

# Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

---

Forterra Building Products Limited

Hams Hall  
Canton Lane  
Coleshill  
Warwickshire  
B46 1AQ

**Permit number**

EPR/QP3435DY

# Hams Hall

## Permit number EPR/QP3435DY

### Introductory note

#### **This introductory note does not form a part of the permit**

The main features of the permit are as follows.

Forterra Building Products Limited manufacture Autoclaved Aerated Concrete (AAC) blocks at their Hams Hall site ('the site'). The AAC block manufacturing process uses a combination of natural hydration reactions, reactions that take place at ambient temperature and pressure when water is added to Portland Cement, and accelerated curing processes resulting from high temperature and high pressure autoclaving of the products. Once the AAC blocks have been manufactured they undergo extensive quality control tests to ensure that they meet the relevant specification for AAC masonry units.

This permit authorises Forterra to manufacture concrete blocks from certain hazardous and non-hazardous waste ashes, including oil shale ash, as an activity listed under Section 5.3 A(1)(a)(vi) of the Environmental Permitting Regulations. The permit includes a Section 5.6 A(1)(a) activity for the on-site storage of the hazardous waste ash used in the process. The permit also includes a Section 3.1 Part B activity for the use of cement in the block making process. The waste ashes and cement will be stored at the site in dedicated silos. The site will accept up to 225,000 tonnes of waste material per annum, storing a maximum of 1340 tonnes of waste material on-site at any one time and treating up to 1050 tonnes of ash per day.

Principal point source emissions to air include emissions from the gas-fire boiler plant and autoclaves associated with the block curing process. Each autoclave has its own steam release valve. The facility has two gas fired boilers, however only one boiler is ever operating at any one time. Emissions of combustion gases from the boiler plant are released to air via a shared 20 metre high stack.

The site has one permitted discharge to surface water (River Tame), allowing the discharge of clean site surface water. The site also has one discharge to sewer, consented by Sever Trent Water, allowing the discharge of water from the vehicle wash. Both the discharge to surface water and sewer pass through interceptor chambers prior to release.

The site is located on the southern edge of Lea Marston, approximately 3km to the north of the centre of Coleshill. The National Grid Reference (NGR) for the site is SP2061292355.

The site is located on the northern edge of an industrial estate with further industrial units located to the south. Canton Lane, from where the site is accessed, is located to the south, whilst the closest residential property is located approximately 60m to the North West. A railway line is located 450m to the north west and the River Tame is located 10m to the north of the site.

Forterra operate an Environmental Management System accredited to ISO 14001.

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

<b>Status log of the permit</b>		
<b>Description</b>	<b>Date</b>	<b>Comments</b>
Application EPR/QP3435DY/A001	Duly made 01/12/2016	
Additional information requested by Schedule 5 Notice, dated 19/01/2017	Received 17/02/2017 and 07/04/2017	The first response dated 17/02/2017 did not fully satisfy the requirements of the Notice and the Operator was informed of the further information required by email on 09/03/2017.
Additional information requested by Schedule 5 Notice, dated 28/04/2017	Received 26/05/2017	
Permit determined EPR/QP3435DY PAS Billing ref. QP3435DY	14/06/2017	Permit issued to Forterra Building Products Limited.

End of introductory note

# Permit

## The Environmental Permitting (England and Wales) Regulations 2016

### Permit number

**EPR/QP3435DY**

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

**Forterra Building Products Limited** (“the operator”),

whose registered office is

**Forterra Building Products Limited  
5 Grange Park Court  
Roman Way  
Northampton  
NN4 5EA**

company registration number 08960430

to operate an installation at

**Hams Hall  
Canton Lane  
Coleshill  
Warwickshire  
B46 1AQ**

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

Name	Date
Claire Roberts	14/06/2017

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”).
- 2.1.2 Waste authorised by this permit shall be clearly distinguished from any other waste on the site.

### **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 Waste shall only be accepted if:
  - (a) it is of a type and quantity listed in schedule 2, tables S2.2 and S2.3, and
  - (b) it conforms to the description in the documentation supplied by the producer and holder.
- 2.3.5 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.
- 2.3.6 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**

- 2.3.7 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.

