

Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Graphic Plc

Down End

Lords Meadow Industrial Estate

Crediton

Devon

EX17 1HN

Permit number

EPR/PP3239RN

Down End, CREDITON

Permit number EPR/PP3239RN

Introductory note

This introductory note does not form a part of the permit

The main features of the permit are as follows.

This permit controls the operation of an installation which manufactures printed circuit boards using a chemical etching process. Under the Environmental Permitting Regulations (EPR) 2016 the principal listed activity is Section 2.3 Part A(1)(a), *Surface treating metals and plastic materials using electrolytic or chemical processes where the aggregated volume of the treatment vats is more than 30m³*. An additional listed activity relates to the operation of the on-site effluent treatment plant (ETP) which treats process effluent prior to discharge to foul sewer. The listed activity is Section 5.3 Part A(1)(a)(ii), *Disposal of hazardous waste with a capacity exceeding 10 tonnes per day involving physico-chemical treatment*. The permit implements the requirements of the EU Directive on Industrial Emissions.

The installation is located at National Grid Reference SS 84816 00292, in the town of CREDITON, Devon. The site is located on the edge of an industrial estate, on the eastern side of the town, with farmland immediately to the south. There are no Habitats Directive sites (Special Area of Conservation, Special Protection Area or Ramsar) within 10km of the installation, nor any Sites of Special Scientific Interest or non-statutory Local Wildlife Sites within 2km of the installation.

The installation has been operating in CREDITON since the early 1970s but until now has not been regulated under the Environmental Permitting Regulations (EPR) or predecessor legislation. The recent installation of new processing equipment has seen the total volume of the treatment vats increase to approximately 37m³, thereby exceeding the relevant EPR activity threshold of 30m³.

The printed circuit board manufacturing process starts with laminate board clad on both sides with a thin layer of copper sheet, being washed and prepared for etching. The required pattern of conducting tracks is then transferred onto the surface of the copper using a photographic process, whereby the board is covered with a thin layer of photo resist material and then exposed to light through a photographic film or photo-mask detailing the required tracks. The photo resist is placed in a developer so that only those areas of the copper where tracks are required are covered in the resist. The next step involves chemical etching where the boards are placed in reaction vats containing etching liquid, typically ferric chloride, which etches away (removes) the unwanted copper. Depending on the customer requirement the boards can be configured in multi-layer arrangements, being joined electronically by copper lined holes (called vias) drilled through the boards. Finally the exposed copper tracks are plated with solder, tin, gold, or other anti-corrosion coating. This involves the application of a layer of solder resist, followed by the plating layer.

The manufacturing process results in emissions to air from several process steps, with emissions being extracted either directly to atmosphere or via abatement plant (scrubbers and cyclones). Liquid process effluent from the main factory building is treated in the on-site ETP and discharged to foul sewer. Process effluent from the Hot Air Solder Level (HASL) process in the Oak 4 building is not treated prior to discharge to foul sewer. Both discharges are made under agreement with South West Water via two trade effluent consents. Uncontaminated surface water run-off from the site is discharged via surface water drains to a local watercourse. There are no emissions to land or groundwater from the installation.

The manufacturing process results in a number of waste streams, producing both hazardous and non-hazardous liquid and solid wastes. The wastes are handled and stored in accordance with the Operator's Waste Control Procedure which forms part of their environmental management system (EMS), prior to off-site recovery or disposal.

The installation operates an EMS under ISO14001 and a climate change levy agreement is also in place.

The permit sets conditions controlling the management, operation and the control of emissions from the installation, including the monitoring and reporting of emissions.

