

# Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

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Allegheny Technologies Limited

Carlisle Street East Works

Carlisle St East

Sheffield

S4 7QR

**Variation application number**

EPR/KP3230QN/V002

**Permit number**

EPR/KP3230QN

# Carlisle Street East Works

## Permit number EPR/KP3230QN

### 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.

#### **Change of Regulator**

Carlisle Street East Works, currently operated by Allegheny Technologies Limited has in the past been regulated by the Environment Agency, but was most recently regulated (from 2008) by the local authority, Sheffield City Council, with the 'listed' activity in the permit being the following Section 2.2 Part A(2) activity:

*S2.2 A(2)(a) 'Melting, including making alloys of, non-ferrous metals, including recovered products and operating of non-ferrous metal foundries where 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:*

- (i) no 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, or*
- (ii) the plant uses a vacuum furnace of any design holding capacity.'*

Although no significant changes have taken place at the installation over the years, recent re-consideration of the type of furnace processes used mean that part of the installation falls under the following Section 2.2 Part A(1) activity:

*S2.2 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',*

and as such the installation should be regulated by the Environment Agency as a Part A(1) installation. Upon agreement with the local authority and the operator, the Environment Agency assumed regulation of the site in 2018.

Under Article 21(3) of the Industrial Emissions Directive (IED) the regulator is required to review installation permits within four years of the publication of the main activity BAT conclusions for a site. Due to the publication of the BAT Conclusions (BATc) for the non-ferrous metals industries in June 2016, and further to the Environment Agency assuming regulation for the installation, we have undertaken a review of the installation activities against the non-ferrous metals BATc.

#### **Changes introduced by this variation notice/statutory review**

This variation has been issued to update some of the conditions following a statutory review of the permits in the industry sector for non-ferrous metals. The opportunity has also been taken to consolidate the original permit and subsequent variations.

The 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 30<sup>th</sup> 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 13<sup>th</sup> June 2016. The BATc for this installation which apply from 30<sup>th</sup> June 2020 are 1-10, 14, 15, 18, 19, 163, 164, and 176. The operator is already compliant with the BATc.

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.

### **Change of Company name**

As of 5<sup>th</sup> December 2018 the name of ATI Speciality Materials Limited, registered with Companies House under Company Number 01919677, changed to Allegheny Technologies Limited. The Company's registered office address remained as President Way Works, President Way, Sheffield, S4 7UR. The legal entity, identified by the Company number remains the same, therefore this change is noted within this variation as a change of fact only.

### **Brief description of the process**

Carlisle Street East Works (the Installation) is operated by Allegheny Technologies Limited and is located in Sheffield, England. The main purpose of the activities at the installation is the manufacture of high performance nickel based alloys. The site use virgin raw materials or clean high grade scrap metals to produce nickel alloys to customer technical specifications and into various forms; shafts, billets, bars and rings. This process involves melting the raw materials using Vacuum Induction Melting furnaces (VIM), and refining them in either the Vacuum Arc Remelting (VAR) furnaces or the Electroslag Refining (ESR) furnaces. When utilising the ESR furnaces this activity is listed in Table S1.1 of this permit as a Section 2.2 A(1)(b) activity. When only using the VIM and VAR furnaces then the activity remains a Section 2.2 A(2)(a) activity.

The site operates a number of furnaces, these are as follows:

- 2 VIM furnaces (Y and Z) with capacities of 6 tonnes and 10 tonnes respectively.
- 3 VAR furnaces (G, H, and J) with capacities of 10 tonnes, 10 tonnes, and 19 tonnes respectively.
- 2 ESR furnaces (R and S) with capacities of 10 tonnes and 23 tonnes respectively.

