Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Enlightened Lamp Recycling Limited

Mercury Recovery, Redhill, Surrey
11 Ormside Way
Holmethorpe Industrial Estate
Redhill
Surrey
RH1 2LW

Variation application number

EPR/GP3339BE/V003

Permit number

EPR/GP3339BE

Mercury Recovery, Redhill, Surrey

Permit number EPR/GP3339BE

Introductory note

This introductory note does not form a part of the notice

The following notice gives notice of the variation of an environmental permit.

Changes introduced by this variation notice/statutory

The effect of this Environment Agency initiated variation is to change the type of regulated facility from an installation to a waste operation. The regulated facility was formerly permitted as a non-ferrous metals installation under Section 2.2 Part A(1)(c) of the Environmental Permitting (England and Wales) Regulations (EPR 2016). The change is the result of a statutory review of the permit in response to the publication of the Best Available Techniques (BAT) Conclusions for the Non-ferrous Metals Industries.

Under the Industrial Emissions Directive (IED) the Environment Agency is required to review installation permits within four years of the publication of BAT Conclusions, enabling the regulator to ensure that operators of installations use all relevant BAT Conclusions as described in the Commission Implementing Decision in order to prevent or minimise emissions from their activities. The BAT Conclusions for the Non-ferrous Metals Industries were published on 30th June 2016 in the Official Journal of the European Union (L174/32) following a European Union wide review of BAT, implementing decision (EU) 2016/1032 of 13th June 2016.

We have considered information provided by the operator and from this it is clear that the main purpose, and intent, of the site is the treatment of hazardous waste to separate out the various constituent parts and enable subsequent recovery or disposal of these wastes streams. Wastes accepted for treatment at the site include batteries, activated carbon filters, thermometers, waste from the dental sector, fluorescent tubes. The technique of vacuum distillation is used to remove mercury from the incoming wastes. This technique allows for the separation of mercury in a pure form which the operator can sell as a raw material. The resultant mercury free waste stream is sent off-site for recovery or disposal.

The BAT Reference Document (BREF) and BAT Conclusions for the Non-ferrous Metals Industries does not include the recovery of mercury or the use of vacuum distillation. By contrast the Waste Treatment BREF and BAT Conclusions *(final draft, Oct 2017)* explicitly list vacuum distillation as a technique to recover mercury from hazardous waste streams such as batteries, activated carbon filters, thermometers, waste from the dental sector, fluorescent tubes.

We have therefore determined that the primary activity of the site is more aptly defined as a waste treatment activity, rather than a non-ferrous metal production or recovery activity. We have also determined that the site does not meet the capacity threshold (no more than 10 tonnes of hazardous waste to be treated per day) for hazardous waste treatment under Section 5.3 Part A(1)(a) of EPR 2016 and is therefore not an installation but a waste operation. Table S1.1 (Activities) of the permit has been amended to reflect the above decision.

This variation introduces the following changes to the permit:

- the current *listed* activity, i.e. Section 2.2 Part A(1)(c) *'Producing, melting or recovering (whether by chemical means or by electrolysis or by the use of heat) cadmium or mercury or any alloy containing more than 0.05 per cent by weight of either of those metals or both in aggregate'* has been removed and replaced with an *A17 – Physical and chemical treatment facility*, activity code.
- removal of all conditions that would normally be required for installation permits under the IED and EPR 2016.

- addition of an improvement condition to ensure the operator complies with a relevant waste technical competence scheme.
- update to modern permit conditions including the consolidation of any relevant changes from the original permit by subsequent variations.
- update to monitoring standards to reflect current best practice and/or Environment Agency requirements.

The schedules specify the changes made to the permit. Schedule 1 of the notice specifies the conditions that have been varied and schedule 2 comprises a consolidated permit which reflects the variations being made. All the conditions of the permit have been varied and are subject to the right of appeal.

Brief description of the process

The site is approximately 0.035ha and comprises a warehouse unit with mezzanine floor and an external concrete area. It is located in a predominantly light industrial setting approximately 1.5km north of Redhill town centre. The Mole Gap to Reigate Escarpment is a designated site (SSSI and SAC) and is located around 1.7km from the site boundary at its nearest point.

The site receives and processes hazardous wastes containing mercury such as batteries, activated carbon filters, thermometers, waste from the dental sector, fluorescent tubes.

