



**POLLUTION PREVENTION & CONTROL ACT 1999
Environmental Permitting (England and Wales) Regulations 2016
Statutory Instrument 2016 No. 1154 (as amended)**

A2 PERMIT

CANOVA CLAY LIMITED

Permit Reference IPPC/A2/05/2025/V1

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Introductory Note

The Permit is issued under Regulation 13 of the Environmental Permitting (England and Wales) Regulations 2016 as amended (the EP Regulations). It permits the operation of an installation carrying out an activity described within Part A2 (a) of Section 3.6 of Chapter 3, Part 2, Schedule 1, of the Environmental Permitting (England and Wales) Regulations 2016 as amended.

In some sections of the Permit, conditions require the Operator to use Best Available Techniques (BAT), in each of the aspects of the management of the installation, to prevent, and where that is not practicable, to reduce emissions. In determining BAT, the Operator should pay particular attention to relevant sections of the Sector Guidance Note IPPC SG7, appropriate Horizontal Guidance and any other relevant guidance.

Note that the Permit requires the submission of certain information to the Regulator, and in addition, the Regulator has the power to seek further information at any time under Regulation 60 of the EP Regulations provided that the request is reasonable.

Public Registers

Considerable information relating to Permits, including the application, is available on the public register in accordance with the EP Regulations. Certain information may be withheld from the public register where it is commercially confidential, or in the interest of national security to do so (subject to the local authority agreeing to a specific application for exemption made by the Operator).

Variations to the Permit

The Permit may be varied in the future by the Regulator, by serving a variation notice on the Operator. Should the Operator require any of the conditions of the Permit to be changed, a formal application must be submitted (the relevant forms are available from the Regulator).

Surrender of Permit

Before this Permit can be wholly or partially surrendered, an application to surrender the Permit has to be made by the Operator. For the application to be successful, the Operator must be able to demonstrate to the Regulator that there is no pollution risk and that no further steps are required to return the site to a satisfactory state.

Transfer of the Permit or part of the Permit

Before the Permit can be wholly or partially transferred to another Operator, an application to transfer the Permit has to be made jointly by the existing and proposed Operators. A transfer will not be approved if the Regulator is not satisfied that the proposed Permit holder will be the person having control over the operation of the installation or will not comply with the conditions of the transferred Permit. In addition, if the Permit authorises the Operator to carry out a specified waste management activity, the transfer will not be approved if the Regulator does not consider the proposed Permit holder to be a 'fit and proper person' as required by the EP Regulations.

Process Changes

The Operator is obliged to notify Regulatory Services (within a minimum of 14 days) of any proposed changes to the operation of the installation which may have a negative effect on the environmental impact of the installation. The notification shall include an assessment of the effect of the proposed changes and list any alternative strategies that may have been considered. The Operator will be liable to enforcement action if a change is made without approval which is such

that the installation (as changed) is not permitted, or a condition of the Permit is not being complied with as a result of the change being made.

Annual Subsistence Fee

The annual subsistence fee is payable on 1st April every year. An invoice will be sent to every process operator (in April) stating the amount payable and where payment should be made. A Permit may be revoked if the appropriate fee is not paid.

Powers of Entry

In order for the Council to discharge its functions under the Environmental Permitting Regulations, authorised persons have powers of entry to premises at any reasonable time, or in a situation in which in the officer's opinion there is an immediate risk of serious pollution of the environment, at any time. Where entry has been refused, a warrant may be obtained to effect entry. The full powers of officers are stated in Section 108 of the Environment Act 1995.

Offences

Examples of offences under the Environmental Permitting Regulations are to:

- operate an installation or mobile plant without a Permit.
- operate an installation or mobile plant in breach of a Permit condition.
- fail to notify of a change in the operation of an installation
- fail to comply with the requirements of an Enforcement or Suspension Notice.
- fail to comply with a request for information.
- intentionally make a false entry in any record required to be kept under a condition of a permit
- make a statement which is known to be false or misleading in a material particular in order to obtain a permit, variation, transfer or surrender

The fines and penalties for these offences vary up to a maximum of a fine not exceeding £50,000 on summary conviction and an unlimited fine and/or up to five years imprisonment on conviction on indictment.



Public Health and Regulation

**Pollution Prevention & Control Act 1999
Environmental Permitting (England & Wales) Regulations 2016
Statutory Instrument 2016 No. 1154 (as amended)**

Permit To Operate a Scheduled Installation

Application Received 12th March 2005

Reference No. IPPC/A2/05/2025/V1

Canova Clay Limited is hereby permitted to operate an installation for the manufacture of ceramic products by firing in kilns where the capacity is greater than 75 tonnes per day as defined in Schedule 1, Part 2, Section 3.6, Part A2 of the Environmental Permitting (England and Wales) Regulations 2016 as amended, as described below and in accordance with the attached conditions.

Address of Permitted Installation

Canova Clay Limited
Hazlehead
Crowedge
Sheffield
S36 4HG

Operator Name & Address

Canova Clay Limited
Wavin Edlington Lane
Edlington
Doncaster
DN12 1BY

Registered Office

Canova Clay Limited
Wavin Edlington Lane
Edlington
Doncaster
DN12 1BY

Number 16060076

Signed: 

Carrie Abbott
Service Director
Public Health and Regulation

Dated: 27.02.2025

Barnsley Metropolitan Borough Council
Public Health and Regulation
Regulatory Services
PO Box 604
Barnsley
S70 9FB

(the address for all correspondence in relation to this permit)

Description of Activities

TECHNIQUES FOR POLLUTION CONTROL

PROCESS DESCRIPTION

OVERVIEW OF THE SITE

The installation covered by the IPPC permit is limited to the boundary surrounding the processes operated at the Canova Clay site at Hazlehead, as indicated in drawing DRG No. G/01/01/021 D. Hereafter the installation shall be referred to as the 'Site' including all activities and areas identified within the scope of this permit and outlined on drawing DRG No. G/01/01/021 D.

The installation is situated approximately 5 kilometres to the southeast of Holmfirth at approximate National Grid Reference (NGR) 41804046. Canova Clay Limited became the operator of the installation in 2025, following Wavin who occupied the site since 1858, originally as the Hepworth Iron Company for the mining of iron ore, transferring to coal mining in 1869. In 1956 Hepworth began the manufacture of clay drainage systems on the site, which has continued to this day.

OVERVIEW OF THE PROCESS

The schematic of the clay pipe manufacturing process at Hazlehead is summarised in Figure 1.