## **2.5 Pre-operational conditions**

- 2.5.1 The activities shall not be brought into operation until the measures specified in schedule 1 table S1.4A have been completed.
- 2.5.2 The operations specified in schedule 1 table S1.4B shall not commence until the measures specified in that table have been completed.

## **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 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 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.
- 4.2.5 Within 1 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.

## 4.3 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), 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.
- 4.3.6 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

<b>Table S1.1 activities</b>			
<b>Activity reference</b>	<b>Activity listed in Schedule 1 of the EP Regulations</b>	<b>Description of specified activity and WFD Annex I and II operations</b>	<b>Limits of specified activity and waste types</b>
A1	S5.3 A(1)(a)(vi) Recovery of hazardous waste with a capacity exceeding 10 tonnes per day, involving recycling or reclamation of inorganic materials other than metals or metal compounds	Producing autoclaved aerated concrete blocks using hazardous waste ash (R5)	From receipt of ash and other raw materials to storage of blocks produced, including the operation of mixer plant, material handling and transfer equipment and autoclaves. Maximum treatment capacity of 1050 tonnes per day. Waste types as specified in Table S2.2. Waste accepted for treatment shall be limited to that which is classified hazardous waste due to alkalinity alone, with Hazardous Property HP8 or HP4 only.
A2	S5.6 A(1)(a) Temporary storage of hazardous waste with a total capacity exceeding 50 tonnes pending any of the activities listed in Sections 5.1, 5.2 and 5.3 and paragraph (b) of this section.	Storage of hazardous waste oil shale ash (R13)	From receipt and acceptance of waste for on-site storage to the use of waste in the concrete block production process. Ash to be stored in designated hazardous ash silo. Maximum storage capacity 1050 tonnes. Waste types as specified in Table S2.2.
A3	S3.1 B (b) Blending cement in bulk or using cement in bulk other than at a construction site – for the manufacture of concrete blocks.	Use of cement in autoclaved aerated concrete block manufacturing process.	From receipt of cement to use in block manufacturing process. Cement to be stored in dedicated silos.
<b>Directly Associated Activities</b>			
A4	Steam supply.	2 x 10 MWth natural gas fired boilers, with gas oil as back-up fuel.	Includes oil receipt and storage. Only one boiler may be operated at any one time. Operation of plant on gas oil limited to times when the boiler plant are being serviced.
A5	Storage of non-hazardous wastes for use in the block manufacturing process.	Storage of non-hazardous waste materials at the facility prior to their use in the permitted concrete block manufacturing process.	From receipt of the non-hazardous waste materials to their storage on site. Waste types as specified in Table S2.3. Waste materials stored in

<b>Table S1.1 activities</b>			
<b>Activity reference</b>	<b>Activity listed in Schedule 1 of the EP Regulations</b>	<b>Description of specified activity and WFD Annex I and II operations</b>	<b>Limits of specified activity and waste types</b>
			designated non-hazardous ash silo or inside ash storage building, as determined by waste pre-acceptance checks.
A6	Use of non-hazardous wastes in block manufacturing process.	Use of non-hazardous waste materials in the permitted concrete block manufacturing process.	From transfer of material from waste storage to its use in the block manufacturing process. Waste types as specified in Table S2.3.
A7	Crushing of reject block material.	Crushing of reject block material for re-use on-site or for further recovery off-site.	Crushing of reject block material generated from on-site activities only and using dedicated crusher plant. Includes storage of material prior to crushing and transfer of material to the storage silo using an enclosed conveyor. Limited to the treatment of non-hazardous waste material.
A8	On-site storage of reject materials and other non-hazardous wastes.	On-site storage of reject materials and other non-hazardous wastes generated by the block manufacturing process for off-site disposal or recovery.	From generation of the reject/waste materials by the block manufacturing process to their storage in hardcore storage barn and transfer off-site.
A9	Storage of raw materials.	Storage of raw materials used in block manufacturing process, including, but not limited to, aluminium powder, anhydrite and lime.	From receipt of materials to their use on site.
A10	Vehicle wash out and wheel wash area.	Operation of vehicle wash out and wheel wash areas provided for vehicles following material delivery.	Operation of vehicle wash area and management of wash waters prior to discharge to sewer.
A11	Steam condensing tank.	Operation of steam condensing tank serving aerated block manufacturing process.	Operation of condensing tank, including recovery and handling of steam.