All processing and storage is to be within the warehouse building with a firewater bund constructed in the doorway. The only exception to this is glass cullet from the fluorescent tubes which have already been processed to remove the mercury bearing phosphor powder which is stored outside the building in covered containers prior to removal off site. There are no drains within the building which could allow pollution to enter the surface water and the bund over the doorway should prevent any contaminated water in the event of a fire from leaving the building.

The majority of the wastes received are the fluorescent tubes which will require pre-treatment prior to being processed as follows:

- Lamp wastes are first processed through the RTI 2000B compact crusher and sieve machine either on a power-feed belt or manually, and then are moved into a negative pressure air chamber. Each lamp is crushed and the larger glass and metal fractions are separated from the phosphor powder. Glass is discharged from the rotary screen and is separated with the aid of a vibratory screening device beneath the primary screen. The separated metal socket parts (end caps) are discharged into a container for further recycling.
- A vapour collection system comprises a fan with particulate filters, an air compressor and an activated carbon filter. The filters remove dust at 0.5 microns or larger at the efficiency rate of 99%. This system is fitted with a photophilic gauge to shut down the system with an alarm when the filters need to be replaced. Following the abatement this exhaust is discharged into the building.
- Phosphor powder collects in the multi stage filtration system. This is then treated again by the vacuum retort to allow the extract the elemental mercury.
- The RTI 2000B also has a HID de-globing chamber to remove the outer glass. The HID frames and mercury bearing arc tubes are manually removed from the chamber and separated using a wire cutting device. The metal is sent off site for recycling and the mercury bearing arc tube can then be retorted with the phosphor powder.

The distillation equipment used on site to extract the mercury is the Effective Energy RipSYS Retort which is fully computerised. Four 45 gallon drums are attached to the distillation plant under vacuum. The system monitors the flow to ensure there are no leaks, sudden changes in pressure and temperature which could all indicate runaway conditions. The process can only continue if all of these parameters are within normal limits.

The oven convection air is heated to its set point appropriate to the batch being treated. The heated, evaporated, and filtered gas flows out of the oxidation –ceramic filter unit at a temperature up to 650˚C and into the condensing unit. This consists of a heat exchanger which through progressive cooling is able to cool the exhaust gases to below 0˚C. The condensate consists of liquid mercury along with small amounts of liquid water and small amounts of condensable hydrocarbons and is collected in a sealed reservoir drum.

The reservoir is followed by a high efficiency vacuum pump and cold trap which removes residual mercury vapour down to low ppm levels.

From the cold trap the exhaust gases travel to the Dual–Bed activated carbon column. Mercury levels are monitored downstream of the first bed as well as the second bed. After the activated carbon column the exhaust is vented to the air (emission point A2). There is another discharge to the air from the distillation equipment but this vents only heat (emission point A1).

The mercury is condensed and collected in containers for removal off site for re-use. The distillation equipment uses a 30% glycol and water mixture in a sealed chiller / condenser. Therefore there is no requirement for additional water input into the process.

The schedules specify the changes made to the original permit.

The status log of a permit sets out the permitting history, including any changes to the permit reference number.

Status log of the permit		
Description	**Date**	**Comments**
Application received	Duly made 06/12/05	
Response to request for information, dated 22/02/06	Received 02/03/06	Request for further information on ASR, clarification of inconsistencies within the application
Response to request for information, dated 27/02/06	Received 27/02/06	Request for further information on releases to air.
Request to extend the determination until 25/05/06. (Request dated 28/03/06)	Request accepted 05/04/06	
Permit determined EPR/GP3339BE	15/06/06	Permit issued.
Variation Application EPR/GP3339BE/V002	19/05/11	
Variation determined EPR/GP3339BE/	05/07/11	Permit Issued.
Regulation 60 Notice dated 16/12/16 (Notice requiring information for statutory review of permit)	Response Received 22/02/17	Technical standards detailed in response to the information notice. Information to demonstrate that relevant BAT Conclusions are met for the non-ferrous metals industries as detailed in document reference L174.
Environment Agency initiated variation EPR/GP3339BE (variation and consolidation) Variation determined EPR/GP3339BE/V003 [EAWML 405037]	28/06/18	Statutory review of permit – Non-ferrous metals BAT Conclusions published 30/06/16. This variation resulted in changing the type of regulated facility from an installation to a waste operation. Varied and consolidated permit issued

