

<b>Operator</b>	<b>Michelmersh Brick Holdings PLC</b>
<b>Installation Address</b>	Sommerfeld Road Trench Lock Telford TF1 5RY
<b>Grid Reference</b>	SJ 684 122
<b>Company Number</b>	
<b>Registered Office</b>	Freshfield Lane Danehill Haywards Heath Sussex RH17 7HH

Michelmersh Brick Holdings PLC (trading as MBH Blockleys) is hereby permitted by The Borough of Telford & Wrekin to carry on a Ceramic Production Activity under Section 3.6 (A2) of the Environmental Permitting (England and Wales) Regulations 2010 (as amended) and other Part B activities as listed and as described below within the installation boundary as marked red on the attached plan reference 04/00006/PPCA2/1 and in accordance with the following conditions.

<b>Provenance</b>	<b>Relevant Dates</b>
Date Application Made	26 March 2004
Date 'Duly Made'	8 April 2004
Date Permit First Issued	10 October 2005
Date of Variations	25 April 2013
Date of Latest Variation	25 April 2013

This permit consists of 31 numbered pages

## Description of the Installation

The installation produces clay bricks, standard and non-standard special shaped bricks, clay pavers and clay paving accessories.

All manufacturing activities are carried out in accordance with a Quality Management System meeting the requirements of BS EN ISO 9001 and an Environmental Management System meeting the requirements of EN ISO 14001

The production facilities are carried out in two manufacturing plants located in one building.

The brick making process comprises the following elements and activities:

- 1 - Clay stockpiling element,
- 2 - Clay preparation element,
- 3 - Brick forming activity,
- 4 - Sand preparation element,
- 5 - Drying element,
- 6 - Setting process element,
- 7 - Firing process element,
- 8 - Sorting/packing and storage element,
- 9 - Waste storage element

The following text divides the processes as described above into elements and activities both those scheduled under the above regulations and those non scheduled activities required to be permitted because of their polluting potential and direct association and technical connection with the scheduled activities.

### **1 - Clay Stockpiling Element:**

Clay won from the Hadley Quarry is stockpiled on site within the process boundary. Clay is normally matured and weathered for a period of approximately 12 months prior to use.

Clay is re-won from the stockpile using a JCB backactor and loaded into an articulated dump truck. The clay is transported to the box feeders located in the one primary production units.

All further production activity takes place inside an enclosed modern factory building.

### **2 – Clay Preparation Element**

The box feeder feeds the clay into the crusher which crushes the hard clay prior to it being conveyed to the rolling mills. All clay preparation plant is located inside the plant buildings

Clay is delivered to the rolling mills via a box feeder at a constant rate. The material is ground using heavy weight rollers which forces the material through rotating grids.

The ground material is put through a series of vibrating screens which grade the material to the required consistency. It is then transported via conveyors to rotating storage silos holding approximately 80 tonnes of clay.

The clay preparation plant in the principal manufacturing plants typically produces 30 to 45 tonnes of ground clay per hour.

### **3 - Brick Forming Activity**

The forming of standard bricks, clay pavers, special shapes and paver accessories is achieved by using one type of extrusion process.

#### a) Extrusion process

The clay from the preparation plant is fed into mixers where water and clay is added and mixed to the required consistency with a moisture content of around 12%. The clay is then fed into a further mixer and pushed through rotating shredder knives which shred the clay into a vacuum chamber which removes air from the clay. The clay is then fed via an auger worm through a die to form the basic shape of the brick or paver in the form of a horizontal clay column. The clay column is conveyed to a guillotine cutter and multi wire cutter which cuts the clay column into individual units at a rate of approximately 12000 units per hour. The units are transported via a conveyor and fed onto steel pallets which are conveyed to the ascending frame. The units are equally spaced for the drying process and transported to drying chambers.

There are two different extrusion production lines, the normal extrusion process, and the specials and accessories extrusion process.

The specials and accessories extruder operates in a similar manner to the main line production extruder at a rate of 4000 units per hour. However due to the different ranges of product and the varying sizes these units are taken by hand and placed on drying trays. These trays are automatically loaded into stillages and transported to bespoke drying chambers for this type of product.

Immediately following the extrusion process the products may have some form of texturing applied to the surface of the brick or may have liquid pigment and sand/stains applied which determines the final product appearance after the firing process.

### **4 - Sand Preparation Element**

Sands and stains used in the extrusion process are prepared in a separate enclosed building.

Sand is delivered in bulk bags and deposited in storage areas within the manufacturing plant prior to it being used either in its original state or being mixed with a dry powder stain to create a sand and stain mixture to the required colour and

recipe. The sand and stain mixture is stored in sealed bulk bags or enclosed bins prior to being used in the extrusion process

### **5 - Drying Element**

Bricks or other products are transported into several drying chambers where the product is dried over a period of 24 hours using predominantly waste heat recovered from the kiln firing process and a combination of humidity control and direct heat.

Once the drying cycle is complete the bricks are tested for moisture content. Typically dry bricks shall not exceed a moisture content of 1%. The dry bricks are transported via a finger car to a descender for presentation to the setting machine.

There are two special drying chambers designed to hold a range and size of products. The drying process for these chambers is via conventional gas burners each fitted with flame failure devices. For different ranges of thickness and size of product the drying cycles can be varied, the larger units typically require 48 to 56 hour drying cycles in order to achieve the less than 1% moisture criteria.

### **6 – Setting Process Element**

Products are presented to the setting machine from a descender via a series of conveyors and grippers. Depending on the nature of the products they are grouped into the required pattern when automatic grippers lift the product from the setting table and place the bricks on the kiln cars. The different setting pattern determines the extent of the heat work carried out to the product during the firing and this contributes to the final colour of the product.

Typically each kiln car holds between 3328 and 4352 units.

All special products and paver accessories are set by hand due to the varying nature and size of product. These are set onto kiln cars which are designated for the intermittent kilns.

### **7 – Firing Process Element**

There is 1 continuous tunnel kiln and 2 intermittent batch kilns on site.

Once the kiln car has been set it is automatically transported to the kiln pre-heater. The product is passed through the pre-heater, fed with waste heat recycled from the cooling zones of the kiln, before entering the tunnel kiln.

Product entering the kiln passes through a series of firing zones, each zone is higher in temperature and forms a controlled temperature rise until a peak temperature of around 1,150°C is reached.

The product is held at the peak temperature for a period of time depending on product type, allowing the heat to uniformly penetrate the product on the kiln car

before entering the cooling zones where all cooling air is recouped and used as detailed above for the pre-heating and drying processes.

The kiln is fitted with natural gas burners fed by combustion air fans which make up a number of firing zones.

Each zone is automatically controlled via a temperature controller sited in the kiln control room. Zones are pulse-fired to aid temperature uniformity and are very fuel efficient.

The kiln is equipped with safety devices which automatically shut off in the event of power supply failure.

The kiln is supported by a small standby generation systems in order to ensure essential roof and under car cooling systems are maintained in the event of a power failure.

All gases are exhausted via a fanned exhaust which draws all waste gases down the tunnel kiln and out through the chimney via a gas scrubbing unit to control Hydrogen Fluoride emissions.

