

Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

Tata Steel UK Limited
Rotherham Aldwarke Site
Aldwarke Lane
Rotherham
South Yorkshire
S65 3SR

Variation application number

EPR/XP3030FC/V003

Permit number

EPR/XP3030FC

Rotherham Aldwarke Site

Permit number EPR/XP3030FC

Introductory note

This introductory note does not form a part of the notice.

The following notice gives notice of the variation and consolidation of an environmental permit.

This variation has been issued to consolidate the original permit and subsequent variations, to update some of the conditions following a statutory review of permits in the Metals Sector and to introduce a number of changes due to the transposition of the Industrial Emissions Directive. At the same time the permit has been converted into the current EPR Permit format.

The Industrial Emissions Directive (IED) came into force on 7th January 2014 with the requirement to implement all relevant BAT conclusions as described in the Commission Implementing Decision. The steelmaking BAT conclusions were published on 8th March 2012 in the Official Journal of the European Union following a European Union wide review of BAT. Unless otherwise stated all relevant BAT conclusions (1, 2, 5-18, 87-89, 91-93 and 95) apply from 8th March 2016.

The schedules specify the changes made to the permit.

Description of the Installation

The activities covered by this permit relate to the manufacture of finished and semi-finished steel products from ferrous scrap. The process comprises electric arc steelmaking, hot metal continuous casting, ingot casting, hot rolling and other finishing operations.

The process activities are carried out in a number of areas at the Installation:

Aldwarke	Steelmaking Ingot Casting Continuous bloom and billet casting Primary Rolling Mill producing billets Boiler Plant
Roundwood Bar Mill	Hot rolling producing coiled round, hexagon and square bar (this activity ceased operation during 2005 but the permit remains in force for the Roundwood Bar Mill until formally surrendered)
Thrybergh Bar Mill	Hot rolling producing coiled and straight sectional bars
Roundwood Bright Bar	Production of heat treated bright bar from hot-rolled steel bar
Waste Management Area	Managing wastes arising within the site like as ashes and slags, transfer of some waste arising at other local sites like paper and cardboards and the processing of wastes received at the site, such as scrap metals for incorporation in to the steel making process

Aldwarke Steelmaking, continuous casting and ingot casting

Ferrous scrap is delivered to site and is stored in the steel scrap stock areas prior to being charged into one of two electric arc furnaces housed within the Aldwarke Melting Shop.

Carbon, lime and other fluxing agents are also added to the electric arc furnaces. These react with impurities within the molten steel to form a slag which floats on the surface and which is subsequently removed from the process for subsequent processing.

Oxygen is injected into the furnaces to promote chemical reactions within the molten steel charge and subsequently to oxidise carbon monoxide produced within the process.

The furnace sidewalls, carbon electrodes, ductwork and other localised electrical equipment on the furnaces, are water-cooled.

The resulting molten steel is poured into ladles for transfer to secondary refining facilities. The prime function of the secondary steel-making facilities is to further refine the steel and to incorporate additional alloying materials, including lead, to achieve the correct physical properties and final steel analysis.

After refining, the ladles containing the molten steel are transferred to the continuous casting machines where the steel is cast into blooms and billets. A proportion of liquid steel can also be cast into ingots.

The blooms and billets are cut to length as they are discharged from the continuous caster. The billets are transferred to the Thrybergh Mill for rolling into coil and straight bars.

The main releases to air from the Installation arise from the following areas:

- a) **Electric Arc Furnaces** – The furnaces employ primary fume control by means of direct extraction via a hole in the furnace roof. The fume is led via water-cooled ducting, which incorporates direct ambient air cooling, to a positive pressure bag filter unit venting to atmosphere via roof vent louvres. Additionally, any fugitive releases escaping into the melting shop during such operations as slagging and tapping, are collected via a roof vent extraction system which is again exhausted to the above-mentioned bag filter.
- b) **Secondary steel-making ladle furnaces** – Fumes from the ladle arc furnace in the Melting Shop are extracted to the bag filter serving the Melting Shop. Fumes from the ladle furnaces, tundish preparation and bloom/billet cutting in the Caster Building are extracted to a pair of dedicated induced draught bag filter units.
- c) **Scarfig operations** – Fumes arising from the in-line scarfig operations are abated using a wet electrostatic precipitator.
- d) **Vacuum De-gassing** – Fumes arising from the vacuum vessels pass to a dust catcher and subsequently to 3 spray condensers prior to discharge to atmosphere.
- e) **Vacuum Oxygen Decarburiser** – Fumes from the vacuum vessel pass through a dedicated bag filter and gas cooler. As the waste gas contains a high proportion of carbon monoxide it is burnt on a flare stack at the point of release.
- f) **Miscellaneous cutting operations using abrasives** – Fume and dust arising from these operations are abated by the use of dedicated bag filter plant.

Water is abstracted from the River Don and is used for equipment cooling within various open and closed circuits within the Installation. Release of waste water into controlled waters is made via release point RWA2. This consists of overflows from water treatment plant, from other specific sources detailed in the application and from plant drain-down as necessary for emergency or maintenance purposes. Surface water, including water draining from the Scrap Yard, is made via release point RWA3.

Releases to land include mill scale, slurry, spent refractory, undersize slag and filter dusts; these are processed either for reuse, recycled, or disposed to an off-site licensed landfill. The steelmaking slag is processed off-site for re-use as a roadstone aggregate by a specialist contractor.

Aldwarke Primary Mill

The reheated blooms from the continuous caster and cast ingots are rolled into billets in the Primary Mill, which incorporates in-line hot scarfig facilities. The billets are cooled, dressed and tested. Billets may be despatched off-site for sale or transported to the Thrybergh Bar Mill for further rolling and finishing.

Within the mill there are 16 batch furnaces (or soaking pits) having a total rated heat input of 102MW, and two bloom reheat furnaces rated at 45MW each. All of these furnaces are dual fuelled by natural gas supplied on an interruptible basis, with gas oil used as the standby fuel. Soaking pits are used for re-heating steel blooms/ingots and are connected to a total of 4 stacks, each 61m high, in groups of up to 4 furnaces per stack, identified as points RA4, RA5, RA6 and RA7. The two larger furnaces are also used for re-heating

steel blooms prior to their conversion to smaller billets in the rolling mill, and are connected to a common stack (point RA8) 66m high.

Wastewater arising within the mill is passed through a water treatment plant and is re-circulated back into the mill, any overflow from the mill water system passes to the river water treatment plant from where it is recycled back into the site river water system. The mill was mothballed in October 2009 and was closed for demolition in June 2015.

