



**POLLUTION PREVENTION AND CONTROL ACT 1999  
ENVIRONMENTAL PERMITTING (ENGLAND AND WALES)  
REGULATIONS 2016**

**Permit Number:2.1/047548/ET2**

**Installation Address:  
Replicast Ltd  
7 East Bank Road  
Sheffield  
S2 3PT**

**In accordance with Regulation 13 of the Environmental Permitting (England and Wales) Regulations 2016 as amended, Replicast Ltd is hereby permitted to operate a scheduled activity at the address detailed above, namely the melting of ferrous metals, as described in Schedule 1, Part 1, Chapter 2, Section 2.1, Part B, subsection (b) and subject to the following conditions of this Permit.**

**Signed**

**Dated 26<sup>th</sup> September 2018**

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**Commercial Team Manager  
Authorised by Sheffield City Council to sign on their behalf**

The scheduled activity falls under the following chapter of Schedule 1 of the Environmental Permitting (England and Wales) Regulations 2016; Chapter 2, Section 2.1, Part B subsection:

(b) Producing, melting or refining iron or steel or any ferrous alloy, including continuous casting, except where the only furnaces used are –

- (i) Electric arc furnaces with a designed holding capacity of less than 7 tonnes, or
- (ii) Cupola, crucible, reverberatory, rotary, induction, vacuum, electro-slag or resistance furnaces

The Secretary of States Guidance 2/04(13) 'statutory guidance for iron, steel and non-ferrous foundry processes' has provided the framework for the conditions in this permit.

**Name & Address of Operator:**

Replicast Ltd  
7 East Bank Road  
Sheffield  
S2 3PT

Contact: Bruce Wright Telephone number: 0114 272 8647

**Registered Office:**

Replicast Ltd  
7 East Bank Road  
Sheffield  
S2 3PT  
Companies House Registration Number 02908145

**Holding Company:**

The Foundry Association  
7 East Bank Road  
Sheffield  
S2 3PT  
Companies House Registration Number 03157646

**Address of Permitted Installation:**

Replicast Ltd  
7 East Bank Road  
Sheffield  
S2 3PT

## **Talking to Us**

Any communication with Sheffield City Council should be made to the following address quoting the Permit Number:

**ENVIRONMENTAL PROTECTION SERVICE  
SHEFFIELD CITY COUNCIL  
HOWDEN HOUSE  
5<sup>TH</sup> FLOOR NORTH  
1 UNION STREET  
SHEFFIELD  
S1 2SH**

Alternatively Email: [epsadmin@sheffield.gov.uk](mailto:epsadmin@sheffield.gov.uk) or Ring 0114 273 4651

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## **Explanatory Note to Pollution Prevention and Control Permit for Part B Installations.**

**(This note does not form a part of the Permit)**

The following Permit is issued under Regulation 13 of the Environmental Permitting (England and Wales) Regulations 2016, (“the EP Regulations”) to operate an installation carrying out activities covered by the description In Chapter 2, Section 2.1, Part B, subsection (b)(ii) 1 of those Regulations, to the extent authorised by the Permit:

### **Process Changes**

Under the provisions of the EP Regulations, you are required to notify the Council of any proposed change in operation at least 14 days before making the change. This must be in writing and must contain a full description of the proposed change in operation and the likely consequences. Failure to do so is an offence.

If you consider that a proposed change could result in the breach of the existing permit conditions or is likely to require the variation of permit conditions then you may apply in writing under Regulation 20(1) of the EP Regulations. Additionally, if this involves a SUBSTANTIAL CHANGE to the installation you will be required to submit an application, pay the relevant fee and advertise the application accordingly. You may serve a Notice on the Council requesting that they determine whether any change that is proposed would constitute a substantial change before you proceed with application.

### **Variations to the Permit**

The Permit may be varied in the future by the Council serving a Variation Notice on the Operator. If the Operator wishes any of the Conditions of the Permit to be changed, a formal Application must be submitted.