<b>Table S1.2 Operating techniques</b>		
<b>Description</b>	<b>Parts</b>	<b>Date Received</b>
Application	Tables 4.2, 4.3 and 4.4 of the Environmental Risk Assessment detailing risk management measures.	Duly Made 01/12/2016
Response to Schedule 5 Notice dated 19/01/2017	Response to Questions 1d, 1e, 1f, 1h, 2c, 2e, 3b, 3d, 6c, 7e, 7i and 7j.	17/02/2017
Second response to Schedule 5 Notice dated 19/01/2017.  The first response dated 17/02/2017 did not fully satisfy the requirements of the Notice and the Operator was informed of the further information required by email on 09/03/2017.	Response to Questions 1b, 1f, 2a, 2b, 2e, 4b, 4g and additional Question ii.	07/04/2017
Response to Schedule 5 Notice dated 28/04/2017	Schedule 5 Response document- response to Question 10. BATOT document, Sections 2, 3 (including Table 3.1 and identified risk management measures), 4.9, 4.12, 4.13, 4.14, 4.15, 5.1, 5.2, 5.8, and 5.11.	26/05/2017

<b>Table S1.3 Improvement programme requirements</b>		
<b>Reference</b>	<b>Requirement</b>	<b>Date</b>
IC1a	The Operator shall provide the Environment Agency with written proposals for a monitoring exercise to obtain representative data to characterise and quantify the point source emissions to air from the facility's two gas-fired boiler plant, including a timetable for the completion of the monitoring. The monitoring proposals shall be made in accordance with Environment Agency Technical Guidance Notes M1 'Sampling Requirements for Stack Emissions Monitoring' and M2 'Monitoring of Stack Emissions to Air'. Upon receiving agreement from the Agency, the operator shall carry out the agreed monitoring programme.	14/12/2017
IC1b	<p>Following the completion of the monitoring exercise required by IC1a, the Operator shall undertake an environmental risk assessment for the point source emissions to air from the boiler plant, using the data obtained and following Environment Agency Web Guidance 'Air emissions risk assessment for your environmental permit'. A written report shall be submitted to the Environment Agency for approval detailing the monitoring undertaken, data obtained and the results and conclusions of the air emissions risk assessment.</p> <p>If the risk assessment concludes that emissions do not have an insignificant environmental impact, the operator shall undertake a BAT assessment for the design and operation of the plant, having regards to Combustion Sector Guidance Note EPR 1.01. If emissions of Nitrogen Dioxide are assessed as not insignificant, options considered as part of the BAT assessment shall include, but not be limited to, providing the boiler plant with low-NOx burners. The Operator shall provide the Environment Agency with a report detailing the BAT assessment undertaken and providing a timetable for the implementation of measures to reduce the impacts of the identified emissions.</p>	Within 3 months from the completion date of IC1a
IC2a	The Operator shall provide the Environment Agency with written proposals for a monitoring exercise to obtain representative data to characterise and quantify the facility's discharges to sewer and surface water, including both hazardous and sanitary pollutants, in accordance with Environment Agency Technical Guidance Note M18 Monitoring of Discharges to Water and Sewer. The proposals shall include a timetable for the completion of the monitoring. Upon receiving agreement from the Agency, the operator shall carry out the agreed monitoring programme.	14/10/2017
IC2b	Following the completion of IC2a, the operator shall provide a written report to the Environment Agency for approval detailing the results and conclusions of the monitoring exercise. If hazardous and/or sanitary pollutants are identified in one of the monitored discharges then an environmental risk assessment of that emission shall be carried out in accordance with the Environment Agency's Web Guidance 'Surface water pollution risk assessment for your environmental permit' and provided with the report for approval.	Within 6 months from the completion date of IC2a
IC3a	The Operator shall provide the Environment Agency with written proposals for a monitoring exercise to quantify and verify emissions of particulates emitted from the dust abatement systems operating at the facility (including bag and ceramic filters), including a timetable for the completion of the monitoring. Monitoring shall be carried out under a representative range of operating scenarios, including times of maximum load associated with tanker deliveries, pneumatic transfer of material and operation of the raw material mixing processes. Upon receiving agreement from the Agency, the operator shall carry out the agreed monitoring programme.	14/12/2017