The tunnel kiln has a thermal input greater than 2 Megawatts.

For special products there are two intermittent kilns capable of holding 11,100 and 3,700 units respectively. Each has a thermal input less than 2 Megawatts. They are both fully automatic and fitted with reduction facilities to produce the blue / multi-colour range of product. Both kilns have safety shut off valves to shut off the main supply of gas to kiln in the event of power or main fan failure.

## **8 – Sorting and Packaging Element**

Fired cars from the kilns are automatically transported to the de-hacking machine or robots where mechanical heads pick up the products and place these onto a marshalling table for transfer to sorting chains. The bricks travel on the sorting chains with the face of the bricks upper most to allow for visual inspection.

All bricks are checked for colour match and quality on the sorting chains before being marshalled in preparation for the next stage. The product is then transported on roller conveyors to the pack forming head which picks up each layer and places them onto a descending table. The layers are interspersed with void forms and layers of interleaving paper as appropriate to provide pack stability. Once the pack is formed it is transferred to the strapping station where edge protection and plastic strapping is applied automatically to complete the pack of 400 units in the case of 65mm facing bricks and 65mm paviors. Packs of 520 units are formed by the same process where the units are 50mm thick and packs of 336 units are produced by the same process where the units are 73mm or 75mm.

At the strapping station the product name and batch code is automatically applied by a heat foil marking system. All paver products have film stretched over them via the Lachenmeirer hooding machine. Labels detailing the contents are added to some of the products when instructed by supervisors / managers. Film is stretched over the facing brick packs when instructed by the supervisors / managers. The product is fork lifted off the drawing table and transported to the designated stockyard.

All special bricks and paver accessories are manually unloaded from the kiln cars and put onto pallets, using interleaving paper where appropriate for stability. The product is shrink-wrapped on the pallet and transported by forklift truck to the designated area in the specials stockyard.

### Stockyard

When the bricks leave the de-hacker and packaging station they are transported by a forklift truck to the designated area on the stockyards.

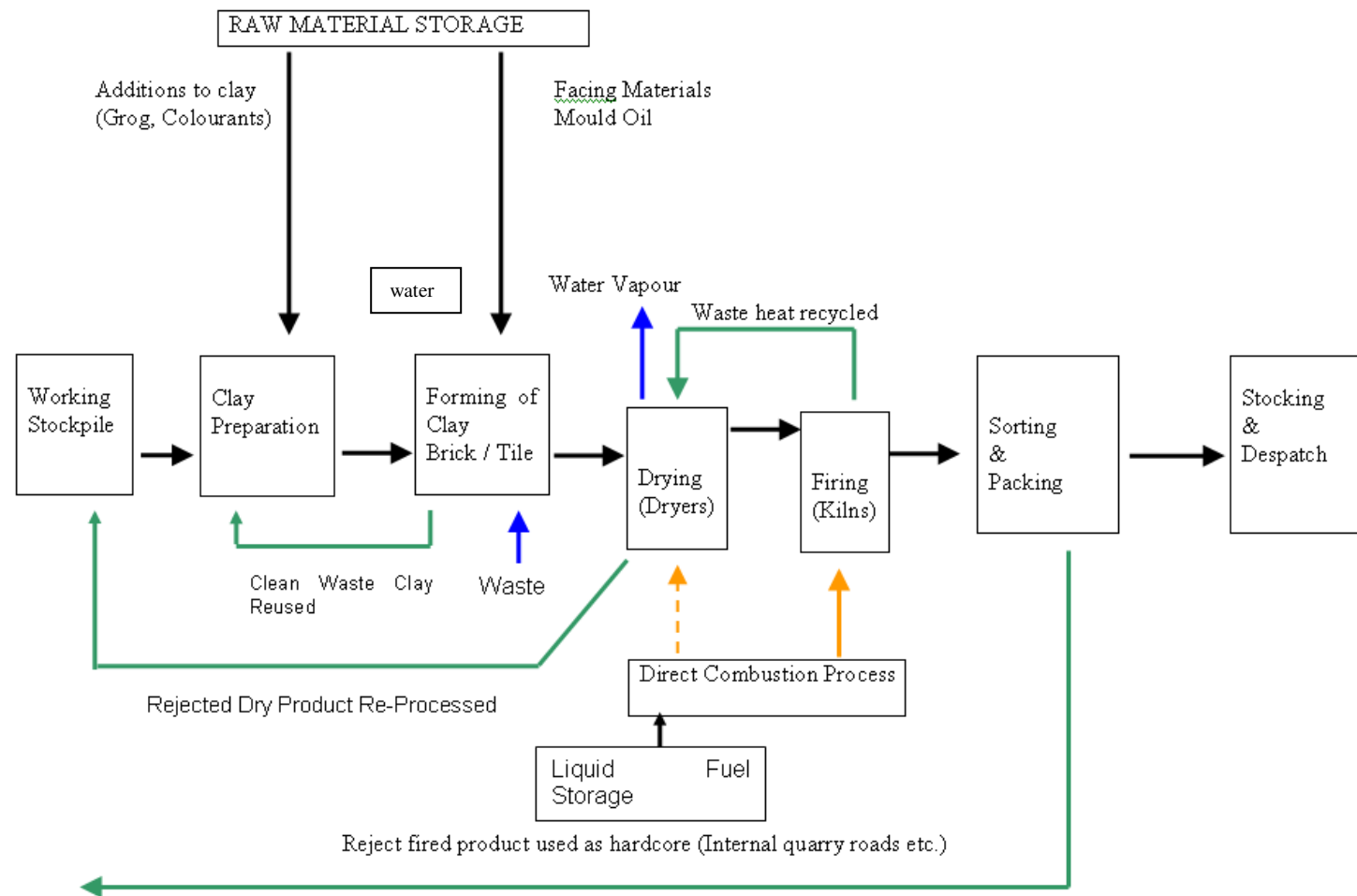
Vehicles are loaded by forklift operators assigned to this process, drawing the required product from specific stock lines. The loading of vehicles is in one specific location, other than for those collecting special shaped products, where they are directed to the specials stockyard. Speed restriction applies to all areas around the works.

### 9 – Waste Storage element

The waste storage areas (both internal and external) are designated on the plan 04/00006/PPCA2/2 and Environmental Form B-EF-6 Materials and Waste Storage Inspection Sheet.

Waste storage is an element within the brick manufacturing process that is directly associated and technically connected with the activities scheduled in section 3.6(A2) Environmental Permitting (England and Wales) Regulations 2010 (as amended) and as such it is regulated as a polluting activity.

### BRICK MAKING PROCESS FLOW CHART







### Materials Used

Table 1 (below) lists the total quantities of raw materials brought into the installation and subjected to processing, the figures listed are for the year 2011.