### **Surrender of the Permit**

Where the Operator of a Part B installation or mobile plant ceases or intends to cease the operation of the activity the Operator may notify the regulator of the surrender of the whole permit, in any other case, notify the regulator of the surrender of the permit in so far as it authorises the operation of the installation or mobile plant which he/she has ceased or intends to cease operating. The notification shall contain information as described in Regulation 24 or 25 of the EP Regulations.

## **Transfer of the Permit or Part of the Permit**

Before the Permit can be wholly or partially transferred to another person, a joint application to transfer the Permit has to be made by both the existing and proposed holders, in accordance with Regulation 21 of the EP Regulations. A transfer will be allowed unless Sheffield City Council considers that the proposed holder will not be the person who will have control over the operation of the installation or will not ensure compliance with the conditions of the transferred Permit.

## **Annual Subsistence Fee**

In accordance with Regulation 66 of the EP Regulations, the holder of a permit is required to pay a fee for the subsistence of the Permit. This fee is payable annually on 1<sup>st</sup> April. You are advised that under the provisions of Regulation 66 (5) of the EP Regulations, if you fail to pay the fee due promptly, Sheffield City Council may revoke the Permit. You will be contacted separately each year in respect to this payment.

## **Public Register**

The Council is required by Regulation 46 of the EP Regulations to maintain a Public Register containing information on all LAPPC installations and mobile plant. The register is available for inspection by the public free of charge during office hours (Monday to Friday 9.00 am to 5.00 pm) at the following address:

Environmental Protection Service  
Sheffield City Council  
Howden House  
5<sup>th</sup> Floor (North)  
1 Union Street  
Sheffield  
S1 2SH  
Tel: 0114 273 4651 or email [epsadmin@sheffield.gov.uk](mailto:epsadmin@sheffield.gov.uk)

## **Confidentiality**

Sheffield City Council has a duty to consider the question of confidentiality of information supplied to it. If any information supplied is considered confidential, a statement of which information this applies to and the reasons why it is considered confidential should be specified. The Operator is reminded that he may apply to Sheffield City Council for the exclusion of information from the public register under the provisions of the Environmental Permitting (England and Wales) Regulations 2016.

## **Appeals**

Under Regulation 31 of the EP Regulations Operators have the right of appeal against the conditions attached to their permit. Schedule 6 of the EP Regulations sets out the detailed procedures.

Appeals against a Variation Notice do not have the effect of suspending the operation of the Notice. Appeals do not have the effect of suspending Permit conditions.

Notice of appeal against the conditions attached to the permit must be given within six months of the date of the Notice, which is the subject matter of the appeal.

## **How to Appeal**

There are no forms or charges for appealing. However, for an appeal to be valid, appellants (the person/Operator making the appeal) are legally required to provide:

- Written notice of the appeal;
- A statement of the grounds of appeal;
- A statement indicating whether the appellant wishes the appeal to be dealt with by written representations procedure or a hearing – a hearing must be held if either the appellant or enforcing authority requests this, or if the Planning Inspector or the Secretary of State decides to hold one.
- (Appellants must copy the above three items to the local authority when the appeal is made)
- A copy of any relevant application;
- A copy of any relevant permit;
- A copy of any relevant correspondence between the appellant and the regulator; and
- A copy of any decision or notice, which is the subject matter of the appeal.

## **Where to Send Your Appeal Documents**

Appeals should be addressed to:

**The Planning Inspectorate  
Environmental Appeals Administration  
Room 4/19 – Eagle Wing  
Temple Quay House  
2 The Square  
Temple Quay  
Bristol BS1 6PN**

In the course of an Appeal process the main parties will be informed of procedural steps by the Planning Inspectorate.

To withdraw an appeal the appellant must notify the Planning Inspectorate in writing and copy the notification to the local authority.

## **Enforcement**

An **Enforcement Notice** may be served if the Local Authority believes an Operator has contravened, is contravening or is likely to contravene any condition of his Permit.

