

Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Pegler limited
Trading as Pegler Yorkshire Group Limited

Belmont Works
St Catherine's Avenue
Doncaster
South Yorkshire
DN4 8DF

Variation application number

EPR/BM1091IW/V004

Permit number

EPR/BM1091IW

Belmont Works

Permit number EPR/BM1091IW

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 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 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 1-10, 14, 18, 19, 20, 22, 25, 26, 35, 41, 45, 46, 48 and 54. The operator is already compliant with the BATc with the exception of BAT 6, 10, 46 and 48. We have set an improvement condition in the varied permit to track progress against future compliance.

During this permit review we have also taken the opportunity to remove emission point A3, A4, A5, A6, A7, A8, A9, A10, A33, A34, A35 and A36 from Table S3.1 Point source emissions to air. This is because the operator has confirmed that these emission are no longer in use as a result of the installation of the new extrusion plant brought into the permit under EPR/BM1091/IW/V003. These were initially left on the permit as the operator had been given a time-limited technical evaluation period where they could run both extrusion plants.

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

Belmont works (the installation) is operated by Pegler limited trading as Pegler Yorkshire Group Limited. The installation is located Doncaster, South Yorkshire, England.

The main purpose of the activities at the installation is the production of a wide range of primarily brass castings and fittings, such as taps mixers and, domestic and industrial valves. These products are then subject to a wide variety of further processing and/or finishing treatments. A significant proportion of the total product is electroplated in chrome, nickel or gold.

Melting Activities

Copper, zinc and other metals from secondary sources, including scrap, swarf and ingot, delivered by road and unloaded from heavy goods delivery vehicles into a receiving yard adjacent to the scrap melting induction furnace.

Copper (De-oiled swarf, scrap metal and ingot) and Zinc (ingot) is melted in an electric induction furnace, usually to make 60/40 brass (60% copper and 40% Zinc). The melt is then transferred via enclosed launder to a holding furnace which feeds a continuous casting plant for the production of 6" diameter bar, which is then cut into billets.

The molten alloy is fed into a continuous casting machine from a number of electric induction furnaces. The main melting furnace is the Coreless Electric induction furnace which has a capacity of 7 tonnes. The site have a backup electric induction furnace with a capacity of 6 tonnes which is used when there are issues with the main melting furnace. In addition to these two larger melting furnaces the site operate two smaller Birlec coreless electric induction furnaces with a capacity of 1.5 tonnes which are used for melting specialist alloys. Following, melting the molten alloy is stored in a 6 tonne holding furnace (electric induction channel furnace)

The continuous casting plant is served by multiple close-linked extraction hoods venting to atmosphere through the main stack (A1) after passing through the Camfil filtration plant.

The billets pass through a gas-fired re-heating furnace and are then extruded through hydraulic press into bars of various diameters and profiles. This single re-heating furnace and extrusion plant was successfully commissioned and replaces the two older, much less efficient production lines. Exhaust gases are released to atmosphere via a new emission stack (A41). Most of the bars are transferred to the stamping shop, where they are heated and stamped in press machines to form fittings and valve or tap components.

Finishing activities

- A wide range of subsequent processing and finishing activities are carried out within the installation, including the following.
- Stamping of nuts from brass bar in a Hatebar hot forging machine.
- Buffing of valve and tap components prior to electroplating.
- Electroplating of taps and mixers, and other components, in nickel/chrome or nickel/gold.
- Vibratory polishing of brass components by tumbling in barrel polishers containing abrasive media, surfactants and water. This operation is served by a small effluent treatment plant.

The electroplating plant comprises the following:

- An automated nickel/chrome plating line capable of plating 150 jigs per hour, comprising treatment tanks of approximately 40 m³ aggregated volume.
- An automated nickel/gold plating line capable of plating 16 jigs per hour, comprising treatment tanks of approximately 7 m³ aggregated volume.
- A manually operated jig and product stripping plant (for removal of plated metal) capable of stripping 36 jigs per hour, comprising treatment tanks of approximately 2 m³ aggregated volume.
- Air extraction ductwork for certain tanks on the two plating lines leading to three wet scrubbers for the abatement of acid fumes.
- Air extraction ductwork for certain tanks on the stripping line leading to a washed eliminator for the abatement of fumes.
- Electrolytic recovery of nickel from rinse waters to enable reuse of the nickel as metal.
- Evaporative chrome recovery from rinse waters to enable reuse as concentrated solution.
- An ion exchange plant for recovery and reuse of a proportion of the rinse waters.
- An effluent treatment plant for treatment of the remaining rinse waters and other general effluents. The effluent treatment plant comprises chromium reduction and cyanide oxidation, followed by precipitation, flocculation, settlement and filtration before discharge of the treated effluent to sewer.

