Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Tandom Metallurgical Group Limited

Tandom Metallurgical Group Limited
Third Avenue
Radnor Park Industrial Estate
Congleton
Cheshire
CW12 4XE

Variation application number

EPR/QP3634KX/V003

Permit number

EPR/QP3634KX

Tandom Metallurgical Group Limited
Permit number EPR/QP3634KX

Introductory note

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

Under the Environmental Permitting (England & Wales) Regulations 2016 (schedule 5, part 1, paragraph 19) a variation may comprise a consolidated permit reflecting the variations and a notice specifying the variations included in that consolidated permit.

Changes introduced by this variation notice/statutory review

This variation has been issued as a result of an application made by the operator. The application was made to regularise the permit by incorporating (a) two 'listed' activities, under Sections 2.2 Part A(1)(a) and Section 3.5 Part B(a) respectively as described below, and (b) the following changes that have taken place on-site since the operator took over the installation:

- an extension to the installation boundary to accommodate additional development in the form of a Process Building, Storage Building and associated external bunkers to allow for the sorting of materials, and a weighbridge together with 20 car parking spaces;

- replacement of the original A1 filter plant that served the installation's furnaces and relocation of emission point A1 to a more central point of the installation. The new A1 filter plant serves the TR12 rotary furnace, and the C & CH reverberatory furnaces;

- replacement of the original A2 filter plant that served the Rodecs delacquering plant. The new A2 filter plant serves the DF rotary furnace, RD reverberatory furnace and the two electric induction furnaces; and

- the installation of a new cartridge filter connected to the Dross Processing Plant (DPP) with emissions to air via new emission point A3. This plant is designed to abate emissions of particulates only as the DPP is a non-combustion process.

The Environment Agency has also updated the permit 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 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 14, 15, 18, 19, 74, 75, 77, 78, 79, 80, 81, 82, 83, 84, 85, and 86. The operator is already compliant with the BATc with the exception of 5, 6 and 10. We have set an improvement condition in the varied permit to track progress against future compliance.

The original permit and subsequent variations have been consolidated. The schedules specify the changes made to the permit. Schedule 1 of the notice specifies the conditions that have been varied and schedule 2 comprises a consolidated permit which reflects the variations being made. All the conditions of the permit have been varied and are subject to the right of appeal.

Brief description of the process

Purpose

The main purpose of the activities at the installation is processing scrap aluminium to produce cast aluminium product. As such several listed activities under the Environmental Permitting (England and Wales) Regulations 2016 take place on site:

- Section 2.2 Part A(1)(a) - *producing non-ferrous metals from ore, concentrates or secondary raw materials by metallurgical, chemical or electrolytic activities.*

  This activity relates to producing non-ferrous metal from aluminium drosses and metallics in rotary furnaces.

- Section 2.2A(1)(b) - *melting, including making alloys of, non-ferrous metals, including recovered products and the operation of non-ferrous metal foundries where (i) the plant has a melting capacity of more than 4 tonnes per day for lead or cadmium or 20 tonnes per day for all other metals, and (ii) any furnace (other than a vacuum furnace), bath or other holding vessel used in the plant for the melting has a design holding capacity of 5 or more tonnes.*

  This activity relates to the melting of bulk scrap, ingot, drosses and decontaminated swarf in reverberatory furnaces; and the melting of high grade scrap and alloying additions in induction furnaces to produce master alloys.

- Section 3.5B(a) - *the crushing, grinding or other size reduction, other than the cutting of stone, or the grading, screening or heating of any designated mineral or mineral product except where the operation of the activity is unlikely to result in the release into the air of particulate matter*.

  This activity relates to the processing of drosses and slags (both from on-site production and external suppliers) by crushing, milling, magnetic separation and screening in the Dross Processing Plant (DPP) to recover non-ferrous metals for further processing.

There are also Directly Associated Activities (DAA's) taking place on site which support the main activities, including the handling and storage of secondary metals raw materials, and solid wastes, and the operation of air emissions abatement plant.

A waste operation also takes place on the site, this not being associated with the main purpose of the installation, for the processing of bulk metal scrap and non-ferrous drosses and skimmings, prior to storage and off-site dispatch.

Location

The Tandom Metallurgical Group Limited site is located on the Radnor Park Industrial Estate, Congleton in Cheshire. The site covers an area of approximately 3 hectares and consists of an office block, laboratory, storage areas for swarf, dross and final products, warehouse and production buildings, along with open yards for the processing and storage of scrap. Production includes the melting of scrap metal in furnaces which operates 24 hours per day, 7 days a week.

With respect to designated habitats and species, there is one European site within 10km of the installation, namely Midland Meres & Mosses Phase 1 Ramsar site. There is a single Site of Special Scientific Interest (SSSI) within 2km of the installation, namely the River Dane SSSI. Also there are numerous non-statutory conservation sites (in this case, Local Wildlife Sites and Ancient Woodlands) within 2km of the installation.

Raw Materials

The main raw materials used on the site are scrap metal, dross and skimmings, alloying additions and fluxes. Scrap includes wrought, extruded, rolled, swarf and cast aluminium and stainless steels, as well as used beverage cans (UBC) and aluminium foils from waste coffee pots. The scrap is inspected, sorted, graded, processed (cropping, cutting, shredding, baling) prior to either melting in a furnace or dispatch off-site. Swarf, which may contain residual oil and water, is stored in a dedicated area surrounded by a catchment gully to contain oily water. Drainage from this area passes through a triple chamber separator to prevent oil entering the foul sewer. Drosses and skimmings are processed to recover their metal content and melted in rotary furnaces. Alloying additions are inspected on receipt and stored under cover prior to use.

Melting and Casting

The aluminium and alloying additions are melted in a series of furnaces comprising as follows - 1 x 8 tonne rotary, 1 x 12 tonne rotary, 1 x 12 tonne reverberatory, 1 x 23 tonne reverberatory, 1 x 23 tonne tilt reverberatory, 1 x 1 tonne electric induction, and 1 x 1.5 tonne electric induction.

The main production furnaces are controlled by programmable logic controllers which automatically control the burners and process conditions during melting to minimise fume production. The smaller furnaces are manually controlled. The rotary furnaces are used primarily to recover aluminium contained in drosses, both internal and externally sourced, using salt flux. The flux is used to remove impurities and aid recovery. The reverberatory furnaces are used to melt bulk scrap including molten metal received from the rotary furnaces. The two electric induction furnaces are used to melt high grade scraps and additions to produce master alloys.

Following melting, the molten aluminium is then cast into moulds to produce ingots which are cooled and stored prior to final dispatch.

Releases to Air and Abatement Techniques

Potential releases to air include particulates, oxides of nitrogen, sulphur, volatile organic compounds and dioxins and furans.

The furnaces are all fitted with extraction systems to collect fume released during the melting process and to control fume releases around the doors during charging of raw materials. All emissions from the extraction systems pass through abatement plant, which includes lime and activated carbon injection to control acid gases and bag filtration to remove particulate matter prior to release to atmosphere.

