV of the IED).

5 How are the requirements of Schedules 7A, 8 and 9 to the EPR applicable to different types of waste incineration plant and waste co-incineration plant?

Schedule 7A – Part A installations

5.1 Part A installations are subject to the requirements of Schedule 7A. Schedule 7A applies the requirements of Chapter II of the IED (and some parts of Chapter I), to the extent that they impose obligations relevant to the permitting of Part A(1) and Part A(2) installations. This includes, for example, the requirement for the application of Best Available Techniques (BAT) for the prevention or, where that is not practicable, the reduction of emissions to all media. This means that environmental permits for A(1) and A(2) installations will include conditions that reflect these requirements, alongside any conditions that are necessary to deliver the obligations imposed by other schedules. It should be noted that the emission limit values set out in Annex VI to the IED represent *maximum* limits/ceilings. BAT, as defined in the European Commission's sector-specific BAT Reference documents (BREFs) and BAT Conclusions documents, or environmental quality standard requirements under Article 18 of the IED, may dictate that lower emission limits than those set out in Annex VI are applicable.

Schedule 8 – Part B installations

5.2 Part B installations are subject to the requirements of Schedule 8. SWIPs are also subject to the requirements of Schedule 8. Schedule 8 applies Best Available Techniques for the prevention or, where that is not practicable, the reduction of emissions to air, amongst other requirements. This means that environmental permits for Part B installations and SWIPs must include conditions that reflect these requirements. It should be noted that the emission limit values set out in Annex VI to the IED represent maximum limits/ceilings. BAT may dictate that lower emission limits than those set out in Annex VI are applicable.

Schedule 9 – Waste operations

- 5.3 'Waste operation' is defined in regulation 2 of the EPR. Waste operations are subject to the requirements of Schedule 9. The broad scope of the definition of 'waste operation' means that all SWIPs and other waste incineration and co-incineration plant will be subject to Schedule 9. Regulators must discharge the obligations set out in Schedule 9 when determining applications for environmental permits.