**Table 1A. Quantities of Materials Used**

Raw Material	Typical Storage	Usage (2011)	Activity
Clay	Stock Pile	<b>Commercially</b>	1
Bulk Sand (Damp)	Bunkers		1
Bulk Sand (Dry)	Silos		1
Liquid clay additives/conditioners	Tanks		1
Non-Organic Aqueous Suspended Pigments – Body Colour	IBC Containers Tanks		1,2,3
Dry bagged facing stains	Bags		4
Brick oil – Extrusion lubricant	Bunded tank		3
Machine oils & lubricants	Drums		Misc.
Gas Oil – Red Diesel	Bunded Tank		1,8
Paraffin	Tanks/Drums		1
Plastic Shrink Wrap Bags/ Strapping/ Void Boards	Rolls/ Pallets		1
Wooden Pallets	Loose		1
Packaging Paper	Pallets		8
Wood Void Boards	Pallets		8

**Table 1B Raw Materials – Water usage**

Process / Plant	Supply Source	Release Routes	Quantity (cubic metres per annum)
Additive to clay to produce plastic material for extrusion.	Mains	Evaporated during drying process	Not measured But at Least 50 % of Total
Welfare block	Mains	To foul sewer	Not measured
<b>TOTAL</b>			<b>Commercially confidential</b>

Currently, there is no requirement for the company to operate under a sewerage undertaker discharge consent.

Table 2 (below) lists all the plant and equipment concerned with the installation that is regulated within this permit. The aforementioned plant or equipment is classified by Activity (discussed above), identified specifically by reference numbers and the relevant emission point(s) and any relevant abatement plant are noted.

**Table 2. List of plant equipment concerned with the installation**

Plant or Equipment used	Activity	Machine reference numbers	Abatement	Emission Points
JCB Backactor	1	PE1	N/A	Vehicle Exhaust
Articulated Dump truck	1	PE2	N/A	Vehicle Exhaust
Box feeders	2	PE3	N/A	Fugitive
Crusher	2	PE4	N/A	Fugitive
Rolling mill	2	PE5	N/A	Fugitive
Vibrating Screens	2	PE6	N/A	Fugitive
Rotating Storage Hoppers 80 tonnes	2	PE7	N/A	Fugitive
a) extrusion process				
i) Mixer	3	PE8	N/A	Fugitive
ii) Rotating shredder knives	3	PE9	N/A	N/A
iii) Vacuum Chamber	3	PE10	N/A	N/A
iv) Die	3	PE11	N/A	N/A
v) Guillotine cutter	3	PE12	N/A	N/A
vi) Multi-wire cutter	3	PE13	N/A	N/A
vii) Conveyor	3	PE14	N/A	N/A
viii) Drying chambers	5	PE15	N/A	Dryer Exhausts
Sand Preparation				
ii) loading shovel	2	PE16	N/A	Vehicle Exhaust
Drying Chambers (6)	5	A4, A5, A6	None	Dryer Exhausts
Setting machine	6	PE18	N/A	N/A
No 8 Tunnel Kiln	7	A1	Scrubber	Kiln Exhaust
No 9 Shuttle Kiln	7	A2	None	Kiln Exhaust
No 10 Shuttle Kiln	7	A3	None	Kiln Exhaust
HF Scrubber 8	7	PE22	Scrubber	Kiln Exhaust
De-hacking machine	8	PE23	N/A	N/A
De-Hacking Robots (Fanuk)	8	PE24	N/A	N/A
Packing station	8	PE25	N/A	N/A
Fork Lift Trucks	8	PE26	N/A	Vehicle Exhaust
Stockyard	8	PE27	N/A	N/A

Note abbreviations:

Clay prep: Clay preparation; BF: Brick forming; Sand Prep: Sand preparation; PE: Plant Equipment.

**Plant concerned with preventing emissions to atmosphere**

Many of the emissions from the process plant are ducted to abatement equipment installed for the purpose of removing pollutants prior to release to atmosphere. Table 3 (below) identifies the abatement plant or production equipment that discharges to atmosphere via the identified emission stack. Equipment and emission stacks that emit direct to atmosphere are unabated emission sources.

**Table 3 Abatement plant and Emissions**

Plant or Equipment used	Abatement Type	Machine reference numbers	Emission Stacks metres	Pollutants
No 8 Tunnel Kiln	Scrubber	A1	15	Smoke, TPM, NOx, SO <sup>2</sup> , HCl, HF, Products of Combustion, Smoke
No 9 Shuttle Kiln	None	A2	13.5	Smoke
No 10 Shuttle Kiln	None	A3	13.5	Smoke
No 9 Dryer Exhaust	None	A4		Smoke, Water Vapour, Products of combustion
No 8 Dryer Exhaust	None	A5		Smoke, Water Vapour, Products of combustion
Specials Dyer Exhaust	None	A6	10.5	Smoke, Water Vapour, Products of combustion
No 8 Tunnel Kiln Standby Exhaust Point	None	A7	13.65	Smoke, TPM, NOx, SO <sup>2</sup> , HCl, HF, Products of Combustion Used only if scrubber fails.
No 8 Kiln Pre-heat pressure relief valve	None	A8	11	None
LEV Cabinet Filter	Bag Filter	A9	3	TPM

Note Abbreviations:

TPM; Total Particulate Matter; NOx: Oxides of Nitrogen; SO<sup>2</sup>; Oxides of Sulphur; HCl; Hydrogen Chloride; HF; Hydrogen Fluoride.

The Tunnel Kiln No 8 has a net rated thermal input of greater than 2 megawatts. Shuttle Kilns 9 and 10 have a rated thermal input of less than 2 megawatts.

**Glossary of Terms/Definitions:**

Activity	One or more stationary technical units falling within the defined sections of the Schedule 1 of the Environmental Permitting (England and Wales) Regulations 2010 (as amended)
Bagfilter	An arrestment plant device used to trap particulate matter from emissions to air. Essentially grit laden air is passed through a fabric filter trapping the particles on the one side allowing the clean air to be discharged. Collected particles are knocked off the surface of the filter and collected in drop bins for disposal.
De-hacking	Removing the bricks from the kiln cars and marshalling them for packaging
EPA	Environmental Protection Act, the former pollution control regime, now redundant due to the implementation of PPC.
Installation	One or more stationary technical units comprising at least one activity or activities falling within the description of Schedule 1 of the Environmental Permitting (England and Wales) Regulations 2010 (as amended) within a defined area.
Net rated thermal input	is the rate at which fuel can be burned at the maximum continuous rating of the installation multiplied by the net calorific value of the fuel and expressed as megawatts thermal
Regulator	Means Borough of Telford and Wrekin Environmental Health Team. When contacting the regulator, it is not sufficient to contact any other part of the council other than the Environmental Health Team at the address specified in the additional notes.
Strapping	stacking bricks in a manner suitable to bind using plastic wrapping, formerly steel strip.
The Regulations	means the Environmental Permitting (England and Wales) Regulations 2010 (as amended)

## Permit Conditions

### Authorised Plant

- 1.1 The authorised production plant shall consist of the plant and equipment listed in Table 2 (above). No other production plant or equipment shall be used except where a written notification has been submitted to, and approved by, the regulator.
- 1.2 Plant or equipment concerned with the prevention of emissions to atmosphere is listed in Table 3 (above). No other abatement plant shall be used except where a written notification has been submitted to, and approved by, the regulator.