Previously the permit was varied to include the use of Na/K cyanides in the gold plating process however the choice of a different plating process has meant that these cyanides have never been used an the operator has confirmed that they will not use these cyanides in future, therefor the reference to hydrogen cyanide in table S3.1 and cyanide in Table S3.4 have been removed.

The site operates an Environmental Management System that is compliant with ISO 9001:2015 and ISO 14001:2015. These documented systems are accredited by BSI and form the Documented Process Control System and an Energy Management System compliant with ISO 50001. The site is also registered with Energy Saving Opportunity Scheme since December 2016).

There is no discharge of process water from the melting of non-ferrous metals (Activity Section 2.2 A(1)(b)) to either public foul sewer or surface water. There is a discharge to public foul sewer from the finishing activities (Activity Section 2.3 A(1)(a)) via an effluent treatment plant.

All site drainage is directed to a surface water sewer and leaves the site via the Mother Drain.

All activities are carried out on a sealed concrete base with no discharges impacting on land.

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 BM1091 (EPR/BM1091IW/A001)	Received 19/12/01	
Response to first request for information	Request dated 14/03/02	Response dated 05/07/02
Response to second request for information	Request dated 17/05/02	Responses dated 03/09/02 and 14/11/02
Permit BM1091 (EPR/BM1091IW/A001)	24/09/03	Determined
Application for Variation for new plant (EPR/BM1091IW/V002)	13/10/03	Determined. Comprises consolidated permit.
Variation Notice BW1505 (EPR/BM1091IW/V002)	14/02/04	11/12/09 & 16/12/09
Application for Variation for new extrusion plant (EPR/BM1091IW/V003)	Received 09/09/09	Response dated 05/07/02
Schedule 5 Notice	09/12/09	Responses dated 03/09/02 and 14/11/02
Variation EPR/BM1091IW/V003	Determined 15/01/10	
Regulation 60 Notice dated 16/12/16 (Notice requiring information for statutory review of permit)	Response Received 11/04/17	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.
Regulation 61 Notice dated 06/02/18 (Notice requiring information for statutory review of permit)	Response Received 21/03/18, 06/04/18 13/04/18 and 20/04/18	Further information / clarification with regard to BAT conclusions 2-8, 10-13, 19, 20, 22, 23, 25-36, 40, 42-44, 46-48 and 50-52.
Environment Agency initiated variation EPR/BM1091IW/V004 (variation and consolidation)	04/06/2018	Statutory review of permit – Non-ferrous metals BAT Conclusions published 30/06/16
Variation determined EPR/BM1091IW (PAS / Billing Ref: PP3532JJ)		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/BM1091IW

Issued to

Pegler Limited trading as Pegler Yorkshire Group Limited ("the operator")

whose registered office is

**Belmont works
St Catherine's Avenue
Doncaster
South Yorkshire
DN4 8DF**

company registration number 01194543

to operate an installation at

**Belmont works
St Catherine's Avenue
Doncaster
South Yorkshire
DN4 8DF**

to the extent set out in the schedules.

The notice shall take effect from 04/06/2018

Name	Date
Tom Swift	04/06/2018

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

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to operate an installation at

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

Name	Date
Tom Swift	04/06/2018

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 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 Waste shall only be accepted if:

- (a) it is of a type and quantity listed in schedule 2 table S2.2: 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.

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 S3.1, S3.2 and S3.3.
- 3.1.2 The limits given in schedule 3 shall not be exceeded.
- 3.1.3 Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

3.2 Emissions of substances not controlled by emission limits

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

3.3 Odour

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

3.4 Noise and vibration

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

3.4.2 The operator shall:

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

3.5 Monitoring

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

- (a) point source emissions specified in tables S3.1, S3.2 and S3.3.
- (b) surface water or groundwater specified in table S3.4.

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, S3.3 and S3.4 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 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.

4.3 Notifications

4.3.1 In the event:

- (a) that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—
 - (i) inform the Environment Agency,
 - (ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and
 - (iii) take the measures necessary to prevent further possible incidents or accidents;
- (b) of a breach of any permit condition the operator must immediately—