Figure 1 – Flow Diagram of Vitrified Clay Pipe Manufacturing Process

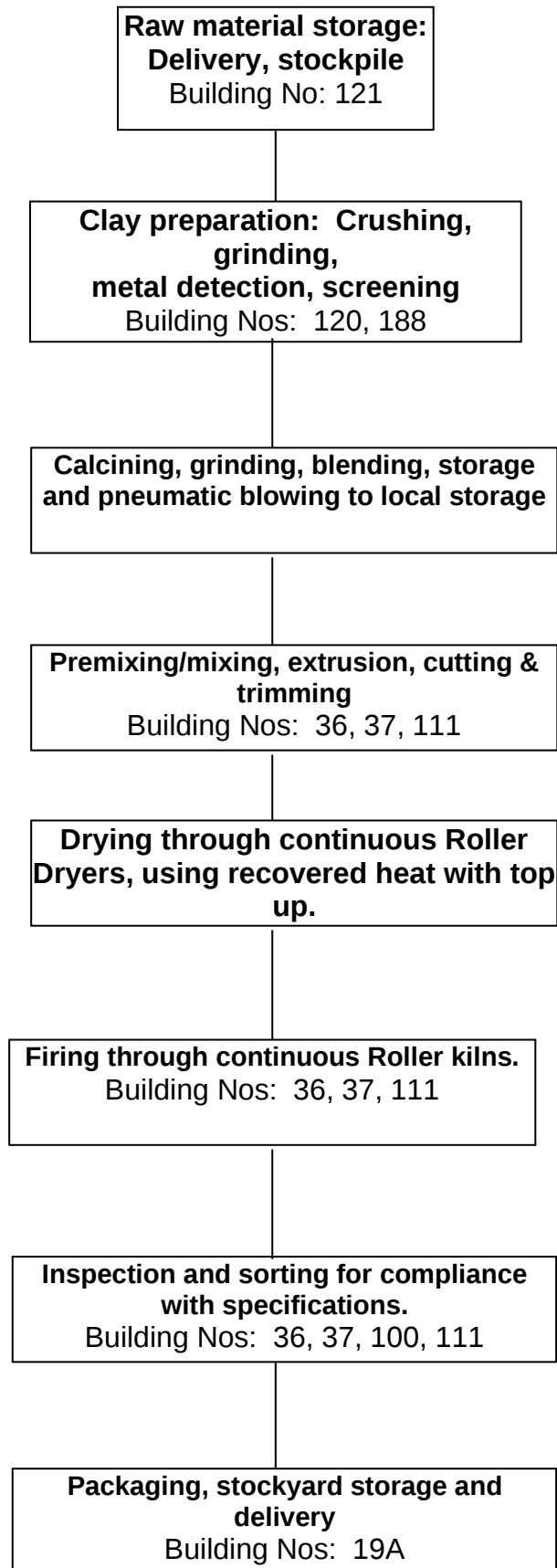
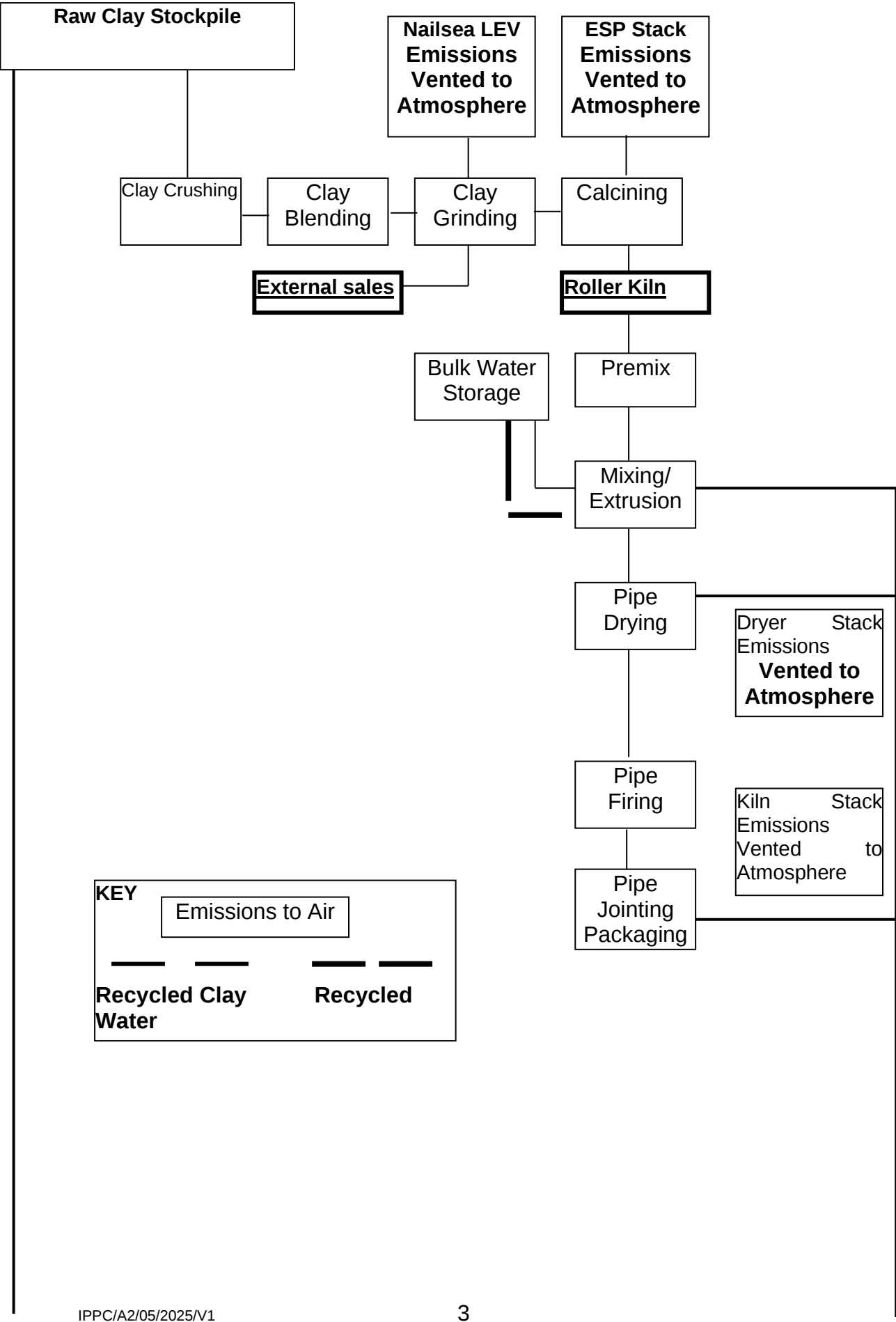


Figure 2 Process Flow Diagram Also Showing Material Recovery Channels



TECHNICAL DESCRIPTION OF THE ACTIVITIES

Raw Materials Storage and Handling

The primary raw material used in the manufacture of vitrified pipes is clay. Clay is delivered to the site by covered lorry and is stored in open storage sheds or external stockpiles prior to blending into compacted stockpiles. There are several discrete stockpiles containing between two and four thousand tonnes of material each, approximately twelve thousand tonnes in total (or six weeks capacity).

Additional blue and calcined clay stores provide a strategic reserve of material under cover or in enclosed silos. Clay may be fed from these stores, using (for example) a front end-loading shovel or, for calcined material, via pneumatic conveying.

Raw Materials Preparation

Crushing, Blending and Grinding

Clay is extracted from the stockpile and tipped into a receiving hopper. It is crushed and transferred to the blending area for formation into plant specific clay blended stockpiles. It is first fed into a primary grinding process (which may involve the addition of water). The grinding plant prepares the material to the required particle size by the use of an enclosed pan grinding system.

Traditional blue clay processing is now complete and will be used for external clay sales or after further treatment in the calcining process for fast firing via the roller kilns.

Plain trough conveyor belts are used to transport material around the site.

Prepared raw material is also moved around the site via pneumatic conveyor systems to local storage hoppers prior to use. Pneumatic conveying is conducted by the application of low-pressure air on a fixed volume of materials stored in a blow tank.

Calcining

The purpose of the calcine plant is to physically and chemically change the properties of clay supplied from the grinding plant, so as to enable the fast drying and firing cycles within the roller kiln pipe process. The calcine plant comprises a circulating fluid bed calciner, dolomite storage and dosing equipment, two proportioning weigh feeders, two Hardinger ball mills, a number of storage hoppers, blow tanks, pneumatic conveyors and silos.

Ground clay is supplied to the calcining process by covered overhead conveyor; the material is being delivered to a small surge hopper situated in the calcine plant.

A screw conveyor transfers clay from this hopper into the venturi dryer where it mixes with the exhaust gases leaving the calcining process before being separated by a cyclone. The clay is dried and preheated by the hot flue gases.

The preheated clay is gravity fed to 141 seal pot after separation from the exhaust gases. The seal pot enables transfer of the clay to the calcining furnace.

The furnace is a 10-metre high by 1 metre diameter refractory lined chamber. A large volume of preheated primary air is blown through the furnace bottom distributor. This air fluidises the clay in the furnace. Three gas lances mounted just above the distributor inject butane gas into the fluidised bed. At this point, gas and air mix and the temperatures within the process are sufficient to promote combustion. The effect of the generated heat on the clay causes chemical changes to take place; the main two changes are removal of organic carbon and chemically combined water.

The clay, gas, air and products of combustion, travel up the furnace and pass into a cross duct which feeds 142 recirculating cyclone. The action of the cyclone separates the solids from the exhaust gases. The solids gravity feed into 143 seal pot and the exhaust gases continue upwards passing into the venturi drier (where they pick up the clay feed on its first pass into the system, see above). 143 seal pot enables transfer of the calcined clay back to the furnace whilst maintaining a pressure seal against the higher furnace pressures. This layout, therefore, creates a recirculating loop and indeed whereas 10 tons an hour may be discharged from the system it is estimated that there is a recirculating load 4 or 5 times greater.

Calcined clay is extracted from the process by discharge through a hole in 143 seal pot. A lance that moves backwards or forwards to restrict passage of the solids through the hole controls the discharge. The discharge solids pass through two cooling chambers before being transferred into a pneumatic conveying line which can be routed to an external 2000 ton silo or to the internal mixing station silo.