### Emission Limits and Controls - Air

- 2.1 There shall be no visible emissions, other than steam or water vapour from the installation or from the process buildings.
- 2.2 Emissions from the installation, other than steam or condensed water vapour, shall be free from droplets and from persistent mist and persistent fume.
- 2.3 Emissions from combustion processes shall in normal operations be free from visible smoke and in any case shall not exceed the equivalent of Ringelmann shade 1 as described in British Standard B.S.2742:2009 at any time.
- 2.4 Emissions from final point of discharge to atmosphere noted in Table 3 shall not exceed the following concentrations of the substances and chemicals listed:

Pollutant	Permitted Concentration
Total particulate matter (TPM)	100mgm <sup>-3</sup>
Fluoride (HF)	10mgm <sup>-3</sup>
Sulphur dioxide (SO <sub>2</sub> )	500mgm <sup>-3</sup>
Nitrogen Oxides (NO <sub>x</sub> )	500mgm <sup>-3</sup>
Chloride (HCl)	50mgm <sup>-3</sup>

It shall be a requirement for emission points listed in Table 3 to meet the particular pollutant emission concentrations listed for that emission point only. Not all emitted substances or chemicals apply to all emission points.

- 2.5 The concentrations of the substances listed in condition 2.4 shall be expressed at reference conditions, 273K, 101.3kPa, 18% oxygen measured dry, and averaged over the firing cycle of the kiln and the results of the monitoring shall be expressed in milligrams per cubic metre (mgm<sup>-3</sup>).
- 2.6 No piece of plant or equipment mentioned in condition 1.1 above (or any replacement used for the same purpose), shall be operated with an extraction

point direct to atmosphere unless specifically noted within this document or specifically agreed in writing with the regulator.

- 2.7 The introduction of dilution air to emission stacks shall not be permitted. In the event that an emission stack can be demonstrated to be compliant with condition 2.4 above, dilution air may be added to render harmless a visible or odorous emission. Such dilution shall only be permitted where agreed in writing with the regulator.
- 2.8 For any plant listed in Table 3, any bypass of the abatement plant shall be deemed an emergency and steps shall be taken to contain the unabated emissions. If the unabated emissions cannot be contained steps shall be taken to rectify this immediately, and if necessary arrangement shall be made for a controlled process shutdown. The regulator shall be notified immediately of any such occurrence.
- 2.9 The operator shall ensure that water is available to control dust emissions from the main stockpile.

#### **Atmospheric Dispersion of Contained Emissions**

- 2.10 With the exception of the driers (activity 5) the efflux velocity of all emissions serving the emission points listed in Table 3 must not be less than  $15 \text{ msec}^{-1}$ , or shall otherwise be demonstrated to have sufficient efflux velocity.
- 2.11 With the exception of the driers (activity 5), chimneys and vents listed in Table 3 shall not be fitted with any restrictive plates, caps or cowls at the final opening.
- 2.12 All emission points listed in Table 3 shall discharge at a height calculated with the procedural document D1 entitled, "The Determination of Discharge Stack Heights for Polluting Emissions", published by HMIP.

Emissions consisting solely of particulate matter shall not require a calculation to be carried out where, in accordance with the requirements of D1 the effective discharge height is reduced to ground level.

- 2.13 Any emissions from final point of discharge to atmosphere from emission points listed Table 3 (or any replacements or additional arrestment plant used for the same purpose) shall be maintained at the same height as calculated in condition 2.12 for the lifetime of the plant. Where guidance, plant or equipment, or the nature of emissions changes; the calculations required in conditions 2.12 shall be repeated.
- 2.14 External surfaces of the process building, ancillary plant and open yards and storage areas shall be inspected and cleaned as may be necessary to prevent the accumulation of dusty material in circumstances where the dust may become wind entrained. Particular attention shall be paid to roofs, guttering,

roadways, external storage areas and yards. Cleaning operations shall be carried out by methods which minimise emissions of particulate matter to air.

A record of the actions taken in compliance with this condition shall be retained and held with the log book required to be kept under condition 9.5.

#### **Emissions to Surface Water, Sewer and Groundwater**

2.15 Any alterations to the existing drainage system shown in plan 04/00006/PPCA2/4 shall be approved by the regulating authority. The drainage system plan shall be resubmitted following partial decommissioning.

2.16 All hardstanding areas (designated by plan 04/00006/PPCA2/4) shall drain to drainage systems discharging through interceptors. The drainage system plan shall be resubmitted following partial decommissioning.

2.17 Additives, oils, lubricants and other process related solutions shall be stored in an area(s), designed or located such that any leakage or spillage in that area(s), is contained or controlled.

2.18 The operator shall prepare a cleaning and maintenance schedule for the all interceptors that shall identify:

- That they are impermeable and resistant to stored materials
- subject to visual inspection
- subject to a maintenance inspection.

The cleaning and maintenance schedule shall be agreed with the regulator and shall be updated as may be necessary to account for process changes or changes to the plan as identified in 2.17 above.

All interceptors for the site shall be emptied in accordance with the cleaning and maintenance schedule, or more frequently as may be necessary to ensure efficacy of the interceptor.

2.19 Delivery connections to bulk liquid storage tanks shall be located within the area noted in condition 2.20.

2.20 Where necessary to prevent emissions direct to the environment, all fixed storage tanks and silos (excluding oil storage) shall be fitted with high-level alarms or volume indicators to warn of over-filling. Where practicable the filling systems shall be interlocked to the alarm system to prevent overfilling. The operator shall supply a plan of the site indicating the location of the fixed storage tanks, their content, and maximum capacity. Each storage tank shall be clearly labelled with that information.

The plan shall be submitted within 2 months of the issue of this permit and thereafter updated as and when storage tanks or silos change.

- 2.21 Gas oil and diesel shall be stored in accordance with the Control of Pollution (Oil Storage) (England) Regulations 2001.
- 2.22 The bunded areas surrounding storage tanks shall be capable of storing 110% of the capacity of the largest tank within the bund.

The integrity of storage tanks and bunds shall be inspected, recorded and documented.

These inspections shall be included in the maintenance schedule required by condition 9.1 and copies stored with the logbook required to be kept in accordance with condition 9.5.

- 2.23 There shall be no process effluent emissions to sewer or surface water drainage without the prior consent of the regulator and the prior consent of Severn Trent or Environment Agency (as necessary). The operator shall make an application in writing to the regulator at least 28 days prior to any intention to discharge waste effluent to sewer or surface water drainage.

#### **Emission Limits and Controls – Ground Water**

- 2.24 The Environment Agency has not requested any specific ground water controls under Regulation 13 of The Regulations.
- 2.25 The bunded and designated hard standing areas in conditions 2.16, 2.22, shall be maintained in an impervious condition. There shall be no defects in the hard standing within the area of the installation as designated on the Plan 04/00006/PPCA2/2 (to be resubmitted after partial decommissioning). Moreover, as far as is practicable, joints between concrete pads shall be effectively sealed so as to provide an impervious surface.

For the purpose of this condition, a 'defect' is any break in the concrete hard standing that will allow liquid spillages to drain away into the sub soil. For the purpose of this condition 'rectified' shall mean repair of the defect such that liquid spillages can no longer enter the subsoil.

