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POLLUTION PREVENTION AND CONTROL ACT 1999
ENVIRONMENTAL PERMITTING (ENGLAND & WALES) REGULATIONS 2016, AS AMENDED

Permit Number: 2.2/072554/JT2

Installation Address:
Transition International Limited
Hi Temp Works
480 Penistone Road
Sheffield
S6 2FU

In accordance with Regulation 13 of the Environmental Permitting (England and Wales) Regulations 2016, as amended, Transition International Limited is hereby permitted to operate 2 scheduled activities at the address detailed above namely the melting, including making alloys of non-ferrous metals where the plant has a melting capacity of more than 20 tonnes per day, where no furnace, bath or other holding vessel used in the plant for the melting has a design holding capacity of 5 tonnes or more, as described in Schedule 1, Part 2, Chapter 2, Section 2.2, Part A(2), subsection (a) and the directly associated activity of the heating in a furnace of any non-ferrous metal or metal alloy for the purpose of removing grease, oil or any other non-metallic contamination as described in Schedule 1, Part 2, Chapter 2, Section 2.2, Part B, (b) and subject to the following conditions of this Permit.

Signed **Dated this day 27th May 2020**

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

The BAT Conclusions Document for the non-ferrous metals industries published on 30th June 2016 in the Official Journal of the European Union (L174) implementing decision (EU) 2016/1032 have provided the framework for the conditions in this Permit.

Name & Address of Operator:

Transition International Limited
Hi Temp Works
480 Penistone Road
Sheffield
S6 2FU
Contact: Ali Hoyes
Tel: 0114 2447441
email: Alison.hoyes@transition.co

company registration number:4787596

Registered Office Address

Transition International Limited
Hi Temp Works
480 Penistone Road
Sheffield
S6 2FU

Holding Company:
No

Address of Permitted Installation:
Transition International Limited
Hi Temp Works
480 Penistone Road
Sheffield
S6 2FU

Talking to Us.

Any communication with Sheffield City Council should be made to the following address quoting the Permit Number: epsadmin@sheffield.gov.uk Tel: (0114) 273 4651

Environmental Protection Service
5th Floor (North)
Howden House
1 Union Street
Sheffield
S1 2SH

Contents

Explanatory Note to Environmental Permit for Part A2 Installations
(This note does not form a part of the Permit)

This Permit is issued to update some of the conditions following a statutory review of the permits in the industry sector for non-ferrous metals.

The Industrial Emissions Directive (IED) came into force on 7th January 2014 with the requirement to implement all relevant Best Available Techniques (BAT) Conclusions as described in the Commission Implementing Decision. The BAT Conclusions (BATc) for the non-ferrous metals industries were published on 30th June 2016 in the Official Journal of the European Union (L174) following a European Union wide review of BAT, implementing decision (EU) 2016/1032 of 13th June 2016. The BATc for this installation which apply from 30th June 2020 are BAT 1-10, BAT 14-18, BAT 153-155 and BAT 159-162.

The following Permit is issued under Regulation 13 of the Environmental Permitting (England and Wales) Regulations 2016 (S.I. 2016 No.1154), as amended, ("the EP Regulations") to permit 2 scheduled activities to operate at the address detailed previously, namely the melting, including making alloys, of non-ferrous metals where the plant has a melting capacity of more than 20 tonnes per day, where no furnace, bath or other holding vessel used in the plant for the melting has a design holding capacity of 5 tonnes or more, as described in Schedule 1, Part 2, Chapter 2, Section 2.2, Part A(2), subsection (a) and the directly associated activity of the heating in a furnace of any non-ferrous metal or metal alloy for the purpose of removing grease, oil or any other non-metallic contamination as described in Schedule 1, Part 2, Chapter 2, Section 2.2, Part B, (b) of those Regulations, to the extent authorised by the Permit and subject to the following conditions.

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 A2 installation 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 1st 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
5th Floor (North)
Howden House
1 Union Street
Sheffield
S1 2SH

Tel: 0114 273 4651 or email epsadmin@sheffield.gov.uk or ippc@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 as amended.

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 their 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:

"Accident" means an accident that may result in pollution.

"Application" means the application for this Permit, together with any additional information supplied by the Operator as part of the application and any response to a notice served under Schedule 5 to the EPR Regulations.

"Authorised officer" means any person authorised by Sheffield City Council under section 108(1) of the Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, any power specified in section 108 (4) of that Act.

"Average over the sampling period" means the average value of three consecutive measurements of at least 30 minutes each, unless otherwise stated, as defined in the *General Considerations* section of the Non-Ferrous Metals BAT Conclusions. For batch processes, the average of a representative number of measurements taken over the total batch time or the result of a measurement carried out over the total batch time can be used.

"BAT-AELs" means BAT associated emission levels, ie the emission levels associated with the best available techniques for emissions to air and/or water, as set out in the Non-Ferrous Metals BAT Conclusions.

"Daily average" means the average over a period of 24 hours of valid half-hourly or hourly averages obtained by continuous measurements, as defined in the *General Considerations* section of the Non-Ferrous Metals BAT Conclusions. A half – hourly or hourly average shall be considered valid if measurements are available for a minimum of (a) 20 minutes during the half hour, or (b) 40 minutes during the hour. The number of half-hourly or hourly averages so validated shall not exceed 5 per day.

"EPR Regulations" means the Environmental Permitting (England and Wales) Regulations 2016 (as amended) S.I. No. 1154 and words and expressions used in this Permit which are also used in the Regulations have the same meaning as those in the Regulations.

"Emisions of substances not controlled by emission limits" means emissions of substances to air, water or land from the activities, either from the emissions points specified in the Permit or from localised or diffuse sources, which are not controlled by an emission limit.

"Groundwater" means all water, which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

"Hazardous property" has the meaning in Annex III of the Waste Framework Directive.

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

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

"MCERTS" means the Environment Agency's Monitoring Certification Scheme.

"Monthly average" means the average over a period of a calendar month of valid daily averages obtained by continuous measurements.

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

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

- in relation to emissions from combustion processes and not subject to BAT-AELs for air emissions, the concentration in dry air at a temperature of 273.15K, at a pressure of 101.3kPa, and with an oxygen content of 3% dry for liquid and gaseous fuels and 6% dry for solid fuels; and/or
- in relation to emissions from non-combustion sources and not subject to BAT-AELs for air emissions, the concentration at a temperature of 273.15K and at a pressure of 101.3kPa, with no correction for water vapour content; and/or

- in relation to emissions from non-combustion sources subject to BAT-AELs for air emissions, the concentration in dry air at a temperature of 273.15K and at a pressure of 101.3kPa; and/or
- in relation to emissions from combustion processes subject to BAT-AELs for air emissions, the concentration in dry air at a temperature of 273.15K and at a pressure of 101.3kPa, and with an oxygen content of 3% dry for liquid and gaseous fuels and 6% for solid fuels.

"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;

"grading" means the sorting of metals to industry-agreed specifications ready for use, withiout the need for further treatment, by the end consumer to manufacture new metals.

"Impermeable surface" means a surface or pavement constructed and maintained to a standard sufficient to prevent the transmission of liquids beyond the pavement surface, and should be read in conjunction with the term "sealed drainage system" (below).

"pollution" means emissions as a result of human activity which may –

a) be harmful to human health or the quality of the environment,
b) cause offence to a human sense,
c) result in damage to material property, or
d) impair or interfere with amenities and other legitimate uses of the environment.

"quarter" means a calendar year quarter commencing on 1st January, 1st April, 1st July or 1st October.

"R" means a recovery operation provided for in Annex IIB to Directive 2006/12/EC of the European Parliament and of the Council of 5th April 2006 on Waste.

"sealed drainage system" in relation to an impermeable surface, means a drainage system with impermeable components which does not leak and which will ensure that:

a) no liquid will run off the surface otherwise than via the system;
b) except where they may lawfully be discharged to foul sewer, all liquids entering the system are collected in a sealed sump.

"separation" means separating wastes into different material types, components and grades.

"shearing" means utilises a range of hydraulic machinery that comprise hard steel blades which cut metals into manageable sizes. It may be hand-held, static, or attached to mobile plant (e.g. cranes)

"Sorting" means sorting that may be undertaken by hand or machinery. Sorting enables materials to be processed/recycled appropriately. It may involve separation of different waste types or the separation of dirrerent metal types including:

- different ferrous metals
- non-ferrous metals
- non-metallic materials (e.g. paper and plastic)

The sorted metals are graded by visual inspection, supplemented by chemical and other laboratory tests. The physical sorting may be assisted by conveyors and electromagnets.