- (i) inform the Environment Agency, and
 - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;
- (c) of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.
- 4.3.2 Any information provided under condition 4.3.1 (a)(i), or 4.3.1 (b)(i) where the information relates to the breach of a limit specified in the permit, shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.
- 4.3.3 Where the Environment Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Environment Agency when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to the Environment Agency at least 14 days before the date the monitoring is to be undertaken.
- 4.3.4 The Environment Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:
- Where the operator is a registered company:
- (a) any change in the operator's trading name, registered name or registered office address; and
 - (b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.
- Where the operator is a corporate body other than a registered company:
- (a) any change in the operator's name or address; and
 - (b) any steps taken with a view to the dissolution of the operator.
- In any other case:
- (a) the death of any of the named operators (where the operator consists of more than one named individual);
 - (b) any change in the operator's name(s) or address(es); and
 - (c) any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.
- 4.3.5 Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:
- (a) the Environment Agency shall be notified at least 14 days before making the change; and
 - (b) the notification shall contain a description of the proposed change in operation.
- 4.3.6 The Environment Agency shall be given at least 14 days notice before implementation of any part of the site closure plan.
- 4.3.7 Where the operator has entered into a climate change agreement with the Government, the Environment Agency shall be notified within one month of:
- (a) a decision by the Secretary of State not to re-certify the agreement;
 - (b) a decision by either the operator or the Secretary of State to terminate the agreement; and
 - (c) any subsequent decision by the Secretary of State to re-certify such an agreement.

4.4 Interpretation

- 4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.
- 4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made “immediately” in which case it may be provided by telephone.

Schedule 1 – Operations

Table S1.1 activities		
Activity 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
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>From receipt of the furnace charge to intermediate storage prior to the extrusion process.</p> <p>Waste types as specified in Table S2.2.</p>
Section 2.3 A(1)(a)	Surface treating metals and plastic materials using an electrolytic or chemical process where the aggregated volume of the treatment vats is more than 30m ³	Storage of plating acids and other raw materials; operation of nickel/chrome and nickel/gold plating lines and product/jig stripping line; water and metal recovery systems;
Directly Associated Activity		
Raw materials storage and handling	Receipt, handling and storage of copper scrap and all process substances including treatment and handling of in-house swarf	Receipt of raw materials until used in the process, to the transfer of material to the melting, and/or surface treatment activities and associated DAAs.
Extrusion plant	Extrusion of bar from continuous casting into copper profiles and cutting	<p>Billet storage and handling, extrusion, annealing and cutting. Includes plant services, die cleaning and process materials storage.</p> <p>Excludes workshops and packaging areas</p>
Stamping shop	Pressing of semi-finished product	Receipt of 'semi-finished product' to transfer to finishing activity or despatch
Buffing	Buffing and polishing of product prior to electroplating (Activity 2.3A(1)(a))	Receipt of product for buffing to despatch of product to electroplating, including associated abatement plant
Finishing activities	Vibratory polishing and Hatebar machine	Receipt of semi-finished product to despatch of finished product, including associated abatement plant

Table S1.1 activities		
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
Off-gas collection, abatement and discharge systems.	Localised extraction hoods, ducting, bag filter, wet scrubber and stacks,	Collections of air emissions to exit point via stacks. Collection of scrubber liquor
Water discharges to controlled waters	Discharge of site drainage from the installation	From entry into site drains to entry into surface water
Effluent discharge to foul sewer	Discharge of process water from the effluent treatment plant	From production of effluent to discharge to external foul sewer
Storage and handling of solid and liquid wastes	Handling, storing and removal of all wastes from site	From separation of wastes to despatch from installation

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application	The response to question 2.3 given in sections B1.3, B2.3 and F4 (Non-Technical Summary) of the application	19/12/01
Response to second Schedule 4 Part 1 Notice	Response to questions 10, 14, 15, 16 and 20	3/9/02 and 14/11/02
Application for Variation BW1505	Section C2.1 and Appendices 1 to 6	13/10/03
Application for Variation	The response to question C2 of the variation application and the Non-Technical Summary document of the variation application	09/09/09
Response to Schedule 5 Notice	Response to question 5	11/12/09
Response to Regulation 60 Notice – request for further information dated 06/12/16	Technical standards detailed in response to BAT Conclusions 1-10, 14, 18, 19, 20, 22, 25, 26, 35, 41, 45, 46, 48 and 54 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	Received 21/06/17
Response to Regulation 61 Notice – request for further information dated 06/02/2018	Technical standards detailed in response to items 2-8, 10-12, 20, 23, 25-36, 40, 42- 44, 46-48, 50- 52 and 54 of the request.	Received 21/03/2018
Responses to email dated 04/04/18 and 05/04/18	Further information on BAT Conclusions 2-8, 10, 20, 22, 25, 26, 46 and 48 Further information on operational details to clarify consolidation of the existing permit.	6/04/18 13/04/18
Response to emails dated 10/04/2018	Further information on BAT Conclusions [JP to list appropriate BATs] along with operation details to clarify consolidation of the existing permit.	20/04/18