#### **Monitoring, Sampling and Measurement of Emissions - Air**

- 3.1 The process shall be observed for visible emissions at least once per day, or more often as may be prescribed in writing by the regulator, from a point providing an unimpeded view of the emissions points for the prescribed process. In the event of visible emissions being observed, immediate action shall be taken to determine the cause of the emission, and action shall be taken to abate the emission.
- If visible emissions are noted, immediate action shall be taken to determine the cause of the emission and to resolve the malfunction responsible for the emission.



Contingency arrangements shall be instigated to prevent or reduce to a minimum any further visible emissions caused by the malfunction.

The results of the observations shall be recorded in the logbook (required to be kept by condition 9.5) along with details of remedial action taken.

- 3.2 Emissions from the final point of discharge to atmosphere serving the emission points listed in Table 3 shall be sampled for concentrations of the substances listed on a triennial (three yearly) basis or upon written request by the regulator. Where an emission limit (prescribed by conditions 2.4) for a particular pollutant is listed for an emission point, there shall be a requirement to sample and provide emission monitoring results for that pollutant.

All Sampling shall be carried out in accordance with recognised standards as agreed with the regulator prior to monitoring taking place. In most cases this requires that MCERTS accreditation is required. The proposed test methods for measuring compliance with emission concentration limits shall be forwarded to the regulator at least 21 days prior to commencement of sampling, and testing shall not be commenced until the regulator approves the proposed test method in writing.

The regulating authority must be advised at least 7 days in advance of any periodic monitoring exercise giving the date, time and place of sampling and the pollutants to be tested.

Results shall be expressed in accordance with the requirements of condition 2.5 and the results of monitoring to be supplied to the regulating authority within 28 days of completion of the monitoring. Monitoring reports shall be submitted electronically and held in a hard copy format on site and available for inspection as required.

When sampling is not carried out in a given year, the operator shall instead prepare a summary report outlining maintenance (both planned and unplanned) carried out on the identified plant for that given year, and include a summary of details of continuous monitoring data held which shall be submitted to the regulator upon written request.

#### **Air Quality**

- 3.3 The operator shall prepare a list of all emission points and related pollutant emissions to atmosphere based on Table 3 (above). The operator shall provide details of the emissions of those pollutants to atmosphere as a result of any sampling that may be carried out (see condition 3.2 (above)).

Where sampling is carried out, no correction for atmospheric pressure or water vapour need be made.

The operator shall also submit for each point of emission to atmosphere details of stack height, volume flow rate and stack diameter, as well as the height, width and length of the building to which the stack (or stacks) are attached.

The results shall be tabulated and submitted in Microsoft Excel format and shall be sent to the following email address (or another to be specified by the regulator):

[environmental.health@telford.gov.uk](mailto:environmental.health@telford.gov.uk)

Such information shall be submitted as and when requested by the regulator.

#### **Monitoring, Sampling and Measurement of Emissions – Surface Water and Sewer**

3.4 Neither the sewerage undertaker nor the Environment Agency have requested any specific surface water or sewer discharge monitoring as a result of Regulation 58 of the Regulations.

#### **Monitoring, Sampling and Measurement of Emissions – Ground Water**

3.5 The Environment Agency has not requested any specific ground water monitoring as a result of Regulation 58 of the Regulations.

#### **Process Controls**

4.1 The raw materials used in the prescribed process and all waste materials produced from the prescribed process shall be handled with care to prevent or reduce to an absolute minimum any emissions to air.

4.2 Spillages of liquids and finely divided materials shall be cleaned up immediately. Liquid spillages shall be contained and cleaned up by the use of a suitable absorbent material. Spillages of finely divided or powdery materials shall be removed by means of vacuum cleaning using an industrial grade vacuum cleaner or by wet cleaning methods, dry sweeping methods shall not be permitted. Sweeping and vehicular movement of powdery materials using uncovered containers is prohibited unless the material is thoroughly damped to prevent wind entrainment.

4.3 All raw materials delivered to the installation, and waste materials generated by the installation, shall be placed in areas of site designated for storage. These storage and waste areas are specifically designated on the plan 04/00006/PPCA2/2 and environmental form B-EF-6 Materials and Waste Storage Inspection Sheet

No raw material or waste shall be stored anywhere other than in the areas so designated.

All designated areas shall be capable of containing the raw material or waste contained therein, and prevent overflow into surrounding areas. Where damage accrues to containment for these areas, this damage shall be repaired as soon as it practicable and in any case no longer than 4 weeks from the date of detection of the damage after the inspection (see below).

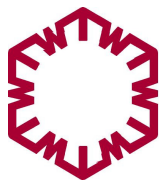
The operator shall inspect the designated areas on a weekly basis to ensure that materials or waste are adequately contained. Actions as a result of inspections along with any repair work (where necessary) shall be recorded in the log book required to be kept by condition 9.5.

- 4.4 Any accumulation of waste or raw materials found outside the areas designated by condition 4.3 above shall be considered a spillage and shall be dealt with in accordance with the requirements of condition 4.2 above.
- 4.5 All sand used within the installation shall either:  
(a) be stored in bags and bins or,  
(b) be contained within designated areas  
No sand shall be stored in the open air (other than in locations designated by condition 4.3 above).
- 4.6 A locking device shall be securely attached to each coupling of every tank or silo supply pipe such that delivery cannot take place without removal of the device. The unlocking mechanism shall be held by the nominated person or persons who shall be responsible for securely locking and unlocking the device before and after each delivery.

Each supply pipe shall be clearly marked with the silo details and the nature of the material contained therein.

No discharge shall take place to any silo without the express permission of the nominated person and discharge shall only take place when the driver of the vehicle discharging to the silo has been advised of the procedure to be followed.

- 4.7 With the exception of deliveries of oil, the following procedure shall be used for the delivery of materials to silo:
- The nominated person shall be notified on the arrival of a bulk delivery.
  - The nominated person shall confirm that there is sufficient capacity in the silo to accept the quantity to be delivered.
  - The nominated person shall bring to the attention of the delivery driver a sign clearly displayed and legible at the point of delivery stating the delivery procedure to be followed concerning noise, spillage, leaks and dusty emissions. A copy of the procedure shall be forwarded to the regulator within one month of the date of this permit.
  - Only the nominated person shall remove the locking device to the transfer line.



- e) The nominated person shall supervise every delivery
  - f) The driver and the nominated person shall inspect the delivery lines and check them for signs of damage or wear, the driver shall connect the delivery lines and the driver and the nominated person shall check the connections are properly made.
  - g) Only after conditions (d) to (f) have been complied with shall delivery commence.
  - h) Where any emissions are visible from ducting, pipework, the pressure relief valve, dust arrestment plant, any other part of the plant, or the delivery vehicle during silo filling, the operation shall cease immediately; and the cause of the problem shall be rectified prior to any delivery recommencing.
  - i) Where any alarm sounds or the level indicator on the silo suggests the silo is full, delivery shall cease immediately.
- 4.8 All liquid storage tanks shall be located within bunds that are designed, constructed and located away from watercourses and drains to appropriate standards and ensuring that the volume is more than 110% of the largest tank
- 4.9 The operator shall ensure that the road between the stockpile and the primary crusher has a consolidated surface which is kept in good repair. All other roads shall be subject to sweeping to prevent wind entrainment of dust.