The non-ferrous metal process involves the following key stages:

- 1) **Melting:** melting a mixture of elements, master alloys and high grade scrap in two VIM furnaces. The metal is then cast into cylinder shaped billets referred to as an *electrodes*.
- 2) **Remelting:** following casting the electrode is remelted in either a VAR or ESR furnace. Fluxes that are a combination of CaO, CaF<sub>2</sub>, and Al<sub>2</sub>O<sub>3</sub> are used during the ESR remelting process. These fluxes provide the resistance heating necessary for melting the electrode and the mechanisms of material cleanliness improvement.
- 3) **Casting:** the molten metal is then cast as required by the customer's specifications. Products may be machined prior to final dispatch to the customer

The site also manufacture's high performance ferrous metal alloys. The site uses virgin raw materials or high grade scrap to produce ferrous alloys to customer technical specifications. They utilise the same processes and furnaces as the non-ferrous activity to do this and undertake the ferrous and non-ferrous activities interchangeably. The ferrous metal process is listed in the permit as a Section 2.1 B(b) activity.

Emissions from the ESR furnaces are collected and treated via a bag filter plant prior to venting to atmosphere at emission points A1 and A2. The vacuum furnaces are fitted with pumps which run for the duration of the melts. These extract directly to atmosphere (VAR furnaces at emission points A3 and A4, and VIM furnaces at emission points A5 and A6) but do not contain any significant pollutant emissions.

The site also undertake degreasing of metal products (such as engine shafts) in a proprietary TechnoWash machine which uses a mixture of detergent and hot water to breakdown any grease or other contaminants on the metal products. The metal products are loaded into the machine using an overhead crane, and are placed on a set of rollers which can rotate the products during the wash cycle. There is no direct emission to water or sewer from this machine, with a specialist hazardous waste company emptying the machine on a monthly basis.

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

<b>Status log of the permit</b>		
<b>Description</b>	<b>Date</b>	<b>Comments</b>
Application BK3450	Received 16/11/01	-
Permit BK3450	Determined 05/07/02	Permit issued to Allvac Ltd
Local Authority Part A2 Permit Permit Number: 2.2/050555/GJ1	25/04/08	Part A2 permit issued by Sheffield City Council to ATI Allvac Limited.
Regulation 61 Notice dated 23/05/18 issued by Environment Agency (Notice requiring information for statutory review of permit)	Response Received 03/12/18	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.
Regulation 61 Notice dated 13/12/19 (Notice requiring information for statutory review of permit)	Response Received 28/01/2020	Further information / clarification with regard to BAT conclusions 2-9, 15, 19, 75, 77-80. 84.
Environment Agency initiated variation EPR/KP3230QN/V002 (variation and consolidation)  Variation determined EPR/KP3230QN/V002 (PAS / Billing Ref: KP3230QN)	19/06/2020	Statutory review of permit – Non-ferrous metals BAT Conclusions published 30/06/16  Varied and consolidated permit issued to Allegheny Technologies Limited

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/KP3230QN

### Issued to

**Allegheny Technologies Limited** (“the operator”)

whose registered office is

**President Way Works**

**President Way**

**Sheffield**

**S4 7UR**

company registration number 01919677

to operate an installation at

**Carlisle Street East Works**

**Carlisle St East**

**Sheffield**

**S4 7QR**

to the extent set out in the schedules.

The notice shall take effect from 19/06/2020

Name	Date
Simon Hunt	19/06/2020

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 2016

### Permit number

**EPR/KP3230QN**

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/KP3230QN/V002 authorising,

**Allegheny Technologies Limited** (“the operator”),

whose registered office is

**President Way Works**

**President Way**

**Sheffield**

**S4 7UR**

company registration number 01919677

to operate an installation at

**Carlisle Street East Works**

**Carlisle St East**

**Sheffield**

**S4 7QR**

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

Name	Date
Simon Hunt	19/06/2020

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 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.

## **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 green on the site boundary plan at schedule 7 to this permit.

### **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 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.
- 2.3.5 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 and S3.2.
- 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.

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

## **3.6 Fire prevention**

- 3.6.1 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.
- 3.6.2 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 (A1 to A4 etc.) 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.