"SSSI" means Site of Special Scientific Interest within the meaning of the Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000).

"Waste code" means the six digit code referable to a type of waste in accordance with the List of Wastes (England) Regulations 2005, or List of Wastes (Wales) Regulations 2005, as appropriate, and in relation to hazardous waste, includes the asterisk.

"year" means calendar year commencing on 1st January and ending 31 December.

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

Main Activities.
Transition International Limited operates a decontamination, melting and crushing process to produce sized ferro-alloys. The Melt Shop has a melting capacity of more than 20 tonnes per day of non-ferrous metals in the form of ferro-titanium ingots and other ferro-alloys. The alloying process is slag free.

The installation is located as indicated in Schedule 1 “Installation Location” which forms part of this Permit. The Installation Boundary is indicated in Schedule 2, the Installation Layout and Process Flow Schematic are presented in Schedule 3 and 4 respectively. The process steps involve the following:

Receipt of Raw Material:
All feedstock (swarf, solids and steel) is delivered to site by road and enters via the delivery entrance at the rear of the site. All incoming material passes over the weighbridge where it receives initial inspection to ensure it conforms with the delivery note. A material sample is taken of the swarf for quality control purposes. Ferrous units are purchased to a specification in the form of mild steel solids.

Solids
Solids can be in any form from sheet, chips, lumps, billets or waste component parts. After offloading and sampling, the solids are graded and processed into suitable size for addition to the furnace. Depending on the form, material may be sent for shearing, shredding, baling or oxy propane burning. Solid scrap is analysed and graded and stored in bays 9-11 of the concreted processing shed. Oversized solids are sent to the burning booth for furnace preparation.

Burning Booth
Oversized solids are cut to furnace ready size in a dedicated burning booth using an oxy-propane cutting torch. Emissions of fume and dust are captured in the booth, filtered and ducted to the DCI CV10-23 bag filter before exhausting to atmosphere via a 14 metre high stack.

Turnings Processing
Turnings arrive either loose in bulk or in containers such as boxes, drums, skips etc. The load is sampled for oil & moisture content and chemical assay. Once cleared for production it is stored in designated, impervious areas which are referenced as Raw Materials Storage on the Installation Layout in Schedule 3. Turnings bays are designed so that any excess run off from bulk loads is directed to a sealed catch pit to the rear of the storage area. The pit is subject to regular checks which are recorded through the planned preventative maintenance system and emptied when necessary.

Chipping/Hammer Mill
Turnings are processed through one of two chipping machines and then crushed to a free flowing and uniform size in a hammer mill. Fire suppression systems are fitted to the hammer mill in case of emergency. The material is collected in a skip and transported to a holding area before being sent for degreasing.

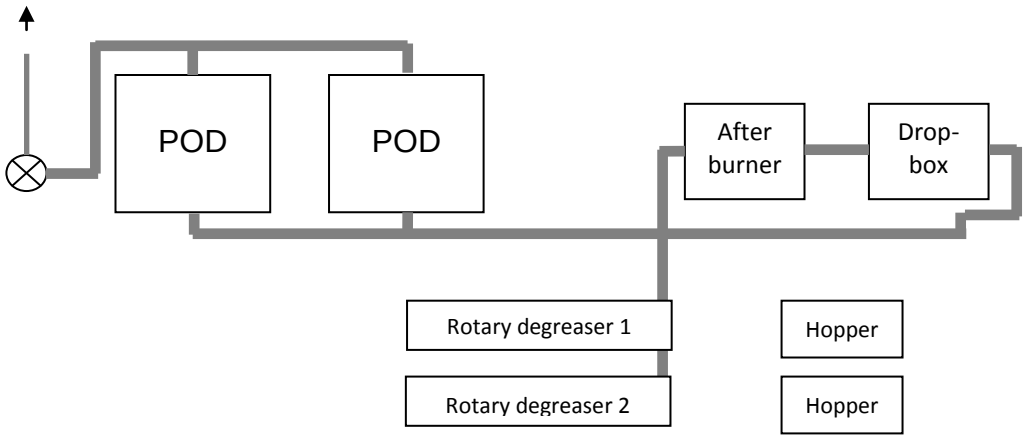
Thermal Degreasing
Chipped turnings are moved into hoppers which feed two gas fired rotary furnaces that burn off oil and cutting fluid residue. Once the unit has reached the desired operating

condition, turnings pass through the rotary drier section of the degreaser against a hot air flow which is maintained by a gas burner and extraction fan. Hot air containing oil bearing gases is produced and captured by hoods on the rotary driers. This then travels through an afterburner which is maintained at a minimum of 850°C. The afterburner is fitted with an interlock such that if the temperature falls below 800^{o}C an alarm sounds and the feedstock conveyor is stopped, until the afterburner temperature reaches 850°C. Residence time of gas within the afterburner is a minimum of 2 seconds in the high temperature zone.

Thermal Degreasing Filter Plant

Post afterburner, the hot air is passed through a drop out box (where larger particles will drop out), along ductwork and into two Glosfume filter units before being exhausted to atmosphere via a 10 metre vertical stack. Final exhaust emissions are approximately 160°C. The ceramic filters have measured air flow capacity of 1,100cfm and 1,600cfm and are fitted with a 'clean on demand' reverse air pulse to remove dust build up. The dust is collected directly into drums and removed from site through a licensed contractor. Pressure differential across the ceramic filters is monitored by magnahelic gauges to warn of filter blinding or failure. The exit stack is fitted with a Codel MCERTS registered quantitative triboelectric particulate monitor with data logger. This continuously monitors levels of particulate in the stack and will alarm at the degreaser control panel if activated. If the alarm sounds the cause is investigated and if the reading is above 4mg/m^3 the process is shut down for examination of the filters. Activity from the datalogger is continually sent to a dedicated computer where the results are reviewed on a daily basis.

Degreaser Plant Layout.



Electric Induction Melting

The installation operates 2 electric induction furnaces for the melting of decontaminated turnings and scrap. Furnace A has a melt capacity of 3 tonnes and. Furnace D has a melt capacity of 2 tonnes, both furnaces produce ferro alloys.

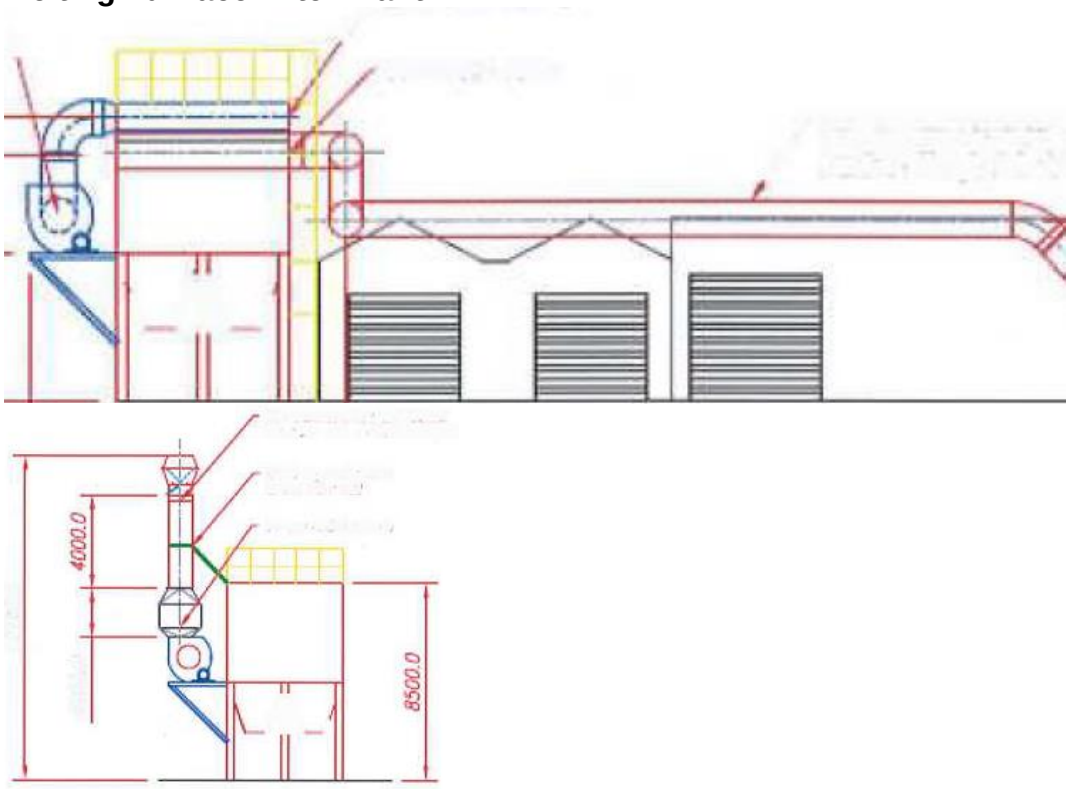
Furnace charges are calculated based on the analysis of raw materials. Materials are weighed into pans and fed into the furnaces using a hopper and chute arrangement. Pouring of molten ferro-alloys into steel ingot pans occurs inside the melting shop. Once cast, the ingots are left to solidify briefly and then transferred to an external holding area to complete the cooling process.