### **Noise Emissions**

- 5.1 The operator shall:
- Carry out a survey of the installation and identify any plant or equipment likely to give rise to noise. The survey shall specifically identify plant or equipment capable of being discerned at the installation boundary.
  - Review the noise survey of the installation such that any changes to the plant or equipment noted in Table 2 (above) are identified and the survey updated appropriately.
  - Construct a noise management plan based on the survey which shall include the following:
    - A statement of policy with regard to dealing with noise
    - A documented complaint procedure for the investigation, analysis, determination, and solution to noise problems
    - Details of routine maintenance undertaken in particular to deal with noise issues
  - Construct a register of complaints regarding noise emissions from the installation

The operator shall provide the above information at the formal written request of the regulator. All documentation required to be produced by this condition shall be retained in the log book required to be kept in accordance with condition 9.5.

5.2 It shall be a requirement that any new plant or equipment listed in Table 2, or any such plant or equipment that undergoes modification, shall be demonstrated to be BAT. The operator shall demonstrate that sound power levels for substantially changed plant or equipment shall be lower than that for existing plant or equipment. For new plant or equipment the emitted noise levels shall be demonstrated to be as low as possible when compared to other manufacturers' plant or equipment of the same type.

5.3 No new plant or equipment shall be permitted within the installation except where:

(i) The plant or equipment can be demonstrated to have a minimal environmental impact. For the purpose of this condition 'minimal' shall be taken to mean that, the plant or equipment, if monitored under requirements of BS4142:1997, has a rating level of  $-10\text{dB}$  (when compared to the background level), or is otherwise inaudible.

or

(ii) Where plant or equipment cannot be demonstrated to meet the standard above, a full noise survey shall be carried out and the results modelled to show the specific impact of the new plant or equipment on the environment. The modelling exercise shall take account of any relevant noise abatement measures. The results of the modelling shall be submitted to the regulator and shall demonstrate BAT.

The modelled plant or equipment shall be permitted within the installation only where written consent of the regulator has been obtained.

5.4 In the event of the regulator receiving a complaint of noise associated with any element or activity within the installation boundary, the operator shall:

- (i) Investigate the source of the complaint.
- (ii) Carry out such monitoring, surveys or modelling of the source of the complaint to demonstrate, to the satisfaction of the regulator, either:
  - (a) that the complaint is unfounded, or
  - (b) the complaint has substance

Where (ii)(b) above is found to be the case, the operator shall arrange to carry out such works or change procedures or processes in such a way, that a re-assessment carried out in (ii) above comes to the conclusion in (ii)(a).

All time scales in relation to aspect of this condition to be set by the regulator in the event of complaint being received. Typically, 5.4(i) shall take no longer than 48hrs from the date of notification, whilst 5.4(ii) may take considerably longer dependent on the work required to be undertaken.

## Waste Minimisation

6.1 The operator shall:

- Maintain an inventory covering the principal types of raw materials used (as listed in Tables 1A and 1B) to be submitted to the regulator annually based on consumption of raw materials for the previous year.
- Review alternatives for the principal types of raw materials used with regard to their environmental impact. Such reviews shall be submitted to the regulator every four years.
- Maintain records to demonstrate that quality control procedures are used to minimise any potential environmental impact of raw materials and that they are supplied and stored in a manner such that contamination cannot occur
- Undertake to complete any long term studies needed into the less polluting options and make any material substitutions identified within the review period. Such studies will be identified as and when required by the regulator and requested in writing.

All information required by this condition shall be submitted to the regulator annually, or where such information is requested every four years from the date of issue of the permit as may be required for long term studies. All such information shall be retained by the operator and kept with the log book required to be kept in accordance with condition 9.5.

The information required by this condition has been deemed commercially confidential and shall not appear on the public register. All information submitted in accordance with this condition shall be clearly marked "Commercially Confidential – DO NOT place on public register".

6.2 The operator shall demonstrate that a systematic approach to the reduction of waste at source is being used.

The operator shall carry out a waste minimisation audit at the written request of the regulator. The methodology used and an action plan for optimising the use of raw materials shall be submitted to the regulator within 2 months of completion of the audit.

Specific improvements resulting from the recommendations of audits shall be carried out within a timescale approved by the regulator.

6.3 The operator shall, within 4 weeks of submitting the information required by condition 6.1, also calculate the following indicators of waste minimisation performance expressed as a ratio:

- (i) tonnes of Clay consumed v tonnes of good product
- (ii) tonnes of waste product v tonnes of good product

- (iii) tonnes of towns water consumed in the operations v tonnes of good product.
- (iv) Additionally, the operator shall calculate the amount of water recycled expressed as a percentage of total water usage in the operations.

All such information shall be retained by the operator and kept with the log book required to be kept in accordance with condition 9.5.

Where any of the above parameters are not specifically monitored, arrangements shall be made to undertake monitoring of the use of the material within 8 weeks of issue of this permit.

The information required by this condition has been deemed commercially confidential and shall not appear on the public register. All information submitted in accordance with this condition shall be clearly marked "Commercially Confidential – DO NOT place on public register".

- 6.4 The volume of mains and abstracted water used in the activities shall be directly measured when the installation is operating and such data shall be recorded monthly. All measurements shall be recorded and the records held on site.
- 6.5 The operator shall record the following for all waste which is consigned off site:
  - Quantity nature and origin of the waste
  - The physical description of the waste
  - A description of the composition of the waste
  - Any relevant hazardous properties (hazard and risk phrases)
  - European Waste Catalogue code
  - Handling precautions and substances including mixing of wastes
  - Disposal routes for each waste categoryThe documentation shall be available for inspection upon request by the regulator.
- 6.6 The operator shall ensure that waste from the hydrogen fluoride scrubber serving plant 8 is only disposed of by an approved waste contractor.

### Energy Efficiency

- 7.1 The operator shall produce a report annually on the energy consumption of the installation. The operator may wish to make use of Sankey diagrams to illustrate energy use.

The operator shall make the report available for inspection. The report shall include the following indicators of energy efficiency performance expressed as a ratio:

- (i) Energy (Electricity) consumed vs tonnes of good product
- (ii) Energy (MJ) gas consumed vs tonnes of good product.

All such information shall be retained by the operator and kept with the log book required to be kept in accordance with condition 9.5

The information required by this condition has been deemed commercially confidential and shall not appear on the public register. All information submitted in accordance with this condition shall be clearly marked "Commercially Confidential – DO NOT place on public register".

- 7.2 The operator shall monitor energy flows and target areas for reduction which shall be updated annually within the report mentioned in 7.1 above. This shall be agreed in writing with the regulator.
- 7.3 The operator shall ensure that all plant listed in Table 2 is operated and maintained to optimise the use and minimise the loss of energy.
- 7.4 In respect of energy efficiency, the operator shall meet the requirements of either:
- (i) Climate Change Agreement (CCA), or
  - (ii) Direct Participation Agreement (DPA);
- in addition to the requirements of conditions 7.1 to 7.4 (above).

Where neither (i) nor (ii) above are complied with the operator shall notify the regulator immediately.