## 4.3 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	Limits of specified activity
AR1	Section 2.2 A(1)(b)	<p>Melting, including making alloys of, non-ferrous metals, including recovered products and the operation of non-ferrous metal foundries where-</p> <p>(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</p> <p>(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</p> <p><i>[Operation of ESR furnace]</i></p>	From the loading of ESR furnace with electrode (produced by activity AR2) to the removal of ingot.
AR2	Section 2.2 A(2)(a)	<p>Melting, including making alloys of, non-ferrous metals, including recovered products and operating of non-ferrous metal foundries where 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:</p> <p>(i) no 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, or</p> <p>(ii) the plant uses a vacuum furnace of any design holding capacity.</p> <p><i>[Operation of vacuum furnaces]</i></p>	<p><b>Melting using VIM furnace followed by VAR furnace:</b> From charging of VIM furnace to the removal of ingot from the VAR furnace.</p> <p><b>Melting using VIM furnace followed by ESR furnace:</b> From charging of VIM furnace to the removal of cast electrode for transfer to ESR furnace.</p>

<b>Table S1.1 activities</b>			
<b>Activity reference</b>	<b>Activity listed in Schedule 1 of the EP Regulations</b>	<b>Description of specified activity</b>	<b>Limits of specified activity</b>
AR3	Section 2.1 B(b)	Producing, melting or refining iron or steel or any ferrous alloy (other than producing pig iron or steel, including continuous casting) using—  (i) one or more electric arc furnaces, none of which has a designed holding capacity of 7 or more tonnes, or  (ii) a cupola, crucible, reverberatory, rotary, induction, vacuum, electro-slag or resistance furnace.  <i>[Operation of any combination of furnaces]</i>	From charging of VIM furnace to the removal of ingot from the VAR or ESR furnaces.
<b>Directly Associated Activity</b>			
AR4	Raw materials storage and handling	Receipt, handling and storage of virgin metal and high quality scrap and all process chemicals / substances	From receipt of raw materials until utilisation in the process.
AR5	Degreasing activity	Hot water and detergent based degreasing of metal products in Technowash machine	From charging of degreasing machine with metal product, water and detergent, to the removal of degreased products and the tankering off-site of resultant wastewater
AR6	Discharge to foul sewer	Discharge of process wastewater from the installation	From production of wastewater to discharge to public foul sewer
AR7	Storage and handling of wastes	Handling, storing and removal of all wastes from site	From the generation of waste by the permitted activities to dispatch of waste off-site.  Except wastes from finished products packaging and storage.

<b>Table S1.2 Operating techniques</b>		
<b>Description</b>	<b>Parts</b>	<b>Date Received</b>
Response to Regulation 61 Notice – request for further information	Technical standards detailed in response to BAT Conclusions 1-19 and 163-176 of the notice provided under Regulation 61(1) of Environmental Permitting Regulations.  Best available techniques as described in BAT Conclusions under Directive 2010/75/EU of the	Received 03/12/18

<b>Table S1.2 Operating techniques</b>		
<b>Description</b>	<b>Parts</b>	<b>Date Received</b>
	European Parliament and of the Council on industrial emissions for non-ferrous metals industries	
Receipt of additional information to the Regulation 61 Notice, requested by letter dated 13/12/19	Technical standards detailed in response to questions 1-16 of the request.	Received 28/01/20
Response to Environment Agency emails dated 19/03/20 and 23/03/20	<p>The following aspects of the responses to our emails, regarding the changes to the degreasing activities undertaken on site:</p> <ul style="list-style-type: none"> <li>• Answers to Points 1) and points 2) of email entitled 'Degreasing Process' dated 19/03/20, confirming a change in the degreasing process and that solvents are no longer used.</li> <li>• Explanation of the new degreasing process using Technowash machine. Email entitled 'RE; Degreasing Process', dated 30/03/20.</li> </ul>	Received 19/03/20 and 30/03/20
Response to Environment Agency email dated 29/04/20	<p>The following aspects of the responses to our email, regarding the process for continuous monitoring of dust for process control purposes only:</p> <ul style="list-style-type: none"> <li>• Answer to question 4 of email entitled 'RE; EA/EPR/KP3230QN/A001 Allegheny Technologies Limited - Emission Limits and Monitoring requirements - Email 4 of 5', dated 07/05/20.</li> </ul>	Received 07/05/20