Table S1.3 Improvement programme requirements		
Reference	Improvement Condition	Completion date
IC1	<p>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 30/06/20. The report shall include, but not be limited to, the following:</p> <ol style="list-style-type: none"> 1) Methodology for achieving BAT. 2) Associated targets / timelines for reaching compliance by 30/06/20. 3) Any alterations to the initial plan <p>The report shall address the following BAT Conclusion:</p> <p>BAT 6 ("...to set up an implement an action plan on diffuse dust emissions, as part of the environmental management system...")</p> <p>BAT 10 ("...to monitor the stack emissions with at least the frequency given... in accordance with EN standards...")</p> <p>Refer to BAT Conclusions for a full description of the requirements.</p>	<p>Interim progress report by 30th June 2019</p> <p>Final report by 31st March 2020</p>
IC2	<p>The operator shall submit, for approval by Environment Agency, a report setting out progress to achieving the BAT conclusion AELs 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:</p> <ol style="list-style-type: none"> 1) Current performance against the BATc AEL. 2) Methodology for reaching the AELs. 3) Associated targets / timelines for reaching compliance by 30th June 2020. 4) Any alterations to the initial plan <p>The report shall address the following BATc:</p> <p>BAT 46 (...reduce organic compounds emissions to air from...melting of secondary raw materials...)</p> <p>BAT 48 (...reduce PCDD/F emissions to air from...melting... operations in secondary copper production...)</p> <p>Refer to BAT Conclusions for a full description of the requirements.</p>	<p>Interim progress report by 30th June 2019</p> <p>Final report by 31st March 2020</p>
IC3	<p>The operator shall undertake a review of periodic monitoring for emissions to air of Particulate Matter, TVOC and PCDD/F from emission point A1. 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.</p> <p>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</p>	<p>Within 12 months of effective date of notice V004</p>

Table S1.3 Improvement programme requirements		
Reference	Improvement Condition	Completion date
	<p>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.</p> <p>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.</p>	
IC4	<p>The operator shall submit 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 and/or sewer from the installation. The risk assessment shall include, but not be limited to the following:</p> <p>representative emissions data for the following hazardous pollutants: silver, arsenic, cadmium, cobalt, chromium (total), chromium (VI), copper, mercury, nickel, lead, zinc; and any other relevant substances discharged from the installation. Any emissions monitoring required should be carried out using the methods and standards described in Environment Agency <u>M18</u> guidance; and</p> <p>a risk assessment in accordance with the screening procedures in Environment Agency guidance "<u>Surface water pollution risk assessment for your environmental permit</u>", using the representative emissions data obtained in (a) above.</p>	Within 12 months of effective date of notice V004
IC5	<p>The operator shall propose to the Environment Agency monitoring standards and techniques for the routine monitoring of emissions to water and sewer. The proposals should be in line with Environment Agency TGN M18 and the Surface Treatment of Metals and Plastics BREF 2006. The proposals should include arrangements for sample storage and transport.</p>	Within 1 months of effective date of notice V004
IC6	<p>The operator shall review the current permitted limits against the BAT-AELs in the Surface Treatment of Metals and Plastics BREF 2006. Where the permitted ELVs are higher than the BAT-AELs, the operator shall propose a plan to meet the BAT-AELs. Where there is no BAT-AEL the operator may propose to cease the monitoring.</p>	Within 12 months of effective date of notice V004

Schedule 2 – Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	Specification
Secondary Metals	Free from Mercury and Sulphur

Table S2.2 Permitted waste types and quantity for melting, including making alloys, of non-ferrous metals.	
Maximum quantity	3000 tonnes per annum
Waste code	Description
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 12	Wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 03	non-ferrous metals from mechanical treatment of waste

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. & location¹	Source	Parameter	Limit (including unit)	Reference period^{1, 2}	Monitoring frequency²	Monitoring standard or method²
A1 [Point A1 on site plan in Schedule 7]	Exhaust from Camfil plant serving continuous casting furnaces	Particulates	10 mg/Nm ³	Extractive sample	Once a year	BS EN 13284-1 and MID
		Copper, lead and, zinc and their compounds taken together (as element)	2 mg/Nm ³	Extractive sample	Once a year	BS EN 14385 and MID
A37 [Point A37 on site plan in schedule 7]	Exhaust from scrubber serving nickel and associated tanks on nickel/chrome plating line	Nickel and its compounds expressed as Ni	2 mg/Nm ³	Extractive sample	Once a year	BS EN 14385 and MID
		Hydrogen fluoride	2 mg/Nm ³	Extractive sample	Once a year	BS EN 15713 and MID
A38 [Point A38 on site plan in schedule 7]	Exhaust from scrubber serving chrome and associated tanks on nickel/chrome plating line	Chromium and its compounds expressed as Cr	1 mg/Nm ³	Extractive sample	Once a year	BS EN 14385
A39 [Point A39 on site plan in schedule 7]	Exhaust from scrubber serving nickel/gold plating line	Nickel and its compounds expressed as Ni	2 mg/Nm ³	Extractive sample	Once a year	BS EN 14385 and MID
		Chromium and its compounds expressed as Cr	1 mg/Nm ³	Extractive sample	Once a year	BS EN 14385
		Hydrogen chloride	10 mg/Nm ³	Extractive sample	Once a year	BS EN 1911
A40 [Point A40 on site plan in schedule 7]	Exhaust from washed eliminator serving the jig and product stripping line	Sulphuric acid (as mist)	5 mg/Nm ³	Extractive sample	Once a year	USEPA Method 8