### Prevention of Accidents (environmental incidents)

- 8.1 The operator shall produce an accident management plan that identifies the hazards, assesses the risks and identifies the measures required to reduce the risk of potential events or failures that might lead to an environmental impact. The plan shall identify:
- the actions to be taken to minimise these potential occurrences; and
  - the actions to deal with such occurrences so as to limit their consequences

In the case of abnormal emissions arising from an accident, such as a spillage for example, the operator shall:



- investigate immediately and undertake remedial action as soon as practicable
- promptly record the events and actions taken
- ensure the regulator is made aware, as soon as practicable

In the event of an accident occurring, the operator shall follow the prescribed instructions within the accident management plan. In an emergency situation it shall be sufficient to demonstrate that any divergence from the plan was necessary either:

- in the interests of health and safety
- as a result of instructions from a suitably qualified member of the emergency services (fire, ambulance, police)
- as a result of instructions from a duly authorised officer of the Health and Safety Executive
- as a result of instructions from the regulator.

The accident management plan shall be reviewed annually and a copy shall be submitted to the regulator upon written request. A copy of the accident management plan shall be kept with the logbook required to be kept be condition 9.5.

### General Conditions

9.1 Effective operational and maintenance systems shall be employed on all aspects of the installation whose failure could impact on the environment, in particular there shall be:

- documented operational control procedures
- a documented preventative maintenance schedule, covering all plant whose failure could lead to impact on the environment, including major 'non productive' items such as tanks, pipe-work, retaining walls, bunds, ducts and filters; this shall be reviewed and updated annually
- A documented cleaning schedule covering all plant and equipment that could potentially cause an environmental emission through not being clean. The schedule shall also include roadways and buildings and tanks and bunding.
- Documented procedures for monitoring of emissions to include duration, frequency, type and appropriate reference standard (where applicable).

Operation and maintenance procedures shall be updated from time to time as may be necessary to account for changes in working practice or plant and machinery, chemical or procedures used. If the schedules change, a copy of the new schedules shall be made available for inspection by the regulator.

In terms of emergency maintenance, spares and consumables, in particular, those subject to continual wear, shall be held on site, or shall be available at short notice so that plant breakdowns can be rectified rapidly.

- 9.2 Relevant staff at all levels shall receive the necessary formal training and instruction in their duties relating to control of the process and emissions to air. Such training shall include the following:
- awareness of the regulatory implications of the permit
  - awareness of all potential environmental impacts under normal and abnormal circumstances
  - awareness of the procedures for dealing with a breach of the permit conditions
  - prevention of accidental emissions and action to be taken when accidental emissions occur
  - awareness of all operating procedures

Records shall be kept which detail all relevant training provided to staff, the records shall be made available for inspection by an authorised officer from the regulating authority. Records of training shall be retained for two years.

The operator shall also appoint a suitably competent person to liaise with the regulator and members of the public in the event of complaint. The designated person shall be notified to the regulator within 14 days of issue of the permit and, where that person changes, within 14 days of any change. The requirement to have a competent person liaising with the regulator in no way reduces the requirement to adequately train staff in terms of environmental awareness.

- 9.3 If there is any intention to change any aspect of the prescribed process from the description of the process at the beginning of this permit, or any other aspect which may affect the substances or concentration of substances being emitted to air, the enforcing authority shall be notified of the proposed changes at least 4 weeks before the changes take place.
- 9.4 Any malfunction which results in emissions to atmosphere which are likely to cause an adverse effect on the local community shall be reported to the regulator immediately, and a record shall be made of the incident within the logbook required by condition 9.5.
- 9.5 A logbook shall be established and maintained which records all information required to be kept by conditions of this permit, this includes details of procedures, results of sampling, record of all visual and olfactory observations, maintenance records and any other information required to be recorded and kept by conditions of this permit.

The information shall be recorded in a form to be agreed with the regulator but can include both electronic and hard copies, and shall be retained for at least two years. This information shall be made available for inspection by an authorised officer of regulating authority on request. Where information is

updated or modified, copies of the modified information shall replace those held within the logbook.

- 9.6 The best available techniques shall be used to prevent or, where that is not practicable, reduce emissions from the installation in relation to any aspect of the operation of the installation which is not regulated by any other condition of this permit.

#### **Decommissioning the Installation**

10.1 A site decommissioning plan shall be submitted to the regulator within 6 months prior to the closure the plant. The plan shall be prepared and updated as may be necessary due to changes in plant, equipment or materials used within the installation. . The plan shall include:

- A complete methodology to be adopted in the decommissioning of the installation, to include:
  - Removal of key plant or machinery likely to be contaminated
  - Removal of contamination associated with the plant and machinery
  - Minimising any contamination from the installation buildings during demolition
  - Removal of contaminated subsurface infrastructure as may be necessary
- An assessment of the impact of decommissioning on the nearest sensitive receptors

The Preparation of a ground contamination report to include the testing of soil within the decommissioned installation to demonstrate contamination levels are no greater than those submitted in Operators application site reports.

..... **Date**

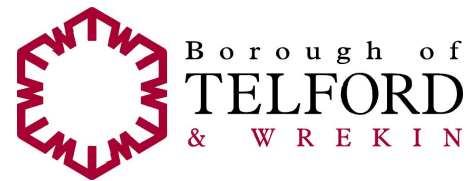
.....  
**authorised by Borough of Telford & Wrekin**

**Public Protection  
Borough of Telford & Wrekin  
Darby House  
Telford  
Shropshire  
TF3 4JA**

Appendix 1 –  
04/00006/PPCA2/1 Location plan and installation boundary



Plan layout shows interim map  
for clarity, final plan to be  
prepared following full  
decommission

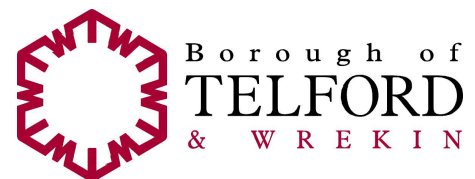


Pollution Prevention and Control Act 1999

Environmental Permitting (England and Wales) Regulations 2010 (as amended)

04/00006/PPCA2/2 Site layout

To be submitted after decommissioning is completed, hard standing and raw material/waste storage