<b>Table S1.3 Improvement programme requirements</b>		
<b>Reference</b>	<b>Improvement Condition</b>	<b>Completion date</b>
IC1	<p>The operator shall submit to the Environment Agency for approval a risk assessment considering the possibility of soil and groundwater contamination at the installation where the activity involves the use, production or release of a relevant hazardous substance (as defined in Article 3(18) of the Industrial Emissions Directive). The risk assessment shall clearly establish with appropriate evidence whether or not there is a risk of contamination of soil and groundwater.</p>	<p>Within 3 months of effective date of notice V002</p>
IC2	<p>Where the risk assessment carried out under IC1 above establishes a risk to soil and groundwater the operator shall:</p> <ul style="list-style-type: none"> <li>• prepare and submit a baseline report compliant with Article 22 of the Industrial Emissions Directive (IED) containing information necessary to determine the current state of soil and groundwater contamination; or</li> <li>• provide a summary report referring to information previously submitted where the operator is satisfied that such information represents the current state of soil and groundwater contamination,</li> </ul>	<p>Within 12 months of effective date of notice V002</p>



Table S1.3 Improvement programme requirements		
Reference	Improvement Condition	Completion date
	so as to enable a quantified comparison to be made with the state of soil and groundwater contamination upon definitive cessation of activity.	
IC3	<p>The operator shall resubmit a surface water pollution risk assessment to the Environment Agency for approval, which shall assess the impact of discharges of hazardous pollutants to surface water <b>and/or sewer</b> from the installation. This is to address the shortcoming of the assessment provided during the NFM BAT permit Review:</p> <p>The risk assessment shall:</p> <ul style="list-style-type: none"> <li>a) Re-evaluate the long term and short term impact of cadmium within both discharges from the installation. [The assessment currently undertaken (titled: Report on Surface Water Risk Assessment at Allegheny Technologies Limited, ref:E69665-RA Dated:03/01/2019) uses an incorrect EQS of 5 ug/l as the EQS rather than 0.08ug/l (AA) and 0.45 ug/l (MAC) and is prematurely screened out in the risk assessment].</li> <li>b) Undertake a part B screening (significant load test) for cadmium and mercury. [this was not provided as part of the current submission(as referenced above)].</li> </ul>	Within 2 months of effective date of notice V008

## Schedule 2 – Waste types, raw materials and fuels

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

## 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
A1 [Point A1 on site plan in Schedule 7]	ESR 'R' Furnace	Total Particulate Matter	5 mg/m <sup>3</sup>	Annual	Extractive	BS EN 13284-1 and MID
		Nickel	1 mg/m <sup>3</sup>	Annual	Extractive	BS EN 14385 and MID
		Lead	2 mg/m <sup>3</sup>	Annual	Extractive	BS EN 14385 and MID
		Chromium, Cadmium, Cobalt,  Total emission for any individual metal or combination of listed metals	1 mg/m <sup>3</sup>	Annual	Extractive	BS EN 14385 and MID
		Flouride	5 mg/m <sup>3</sup>	Annual	Extractive	BS ISO 15713 and MID
		Dioxins	0.1 ng/m <sup>3</sup>	Annual	Extractive	BS EN 1948 Parts 1, 2 and 3 and MID
A2 [Point A2 on site plan in schedule 7]	ESR 'S' Furnace	Total Particulate Matter	5 mg/m <sup>3</sup>	Annual	Extractive	BS EN 13284-1 and MID
		Nickel	1 mg/m <sup>3</sup>	Annual	Extractive	BS EN 14385 and MID
		Lead	2 mg/m <sup>3</sup>	Annual	Extractive	BS EN 14385 and MID
		Chromium, Cadmium, Cobalt,  Total emission for any individual metal or combination of listed metals	1 mg/m <sup>3</sup>	Annual	Extractive	BS EN 14385 and MID
		Flouride	1 mg/m <sup>3</sup>	Annual	Extractive	ISO 15713
		Dioxins	0.1 ng/m <sup>3</sup>	Annual	Extractive	BS EN 1948 Parts 1, 2 and 3 and MID