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

Status log of the permit		
Description	Date	Comments
Application EPR/PP3239RN/A001	Duly made 10/11/16	Application for a facility that manufactures printed circuit boards
Schedule 5 Notice request for additional information	Issued 09/12/16	Information requested in support of operator's H1 impact assessment and BAT assessment
Schedule 5 Notice request for additional information	Issued 04/05/17	Information requested on the use of formaldehyde, emissions points from the installation, and the site condition report (SCR)
Permit determined EPR/PP3239RN (PAS Billing ref. PP3239RN)	09/03/18	Bespoke permit issued to Graphic Plc

End of introductory note

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/PP3239RN

The Environment Agency hereby authorises, under regulation 13 of the Environmental Permitting (England and Wales) Regulations 2016

Graphic Plc ("the operator"),

whose registered office is

Down End

Lords Meadow Industrial Estate

Crediton

Devon

EX17 1HN

company registration number 01036230

to operate an installation at

Down End

Lords Meadow Industrial Estate

Crediton

Devon

EX17 1HN

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

Name	Date
M Bischer	09/03/2018

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.

1.2 Energy efficiency

1.2.1 The operator shall:

- (a) take appropriate measures to ensure that energy is used efficiently in the activities;
- (b) review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and
- (c) take any further appropriate measures identified by a review.

1.3 Efficient use of raw materials

1.3.1 The operator shall:

- (a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;
- (b) maintain records of raw materials and water used in the activities;
- (c) review and record at least every four years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and
- (d) take any further appropriate measures identified by a review.

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

1.4.1 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.

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

2.3.4 The operator shall ensure that where waste produced by the activities is sent to a relevant waste operation, that operation is provided with the following information, prior to the receipt of the waste:

- (a) the nature of the process producing the waste;
- (b) the composition of the waste;
- (c) the handling requirements of the waste;
- (d) the hazardous property associated with the waste, if applicable; and
- (e) the waste code of the waste.

2.3.5 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.

Hazardous waste storage and treatment

2.3.6 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.

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.

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.
- 3.1.3 Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

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 tables S3.1, S3.2 and S3.2.
- 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 3.5.1 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 and S3.2 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 A report or reports on the performance of the activities over the previous year shall be submitted to the Environment Agency by 31 January (or other date agreed in writing by the Environment Agency) each year. The report(s) shall include as a minimum:

- (a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data;
- (b) the annual production /treatment data set out in schedule 4 table S4.2; and
- (c) the performance parameters set out in schedule 4 table S4.3 using the forms specified in table S4.4 of that schedule.

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.

4.2.4 The operator shall, unless notice under this condition has been served within the preceding four years, submit to the Environment Agency, within six months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.

4.3 Notifications

4.3.1 In the event:

- (a) that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—
 - (i) inform the Environment Agency,
 - (ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and
 - (iii) take the measures necessary to prevent further possible incidents or accidents;
- (b) of a breach of any permit condition the operator must immediately—
 - (i) inform the Environment Agency, and
 - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;
- (c) of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.

4.3.2 Any information provided under condition 4.3.1 (a)(i), or 4.3.1 (b)(i) where the information relates to the breach of a limit specified in the permit, 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.

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.

4.3.6 The Environment Agency shall be given at least 14 days notice before implementation of any part of the site closure plan.

4.3.7 Where the operator has entered into a climate change agreement with the Government, the Environment Agency shall be notified within one month of:

- (a) a decision by the Secretary of State not to re-certify the agreement;
- (b) a decision by either the operator or the Secretary of State to terminate the agreement; and
- (c) any subsequent decision by the Secretary of State to re-certify such an agreement.

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 "immediately", in which case it may be provided by telephone.

Schedule 1 – Operations

Table S1.1 activities			
Activity Reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity and WFD Annex I and II operations	Limits of specified activity and waste types
AR1	Section 2.3 Part A(1)(a) Surface treating metals and plastic materials using electrolytic or chemical processes where the aggregated volume of the treatment vats is more than 30m ³	The production of printed circuit boards	From receipt of raw materials to off-site dispatch of final products
AR2	S5.3 Part A(1)(a)(ii) Disposal of hazardous waste with a capacity exceeding 10 tonnes per day involving physico-chemical treatment	Treatment of hazardous liquid waste in the on-site effluent treatment plant (ETP) for the purpose of disposal. D9: Physico-chemical treatment not specified elsewhere which results in final compounds or mixtures which are disposed of by any of the operations numbered D01 to D12.	From receipt of effluent at the ETP to discharge to foul sewer
Directly Associated Activity			
AR3	Raw materials handling and storage	Handling and storage of raw materials used in the manufacturing process	From receipt of raw materials to use within the installation
AR4	Waste handling and storage	Handling and storage of hazardous and non-hazardous waste from the manufacturing process	From production of waste to dispatch off-site for recovery or disposal Does not include liquid hazardous waste under AR2