Emissions from melting and casting are captured by hoods and exhausted to a reconditioned DCI CV10-23 dust extraction filter plant with Nomex rated tubular sock filter media. The system design capacity is 45,000m^3 /hour (26,000cfm) with an air transport speed of 15m/s. The plant exhausts via a 1m diameter 14m high stack fitted with a Swedish cowl. Stack particulate matter emissions are continuously monitored by an MCERTS quantitative triboelectric continuous emissions monitor with datalogger, which is set to trigger an alarm when emissions reach 4mg/m^3.

Filters are cleaned of dust using a reverse pulse air jet system and the arrested dust is collected directly under the filter unit in closed skips prior to disposal. The pressure differential across the filters is continuously monitored by a magnehelic gauge, to warn of filter failure or blinding.

Emissions data are collected electronically and reviewed daily.

Melting Furnace Filter Plant



Furnace Cooling System

A & D furnaces are cooled with water from a pressurised closed loop system. There are two pumps, which are regularly switched to check operability and equalise duty. Air cooled water is pumped to the furnaces then returned to the cooler via a flow and temperature gauge in order that system status can be monitored. In the event of a power failure an alarm will sound as flow rate drops and a gravity fed system is manually deployed until such time as power is restored.

Ferro Alloy Crushing.

Ingots are selected for batching according to customer requirement and placed into the pre-crushing bays. Batches are tipped into trays and transferred to the FeTi Crushing Shop. The material is processed through a series of four crushing machines and sieves, to resize the material according to the work order. Once the desired size is met the material is bagged, sampled and stored under cover prior to despatch.

The crushing building and production operation have been specifically designed to prevent any nuisance noise or dust affecting neighbouring premises. Dust from this activity is contained within the building. Noise and vibration is minimised by placing the plant on a floating concrete raft and seating on anti-vibration mounts.

Cleaning of the equipment and floor area is completed after every batch and deep cleaning of the building is completed on a rolling basis throughout each month to reduce build up of fine material and associated fire hazards.

CONDITIONS OF PERMIT

All conditions shall be complied with immediately unless otherwise stated in the condition.

Section 1 – The Permitted Installation: Plant and Equipment

1.1 Transition International Limited is Permitted to carry out the activities and/or associated activities specified in Table 1 below.

Table 1 – Permitted Activities

Listed/ Directly Associated Activity	Description of Specified Activity
Section 2.2 Part A2a(i)	Melting of non-ferrous metals where no furnace used in the plant has a design holding capacity of 5 tonnes or more.
Section 2.2 Part B (b)	The heating in a furnace or any other appliance of any non-ferrous metal alloy for the purpose of removing grease, oil or any other non-metallic contaminant.
Delivery and storage of raw materials such as swarf, scrap, oil, laboratory supplies etc.	Handling raw materials from receipt, storage and handling in designated areas or by designated methods.
Chipping swarf	The pulverising and chipping of swarf in a proprietory crusher, hammer mill & centrifuge
Oxy cutting oversize	The cutting of over sized solid scrap materials by oxy-propane torch in a dedicated burning booth with extraction and filtration.
Casting	The pouring of molten metal into steel pans to produce ingots up to 2 tonnes in weight, inside the foundry building. The emissions are captured by the hood leading to extraction and filtration.
Cooling of ingots	The natural cooling of cast ingots in the open air or under cover.
Crushing of ingots	The crushing of ingots in series by crushing plant housed within a sound insulated building. Plant is seated on anti vibration mounts.
Cooling of furnaces	The use of a closed loop system for the water cooling of the 2 melting furnaces.
Storage and handling of final products	Storage and handling of ingots and crushed ingots.
Storage and handling of waste materials	The receipt, storage and handling of waste materials including, but not exclusive to, scrap and turnings, and the production of wastes such as dust from arrestment plant, waste oils, laboratory waste etc.

1.2 The activities specified in condition 1.1 shall not extend beyond the installation boundary outlined in red in Schedule 2 of this Permit.

1.3 Plant or equipment for the prevention of emissions to air shall consist of that specified in Table 2 - Permitted Arrestment Plant. No other plant shall be used except where a formal written application has been submitted to and approved in writing by the Regulator. Abatement plant specified shall be in place and fully operational during all times that relevant activities are taking place.

Table 2 – Permitted Arrestment Plant.

Plant	Point Source*	Emission Source	Continuous Monitoring	Stack Height
Afterburner, drop out box, and Glosfume ceramic filters with reverse jets	A	Swarf processing	Magnehelic gauge and Codel MCERTS triboelectric quantitative monitor	10 metres
Furnace extraction hood leading to dry bag fabric filter with reverse jets	B	Melting	Magnehelic gauge and Codel MCERTS triboelectric quantitative monitor	14 metres
Burning booth extraction leading to dry bag fabric filter with reverse jets	B	Oxy cutting of oversize	Magnehelic gauge and Codel MCERTS triboelectric quantitative monitor	14 metres
Yard sealed drainage/catchpits		Swarf materials store, “ex-Streetforce” recycling/waste yard.	Fill level device	n/a

* located as indicated on the Installation Boundary shown in Schedule 2 to this Permit

1.4 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.

Section 2 – Upgrading Conditions

2.1 There are no conditions of upgrading.

Section 3 – Emissions Limits and Controls: Air

3.1 Emissions to air shall be monitored at the frequency specified in Table 3.

3.2 Emissions to air shall not exceed the emission limits for specific processes set out in Table 3.

3.3 No plant or equipment used for any activity shall be operated with an extraction point direct to the external air unless specifically noted within this Permit in Table 3 or specifically agreed in writing with the Regulator.

Table 3 – Emissions Limits and Controls for Emissions to Air

Pollutant	Emission Limit	Type of Monitoring	Frequency of Monitoring	Applicable To
Total particulate matter, prior to 30th June 2020	20mg/m^3	Continuous recorded monitoring **plus** extractive monitoring BS EN 13284-1 or any update thereof	Continuous recorded monitoring plus annual extractive	All furnace operations – charging, fluxing, melting, pouring. Furnace stack B.
Total particulate matter, **from** 30th June 2020	5mg/m^3	Continuous recorded monitoring **plus** extractive monitoring BS EN 13284-1 or any update thereof	Continuous recorded monitoring plus annual extractive	All furnace operations – charging, fluxing, melting, pouring. Furnace stack B.
Dioxins PCDD/F prior to 30th June 2020	1 ng/m^3	Manual extractive testing BS EN 1948:2006 Parts 1, 2 and 3,or any update thereof	Annually	All furnace operations – charging, fluxing, melting, pouring. Furnace stack B.
Dioxins PCDD/F **from** 30th June 2020	0.05ng/m^3	Manual extractive testing BS EN 1948:2006 Parts 1,2 and 3, or any update thereof	Annually	All furnace operations – charging, fluxing, melting, pouring. Furnace stack B.
Total particulate matter prior to 30th June 2020	10mg/m^3	Continuous recorded monitoring **plus** extractive monitoring BS EN 13284-1 or any update thereof	Continuous monitoring plus annual extractive	Swarf processing & degreasing. Degreaser stack A.
Total particulate matter, **from** 30th June 2020	5mg/m^3	Continuous recorded monitoring **plus** extractive monitoring BS EN 13284-1 or any update thereof	Continuous monitoring plus annual extractive	Swarf processing & degreasing. Degreaser stack A.
Organic compounds excluding particulate matter prior to 30th June 2020	20mg/m^3	Manual extractive testing BS EN 13211 BS EN 12619:2013 or any update thereof	Annually	Swarf processing & degreasing. Degreaser stack A.
TVOC expressed as total carbon **from** 30th June 2020	20mg/m^3	Manual extractive testing BS EN 12619:2013 or any update thereof	Annually	Swarf processing & degreasing. Degreaser stack A.
Chloride emissions excluding particulate matter	10mg/m^3	Manual extractive testing BS EN 13211 BS EN 1911:2010 or any update thereof	Annually	Swarf processing & degreasing. Degreaser stack A.
benzo-(a)-pyrene **from** 30thJune2020	1mg/m^3	ISO 11338-1 and 11338-2. EN ISO 17993	Annually	Swarf processing & degreasing. Degreaser stack A.