Clay mineral is destroyed in the calcining process and a small amount of clay mineral is required in the final calcine/clay mix. Adding back a controlled amount of ground blue clay restores sufficiently plasticity in the final roller kiln feed to facilitate extrusion. Two weigh feeders proportion the calcine and clay and deliver the mix into a chute that feeds the ball mills. At this point 2% to 5% dolomite is added to the calcine clay blend. The preset dolomite % feed rate is delivered by a screw feeder that is controlled by the operation of the weigh feeders. There are two Hardinger ball mills; a 9ft-diameter unit and a 7.5ft diameter unit.

Each milling unit has a main air fan that circulates air around a semi sealed system. The calcine/clay feed gravity feeds into the mill inlet that is also under suction from the fan. As the solids pass through the mill to the outlet, cascading steel balls crush them. At the mill outlet, the ground material is entrained in the re-circulating airflow. The solids are transported vertically upwards and pass into a classifier. Coarse, over sized, particles separate and pass back to the mill; the finer particles continue on to the separating cyclone. In the separating cyclone the fine ground material is first transferred to a small surge bin and then transferred through a rotary valve seal into a pneumatic conveying line. The re-circulating mill air continues back to the main air fan for re-circulation. Any unwanted air that has been entrained into the system is exhausted to atmosphere after passing through a reverse air filter unit. The fine ground calcine mix is pneumatically conveyed to one of four 200-ton silos. On receiving a call signal from a roller kiln, a 1000KG of calcine mix is dropped into a blow tank, situated beneath each 200 ton silo and then pneumatically conveyed to the roller kiln factory storage hoppers.

Roller Kilns

Milled, calcined clay is pneumatically received from the calcine plant in storage hoppers in the premix areas. From here, the clay is batch-weighed and high-speed mixed with water from the on-site reservoir. It is then pneumatically conveyed to receiving hoppers local to the extrusion machines where the clay is mixed with more water and extruded.

The drying process uses waste heat from the kiln to remove the majority of the water from the pipes before they can be fed into the kiln, where they are fired up to a maximum temperature of approximately 1100°C using natural gas. All dryer and kiln emissions are directly vented to atmosphere through the permitted stacks.

Conditions

1 Releases to Air

1.1 Point Source Emissions to Air

- 1.1.1 Emissions from the kiln process exhausts no. A1 to A7, A13 to A15 on plan reference DRG. No. G_01_00_30_B shall be contained and adequately extracted to meet the specified emission limit values as detailed in Table 2 (condition 1.2.2) and condition 1.4.13 below.
- 1.1.2 Emissions from the calcine plant process exhaust no. A8 on plan reference DRG. No. G_01_00_30_B shall be contained and adequately extracted via the electrostatic precipitator arrestment plant to meet the specified emission limit values as detailed in Table 2 (condition 1.2.2) and conditions 1.4.13 and 1.4.14 of the permit.
- 1.1.3 Emissions from combustion processes in normal operation shall be free from visible smoke and in any case shall not exceed the equivalent of Ringelmann Shade 1 as described in British Standard BS 2742:2009.
- 1.1.4 Process emissions from the stacks marked A1 to A16 on plan reference DRG. No. G_01_00_30_B shall be dispersed in such a way as to ensure that the relevant air quality standards for oxides of nitrogen, oxides of sulphur and particulate matter are not being breached.
- 1.1.5 New and replacement stacks shall be designed and constructed in accordance with the sector guidance note SG 7 and condition 1.1.4 above.
- 1.1.6 Emissions of water vapour shall be free from droplet fallout.
- 1.1.7 Process stacks shall not be fitted with any restriction at the final opening such as a plate, cap or cowl, with the exception of a cone which may be necessary to increase the exit velocity of the emissions.
- 1.1.8 The Operator shall, during kiln shutdown and where feasible, inspect the condition of flues and ductwork and carry out any necessary works to ensure these are clean and to prevent accumulation of materials.
- 1.1.9 Stack heights A1 to A8 shall be a minimum of 1 metre above roof ridge height of any building within a distance of 5 times the uncorrected stack height and in no circumstances shall it be less than 8 metres above ground level.

1.2 Point Source Emissions to Air - Emission Limits

1.2.1 Monitored release points to air shall be referenced as detailed in Table 1 below.

TABLE 1	
Release Point	Description
A1	RK2 Dryer3
A2	RK2 Dryer4
A3	RK3 Dryer
A4	RK4 Dryer
A5	RK4 Kiln
A6	RK5 Dryer
A7	RK5 Kiln
A8	Calcine Plant
A12	RK2 Kiln Emergency Vent
A13	RK3 Kiln Vent
A14	RK4 Kiln Vent
A15	RK5 Kiln Vent
A16	RK3 Dryer Zone 4 (water vapour only)
A17	Grinding Plant Nailsea Exhaust
A18	Grinding Plant Grog Exhaust

1.2.2 The emission limits for the following release points detailed in Table 2 shall not be exceeded.

TABLE 2		
Release Points	Emission	Limit
A1 to A7, A13 to A15	Particulate Matter	100 mg/m ³
A1 to A7, A13 to A15	Fluorides	10 mg/m ³ (expressed as HF)
A8	Particulate Matter	50mg/m ³
A8	Fluorides	5 mg/m ³ (expressed as HF)
A17, A18	Particulate Matter	No Visual Emissions

All pollution concentrations shall be expressed at reference conditions of 273k and 101.3kPa, without correction for water vapour content. The concentration of pollutants in the furnace emissions shall be normalised to 18% oxygen when measured dry. The results shall be averaged over the firing cycle of the kiln.

1.2.3 The emission limits for the following release points shall be achieved by the dates specified within the table 3 below.

TABLE 3			
Release Point	Emission	Limit	Compliance Date
A17, A18	Particulate Matter	50 mg/m ³	To be agreed with Regulator, in line with conditions 1.4.19

1.3 Point Source Emissions to Air – Replacement stacks

- 1.3.1 Before any works to new or replacement stacks, as marked A13, A14, A15, A17 and A18 on plan reference DRG. No. G_01_00_30_B, the Operator shall provide their proposals for the design, height and details of the sampling points of the stack to the Regulator for approval.
- 1.3.2 The Operator shall review the positioning of the sampling points as part of the installation of new or replacement stacks. Any new sampling points shall be designed to comply with the British or equivalent standards. e.g. BS EN 13284-1 or BS ISO 15713.

1.4 Monitoring of Contained Emissions to Air

- 1.4.1 The release points detailed in Table 1 shall be monitored in compliance with the main procedural requirements of the following standard methods as specified in Table 4 below.

TABLE 4				
Release Point	Emission	Type of Monitoring	Frequency of Monitoring	Methodology
A1 to A8	Particulate Matter	Extractive	Once every 2 years	BS EN 13284
A8	Particulate Matter	Recorded Indicative	Continuously Once every 2 years	BS EN 13284
A1 to A8	Fluorides	Extractive	Once every 2 years	BS ISO 15713
A17, A18	Particulate Matter	Visual assessment	Daily (when operational)	

- 1.4.2 The Operator shall notify the Regulator at least 7 days before any periodic monitoring exercise to determine compliance with emission limit values. The Operator shall state the provisional time and date of the monitoring, pollutants to be tested and methods to be used.
- 1.4.3 The results of the sampling as required by Condition 1.4.1 and 1.4.2 above, shall be received by the Regulator not later than eight weeks from the date of sampling. The results shall include details of process conditions at the time of monitoring.
- 1.4.4 Any deviation from the standard methods detailed in Table 4 above, shall be notified to the Regulator prior to a different method being implemented. Justification for a deviation shall also be provided to the Regulator.
- 1.4.5 Exhaust flow rates of waste gases should be consistent with the efficient capture of emissions, good operating practice and meeting the requirements of the legislation relating to the workplace environment.