A **Suspension Notice** may be served if in the opinion of the Local Authority the operation of an installation involves an imminent risk of serious pollution. This applies whether or not the Operator has breached a Permit condition.

The Local Authority can revoke a Permit by written notice at any time by serving a **Revocation Notice**. The Permit then ceases to authorise the operation of the installation.

## **Offences**

A limited summary of the offences is listed below:

- a) operation of an installation without a Permit
- b) failure to comply with or contravene a Permit condition
- c) failure to comply with the requirements of an enforcement or suspension notice

A full list is available under Regulation 38 of the Environmental Permitting (England & Wales) Regulations 2016 as amended.

## **Penalties**

The maximum penalties for the above offences are a fine not exceeding £50,000 and/or up to twelve months imprisonment per offence for a summary conviction (in a Magistrates Court); and a fine and/or up to five years imprisonment for conviction on indictment (in a Crown Court).



## Definitions

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

*“Application”* means the application for this Permit, together with any response to a notice served under Schedule 4 to the EPR Regulations and any operational change agreed under the conditions of this Permit.

*“EPR Regulations”* means the Environmental Permitting (England and Wales) Regulations 2016 and words and expressions defined in the EPR Regulations shall have the same meanings when used in this Permit save to the extent they are explicitly defined in this Permit.

*“Permitted Installation”* means the activities and the limits to those activities described in this Permit.

*“Monitoring”* includes the taking and analysis of samples, instrumental measurements (periodic and continual), calibrations, examinations, tests and surveys.

*“Regulator”* means any officer of Sheffield City 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.

*“BAT”* means 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 bases for emission limit values designed to prevent, and where that is not practical, generally to reduce emissions and the impact on the environment as a whole. For those purposes:

*“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;

*“best”* means, in relation to techniques, the most effective in achieving a high general level of protection of the environment as a whole; *“techniques”* include both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned. Schedule 2 of the Regulations shall have effect in relation to the determination of best available techniques, and;

*“Fugitive Emission”* means an emission to air from the permitted installation that is not controlled by an emission limit imposed by a condition of this Permit.

Where any condition of this Permit refers to the whole or parts of different documents, in the event of any conflict between the wording of such documents, the document with the most recent publication date shall be taken to be the most appropriate document to be used.

## **DESCRIPTION OF ACTIVITIES.**

### **Background**

The company produces cast metal parts in a range of ferrous alloys for use in many sectors such as oil exploration, petrochemical and defence sectors. The processes involved in the production include mould production (sand and ceramic), metal melting, casting and fettling.

The areas of the site and the activities within the site are described below:

### **The Replicast Process**

Polystyrene beads are weighed and expanded using steam in a self-contained unit. The expanded material is transferred into dies and steamed again. Escaping steam is extracted by a fan and vented through the roof, and side wall. After a short cooling period in cold water, the pattern replica is stripped from the die and is ready to be coated with ceramic shell.

To make the ceramic mould, the polystyrene replica is alternately dipped into a slurry and then coated with a granular refractory material.

A layer of fine refractory is covered with three to five layers of coarser refractory to make the mould. Finally, the ceramic layers are fired, and the polystyrene is burnt out of the shell mould in a firing furnace at 1050° C for 45 minutes. Fumes from the mould firing furnace are extracted to atmosphere after passing through an incinerator to remove any products of combustion which may remain.

The hard ceramic shells are then placed into casting boxes and surrounded by sand. The boxes are vibrated to consolidate the sand around the shells. The shells are then ready for casting.

### **Traditional Sand Moulding Processes**

There is a pattern making facility on site which consists of a wood pattern shop, machining centre, hand crafted polystyrene area and a ceramic shell moulding area. The pattern shop is equipped with all the tools necessary to create wooden patterns, including a band saw, sanders and lathe. These tools are served by a local exhaust ventilation system. Patterns are constructed from pieces which have either been machined out or hand cut. The pieces are then assembled together to form the finished pattern which is finished off by coating it with two coats of a suitable pattern paint.