<b>Table S3.1 Point source emissions to air – emission limits and monitoring requirements</b>						
<b>Emission point ref. &amp; location</b>	<b>Source</b>	<b>Parameter</b>	<b>Limit (including unit)</b>	<b>Reference period</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>
A3 [Point A3 on site plan in schedule 7]	VAR 'G' and 'J' Furnaces	No parameter set	No limit set	-	-	-
A4 [Point A4 on site plan in schedule 7]	VAR 'H' Furnace	No parameter set	No limit set	-	-	-
A5 [Point A5 on site plan in schedule 7]	VIM 'Y' Furnace	No parameter set	No limit set	-	-	-
A6 [Point A6 on site plan in schedule 7]	VIM 'Z' Furnace	No parameter set	No limit set	-	-	-
A7 [Point A7 on site plan in schedule 7]	Laboratory Wet Scrubber	Oxides of Nitrogen	200 mg/m <sup>3</sup>	Annual	Extractive	BS EN 14792
		Total Particulate Matter	5 mg/m <sup>3</sup>	Annual	Extractive	BS EN 13284-1 and MID
		Nickel	1 mg/m <sup>3</sup>	Annual	Extractive	BS EN 14385 and MID
		Lead	2 mg/m <sup>3</sup>	Annual	Extractive	BS EN 14385 and MID
		Chromium, Cadmium, Cobalt,  Total emission for any individual metal or combination of listed metals	1 mg/m <sup>3</sup>	Annual	Extractive	BS EN 14385 and MID
A9 [Point A9 on site plan in schedule 7]	Z Furnace Vacuum Pump Motor	Oil mist	No limit set	-	-	-
A10 [Point A10 on site plan in schedule 7]	Welding	Fume	No limit set	-	-	-
A11 [Point A11 on site plan in schedule 7]	Fume Cupboards (Lab, NDT)	Hydrochloric, Nitric, Hydrofluoric, Sulphuric, and Perchloric Acids	No limit set	-	-	-

**Table S3.2 Point source emissions to sewer, effluent treatment plant or other transfers off-site-  
emission limits and monitoring requirements**

<b>Emission point ref. &amp; location</b>	<b>Source</b>	<b>Parameter</b>	<b>Limit (incl. Unit)</b>	<b>Reference period</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>
S1 [Point S1 on site plan in schedule 7]	Surface water run-off (roofs and yards)	Suspended Solids	No limit set	-	-	-
		pH	No limit set	-	-	-
	Macro-etch facility scrubber	COD	No limit set	-	-	-
		Metals	No limit set	-	-	-

## Schedule 4 – Reporting

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

<b>Table S4.1 Reporting of monitoring data</b>			
<b>Parameter</b>	<b>Emission or monitoring point/reference</b>	<b>Reporting period</b>	<b>Period begins</b>
Emissions to air Parameters as required by condition 3.5.1.	A1, A2, A7	Every 12 months	1 January

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

<b>Table S4.3 Performance parameters</b>		
<b>Parameter</b>	<b>Frequency of assessment</b>	<b>Units</b>
Water usage	Annually	tonnes
Energy usage	Annually	MWh
Total raw material used	Annually	tonnes

<b>Table S4.4 Reporting forms</b>		
<b>Media/parameter</b>	<b>Reporting format</b>	<b>Date of form</b>
Air1	Form air 1 or other form as agreed in writing by the Environment Agency	19/06/2020
Water usage1	Form water usage 1 or other form as agreed in writing by the Environment Agency	19/06/2020
Energy1	Form energy 1 or other form as agreed in writing by the Environment Agency	19/06/2020

# 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	

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

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

<b>Time periods for notification following detection of a breach of a limit</b>	
<b>Parameter</b>	<b>Notification period</b>

<b>(c) Notification requirements for the detection of any significant adverse environmental effect</b>	
<b>To be notified within 24 hours of detection</b>	
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 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.

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

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

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

“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.