End of introductory note

Notice of variation and consolidation

The Environmental Permitting (England and Wales) Regulations 2016

The Environment Agency in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2016 varies

Permit number

EPR/GP3339BE

Issued to

Enlightened Lamp Recycling Limited ("the operator")

whose registered office is

Abbey House
25 Clarendon Road
Redhill
RH1 1QZ

company registration number 05253482

to operate a regulated facility at

11 Ormside Way
Holmethorpe Industrial Estate
Redhill
Surrey
RH1 2LW

to the extent set out in the schedules.

The notice shall take effect from 28/06/18

Name	Date
Tracey Pollard	**28/06/18**

Authorised on behalf of the Environment Agency

Schedule 1

All conditions have been varied by the consolidated permit as a result of an Environment Agency initiated variation.

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/GP3339BE

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/GP3339BE/V003 authorising,

Enlightened Lamp Recycling Limited ("the operator"),

whose registered office is

Abbey House
25 Clarendon Road
Redhill
RH1 1QZ

company registration number 05253482

to operate waste operations at

11 Ormside Way
Holmethorpe Industrial Estate
Redhill
Surrey
RH1 2LW

to the extent authorised by and subject to the conditions of this permit.

Name	**Date**
Tracey Pollard	**28/6/18**

Authorised on behalf of the Environment Agency

Conditions

1 Management

1.1 General management

1.1.1 The operator shall manage and operate the activities:

(a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and

(b) using sufficient competent persons and resources.

1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.

1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

1.1.4 The operator shall comply with the requirements of an approved competence scheme.

1.2 Avoidance, recovery and disposal of wastes produced by the activities

1.2.1 The operator shall take appropriate measures to ensure that:

(a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities; and

(b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and

(c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.

1.2.2 The operator shall review and record at least every four years whether changes to those measures should be made and take any further appropriate measures identified by a review.

2 Operations

2.1 Permitted activities

2.1.1 The operator is only authorised to carry out the activities specified in schedule 1 table S1.1 (the "activities").

2.2 The site

2.2.1 The activities shall not extend beyond the site, being the land shown edged in green on the site plan at schedule 7 to this permit.

2.3 Operating techniques

2.3.1 The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by the Environment Agency.

2.3.2 If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency for approval within the period specified, a revision of any plan or other documentation ("plan") specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan , and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Environment Agency.

2.3.3 Waste shall only be accepted if:

(a) it is of a type and quantity listed in schedule 2 table S2.2

(b) it conforms to the description in the documentation supplied by the producer and holder.

2.3.4 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.

2.4 Improvement programme

2.4.1 The operator shall complete the improvements specified in schedule 1 table S1.3 by the date specified in that table unless otherwise agreed in writing by the Environment Agency.

2.4.2 Except in the case of an improvement which consists only of a submission to the Environment Agency, the operator shall notify the Environment Agency within 14 days of completion of each improvement.

2.5 Technical requirements

Hazardous waste storage and treatment

2.5.1 Hazardous waste shall not be mixed, either with a different category of hazardous waste or with other waste, substances or materials, unless it is authorised by schedule 1 table S1.1 and appropriate measures are taken.

3 Emissions and monitoring

3.1 Emissions to water, air or land

3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1, S3.2 and S3.3.

3.1.2 The limits given in schedule 3 shall not be exceeded.

3.2 Emissions of substances not controlled by emission limits

3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.

3.2.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;

(b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.2.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

3.3 Odour

3.3.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.

3.3.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;

(b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.4 Noise and vibration

3.4.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.

3.4.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;

(b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.5 Monitoring

3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring specified in the following tables in schedule 3 to this permit:

(a) point source emissions specified in table S3.1

(b) annual emission limits specified in table S3.2

(c) process monitoring specified in table S3.3;

3.5.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.

3.5.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.3.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by the Environment Agency.

3.5.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 tables S3.1, S3.2, S3.3 unless otherwise agreed in writing by the Environment Agency.

3.6 Pests

3.6.1 The activities shall not give rise to the presence of pests which are likely to cause pollution, hazard or annoyance outside the boundary of the site. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved pests management plan, have been taken to prevent or where that is not practicable, to minimise the presence of pests on the site.