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application EPR/PP3239RN/A001	Application forms C2 and C3 and all relevant supporting documentation	10/11/16
Response to Schedule 5 Notice dated 09/12/2016	BAT submission	07/03/17
Additional information received	Summary of abatement systems	21/03/17
Additional information received	Emission points plans, refs. Q1420F-2, Q1426A-3 and Q1424-3	06/06/17

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC1	<p>The operator shall submit a formaldehyde monitoring plan to the Environment Agency for approval, to inform the risk assessment required by IC2. The monitoring plan shall include (but not be limited to) the following information:</p> <ul style="list-style-type: none"> a) proposals for obtaining a minimum of 12 representative samples of treated effluent from emission point S1, including justification for the timing and frequency of sampling b) proposals for obtaining the following river water samples: <ul style="list-style-type: none"> (i) 2 water samples from the River Yeo, i.e. one sample upstream of the Crediton Sewage Treatment Works (STW) outlet (located at NGR SX 85720 99120) and one sample downstream of the STW outlet but before the confluence with the River Creedy; and (ii) 2 water samples from the River Creedy, i.e. one sample upstream of the Crediton STW outlet (located at NGR SS 84877 00621) and one sample downstream of the STW outlet but before the confluence with the River Yeo. <p>Note that Crediton STW has two outlets, one on the River Yeo and the other on the River Creedy, which is why water quality data on both watercourses is required.</p> c) proposals for analysing the samples obtained in (a) and (b) for formaldehyde, including details of the testing organisation and of the UKAS accredited test method to be followed. 	Within 3 months of the date of this variation notice

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC2	The operator shall carry out a risk assessment using the results of the monitoring undertaken in accordance with the approved plan under IC1. The assessment will consider the impact of the discharge upon the receiving water downstream of Crediton (Lords Meadow) sewage treatment works. The assessment shall be carried out with reference to the Environment Agency's 'surface water pollution risk assessment' guidance, available at GOV.UK . The operator shall submit the completed risk assessment to the Environment Agency for approval.	Within 18 months of the date of this variation notice
IC3	If the Environment Agency concludes that the risk assessment required by IC2 identifies that the discharge is impacting upon the River Creedy, the Operator shall submit a written Action Plan to the Environment Agency for approval identifying what improvements to the treatment system shall be made to address the impact(s).	Within 3 months of the Environment Agency requesting in writing that the operator submit a written Action Plan
IC4	The operator shall implement the improvements identified within any Action Plan approved by the Environment Agency under IC3 and provide written confirmation to the Environment Agency that the improvements have been made.	Within 12 months of the Action Plan being approved by the Environment Agency or any subsequent date as notified in writing by the Environment Agency
IC5	The operator shall submit to the Environment Agency a report on the performance of the filter presses within the effluent treatment plant room. The report shall include (but not be limited to) the following information: <ul style="list-style-type: none"> a) a technical description of the presses b) the key operational parameters for control of the process c) how waste is handled. <p>The report shall also give consideration to improving the efficiency of the presses by increasing the solids content of the filter cake to meet indicative BAT as set out in Environment Agency sector guidance EPR 2.07.</p>	Within 6 months of the date of this variation notice
IC6	Should the report required under IC5 conclude that the existing filter presses are unable to be operated in accordance with indicative BAT the operator shall undertake an options appraisal for replacement of the presses and submit a written Action Plan to the Environment Agency for approval identifying what improvements shall be made.	Within 12 months of the date of this variation notice
IC7	The operator shall implement the improvements identified within any Action Plan approved by the Environment Agency under IC6 and provide written confirmation to the Environment Agency that the improvements have been made.	Within 12 months of the Action Plan being approved by the Environment Agency or any subsequent date as notified in writing by the Environment Agency