IC3b	Following the completion of the monitoring exercise required by IC3a, the operator shall provide a written report detailing the results of the monitoring. The report shall include an assessment of the monitored emission concentrations having regard to the emission concentration stated in the application (10mg/m <sup>3</sup> ) and the relevant emission benchmarks for particulates to air stated in Section 3.9 of Sector Guidance Note EPR 5.06 'Guidance for the Recovery and Disposal of Hazardous and Non Hazardous Waste' (EPR 5.06) and Section 4 of Process Guidance Note 3/01(12) 'Statutory guidance for blending, packing, loading, unloading and use of cement'. Where a relevant benchmark is found to be exceeded, an improvement programme shall be proposed in the report to reduce emission levels to the relevant benchmark concentration.	Within 3 months from the completion date of IC3a
IC4	The Operator shall provide the Environment Agency with a written report for approval summarising the inspection and maintenance programme and schedules for the facility, including the infrastructure and plant subject to inspection and maintenance (including site surfacing, drainage systems and containment measures), the frequency and method of inspection.	14/12/2017
IC5	The Operator shall undertake a review of the measures in place at the facility to prevent fugitive emissions to air, land and water from the handling and transfer of waste materials and potentially dusty materials that are not stored in silos. The review shall have regard to the measures set out in Sections 2.2.4 and 2.2.5 of EPR 5.06 and Section 5 of Process Guidance Note 3/01(12). A written report shall be submitted to the Environment Agency for approval summarising the review, its results and conclusions and detailing any proposed improvements, along with a timetable for their implementation.	14/02/2018
IC6	A review of site drainage infrastructure shall be carried out to ensure that all operational areas of the site where potentially polluting substances are stored, handled or treated are provided with an impervious surface, spill containment kerbs, sealed construction joints and sealed drainage systems (i.e. drain to a collection sump or to sewer), in accordance with EPR 5.06 and Section 10 of CIRIA Guidance C736 'Containment Systems for the Prevention of Pollution - secondary, tertiary and other measures for industrial and commercial premises'. The review shall ensure that site drainage infrastructure has been constructed to an appropriate standard, review the physical condition of the infrastructure and ensure that it is subject to an appropriate inspection and maintenance programme.  The review shall be undertaken by an appropriately qualified engineer.  Following completion of the survey, the Operator shall provide the Environment Agency with a written report for approval summarising the survey undertaken and detailing the findings, conclusions and recommendations made. Where the need for improvements and/or repairs is identified the report shall include a timetable for their completion.	14/04/2018
IC7	The Operator shall review the measures in place for monitoring the operation of the facility's dust abatement and arrestment equipment having regards to Section 2.10.1 of EPR 5.06 and Process Guidance Note 3/01(12), and review the viability of providing continuous monitoring systems for the operation of this equipment (for example, pressure drop monitoring). The Operator shall provide the Environment Agency with a written report for approval detailing the findings and conclusions of this review along with a timetable for identified actions and improvements.	14/06/2018
IC8	A review shall be carried out of the site containment measures (primary and secondary containment) in place to prevent and control fugitive emissions to land and water from potentially polluting liquids stored on-site, having regard to the requirements of Section 2.2.5 of EPR 5.06, CIRIA Guidance C736 and 'The groundwater protection code of practice on how to prevent pollution from petrol, diesel and other fuel tanks'. The review shall ensure that containment measures are constructed to an appropriate standard, review their physical condition and ensure that they	14/06/2018