3.6.2 The operator shall:

(a) if notified by the Environment Agency, submit to the Environment Agency for approval within the period specified, a pests management plan which identifies and minimises risks of pollution, hazard or annoyance from pests;

(b) implement the pests management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.7 Fire prevention

3.7.1 The operator shall take all appropriate measures to prevent fires on site and minimise the risk of pollution from them including, but not limited to, those specified in any approved fire prevention plan.

3.7.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to a risk of fire, submit to the Environment Agency for approval within the period specified, a fire prevention plan which prevents fires and minimises the risk of pollution from fires;

(b) implement the fire prevention plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

4 Information

4.1 Records

4.1.1 All records required to be made by this permit shall:

(a) be legible;

(b) be made as soon as reasonably practicable;

(c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and

(d) be retained, unless otherwise agreed in writing by the Environment Agency, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:

(i) off-site environmental effects; and

(ii) matters which affect the condition of the land and groundwater.

4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by the Environment Agency.

4.2 Reporting

4.2.1 The operator shall send all reports and notifications required by the permit to the Environment Agency using the contact details supplied in writing by the Environment Agency.

4.2.2 Within one month of the end of each quarter, the operator shall submit to the Environment Agency using the form made available for the purpose, the information specified on the form relating to the site and the waste accepted and removed from it during the previous quarter.

4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Environment Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:

(a) in respect of the parameters and emission points specified in schedule 4 table S4.1;

(b) for the reporting periods specified in schedule 4 table S4.1 and using the forms specified in schedule 4 table S4.4 ; and

(c) giving the information from such results and assessments as may be required by the forms specified in those tables.

4.3 Notifications

4.3.1 The Environment Agency shall be notified without delay following the detection of:

(a) any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution;

(b) the breach of a limit specified in the permit; or

(c) any significant adverse environmental effects.

4.3.2 Any information provided under condition 4.3.1 shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.

4.3.3 Where the Environment Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Environment Agency when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to the Environment Agency at least 14 days before the date the monitoring is to be undertaken.

4.3.4 The Environment Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:

Where the operator is a registered company:

(a) any change in the operator's trading name, registered name or registered office address; and

(b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

Where the operator is a corporate body other than a registered company:

(a) any change in the operator's name or address; and

(b) any steps taken with a view to the dissolution of the operator.

In any other case:

(a) the death of any of the named operators (where the operator consists of more than one named individual);

(b) any change in the operator's name(s) or address(es); and

(c) any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.

4.3.5 Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:

(a) the Environment Agency shall be notified at least 14 days before making the change; and

(b) the notification shall contain a description of the proposed change in operation.

4.4 Interpretation

4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.

4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made “without delay”, in which case it may be provided by telephone.

Schedule 1 – Operations

Table S1.1 activities	
Description of activities for waste operations	**Limits of activities**
R4: Recycling/reclamation of metals and metal compounds R5:Recycling/reclamation of other inorganic materials R13: Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where the waste is produced) D9: Physico-chemical treatment not specified elsewhere which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1 to D12 D15: Storage pending any of the operations numbered D1 to D14 (excluding temporary storage, pending collection, on the site where the waste is produced)	From receipt of hazardous waste (containing mercury) to the storage of treated waste, including but not limited to the operation of a crusher, vacuum retort and de-globing chamber. No more than 10 tonnes per day of hazardous waste to be treated at the site. Temporary storage of hazardous waste shall not exceed 50 tonnes pending any of the activities listed in Part A (1) Section 5.1, 5.2, 5.3 of the EP Regulations. Subject to any other requirements of this permit wastes shall be stored for no longer than 1 year prior to disposal or 3 years prior to recovery. Waste types as specified in Table S2.2.