Releases to Water

Uncontaminated rainfall run-off from the existing part of the site and roof drainage from buildings on the area of the site extension is discharged into the public surface water sewer. Potentially contaminated run-off from the swarf storage area on the existing part of the site, and surface run-off from the area of the site extension is collected and passed through an oil interceptor within each area, prior to discharge as trade effluent into the public foul sewer.

Monitoring

Emissions from the main abatement stacks (emission points A1 and A2) are continuously monitored for particulate concentrations. Air emissions for a variety of other pollutants are monitored on a regular basis to ensure compliance with emission limits. Emission point A3 which serves the Dross Processing Plant will be subject to an annual extractive sample for dust (particulate).

Trade effluent from the oil interceptors is routinely and regularly sampled and monitored prior to discharge to sewer under a trade effluent consent with the sewerage undertaker, United Utilities.

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 received (BL4662) (EPR/BL4362/A001 06/04/08)	Received 21/12/01	Duly made but insufficient detail
Response to request for information; Schedule 4 Notice 01	Request dated 13/02/02	Response dated 22/04/02
Response to request for information; Schedule 4 Notice 02	Request dated 25/06/02	Response received undated
Response to request for information; Schedule 4 Notice 03	Request dated 15/07/02	Response received undated
Replacement application BL4362 (EPR/BL4362/A001 06/04/08)	Received October 2002	Incorporates initial application and responses to all the Schedule 4 Notices
Requests by Environment Agency to extend determination to 31/07/02, 31/10/02 and 28/02/03	Requests dated 11/04/02, 16/07/02 and 15/10/02	Requests accepted 15/04/02, 19/07/02 and 18/10/02
Additional information received	19/02/03	Exclusion of hygiene fan system
Permit BL4362 determined (EPR/BL4362/A001 06/04/08)	25/02/03	
Variation application DP3435SQ (EPR/BL4362/V002 06/04/08)	Received 23/12/04 Determined 04/02/05	Inclusion of Rodecs equipment
Variation application DP3338LD (EPR/BL4362/V003 06/04/08)	Determined 10/04/06	Lead and manganese monitoring added to requirements
Variation application SP3038UN (EPR/BL4362/V004 06/04/08)	Determined 30/07/07	Introduction of Tardis and new release point for the Rodecs plant
Variation application EPR/BL4362IQ/V005	Received 11/12/08 Determined 15/01/09	Installation of UBC shredder and hygiene filter
Transfer application EPR/QP3634KX/T001 (full transfer of permit BL4362 to Tandom Metallurgical Group Limited)	Received 22/09/09	Whole transfer
Transfer determined EPR/QP3634KX	Effective 16/10/09	
Regulation 60 Notice dated 16/12/16 (Notice requiring information for statutory review of permit)	Response Received 07/04/17	Technical standards detailed in response to the information notice. Information to demonstrate that relevant BAT Conclusions are met for the non-ferrous metals industries as detailed in document reference L174.
Environment Agency initiated variation for statutory review of permit EPR/QP3634KX/V002	Review commenced 01/07/17	Statutory review of permit – Non-ferrous metals BAT Conclusions published 30/06/16

Status log of the permit		
Description	**Date**	**Comments**
Application (variation and consolidation) EPR/QP3634KX/V003	Duly made 25/01/18	Application to regularise and consolidate permit through the addition of listed activities, revision of emission points, and incorporating an extension to the installation boundary
Additional information received in response to Schedule 5 Notice dated 07/03/18 EPR/QP3634KX/V003	08/07/18	Including noise modelling data files, drainage plan for site extension, oil interceptor drawings, and revised H1 assessment
Additional information received in response to email request for information dated 15/02/19 EPR/QP3634KX/V003	22/05/19 & 24/09/19	Information in relation to the processing of swarf and oil contaminated metals, oil interceptor capacity, hygiene filter, site drainage, waste tonnages, and compliance with NFM BAT conclusions
Additional information received in response to email request for information dated 11/02/2020. EPR/QP3634KX/V003	16/03/2020 & 27/03/2020	Confirmation of waste types and quantities and BAT compliance status
Variation determined EPR/QP3634KX/V003 (variation and consolidation) also incorporating Agency initiated variation (ref. V002) following statutory review of permit (PAS / Billing Ref: XP3732JH)	15/06/2020	Statutory review of permit – Non-ferrous metals BAT Conclusions published 30/06/16 Varied and consolidated permit issued

End of introductory note

Notice of variation and consolidation

The Environmental Permitting (England and Wales) Regulations 2016

The Environment Agency in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2016 varies and consolidates

Permit number

EPR/QP3634KX

Issued to

Tandom Metallurgical Group Limited ("the operator")

whose registered office is

Third Avenue
Radnor Park Industrial Estate
Congleton
Cheshire
CW12 4XE

company registration number 06661279

to operate an installation at

Tandom Metallurgical Group Limited
Third Avenue
Radnor Park Industrial Estate
Congleton
Cheshire
CW12 4XE

to the extent set out in the schedules.

The notice shall take effect from 15/06/2020

Name	Date
Sifelani Mpofu	**15/06/2020**

Authorised on behalf of the Environment Agency

Schedule 1

All conditions have been varied by the consolidated permit as a result of the application made by the operator.

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/QP3634KX

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/QP3634KX/V003 authorising,

Tandom Metallurgical Group Limited ("the operator"),

whose registered office is

Third Avenue
Radnor Park Industrial Estate
Congleton
Cheshire
CW12 4XE

company registration number 06661279

to operate an installation at

Tandom Metallurgical Group Limited
Third Avenue
Radnor Park Industrial Estate
Congleton
Cheshire
CW12 4XE

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

Name	Date
Sifelani Mpofu	**15/06/2020**

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.

1.2 Energy efficiency

1.2.1 For the following activities referenced in schedule 1, table S1.1 (AR1 to AR8) 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 For the following activities referenced in schedule 1, table S1.1 (AR1 to AR8) 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.

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").

2.2 The site

2.2.1 The activities shall not extend beyond the site, being the land shown edged in red on the site boundary plan at schedule 7 to this permit.

2.3 Operating techniques

2.3.1 For the following activities referenced in schedule 1, table S1.1 (AR1 to AR8) 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 S2.4; 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.

Hazardous waste storage and treatment

2.3.7 Hazardous waste shall not be mixed, either with a different category of hazardous waste or with other waste, substances or materials, unless it is authorised by schedule 1 table S1.1 and appropriate measures are taken.

2.4 Improvement programme

2.4.1 The operator shall complete the improvements specified in schedule 1 table S1.3 by the date specified in that table unless otherwise agreed in writing by the Environment Agency.

2.4.2 Except in the case of an improvement which consists only of a submission to the Environment Agency, the operator shall notify the Environment Agency within 14 days of completion of each improvement.

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 S3.1a, S3.1b, 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 table S3.1a and S3.1b.

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, S3.2 and S3.3 unless otherwise agreed in writing by the Environment Agency.

3.6 Pests

3.6.1 The activities shall not give rise to the presence of pests which are likely to cause pollution, hazard or annoyance outside the boundary of the site. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved pests management plan, have been taken to prevent or where that is not practicable, to minimise the presence of pests on the site.