The sand is delivered to site and held within one silo with a capacity of 20 tonnes. The sand moulding is undertaken using the self set alkaline phenolic (ester) binding system. This system is a cold set process, and some ester fumes are generated during mixing and setting.

Pattern equipment is coated with a mould release agent prior to filling with the mixed sand. The required sand is mixed either in the continuous mixer or in a batch mixer depending upon the size of the job. The sand and binder mixture is then compacted into the wooden mould and left to set at room temperature. After the sand has set, the wooden box and pattern is removed, and the sand mould is coated in a zircon/iron oxide propanol base suspension. Once this has dried, usually after being flamed off, the halves of the mould are placed together, and adhered using corefix glue. Once the glue has dried and mould has been clamped together it is ready to cast.

### **Melting, casting and knock-out**

The site's melting operations are undertaken in the foundry.

#### **Ferrous melting**

The ferrous foundry is equipped with five coreless induction furnaces of 250kg, 1000kg, 1500kg, 100Kg and 25Kg nominal (steel) capacity. The 250 and 1000 kg units are situated in Foundry Bay 1 are high frequency furnaces rated at 300 and 750kW respectively and share a common power pack. The 1500 kg furnace in Foundry Bay 2, is a medium frequency furnace with a 750kW power pack. The 100kg and the 25kg furnaces, situated in the Finishing area share a 125 kW power pack.

The furnaces are charged with a mix of scrap and alloys to meet the required specification. Some fume is generated during melting which are discharged through roof vents therefore there are no specific emission points for each furnace. Slag is removed with a proprietary coagulant. The slag and coagulant are disposed of into the foundry wastes skip. Ferro-alloys are added to the liquid metal to meet the composition specification. The metal is superheated and tapped into a ladle, where it is treated with inoculants, deoxidisers and spheroidisers as appropriate.

#### **Replicast Casting**

The mould box is coupled to a vacuum pump and the vacuum is maintained throughout the pouring operation. The vacuum in the sand bed creates a pressure drop against the refractory coating which holds it in place against the consolidated sand. The sand in the mould box can be re-used. After the castings have been removed from the mould box, it is emptied into the cooler-classifier where any large lumps are removed, before it is cooled and blown back into the silo. This process ensures that only a minimal amount (5% maximum loss) of sand is wasted.

There is also a rarely used "full mould process" in which the polystyrene pattern remains in place until casting and the metal poured directly on to it. When casting into full moulds, the expanded polystyrene pattern volatilises as it comes in contact with the metal. A small amount of styrene fume is

generated when casting into full moulds. This fume is high in volatile organic compound (VOC's) and this is removed by the vacuum.

### **Traditional Sand Mould Casting**

Casting into resin-bonded sand is done by simply pouring the metal into a mould cavity via runner systems moulded into the sand. A range of organic compounds will occur in the casting fume, as a result of degradation of the binders used. These are discharged via roof vents or via the building fabric. Once cast and cooled, resin-bonded sand moulds are broken up with a sledge hammer, and the castings removed. The used sand is shovelled into the skip for disposal.

### **Metal finishing**

Castings may be heat treated (if required), before being hung in an automatic shot blasting booth where the initial surface cleaning is performed. The individual pieces are separated from the sprue, either on the slitting machine, by cold sawing or burning, and worked on at the fettling bench with power tools to remove inclusions, stucco, surface defects and excess metal left from the attachment to the sprue. The fettling benches have local exhaust ventilation and are vented internally.

## **CONDITIONS OF PERMIT**

The following conditions shall be complied with immediately unless otherwise stated.