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC8	<p>The operator shall submit to the Environment Agency a report on the use of all open topped tanks for the storage and/or treatment of hazardous or liquid wastes. For each such tank the operator shall include the following details:</p> <ul style="list-style-type: none"> a) location of the tank and unique identifier b) what the tank is used for c) wastes stored / treated, including flashpoint limit d) dimensions and capacity e) type of construction f) age of the tank g) details of most recent inspection h) current appraisal of tank condition <p>The report shall also include a written Action Plan (for approval) for replacing the open topped tanks with enclosed tanks in order to meet indicative BAT as set out in Environment Agency sector guidance IPPC S5.06. Robust, risk-based justification must be provided for any exceptions to this requirement, the approval for which may not be granted.</p>	Within 6 months of the date of this variation notice
IC9	The operator shall implement the improvements identified within any Action Plan approved by the Environment Agency under IC8 and provide written confirmation to the Environment Agency that the improvements have been made.	Within 12 months of the Action Plan being approved by the Environment Agency or any subsequent date as notified in writing by the Environment Agency
IC10	The operator shall ensure that clear signage is provided for all storage areas, vessels, tanks and valves. Signage shall include a unique identifier for each storage area, vessel, tank or valve. The operator shall provide written confirmation to the Environment Agency that the above improvements have been made.	Within 12 months of the date of this variation notice
IC11	The operator shall submit to the Environment Agency for approval details of the inspection and maintenance procedures associated with all storage areas, tanks and vessels, their associated pipework and valves.	Within 3 months of the date of this variation notice
IC12	<p>The operator shall submit a report on the condition of the bunded areas on the lower ground floor to ensure that no releases to groundwater, surface water or sewer can take place through normal operation or as a result of an accident. The report shall include (but not be limited to) the following information:</p> <ul style="list-style-type: none"> • a physical description and assessment of integrity of the secondary containment in place, i.e. the existing bunds, including flooring and any chemical sealants; • the suitability of the existing bunds for providing containment in the event of a catastrophic tank failure; and • details of any remedial action required to ensure compliance with the standards set out in CIRIA C736 - 	Within 6 months of the date of this variation notice

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
	Containment Systems for the Prevention of Pollution - secondary, tertiary and other measures for industrial and commercial premises or other relevant industry standard.	
IC13	Should the report required under IC12 conclude that there is a risk of releases to groundwater, surface water or sewer through normal operation or as a result of an accident the operator shall submit an Action Plan to the Environment Agency for approval identifying what improvements shall be made.	Within 12 months of the date of this variation notice
IC14	The operator shall implement the improvements identified within any Action Plan approved by the Environment Agency under IC13 and provide written confirmation to the Environment Agency that the improvements have been made.	Within 12 months of the Action Plan being approved by the Environment Agency or any subsequent date as notified in writing by the Environment Agency