Table S3.1a Point source emissions to air – emission limits and monitoring requirements						
Effective until 29 June 2020						
Emission point ref. & location¹	Source	Parameter	Limit (including unit)	Reference period^{1, 2}	Monitoring frequency²	Monitoring standard or method²
A41 [Point A4 on site plan in schedule 7]	Exhaust from extrusion plant oven (formally Extrusion plant Oven No 3)	Particulates	10 mg/Nm ³	Extractive sample	Once a year	BS EN 13284-1 and MID
<p>1. Measurements for the determination of concentrations of substances specified in this permit shall be carried out representatively. Where the activity giving rise to the substances measured is operated on a batch basis, extractive sampling shall be carried out to include the period of peak emissions and exclude periods outside the batch cycle.</p> <p>2. Monitoring to be undertaken in accordance with stated requirements in Table S3.1b pending completion of Improvement Condition IC3 in Table S1.3</p>						

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 [Point A1 on site plan in Schedule 7]	Exhaust from Camfil plant serving continuous casting furnaces	Particulates	5 mg/Nm ³	Average over the sampling period	Once a year ⁴	BS EN 13284-1 and MID
		PCDD/F (as TEQ/Nm ³)	0.1 ng/ Nm ³	Average over the sampling period	Once a year	BS EN 1948 parts 1, 2 & 3 and MID
		TVOC (as C)	40 mg/ Nm ³	Average over the sampling period	Once a year	BS EN12619
A37 [Point A37 on site plan in Schedule 7]	Exhaust from scrubber serving nickel and associated tanks on nickel/chrome plating line	Nickel and its compounds expressed as Ni	2 mg/Nm ³	Average over the sampling period	Once a year	BS EN 14385 and MID
		Hydrogen fluoride	2 mg/Nm ³	Average over the sampling period	Once a year	BS EN 15713 and MID
A38 [Point A38 on site plan in Schedule 7]	Exhaust from scrubber serving chrome and associated tanks on nickel/chrome plating line	Chromium and its compounds expressed as Cr	1 mg/Nm ³	Average over the sampling period	Once a year	BS EN 14385

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
A39 [Point A39 on site plan in Schedule 7]	Exhaust from scrubber serving nickel/gold plating line	Nickel and its compounds expressed as Ni	2 mg/Nm ³	Average over the sampling period	Once a year	BS EN 14385 and MID
		Chromium and its compounds expressed as Cr	1 mg/Nm ³	Average over the sampling period	Once a year	BS EN 14385 and MID
		Hydrogen chloride	10 mg/Nm ³	Average over the sampling period	Once a year	BS EN 1911
A40 [Point A40 on site plan in Schedule 7]	Exhaust from washed eliminator serving the jig and product stripping line	Sulphuric acid (as mist)	5 mg/Nm ³	Average over the sampling period	Once a year	
A41 [Point A4 on site plan in schedule 7]	Exhaust from extrusion plant oven (formally Extrusion plant Oven No 3)	Particulates	10 mg/Nm ³	Average over the sampling period	Once a 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 emission to Mother Drain via surface water sewer	Main site drainage	Flow rate, l/s	No limit set	Instantaneous (Spot sample)	Quarterly	In accordance with Environment Agency M18 Guidance ¹
		pH	6-10	Instantaneous (Spot sample)		
		Total hydrocarbon oil	10 mg/l	Instantaneous (Spot sample)		
		BOD	No limit set	Instantaneous (Spot sample)		
		Copper and its compounds (as Cu)	2.5 mg/l	Instantaneous (Spot sample)		
		Nickel and its compounds (as Ni)	2.0 mg/l	Instantaneous (Spot sample)		

Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
		Zinc and its compounds (as Zn)	3.5 mg/l	Instantaneous (Spot sample)		
W2 emission to Mother Drain via surface water sewer	Site drainage from compressor area	Flow rate, l/s	No limit set	Instantaneous (Spot sample)		In accordance with Environment Agency M18 Guidance ¹
		pH	6-10	Instantaneous (Spot sample)		
		Total hydrocarbon oil	5 mg/l	Instantaneous (Spot sample)		
		BOD	No limit set	Instantaneous (Spot sample)		
		Copper and its compounds (as Cu)	0.5 mg/l	Instantaneous (Spot sample)		
		Nickel and its compounds (as Ni)	0.5 mg/l	Instantaneous (Spot sample)		
		Zinc and its compounds (as Zn)	3.0 mg/l	Instantaneous (Spot sample)		
1. Or as otherwise agreed by the Environment Agency.						

Emission point ref. & location	Source	Parameter	Limit (incl. Unit)	Reference period	Monitoring frequency	Monitoring standard or method
S1 emission to Yorkshire Water foul sewer	Site effluent from plating plant effluent treatment plant	Flow rate	250m ³ /day	Continuous	Quarterly	In accordance with Environment Agency M18 Guidance ¹
		pH	6-10	Continuous		
		Chromium and its compounds (as Cr)	1 mg/l	Instantaneous (Spot sample)		
		Copper and its compounds (as CU)	1 mg/l	Instantaneous (Spot sample)		
		Lead and its compounds (as Pb)	1 mg/l	Instantaneous (Spot sample)		
		Nickel and its	1 mg/l	Instantaneous (Spot sample)		

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
		compounds (as Ni)				
		Zinc and its compounds (as Zn)	1 mg/l	Instantaneous (Spot sample)		
		Suspended solids	50 mg/l	Instantaneous (Spot sample)		
		COD	500 mg/l	Instantaneous (Spot sample)		
S2 emission to Yorkshire Water foul sewer	Site effluent from Adpec effluent treatment plant	Flow rate	-	Continuous	Quarterly	In accordance with Environment Agency M18 Guidance ¹
		pH	6-10	Continuous		
		Copper and its compounds (as CU)	2 mg/l	Instantaneous (Spot sample)		
		Lead and its compounds (as Pb)	2 mg/l	Instantaneous (Spot sample)		
		Zinc and its compounds (as Zn)	2 mg/l	Instantaneous (Spot sample)		
		Suspended solids	50 mg/l	Instantaneous (Spot sample)		
		COD	2000 mg/l	Instantaneous (Spot sample)		
1. Or as otherwise agreed by the Environment Agency.						

Table S3.4 Surface water monitoring requirements

Location or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Mother Drain at Inlet to site Point C and Point E	Flow rate, l/s	Quarterly	In accordance with Environment Agency M18 Guidance ¹	Instantaneous (Spot sample)
	pH			
	Total hydrocarbon oil mg/l			
	BOD mg/l			
	Copper and its compounds (as Cu) mg/l			

Table S3.4 Surface water monitoring requirements				
Location or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
	Nickel and its compounds (as Ni) mg/l			
	Zinc and its compounds (as Zn) mg/l			
1. Or as otherwise agreed by the Environment Agency.				

Schedule 4 – Reporting

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

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Emissions to air Parameters as required by condition 3.5.1.	A1, A36, A37, A38, A39, A41	Every 12 months	1 January
Emissions to water Parameters as required by condition 3.5.1	W1, W2	Every 12 months	1 st January, 1 st April, 1 st July, 1 st October
Emissions to sewer Parameters as required by condition 3.5.1	S1, S2	Every 12 months	1 st January, 1 st April, 1 st July, 1 st October
Surface water monitoring requirements as required by condition 3.5.1	Points C and E (Inlet)	Every 12 months	1 st January, 1 st April, 1 st July, 1 st October

Parameter	Units
Copper products	tonnes

Parameter	Frequency of assessment	Units
Water usage	Annually	tonnes
Energy usage	Annually	MWh
Total raw material used	Annually	Tonnes
Waste disposal (excluding material sent for recovery).	Annually	Tonnes/ tonne of finished product

Media/parameter	Reporting format	Date of form
Air	Form air 1 or other form as agreed in writing by the Environment Agency	DD/MM/YY
Water	Form water 1 or other form as agreed in writing by the Environment Agency	DD/MM/YY
Sewer	Form sewer 1 or other form as agreed in writing by the Environment Agency	DD/MM/YY
Water usage	Form water usage 1 or other form as agreed in writing by the Environment Agency	DD/MM/YY
Energy usage	Form energy 1 or other form as agreed in writing by the Environment Agency	DD/MM/YY