### **Section 1 – Upgrading Requirements**

- 1.1 An audit of items of plant and equipment shall be undertaken within 8 weeks of the date of this permit. The audit shall identify all plant and equipment that is critical to prevent, reduce or control emissions from the installation. A copy of the audit shall be submitted to Sheffield City Council's Environmental Protection Service for written approval on completion.
- 1.2 The Operator shall produce a written preventative maintenance programme for all plant and equipment identified from the audit required by condition 1.1 within 8 weeks from the date of this permit. This programme shall detail the frequency and type of maintenance required to be carried out. This programme shall be applicable to all plant and equipment concerned with the control of emissions to air. The maintenance programme shall be submitted to Sheffield City Council's Environmental Protection Service for written approval on completion.
- 1.3 A silo management system shall be put in place within 8 weeks of the date of this permit to ensure that silo deliveries are appropriately controlled and monitored to ensure that sand releases are prevented. The silo management system shall include the installation of an alarm to warn of overfilling. Details of the silo management system shall be submitted to Sheffield City Council's Environmental Protection Service for written approval on completion.

### **Section 2 - Plant and Equipment**

- 2.1 Permitted activities shall only be carried out using the plant and equipment as detailed in the installation description and on the installation layout reproduced in Schedule 2 of this Permit.
- 2.2 The installation shall have a melting capacity of less than 20 tonnes per day.
- 2.3 Records of melting that demonstrate compliance or otherwise with condition 2.2 of this Permit shall be kept on site for a period of at least 2 years and shall be submitted to Sheffield City Council's Environmental Protection Service at least once in every twelve month period.
- 2.4 No plant or equipment used for any activity shall be operated with an extraction point direct to atmosphere unless specifically agreed in writing

by Sheffield City Council's Environmental Protection Service.

### Section 3 - Emission Limits and Controls

- 3.1 All emissions to air, other than steam or condensed water vapour shall be free from droplets and from persistent mist and persistent fume.
- 3.2 Emissions from combustion processes e.g. mould firing furnace, shall in normal operation be free from visible smoke. During start up and shut down the emissions shall not exceed the equivalent of Ringelmann Shade 1 as described in British Standard BS2742:2009.
- 3.3 There shall be no persistent visible emissions to air.
- 3.4 The number of start-ups and shut downs shall be kept to a minimum that is reasonably practicable. The Operator shall take all appropriate precautions to minimise emissions during start up and shut down.
- 3.5 There shall be no offensive odour detectable beyond the site boundary, as perceived by authorised officers of Sheffield City Council's Environmental Protection Service.
- 3.6 There shall be no burning of materials, including waste, in the open air, inside buildings or in any form of incinerator in connection with the activities within the installation boundary, without permission in writing from Sheffield City Council's Environmental Protection Service.
- 3.7 In the keeping of records, all pollutant concentrations shall be expressed at reference conditions 273K, 101.3Kpa, oxygen and water references shall be that which correspondence to the normal operating conditions in the process concerned.
- 3.8 The following emission concentration limits shall apply to releases from the afterburner which abates emissions from the mould firing furnace. These emission limits shall not be exceeded.

<b>Pollutant</b>	<b>Concentration</b>
Total particulate matter	20mg/m <sup>3</sup>
VOC	30mg/m <sup>3</sup>

Emissions shall be tested at least once in every twelve month period to demonstrate compliance with these limits. The first test shall be undertaken by 1<sup>st</sup> November 2018.