<b>Table S1.3 Improvement programme requirements</b>		
<b>Reference</b>	<b>Requirement</b>	<b>Date</b>
	are subject to an appropriate inspection and maintenance programme. The review shall be undertaken by an appropriately qualified engineer. Following completion of the survey, the Operator shall provide the Environment Agency with a written report for approval summarising the survey undertaken and detailing the findings, conclusions and recommendations made. Where the need for improvements and/or repairs is identified the report shall include a timetable for their completion.	
IC9	Following completion of Improvement Conditions IC7 and IC8, the Operator shall review and, where necessary, update the facility's site condition report. A written copy of the updated site condition report shall be provided to the Environment Agency for approval.	14/08/2018
IC10	The Operator shall review site energy efficiency measures against Section 2.7.2 and 2.7.3 of EPR 5.06 and Environment Agency web guidance 'Energy efficiency standards for industrial plants to get environmental permits' and provide an energy efficiency plan for the facility. The energy efficiency plan shall be submitted in writing to the Environment Agency for approval and shall include any identified improvements along with a timetable for their implementation, including, but not being limited to, the provision of new economiser units for the existing boiler plant.	14/10/2018
IC11	The Operator shall undertake a water efficiency audit for the facility having regards to the water efficiency measures detailed in Section 2.4.3 of EPR 5.06. The water efficiency audit shall include a review and assessment of measures implemented and improvements for the minimisation of water loss from the process, specifically including, but not limited to, minimising losses from the autoclaves and steam condensing plant. A written report shall be submitted to the Environment Agency for approval, detailing the results and finding of the audit and providing a timetable for the implementation of identified improvements.	14/12/2018
IC12	The Operator shall submit to the Environment Agency for approval, a written site closure plan for the permitted facility in accordance with Section 2.11 of EPR 5.06.	14/12/2018

<b>Table S1.4A Pre-operational measures</b>	
<b>Reference</b>	<b>Pre-operational measures</b>
PO1	Prior to the acceptance of waste, other than that being accepted and treated at the time of permit issue under the Regulatory Position Statement for the use of unbound pulverised fuel ash and furnace bottom ash, the Operator shall provide the Environment Agency with written procedures for the pre-acceptance and acceptance of waste, having regards to the requirements of Sections 2.1.1 and 2.12 of EPR 5.06. The procedures shall specify clear and unambiguous criteria for the acceptance and rejection of waste and detail the method(s) used to ensure representative samples of waste are taken. The procedures shall be implemented in accordance with the written approval from the Agency.
PO2	Prior to the acceptance of waste, other than that being accepted and treated at the time of permit issue under the Regulatory Position Statement for the use of unbound pulverised fuel ash and furnace bottom ash, the Operator shall provide the Environment Agency with written procedures for a sampling and testing programme for block products produced by waste treatment process, including leachate tests. The procedures shall be implemented in accordance with the written approval from the Agency.



<b>Table S1.4B Pre-operational measures for future development</b>		
<b>Reference</b>	<b>Operation</b>	<b>Pre-operational measures</b>
PM1	Trialling of new waste for use as a raw material within the block manufacturing process	<p>The Operator shall submit to the Environment Agency a protocol which details the steps to be taken if the Operator proposes to trial a new waste as a raw material within the block manufacturing process.</p> <p>The protocol must:</p> <ol style="list-style-type: none"> <li>1) detail the arrangements for obtaining the prior written approval of the Environment Agency for any such trial;</li> <li>2) specify the types and quantities of waste to be used;</li> <li>3) identify the criteria used to demonstrate that the waste is a suitable raw material in the process and the point at which it ceases to be waste;</li> <li>4) demonstrate that any hazards posed by the waste will be adequately managed by the procedures and infrastructure in place at the facility;</li> <li>5) detail any additional measures necessary to meet the objectives of the Waste Framework Directive in ensure that the waste will be managed without endangering human health or harming the environment; and</li> <li>6) be approved by the Environment Agency before any trials of new wastes are carried out at the facility.</li> </ol>

## Schedule 2 – Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	Specification
Gas oil used as back-up fuel for gas-fired boilers	Low sulphur content fuel (<1% w/w Sulphur)