Aldwarke Boiler Plant

The plant comprises 4 identical packaged steam boilers dual fuelled by natural gas on an interruptible basis, with gas oil as standby, having a total rated heat input of 53.2MWth. The produced steam is used within the process and for space heating. Each boiler is connected to its own stack, points RA1, RA2, RA3 and RA3A, each of height 39m. Towns water is used as boiler feed for conversion to steam, and for boiler cleaning and auxiliary operations. Wastewater is fed to a dedicated treatment plant from which it is finally discharged into the River Don at point RWA2 from the drainage system.

Miscellaneous Furnaces

In addition to the boilers and furnaces described above there are a number of smaller dryers and furnaces, each of less than 3MW thermal rating. All use natural gas as the principal fuel.

Roundwood Bar Mill

The Roundwood Coiled Bar Mill contains a single billet reheat furnace rated at 77MW thermal input, dual fuelled by natural gas on an interruptible basis with gas oil as standby. The furnace discharges to air through the 45m high stack identified as point RA10.

As with other mills, any wastewater enters a mill water system where it passes through a water treatment plant to remove suspended solids. Surplus water from the Mill system is discharged into Roundwood Brook, a tributary of the River Don, at point RWR6.

The Roundwood Mill ceased operation during 2005 but remains a permitted activity until the permit is formally surrendered.

Roundwood Stockholding Facility

An area of the redundant Roundwood Bar Mill houses a finishing and stockholding facility. Machine tools are provided for cutting rolled bars to length prior to placing into stock. There are no process releases to air or controlled waters from the facility. Machining swarf will be recovered on site. Waste oils will be transferred off-site for recovery or disposal.

Thrybergh Bar Mill

A single steel billet reheat furnace, rated at 137MW thermal input is situated within the Thrybergh Mill. It is dual fuelled by an interruptible natural gas supply, with gas oil as a standby. The reheat furnace is used to heat billets of steel to the correct temperature to allow their conversion to bars and coiled rods of differing sizes. The furnace is connected to a single 66m high stack, identified as point RA9.

Surface drainage associated with the Mill discharges directly into the River Don at points RWT1, RWT2 and RWT3 and any waste water (contaminated cooling water) from the Mill is also discharged into the river at point RWT4 via a water treatment plant. Water used within the mill is taken from the site river water system.

Roundwood Bright Bar Facility

Hot rolled bar is processed into bright bar products using turning, grinding, reeling, cutting and heat treatment equipment.

Gas fired furnaces, of total thermal input approx. 10.6MWth, are employed to heat treat steel bar. Water and oil quenching facilities are also used for heat treatment and surface treatment operations. Machining operations generate swarf which is recycled to the Aldwarke Melting Shop.

Releases into air arise from the heat treatment furnaces and oil vapours from heat treatment operations and discharge into air via release points RA74, RA75, RA76(A to F) and RA 78.

There are no process releases to controlled waters from the Facility

Roundwood Hazardous Waste Treatment Facility

The treatment facility, with a nominal capacity of approximately 30 tonnes per day, processes hazardous wastes arising within the Installation. Waste slurries and oily wastewater is deposited in primary settling lagoons to deposit coarse solids. Wastewater, containing suspended solids following primary settlement, is further treated in a clarifier to remove solids. The clarified wastewater is returned to the Works process water system or discharged via RWA2. The underflow from the clarifier is de-watered on the de-watering pad to produce a granular solid waste for off-site disposal.

ACP Scrap Yard Hammer Mill Shredder

A hammer mill shredder reduces the individual piece size of up to 180,000 tonnes per annum of mixed scrap steel and aluminium. This improves bulk density of the steel and aluminium and allows fewer basket loadings in the steel charge to the electric arc furnace. This has an emission point known as RA83

General

Solid waste from each of the Rolling Mills consists principally of the refractory linings from the furnaces and mill scale from the scale pits and furnaces. The mill scale is separated and sold for re-processing, the remaining solid waste is transferred off-site for disposal.

Surface water from the Roundwood Mill area will discharge to Roundwood Brook via release points RWR5 & RWR6.

The Chapter 2, S2.1, Part A (1) (b) installation produces steel billet from scrap using an electric arc furnace and continuous casting. The plant has a design capacity of approximately 1.3 million tonnes of finished billet per year (27,000 tonnes per week). The steel plant can operate 24 hours per day, seven days per week, for up to 52 weeks per year with planned maintenance occurring as and when required. Steel billet is processed through the Chapter 2, S2.1, Part A (1) (c) activities, which include hot rolling and other finishing operations.

The waste operation is involved with the storage and processing of materials from the Aldwarke site, and from other sites. These activities include the processing of materials to be used in the steelmaking process, and of materials for disposal and recovery.

Tata also have several exemptions from waste activities (S2 & T4) for the management of other low risk wastes produced around the site. These relate to activities within the Recycling Centre located close to the central engineering workshops

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

Status log of the permit		
Description	Date	Comments
Application BK6661IL received	Received 28/08/01	
Additional information received	28/01/02	
Permit determined EPR/BK6661IL	11/10/02	Permit issued
Variation determined EPR/BK6661IL/V002	Determined 13/08/04	Installation of heat treatment furnace (PAS Reference YP3133BW)