Table S4.4 Reporting forms		
Media/parameter	Reporting format	Date of form
Waste	Form Performance 1 or other form as agreed in writing by the Environment Agency	DD/MM/YY

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	

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

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

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

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

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

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

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

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

- in relation to emissions from combustion 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

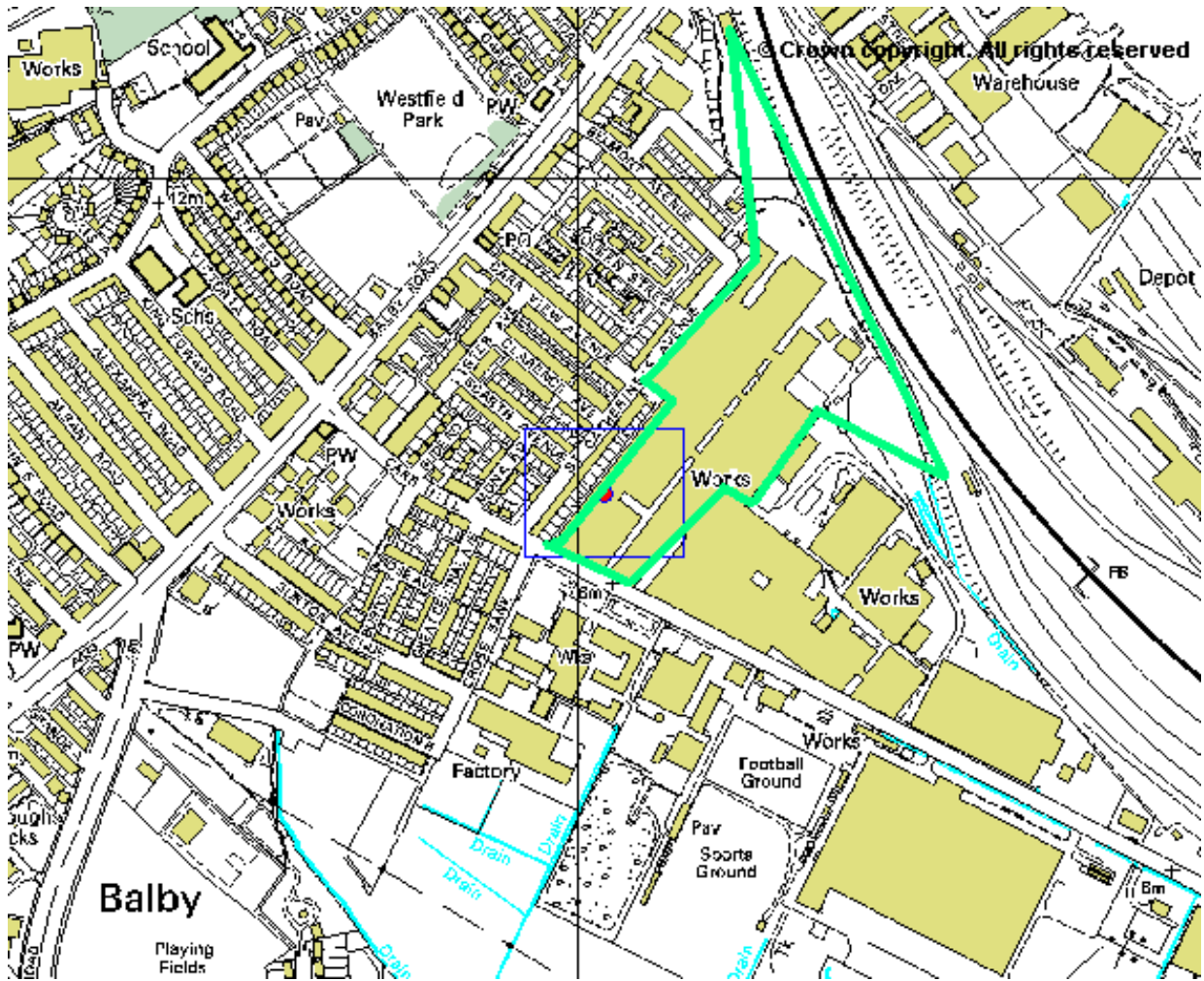
2,3,7,8 Tetrachlordibenzodioxin (TCDD)	1
1,2,3,7,8 Pentachlordibenzodioxin (PeCDD)	0.5
1,2,3,4,7,8 Hexachlordibenzodioxin (HxCDD)	0.1
1,2,3,7,8,9 Hexachlordibenzodioxin (HxCDD)	0.1
1,2,3,6,7,8 Hexachlordibenzodioxin (HxCDD)	0.1
1,2,3,4,6,7,8 Heptachlordibenzodioxin (HpCDD)	0.01
Octachlordibenzodioxin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