- 1.4.6 The introduction of dilution air to achieve emission concentration limits shall not be permitted. Dilution air may be added for waste gas cooling or improved dispersion where justified but this shall not be considered when determining the mass or concentration of the pollutant in the waste gases.
- 1.4.7 A visual assessment of emissions from release point A1 to A7 and A12 to A18 shall be made from a position with a clear view of the area around stacks regularly and frequently and not less than once a day. The results of the monitoring shall be recorded in the installation log, kept in accordance with Condition 9.1 of this permit. All entries shall include the date and time of the observation, location, findings of the assessment, any action taken and the identity of the person carrying out the monitoring.
- 1.4.8 All adverse assessments shall be investigated immediately and remedial action taken. Adverse results from any monitoring activity (both continuous and non-continuous) shall be investigated immediately. The Operator shall ensure that:
- a) the cause has been identified and corrective action taken
 - b) as much detail as possible is recorded regarding the cause and extent of the problem and the action taken to rectify the situation
 - c) re-testing to demonstrate compliance is carried out as soon as possible, and
 - d) the Regulator is notified as soon as is practical
- Details of any adverse assessments shall be recorded in the installation log, kept in accordance with Condition 9.1 of this permit.
- 1.4.9 The calcine plant process exhaust numbered A8 on plan reference DRG. No. G_01_00_30_B shall be continuously monitored for particulate matter using a PCME SC600. The calcine plant continuous particulate matter monitor shall be calibrated following the monitoring exercise carried out every 2 years.
- 1.4.10 The Regulator shall be informed within 24 hours if continuous monitoring values for the calcine plant (process exhaust numbered A8 on plan reference DRG. No. G_01_00_30_B) shows an emission concentration exceeding double the limit value (i.e. 100mg/m³).
- 1.4.11 The continuous monitoring readings for the calcine plant (exhaust numbered A8 on plan reference DRG. No. G_01_00_30_B) shall be on display to appropriately trained operating staff.
- 1.4.12 The calcine plant process exhaust, numbered A8, on plan reference DRG. No. G_01_00_30_B, continuous particulate monitor shall be fitted with audible and visual alarms, situated appropriately, to warn the Operator of arrestment plant failure or malfunction. The activation of alarms shall be automatically recorded.
- 1.4.13 No result shall exceed the emission concentration limits specified in table 2, except where either:
- (a) data is obtained over at least 5 sampling hours in increments of 15 minutes or less; or

- (b) at least 20 results are obtained where sampling time increments of more than 15 minute are involved; AND in the case of (a) or (b)
 - (c) no daily mean of all 15-minute mean emission concentrations shall exceed the specified emission concentration limits during normal operation (excluding start-up and shutdown); and
 - (d) no 15-minute mean emission concentration shall exceed twice the specified emission concentration limits during normal operation (excluding start-up and shut-down).
- 1.4.14 The results of the continuous quantitative monitoring of the calcine plant, process exhaust numbered A8, on plan reference DRG. No. G_01_00_30_B shall comply with (c) and (d) of condition 1.4.13 above. This shall be demonstrated on a daily basis.
- 1.4.15 The silo arrestment plant and the calcine arrestment plant shall be checked on a basis in line with the MMS. Checks shall be recorded in the installation log as detailed in condition 9.1 of this permit.
- 1.4.16 The kiln emergency bypass vent on RK2 numbered A12 on plan reference DRG. No. G_01_00_30_B shall be kept closed during normal operations. The Regulator shall be advised of the frequency of opening for safety checks. Opening of the bypass for major incidents shall be recorded and shall include all reasons for, and the duration of, opening of the bypass.
- 1.4.17 The Operator shall submit to the Regulator at least once per year information of the following operational levels:
- a) The tons of raw materials processed and working hours for the Nailsea plant as identified as A17 (on plan reference DRG. No. G_01_00_30_B).
 - b) The hours of operation of the Grog plant as identified as A18 (on plan reference DRG. No. G_01_00_30_B).
- 1.4.18 The Operator shall fit and operate continuous monitors on the Nailsea and Grog plant (process exhausts numbered A17 and A18 on plan reference DRG. No. G_01_00_30_B) within 6 months from the date when operational levels go over the thresholds of:
- a) 80000 tons of raw materials or 3500 working hours in 1 year for A17
 - b) 1000 hours in 1 year for A18

1.5 Control of Dust from Stockpiles, Transfer and Storage of Materials

- 1.5.1 Stockpiles of unprocessed clay shall be suitably profiled so as to minimise emissions of dust. Stockpiles shall be sprayed with water, when required, during periods of dry weather to ensure emissions to air are minimised.
- 1.5.2 The raw material storage area shall have a consolidated crushed fired clay surface. This surface shall be checked and maintained in a good state of repair. The surface shall be sprayed with water, when required, during periods of dry weather to ensure emissions to air are minimised.

- 1.5.3 Unprocessed clay shall be stored in a roofed open sided building in the designated area or in a managed external stockpile as identified on plan reference DRG. No. G_01_01_021_D.
- 1.5.4 Processed crushed clay shall be stored in the enclosed blending plant building as shown on plan reference DRG. No. G_01_01_021_D.
- 1.5.5 Processed calcined clay shall be stored in the 4 external silos as indicated on plan reference DRG. No. G_01_00_30_B. The calcined clay shall then be transported pneumatically through pipework to the holding silos within the roller kiln buildings.
- 1.5.6 Storage silos venting to external atmosphere shall be vented to reverse air jet filter units. The filters shall be of a sufficient size so as to prevent visible emissions. During filling operations the silos shall not be charged at a rate exceeding that prescribed by the filter manufacturer such that it will cause any visible emissions of material from any part of the pipework, transfer lines, silo or its filters.
- 1.5.7 In the event of arrestment plant failure or leakage of particulate matter the delivery shall cease immediately. No further deliveries shall take place until appropriate corrective action has been taken to return the arrestment plant etc. back to its correct working order. Details of the plant failure and particulate matter leakage, including corrective action taken, shall be recorded in the installation log as detailed in condition 9.1 of this permit.
- 1.5.8 Storage silos venting to external atmosphere shall be fitted with pressure relief valves/over pressure detection devices. The seating of the pressure relief valve/over pressure detection device shall be checked once every 6 months. The Operator shall carry out daily visual assessments of the silos in order to identify any possible failure of the system. In instances where the pressure relief valve appears to have become unseated the delivery of material to the silo shall cease until the fault has been rectified. The Operator shall record details of this check and any actions taken in the installation log as detailed in condition 9.1 of this permit.
- 1.5.9 The reverse jet filtration systems on the storage silos shall be checked once every 6 months. The Operator shall carry out daily visual assessments of the silos in order to identify any possible failure of the system. In instances where the filters appear faulty or an emission occurs the delivery of material to the silo shall cease until the fault has been rectified. The Operator shall record details of this check and any actions taken in the installation log as detailed in condition 9.1 of this permit.
- 1.5.10 Storage silos shall be fitted with audible/visual high-level alarms to warn of overfilling. The operation of these alarms shall be checked on a weekly basis. The Operator shall record details of this check and any actions taken in the installation log as detailed in condition 9.1 of this permit.
- 1.5.11 The Operator shall ensure that all external conveyors are enclosed on the top and sides and maintained with transfer points enclosed, in order to minimise emissions of dust.

- 1.5.12 All external conveyors shall be kept clean by the use of belt scrapers. Dusty material cleaned from the conveyors shall be collected and contained in such a way as to ensure emissions to air are minimised prior to disposal/reuse in the process.
- 1.5.13 All external conveyor systems carrying dusty material shall be fitted with side chute guards, variable discharge gates and motor overload protection to prevent overloading.
- 1.5.14 External conveyor systems shall be operated to ensure that overloading and spillage of material does not occur. Any spilt material shall be removed as soon as possible and not allowed to build up either beneath the conveyer or within the surrounding framework.
- 1.5.15 Processed uncalcined clay shall be transported by covered vehicle from the raw materials processing area to the clay delivery area as shown on plan reference DRG. No. G/01/01/021 D. The clay shall then be transferred within the building to storage as shown on plan reference DRG. No. G/01/01/021 D.

1.6 Control of Dust from Processing Operations

- 1.6.1 All crushing and grinding of clay shall take place within the buildings marked 120,188 and 200 on plan reference DRG. No. G_01_00_30_B. Emissions from processing operations including crushing, grinding, pans conveyors and elevators shall be exhausted to atmosphere via the Nailsea and Grog dust extraction system.
- 1.6.2 Airflow through the crushing and grinding plant shall be minimised by keeping the doors closed whenever practical to do so.
- 1.6.3 Emissions from the milling, secondary crushing and screening plants shall be contained within the building.