Table S2.2 Permitted hazardous waste types and quantities for concrete block manufacturing process	
Maximum quantity	Maximum annual throughput of 225,000 tonnes, in total, including waste types specified in Table S2.3. Maximum storage capacity for hazardous waste of 1050 tonnes.
Waste code	Description
<b>10</b>	<b>Wastes from thermal processes</b>
<b>10 01</b>	<b>wastes from power stations and other combustion plants (except 19)</b>
10 01 04*	oil fly ash and boiler dust

Table S2.3 Permitted non-hazardous waste types and quantities for concrete block manufacturing process	
Maximum quantity	Maximum annual throughput 225,000 tonnes, in total, including waste types specified in Table S2.2. Maximum total site storage capacity (for hazardous and non-hazardous waste) of 1340 tonnes.
Waste code	Description
<b>01</b>	<b>Wastes resulting from exploration, mining, quarrying, and physical and chemical treatment of minerals</b>
<b>01 04</b>	<b>wastes from physical and chemical processing of non-metalliferous minerals</b>
01 04 09	waste sand and clays
01 04 10	dusty and powdery wastes other than those mentioned in 01 04 07
<b>10</b>	<b>Wastes from thermal processes</b>
<b>10 01</b>	<b>wastes from power stations and other combustion plants (except 19)</b>
10 01 01	bottom ash, slag and boiler dust (excluding boiler dust mentioned in 10 01 04)
10 01 02	coal fly ash
10 01 03	fly ash from peat and untreated wood
10 01 05	calcium-based reaction wastes from flue-gas desulphurisation in solid form
10 01 07	calcium-based reaction wastes from flue-gas desulphurisation in sludge form
10 01 15	bottom ash, slag and boiler dust from co-incineration other than those mentioned in 10 01 14
10 01 17	fly ash from co-incineration other than those mentioned in 10 01 16
10 01 24	sands from fluidised beds
<b>10 11</b>	<b>wastes from manufacture of glass and glass products</b>
10 11 14	glass-polishing and grinding sludge other than those mentioned in 10 11 13

**Table S2.3 Permitted non-hazardous waste types and quantities for concrete block manufacturing process**

<b>Maximum quantity</b>	Maximum annual throughput 225,000 tonnes, in total, including waste types specified in Table S2.2. Maximum total site storage capacity (for hazardous and non-hazardous waste) of 1340 tonnes.
<b>Waste code</b>	<b>Description</b>
<b>10 12</b>	<b>wastes from manufacture of ceramic goods, bricks, tiles and construction products</b>
10 12 08	waste ceramics, bricks, tiles and construction products (after thermal processing)

## Schedule 3 – Emissions and monitoring

<b>Table S3.1 Point source emissions to air – emission limits and monitoring requirements</b>						
<b>Emission point ref. &amp; location</b>	<b>Source</b>	<b>Parameter</b>	<b>Limit (including unit)</b>	<b>Reference period</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>
A1 [Point A1 on site plan in Schedule 7]	Boiler stack, serving two gas-fired boilers	Note 1	Note 1	Note 1	Note 1	Note 1
A2 [Point A2 on site plan in schedule 7]	Extractor vent on hazardous ash silo	No parameters set	No limit set			
A3 [Point A3 on site plan in schedule 7]	Extractor vent on hardcore storage silo	No parameters set	No limit set			
A4 [Point A4 on site plan in Schedule 7]	Extractor vent on cement silo	No parameters set	No limit set			
A5 [Point A5 on site plan in Schedule 7]	Extractor vent on non-hazardous ash silo	No parameters set	No limit set			
A6 [Point A6 on site plan in Schedule 7]	Extractor vent on anhydrite silo	No parameters set	No limit set			
A7 [Point A7 on site plan in Schedule 7]	Extractor vent on lime silo	No parameters set	No limit set			
A8 & A9 [Points A8 & A9 on site plan in Schedule 7]	Extractor vents on internal cement silos	No parameters set	No limit set			
A10 & A11 [Points A10 & A11 on site plan in Schedule 7]	Extractor vents on internal ash silos	No parameters set	No limit set			
A12 – A22 [Points A12 – A22 on site plan in Schedule 7]	Steam vents from autoclaves	No parameters set	No limit set			
A23 [Point A23 on site plan in Schedule 7]	Chimney of steam condensing tank	No parameters set	No limit set			
A24 [Point A24 on site plan in Schedule 7]	Dust abatement plant vent of pneumatic transfer systems	No parameters set	No limit set			