Status log of the permit		
Description	Date	Comments
Variation determined EPR/ BK6661IL/V003	Determined 01/11/04	New secondary steel making New continuous casting New ingot casting New bright bar heat treatment Modified waste water treatment Amendments to condition 2 – operational matters Amendments to condition 4 – reporting Amendment to condition 6 – emissions Amendments to condition 9 – improvement programme (PAS Reference TP3732PC)
Variation determined EPR/ BK6661IL/V004	Determined 31/03/05	Re-commissioning of Ingot Reheat Furnaces (Soaking Pits) Re-commissioning of APM finishing equipment New stockholding facilities in RBM Fume dust export facilities Changes to Works Debris handling (PAS Reference GP3230LU)
Request for additional information	Received 30/01/06	
Variation determined EPR/BK6661IL/V005	Determined 23/11/06	Permitting the use of gas as an alternative to natural gas (PAS Reference ZP3937LM)
Request for additional information	Received 24/11/06 & 29/11/06	
Variation determined EPR/ BK6661IL/V006	Determined 19/02/07	Operation of a hazardous waste treatment facility (PAS Reference RP3735MZ)
Variation determined EPR/ BK6661IL/V007	Determined 01/07/10	Replacing MultiServ Group Ltd references with Harsco Metals Holdings Ltd (PAS Reference KP3432TB)
Application EPR/XP3030FC/T001 (full transfer of permit EPR/BK6661IL)	Determined 18/04/11	Name change to Tata Steel from Corus Engineering Steels Ltd (PAS Reference XP3030FC)
Application EPR/XP3030FC/V002	Duly Made 08/11/2013	Operation of a scrap metal shredder Other administrative updates
Variation EPR/XP3030FC/V002 determined	Issued 10/01/14	(PAS Reference BP3439EE)
Regulation 60 Notice dated 13/09/14	Response Received 30/04/14	Technical standards detailed in the notice provided under Regulation 60 of Environmental Permitting Regulations. Best available techniques as described in BAT conclusions under Directive 2010/75/EU of the European Parliament and of the Council on industrial emissions for iron and steel production
Application to include a new listed activity for ash treatments part of the BATC sector permit review	Received 01/04/15	Application relates to existing waste treatment activities above IED threshold for scheduled activity (a newly prescribed activity). Determined as part of the sectoral review incorporating 2012 BATC
Variation EPR/XP3030FC/V003	03/09/2015	Varied and consolidated permit issued in modern condition format. (PAS Reference NP3434VH) (EAWML Reference 402705)

Other Part A installation permits relating to this installation		
Operator	Permit number	Date of issue
Harsco Metals Group Limited	EPR/DP3737ZV	20/03/13 (Transfer of BM0826IF)

End of introductory note

Notice of variation and consolidation

The Environmental Permitting (England and Wales) Regulations 2010

The Environment Agency in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2010 varies and consolidates

Permit number

EPR/XP3030FC

Variation number

EPR/XP3030FC/V003

Issued to

Tata Steel UK Limited ("the operator")

whose registered office is

30 Millbank
London
SW1P 4WY

company registration number 02280000

to operate a regulated facility at

Rotherham Aldwarke Site
Aldwarke Lane
Rotherham
South Yorkshire
S65 3SR

to the extent set out in the schedules.

The notice shall take effect from 03/09/2015

Name	Date
Peter Kelly	03/09/2015

Authorised on behalf of the Environment Agency

Schedule 1

All conditions have been varied by the consolidated permit as a result of an Environment Agency initiated variation.

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2010

Permit number

EPR/XP3030FC

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/XP3030FC/V003 authorising,

Tata Steel UK Limited (“the operator”),

whose registered office is

30 Millbank
London
SW1P 4WY

company registration number 02280000

to operate an installation at

Rotherham Aldwarke Site
Aldwarke Lane
Rotherham
South Yorkshire
S65 3SR

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

Name	Date
Peter Kelly	03/09/2015

Authorised on behalf of the Environment Agency

Conditions

1 Management

1.1 General management

- 1.1.1 The operator shall manage and operate the activities:
- (a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and
 - (b) using sufficient competent persons and resources.
- 1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.
- 1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.
- 1.1.4 The operator shall comply with the requirements of an approved competence scheme or other approval issued by the Environment Agency.

1.2 Energy efficiency

- 1.2.1 The operator shall:
- (a) take appropriate measures to ensure that energy is used efficiently in the activities;
 - (b) review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and
 - (c) take any further appropriate measures identified by a review.

1.3 Efficient use of raw materials

- 1.3.1 The operator shall:
- (a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;
 - (b) maintain records of raw materials and water used in the activities;
 - (c) review and record at least every four years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and
 - (d) take any further appropriate measures identified by a review.

1.4 Avoidance, recovery and disposal of wastes produced by the activities

- 1.4.1 The operator shall take appropriate measures to ensure that:
- (a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities; and
 - (b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and
 - (c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.

- 1.4.2 The operator shall review and record at least every four years whether changes to those measures should be made and take any further appropriate measures identified by a review.

1.5 Multiple operator installations

- 1.5.1 For the following activities referenced in schedule 1, table S1.1. Where the operator notifies the Environment Agency under condition 4.3.1 (a) or 4.3.1 (c), the operator shall also notify immediately the other operator(s) of the installation of the same information.

2 Operations

2.1 Permitted activities

- 2.1.1 The operator is only authorised to carry out the activities specified in schedule 1 table S1.1 (the “activities”).
- 2.1.2 Waste authorised by this permit shall be clearly distinguished from any other waste on the site.

2.2 The site

- 2.2.1 The activities shall not extend beyond the site, being the land shown edged in red on the site plan at schedule 7 to this permit, excluding the area hatched green. The area edged in red on the site plan, including the area hatched green represents the extent of the installation covered by this permit and that/those of the other operator of the installation.

2.3 Operating techniques

- 2.3.1 The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by the Environment Agency.
- 2.3.2 If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency for approval within the period specified, a revision of any plan or other documentation (“plan”) specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 2.3.3 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.
- 2.3.4 Waste shall only be accepted if:
- (a) it is of a type and quantity listed in schedule 2 table(s) S2.2 , S2.3 and
 - (b) it conforms to the description in the documentation supplied by the producer and holder.
- 2.3.5 The operator shall ensure that where waste produced by the activities is sent to a relevant waste operation, that operation is provided with the following information, prior to the receipt of the waste:
- (a) the nature of the process producing the waste;
 - (b) the composition of the waste;
 - (c) the handling requirements of the waste;
 - (d) the hazardous property associated with the waste, if applicable; and
 - (e) the waste code of the waste.

- 2.3.6 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.

3 Emissions and monitoring

3.1 Emissions to water, air or land

- 3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1, S3.2 and S3.3.
- 3.1.2 The limits given in schedule 3 shall not be exceeded.
- 3.1.3 Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

3.2 Emissions of substances not controlled by emission limits

- 3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.2.2 The operator shall:
- (a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;
 - (b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 3.2.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

3.3 Odour

- 3.3.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.
- 3.3.2 The operator shall:
- (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;
 - (b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.4 Noise and vibration

- 3.4.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.

3.4.2 The operator shall:

- (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;
- (b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.5 Monitoring

3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring specified in the following tables in schedule 3 to this permit:

- (a) point source emissions specified in tables S3.1 and S3.2;
- (b) ambient air monitoring specified in table S3.3;

3.5.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.

3.5.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.5.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by the Environment Agency.

3.5.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 tables S3.1 unless otherwise agreed in writing by the Environment Agency.