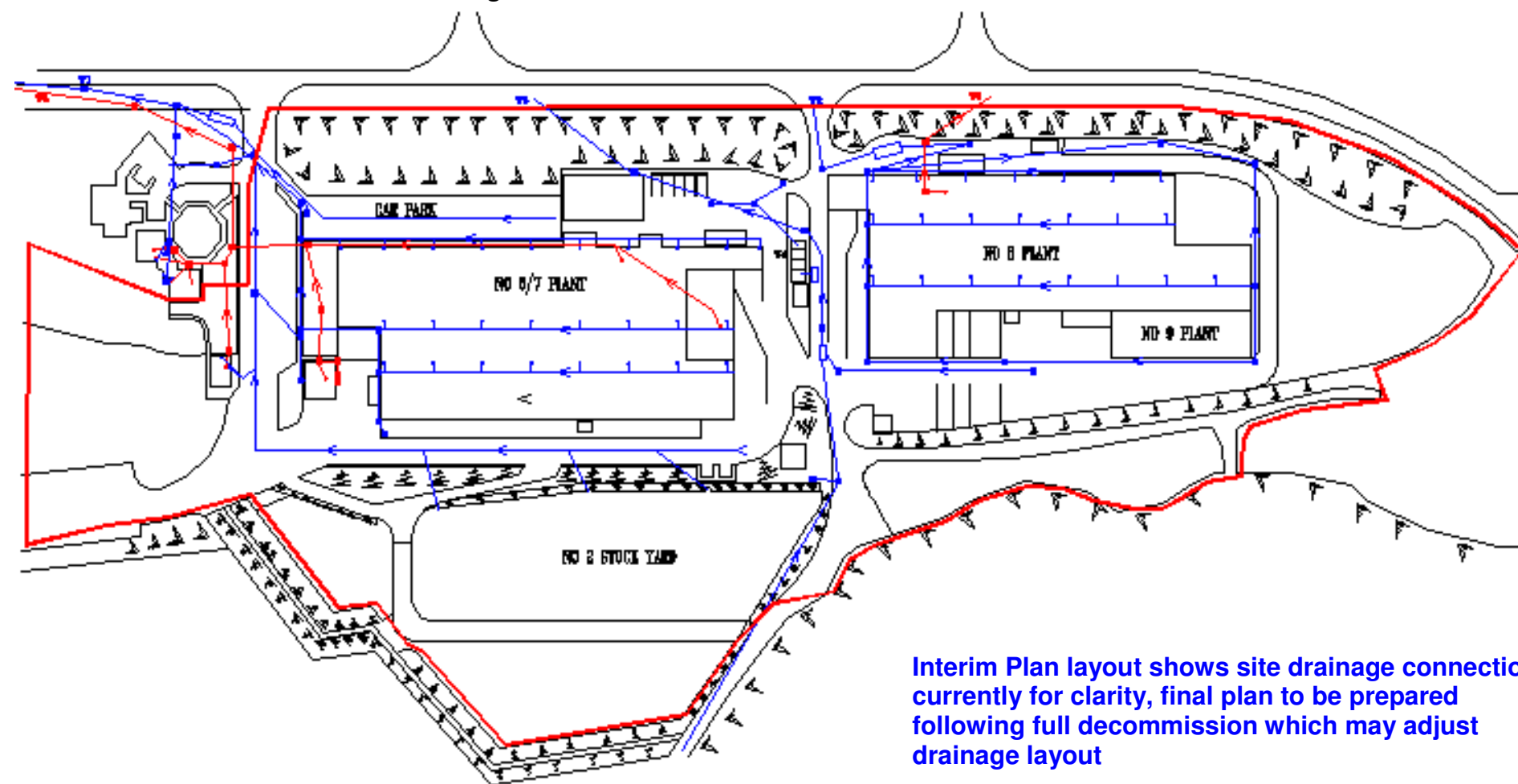
Pollution Prevention and Control Act 1999

Environmental Permitting (England and Wales) Regulations 2010 (as amended)

**04/00006/PPCA2/3 Emission Points to the Environment**

**Revised Plan to be submitted layout to be submitted after decommissioning completed.**

04/00006/PPCA2/4 Site Drainage



Interim Plan layout shows site drainage connections currently for clarity, final plan to be prepared following full decommission which may adjust drainage layout

## Explanatory Notes

### **Inspections**

Regular inspections will be made by officers of Telford & Wrekin Council (without prior notice), in order to check and ensure full compliance with this permit.

### **BAT (Best Available Techniques)**

Article 2(11) of the IPPC Directive defines “best available techniques” as follows:

*“the most effective and advanced stage in the development of activities and their methods of operation which indicates the practical suitability of particular techniques for providing in principle the basis for emission limit values designed to prevent, and where that is not practicable, generally to reduce emissions and the impact on the environment as a whole”.*

- “techniques” shall include both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned,
- “available” techniques shall mean those developed on a scale which allows implementation in the relevant industrial sector, under economically and technically viable conditions, taking into consideration the costs and advantages, whether or not the techniques are used or produced inside the Member State in question, as long as they are reasonably accessible to the operator,
- “best” shall mean most effective in achieving a high general level of protection of the environment as a whole.

In determining the best available techniques, special consideration should be given to the items listed in Annex IV of the Directive.

### **Health and Safety at Work and Other Statutory Requirements**

Compliance with this permit does not necessarily infer compliance with any other legislation.

### **Notification of Operation Changes**

The operator will be liable to prosecution if they operate otherwise than in accordance with the conditions and plant described in this permit.

The operator shall contact the regulator to discuss any proposed changes.



**Enforcement**

The operator will be liable to enforcement action where: -

- a) the operator fails to comply with or contravenes any permit condition;
- b) a change is made to the installation operation without prior notification of the change to the regulator;
- c) intentional false entries are made in any record required to be kept under the conditions of the permit;
- d) false or misleading statement is made.

Any enforcement action is taken in accordance with the regulator's enforcement policy.

**Annual Subsistence Charge**

A subsistence charge is payable on the 1<sup>st</sup> April each year. An invoice will be issued by the regulator providing further details of how to pay. The charges are based on a risk based system. Details of the risk assessment can be found at <http://www.defra.gov.uk/environment/quality/pollution/ppc/localauth/fees-risk/fees.htm>

**Appeal against Regulatory Action**

The operator can appeal against regulatory action by the regulator to the Secretary of State for Environment, Food & Rural Affairs. Appeals must be sent to the Secretary of State on a form found at

[http://www.planning-inspectorate.gov.uk/pins/environment/environment/environmental\\_appeals/environmental\\_permitting\\_appeal\\_form.pdf](http://www.planning-inspectorate.gov.uk/pins/environment/environment/environmental_appeals/environmental_permitting_appeal_form.pdf)

Guidance on the appeal procedure can be found at

[http://www.planning-inspectorate.gov.uk/pins/environment/environment/environmental\\_appeals/environmental\\_permitting\\_guidance\\_notes.pdf](http://www.planning-inspectorate.gov.uk/pins/environment/environment/environmental_appeals/environmental_permitting_guidance_notes.pdf)

There are time limits for making an appeal as follows:

- a) in relation to an appeal against a revocation notice, before the notice takes effect;
- b) in relation to the withdrawal of a duly-made application under paragraph 4(2) of Schedule 5, not later than 15 working days from the date of the notice served under that paragraph;
- c) in relation to a variation notification, a suspension notice, an enforcement notice or a landfill closure notice, not later than 2 months from the date of the notification or notice;
- d) in any other case not later than 6 months from the date of the decision or deemed decision.

Please note:

**An appeal will not suspend the effect of the conditions appealed against;** the conditions must still be complied with.

In determining an appeal against one or more conditions, the Act allows the Secretary of State in addition to quash any of the other conditions not subject to the appeal and to direct the local authority either to vary any of these other conditions or to add new conditions.

**Contact Numbers for the Regulator**

The Regulator is the Pollution Control Section of Telford & Wrekin Council. They can be contacted on 01952 381818. You may also contact them by email at any time. [Environmental.health@telford.gov.uk](mailto:Environmental.health@telford.gov.uk)

**Correspondence Address**

All correspondence to Telford & Wrekin Council relating to this information shall be addressed  
Environmental Health, Telford & Wrekin Council, Darby House, P.O. Box 214, Telford, TF3 4LE