* emission points located as indicated on the Installation Layout shown in Schedule 2 to this Permit.

3.4 There shall be no emissions to external air of un-contained pollutants other than those listed in Table 4.

Table 4 - List of Uncontained Emission Points to Air

Emission Point Reference *
Wall louvres, melting shop
Open frontage of melting shop
Open sides of degreasing shed
Roof vents of melting shop

3.5 There shall be no offensive odour emitted from the installation detected beyond the installation boundary as perceived by the Regulator, unless deemed to be employing the Best Available Techniques.

3.6 The introduction of dilution air to stack emissions to achieve concentration limits is not permitted.

3.7 The final efflux velocity of all emissions from the final point of discharge to atmosphere of tested emission points shall be a minimum of 15m/s. The discharge shall be vertically upwards.

3.8 Process stacks shall not be fitted with any plate, cap or cowl at the final opening unless otherwise agreed in writing by the Regulator.

3.9 Emissions from the installation, other than steam or condensed water vapour, shall be free from persistent mist and free from persistent fume.

3.10 All emissions from combustion processes in normal operation shall be free from visible smoke and, in any event, shall not exceed the equivalent of Ringelmann Shade 1 as described in British Standard BS 2742:2009.

3.11 There shall be no persistent visible emissions from the installation.

3.12 There shall be no visible emissions of dust, smoke or fume beyond the installation boundary as indicated on the plan shown in Schedule 2 of this Permit.

3.13 The filters serving the melting furnaces and the swarf degreasing units shall each be fitted with a magnehelic gauge for detection of abatement plant failure. The gauges shall be in operation for the duration that the abatement plant is in use.

3.14 Emissions of total particulate matter in the stack from the melting operations shall be continuously monitored and recorded using an MCERTS quantitative particulate monitor, during all melting and pouring operations.

3.15 Emissions of total particulate matter in the stack from the thermal degreasing operations shall be continuously monitored and recorded using an MCERTS particulate monitor during all thermal degreasing operations.

3.16 Prior to June 30th 2020, the continuous particulate monitors serving the melting and degreasing operations shall be connected to audible and visual alarm systems that activate when emissions of total particulate matter reach 75% of the emissions limit, that is 15 mg/m^3 for the melting alarm and 7mg/m^3 for the degreasing alarm.

3.17 By 30th June 2020 the alarms on the continuous particulate monitors serving the melting and degreasing operations shall be adjusted such that they each activate when the emissions of total particulate matter reach 4mg/m^3.

3.18 Activation of any alarm on the particulate monitors serving the melting and degreasing operations shall be automatically recorded.

3.19 The burning of any materials, including wastes, either in the open, inside buildings or in any form of incinerator is not permitted without the written consent of the Regulator.

3.20 The temperature of the afterburner serving the thermal degreasing plant shall be continuously measured, automatically recorded and fitted to an alarm to warn the Operator when the temperature falls below 850°C.

3.21 Interlocks on the thermal degreasing plant shall prevent the addition of further materials to the degreaser at any time when the temperature in the secondary combustion chamber falls below 850°C.

3.22 The thermal degreasing plant shall not be overloaded in order to ensure maximum efficiency and to reduce the production of smoke.

3.23 Loading of the thermal degreasing plant main chamber shall not occur until the thermal oxidiser has reached a temperature of 850°C.

3.24 The thermal oxidiser serving the thermal degreasing plant shall be maintained at a temperature of at least 850°C and the residence time of gases in the afterburner chamber shall be a minimum of 2 seconds.

3.25 The height of the stack off the ceramic filters serving the degreasing plant shall be a minimum of 10 metres above ground level.

3.26 The height of the stack off the fabric filters serving the melting furnaces shall be a minimum of 14 metres above ground level.

3.27 Emissions during pouring and casting of metal from the induction furnaces shall be contained by the furnace hoods, as far as reasonably practicable. The hoods shall be permanently directly ducted to the fabric filters.

3.28 The filters serving the melting and degreasing operations shall be cleaned automatically by reverse air jets throughout the melting and degreasing activities.

3.29 Arrested particles from the abatement filters shall be collected directly into sealed containers or bags underneath the arrestment plant in order to prevent the double handling of particulates.

3.30 Scrap and oversized metals shall only be oxy cut in the dedicated burning booth with the extraction running.

3.31 Degreasing and melting shall only take place with the filters in place and extraction running.

Section 4 – Emissions Limits and Controls: Groundwaters

4.1 Emissions to watercourses or groundwaters from the installation are not permitted.

4.2 The Operator shall maintain a record of all subsurface drains, sewers, plant, equipment, sumps or storage vessels to include the routing of all pipe-work. The record shall incorporate a clear diagrammatic representation of the systems. This record shall be made available to the Regulator on demand.

4.3 The whole area of the ground of the installation shall be provided with concrete hard standing or other impervious covering in order to prevent emissions to groundwaters or soils.

4.4 The concrete hard standing covering the installation shall be inspected on a quarterly basis as a minimum. Particular attention shall be given to areas surrounding storage tanks, bunded areas, waste storage areas and raw material storage areas. Defects in the concrete hard standing shall be recorded and rectified within 4 weeks of the inspection. Details of the inspections and any remedial works shall be recorded.

4.5 The Operator shall carry out an appropriate inspection, testing and maintenance programme for all subsurface structures, pipes, drains containing or transporting gaseous, liquid or solid matter with the potential to become airborne or contaminate soil or groundwaters.

4.6 The Operator shall maintain a site plan identifying risk areas where materials or spillages may have the potential to affect ground waters or contaminate the ground. The areas identified shall be given a high priority for inspection in the planned preventative maintenance programme. A copy of the plan shall be submitted to the Regulator upon request.

4.7 All tanks or storage containers of potentially harmful liquids such as oil, shall be bunded. Bunds shall be impermeable and resistant to the materials stored, have no outlets and drain to a blind collection point. Bunds shall be designed to have a holding capacity of at least 110% of the largest tank or container and shall be located more than 10m from the nearest watercourse.

4.8 All bunds shall be inspected in accordance with a written planned preventative maintenance programme. All inspections and checks shall be recorded and any defects rectified promptly. Details of the remedial works shall be recorded.

4.9 All storage tanks of potentially harmful liquid, excluding IBC's, shall be fitted with a high level alarm or volume indicator to warn of over filling. The filling system shall be interlocked to an alarm system to prevent over filling. Delivery connections shall be located in a bunded area or suitable alternative arrangement and shall be fixed and locked when not in use.

4.10 All operational and storage areas shall have an impervious surface, spill containment kerbs, sealed construction joints and be connected to a sealed drainage system.

4.11 Spillages or accumulations of oils, dusts or other potentially contaminative substance shall be dealt with immediately.

4.12 Records of all spillages dealt with shall be kept in the log book or recording system kept in accordance with this Permit.

4.13 Suitable and sufficient spill kits shall be provided at appropriate locations around the installation and staff shall be trained on their use.

4.14 Run off water, oils and other substances from the swarf raw material storage areas shall be channelled to interceptors which lead to a sealed catchpit.

4.15 All interceptors to the site drainage system shall be impermeable and be visually checked at least once every 3 months. Any contamination found shall be removed immediately.

4.16 The yard catchpits shall be fitted with a float pump which activates an alarm when the catchpit is at 85% capacity.

4.17 At least once in every 18 month period, or when the float pump alarm is activated, the interceptors and yard catchpit shall be cleared of all contents.