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Application	The response to questions 2.1 and 2.2 in section 2.1 and 2.2 of the application.	06/12/05

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
IC1 Technical Competence	The operator shall gain a relevant Technical Competence Qualification by one of the following government approved schemes. Details below: • **WAMITAB/CIWM** o Environmental Permit Operators Certificate (EPOC) or 4 Regulated Qualification Framework (RQF) units. To be completed by intermediate deadline. o All necessary units completed to gain required qualification. To be completed by final deadline. • **EU Skills Scheme** o Schedule to be agreed for audit and certification with approved certification body. To be completed by intermediate deadline. o Gap Analysis Audit. o Formal Certification of CMS. To be completed by final deadline.	**Intermediate deadline:** **4 weeks from effective date of notice V003** **Final Deadline: 12 months from effective date of notice V003**

Schedule 2 – Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	**Specification**
-	-

Table S2.2 Permitted waste types and quantities for the treatment of hazardous waste containing mercury	
Maximum quantity	**The total quantity of waste accepted at the site for the above activity shall be less than 500 tonnes a year.**
Waste code	**Description**
06	Wastes from inorganic chemical processes
06 13	wastes from inorganic chemical processes not otherwise specified
06 13 02*	spent activated carbon (except 06 07 02)
16	Wastes not otherwise specified in the list
16 02	wastes from electrical and electronic equipment
16 02 13*	discarded equipment containing hazardous components other than those mentioned in 16 02 09 to 16 02 12
16 05	gases in pressure containers and discarded chemicals
16 05 06*	laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals
16 06	batteries and accumulators
16 06 03*	mercury-containing batteries
16 09	oxidising substances
16 09 04*	oxidising substances, not otherwise specified
17	Construction and demolition wastes (including excavated soil from contaminated sites)
17 09	other construction and demolition wastes
17 09 01*	construction and demolition wastes containing mercury
18	**Wastes from human or animal health care and/or related research (except kitchen and restaurant wastes not arising from immediate health care)**
18 01	**wastes from natal care, diagnosis, treatment or prevention of disease in humans**
18 01 10*	amalgam waste from dental care

19	Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use
19 02	wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)
19 02 11*	other wastes containing hazardous substances (mercury and non-distilled phosphor powder)
20	Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions
20 01	separately collected fractions (except 15 01)
20 01 21*	fluorescent tubes and other mercury-containing waste
20 01 35*	discarded electrical and electronic equipment other than those mentioned in 20 01 21 and 20 01 23 containing hazardous components

Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	**Source**	**Parameter**	**Limit (including unit)**	**Reference period[1]**	**Monitoring frequency[1]**	**Monitoring standard or method[1]**
A1 – Distillation Equipment	Local exhaust vent from oven on mercury still discharging heat only.	No Parameters Set	-	-	-	-
A2 Distillation Equipment	Local exhaust vent from mercury still via two stage activated carbon bed / filter.	Mercury and its compounds (as Hg)	0.02mg/m^3	Extractive Sample	Twice a year	EN 14884, EN 13211, and MID[2]
		Cadmium and its compounds (as Cd)	0.05 mg/m^3	Extractive Sample	Twice a year	EN 14385 and MID

Note 1: certification to the MCERTS performance standards indicates compliance with BS EN 15267-3

Note 2: the most appropriate MID for the sampling of mercury is the MID for 14385.

Table S3.2 Annual emission limits		
Substance	**Medium**	**Limit (including unit)**
Mercury	Air	0.2 kg (based on mas balance calculations)
Cadmium	Air	0.5 kg (based on mas balance calculations)

Table S3.3 Process monitoring requirements				
Emission point reference or source or description of point of measurement	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
Sample of glass cullet after crushing of fluorescent tubes	Mercury mg/kg	6 monthly	ICP –OES coupled optical spectrometry Inductively Plasma Emission	To UKAS Standard
Sample of phosphor powder, dental amalgam, button cell batteries that have been through the waste recovery process.	Mercury mg/kg	6 monthly	ICP –OES coupled optical spectrometry Inductively Plasma Emission	To UKAS Standard

Schedule 4 – Reporting

Parameters, for which reports shall be made, in accordance with conditions of this permit, are listed below.

Table S4.1 Reporting of monitoring data			
Parameter	**Emission or monitoring point/reference**	**Reporting period**	**Period begins**
Emissions to air Parameters as required by condition 3.5.1.	A2	Twice per year	01 Jan,01 Jun
Annual emission limits (air) Parameters as required by condition 3.5.1.	A2	Once per year	01 Jan,01 Jun
Process monitoring requirements Parameters as required by condition 3.5.1.	Spot check of outgoing wastes.	Twice per year	01 Jan,01 Jun

Table S4.2 Performance parameters		
Parameter	**Frequency of assessment**	**Units**
-	-	-

Table S4.3 Reporting forms		
Media/parameter	**Reporting format**	**Date of form**
Air	Form air 1 or other form as agreed in writing by the Environment Agency	28/06/18
Process Monitoring	Form as agreed in writing by the Environment Agency	-

Schedule 5 – Notification

These pages outline the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the EP Regulations.