1.7 Control of Dust from Roadways

- 1.7.1 Permanent internal roadways that are in regular use shall be hard surfaced, or a consolidated surface with regard to the clay stocking areas and shall be maintained to a standard such that they can be effectively cleaned. Roadways shall be monitored and maintained as part of the MMS as detailed in condition 5.1.1 of this permit.
- 1.7.2 All roadways and other areas in general vehicular use shall be maintained so as to minimise visible emissions of dust by regular use of a road sweeper and/or water bowser. A formal road sweeper plan shall be in place for ensuring that roadways are kept clean.
- 1.7.3 Where the transfer of dust to public roads is likely due to the regular movement of goods vehicles then the wheel wash facility that has been provided shall be used. Exhausts from such vehicles shall normally be directed above the horizontal.
- 1.7.4 The transfer of dusty materials shall be carried out in closed tankers or sheeted vehicles.

1.8 Control of Fugitive Emissions to Air

- 1.8.1 All external pipework for the transfer of dusty material, calcined clay etc. shall be maintained in a good state of repair such that there is no leakage of material from joints etc.
- 1.8.2 The loading and unloading of road vehicles and delivery of material to stockpiles shall be carried out so as to minimise dust emissions by ensuring drop heights are kept to a minimum and the shovels are not overfilled.
- 1.8.3 Dusty spillages shall be cleaned by vacuum or using wet methods in order to ensure emissions to air are minimised.
- 1.8.4 The Operator shall have in place an action plan to address the storage of dusty materials used in the permitted process. This shall be held on site and made available for inspection by the Regulator upon request.
- 1.8.5 The material collected from abatement plant, shall be transferred and contained by methods which do not give rise to particulate emissions to the external atmosphere. Such material shall be contained or kept damp/undercover in order to ensure that fugitive emissions are prevented to the external atmosphere prior to removal from site.

1.9 Monitoring of Fugitive Emissions to air

- 1.9.1 Visual assessments shall be made of particulate matter emissions from raw material storage areas including the storage hoppers and the arrestment plant to the storage hoppers. These assessments shall be carried out by the Operator on a daily basis to assess plant operations and also during the delivery and transfer of raw materials to site. These shall be carried out from a position with a clear view of the process.
- 1.9.2 All adverse assessments shall be investigated immediately and remedial action taken.
- 1.9.3 The results of all adverse assessments shall be recorded together with details of any remedial action taken in the installation log, kept in accordance with Condition 9.1.

1.10 Control of Emissions from Dolomite Silo

- 1.10.1 Dolomite shall be stored in the 100 tonne silo as indicated on plan reference DRG. No. G/01/01/021 D. The dolomite shall be transferred to the ball mill feed system via an internal delivery screw.
- 1.10.2 Visual assessments shall be carried out during bulk deliveries of materials to the dolomite storage silo, particularly during the first and last five minutes and periodically in between. The results of the visual assessment checks shall be recorded. All entries shall identify the person making the observation, and the time and duration. Details of any visible emissions shall be recorded detailing the nature of the emission, its source, cause and the corrective action taken. The results shall be recorded in the installation log.

- 1.10.3 The dolomite silo filling rate shall be clearly marked at the tanker filling point. During filling operations the silos shall not be charged at a rate exceeding that prescribed by the filter manufacturer such that it will cause any visible emissions of material from any part of the pipework, transfer lines, silos or their filters.
- 1.10.4 Prior to commencing delivery of dolomite the Operator shall ensure that all transfer lines are securely connected to the delivery tanker discharge point and silo delivery inlet point.
- 1.10.5 In the event of arrestment plant failure or leakage of particulate matter, the delivery shall cease immediately. No further deliveries shall take place until appropriate corrective action has been taken to return the arrestment plant back to its correct working order. Details of the arrestment plant failure or particulate leakage, including corrective action, shall be recorded in the site logbook.
- 1.10.6 The storage silos shall be fitted with audible level alarms to warn of over-filling. On sounding of the alarm the delivery must be halted immediately and no deliveries shall take place until the faults on the alarm system have been rectified. All activation of alarms shall be recorded in the logbook kept in accordance with condition 9.1 of this permit.
- 1.10.7 The correct operation of the dolomite storage silo alarms shall be tested weekly and the results of these checks shall be recorded in the logbook in accordance with condition 9.1 of this permit.
- 1.10.8 The reverse air jet filtration units on the dolomite silo shall be inspected once per month or before a delivery takes place whichever is the longer interval. If any defects are detected, corrective action shall be taken promptly. No further deliveries of material shall take place until the fault has been rectified. Details shall be recorded in the logbook in accordance with condition 9.1 of this permit.
- 1.10.9 The Operator shall have in place a written procedure for the delivery of material to the dolomite storage silo as marked on plan reference DRG. No. G/01/01/021 D. The procedure shall be made available to the Regulator for inspection upon request.
- 1.1.10 The Operator shall inform all tanker drivers of the correct procedure to be followed for the delivery of dolomite to the dolomite storage silo as marked on plan reference DRG. No. G/01/01/021 D.
- 1.10.11 The Operator shall check that there is sufficient capacity in the Dolomite silo prior to the delivery of material taking place. This check shall be recorded in the installation log as detailed in condition 9.1 of this permit.

2.0 Emissions to Water

2.1 Point Source Emissions to Surface Water and Sewer

- 2.1.1 a) The discharge from the permitted process to Sledbrook Dyke (Former discharge consent WA 5729 – Adit Discharge) at National Grid Reference SE 1835 0484 shall consist solely of surface water, mine

working water and factory water.

- b) For flows up to 4 litres per second which shall be treated in settlement lagoons prior to discharge the nature and composition of the effluent shall be such that:
 - i) the discharge shall not contain more than 100 milligrams per litre of suspended solids (after drying at 105 degrees Celsius)
 - ii) the pH value shall not be less than 6 nor more than 9
 - iii) the discharge shall be free from visible oil.
- c) Flows in excess of 4 litres per second shall be retained in the lagoon which shall have a storm capacity of not less than 1200 cubic metres. Only when this capacity is fully utilised may storm flows be discharged via a separate outlet to which the following conditions apply:
 - i) the pH value shall not be less than 6 nor more than 9
 - ii) the discharge shall be free from visible oil.

Upon cessation of the storm conditions the stored volume shall be subsequently discharged at a rate via the normal outlet to which the quality conditions stated in 2.1.1 b) shall apply.

- d) As far as is reasonably practicable, the site shall be operated so as to prevent the discharge from containing any significant trace of visible oil or grease.
- e) The discharge shall not contain any matter (either on its own or in combination with any other matter), to such an extent as to cause the receiving waters to be poisonous or injurious to fish or the spawning grounds, spawn or food of fish.

2.2 Monitoring of Emissions to Surface Water

- 2.2.1 Facilities shall be provided so as to enable samples of the effluent to be conveniently obtained at the sample points as detailed in conditions 2.1.1 of this permit, as shown on plan ref G/00/00/17 B. The Operator shall ensure that all constituents of the discharge pass through the sampling points at all times.
- 2.2.2 The Operator shall carry out regular monitoring of the discharge points as detailed in condition 2.2.1. The Operator shall monitor the points as described below
 - i) 12 samples shall be taken each year
 - ii) All samples shall be analysed for the conditions parameters as detailed in conditions 2.1.1, 2.1.2, above
 - iii) All samples shall be analysed at a NAMAS accredited laboratory.
 - iv) A visual inspection of the discharges shall be made on a monthly basis and at the time of sampling. Records of these observations shall be recorded in the installation log as detailed in condition 9.1 of this permit.

- 2.2.3 The results of the monitoring exercise as detailed in condition 2.2.2 shall be forwarded to the Regulator within 60 days of the sample being taken.

2.3 Point Source Emissions to Groundwater

- 2.3.1 No emission from the Permitted Installation shall give rise to the introduction into groundwater of any substance in List I (as defined in the Groundwater Regulations 2009).
- 2.3.2 No emission from the Permitted Installation shall give rise to the introduction into groundwater of any substance in List II (as defined in the Groundwater Regulations 2009) so as to cause pollution (as defined in the Groundwater Regulations 2009).
- 2.3.3 For substances other than those in List I or List II (as defined in the Groundwater Regulations 2009) the Operator shall use BAT to prevent, or where that is not practicable, to reduce emissions to groundwater from the Permitted Installation.