3.6.2 The operator shall:

(a) if notified by the Environment Agency, submit to the Environment Agency for approval within the period specified, a pests management plan which identifies and minimises risks of pollution from pests;

(b) implement the pests management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.7 Fire prevention

3.7.1 The operator shall take all appropriate measures to prevent fires on site and minimise the risk of pollution from them including, but not limited to, those specified in any approved fire prevention plan.

3.7.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to a risk of fire, submit to the Environment Agency for approval within the period specified, a fire prevention plan which prevents fires and minimises the risk of pollution from fires;

(b) implement the fire prevention plan, from the date of approval, 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 For the following activities referenced in schedule 1, table S1.1 (AR1 to AR8) 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 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 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.

4.3.4 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.

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

4.3.6 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**
AR1	Section 2.2 A(1)(a)	Producing non-ferrous metals from ore, concentrates or secondary raw materials by metallurgical, chemical or electrolytic activities R4: Recycling / reclamation of metals and metal compounds *[Producing non-ferrous metals from aluminium drosses and metallics in rotary furnaces]*	From charging of rotary furnaces to casting of ingots. Waste types as specified in Table 2.2
AR2	Section 2.2 A(1)(b)	Melting, including making alloys of, non-ferrous metals, including recovered products and the operation of non-ferrous metal foundries where- (i) the plant has a melting capacity of more than 4 tonnes per day for lead or cadmium or 20 tonnes per day for all other metals, and (ii) any furnace (other than a vacuum furnace), bath or other holding vessel used in the plant for the melting has a design holding capacity of 5 or more tonnes R4: Recycling / reclamation of metals and metal compounds *[Melting bulk scrap, ingot, drosses and decontaminated swarf in reverberatory furnaces; and melting high grade scrap and alloying additions in induction furnaces to produce master alloys]*	From charging of reverberatory and induction furnaces to casting of ingots. Waste types as specified in Table 2.2
AR3	Section 3.5B(a)	Crushing, grinding or other size reduction, other than the cutting of stone, or the grading, screening or heating of any designated mineral or mineral product except where the operation of the activity is unlikely to result in the release into the air of particulate matter.	From charging of feed hopper to separation of output streams for further processing on-site, or dispatch off-site. Waste types as specified in Table 2.3

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**
		R4: Recycling / reclamation of metals and metal compounds *[Operation of the Dross Processing Plant (DPP) for the processing of aluminium drosses and metallics by crushing, milling, magnetic separation and screening to separate non-ferrous metals for further recovery]*	
Directly Associated Activity			
AR4	Storage and handling of wastes comprising secondary metals raw materials	Storage and handling of incoming wastes including bulk aluminium scrap, waste UBCs and coffee pots, aluminium drosses and metallics, and internally produced revert. R3: Recycling/reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes) R4: Recycling/ reclamation of metals and metal compounds 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)	From the receipt of waste materials to transfer to furnaces or dross processing plant. Activities comprise of storage, sorting, grading, cropping, shredding, separation and baling, as required for each material. Separation using an overband magnet and eddy current machine. Includes the storage of separated plastics and coffee grounds pending dispatch off-site for recovery and/or disposal. Plastics shall be stored in a covered bay on an impermeable surface. Waste types as specified in Table 2.2
AR5	Storage and handling of raw materials	Storage and handling of process chemicals including salts, fluxes and alloying additions, oxygen and nitrogen	From the receipt of raw materials to transfer to furnaces or associated processing equipment
AR6	Storage and handling of solid wastes	Storage and handling of wastes produced on-site, including DPP waste, dross, salt slag, and bag filter dust R13: Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage,	From generation of wastes to dispatch off-site for recovery. Includes the cooling of salt slag under extraction and filtration in a dross press.

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**
		pending collection, on the site where it is produced)	
AR7	Off gas collection, abatement and discharge systems	Bag filters serving the melting furnaces discharging via emission points A1 and A2; and the cartridge filter serving the Dross Processing Plant discharging via emission point A3	From receipt of flue gases to emissions to atmosphere, including extraction air from the dross pan cooling bay, routed via bag filter and emission point A1
AR8	Treatment and discharge of trade effluent (site drainage)	Phase separation via interceptor of oily water arising from the outdoor storage of loose aluminium swarf	From the receipt of effluent at the interceptor to discharge of treated effluent to foul sewer Treatment capacity shall not exceed 10 tonnes per day
Description of activities for waste operations			
AR9	R4: Recycling/ reclamation of metals and metal compounds 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)	Processing of bulk metal scrap and non-ferrous drosses and skimmings, involving a combination of the following activities: storage, sorting, grading, shredding, cutting, cropping, and baling; prior to off-site dispatch. There shall be no treatment of batteries (other than sorting and separating from other wastes if necessary) prior to dispatch. Lead acid batteries shall be stored separately from any non-lead acid batteries in containers, with an impermeable, acid resistant base and a lid that prevents the ingress of water. Non-lead acid batteries (e.g. nickel-cadmium) shall be stored separately from lead acid batteries in lidded plastic drums, or similar. Oil contaminated wastes to be stored on an impermeable surface with a sealed drainage system. Non-ferrous drosses and skimmings to be stored undercover on an impermeable surface. Waste types as specified in Table 2.4	

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Replacement application	The response to question 2.3 given in section 6 of the replacement application, except the references to Hygiene Air in section 6.6.1 provided 19/02/03	October 2002
Response to Schedule 4 Part 1 Notice 01	Response to items 7.2, 7.3, 7.4, 7.5, 7.6 and 7.7	22/04/02
Response to Schedule 4 Part 1 Notice 02	Response to item 6 (4 parts)	Undated (October 2002)
Response to Regulation 60 Notice – request for further information dated 06/12/16	Technical standards detailed in response to BAT Conclusions 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 14, 15, 18, 19, 74, 75, 77, 78, 79, 80, 81, 82, 83, 84, 85, and 86 of the notice provided under Regulation 60(1) 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 non-ferrous metals industries.	07/04/17
Variation application EPR/QP3634KX/V003	Application forms C2 and C3 and relevant supporting information	19/01/18
Response to Schedule 5 Notice dated 07/03/18	Site layout plan for area of site extension	08/07/18
Additional information received in response to email request for information dated 15/02/19 EPR/QP3634KX/V003	Further information and/or clarification on BAT Conclusions Nos. 3, 5, 76, 81, 82, 83 and84 under Directive 2010/75/EU of the European Parliament and of the Council on industrial emissions for non-ferrous metals industries.	22/05/19 & 24/09/19
Additional information received in response to email request for information dated 11/02/2020. EPR/QP3634KX/V003	Waste types and quantities specified in “Document 3 (1.3 Treatment of Waste Table)v2 002”	16/03/2020

Table S1.3 Improvement programme requirements		
Reference	**Improvement Condition**	**Completion date**
IC1	The Operator shall submit, for approval by Environment Agency, a report setting out progress to achieving the ‘Narrative’ BAT where BAT is currently not achieved, but will be achieved before 30th June 2020. The report shall include, but not be limited to, the following: 1) Methodology for achieving BAT. 2) Associated targets / timelines for reaching compliance by 30th June 2020. The report shall address the following BAT Conclusions:	30/06/2020