Note 1: To be agreed in writing with the Environment Agency following completion of Improvement Condition IC1b

**Table S3.2 Point Source emissions to water (other than sewer) and land – emission limits and monitoring requirements**

<b>Emission point ref. &amp; location</b>	<b>Source</b>	<b>Parameter</b>	<b>Limit (incl. unit)</b>	<b>Reference Period</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>
SW1 on site plan in schedule 7, emission to River Tame	Clean site surface run-off and drainage water, via interceptor chamber	Note 1	Note 1	Note 1	Note 1	Note 1

Note 1: To be agreed in writing with the Environment Agency following completion of Improvement Condition IC2b

**Table S3.3 Point source emissions to sewer, effluent treatment plant or other transfers off-site – emission limits and monitoring requirements**

<b>Emission point ref. &amp; location</b>	<b>Source</b>	<b>Parameter</b>	<b>Limit (incl. Unit)</b>	<b>Reference period</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>
S1 on site plan in schedule 7, emission to Severn Trent Water Sewage Treatment Works	Surface drainage water, including vehicle wash water, via interceptor chamber	Note 1	Note 1	Note 1	Note 1	Note 1

Note 1: To be agreed in writing with the Environment Agency following completion of Improvement Condition IC2b

## Schedule 4 – Reporting

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

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Emissions to air Parameters as required by condition 3.5.1.	A1	Note 1	Note 1
Emissions to water Parameters as required by condition 3.5.1	SW1	Note 2	Note 2
Emissions to sewer Parameters as required by condition 3.5.1	S1	Note 2	Note 2

Note 1: To be agreed in writing with the Environment Agency following completion of Improvement Condition IC1b

Note 2: To be agreed in writing with the Environment Agency following completion of Improvement Condition IC2b

Parameter	Units
Treatment of hazardous waste	tonnes
Treatment of non-hazardous waste	tonnes
Aerated concrete blocks produced	tonnes

Parameter	Frequency of assessment	Units
Water usage	Annually	m <sup>3</sup>
Energy usage	Annually	MWh
Total raw material used	Annually	tonnes
Boiler plant – hours operated on gas oil (back-up fuel)	Annually	Hours

Media/parameter	Reporting format	Date of form
Water usage	Form water usage 1 or other form as agreed in writing by the Environment Agency	14/06/2017
Energy usage	Form energy 1 or other form as agreed in writing by the Environment Agency	14/06/2017
Other performance indicators	Form performance 1 or other form as agreed in writing by the Environment Agency	14/06/2017
Waste returns	E-waste return form	-

# 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	

<b>(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</b>	
<b>To be notified within 24 hours of detection</b>	
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>(b) Notification requirements for the breach of a limit</b>	
<b>To be notified within 24 hours of detection unless otherwise specified below</b>	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

<b>Time periods for notification following detection of a breach of a limit</b>	
<b>Parameter</b>	<b>Notification period</b>

<b>(c) Notification requirements for the detection of any significant adverse environmental effect</b>	
<b>To be notified within 24 hours of detection</b>	
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.

“emissions to land” includes emissions to groundwater.

“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

“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.

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

“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 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

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.

When the following terms appear in the waste code list in Schedule 2, table S2.2 and S2.3, for those tables, 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