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

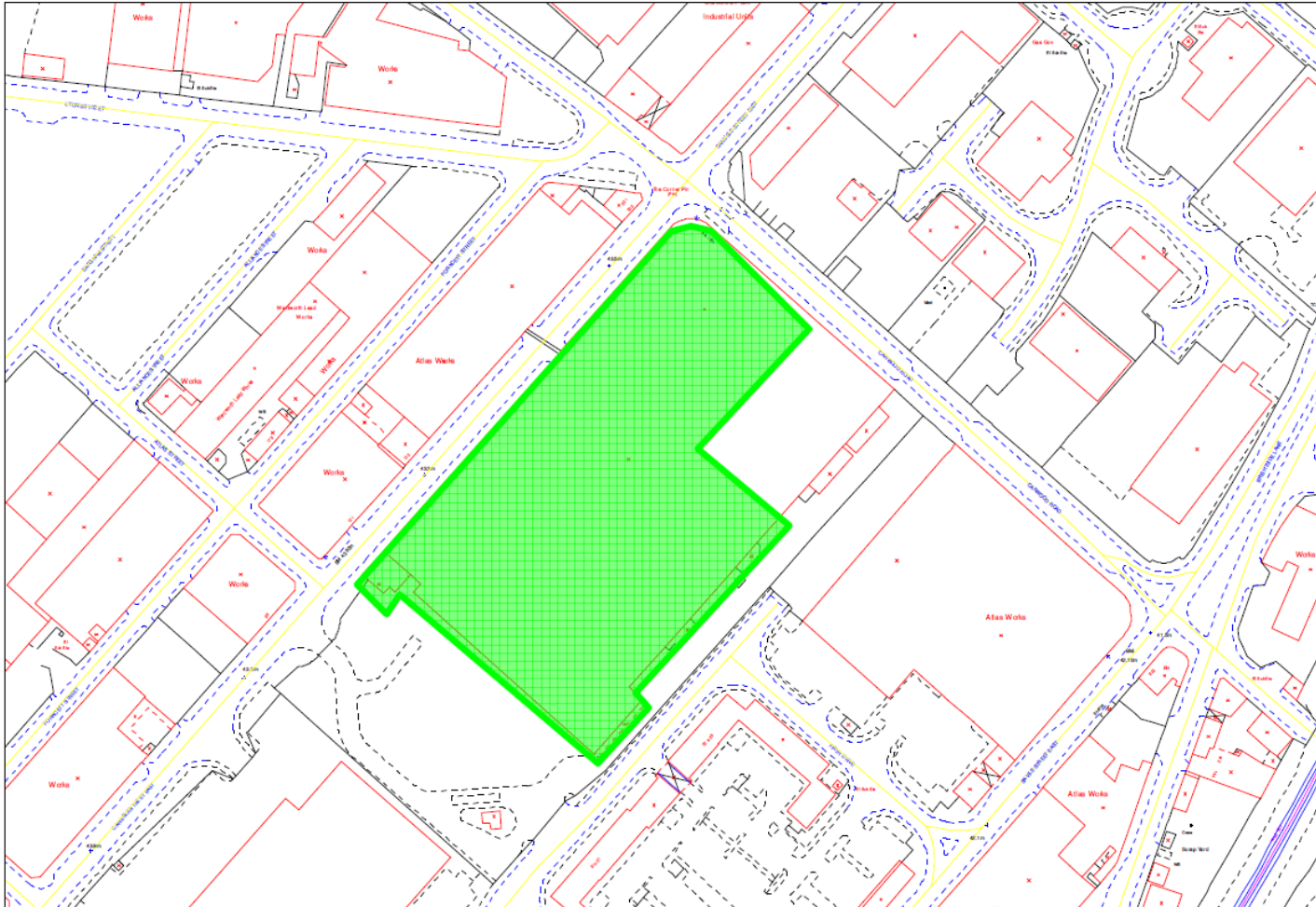
#### Furans

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 Hexachlorodibenzofuran (HxCDF)	0.1
1,2,3,7,8,9 Hexachlorodibenzofuran (HxCDF)	0.1
1,2,3,6,7,8 Hexachlorodibenzofuran (HxCDF)	0.1
2,3,4,6,7,8 Hexachlorodibenzofuran (HxCDF)	0.1
1,2,3,4,6,7,8 Heptachlorodibenzofuran (HpCDF)	0.01
1,2,3,4,7,8,9 Heptachlorodibenzofuran (HpCDF)	0.01
Octachlorodibenzofuran (OCDF)	0.001