Part A

Permit Number	
Name of operator	
Location of Facility	
Time and date of the detection	

(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution	
To be notified within 24 hours of detection	
Date and time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
Measures taken, or intended to be taken, to stop the emission	

Time periods for notification following detection of a breach of a limit	
Parameter	**Notification period**

(c) Notification requirements for the detection of any significant adverse environmental effect	
To be notified within 24 hours of detection	
Description of where the effect on the environment was detected	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

Part B – to be submitted as soon as practicable

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission	
The dates of any unauthorised emissions from the facility in the preceding 24 months.	

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 – Interpretation

“accident” means an accident that may result in pollution.

“Annex I” means Annex I to Directive 2008/98/EC of the European Parliament and of the Council on waste.

“Annex II” means Annex II to Directive 2008/98/EC of the European Parliament and of the Council on waste.

“application” means the application for this permit, together with any additional information supplied by the operator as part of the application and any response to a notice served under Schedule 5 to the EP Regulations.

“authorised officer” means any person authorised by the Environment Agency under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, any power specified in section 108(4) of that Act.

“best available treatment, recovery and recycling techniques” shall have the meaning given to it in the document published jointly by the Department for Environment, Food and Rural Affairs, the Welsh Assembly Government and the Scottish Executive on 27th November 2006, entitled “Guidance on Best Available Treatment, Recovery and Recycling Techniques (BATRRT) and Treatment of Waste Electrical and Electronic Equipment (WEEE).

“building” means a construction that has the objective of providing sheltering cover and minimising emissions of noise, particulate matter, odour and litter.

“D” means a disposal operation provided for in Annex I to Directive 2008/98/EC of the European Parliament and of the Council on waste.

“emissions of substances not controlled by emission limits” means emissions of substances to air, water or land from the activities, either from the emission points specified in schedule 3 or from other localised or diffuse sources, which are not controlled by an emission limit.

“EP Regulations” means The Environmental Permitting (England and Wales) Regulations SI 2016 No.1154 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

“groundwater” means all water, which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

“Hazardous property” has the meaning in Annex lll of the Waste Framework Directive.

“Hazardous waste” has the meaning given in the Hazardous Waste (England and Wales) Regulations 2005 (as amended).

“List of Wastes” means the list of wastes established by Commission Decision 2000/532/EC replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste and Council Decision 94/904/EC establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous waste, as amended from time to time.

“MCERTS” means the Environment Agency’s Monitoring Certification Scheme.

“ozone-depleting substances” “ODS” means “controlled substances” contained in refrigeration, air-conditioning and heat pump equipment, equipment containing solvents, fire protection systems and fire extinguishers.

“pests” means birds, vermin and insects.

“quarter” means a calendar year quarter commencing on 1 January, 1 April, 1 July or 1 October.

“R” means a recovery operation provided for in Annex II to Directive 2008/98/EC of the European Parliament and of the Council on waste.

“Waste code” means the six digit code referable to a type of waste in accordance with the List of Wastes and in relation to hazardous waste, includes the asterisk.

“Waste Framework Directive” or “WFD” means Waste Framework Directive 2008/98/EC of the European Parliament and of the Council on waste.

“year” means calendar year ending 31 December.

When the following terms appear in the waste code list in Schedule 2, table S2.2 for that table they have the meaning given below:

“hazardous substance” means a substance classified as hazardous as a consequence of fulfilling the criteria laid down in parts 2 to 5 of Annex I to Regulation (EC) No 1272/2008.