Section 5 – Emissions Limits and Controls: Sewers

5.1 There shall be no process emissions or process effluent to sewer or surface water drainage without the prior consent of the Regulator.

Section 6 – Emissions Limits and Controls: Land

6.1 Discharges to land from the installation are not Permitted.

6.2 All wastes shall be removed from the site for recycling or lawful disposal.

Section 7 – Monitoring, Sampling and Measurement of Emissions

7.1 The Operator shall undertake the monitoring of pollutants to air at the frequency, and using the methodology, detailed in Table 3, unless otherwise agreed with the Regulator in writing.

7.2 The Operator shall give the Regulator a minimum of 7 days notice before any periodic monitoring is undertaken. The notification shall include details of the time and date of the monitoring, the organisation undertaking the testing, the pollutants and emissions points to be tested and the methods to be used.

7.3 The results of all non-continuous monitoring shall be submitted to the Regulator within 8 weeks of the monitoring being undertaken.

7.4 The Operator shall undertake visual assessments of fugitive airborne emissions from processes at the installation, including but not limited to, degreasing, drying, melting, casting and crushing for a continuous period of at least 5 minutes for every 24 hours of operation of the plant.

7.5 The Operator shall undertake olfactory and noise assessments of emissions from the installation for a continuous period of at least 5 minutes for every 24 hours of operation of the plant at locations downwind of the processes on the installation boundary.

7.6 MCERTS (*Monitoring Certification Scheme, Environment Agency)* standards shall be applicable to all annual extractive monitoring requirements, as detailed in Table 3. Monitoring shall be undertaken by suitably qualified and competent consultants.

7.7 Where continuous monitoring instrumentation is required, as detailed in Table 3, MCERTS standards are applicable unless otherwise agreed in writing with the Regulator.

7.8 The Operator shall ensure that any adverse result from any monitoring or assessment is investigated immediately to identify and rectify the cause. Full details of the emission, the investigation, and any corrective action shall be recorded in the log book or recording system.

7.9 A six monthly summary of the logged emissions and alarm events from the continuous monitors serving the melting abatement plant and the swarf degreasing abatement plant shall be submitted to the Regulator within 2 weeks of the six month period. The first summaries shall be submitted by 31st January 2021.

7.10 The continuous particulate matter readings shall be on display to appropriately trained operating staff in mg/m^3 for and degreasing furnace emissions.

7.11 The particulate continuous emissions monitors shall monitor and collect accurate data >95% of the time.

7.12 Results of non-continuous monitoring shall include details of process conditions at the time of monitoring, monitoring uncertainty and any deviations from the procedural requirements of standard reference methods and any error invoked from such deviations.

7.13 Emissions monitoring shall be carried out in accordance with the methods described in the latest versions of Technical Guidance Notes (Monitoring) M1 and M2 published by the Environment Agency, or by another method agreed in writing by the Regulator.

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

Section 8 – Records, Reporting and Notifications

8.1 The results of all monitoring, maintenance, assessments, checks and observations required by Permit conditions shall be recorded. The record shall include the date and time of the check, prevailing weather conditions, the results of the observations including the nature, colour and persistency of any emission and the name of the person undertaking the assessment. The recording system shall be readily available for inspection by the Regulator on the premises and shall be retained for at least 4 years.

8.2 Where observations indicate that odour from the installation is detected beyond the installation boundary, the Operator shall devise an Odour Control and Management plan in agreement with the Regulator in an agreed timescale.

8.3 In the event of adverse results from any monitoring activity the Operator shall undertake the following actions:

- Investigate the cause immediately;
- Carry out corrective action as soon as is practicably possible;
- Record as much detail as possible regarding the cause and extent of the problem and the action taken to rectify the situation;
- If relating to stack testing, undertake re-testing to demonstrate compliance as soon as possible;
- Notify the Regulator within one day of becoming aware of the results.

8.4 In the event of abnormal or adverse emissions the Operator shall:

- Investigate immediately and undertake remedial action as soon as practicable;
- Promptly record the events, investigation and corrective actions taken;
- Notify the Regulator as soon as practicable and by 10.00 hours on the next working day following the event.

For the purpose of this condition, abnormal emissions are emissions to air, land, sewer or groundwater, including noise, that have the potential to have an adverse impact beyond the boundary of the installation.

8.5 The Operator shall notify the Regulator without delay and no later than 10.00 hours on the next working day of:-

- The failure of key abatement plant (such as bag filtration units);
- Continuous monitoring showing an emission concentration exceeding double the limit value;
- Any event or incident that has caused, or may have the potential to cause pollution.

8.6 The Operator shall submit written confirmation to the Regulator of any notification under conditions 8.3 to 8.5 inclusive of this Permit by sending:-

- A summary of the incident within 24 hours of such notification; and
- A more detailed report of the circumstances, and remedial actions within 7 days of the incident.

8.7 The Operator shall give written details to the Regulator 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) Any proposed change in the operation of the installation; and
d) Resumption of the operation of any part of, or all of the Permitted installation after a cessation notified under (b) above.

8.8 The Operator shall notify the following matters to the Regulator, in writing, within 14 days of their occurrence:

- Any change in the trading name, registered name or registered office address;
- A change to any particulars of any ultimate holding company including details of an ultimate holding company where the company has become a subsidiary;
- Any steps taken with a view to going into administration;
- Entering into a company voluntary arrangement or being wound up.

8.9 All reports and notifications required by this Permit shall be sent to the Regulator at Sheffield City Council's Environmental Protection Service. Unless otherwise agreed in writing, all reports, notifications and communications in respect of this Permit shall be sent by e-mail to eps.admin@sheffield.gov.uk or ippc@sheffield.gov.uk by mail to:

Sheffield City Council,
Environmental Protection Service,
5th Floor (North)
Howden House
1 Union Street
Sheffield
S1 2SH

8.10 A record shall be made of:-

a) Any malfunction, breakdown or failure of plant, equipment or techniques, and remedial measures that may have had an effect on the environmental performance of the Permitted installation. These records shall be kept in a system maintained for that purpose;
b) All monitoring, sampling, maintenance, inspections and assessments taken or carried out in accordance with the conditions of this Permit and any assessment or evaluation made on the basis of such data;
c) Other specified records for the installation as detailed elsewhere within this

Permit.

8.11 All records kept in accordance with Permit conditions shall be made available for inspection by the Regulator at any reasonable time.

8.12 All records made and kept in accordance with this Permit shall;
- Be legible;
- Be made as soon as reasonably practicable;
- Indicate any amendments that have been made to the records and shall include the original record wherever possible.

8.13 A record shall be made at the Permitted installation of any complaints concerning the installation's effect or alleged effect on the environment. The record shall give the date of complaint, time of complaint, a summary of any investigation and the results of such investigation. Such records shall be made in the site log book or recording system kept in accordance with this Permit.

Section 9 – Maintenance

9.1 External surfaces of the process buildings, ancillary plant and open yards/storage areas shall be inspected at least annually or more frequently if necessary, and cleaned to prevent the accumulation of dusty material. Particular attention shall be paid to roadways, external storage areas and yards. Cleaning operations shall be carried out by methods which minimise emissions of particulate matter to air such as vacuuming or wet sweeping.

9.2 An audit of items of plant, equipment and control measures shall be undertaken. The audit shall identify all plant, equipment and control measures that are critical to prevent, reduce or control emissions from the installation, including but not limited to storage tanks, interceptor, bunding, alarms or warning devices, after burner, ceramic filters, bag filters, magnehelic gauges, concrete hardstanding and continuous monitors.

9.3 A preventative maintenance schedule shall be produced for all critical plant and equipment identified from the audit required by condition 9.2.

9.4 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 9.2.

9.5 For plant and equipment identified in the audit required by condition 9.2, alarms or other warning systems shall be provided to indicate equipment malfunction or breakdown.

9.6 The alarms or warning systems required by condition 9.5 for plant and equipment shall be checked as part of a preventative maintenance schedule and maintained in accordance with manufacturer's instructions. A record of such checks and maintenance shall be noted in the recording system kept in accordance with condition 8.1 this Permit.

9.7 All site drainage interceptors shall be impermeable and subject to a minimum of an annual visual inspection. Any contamination found shall be removed immediately at the time of inspection.

9.8 All bunds and sumps shall be visually inspected after heavy rainfall or snowfall, and at least twice per year. The contents of bunds and sumps shall be pumped out and any contamination found shall be removed as soon as practicable. Details of the inspection and any remedial work shall be recorded in the recording system kept in accordance with condition 8.1 of this Permit.