4 Information

4.1 Records

4.1.1 All records required to be made by this permit shall:

- (a) be legible;
- (b) be made as soon as reasonably practicable;
- (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and
- (d) be retained, unless otherwise agreed in writing by the Environment Agency, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:
 - (i) off-site environmental effects; and
 - (ii) matters which affect the condition of the land and groundwater.

4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by the Environment Agency.

4.2 Reporting

4.2.1 The operator shall send all reports and notifications required by the permit to the Environment Agency using the contact details supplied in writing by the Environment Agency.

- 4.2.2 A report or reports on the performance of the activities over the previous year shall be submitted to the Environment Agency by 31 January (or other date agreed in writing by the Environment Agency) each year. The report(s) shall include as a minimum:
- (a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data;
 - (b) the annual production /treatment data set out in schedule 4 table S4.2; and
 - (c) the performance parameters set out in schedule 4 table S4.3 using the forms specified in table S4.4 of that schedule.
- 4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Environment Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:
- (a) in respect of the parameters and emission points specified in schedule 4 table S4.1;
 - (b) for the reporting periods specified in schedule 4 table S4.1 and using the forms specified in schedule 4 table S4.4 ; and
 - (c) giving the information from such results and assessments as may be required by the forms specified in those tables.
- 4.2.4 The operator shall, unless notice under this condition has been served within the preceding four years, submit to the Environment Agency, within six months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.
- 4.2.5 Within 1 month of the end of each quarter, the operator shall submit to the Environment Agency using the form made available for the purpose, the information specified on the form relating to the site and the waste accepted and removed from it during the previous quarter, if during that quarter the total amount accepted exceeds 100 tonnes of non-hazardous waste or 10 tonnes of hazardous waste.

4.3 Notifications

- 4.3.1 In the event:
- (a) that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—
 - (i) inform the Environment Agency,
 - (ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and
 - (iii) take the measures necessary to prevent further possible incidents or accidents;
 - (b) of a breach of any permit condition the operator must immediately—
 - (i) inform the Environment Agency, and
 - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;
 - (c) of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.
- 4.3.2 Any information provided under condition 4.3.1(a)(i), or 4.3.1 (b)(i) where the information relates to the breach of a limit specified in the permit, shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.

4.3.3 Where the Environment Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Environment Agency when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to the Environment Agency at least 14 days before the date the monitoring is to be undertaken.

4.3.4 The Environment Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:

Where the operator is a registered company:

- (a) any change in the operator's trading name, registered name or registered office address; and
- (b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

Where the operator is a corporate body other than a registered company:

- (a) any change in the operator's name or address; and
- (b) any steps taken with a view to the dissolution of the operator.

In any other case:

- (a) the death of any of the named operators (where the operator consists of more than one named individual);
- (b) any change in the operator's name(s) or address(es); and
- (c) any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.

4.3.5 Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:

- (a) the Environment Agency shall be notified at least 14 days before making the change; and
- (b) the notification shall contain a description of the proposed change in operation.

4.3.6 The Environment Agency shall be given at least 14 days notice before implementation of any part of the site closure plan.

4.3.7 Where the operator has entered into a climate change agreement with the Government, the Environment Agency shall be notified within one month of:

- (a) a decision by the Secretary of State not to re-certify the agreement;
- (b) a decision by either the operator or the Secretary of State to terminate the agreement; and
- (c) any subsequent decision by the Secretary of State to re-certify such an agreement.

4.4 Interpretation

4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.

4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made "immediately", in which case it may be provided by telephone.

Schedule 1 – Operations

Table S1.1 activities			
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity and WFD Annex I and II operations	Limits of specified activity and waste types
A1-A3	S1.1 A(1) a)	Combustion of fuel in appliances with a rated thermal input > 50MWTh comprising 16 batch furnace in Aldwarke Primary Mill @ total102MWTh 2 bloom reheat furnaces in Aldwarke Primary Mill @ 45MWTh each 4 steam boilers in Aldwarke boiler plant @ 53.2 MWTh 1 billet reheat furnace in Roundwood bar Mill @ 77 MWTh 1 billet reheat furnace in Thrybergh Bar Mill @ 137 MWTh Gas fired furnaces in Roundwood Bright Bar Facility @ total 10.6MWth plus other small units	
A4-A5	S2.1 A(1) b)	Making and refining steel in electric arc furnaces with a designed holding capacity of more than 7 tonnes.	From receipt raw materials to despatch of finished product
A6-A8	S2.1 A(1) c)	Processing ferrous metals and their alloys by hot-rolling with a capacity > 20 tonnes per hour	From receipt of raw materials to despatch of finished product
A9	S5.3 A(1) a) (ii)	Roundwood Hazardous Waste Treatment Facility Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving physico-chemical treatment	Treatment of process sludges
A10	S5.4 A(1) a) (ii)	Aldwarke 2 Water Treatment plant Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day involving physico chemical treatment , and excluding activities covered by Council Directive 91/271/EEC concerning urban waste-water treatment	Treatment of process effluent
A11	S5.4 A(1) b) (iv)	ACP Scrap Yard Hammer Mill Shredder Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day involving treatment in shredders of metal waste	Size reduction processing in shredders of metal waste for feeding into the metals production processes
A12	S5.4 A(1) b) (iii)	Waste Management Area Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day involving treatment of slags and ashes	Processing of slags and ashes from metal production processes into materials for return to the metal production processes or re-use within the site for recovery purposes
	Directly Associated Activity		
A13	Directly associated activity	Ingot casting	(1)
A14	Directly associated activity	Surface rectification	(1)
A15	Directly associated activity	Heat treatment	(1)
A16	Directly associated activity	Product machining, finishing, handling and storage	(1)

Table S1.1 activities			
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity and WFD Annex I and II operations	Limits of specified activity and waste types
A17	Directly associated activity	Plant activities including:- Steam raising, compressed air and cooling	(1)
A18	Directly associated activity	Storage of chemicals associated with Aldwarke 2 Water Treatment plant	(1)
A19	Directly associated activity	Storage and handling of waste scrap metals prior to treatment	(1)
	Description of activities for waste operations	Limits of activities	
A20	<p>R13: Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)</p> <p>R3: Recycling/reclamation of organic substances which are not used as solvents</p> <p>R4: Recycling/reclamation of metals and metal compounds</p> <p>R5: Recycling/reclamation of other inorganic materials</p>	<p>Waste Management Area Storage and bulking up of wastes produced at this site and others including asbestos</p> <p>Treatment operations shall be limited to: Physical treatment including separation, screening, crushing, baling, for the purpose of recovery.</p> <p>Waste types as specified in Table 2.3</p>	

Note (1): The limits of specified and associated activities collectively comprise all activities carried out in the installation between the receipt of raw materials to the supply of finished products including the storage and handling of wastes.