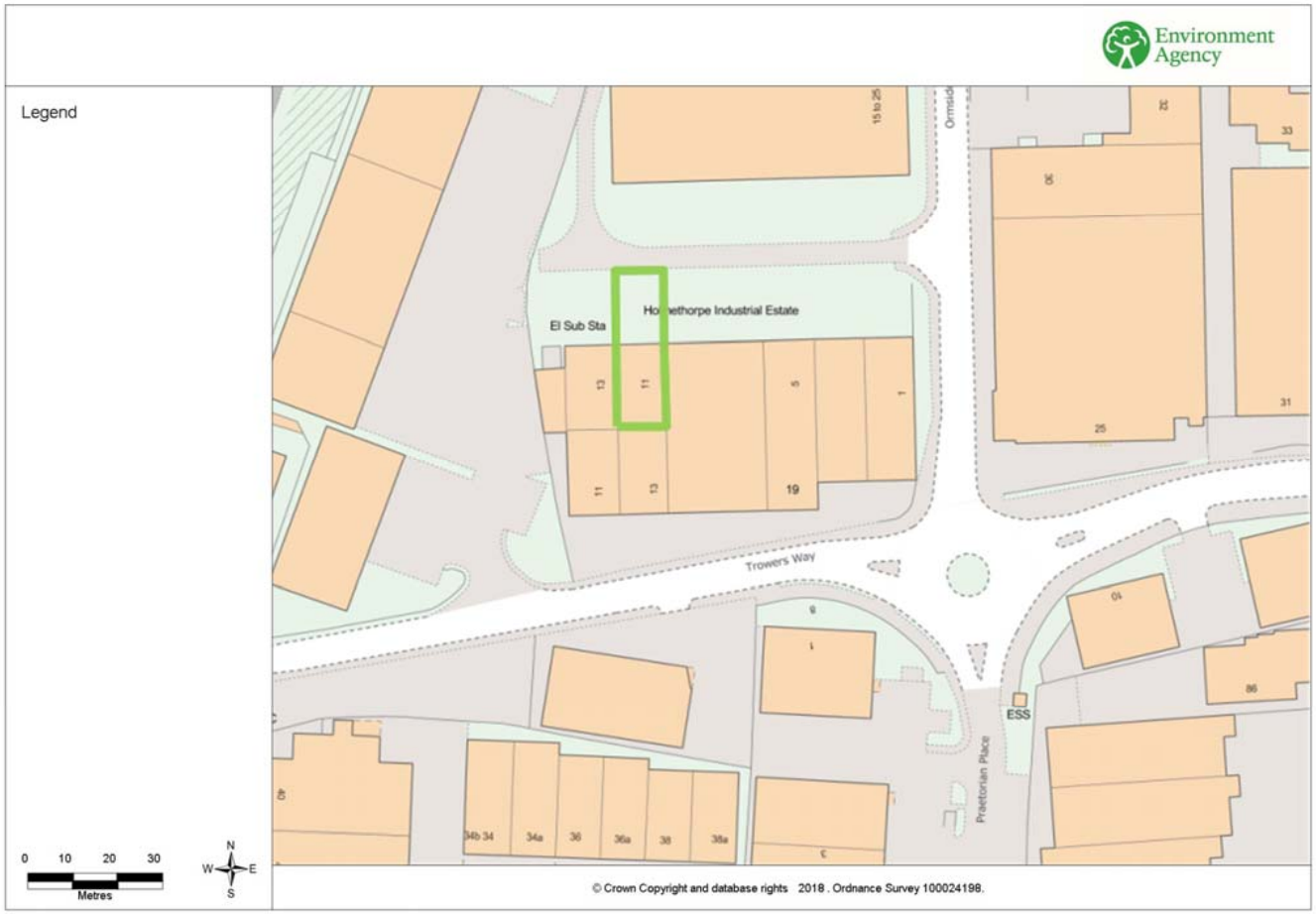
“heavy metal” means any compound of antimony, arsenic, cadmium, chromium (VI), copper, lead, mercury, nickel, selenium, tellurium, thallium and tin, as well as these materials in metallic form, as far as these are classified as hazardous substances.

“PCBs” means

- polychlorinated biphenyls
- polychlorinated terphenyls
- monomethyl-tetrachlorodiphenyl methane, Monomethyl-dichloro-diphenyl methane, Monomethyldibromo-diphenyl methane
- any mixture containing any of the above mentioned substances in a total of more than 0,005 %by weight.

“solidification” means processes which only change the physical state of the waste by using additives without changing the chemical properties of the waste.

Schedule 7 – Site plan



"©Crown Copyright. All rights reserved. Environment Agency, 100024198, 2018."

END OF PERMIT