9.9 All storage tanks shall be inspected at least once per year for integrity. Details of the inspection and any remedial work shall be recorded in the recording system kept in accordance with condition 8.1 of this Permit.

9.10 Records of breakdowns and plant failure shall be kept and analysed in order to identify trends and eliminate common failures. The records shall be made available for inspection by the Regulator on demand.

9.11 The Operator shall ensure that all abatement plant, detection systems, alarms, continuous monitors and protection systems are maintained in good working order in accordance with manufacturer's recommendations.

9.12 The Operator shall ensure that all abatement plant, detection systems, alarms, continuous monitors and protection systems are serviced at least once in every 12 month period by a competent person. Details of the maintenance shall be kept on site and made available for inspection by the Regulator.

9.13 The particulate emissions continuous monitors shall each be serviced and calibrated at least once in every 12 month period by a competent person.

Section 10 – Management and Training

10.1 The Operator shall manage and operate the activities in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the Operator as a result of complaints, using sufficient competent persons and resources.

10.2 Records demonstrating compliance with condition 10.1 shall be maintained.

10.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept near the place where those duties are carried out.

10.4 The Operator shall ensure that a competent person is available at all times for liaison with the Regulator.

10.5 The Operator shall adopt, implement and maintain an appropriate Environmental Management System to assist with compliance with this Permit. As a minimum, it shall address:

- Defined responsibilities;
- Environmental policy;
- Environmental objectives and targets linked to activities that have the potential to impact on the environment;
- Environmental targets;
- Communications and training;
- Audits;
- Procurement procedures;
- Design and implementation of capital projects;
- Contractors etc. working on site;
- Responding to problems;
- Environmental stewardship as an integral part of the business planning process;
- Record keeping;
- Includes a commitment to continual environmental improvement and prevention of pollution;
- Includes a commitment to comply with relevant legislation and other requirements to which the organisation subscribes;
- Identifies, sets, monitors and reviews environmental objectives and key performance indicators independently of the Permit.

10.6 A documented audit of key skills and competencies in respect of pollution control measures shall be maintained and submitted to the Regulator within 6 months of the date of issue of this Permit. The audit shall include contractors and those responsible for procuring equipment and materials where appropriate. The audit shall identify all key posts and the level of training that is required to ensure:

- Awareness of the regulatory implications of the Permit;
- Awareness of the potential environmental impacts under normal and abnormal circumstances;
- Awareness of the procedures for dealing with a breach of the Permit conditions;
- Prevention of accidental emissions and action to be taken when accidental emissions occur;
- Awareness of all operating procedures;
- Record keeping pertaining to maintenance, inspections and defects.

10.7 The documentation specified in Condition 10.6 of this Permit shall be updated following a change of personnel or modification of the process within 14 days.

Section 11 – Accidents and Incidents

11.1 The Operator shall maintain a written Accident and Incident Management Plan that identifies hazards, assesses the risks and identifies the measures required to reduce the risks of any potential events or failures that might lead to an environmental impact. The plan shall include written procedures for investigating accidents and near misses and also identify:

- The actions to be taken to prevent and minimise these potential occurrences; and
- The actions necessary to deal with such occurrences so as to limit their consequences.
- A copy of the plan shall be submitted to the Regulator upon request.

11.2 Changes made to the Accident and Incident Management Plan shall be submitted to the Regulator with 14 days of making the change.

11.3 The Operator shall provide safe storage and conveying systems for both solids and liquids in order to prevent accidental damage.

11.4 The Operator shall use safe systems for the processing and storage of materials in order to minimise the risk of fire or explosion.

Section 12 – Raw Materials

12.1 The Operator shall;

- take appropriate measures to ensure that raw materials and water are used efficiently in the activities;
- maintain records of raw materials and water used in the activities;
- review and record at least every 4 years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use;
- take any further appropriate measures identified by a review.

12.2 The Operator shall maintain an inventory and undertake a review of the principal raw materials used with the main potential for environmental impact. Annually, the Operator shall review alternatives for the principal raw materials used. A copy of the report shall be submitted to the Regulator within 8 weeks of its completion.

12.3 The Operator shall maintain quality procedures to control the specification of raw materials in order to minimise any potential environmental impact. The procedures shall be reviewed annually and updated as appropriate, and provided to the Regulator upon request.

12.4 Feed to furnaces shall be weighed and metered as appropriate and quantities recorded. These records shall be kept for a minimum of 2 years and be made available to the Regulator upon request.

Section 13 – Water Efficiency

13.1 The Operator shall conduct a water efficiency audit. Using information from the audit, usage benchmarks shall be established. Opportunities for water use reduction shall be assessed and implemented in accordance with a timescale agreed with the Regulator. The audit shall be repeated at least every 4 years.

13.2 The volume of mains and abstracted water used in the activities shall be directly measured when the installation is operating, once a day for at least 2 weeks and thereafter, once a week with an annual exercise taking daily measurements for at least 2 weeks. All measurements shall be recorded and the records submitted to the Regulator within 2 weeks of completion.

Section 14 – Energy Efficiency

14.1 The Operator shall;

- take appropriate measures to ensure that energy is used efficiently in the activities;
- review and record at least every 4 years whether there are suitable opportunities to improve the energy efficiency of the activities; and
- take further appropriate measures identified by a review.

14.2 The Operator shall ensure that all plant is operated and maintained to optimise the use of and minimise the loss of energy. All plant shall be operated and maintained in accordance with the manufacturer's instructions.

14.3 The Operator shall produce and submit an annual report to the Regulator on the energy consumption of the installation, by 1st July 2020, and annually thereafter.

14.4 The Operator shall target areas for energy reduction and employ energy efficiency techniques such as;

- Heat recovery
- Minimisation of water use and closed circulating water systems
- Good insulation
- Reducing pumping distances
- Phase optimisation of electronic control motors and fans
- Preventative maintenance programme targeting energy drops.

Section 15 – Waste and Waste Minimisation

15.1 The Operator shall take appropriate measures to ensure that;

- the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities;
- any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive;
- where disposal is necessary, this is undertaken in a manner which minimises its

impact on the environment.

15.2 The Operator shall review and record at least every 4 years whether changes to those measures required by condition 15.1 should be made and take any further appropriate measures identified by a review.

15.3 The Operator shall manage and operate the waste handling activities;

a) In accordance with a written Waste Management System that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the Operator as a result of complaints; and

b) Using sufficient competent persons and resources.

15.4 Non hazardous wastes shall be stored for no longer than 1 year.

15.5 Hazardous wastes shall be stored for no longer than 6 months.

15.6 Waste shall only be accepted if;

a) It is of a type and quantity listed in Table 6;
b) It conforms to the description in the documentation supplied by the producer and holder.

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

- The nature of the process producing the waste;
- The composition of the waste;
- The handling requirements of the waste;
- The hazardous property associated with the waste, if applicable;
  - The waste code of the waste (EWC).

15.8 The Operator shall undertake a Waste Minimisation Audit. The audit shall include, but not be limited to:

- Process flow maps and fates of materials;
- Monitoring and reporting of usage and waste generated against benchmark criteria;
- Active participation of staff;
- Waste prevention; and
- Mass balance studies.

The results of the audit shall be submitted to the Regulator within 8 weeks of its completion, and a Waste Minimisation Plan agreed for the implementation of any recommendations. The audit required by this condition shall be repeated at least every 4 years.

Table 6 Waste Types and Quantities

12	**Waste from Shaping and Physical and Mechanical Surface Treatment of Metals and Plastics**
12 01	**Wastes from shaping and physical and mechanical surface treatment of metals and plastics**
12 01 03	Non-ferrous metals filings and turnings
12 01 01	Ferrous metal filings and turnings
16	**Wastes not otherwise specified in the list**
16 01	**End-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08)**
16 01 17	Ferrous metal
16 01 18	Non-ferrous metal
17	**Construction and Demolition Wastes (Including excavated soil from Contaminated Sites)**
17 04	**Metals (including their alloys)**
17 04 01	Copper, bronze, brass
17 04 02	Aluminium
17 04 03	Lead
17 04 04	Zinc
17 04 05	Iron and steel
17 04 06	Tin
17 04 07	Mixed metals
19	**Wastes from Waste Management Facilities, Off-Site Waste Water Treatment Plants and the Preparation of Water for Human Consumption and Water for Industrial Use**
19 10	**Wastes from shredding of metal-containing wastes**
19 10 01	Iron and steel waste
19 10 02	Non-ferrous waste
19 12	**Wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified**
19 12 02	Ferrous metal
19 12 03	Non-ferrous metal
20	**Municipal Wastes (Household Waste and Similar Commercial, Industrial and Institutional Wastes) Including separately Collected Fractions**
20 01	Separately collected fractions (except 15 01)
20 01 40	Metals

15.9 All waste storage areas shall be clearly marked. Waste containers shall be clearly labelled. Containers shall be durable for the substances stored. Incompatible wastes shall be segregated and stored separately.