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application	The response to questions 2.3 given in Section 2.3 of the application	28/08/01
Change in Operation Letters	To allow the use of Scaffolding for Stack Monitoring platforms and non standard platforms. To allow the use of Hazardous Manganese Shotblast dust in the EAF.	12/09/12
Variation EPR/XP3030FC/V002	Application support document Scrap shredding facility environmental impact assessment (all sections except noise)	Duly made 08/11/13
Response to Regulation 60 Notice dated 13/09/13	Technical standards detailed in response to BAT conclusions 1, 2, 5-18, 87-89, 91-93 and 95 of the notice provided under Regulation 60 of Environmental Permitting Regulations. Best available techniques as described in BAT conclusions under Directive 2010/75/EU of the European Parliament and of the Council on industrial emissions for iron and steel production	30/04/14
Ambient air reporting	The extension to the deadline to submit an annual performance report for ambient air monitoring by 31 st January (requirement in Condition 4.2.2) is extended to 28 th February until further notice	16/01/2015

Schedule 2 – Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	Specification
-	-

Table S2.2 Permitted waste types and quantities for use in the melting shop	
Maximum quantity	None specified
Waste code	Description
02	Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing
02 01	wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing
02 01 10	Waste metal
10	Wastes from thermal processes
10 02	wastes from the iron and steel industry
10 02 07*	solid wastes from gas treatment containing dangerous substances
10 02 08	solid wastes from gas treatment other than those mentioned in 10 02 07
10 02 10	mill scales
10 02 99	Wastes not otherwise specified (Downstream scrap)
10 09	wastes from casting of ferrous pieces
10 09 05*	casting cores and moulds which have not undergone pouring containing dangerous substances
10 09 06	casting cores and moulds which have not undergone pouring other than those mentioned in 10 09 05
10 09 07*	casting cores and moulds which have undergone pouring containing dangerous substances
10 09 08	casting cores and moulds which have undergone pouring other than those mentioned in 10 09 07
12	Wastes 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 01	ferrous metal filings and turnings
12 01 02	ferrous metal dust and particles
12 01 03	non-ferrous metal filings and turnings
12 01 04	non-ferrous metal dust and particles
12 01 16*	Waste blasting materials containing dangerous substances
15	Waste packaging, absorbents, wiping cloths, filter materials and protective clothing not otherwise specified
15 01	packaging (including separately collected municipal packaging waste)
15 01 04	Metallic packaging
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

Table S2.2 Permitted waste types and quantities for use in the melting shop	
Maximum quantity	None specified
Waste code	Description
16 02	wastes from electrical and electronic equipment
16 02 14	discarded equipment other than those mentioned in 16 02 09 to 16 02 13
16 02 16	components removed from discarded equipment other than those mentioned in 16 02 15
16 08	spent catalysts
16 08 07*	spent catalysts contaminated with dangerous substances
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 05	Iron and steel
19	Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use
19 01	wastes from incineration or pyrolysis of waste
19 01 02	Ferrous metals removed from bottom ash
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 metals
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

Table S2.3 Permitted waste types and quantities for processing at the site	
Maximum quantity	None specified
Waste code	Description
10	Wastes from thermal processes
10 02	wastes from the iron and steel industry
10 02 01	Wastes from the processing of slags
10 02 02	Unprocessed slag
10 02 07*	solid wastes from gas treatment containing dangerous substances
10 02 08	solid wastes from gas treatment other than those mentioned in 10 02 07
10 02 10	Mill scales
10 02 11	Wastes from cooling-water treatment containing oil

Table S2.3 Permitted waste types and quantities for processing at the site	
Maximum quantity	None specified
Waste code	Description
10 02 12	Wastes from cooling-water treatment other than those mentioned in 10 02 11
10 02 13*	sludges and filter cakes from gas treatment containing dangerous substances M
10 02 14	sludges and filter cakes from gas treatment other than those mentioned in 10 02 13
10 02 15	Other sludges and filter cakes
10 02 99	wastes not otherwise specified
10 13	wastes from manufacture of cement, lime and plaster and articles and products made from them
10 13 04	Waste from calcination and hydration of lime
10 13 14	Waste concrete and concrete sludge
13	
13 05	oil/water separator contents
13 05 02*	sludges from oil/water separators
13 05 03*	interceptor sludges
13 05 06*	oil from oil/water separators
13 05 07*	oily water from oil/water separators
13 05 08*	mixtures of wastes from grit chambers and oil/water separators
13 07	wastes of liquid fuels
13 07 01*	fuel oil and diesel
13 07 03*	other fuels (including mixtures)
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 03	end-of-life tyres
16 01 07*	oil filters
16 06	batteries and accumulators
16 06 01*	lead batteries
16 06 02*	Ni-Cd batteries
16 06 03*	mercury-containing batteries
16 06 04	alkaline batteries (except 16 06 03)
16 06 05	other batteries and accumulators
16 11	waste linings and refractories
16 11 01	carbon-based linings and refractories from metallurgical processes containing dangerous substances
16 11 02	carbon-based linings and refractories from metallurgical processes others than those mentioned in 16 11 01
16 11 03*	other linings and refractories from metallurgical processes containing
16 11 04	other linings and refractories from metallurgical processes other than those mentioned in 16 11 03
16 11 05*	linings and refractories from non-metallurgical processes containing dangerous substances
16 11 06	linings and refractories from non-metallurgical processes others than those mentioned in 16 11 05