Table S1.3 Improvement programme requirements		
Reference	**Improvement Condition**	**Completion date**
	• **BAT 5** (collection and treatment of diffuse emissions to air and water) • **BAT 6** (to set up an implement an action plan on diffuse dust emissions, as part of the environmental management system) • **BAT 10** (monitoring of stack emissions to air) Refer to BAT Conclusions for a full description of the BAT requirement.	
IC2	The Operator shall undertake a review of periodic monitoring for emissions to air of TVOC, HF and HCl from emission points A1 and A2. The review will be made with reference to BAT 10 of the BAT Conclusions for the Non-Ferrous Metals Industries (Commission Implementing Decision EU2016/1032) and shall justify, with appropriate evidence, the frequency of monitoring to be employed at the installation from 30 June 2020. The evidence required under this condition shall include analysis and interpretation of monitoring results for each substance, and performance against the relevant BAT-AEL. Consideration should be given to *inter alia* the nature of the raw materials, fluxing agents, refining chemicals used; operational stability; and process monitoring associated with operation of abatement plant. The quantity of monitoring data considered must be justified and be sufficient so as to demonstrate that the results are statistically representative of emissions during normal operations, covering the concentration range and mass emission rate of substances emitted at all stages of the process. A report on the above review shall be submitted to the Environment Agency to facilitate agreement in writing of the appropriate monitoring provision at the installation.	30/06/2020
IC3	The Operator shall submit to the Environment Agency a report, or reports, setting out progress with the investigations proposed in their response to our Regulation 60 Notice dated 16/12/16 BAT, with a view to strengthening their BAT compliance against the following non-ferrous metals BAT conclusions: • BAT 7f & 7m - applicability / feasibility of providing dust/gas extraction at the transfer and tipping points for dust-forming materials (BAT 7f), and investigating the costs for enclosing any remaining dust generating processes to prevent discharge of dust in rainwater (BAT 7m) • BAT 8l - review of current fittings for the delivery of liquid and liquefied gas with the manufacturers, and retrofitting with automatic sealing connection systems if applicable • BAT 9c, 9d & 9e - review of the effectiveness of the secondary hooding and/or ductwork installed on charging, tapping and drossing points on furnaces	Within 12 months of effective date of variation V003

Table S1.3 Improvement programme requirements		
Reference	**Improvement Condition**	**Completion date**
	• BAT 75a & 75b - feasibility of implementing preheating of the furnace charge with exhaust gas (BAT 75a), and recirculation of the gases with unburnt hydrocarbons back into the burner system (BAT 75b) • BAT 79a, 79b & 79c - feasibility of cooling other furnace drosses under inert gas in dross skips (BAT 79a), and for allocating further areas for dross/slag storage under cover and with air extraction (technique 79b/c).	
IC4	The Operator shall submit to the Environment Agency for approval a report on the assessment of noise emissions from the installation following implementation of the proposals contained in variation application EPR/QP3634KX/V003 for the area of the site extension, in order to validate the noise modelling results in the application. The assessment shall be undertaken by a suitably qualified noise and acoustics professional and shall follow the procedure within British Standard BS 4142: 2014+A1:2019, *Methods for rating and assessing industrial and commercial sound*. Should the assessment indicate an adverse impact (or worse) at residential receptors, the report should also contain the following information: a) review / appraisal of existing mitigation measures; b) consideration of potential improvements to reduce noise emissions, e.g. either physical abatement, enhanced management / operational controls, or a combination of both; c) a proposed timescale for implementing any such identified improvements.	Within 12 months of effective date of variation V003, or otherwise agreed with the Environment Agency
IC5	The Operator shall submit a report for approval by the Environment Agency on the baseline conditions of soil and groundwater in the area of the site extension at the installation, to determine the state of soil and groundwater contamination so as to make a quantified comparison with the state upon definitive cessation of activities provided for in Article 22(3) of the IED. The report shall contain information, supplementary to that already provided in variation application EPR/QP3634KX/V003 needed to meet the information requirements of Article 22(2) of the IED, including but not limited to the following: • an assessment to determine whether there is a possibility of soil and/or groundwater contamination from relevant hazardous substances (RHS) used, stored or released, and from non-hazardous substances; • a review of existing soil and groundwater measurements to determine whether an appropriate baseline can be established for RHS and non-hazardous substances in the locations that they will be used, stored or released, having regard to the possibility of soil and/or groundwater contamination;	Within 12 months of effective date of variation V003

Table S1.3 Improvement programme requirements		
Reference	**Improvement Condition**	**Completion date**
	proposals to undertake site investigation works should additional soil and groundwater measurements be required to enable an appropriate baseline to be established for RHS and non-hazardous substances in the locations that they will be used, stored or released, having regard to the possibility of soil and/or groundwater contamination.	

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 production / melting of non-ferrous metals (activities AR1 & AR2), and handling and storage of secondary metals raw materials (activity AR4)	
Maximum quantity	**The total quantity of wastes received shall not exceed 41,450 tonnes per annum**
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 03 04	materials unsuitable for consumption or processing (coffee grounds)
10	**Wastes from thermal processes**
10 03	**Wastes from aluminium thermal metallurgy**
10 03 09*	black drosses from secondary production
10 03 15*	skimmings that are flammable or emit, upon contact with water, flammable gases in hazardous quantities
10 03 16	skimmings other than those mentioned in 10 03 15
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 03	non-ferrous metal filings and turnings
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 (coffee capsules)
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 18	non-ferrous metal
16 02	**wastes from electrical and electronic equipment**
16 06	**batteries and accumulators**
17	**Construction and demolition wastes (including excavated soil from contaminated sites)**
17 04	**metals (including their alloys)**

Table S2.2 Permitted waste types and quantities for production / melting of non-ferrous metals (activities AR1 & AR2), and handling and storage of secondary metals raw materials (activity AR4)	
Maximum quantity	**The total quantity of wastes received shall not exceed 41,450 tonnes per annum**
Waste code	**Description**
17 04 01	copper, bronze, brass
17 04 02	aluminium
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 10	**wastes from shredding of metal-containing wastes**
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 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
20 01 99	other fractions not otherwise specified (coffee capsules)

Table S2.3 Permitted waste types and quantities for dross processing plant (activity AR3)	
Maximum quantity	**The total quantity of wastes received shall not exceed 15,000 tonnes per annum**
Waste code	**Description**
10	**Wastes from thermal processes**
10 03	**Wastes from aluminium thermal metallurgy**
10 03 09*	black drosses from secondary production
10 03 15*	skimmings that are flammable or emit, upon contact with water, flammable gases in hazardous quantities
10 03 16	skimmings other than those mentioned in 10 03 15

Table S2.4 Permitted waste types and quantities for waste operation (activity AR9)	
Maximum quantity	**The total quantity of wastes received shall not exceed 39,600 tonnes per annum**
Waste code	**Description**
10	**Wastes from thermal processes**
10 04	**wastes from lead thermal metallurgy**
10 04 01*	slags from primary and secondary production