15.10 The Operator shall ensure that all appropriate precautions are in place to prevent materials from wind whipping.

15.11 The Operator shall keep detailed records of the quantity, nature (including hazardous properties (hazard statements), origin, handling precautions, the destination, frequency of collection, mode of transport and treatment method of any waste which is disposed of or recovered. Records shall be kept on site for a minimum of 4 years and made available for inspection by the Regulator on request

15.12 For all wastes received at or produced by the Permitted installation, the Operator shall record the following;

- The composition or description of the waste including EWC;
- The best estimate of the quantity produced;
- Disposal routes for the waste; and
- The best estimate of the quantity sent for recovery.

15.13 Hazardous waste dusts shall be stored under cover in a designated area.

15.14 The labels on hazardous waste containers shall display the date of production of the waste.

Section 16 – Noise and Vibration

16.1 Any plant or equipment brought into the installation, or any plant or equipment that undergoes modification, shall be demonstrated to comply with the Best Available Techniques (BAT) to the satisfaction of the Regulator. If it is not possible to demonstrate that the new plant or equipment is BAT then suitable attenuation measures shall be agreed with the Regulator and implemented.

16.2 Unless already meeting BAT requirements, the Operator shall demonstrate that sound power levels for substantially changed plant or equipment shall be lower than for existing when operating under normal parameters. The procedure listed in condition 16.3 shall be used. If it is not possible to demonstrate this then suitable attenuation shall be agreed in writing with the Regulator.

16.3 No new plant or equipment shall be Permitted within the installation except where:

(i) The plant or equipment can be demonstrated to have a minimal environmental impact. For the purpose of this condition ‘minimal’ shall be taken to mean that the plant or equipment, if monitored under the requirements of BS4142:2014, is unlikely to attract complaints.

OR

(ii) If the above plant/equipment does not satisfy the BAT criteria as described in 16.3(i) above, then attenuation measures shall be taken by the Operator, in agreement with the Regulator in order to satisfy 16.3(i).

16.4 In the event of the Regulator receiving a complaint of noise associated with any element or activity within the installation boundary, the Operator shall:

(a) Investigate the source of the complaint;

(b) Carry out such monitoring, surveys or modelling of the source of the complaint to demonstrate, to the satisfaction of the Regulator, either that the complaint is unfounded, or that the complaint is justified.

16.5 Where a noise complaint is found to be justified, the Operator shall arrange to carry out such works or change procedures or processes in such a way, that a re-assessment carried out in accordance with condition 16.4 above concludes that the remedial measures are successful and the noise is no longer the cause of justified complaint.

16.6 In the case of the Operator receiving a complaint directly, the company shall notify the Regulator by 17:00 hours the next working day, providing full details of the complaint and indicating the actions to be taken to investigate and resolve the complaint.

16.7 The crushing and sieving plant shall be mounted on anti vibration mounts.

16.8 The building housing the crushing plant shall be well maintained in order to maintain the sound insulating properties.

16.9 Crushing and screening activities shall only occur with the doors to the building housing the process closed.

Section 17 – Decommissioning

17.1 A site decommissioning plan shall be submitted to the Regulator within 6 months of the date of this Permit. The plan shall be prepared and updated as necessary due to changes in plant, equipment and materials used at the installation. The plan shall be reviewed and submitted every 3 years from the date of first submission. The plan shall include:

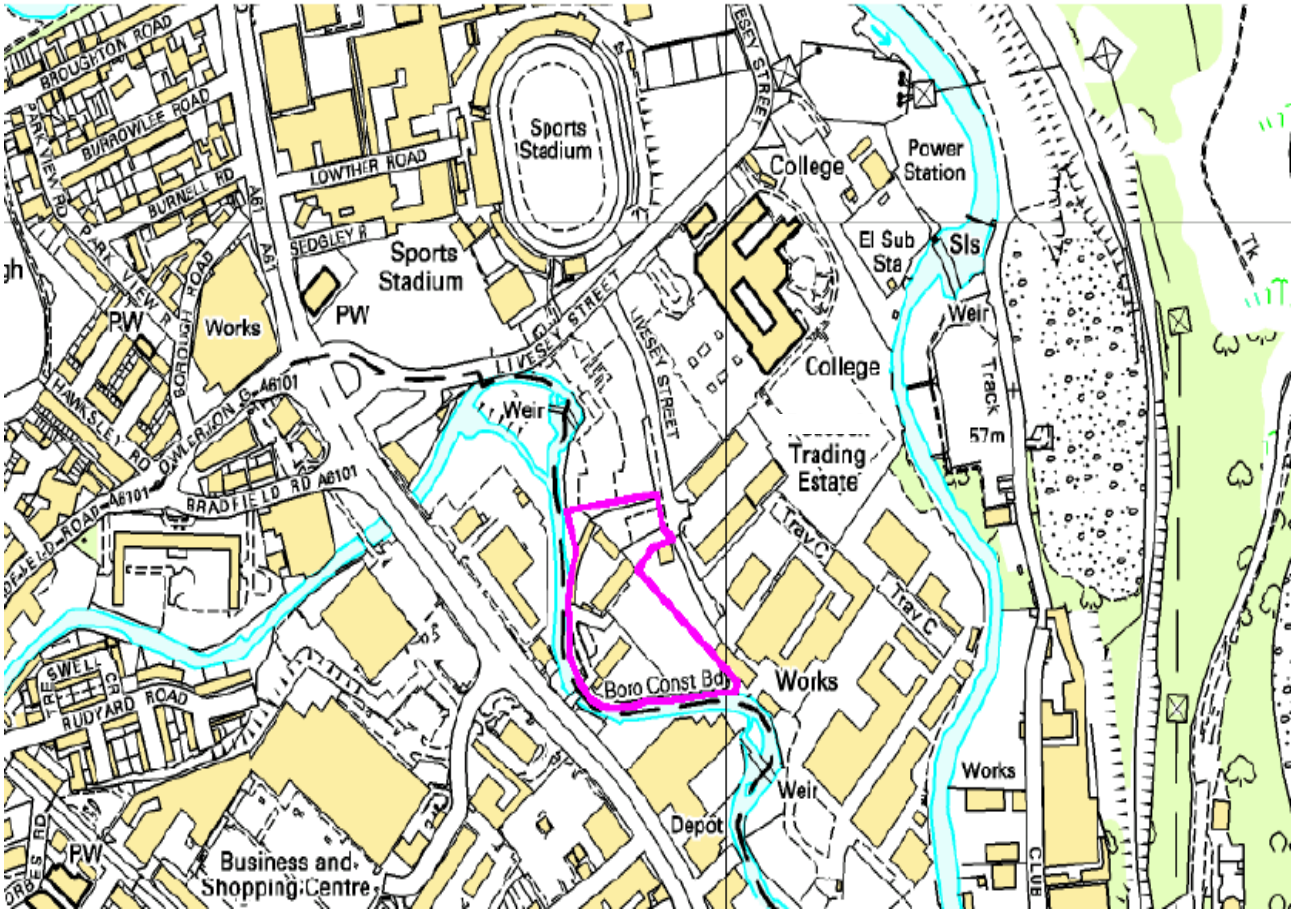
- A complete methodology to be adopted in the decommissioning of the installation to include;
- Removal of plant and machinery;
- Removal of any contamination associated with plant and machinery;
- Minimising any contamination from buildings during demolition;
- Removal of contamination from subsurface infrastructure.

17.2 Prior to site operations ceasing, the Operator shall devise a scheme of works for decommissioning the site and submit to the Regulator for written approval. The site shall not be decommissioned until the scheme has received written approval.