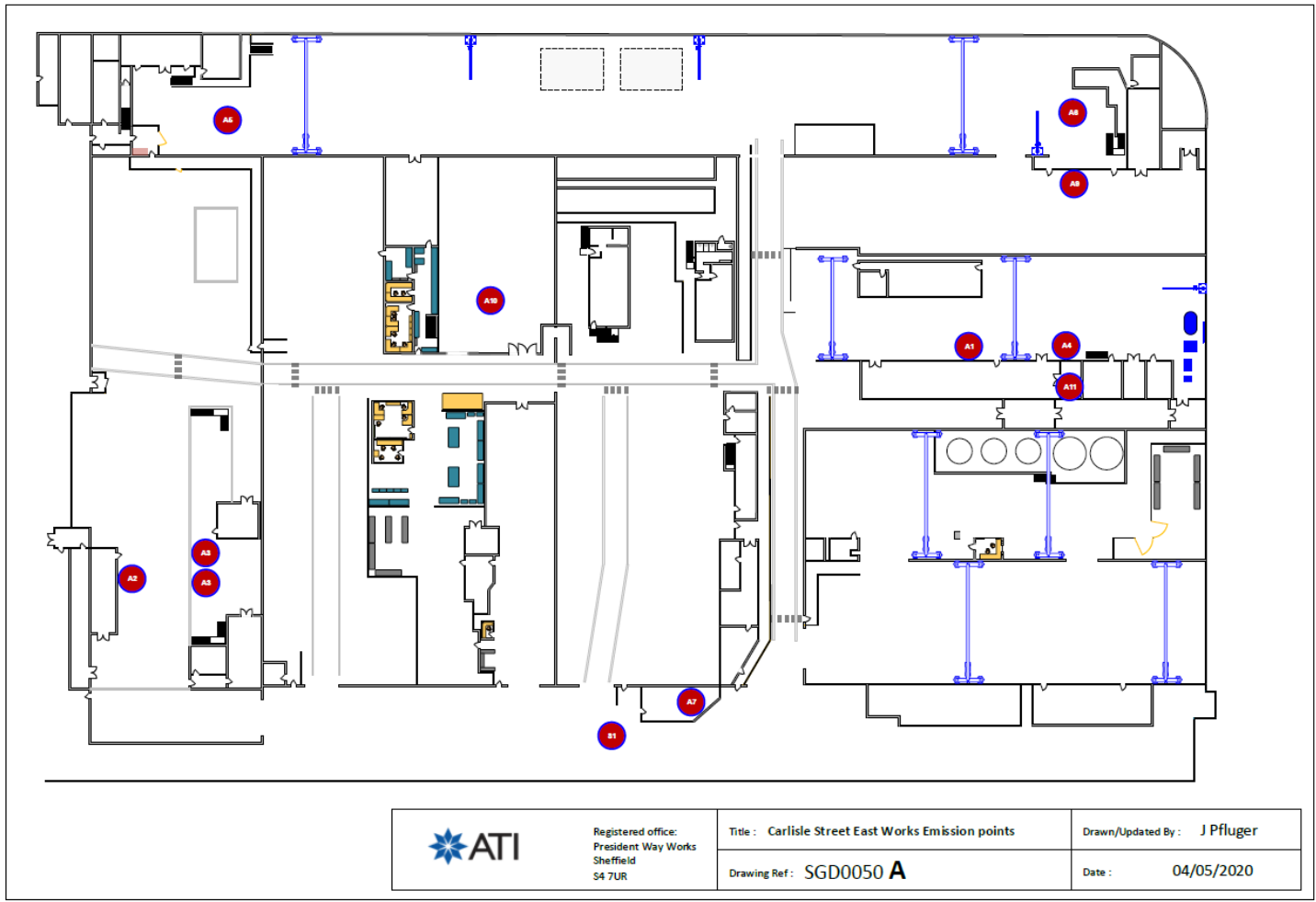
“year” means calendar year ending 31 December.

# Schedule 7 – Site plan

## Site Boundary Plan



# Emission Point Plan



END OF PERMIT