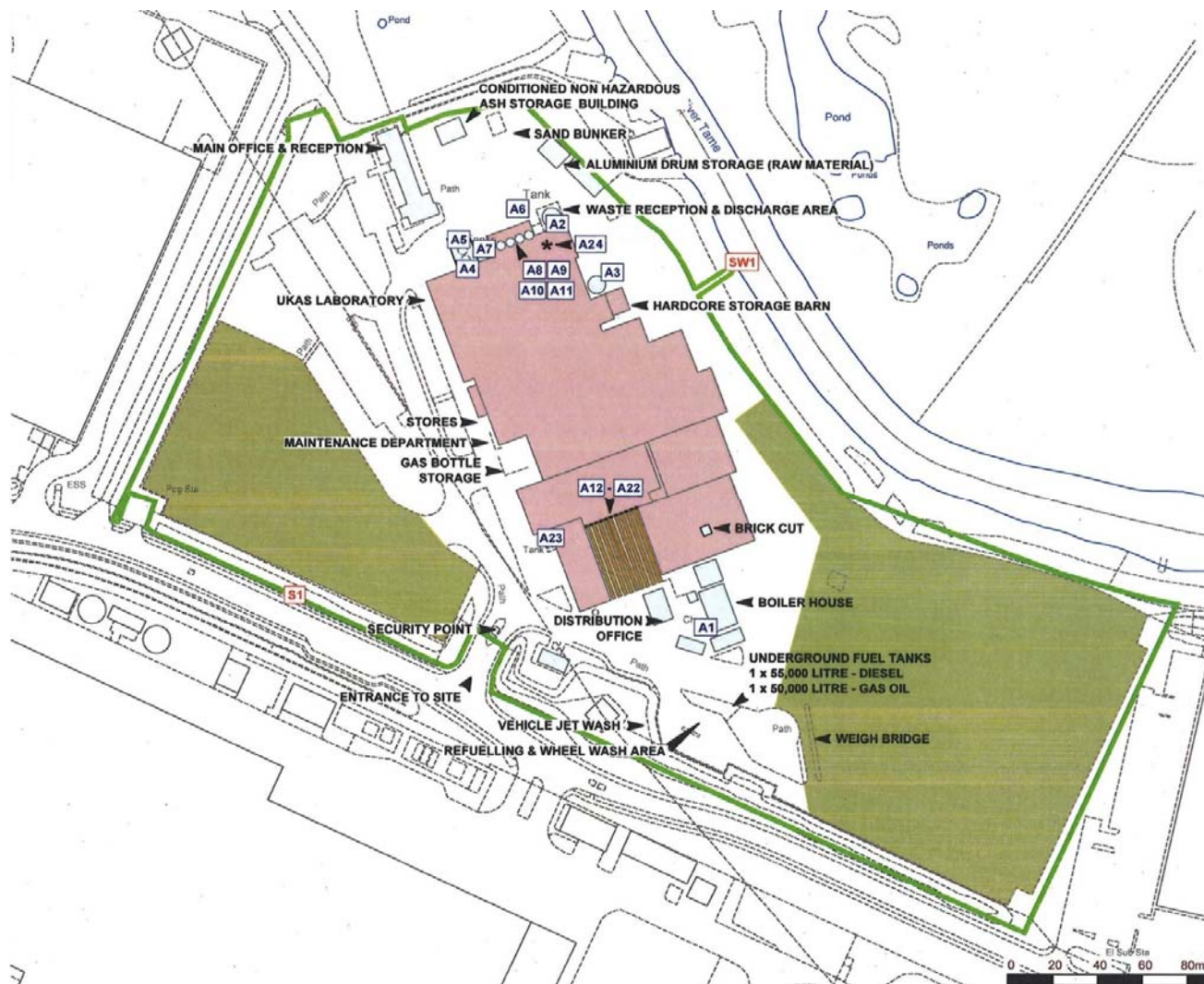
‘transition metals’ means any of the following metals: any compound of scandium, vanadium, manganese, cobalt, copper, yttrium, niobium, hafnium, tungsten, titanium, chromium, iron, nickel, zinc, zirconium, molybdenum and tantalum, as well as these materials in metallic form, as far as these are classified as hazardous substances

‘stabilisation’ means processes which change the hazardousness of the constituents in the waste and transform hazardous waste into non-hazardous waste

‘solidification’ means processes which only change the physical state of the waste by using additives without changing the chemical properties of the waste

‘partly stabilised wastes’ means wastes containing, after the stabilisation process, hazardous constituents which have not been changed completely into non-hazardous constituents and could be released into the environment in the short, middle or long term

## Schedule 7 – Site plan



END OF PERMIT

Permit number  
EPR/QP3435DY