2.4 Fugitive Emissions to Surface Water, Sewer and Groundwater

- 2.4.1 The Operator shall maintain a detailed diagrammatic record of the routing of all installation drains and subsurface pipework including all subsurface sumps and storage vessels. The diagrammatic record shall be reviewed and updated as material changes take place at the installation. The diagrammatic record shall be held on site as part of the installation log and made available for inspection by the Regulator.
- 2.4.2 The Operator shall establish an inspection and maintenance programme for all subsurface structures such as underground storage vessels, subsurface sumps as part of the management system as detailed in condition 5.1.1 of this permit. The programme shall be held on site as part of the installation log and made available for inspection by the Regulator.
- 2.4.3 The Operator shall provide an action plan for carrying out works to ensure that all operational areas shall be equipped with an impervious surface, spill containment kerbs, sealed construction joints, and connection to a sealed drainage system with the exception of the areas notified and agreed with the Regulator, as required by condition 2.4.4 of this permit. The surface shall be of a good integrity and shall be inspected on an annual basis and maintained accordingly. Inspections shall be recorded as part of the installation log required by condition 9.1 of this permit.
- 2.4.4 The Operator shall maintain a record of the design and condition following any future resurfacing of operational areas. This shall include any relevant information. This shall be updated following any relevant material changes to the process.
- 2.4.5 All tanks containing liquids whose spillage could be harmful to the environment shall be contained. The Operator shall review the bunding arrangements and ensure that all bunds:
- are impermeable and resistant to the stored materials

- have no outlet (that is, no drains or taps) and drain to a blind collection point
 - have pipework and drain cocks routed within bunded areas with no penetration of contained surfaces
 - are designed to catch leaks from tanks or fittings
 - have a capacity of at least 110% of the largest tank
 - are visually inspected at least weekly and any contents pumped out or otherwise removed under manual control after checking for contamination
 - have an annual maintenance inspection (normally visual but extending to water testing where structural integrity is in doubt)
- 2.4.6 All sumps shall be impermeable and resistant to stored materials and shall be inspected on a monthly basis. The content of the sump shall be checked for contamination prior to being pumped out.
- 2.4.7 All bulk storage tanks shall be fitted with volume indicators to warn of overfilling. The Operator shall ensure that there is sufficient capacity in the tank prior to deliveries taking place. Filling and delivery connections shall be located within a bunded area and shall be locked when not in use. The integrity of tanks shall be inspected on an annual basis. These inspections shall be included in the maintenance schedule and shall be recorded and documented.
- 2.4.8 External storage areas and containers shall be designed and operated to minimise the risk of fugitive releases to surface water, sewer and groundwater, in particular:
- storage areas shall be located away from watercourses and shall be protected against vandalism
 - containers shall be inspected prior to placing in storage for any leakage, wear and tear etc. and appropriate action shall be taken when defects are detected
 - the maximum capacity of storage areas shall be stated and shall not be exceeded
 - storage areas and silos shall be inspected at least monthly to check for signs of leakage or potential leakage
- 2.4.9 All containers of hydrocarbons and chemicals which are discharged manually shall be placed either in bunded areas or on drip trays or inside buildings away from any drains etc. The filling points shall have outlets which discharge within the bunded area/drip tray.
- 2.4.10 Heavy lubrication oil and diesel shall be delivered to site in enclosed tankers to the oil and diesel storage tanks.
- 2.4.11 The Operator shall check that there is sufficient capacity in the storage tanks prior to the delivery of oil and diesel taking place. This check shall be recorded in the installation log.
- 2.4.12 Tanker transfer lines must be securely connected to the tanker discharge point and the tank inlet point before the delivery commences. Visual observations shall be made during the delivery to ensure there is no leakage from the transfer lines.

- 2.4.13 Tanker drivers shall be informed of the correct procedures to be followed.
- 2.4.14 Deliveries shall cease immediately where there is any leakage of material from transfer lines or connection points and corrective action shall be taken prior to recommencing the delivery. Any incidents shall be recorded in the site log along with any remedial action taken.

3 Emissions to Land

- 3.1 No emission from the Permitted installation shall be made to land without the Regulators prior approval.
- 3.2 The Operator shall notify the Regulator, as soon as is reasonably practicable, of any information concerning the state of the site which affects or updates that supplied to the Regulator as part of the site report submitted as part of the Permit application.
- 3.3 The Operator shall notify the Regulator in writing of any area or zone within the boundary of the installation that has been subject to below ground remediation since the issue of the Permit. Subject to agreement in writing from the Regulator, any necessary analysis of sub-soil to establish baseline pollutant levels shall be undertaken.

4 Odour

- 4.1. All emissions to air from the installation shall be free from offensive odour, as perceived by the Regulator, outside of the installation boundary, as outlined in red on plan reference DRG. No. G/01/01/021 D. The Operator shall not be deemed to have breached this condition if the Operator has used BAT to prevent, or where that is not practicable, to reduce such odorous emissions.

5.0 Management

5.1 Environmental Management System (EMS)

- 5.1.1 The Operator shall have an effective Environmental Management system in operation that shall be reviewed and audited on an annual basis.

The Environmental Management system shall provide an effective technique for ensuring all pollution prevention and control techniques are delivered reliably and on an integrated basis, and shall include but not be limited to:–

A documented preventative maintenance schedule, covering all plant whose failure could impact on the environment.

Documented procedures for controlling and monitoring of emissions

Records of checks made, maintenance etc. (logbooks etc)

Records of breakdowns (include a review following breakdowns)

Auditing systems in place for ensuring procedures are followed, maintenance carried out, records kept up to date etc.

A documented training system (including awareness of the regulatory implications of the permit, awareness of all operating procedures, awareness of potential environmental impacts under normal and abnormal circumstances, prevention of accidental emissions and action to be taken when accidental emissions occur and awareness of procedures for dealing with a breach of permit).

5.2 Operations and Maintenance

- 5.2.1 The Operator shall have in place a list of existing key process and abatement equipment and a list of procedures for dealing with arrestment plant failure and adverse conditions. The list shall be made available for inspection by the Regulator upon request.
- 5.2.2 An effective documented preventative maintenance programme including documented operational control procedures shall be employed on all aspects of the installation whose failure could impact on the environment. This shall also include major 'non-productive' items such as tanks, pipework, retaining walls, bunds, ducts and filters. This shall be reviewed and updated annually and shall be available to the Regulator for inspection upon request.
- 5.2.3 Essential spares and consumables for the effective operation of arrestment systems shall be held on site or be available at short notice from suppliers, such that plant breakdown can be rectified rapidly.
- 5.2.4 Any malfunction or breakdown which leads to abnormal emissions shall be addressed promptly and process conditions and operations adjusted such that the abnormal emissions cease until such time as reparation is effected. All such malfunctions or breakdowns shall be recorded in the installation log kept in accordance with Condition 9.1.
- 5.2.5 The Regulator shall be notified within 1 hour, of any abnormal emission that is likely to affect the local community.
- 5.2.6 A competent elected person and deputy(s) shall be appointed to liaise with the Regulator and the public with regard to complaints. The Regulator shall be informed of the designated individual and deputy(s), including contact details should any changes occur.

5.3 Training

- 5.3.1 Staff at all levels shall receive the necessary training concerning control of emissions to the environment including an awareness of operating procedures in relation to their duties. This shall include awareness of the regulatory implications of the permit and of all potential environmental impacts under normal and abnormal circumstances. Staff shall be aware of the procedures for dealing with a breach of the permit conditions, recording of incidents and for the prevention of accidental emissions and the actions

to be taken when accidental emissions occur. Training needs shall be reviewed on a 2-year basis and also as part of the induction programme for new operatives involved in operations covered by this permit.

- 5.3.2 The skills and competencies necessary for key posts (which may include contractors and those purchasing equipment and materials) shall be documented and records of training needs and training received for these posts shall be kept. This documentation shall be reviewed on a 3 yearly basis.
- 5.3.3 Contractors shall be advised of the relevant procedures to be followed in relation to carrying out duties on site and for control of emissions to the environment.
- 5.3.4 The Operator shall have in place a formal structure that clarifies the extent of each level of employee's responsibility with regard to the control of the process and its environmental impacts. A copy of the structure shall be held on site and be reviewed on an annual basis. This shall be available for inspection by the Regulator upon request.