Schedule 2 – Waste types, raw materials and fuels

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

Schedule 3 – Emissions and monitoring

Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1 [Point 1 on Plan, reference Q1420F-2]	Wet process fume scrubber	No parameter set	No limit set	-	-	-
A2 [Point 2 on Emission Plan Q1420F-2]	Plating lines fume scrubber	No parameter set	No limit set	-	-	-
A3 [Point 3 on Emission Plan Q1420F-2]	Photomech fume scrubber	No parameter set	No limit set	-	-	-
A4 [Point 4 on Emission Plan Q1420F-2]	Via Fill fume scrubber	No parameter set	No limit set	-	-	-
A5 [Point 5 on Emission Plan Q1420F-2]	Electroless line booth extraction	No parameter set	No limit set	-	-	-
A6 [Point 6 on Emission Plan Q1420F-2]	Final Plate line booth extraction	No parameter set	No limit set	-	-	-
A8 [Point 8 on Emission Plan Q1420F-2]	DI Plant extraction	No parameter set	No limit set	-	-	-
A10 [Point 10 on Emission Plan Q1420F-2]	CNC drill swarf/dust cyclone	No parameter set	No limit set	-	-	-
A16 [Point 16 on Emission Plan Q1420F-2]	Laboratory AA extraction	No parameter set	No limit set	-	-	-
A17 [Point 17 on Emission Plan Q1420F-2]	PSR tunnel oven extraction	No parameter set	No limit set	-	-	-
A19 [Point 19 on Emission Plan Q1420F-2]	PSR blue oven extraction	No parameter set	No limit set	-	-	-
A20 [Point 20 on Emission Plan Q1420F-2]	PSR Red oven extraction	No parameter set	No limit set	-	-	-
A21 [Point 21 on Emission Plan Q1420F-2]	Laser Drill LEV	No parameter set	No limit set	-	-	-

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A22 [Point 22 on Emission Plan Q1420F-2]	Diazo developer LEV	No parameter set	No limit set	-	-	-
A27 [Point 27 on Emission Plan Q1420F-2]	Special Plate Line fume scrubber	No parameter set	No limit set	-	-	-
A28 [Point 28 on Oak Buildings Drain Plan Q1426A-3]	Hot Air Solder Level LEV	No parameter set	No limit set	-	-	-

Table S3.2 Point Source emissions to water (other than sewer) and land – emission limits and monitoring requirements						
Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
W1 [as shown on site plan at Schedule 7] emission to watercourse	Uncontaminated surface water run-off from drains serving the main factory and car park	No parameter set	No limit set	-	-	-
W2 [as shown on site plan at Schedule 7] emission to watercourse	Uncontaminated surface water run-off from drains serving the Oak Units	No parameter set	No limit set	-	-	-
W3 & W4 [as shown on site plan at Schedule 7] emissions to watercourse	Uncontaminated surface water run-off from drains serving the stores buildings	No parameter set	No limit set	-	-	-

Table S3.3 Point source emissions to sewer, effluent treatment plant or other transfers off-site–emission limits and monitoring requirements						
Emission point ref. & location	Source	Parameter	Limit (incl. Unit)	Reference period	Monitoring frequency	Monitoring standard or method
S1 [marked as 'Effluent discharge to sewer - consent 904' on Graphic Lower Ground Floor Plan Q1424-3] emission to Crediton (Lords Meadow) STW	Site effluent treatment plant (ETP)	Formaldehyde	No limit set [1]	-	-	-
		Copper	No limit set	-	-	-
		Nickel	No limit set	-	-	-
S2 [marked 'Effluent discharge SWW consent 1219' on Oak Buildings Drain Plan Q1426A-3] emission to Crediton (Lords Meadow) STW	Manufacturing process within Oak 4 building	No parameter set	No limit set	-	-	-

1. Emission limit for formaldehyde to be determined (if necessary) following completion of IC2 in Table S1.3

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
-	-	-	-

Table S4.2: Annual production/treatment	
Parameter	Units
-	-

Table S4.3 Performance parameters		
Parameter	Frequency of assessment	Units
Water usage	Annually	tonnes
Energy usage	Annually	MWh
Waste disposal and/or recovery	Annually	tonnes

Table S4.4 Reporting forms		
Media/parameter	Reporting format	Date of form
Water usage	Form water usage 1 or other form as agreed in writing by the Environment Agency	01/01/18
Energy usage	Form energy 1 or other form as agreed in writing by the Environment Agency	01/01/18
Waste disposal and recovery	Form R1 or other form as agreed in writing by the Environment Agency	01/01/18

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.

“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.

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

“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.

“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.

“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 III of the Waste Framework Directive.