Table S2.4 Permitted waste types and quantities for waste operation (activity AR9)	
Maximum quantity	**The total quantity of wastes received shall not exceed 39,600 tonnes per annum**
Waste code	**Description**
10 04 02*	dross and skimmings from primary and secondary production
10 05	**wastes from zinc thermal metallurgy**
10 05 01	slags from primary and secondary production
10 05 10*	dross and skimmings that are flammable or emit, upon contact with water, flammable gases in hazardous quantities
10 05 11	dross and skimmings other than those mentioned in 10 05 10
10 06	**wastes from copper thermal metallurgy**
10 06 01	slags from primary and secondary production
10 06 02	dross and skimmings from primary and secondary production
10 08	**wastes from other non-ferrous thermal metallurgy**
10 08 09	other slags
10 08 10*	dross and skimmings that are flammable or emit, upon contact with water, flammable gases in hazardous quantities
10 08 11	dross and skimmings other than those mentioned in 10 08 10
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 03	non-ferrous metal filings and turnings
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 (coffee capsules)
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
16 01 22	components not otherwise specified
16 06	**batteries and accumulators**
16 06 01*	lead batteries
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

Table S2.4 Permitted waste types and quantities for waste operation (activity AR9)	
Maximum quantity	**The total quantity of wastes received shall not exceed 39,600 tonnes per annum**
Waste code	**Description**
17 04 05	iron and steel
17 04 07	mixed metals
17 04 11	cables other than those mentioned in 17 04 10
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 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 33*	batteries and accumulators included in 16 06 01, 16 06 02 or 16 06 03 and unsorted batteries and accumulators containing these batteries
20 01 40	metals

Schedule 3 – Emissions and monitoring

Table S3.1a Point source emissions to air – emission limits and monitoring requirements Effective until 29 June 2020						
Emission point ref. & location	**Source**	**Parameter**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
A1 [shown marked Filter Plant A1 on site layout plan in Schedule 7]	Extraction serving TR12 rotary furnace, C and CH reverberatory furnaces, dross pan cooling bay, and bag filter	Particulate	10 mg/m^3	Daily average (of 24 hourly averages)	Continuous	Principles of BS EN 14181
A1 [shown marked Filter Plant A1 on site layout plan in Schedule 7]	Extraction serving TR12 rotary furnace, C and CH reverberatory furnaces, dross pan cooling bay, and bag filter	Particulate	5 mg/m^3 Note 1	Monthly average (of 30 daily averages)	Continuous	Principles of BS EN 14181
A1 [shown marked Filter Plant A1 on site layout plan in Schedule 7]	Extraction serving TR12 rotary furnace, C and CH reverberatory furnaces, dross pan cooling bay, and bag filter	Particulate	5 mg/m^3	Extractive sample	Annual	BS EN 13284-1 and MID
A1 [shown marked Filter Plant A1 on site layout plan in Schedule 7]	Extraction serving TR12 rotary furnace, C and CH reverberatory furnaces, dross pan cooling bay, and bag filter	Oxides of nitrogen (as NO_2)	100 mg/m^3	Extractive sample	Annual	BS EN 14792
A1 [shown marked Filter Plant A1 on site layout plan in Schedule 7]	Extraction serving TR12 rotary furnace, C and CH reverberatory furnaces, dross pan cooling bay, and bag filter	Sulphur dioxide	50 mg/m^3	Extractive sample	Annual	BS EN 14791
A1 [shown marked Filter Plant A1 on site	Extraction serving TR12 rotary furnace, C and CH	Hydrogen chloride	10 mg/m^3	Monthly average or extractive sample	Annual	BS EN 1911

Table S3.1a Point source emissions to air – emission limits and monitoring requirements Effective until 29 June 2020						
Emission point ref. & location	**Source**	**Parameter**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
layout plan in Schedule 7]	reverberatory furnaces, dross pan cooling bay, and bag filter					
A1 [shown marked Filter Plant A1 on site layout plan in Schedule 7]	Extraction serving TR12 rotary furnace, C and CH reverberatory furnaces, dross pan cooling bay, and bag filter	Volatile organic compounds (as carbon)	20 mg/m^3	Monthly average or extractive sample	Annual	BS EN 12619
A1 [shown marked Filter Plant A1 on site layout plan in Schedule 7]	Extraction serving TR12 rotary furnace, C and CH reverberatory furnaces, dross pan cooling bay, and bag filter	Dioxins (ITEQ)	0.1 ng/m^3	Extractive sample	Annual	BS EN 1948: Parts 1, 2 and 3 and MID
A1 [shown marked Filter Plant A1 on site layout plan in Schedule 7]	Extraction serving TR12 rotary furnace, C and CH reverberatory furnaces, dross pan cooling bay, and bag filter	Fluorides (as HF)	1 mg/m^3	Extractive sample	Annual	BS ISO 15713 and MID
A2 [shown marked Filter Plant A2 on site layout plan in Schedule 7]	Extraction serving DF rotary furnace, RD reverberatory furnace, two induction furnaces, and bag filter	Particulate	10 mg/m^3	Daily average (of 24 hourly averages)	Continuous	Principles of BS EN 14181
A2 [shown marked Filter Plant A2 on site layout plan in Schedule 7]	Extraction serving DF rotary furnace, RD reverberatory furnace, two induction furnaces, and bag filter	Particulate	5 mg/m^3 Note 1	Monthly average (of 30 daily averages)	Continuous	Principles of BS EN 14181
A2 [shown marked Filter Plant A2 on site	Extraction serving DF rotary furnace,	Particulate	5 mg/m^3	Extractive sample	Annual	BS EN 13284-1 and MID

Table S3.1a Point source emissions to air – emission limits and monitoring requirements Effective until 29 June 2020						
Emission point ref. & location	**Source**	**Parameter**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
layout plan in Schedule 7]	RD reverberatory furnace, two induction furnaces, and bag filter					
A2 [shown marked Filter Plant A2 on site layout plan in Schedule 7]	Extraction serving DF rotary furnace, RD reverberatory furnace, two induction furnaces, and bag filter	Oxides of nitrogen (as NO_2)	100 mg/m^3	Extractive sample	Annual	BS EN 14792
A2 [shown marked Filter Plant A2 on site layout plan in Schedule 7]	Extraction serving DF rotary furnace, RD reverberatory furnace, two induction furnaces, and bag filter	Sulphur dioxide	50 mg/m^3	Extractive sample	Annual	BS EN 14791
A2 [shown marked Filter Plant A2 on site layout plan in Schedule 7]	Extraction serving DF rotary furnace, RD reverberatory furnace, two induction furnaces, and bag filter	Hydrogen chloride	10 mg/m^3	Monthly average or extractive sample	Annual	BS EN 1911
A2 [shown marked Filter Plant A2 on site layout plan in Schedule 7]	Extraction serving DF rotary furnace, RD reverberatory furnace, two induction furnaces, and bag filter	Volatile organic compounds (as Carbon)	20 mg/m^3	Monthly average or extractive sample	Annual	BS EN 12619
A2 [shown marked Filter Plant A2 on site layout plan in Schedule 7]	Extraction serving DF rotary furnace, RD reverberatory furnace, two induction furnaces, and bag filter	Dioxins (ITEQ)	0.1 ng/m^3	Extractive sample	Annual	BS EN 1948: Parts 1, 2 and 3 and MID