5.4 Documentation

- 5.4.1 All documentation and records kept in compliance with Condition 9.1, that being the installation log, shall:-
- i) be made available for inspection by the Regulator at any reasonable time;
 - ii) be supplied to the Regulator on demand and without charge;
 - iii) be legible;
 - iv) be made as soon as reasonably practicable;
 - v) indicate any amendments that have been made and shall include the original record wherever possible; and
 - vi) be retained at the Permitted Installation, or other agreed location agreed by the Regulator in writing, for a minimum period of two years from the date when the records were made, unless otherwise agreed in writing.
- 5.4.2 The Operator shall respond to any Information Notice served in respect of the installation for the purposes of complying with the obligation to report pollutant releases and off-site waste transfers pursuant to the directly applicable EU duty in accordance with Article 5 of EC Regulation No 166/2006 concerning the establishment of a European Pollutant Release and Transfer Register.

5.5 Notification

- 5.5.1 The Operator shall give written notification as soon as practicable prior to any of the following:-
- (i) permanent cessation of the operation of all or part of the Permitted Installation;

(ii)cessation of operation of all or part of the Permitted Installation for a period likely to exceed one year; and

(iii)resumption of the operation of part or all of the Permitted Installation after a cessation notified under Condition 5.5.1.(ii)above.

5.5.2 The Operator shall notify the matters to the Regulator in writing within 14 days of their occurrence:-

i) any change in the Operators trading name, registered name or registered office address;

ii) any change of particulars of the Operators ultimate holding company (including details of an ultimate holding company where an Operator has become a subsidiary)

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

6.0 Raw Materials

6.1 Raw Materials Selection

6.1.1 The Operator shall maintain an inventory of the principal raw materials and chemicals used for the various activities carried out at the installation.

6.1.2 The inventory, as required by Condition 6.1.1 above, shall be reviewed annually. The review shall include investigating potential alternative materials that will have less environmental impact.

6.1.3 All records pertaining to the inventory and reviews thereof, required by Conditions 6.1.1 and 6.1.2 above, shall be maintained for a period of not less than four years. These records shall form part of the installation log kept in accordance with Condition 9.1.

6.1.4 Quality checks shall be made on raw materials prior to the material being used in the batch, to ensure that it meets the required specification to minimise any potential environmental impact.

6.2 Waste Minimisation (optimising the use of raw materials)

6.2.1 The Operator shall carry out a waste minimisation audit once every 2 years. 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.

The waste minimisation audit shall form part of the revised environmental management system required by Condition 5.1.1.

6.2.2 Specific improvements resulting from the recommendations of the waste minimisation audit shall be carried out within a timescale approved by the Regulator.

6.3 Waste Handling, Storage and Destination

- 6.3.1 The Operator shall ensure that all wastes generated from the Permitted Installation are dealt with according to the Waste Management System that forms part of the Operators MMS.
- 6.3.2 The Waste Management System shall be regularly reviewed and audited, at least annually, to ensure that adequate controls are being implemented to deal with all wastes generated and to identify areas of waste reduction.
- 6.3.3 An inventory shall be maintained that contains information relating to the quantity, nature, origin and destination of all wastes generated. The destination shall include details of wastes that are re-used, recovered, recycled and disposed of. The inventory shall also include details of frequency of collection, mode of transport and treatment methods of any wastes which are disposed of or recovered.
- 6.3.4 Waste storage areas shall be clearly marked with waste segregation notices, placed in appropriate positions, to ensure the correct segregation of waste material.
- 6.3.5 All documentation required to comply with the relevant waste regulations shall be maintained at the installation for a minimum period of four years. This documentation shall form part of the installation log kept in accordance with Condition 9.1.
- 6.3.6 Appropriate storage facilities shall be provided for wastes with special requirements for example flammable waste shall be stored in the recognised flammable store until disposal.
- 6.3.7 The Operator shall ensure that procedures are in place as part of the EMS for dealing with leaks and spills of waste material. This shall include the appropriate siting of spill kits.
- 6.3.8 The Operator shall carry out an annual review to demonstrate that the best environmental options are being used for dealing with waste. The review should include but not be limited to:
- Unfired waste
 - Fired waste
 - Collected dusts
 - Steel bands from pallet packaging
 - Waste water treatment sludge
 - Wood, cardboard and paper
 - Oil

Details of the review shall be available to the Regulator upon request.

- 6.3.9 The Operator shall review the potential markets for the recovery/re-use of wastes that are currently disposed of to landfill. The review shall be carried out every 2 years and be available to the Regulator upon request.

6.4 Water Use

- 6.4.1 The Operator shall carry out regular reviews and audits of water use, in line

with the Operators MMS.

- 6.4.2 The review and audits of water use, required by Condition 6.4.1 above, shall be used to identify further opportunities to minimise water use and further opportunities to re-use or recycle water.
- 6.4.3 The documentation relating to reviews and audits of water use shall be kept by the Operator for a minimum period of four years. This documentation shall form part of the installation log kept in accordance with Condition 9.1 and be available to the Regulator upon request.
- 6.4.4 The volume of mains and abstracted water used for production shall be directly measured when the installation is operating once a day for at least a fortnight and thereafter, once a week with an annual exercise taking daily measurements for at least a fortnight. All measurements shall be recorded and the records held on site.

6.5 Energy Efficiency

- 6.5.1 The Operator shall ensure that all plant and equipment within the installation is designed, operated and maintained to optimise the use and minimise the loss of energy.
- 6.5.2 The Operator shall produce a report on the energy consumed at the Permitted Installation over the previous calendar year, by the 31st March each year.
- 6.5.3 A copy of the report required in compliance of Condition 6.5.2, above, shall be held on site from the 30th April each year to which it relates.
- 6.5.4 Energy efficiency at the installation shall be reviewed and audited on an annual basis as part of the Operators EMS as detailed in condition 5.1.1 of this permit.
- 6.5.5 The documentation relating to the reviews and audits required by Condition 6.5.4, above, shall be maintained by the Operator for a period of not less than four years. This documentation shall form part of the installation log kept in accordance with Condition 9.1.
- 6.5.6 The Operator shall demonstrate compliance with the UK Emissions Trading Scheme (Greenhouse Gas Emissions Trading Scheme Order 2020) (Permit ref. UK-E-IN-13630). This information shall be held in compliance with condition 9.1 of this permit.
- 6.5.7 The Operator shall notify the Regulator, as soon as practicable, of cancellation of or non-compliance with the UK Emissions Trading Scheme (Greenhouse Gas Emissions Trading Scheme Order 2020).

7.0 Accidents

- 7.1 The Operator shall maintain 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 consequence. The accident management plan shall be reviewed and audited on an annual basis or as soon as practicable after an accident.

- 7.2 Written procedures for the investigation of incidents and near misses shall be implemented and followed as part of the EMS. Incidents shall be investigated immediately and remedial action taken as soon as practicable. Incidents shall be recorded in the installation log along with actions taken, in accordance with condition 9.1 of this permit.
- 7.3 The documentation relating to the review and audits of the accident management plan, required for compliance with Condition 7.1 above, shall be kept for a minimum period of four years and shall form part of the installation log, kept in accordance with Condition 9.1.
- 7.4 The Operator shall notify the Regulator, without delay, of any incident or accident that has caused, is causing or has the potential to cause significant pollution to any environmental medium.

8.0 Noise and Vibration

- 8.1 The Operator shall use BAT so as to prevent or where that is not practicable to reduce emissions of noise and vibration from the Permitted Installation, in particular by:
- i) equipment maintenance, e.g. of fans, pumps, motors, conveyors, and mobile plant;
 - ii) use and maintenance of appropriate attenuation, e.g. silencers, barriers, enclosures;
 - iii) timing and location of noisy activities and vehicle movements;
 - iv) periodic checking of noisy emissions, either qualitatively or quantitatively; and
 - v) maintenance of building fabric.
- 8.2 The Operator shall carry out a review of noise and vibration to external atmosphere from the Permitted Installation. This review shall be carried out at least once every two years or in step with operational changes. Details of the review shall be available for inspection by the Regulator upon request.
- 8.3 The documentation relating to the review of noise and vibration, required for compliance with Condition 8.2 above, shall be kept for a minimum period of two years and shall form part of the installation log, kept in accordance with Condition 9.1.

9.0 Installation Log

- 9.1 The Operator shall maintain an installation log which shall include details of the day-to-day activities. The log required to be kept by this Condition shall not be construed as being one document.