Furans

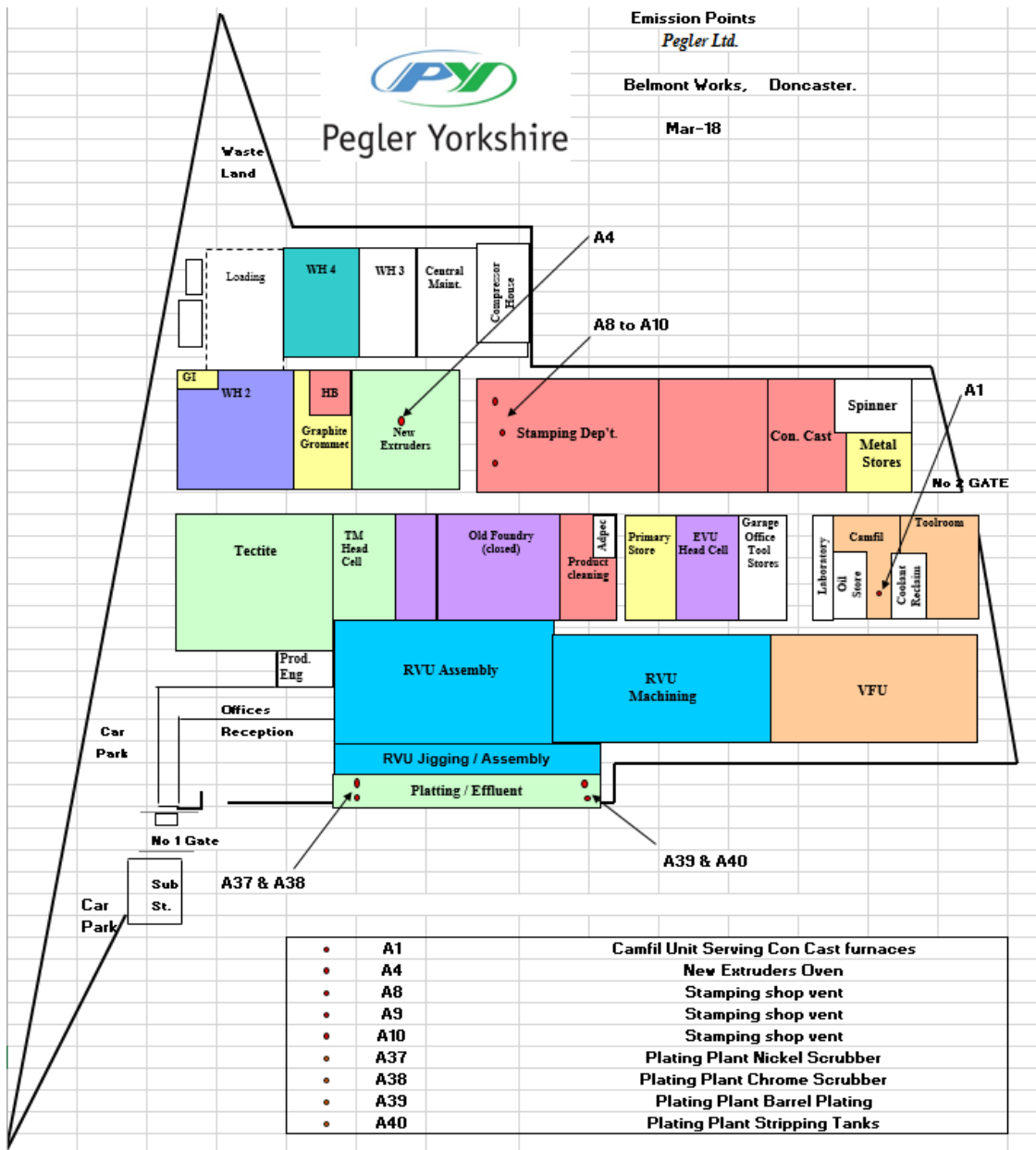
2,3,7,8 Tetrachlorodibenzofuran (TCDF)	0.1
2,3,4,7,8 Pentachlorodibenzofuran (PeCDF)	0.5
1,2,3,7,8 Pentachlorodibenzofuran (PeCDF)	0.05
1,2,3,4,7,8 Hexachlorodibenzofuran (HxCDF)	0.1
1,2,3,7,8,9 Hexachlorodibenzofuran (HxCDF)	0.1
1,2,3,6,7,8 Hexachlorodibenzofuran (HxCDF)	0.1
2,3,4,6,7,8 Hexachlorodibenzofuran (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 plans



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Emission point plan provided by operator

END OF PERMIT