Table S3.1a Point source emissions to air – emission limits and monitoring requirements Effective until 29 June 2020						
Emission point ref. & location	**Source**	**Parameter**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
A2 [shown marked Filter Plant A2 on site layout plan in Schedule 7]	Extraction serving DF rotary furnace, RD reverberatory furnace, two induction furnaces, and bag filter	Fluorides (as HF)	1 mg/m^3	Extractive sample	Annual	BS ISO 15713 and MID
A3 [shown marked FP A3 on site layout plan in Schedule 7]	Extraction serving Dross Processing Plant, and cartridge filter	Particulate	5 mg/m^3	Extractive sample	Annual	BS EN 13284-1 and MID

Note 1 - Not more than one calendar monthly average particulates value during any rolling 12 month period shall exceed 5.5 mg Nm^{-3}

Note 2 – This frequency rate may be changed by agreement with the Environment Agency

Table S3.1b Point source emissions to air – emission limits and monitoring requirements Effective from 30 June 2020						
Emission point ref. & location	**Source**	**Parameter**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
A1 [shown marked Filter Plant A1 on site layout plan in Schedule 7]	Extraction serving TR12 rotary furnace, C and CH reverberatory furnaces, dross pan cooling bay, and bag filter	Particulate	5 mg/m^3	Daily average	Continuous	Principles of BS EN 14181
A1 [shown marked Filter Plant A1 on site layout plan in Schedule 7]	Extraction serving TR12 rotary furnace, C and CH reverberatory furnaces, dross pan cooling bay, and bag filter	Particulate	5 mg/m^3	Average over the sampling period	Once per year	BS EN 13284-1 and MID
A1 [shown marked Filter Plant A1 on site layout plan in Schedule 7]	Extraction serving TR12 rotary furnace, C and CH reverberatory furnaces, dross pan cooling bay, and bag filter	Hydrogen chloride (HCl)	10 mg/m^3	Average over the sampling period	Once per year	BS EN 1911

Table S3.1b Point source emissions to air – emission limits and monitoring requirements Effective from 30 June 2020						
Emission point ref. & location	**Source**	**Parameter**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
A1 [shown marked Filter Plant A1 on site layout plan in Schedule 7]	Extraction serving TR12 rotary furnace, C and CH reverberatory furnaces, dross pan cooling bay, and bag filter	TVOC (as C)	20 mg/m^3	Average over the sampling period	Once per year	BS EN 12619
A1 [shown marked Filter Plant A1 on site layout plan in Schedule 7]	Extraction serving TR12 rotary furnace, C and CH reverberatory furnaces, dross pan cooling bay, and bag filter	Dioxins and furans (PCDD/F) (ng I-TEQ/Nm^3)	0.1 ng I-TEQ/m^3	Average over the sampling period (of at least 6 hours)	Once per year	BS EN 1948: Parts 1, 2 and 3 and MID
A1 [shown marked Filter Plant A1 on site layout plan in Schedule 7]	Extraction serving TR12 rotary furnace, C and CH reverberatory furnaces, dross pan cooling bay, and bag filter	Hydrogen fluoride (HF)	1 mg/m^3	Average over the sampling period	Once per year	BS ISO 15713 and MID
A2 [shown marked Filter Plant A2 on site layout plan in Schedule 7]	Extraction serving DF rotary furnace, RD reverberatory furnace, two induction furnaces, and bag filter	Particulate	5 mg/m^3	Daily average	Continuous	Principles of BS EN 14181
A2 [shown marked Filter Plant A2 on site layout plan in Schedule 7]	Extraction serving DF rotary furnace, RD reverberatory furnace, two induction furnaces, and bag filter	Particulate	5 mg/m^3	Average over the sampling period	Once per year	BS EN 13284-1 and MID
A2 [shown marked Filter Plant A2 on site layout plan in Schedule 7]	Extraction serving DF rotary furnace, RD reverberatory furnace, two induction	Hydrogen chloride (HCl)	10 mg/m^3	Average over the sampling period	Once per year	BS EN 1911

Table S3.1b Point source emissions to air – emission limits and monitoring requirements Effective from 30 June 2020						
Emission point ref. & location	**Source**	**Parameter**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
	furnaces, and bag filter					
A2 [shown marked Filter Plant A2 on site layout plan in Schedule 7]	Extraction serving DF rotary furnace, RD reverberatory furnace, two induction furnaces, and bag filter	TVOC (as C)	20 mg/m^3	Average over the sampling period	Once per year	BS EN 12619
A2 [shown marked Filter Plant A2 on site layout plan in Schedule 7]	Extraction serving DF rotary furnace, RD reverberatory furnace, two induction furnaces, and bag filter	Dioxins and furans (PCDD/F) (ng I-TEQ/Nm^3)	0.1 ng I-TEQ/m^3	Average over the sampling period (of at least 6 hours)	Once per year	BS EN 1948: Parts 1, 2 and 3 and MID
A2 [shown marked Filter Plant A2 on site layout plan in Schedule 7]	Extraction serving DF rotary furnace, RD reverberatory furnace, two induction furnaces, and bag filter	Hydrogen fluoride (HF)	1 mg/m^3	Average over the sampling period	Once per year	BS ISO 15713 and MID
A3 [shown marked FP A3 on site layout plan in Schedule 7]	Extraction serving Dross Processing Plant, and cartridge filter	Particulate	5 mg/m^3	Average over the sampling period	Once per year	BS EN 13284-1 and MID

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**
W1 [shown marked W1 on site layout plan in schedule 7] inspection manhole	Rainfall run-off (site drainage) from existing site	No parameters set	No limit set	-	-	-
W2 [shown marked W2 on site layout plan	Rainfall run-off (roof drainage)	No parameters set	No limit set	-	-	-

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**
in schedule 7] inspection manhole	from area of site extension					

Table S3.3 Point source emissions to sewer, effluent treatment plant or other transfers off-site– emission limits and monitoring requirements						
Emission point ref. & location	**Source**	**Parameter**	**Limit (incl. Unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
S1 [shown marked S1 on site layout plan in schedule 7] emission to United Utilities foul sewer	Trade effluent (site drainage from swarf storage area) via interceptor serving existing site	No parameters set	-	-	-	-
S2 [shown marked S2 on site layout plan in schedule 7] emission to United Utilities foul sewer	Site drainage via interceptor serving area of site extension	No parameters set	-	-	-	-

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.	A1, A2 & A3	Every 12 months	1 Jan, 1 Apr, 1 Jul, 1 Oct

Table S4.2: Annual production/treatment	
Parameter	**Units**
Aluminium production (amount of final product)	tonnes per annum

Table S4.3 Performance parameters		
Parameter	**Frequency of assessment**	**Units**
Water usage	Annually	m^3
Energy usage	Annually	MWh

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	01/06/2020
Water usage	Form water usage 1 or other form as agreed in writing by the Environment Agency	01/06/2020
Energy usage	Form energy 1 or other form as agreed in writing by the Environment Agency	01/06/2020
Waste subject to condition 4.2.5	Waste tonnage return from the Environment Agency website or other form as agreed in writing by the Environment Agency	01/06/2020
Other performance indicators	Form performance 1 or other form as agreed in writing by the Environment Agency	01/06/2020

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 malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution	
To be notified within 24 hours of detection	
Date and time of the event	
Reference or description of the location of the event	
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, or intended to be taken, to stop any emission	
Description of the failure or accident.	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
Measures taken, or intended to be taken, to stop the emission	

Time periods for notification following detection of a breach of a limit	
Parameter	**Notification period**

(c) Notification requirements for the detection of any significant adverse environmental effect	
To be notified within 24 hours of detection	
Description of where the effect on the environment was detected	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

Part B – to be submitted as soon as practicable

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	
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.