Table S2.3 Permitted waste types and quantities for processing at the site	
Maximum quantity	None specified
Waste code	Description
17	Construction and demolition wastes (including excavated soil from contaminated sites)
17 01	concrete, bricks, tiles and ceramics
17 01 01	concrete
17 01 02	bricks
17 01 03	tiles and ceramics
17 01 06*	mixtures of, or separate fractions of concrete, bricks, tiles and ceramics containing dangerous substances
17 01 07	mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06
17 05	soil (including excavated soil from contaminated sites), stones and dredging spoil
17 05 03*	soil and stones containing dangerous substances
17 05 04	soil and stones other than those mentioned in 17 05 03
17 05 07*	track ballast containing dangerous substances
17 05 08	track ballast other than those mentioned in 17 05 07
17 06	insulation materials and asbestos-containing construction materials
17 06 03*	other insulation materials consisting of or containing dangerous substances
17 06 04	insulation materials other than those mentioned in 17 06 01 and 17 06 03
17 09	other construction and demolition wastes
17 09 03*	other construction and demolition wastes (including mixed wastes) containing dangerous substances
17 09 04	mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03
19	Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use
19 02	wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)
19 02 05*	sludges from physico/chemical treatment containing dangerous substances
19 02 06	sludges from physico/chemical treatment other than those mentioned in 19 02 05
19 02 07*	oil and concentrates from separation
19 09 01	solid waste from primary filtration and screenings
19 08	wastes from waste water treatment plants not otherwise specified
19 08 11*	sludges containing hazardous substances from biological treatment of industrial waste water
19 08 12	sludges from biological treatment of industrial waste water other than those mentioned in 19 08 11
19 08 13*	sludges containing hazardous substances from other treatment of industrial waste water
19 08 14	sludges from other treatment of industrial waste water other than those mentioned in 19 08 13
19 09	wastes from the preparation of water intended for human consumption or water for industrial use
19 09 02	sludges from water clarification
19 09 05	saturated or spent ion exchange resins
19 09 06	solutions and sludges from regeneration of ion exchangers
19 09 99	wastes not otherwise specified

Table S2.3 Permitted waste types and quantities for processing at the site	
Maximum quantity	None specified
Waste code	Description
19 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 01	paper and cardboard
19 12 04	plastic and rubber
19 12 05	glass
19 12 06*	wood containing dangerous substances
19 12 07	wood other than that mentioned in 19 12 06
19 12 08	textiles
19 12 09	minerals (for example sand, stones
19 12 10	combustible waste (refuse derived fuel)
19 12 11*	other wastes (including mixtures of materials) from mechanical treatment of waste containing dangerous substances
19 12 12	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11

Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
RA1	Aldwarke No. 1 Boiler Chimney	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	200 mg/m ³	Hourly Average	6 Months	BS EN 14792
RA2	Aldwarke No. 2 Boiler Chimney					
RA3	Aldwarke No. 3 Boiler Chimney					
RA3A	Aldwarke No. 3A Boiler Chimney					
RA4	Aldwarke Primary Mill No. 4 Stack (Soaking Pits 5-8)	Oxides of Nitrogen (as NO ₂)	250 mg/m ³	Hourly Average	6 Months	BS EN 14792
		Lead	No limit set	Periodic over minimum 30 minute, maximum 8 hour period	6 Months	BS EN 14385
RA5	Aldwarke Primary Mill No. 5 Stack (Soaking Pits 9-12)	Oxides of Nitrogen (as NO ₂)	250 mg/m ³	Hourly Average	6 Months	BS EN 14792
		Lead	No limit set	Periodic over minimum 30 minute, maximum 8 hour period	6 Months	BS EN 14385
RA6	Aldwarke Primary Mill No. 6 Stack (Soaking Pits 13-16)	Oxides of Nitrogen (as NO ₂)	700 mg/m ³	Hourly Average	6 months	BS EN 14792
RA7	Aldwarke Primary Mill No. 7 Stack (Soaking Pits 17-20)	Oxides of Nitrogen (as NO ₂)	350 mg/m ³	Hourly Average	6 Months	BS EN 14792
		Lead	No limit set	Periodic over minimum 30 minute, maximum 8 hour period	6 Months	BS EN 14385
RA9	Thrybergh Bar Mill Billet Re-heating furnace	Particulate matter	No limit set	Hourly average	Annual	BS EN 13284-1 and MID
		Oxides of Nitrogen (as NO ₂)	660 mg/m ³	Hourly Average	Quarterly	BS EN 14792
		Lead	No limit set	Periodic over minimum 30 minute, maximum 8 hour period	6 Months	BS EN 14385

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
RA21 & RA22	New Lead Bag Filter & Old Lead Bag Filter Plant	Particulate matter	5 mg/m ³	daily average	Continuous	Principles of BS EN 14181 ⁽³⁾
		Metals Ni, As, Cd, Cr, Cu, Hg, Fe, Zn and their compounds (total)	No limits set	Periodic over minimum 30 minute, maximum 8 hour period	Annual	BS EN 14385
		Lead	1.5 mg/m ³	Periodic over minimum 30 minute, maximum 8 hour period	6 Months	BS EN 14385
RA28	Melting Shop Vacuum Arc Degasser (VAD) and Vacuum Oxygen Decarburiser (VOD)	Particulate matter	10 mg/m ³	Hourly average	Annual	BS EN 13284-1 and MID
RA40, RA41, RA51, RA52, RA56, RA58, RA83, RA102	See Table 3.1(a) below	Particulate	10 mg/m ³	Hourly Average	Annual	BS EN 13284-1 and MID
RA74, RA75	BBR Batch Annealing	Oxides of Nitrogen (as NO ₂) ⁽¹⁾	200mg/m ³	Hourly Average	6 months	BS EN 14792
RA76 A,B,E & F	BBR Hardening & tempering Furnace	Oxides of Nitrogen (as NO ₂) ⁽¹⁾	200mg/m ³	Hourly Average	6 months	BS EN 14792
RA78		Oxides of Nitrogen (as NO ₂) ⁽¹⁾	450mg/m ³	Hourly Average	3 months	BS EN 14792
RA101	AMS Bag Filter Plant Ridge Vent Serving EAF	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	No limit set	Hourly average	Every 3 months	BS EN 15267-3 [Note 1]
		Particulate matter	5 mg/m ³	Daily average	continuous	Principles of BS EN 14181 ⁽³⁾
		Sulphur dioxide	No limit set	Hourly average	Annual	BS EN 15267-3 ⁽¹⁾
		VOC's	No limit set	Hourly average	Annual	
		Dioxins and furans (ITEQ)	0.1 ng/m ³	Minimum 6 hour; maximum 8 hour	Annual	BS EN1948: Parts 1,2 and 3

Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
		Metals Ni, As, Cd, Cr, Cu, Pb, Hg, Fe, Zn and their compounds (total)	No limit set	periodic over minimum 30 minute, maximum 8 hour period	Annual	BS EN 14384
		Mercury and its compounds	0.05 mg/m ³ (¹)	periodic over minimum 4 hours	Annual	BS EN 13211

Note 1: Refers to any representative manual spot sample

Note 2: certification to the MCERTS performance standards indicates compliance with BS EN 15267-3

Note 3: Continuous Emission Monitoring systems shall be quality assured using the following general principles in BS EN 14181: functionality testing with full linearity, and verification with parallel tests using a standard reference method.