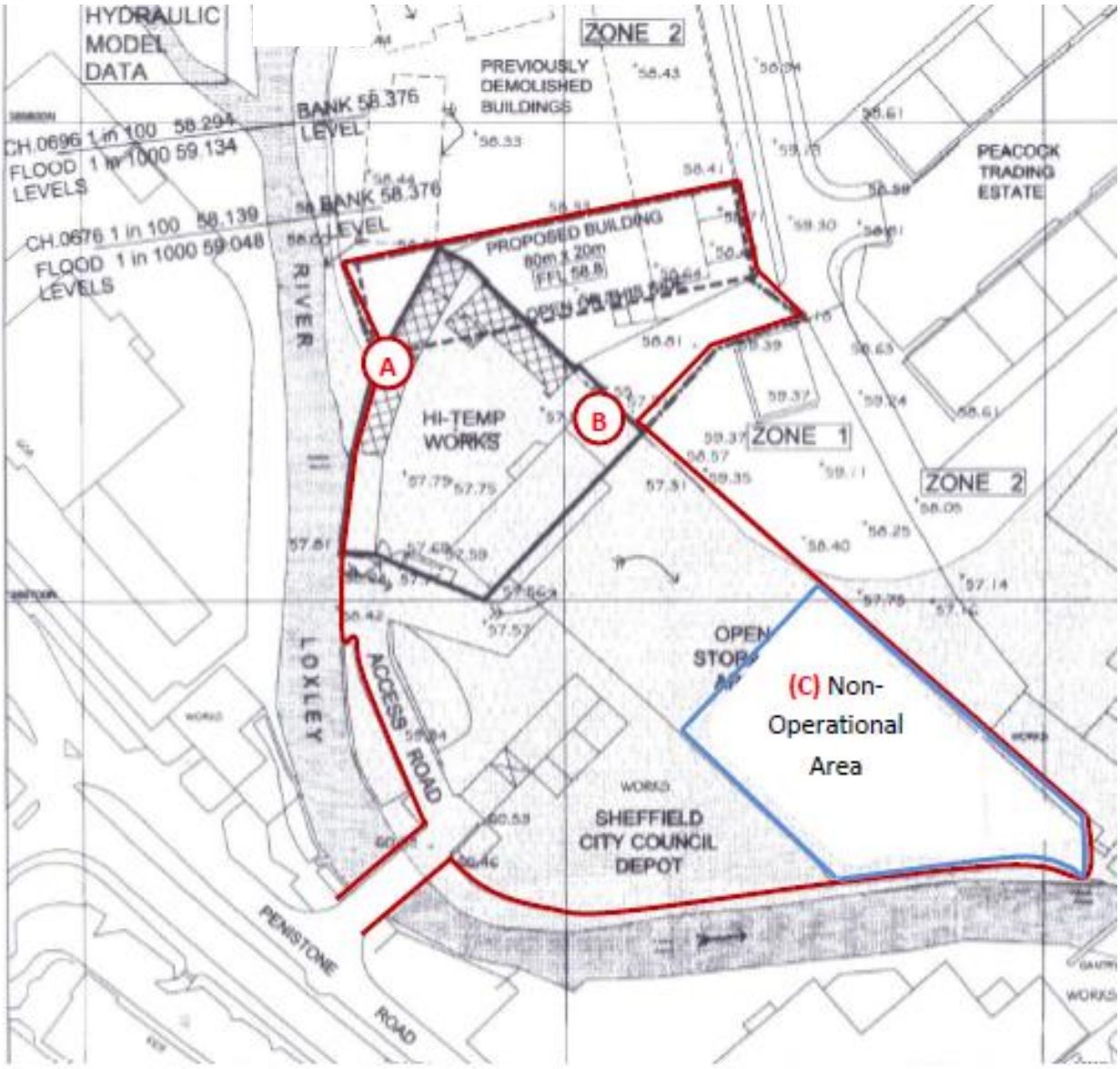
17.3 Prior to cessation of Permitted activities, the Operator shall submit a method statement for intrusive sampling of the site to the Regulator. Once agreed, the Operator shall carry out the intrusive sampling and forward the results within 8 weeks of the sampling to the Regulator. The Operator shall then undertake remediation of the land to an agreed level, within timescales agreed in writing by the Regulator, in order to remove contamination that is attributable to Permitted activities.

END OF CONDITIONS

Schedule 1 – Installation Location



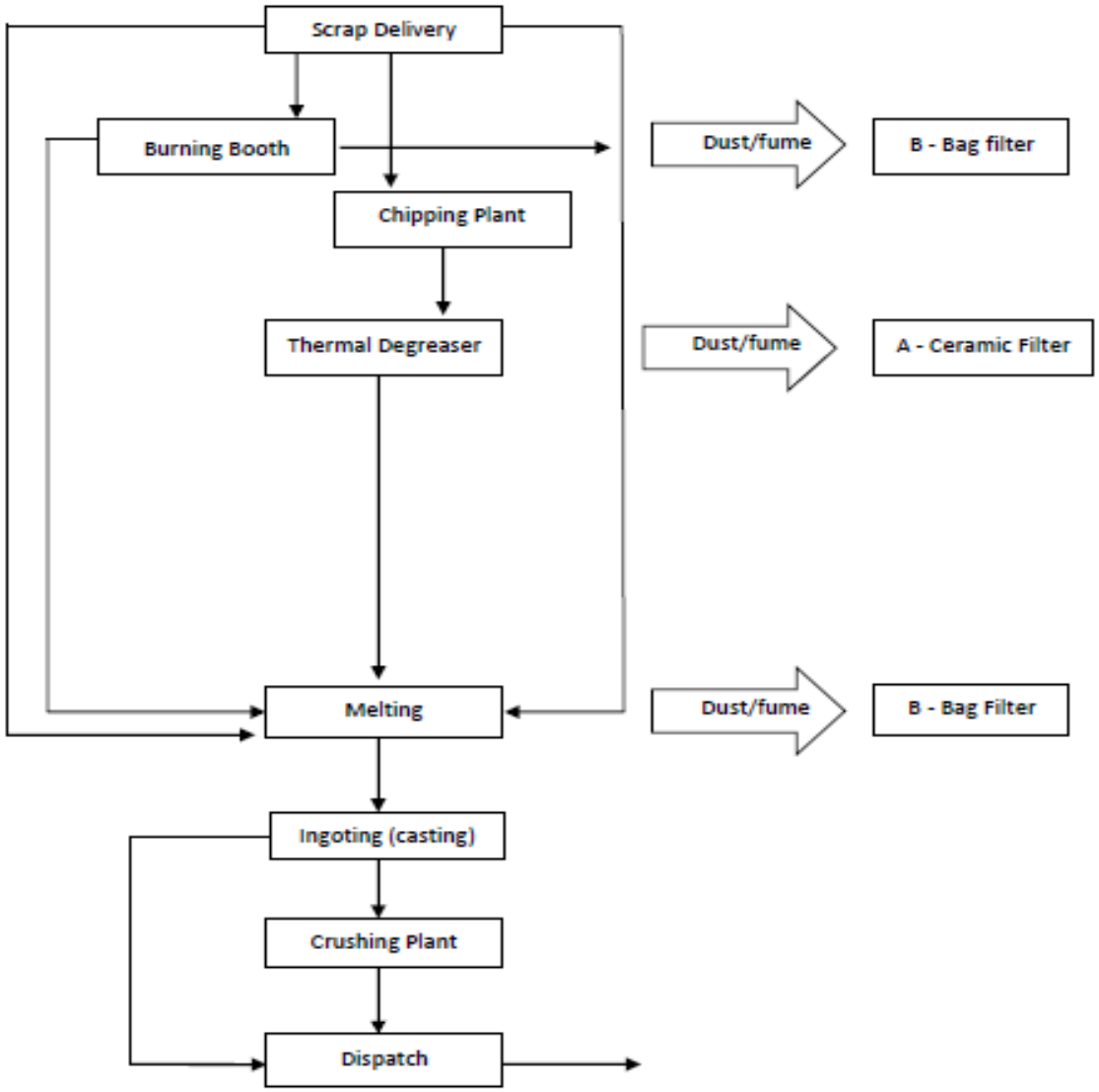
Schedule 2: Installation Boundary



A	Emission Point Source
B	Emission Point Source
C	Non-operational area

Schedule 3 – Installation Layout

Schedule 4 Process Flow Schematic



Schedule 5 – Site Drainage Plan