“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, i.e. 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.

“emissions to land” includes emissions to groundwater.

“EP Regulations” means The Environmental Permitting (England and Wales) Regulations SI 2016 No.1154 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 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.

“monthly average” means the average over a period of a calendar month of valid daily averages obtained by continuous measurements

“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.

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 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 101.3 kPa, 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 101.3 kPa, 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 101.3 kPa; 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 101.3 kPa, and with an oxygen content of 3% dry for liquid and gaseous fuels and 6% dry for solid fuels.

For the determination of the toxic equivalence (I-TEQ) value stated as a release limit the mass concentrations of the following dioxins and furans have to be multiplied with their equivalence factors before summing.

Equivalence factor:

Dioxins

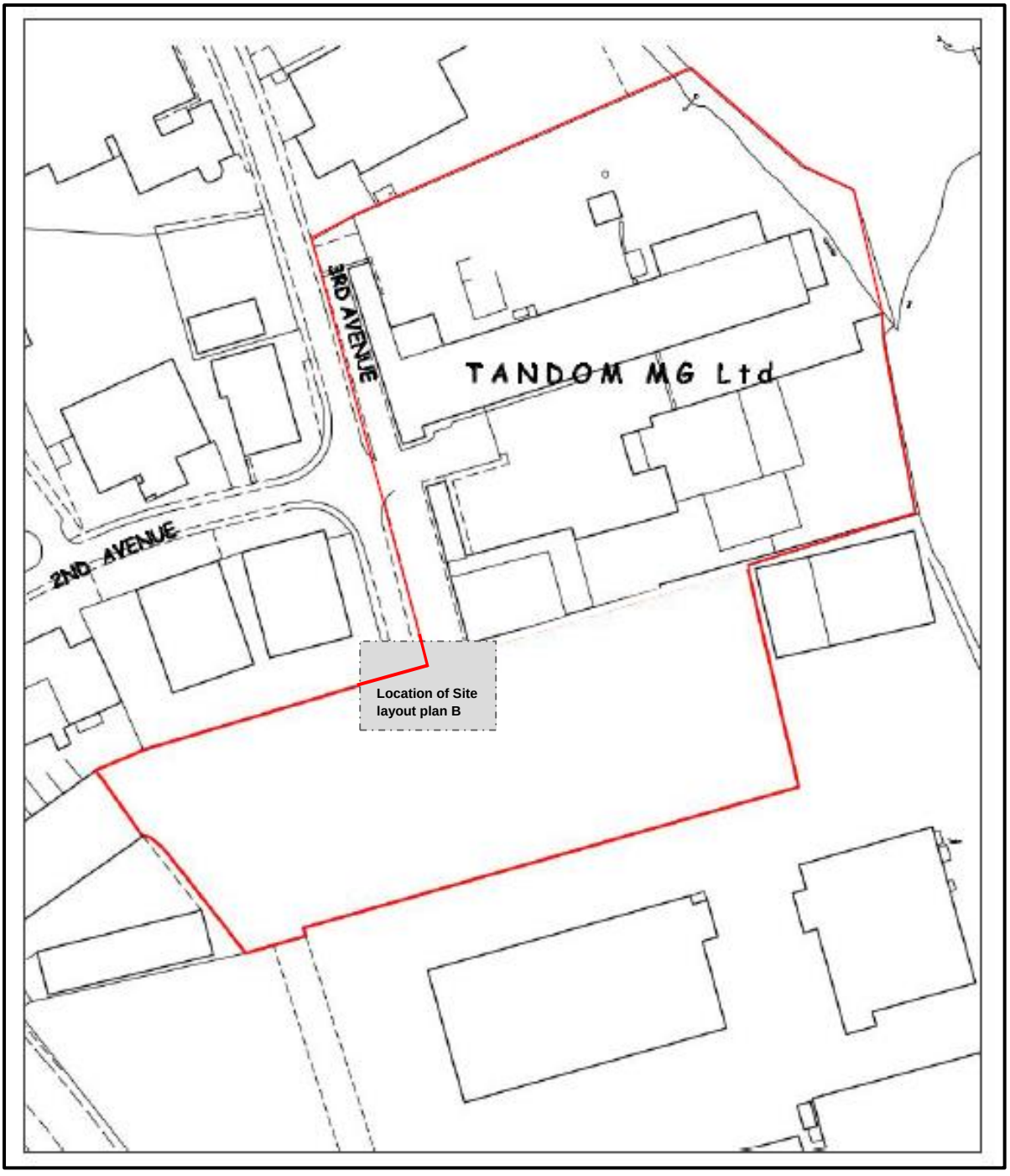
2,3,7,8 Tetrachlordibenzodioxin (TCDD)	1
1,2,3,7,8 Pentachlordibenzodioxin (PeCDD)	0.5
1,2,3,4,7,8 Hexachlordibenzodioxin (HxCDD)	0.1
1,2,3,7,8,9 Hexachlordibenzodioxin (HxCDD)	0.1
1,2,3,6,7,8 Hexachlordibenzodioxin (HxCDD)	0.1
1,2,3,4,6,7,8 Heptachlordibenzodioxin (HpCDD)	0.01
Octachlordibenzodioxin (OCDD)	0.001