Emission point ref	Source	location on site plan
RA1	Aldwarke No. 1 Boiler Chimney	Point RA1 on site plan
RA2	Aldwarke No. 2 Boiler Chimney	Point RA2 on site plan
RA3	Aldwarke No. 3 Boiler Chimney	Point RA3 on site plan
RA3A	Aldwarke No. 3A Boiler Chimney	Point RA3A on site plan
RA4	Aldwarke Primary Mill No. 4 Stack (Soaking Pits 5-8)	Point RA4 on site plan
RA5	Aldwarke Primary Mill No. 5 Stack (Soaking Pits 9-12)	Point RA5 on site plan
RA6	Aldwarke Primary Mill No. 6 Stack (Soaking Pits 13-16)	Point RA6 on site plan
RA7	Aldwarke Primary Mill No. 7 Stack (Soaking Pits 17-20)	Point RA7 on site plan
RA9	Thrybergh Bar Mill Billet Re-heating furnace	Point RA9 on site plan
RA21	New Lead Bag Filter	Point RA21 on site plan
RA22	Old Lead Bag Filter Plant	Point RA22 on site plan
RA23-RA26	Caster Spray Chamber Vents and Caster Water Quench	Point RA23-RA26 on site plan
RA27	ABC Vacuum Arc Degasser (VAD)	Point RA27 on site plan
RA28	Melting Shop Vacuum Arc Degasser (VAD) and Vacuum Oxygen Decarburiser (VOD)	Point RA28 on site plan
RA40	AFB Grinders 1 & 3 Bag Filter	Point RA40 on site plan
RA41	AFB Grinders 2 & 4 Bag Filter	Point RA41 on site plan
RA51	TBM E & W Abrasive Cutter Bag Filter (ACO I)	Point RA51 on site plan
RA52	TBM Billet Line Shot Blast Bag Filter	Point RA52 on site plan
RA56	TBM Process Abrasive Cutter Bag Filter (PACO I)	Point RA56 on site plan
RA58	TBM E & W Abrasive Cutter Bag Filter (ACO II)	Point RA58 on site plan
RA74	Heat Treatment Furnace No. 4	Point RA74 on site plan
RA75	Heat Treatment Furnace No. 5	Point RA75 on site plan
RA76A	Harding Furnace annealing section	Point RA76 on site plan

Emission point ref	Source	location on site plan Parameter
RA76B	Harding Furnace annealing section	Point RA76 on site plan
RA76C	Harding Furnace quenching section	Point RA76 on site plan
RA76D	Harding Furnace quenching section	Point RA76 on site plan
RA76E	Harding Furnace tempering section	Point RA76 on site plan
RA76F	Harding Furnace tempering section	Point RA76 on site plan
RA78	Bright Annealing furnace (3 Flues)	Point RA78 on site plan
RA79	Oil Quench Tank Vent	Point RA79 on site plan
RA81	Landgraffe Lathe	Point RA81 on site plan
RA82	Kieselring Lathe	Point RA82 on site plan
RA83	Metal Shredder Stack	Point RA83 on site plan
RA101	AMS Bag Filter Plant Ridge Vent	Point RA101 on site plan
RA102	Casting Bay Fume Extraction Point Plant Stack	Point RA102 on site plan
RA103	Lime Silo	Point RA103 on site plan

Note 1: certification to the MCERTS performance standards indicates compliance with BS EN 15267-3

Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
RWA2 on site plan in plan – discharge from Aldwarke 2 Water Treatment plant	Steelmaking process, Boiler Plant, and surface water – including scrap yard.	pH	6-10	Spot sample ⁽¹⁾	Weekly ⁽³⁾	BS EN 872
		Total suspended solids	40 mg/ml ⁽²⁾			
		Total hydrocarbons	5 mg/l			
		Lead	0.2 mg/l			BS 6068-2.29 ISO 8288, BS EN ISO 11885
		Nickel	0.5 mg/l			
		Arsenic	0.01 mg/l			
		Cadmium	0.05 mg/l			
		Chromium	0.2 mg/l			
		Copper	0.5 mg/l			
		Zinc	0.5 mg/l			
Iron Compounds	5 mg/l					
RWA3 on site plan in plan - emission to River Don	Slag storage area surface water – including scrap yard	pH	6-10	Spot sample	Monthly	BS EN 872
		Total suspended solids	40 mg/ml			SCA blue book 105 ISBN 011751957X
		Total hydrocarbons	5 mg/l			

Table S3.2 Point Source emissions to water (other than sewer) and land – emission limits and monitoring requirements						
Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
RWT1 on site plan in plan - emission to River Don	Thrybergh Mill surface water	pH	6 – 10.5	Spot Sample	Monthly	BS EN 872
		Total suspended solids	40 mg/ml			
		Total hydrocarbons	5 mg/l			
RWT2 on site plan in plan - emission to River Don	Thrybergh Mill process water and surface water	pH	6-10.5	Spot sample	Monthly	BS EN 872
		Total hydrocarbons	5 mg/l			
RWT3 on site plan in plan - emission to River Don	Thrybergh Mill surface water	pH	6-10	Spot sample	Monthly	BS EN 872
		Total suspended solids	40 mg/ml			
		Total hydrocarbons	5 mg/l			
RWT4 on site plan in plan - emission to River Don	Thrybergh Bar Mill water treatment plant	pH	6-10	Spot sample	Weekly ⁽³⁾	BS EN 872
		Total suspended solids	40 mg/ml			
		Total hydrocarbons	5 mg/l			
		Lead	0.2 mg/l			BS 6068-2.29 ISO 8288, BS EN ISO 11885
		Nickel	0.5 mg/l			
		Cadmium	0.05 mg/l			
		Chromium	0.2 mg/l			
		Copper	0.5 mg/l			
		Zinc	0.5 mg/l			
Iron Compounds	5 mg/l					
RWR5 & RWR6 on site plan in plan - emission to Roundwood Brook	Surface water	pH	6-10	Spot sample	Monthly	BS EN 872
		Total suspended solids	40 mg/ml			
		Total hydrocarbons	5 mg/l			

Note 1: Qualified random sample or 24-hour composite sample

Note 2: Limit applies for measured flows up to 280m³/hr

Note 3: Limit shall be complied with if 95% of all weekly samples or daily composite samples during a rolling half yearly period does not exceed the limit given in table S3.2 and the peak spot sample value or composite sample does not exceed 1.5 times the limit value.