- 9.2 The Operator shall provide the Regulator with a summary of examples of the documentation and management information that constitutes the installation log. The summary can be provided in list or tabular form and shall be available for inspection by the Regulator upon request.

10.0 Closure and Decommissioning

- 10.1 The Operator shall maintain a site closure plan. This plan shall be reviewed at least once every 4 years and the Regulator shall be notified of the results of the review. The plan shall be kept updated as material changes occur.
- 10.1 At such time as the Operator closes and decommissions the installation then the Operator shall ensure that any works necessary to remediate the land to at least the standards identified in the base line survey, as supplied with the Application for this Permit, are carried out.

Appendix A (1)

Submissions Summary

Condition	Timescale
1.4.4 – Submission of monitoring results	Within 8 weeks of the monitoring taking place
1.4.18 – submission of process throughput/working hours of the Nailsea and Grog plant (A17 and A18)	Once per year
2.2.3 – submission of monitoring results	60 days following the sample being taken

APPENDIX A (2)

Notification of Abnormal Emission or Malfunction

Nature of Emission or Malfunction	
Time, date and location of the incident	
Quantity of the substance released or the date of release and the time during which the release took place (where applicable)	
Measures taken or intended to be taken, to stop the release and rectify any environmental damage which has been or may be caused by the release	
Dates of similar releases which have taken place in the last 2 years	
If the information supplied in the notification is considered confidential, a statement of which information this applies to and the reasons why	

APPENDIX A (3)

BS2742:2009

Notes of the Use of the Ringelmann and Miniature Smoke Charts

BS2742: 2009 is a method for the visual assessment of smoke emission by comparison of the darkness of the smoke with standard shades of grey on a chart known as a Ringelmann chart. A corresponding number, the Ringelmann number, is assigned to describe the best match; the numbers range from 0 (white) to 5 (black).

Notes on the use of the Standard Ringelmann Chart (BS2742C)

A clean chart should be used under daylight conditions and held, or fixed, facing the observer at a sufficient distance for the lines to appear to merge into a uniform shade. For most observers the distance is in excess of 15 metres.

Observations should be made outdoors under general daylight conditions. Under hazy conditions readings should not be taken at extreme distances, as there will be a tendency for the readings to be low.

The angle of view of the chart and smoke should be as low as possible: observations at a steep angle should be avoided.

Compare the darkness of the smoke at the point where it leaves the chimney with the chart. Determine the number of the shade that appears most closely to match the darkness of the smoke and note the time and duration of this emission. Shades may be estimated to the nearest quarter Ringelmann number in favourable conditions.

The BS Miniature Smoke Chart

In situations where a standard BS Ringelmann chart cannot conveniently be used the British Standard miniature smoke chart, BS 2742 M, may be more appropriate.

The miniature chart is designed for use at less than 2 metres from the observer's eye. It is to be used under the conditions of illumination described above. As the card on which the chart is printed is slightly translucent, the chart should be backed by a sheet of white opaque material or inserted in a holder.

Preferably the chart should be held approximately 1.5 metres from the observer's eye, fixed to the end of a rod. The chart may also be held at arm's length, but observers are likely to find that readings are less easy to obtain this way.

Report deviation from standard test methods	[prior to any change]
Report breach of Discharge Consent	[within 8 weeks]
Report any change to site condition	[as soon as practicable]

Submissions Summary cont.

Notification for cessation of all or part of installation	[as soon as practicable]
Notification for cessation that is likely to exceed 1 year	[as soon as practicable]
Notification for resumption of operations	[as soon as practicable]
Notification of name change / address change	[within 14 days]
Notification for change of particulars	[within 14 days]
Notification for going into administration / wound up	[within 14 days]
Notification of cancellation of CCLA	[as soon as practicable]
Notification of any incident/accident (pollution)	[immediately]

Interpretations

In relation to this Permit, the following expressions shall have the following meanings:

<i>“Application”</i>	means the application for this Permit, together with any response to a notice served under Schedule 4 to the PPC Regulations and any operational change agreed under the Conditions of this Permit.
<i>“EP Regulations”</i>	means the Environmental Permitting (England and Wales) Regulations 2016 as amended and words and expressions defined in the EP Regulations shall have the same meanings when used in this Permit save to the extent they are explicitly defined in this Permit.
<i>“Permitted Installation”</i>	means the activities and the limits to those activities described in this Permit.
<i>“Monitoring”</i>	includes the taking and analysis of samples, instrumental measurements (periodic and continual), calibrations, examinations, tests, and surveys.
<i>“Regulator”</i>	means any officer of Barnsley Metropolitan Borough Council who is authorised 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(1) of that Act.
<i>“Fugitive Emission”</i>	means an emission to air or water (including sewer) from the Permitted Installation that is not controlled by an emission limit imposed by a condition of this Permit.
<i>“Groundwater”</i>	means all water that is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.
<i>“MCERTS”</i>	means the Environment Agency’s Monitoring Certification Scheme.
<i>“Sewer”</i>	means sewer within the meaning of Section 219(1) of the Water Industry Act 1991.
<i>“EP Regulations”</i> means the Environmental Permitting (England and Wales) Regulations 2016 as amended and words and expressions defined in the EP Regulations shall have the same meanings when used in this Permit save to the extent they are explicitly defined in this Permit.	

Explanatory Note

The Environmental Permitting (England and Wales) Regulations 2016 as amended describes the use of “best available techniques” (BAT) for preventing and reducing emissions and the impact on the environment as a whole. For the purpose of the definition:

- (a) “available techniques” means those techniques which have been developed on a scale which allows implementation in the relevant industrial sector, under economically and technically viable conditions, taking into consideration the cost and advantages, whether or not the techniques are used or produced inside the United Kingdom, as long as they are reasonably accessible to the operator;
- (b) “best” means, in relation to techniques, the most effective in achieving a high general level of protection of the environment as a whole;
- (c) “techniques” include both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned.

For determining best available techniques special consideration shall be given to the following matters, bearing in mind the likely costs and benefits of a measure and the principles of precaution and prevention –

- 1) the use of low-waste technology;
- 2) the use of less hazardous substances;
- 3) the furthering of recovery and recycling of substances generated and used in the process and of waste, where appropriate;
- 4) comparable processes, facilities or methods of operation which have been tried with success on an industrial scale;
- 5) technological advances and changes in scientific knowledge and understanding
- 6) the nature, effects and volume of the emissions concerned;
- 7) the commissioning dates for new or existing installations;
- 8) the length of time needed to introduce the best available technique;
- 9) the consumption and nature of raw materials (including water) used in the process and the energy efficiency of the process;
- 10) the need to prevent or reduce to a minimum the overall impact of the emissions on the environment and the risks to it;
- 11) the need to prevent accidents and to minimise the consequences for the environment;
- 12) the information published by the Commission pursuant to Article 16(2) of

the Directive or by international organisations.

Appeals

Any person who is aggrieved by the conditions attached to a Permit can appeal to the Secretary of State for Environment, Food & Rural Affairs. **Appeals must be received by the Secretary of State no later than 6 months from the date of the decision (the date of the Permit).**

Appeals relating to Prescribed Activities in Wales should be sent to the Secretary of State for Environment, Food & Rural Affairs. The address is as follows :

The Planning Inspectorate
Environment Appeals Team
3A Eagle Wing
Temple Quay House
2 The Square
Temple Quay
Bristol
BS1 6PN

Guidance on the appeal procedures is contained in Schedule 6 of the Environmental Permitting (England and Wales) Regulations 2016 as amended

The appeal must be in the form of a written notice or letter stating that the person wishes to appeal and listing the condition(s) which is/are being appealed against.

The following five items must be included :

- a] a statement of the grounds of appeal;
- b] a copy of any relevant Application;
- c] a copy of any relevant Permit;
- d] a copy of any relevant correspondence between the person making the appeal ("the appellant") and the council;
- e] a statement indicating whether the appellant wishes the appeal to be dealt with,
 - i. by a hearing attended by both parties and conducted by an inspector appointed by the Secretary of State; or
 - ii. by both parties sending the Secretary of State written statements of their case [and having the opportunity to comment on one another's statements].

At the same time, the notice of appeal and documents [a] and [e] must be sent to the Council, and the person making the appeal should inform the Secretary of State that this has been done.

- 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 to either vary any of these conditions or to add new conditions.

Appendix B Site Plans