- 3.9 Monitoring shall be carried out in accordance with methods described in M1 “Sampling requirements for stack emission monitoring” and M2 “Monitoring of stack emissions to air” , or by another method agreed in writing by Sheffield City Council’s Environmental Protection Service.
- 3.10 Non-continuous emissions monitoring of particulate matter shall be carried out in accordance with the main procedural requirements of BS EN 13284: Part 1 with averages taken over operating periods excluding start up and shut down. Sampling equipment should be capable of collecting particulate matter of 0.1 microns diameter or less, with an efficiency of at least 75%.
- 3.11 Where the results of any non-continuous monitoring demonstrate a breach of the emission concentration limit, the Operator shall investigate the matter as soon as possible. The investigation shall include the following steps:
- Close down the process or plant responsible for the breach;
  - Identify the cause of the breach;
  - Carry out any necessary works or repairs to ensure compliance with the emission concentration limit;
  - Re-test the plant promptly to demonstrate compliance with the emission concentration limit specified;
  - Submit the emissions re-test monitoring report to Sheffield City Council’s Environmental Protection Service within 7 days of receipt of the results;
  - Record details of investigation and outcomes in the log book.
- 3.12 The results of annual non-continuous monitoring tests shall be forwarded to Sheffield City Council’s Environmental Protection Service, within 8 weeks of completion of the testing.
- 3.13 The introduction of dilution air into duct systems in order to comply with emission limits shall not be permitted.
- 3.14 Where the results of any non-continuous monitoring exceed the emission concentration limit or are adverse, the Operator shall inform Sheffield City Council’s Environmental Protection Service no later than 10:00 hours the following working day after receipt of the results of the emissions testing.
- 3.15 The silo filtration plant for sand storage shall be designed to operate to an emission standard of less than 10mg/m<sup>3</sup>.



## **Section 4 - Monitoring, Sampling and Measurement of Emissions**

- 4.1 The Operator shall ensure that a visual and olfactory assessment of fugitive fume emissions from the site is carried out at least once a day when the melting and casting is taking place. The duration of the assessment shall be for a minimum of one minute. The visual and olfactory assessments shall be undertaken at the northern boundary of the site or the eastern boundary of the site. All results of observations shall be recorded in the log book kept in accordance with condition 4.5.
- 4.2 The Operator shall ensure that visual assessments are undertaken daily at the silo sand storage area and also during the sand bulk delivery. The visual assessments of emissions from the silo inlet connections and silo arrestment plant shall be undertaken throughout the duration of all bulk deliveries. The start and finish times of all deliveries shall be recorded. All results of observations shall be recorded in the log book kept in accordance with condition 4.5.
- 4.3 The Operator shall ensure that a visual and olfactory assessment of emissions is made from the petrol station on East Bank Road, at least once per day during the operation of the mould firing furnace for a minimum period of one minute. The results shall be recorded in the log book as detailed in condition 4.5.
- 4.4 The Operator shall ensure that adverse results from the assessments carried out in accordance with permit conditions are investigated immediately to identify the cause of the emission and allow the appropriate corrective action to be taken. The corrective action taken shall be recorded in the log book kept in accordance with condition 4.5.
- 4.5 The Operator shall ensure that a record is maintained containing the details and results of all visual assessments and records of all inspections and observations made in accordance with conditions 4.1, 4.2, 4.3, 4.4, 5.1, 7.3 and 8.1 is kept. These records shall include the time and date of inspection, the nature, colour, persistency and intensity of any emission and the name of the person carrying out the assessment. The log book shall be kept on the premises and made available for inspection by authorised officers of Sheffield City Council's Environmental Protection Service. Such records shall be kept for a minimum of two years and shall be furnished in writing to Sheffield City Council on demand.

4.6 In any case of abnormal emissions the Operator shall:

- Identify the cause of the emissions and take corrective action immediately;
- adjust the process or activity to minimise the emissions;
- record details of the incident describing the nature and extent of the problems and the remedial actions taken in the log book.

4.7 The Operator shall inform Sheffield City Council's Environmental Protection Service within one day in cases where:

- an emission is likely to have an effect on neighbouring premises;  
or
- there is a failure of any arrestment plant.

The report to Sheffield City Council's Environmental Protection Service shall include:

- the date and time of the incident;
- the cause and nature of the incident;
- details of any abnormal emissions;
- remedial action taken.

4.8 Prior to any non-continuous monitoring being carried out, the Operator shall ensure that monitoring protocols are submitted to the Environmental Protection Service for approval. The monitoring protocols shall include the proposed date and time of the testing, the method to be used and the pollutants to be monitored. The Environmental Protection Service at Sheffield City Council shall be informed at least 7 days prior to the intention to carry out periodic monitoring.