Table S3.3 Ambient air monitoring requirements				
Location or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
AA1, AA2, AA3 Ambient Air Monitoring Points	Wind Direction	Continuous	Turnkey Optical Particulate Analysis System (TOPAS) monitor or other agreed method	AA1 Aldwarke SK448947 AA2 Thrybergh SK459955 AA3 Roundwood SK447962
	Wind Velocity			
	Lead $\mu\text{g}/\text{m}^3$ (1)			
	PM10 Particulate Matter			
	PM2.5 Particulate Matter			
	PM1.0 Particulate Matter			
Co-located with AA1, AA2, AA3	NOx	Continuous Monthly Tube	NOx Tube	

(1) Lead to be sampled on a continuous basis (through a filter) to produce a monthly average .

Schedule 4 – Reporting

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

Table S4.1 Reporting of monitoring data			
Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Emissions to air Parameters as required by condition 3.5.1.	RA9, RA28, RA31, RA40, RA41, RA51, RA52, RA56, RA58, RA83, RA101, RA102	Every 12 months	1 January
	RA1, RA2, RA3, RA3A RA4, RA5, RA6, RA7, RA21, RA22, RA30, RA31, RA32	Every 6 months	1 January, 1 July
	RA9, R101, RA74, RA75, RA76A, RA76B, RA76E, RA76F, RA78	Every 3 months	1 January, 1 April, 1 July, 1 October
Emissions to water Parameters as required by condition 3.5.1	RWA2, RWA3, RWT1, RWT2, RWT3, RWT4, RWR5, RWR6	Every 3 months	1 January, 1 July
Ambient air monitoring Parameters as required by condition 3.5.1	AA1, AA2, AA3	Every 12 months	1 January

Table S4.2: Annual production/treatment	
Parameter	Units
-	-

Table S4.3 Performance parameters		
Parameter	Frequency of assessment	Units
Water usage	Annually	tonnes
Energy usage	Annually	MWh
Total raw material used in steelmaking	Annually	tonnes

Table S4.4 Reporting forms		
Media/parameter	Reporting format	Date of form
Air	Form air 1 or other form as agreed in writing by the Environment Agency	01/01/2015
Air – Annual NOx	Form Air 2 or other form as agreed in writing by the Environment Agency	01/01/2015
Air – Annual Particulate	Form Air 3 or other form as agreed in writing by the Environment Agency	01/01/2015
Air – Annual Metals	Form Air 4 or other form as agreed in writing by the Environment Agency	01/01/2015
Air – CEM Particulate	Form Air 5 or other form as agreed in writing by the Environment Agency	01/01/2015
Water and Land	Form water 1 or other form as agreed in writing by the Environment Agency	01/01/2015

Table S4.4 Reporting forms		
Media/parameter	Reporting format	Date of form
Sewer	Form sewer 1 or other form as agreed in writing by the Environment Agency	01/01/2015
Water usage	Form water usage 1 or other form as agreed in writing by the Environment Agency	01/01/2015
Energy usage	Form energy 1 or other form as agreed in writing by the Environment Agency	01/01/2015
Ambient Air - TOPAS	Form Ambient 1 or other form as agreed in writing by the Environment Agency	01/01/2015

Schedule 5 – Notification

These pages outline the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the EP Regulations.

Part A

Permit Number	
Name of operator	
Location of Facility	
Time and date of the detection	

(a) Notification requirements for any operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment	
To be notified immediately	
Date and time of the event	
Description of the incident or accident.	
Reference or description of the location of the incident or accident	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken to limit the environmental consequences of such an incident or accident	
Measures taken to prevent further possible incidents or accidents	

(b) Notification requirements for the breach of any permit condition	
To be notified immediately	
Permit condition	
Intent of condition	
Details of breach and, where relevant,:	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	
Measures taken to ensure compliance is restored within the shortest possible time	

Part B – to be submitted as soon as practicable

Any more accurate information on the matters for notification under Part A.	
Further measures taken, or intended to be taken, to ensure compliance is restored and to prevent a recurrence of the incident or accident	
Further measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission	
The dates of any unauthorised emissions from the facility in the preceding 24 months.	

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 – Interpretation

“accident” means an accident that may result in pollution.

“application” means the application for this permit, together with any additional information supplied by the operator as part of the application and any response to a notice served under Schedule 5 to the EP Regulations.

“authorised officer” means any person authorised by the Environment Agency under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, any power specified in section 108(4) of that Act.

“background concentration” means such concentration of that substance as is present in:

- for emissions to surface water, the surface water quality up-gradient of the site; or
- for emissions to sewer, the surface water quality up-gradient of the sewage treatment works discharge.

“disposal”. Means any of the operations provided for in Annex I to Directive 2008/98/EC of the European Parliament and of the Council on waste.

“emissions to land” includes emissions to groundwater.

“EP Regulations” means The Environmental Permitting (England and Wales) Regulations SI 2010 No.675 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

“emissions of substances not controlled by emission limits” means emissions of substances to air, water or land from the activities, either from the emission points specified in schedule 3 or from other localised or diffuse sources, which are not controlled by an emission or background concentration limit.

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

‘Hazardous property’ has the meaning in Annex III of the Waste Framework Directive

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

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

‘List of Wastes’ means the list of wastes established by Commission Decision 2000/532/EC replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste and Council Decision 94/904/EC establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous waste, as amended from time to time.

“MCERTS” means the Environment Agency’s Monitoring Certification Scheme.

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

“recovery” means any of the operations provided for in Annex II to Directive 2008/98/EC of the European Parliament and of the Council on waste.

‘Waste code’ means the six digit code referable to a type of waste in accordance with the List of Wastes and in relation to hazardous waste, includes the asterisk

“Waste Framework Directive” or “WFD” means Waste Framework Directive 2008/98/EC of the European Parliament and of the Council on waste

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

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

- in relation to emissions from combustion sources not subject to BAT-AELs for air emissions, the concentration at a temperature of 273.15K, at a pressure of 101.3 kPa, with correction for water vapour content and correction for 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 101.3 kPa, with no correction for water vapour content; and/or

“year” means calendar year ending 31 December.

Schedule 7 – Site plan



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END OF PERMIT