Furans

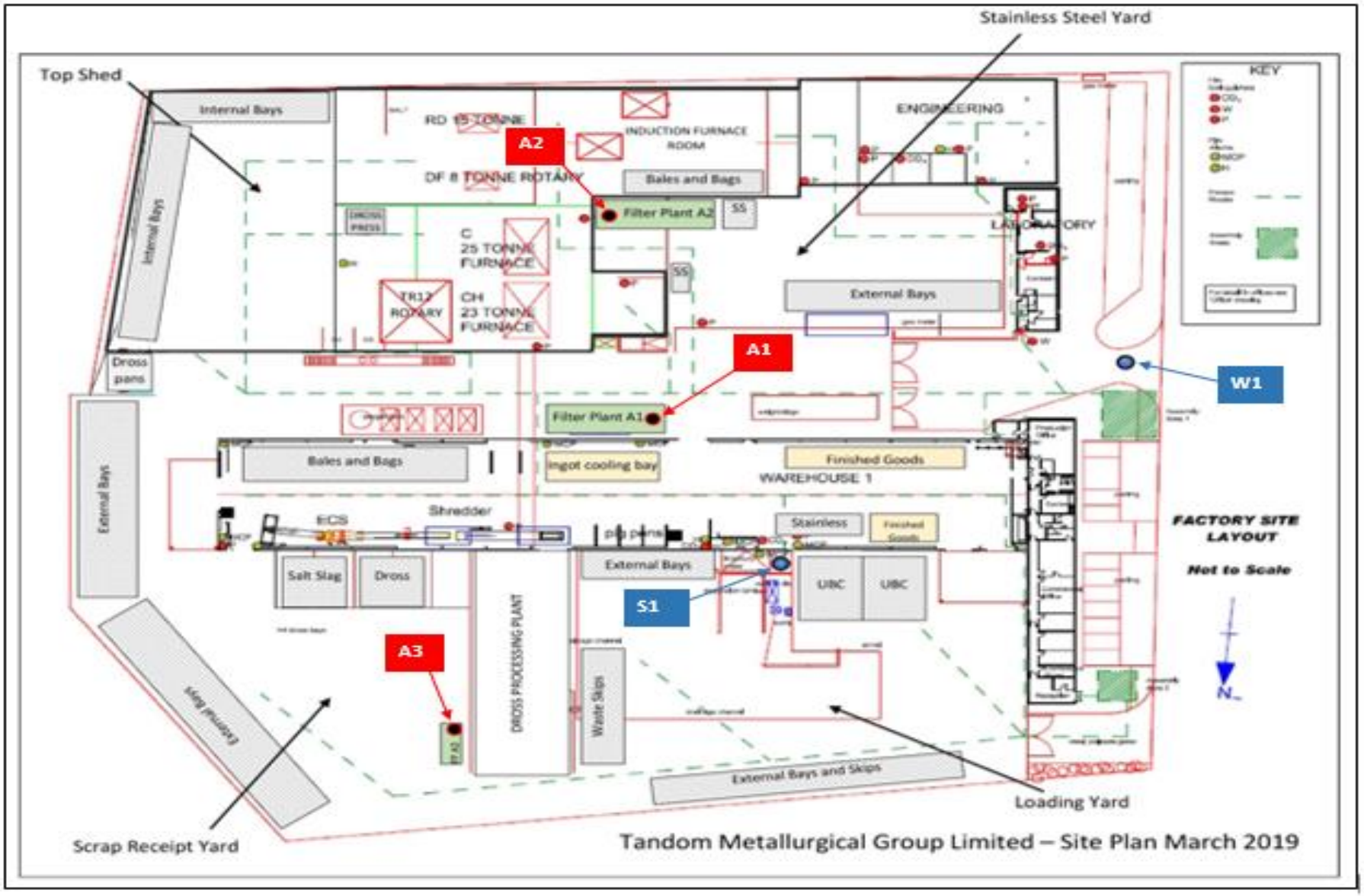
2,3,7,8 Tetrachlorodibenzofuran (TCDF)	0.1
2,3,4,7,8 Pentachlorodibenzofuran (PeCDF)	0.5
1,2,3,7,8 Pentachlorodibenzofuran (PeCDF)	0.05
1,2,3,4,7,8 Hexachlordibenzofuran (HxCDF)	0.1
1,2,3,7,8,9 Hexachlordibenzofuran (HxCDF)	0.1
1,2,3,6,7,8 Hexachlordibenzofuran (HxCDF)	0.1
2,3,4,6,7,8 Hexachlordibenzofuran (HxCDF)	0.1
1,2,3,4,6,7,8 Heptachlordibenzofuran (HpCDF)	0.01
1,2,3,4,7,8,9 Heptachlordibenzofuran (HpCDF)	0.01
Octachlordibenzofuran (OCDF)	0.001

“year” means calendar year ending 31 December.

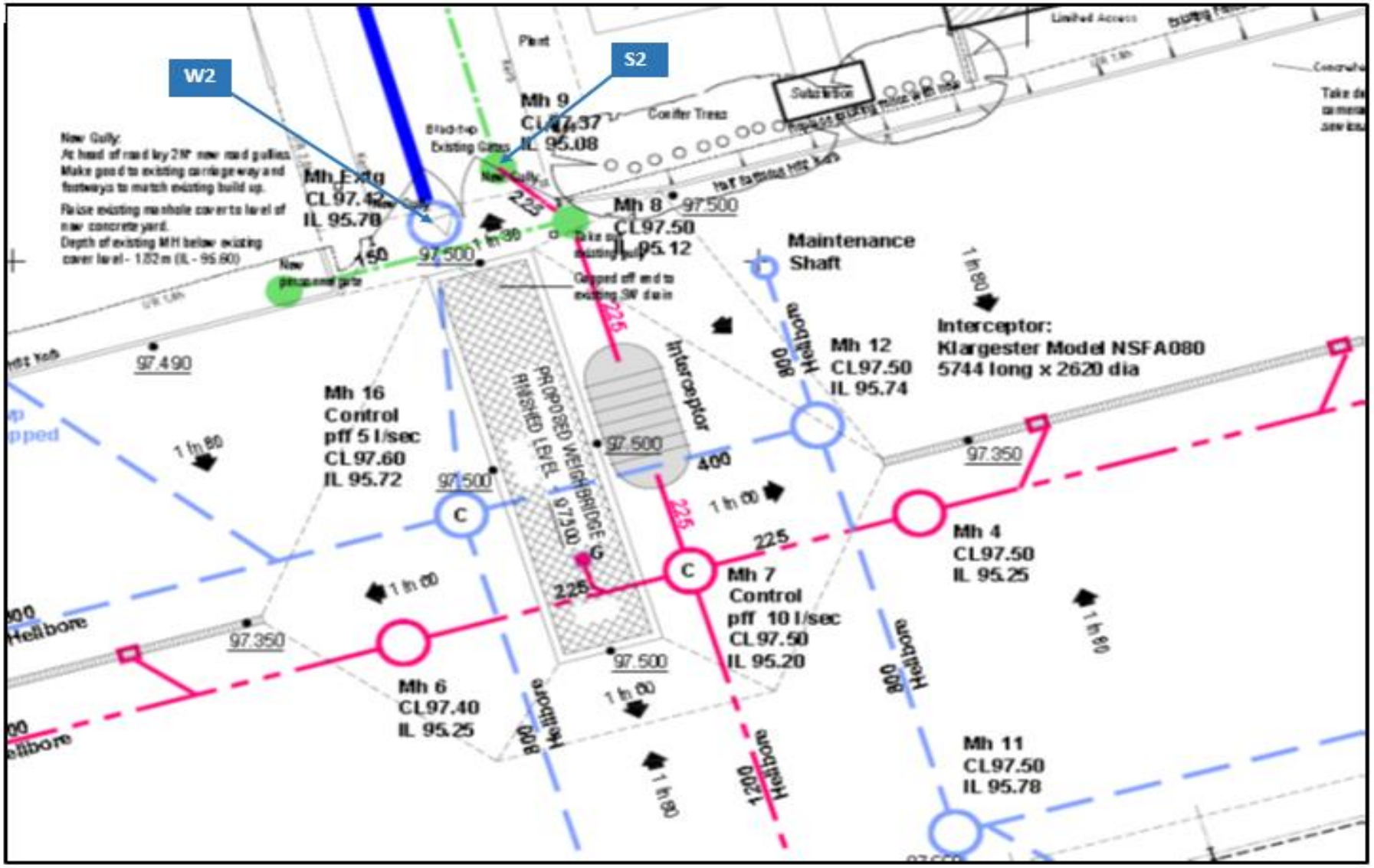
Schedule 7 – Site boundary plan



Site layout plan A



Site layout plan B



END OF PERMIT