4.9 For batch processes, where the production operation is completed over for example, 2 hours, the extractive sampling shall take place over a complete cycle of activity.

## **Section 5 – Stacks, Vents and Process Exhausts**

5.1 All chimney flues, process vents and all duct work shall be free from leaks and damage. An annual programme of inspection, along with the repair work or cleaning shall be carried out from the 1<sup>st</sup> April every year. The programme of work may be split such that one system is inspected each month. Details of the inspection, findings and any remedial works shall be recorded in the log book detailed in condition 4.5.

5.2 Stacks or vents shall not be fitted with any restriction at the final opening to exit velocity such as a plate, cap or cowl other than an accelerator cone or low resistance cowl.

## **Section 6 – Materials Handling**

- 6.1 An inventory of all organic solvent usage shall be maintained.
- 6.2 All dry sand shall be stored in the sand silo with a capacity of 20 tonnes. Remaining capacity of the external silo and the integrity of the sock bag shall be checked before filling commences.
- 6.3 All sand deliveries shall be monitored by the delivery driver. The delivery driver shall be conversant with the correct procedures to follow to prevent any emissions and to ensure that the rate of delivery does not result in an over pressurisation of the silo by use of the appropriate valve work to allow a gradual release and controlled venting.
- 6.4 All spillages shall be effectively cleared immediately so as to minimise emissions to atmosphere.
- 6.5 All dusty or odorous materials shall be handled and stored in a manner which minimises external emissions to the air.
- 6.6 Stocks of fine materials shall be stored in covered containers, purpose built silos or undercover.
- 6.7 Spillages of fine materials shall be effectively cleared by means of vacuum cleaning or by wet methods.
- 6.8 External hard standing areas including roadways shall be cleaned by wet sweeping once every two months or at a greater frequency determined by operational circumstances, so that fine materials cannot become wind whipped.

## **Section 7 – Maintenance**

- 7.1 Before and during all deliveries of sand into any silo, the suitability and integrity of the sand delivery system shall be checked. Any defects giving rise to large potential spillages shall be rectified before delivery commences.
- 7.2 The roof and associated gutters shall be inspected twice yearly and cleaned as necessary to prevent wind entrainment of fine materials. Inspection and cleaning shall be carried out at higher frequency if so dictated by process circumstances in order to prevent wind whipping of materials.
- 7.3 All inspections and cleaning operations shall be recorded in the log book as detailed in condition 4.5.

- 7.4 Effective, preventative maintenance shall be employed on all plant and equipment concerned with the emissions to air. Essential spares and consumables shall be held on site or be available at short notice from suppliers, in order to rectify a breakdown rapidly.

## **Section 8 – General Operations**

- 8.1 Any emissions to atmosphere outside the normal range of the process when operating under routine operating parameters, such as those caused by any failure, breakdown, malfunction or bypass or arrestment equipment or plant shall be notified to Sheffield City Council's Environmental Protection Service at the earliest opportunity and in any event not later than 10.00 a.m. on the next working day. Process operations shall be adjusted as necessary in order to minimise emissions until normal conditions can be restored. Any such occurrence shall be recorded in the log book kept in accordance with condition 4.5 of this permit.
- 8.2 The activities shall be carried out within the installation boundary indicated on the plan in Schedule 1 to this Permit.
- 8.3 The Installation layout and abatement plant shall be as indicated in Schedule 2 to this Permit.
- 8.4 The Operator shall inform Sheffield City Council's Environmental Protection Service of any proposed operational changes to the installation, including any alterations to the process involving the provision of new plant or equipment which may affect emissions. The information shall be submitted at least 14 days before the changes take place.
- 8.5 Staff at all levels shall receive training and instructions necessary for their duties and shall include the following:
- responsibilities under the Permit;
  - minimisation of emissions at start up and shut down;
  - actions during abnormal emissions including minimisation of emissions.
- 8.6 The Operator shall keep and maintain a statement of training requirements for each operational post and keep a record of the training received by each employee whose actions may have an impact on emissions to atmosphere. These documents shall be made available to Sheffield City Council's Environmental Protection Service upon request.
- 8.7 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.