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

“Industrial Emissions Directive” means DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions

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

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

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

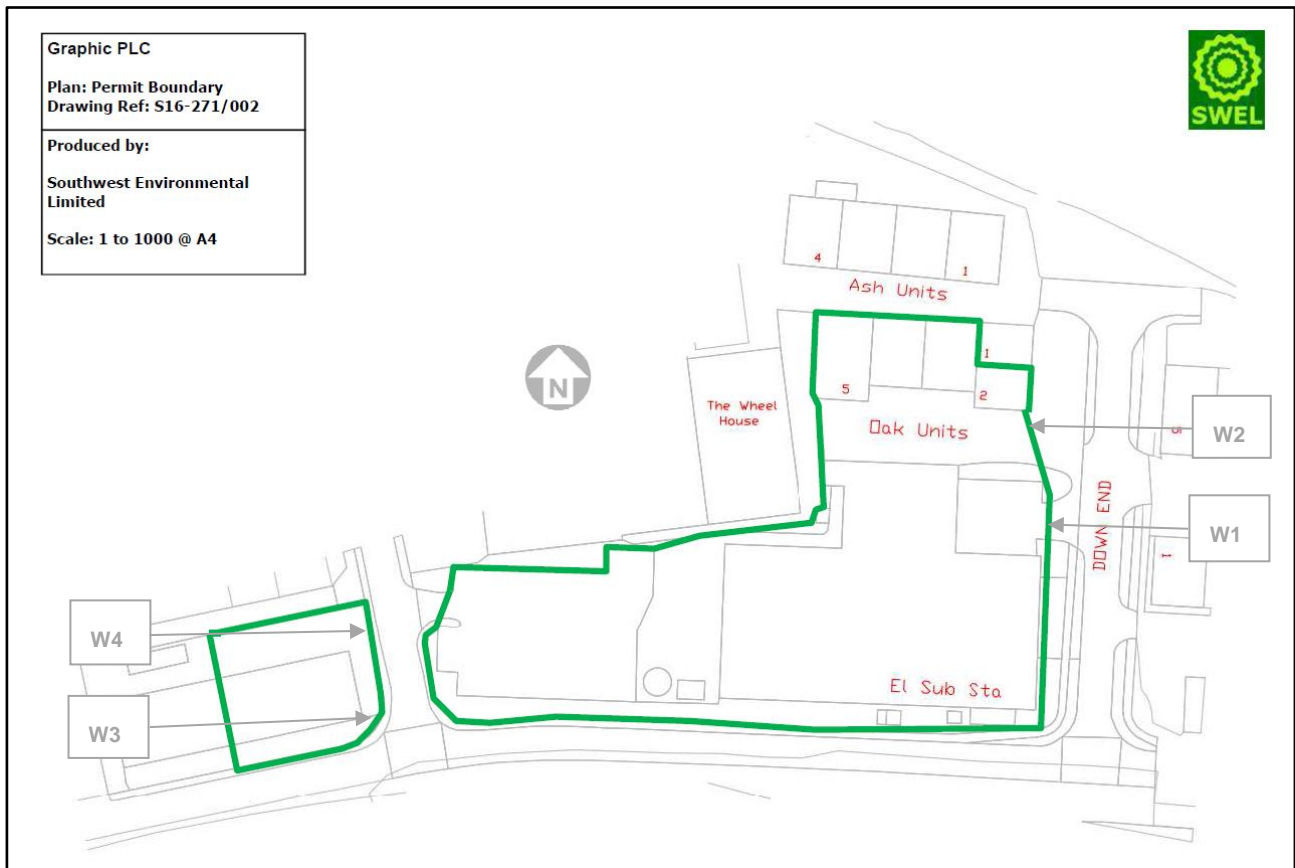
Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

Unless otherwise stated, any references in this permit to concentrations of substances in emissions into air means:

- in relation to emissions from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid and gaseous fuels, 6% dry for solid fuels; and/or
- in relation to emissions from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content.

“year” means calendar year ending 31 December.

Schedule 7 – Site plan



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