- 8.8. An adequate supply of spares and consumables shall be kept on site or made available within 1 day from guaranteed suppliers for all items of plant and equipment identified as being critical as a result of the audit carried out in compliance with condition 1.1.
- 8.9 Records of breakdowns and plant failure shall be kept and analysed in order to eliminate common failures. The records shall be made available for inspection by officers of Sheffield City Council's Environmental Protection Service on demand.
- 8.10 The Operator shall ensure that all abatement plant and associated detection systems, alarms and continuous monitors are maintained in good working order in accordance with manufacturer's recommendations as part of a written preventative Maintenance Programme as required by condition 1.2.
- 8.11 The Operator shall notify the following to Sheffield City Council's Environmental Protection Service, in writing, within 14 days of their occurrence:-
- Any change in the trading name of Replicast Ltd's registered name or registered office address;
  - A change to any particulars of any ultimate holding company of Replicast Ltd's (including details of an ultimate holding company where Replicast Ltd's has become a subsidiary);
  - Any steps taken with a view to Replicast Ltd's going into administration, entering into a company voluntary arrangement or being wound up.
- 8.12 The Operator shall notify the Sheffield City Council Environmental Protection Service **without delay** of:-
- a) The detection of an emission of any substance, which exceeds any limit or criterion in this Permit, specified in relation to the substance;
  - b) The detection of any fugitive emission that has caused, is causing or may cause significant pollution, unless the quantity emitted is so trivial that it would be incapable of causing significant pollution.
  - c) The detection of any malfunction, breakdown or failure of plant or techniques which has caused, is causing or has the potential to cause significant pollution
  - d) Any accident, which has caused, is causing or has the

potential to cause significant air pollution.

- 8.13 The Operator shall give written notification to Sheffield City Council's Environmental Protection Service in the following instances;
- a) Permanent cessation of the operation of any part of, or all of the Permitted Installation;
  - b) Cessation of the operation of any part of, or all of the Permitted Installation for a period, likely to exceed 1 year;
  - c) Resumption of the operation of any part of, or all of the permitted installation after a cessation notified under (b) Above.
- 8.14 All reports and notifications required by this Permit, or under any Regulation under the Environmental Permitting Regulations 2016, as amended, shall be sent to Sheffield City Council's Environmental Protection Service. Unless notified in writing, all reports, notifications and communications in respect of this Permit shall be sent to:

**Sheffield City Council,  
Howden House  
5<sup>th</sup> Floor North  
1 Union Street  
Sheffield  
S1 2SH**

**END OF PERMIT CONDITIONS**

### **Please Note**

Where complaint is attributable to the operation of the installation and is, in the opinion of the Local Authority, justified, or if new knowledge develops on the potential for harmful effects from emissions, an immediate review of the Permit shall be undertaken. The Local Authority shall subsequently specify any new requirements and compliance time scales.

An annual subsistence fee as prescribed by the Secretary of State for the Environment shall be payable, for this Permit, by the process Operator, to this Authority within 2 weeks of the 1<sup>st</sup> April of each year.

In the event that the Permit has been issued after the 1<sup>st</sup> April in the initial year then the subsistence fee shall be pro rata for the complete months remaining and shall be due within 2 weeks of the Permit issue date.

If the relevant payment is not received by Sheffield City Council's Environmental Protection Service then Permit revocation procedures shall be initiated in accordance with Section 22 of the Environmental Permitting (England & Wales) Regulations 2016 or any statutory re-enactment of the same.

The requirements of this Permit are not to be taken as planning permission. Where any structural alterations are necessary to ensure compliance with this Permit then the normal planning channels should be followed.

# Schedule 1 Location Plan & Installation Boundary





## Schedule 2 – Installation Layout with Emission Points

