Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Johnson Matthey Plc

Brimsdown Precious Metal Recovery
33 Jeffreys Road
Brimsdown
Enfield
Middlesex
EN3 7PW

Variation application number

EPR/VP3430BN/V012

Permit number

EPR/VP3430BN

Brimsdown Precious Metal Recovery
Permit number EPR/VP3430BN

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.

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. Only the variations specified in schedule 1 are subject to a right of appeal.

This variation allows the following changes:

1. Changes associated to the implementation of the 'Phase 0 Leach and Dissolve' project that provides improvement to raw material handling and to process efficiency. The project provides compatibility for future development works as part of a 3rd Century Refinery (3CR) programme. Changes include:
   - Removal of nitric acid distribution from iron bullion leaching process and replacement with a new hydrogen peroxide storage and dosing system. *This change has been trialled and shown to improve process efficiency.*
   - Improvements to raw materials handling and input by introduction of a thioform makeup and dosing skid with bag loading station (for sodium formate and sodium thiosulphate solution). *This change will improve raw materials handling and replaces manual operation.*
   - The addition of a chilled holding tank (including chiller package and candle filter).
2. The removal of a Section 4.2 A(1)(a)(ii) regulated activity from table S1.1 (chloro-platinic acid using the Aquacat process) which has been unused for several years. *Associated land is to be retained and not subject to surrender.*
3. Amend recovery code (recovery operations) for three existing listed activities (by addition of R4 recovery code).
4. The permit has been reviewed against the requirements of the Medium Combustion Plant Directive (MCPD) and relevant conditions have been added.

The rest of the installation will continue to operate as follows:

Brimsdown Precious Metal Recovery (the installation) is operated by Johnson Matthey Plc. The installation is located in Brimsdown, Enfield, Middlesex, England.

The main processes carried out on site are as follows:

- Evaluation - processing of incoming raw materials into a form that can be sampled readily.
- Smelting - separation of non-metallics from metals. Resulting bullion is then partially refined by selective oxidation.
- Chemicals - removal of base metal contaminants from partially refined bullion. Separation of silver and gold from platinum group metals (PGMs). Silver is converted to products for use in the photographic, coatings and chemical industries. Gold is shipped to customers. PGMs are shipped to Johnson Matthey's plant at Royston in Hertfordshire, for further processing.

The combined heat and power plant is listed as a DAA and discharges to air via stack A20, while the on-site boilers release waste gases via stacks A8 and A9.

Treated process effluent and site surface water is discharged to sewer under trade effluent consent from Thames Water. A small proportion of the site's rainfall dependant surface water run-off is discharged directly

to surface water. The operator has confirmed that they are reviewing these discharges with the intention of diverting these flows to the effluent treatment plant.

The operator has confirmed that there are no releases to groundwater or land.

The schedules specify the changes made to the permit.

We consider that in reaching our decision to vary the permit we have taken into account all relevant considerations and legal requirements. We are satisfied that the permit will ensure that a high level of protection is provided for the environment and human health and that the activities will not give rise to any significant pollution of the environment or harm to human health.

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 VP3430BN	Duly made 17/12/2005	
Permit determined	13/10/2005	
Variation notice UP3835M determined *[EPR/VP3430BN/V002]*	28/11/2006	Varied permit issued.
Variation notice UP3637U determined *[EPR/VP3430BN/V003]*	26/11/2007	Varied permit issued.
Variation notice EPR/VP3430BN/V004 determined	27/10/2011	Varied permit issued.
Application EPR/VP3430BN/V005	Duly made 23/04/2012	
Variation notice determined EPR/VP3430BN/V005	31/05/2012	Variation Notice issued for new TBRC furnaces
Agency variation determined EPR/VP3430BN/V006	05/03/2014	Agency variation to implement the changes introduced by IED
Variation application EPR/VP3430BN/V007	Duly made 03/11/2014	Application to vary the permit to add waste codes
Additional information	05/11/2014	Clarification on waste to be taken under waste code 16 05 09
Variation determined EPR/VP3430BN/V007	06/11/2014	Varied permit issued.
Regulation 60 Notice dated 16/12/16 (Notice requiring information for statutory review of permit)	Response Received 09/06/2017	Technical standards detailed in response to the information notice. Information to demonstrate that relevant BAT Conclusions are met for the -ferrous metals industries as detailed in document reference L174.
Receipt of additional information - reply to email sent by the site officer on 01/06/18	Response received 01/06/2018	Details regarding scheduled activities and release points
Receipt of additional information – reply to email sent by the site officer on 01/06/18	Response received 06/06/2018	Further information / clarification with regard to BAT conclusions 5, 6, 11, 13, 16, 139, 140, 141, and the validity of initial site condition report.

Status log of the permit		
Description	**Date**	**Comments**
Receipt of additional information	Response received 26/06/2018	Revised site plan with boundary outlined in green (no changes)
Environment Agency initiated variation EPR/VP3430BN/V008 (variation and consolidation) Variation determined EPR/VP3430BN/V008	27/06/2018	Statutory review of permit – Non-ferrous metals BAT Conclusions published 30/06/16 Varied and consolidated permit issued
Application (EPR/VP3430BN/V009) (Variation and consolidation)	Duly Made 09/11/2017	Application to replace CHP unit
Additional information received	16/03/2018, 27/04/2018, 07/06/2018	Submission of recent Air Dispersion Modelling report and relevant data files.
Variation determined EPR/VP3430BN (Billing ref: HP3135JC)	29/09/2018	Varied and consolidated permit issued.
Application (EPR/VP3430BN/V010) (Variation and consolidation)	Duly Made 29/07/2022	Application to install a Wet Electrostatic Precipitator (WESP) serving the Pyrocat process in the Evaluation department. Application also includes request to correct some previous administration errors.
Additional Information received:	12/09/2022, 12/10/2022	Updated risk assessments for noise and particulate air emissions and confirmation of re-routing of discharge from the rainwater of buildings 67 via ETP and S1.
Variation determined EPR/VP3430BN/V010	03/11/2022	Varied and consolidated permit issued.
Application EPR/VP3430BN/V011 (variation and consolidation)	Duly made 11/07/2024	Application to add waste codes.
Variation determined and consolidation issued EPR/VP3430BN	11/10/2024	Varied and consolidated permit issued in modern format.
Application EPR/VP3430BN/V012 (variation and consolidation)	Duly made 06/01/2025	Application relating to Phase 0 Leach and Dissolve' project, the removal of a listed activity, and amendment to waste operation code.
Additional Information received:	17/06/2025	Information relating Medium Combustion Plant permit review
Variation determined and consolidation issued EPR/VP3430BN	15/07/2025	Varied and consolidated permit issued Listed activity removed (no longer used) without land surrender (against that activity). *Section 4.2 A(1)(a)(ii) – Aquacat process needs to be considered within any future surrender application.*

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

Permit number

EPR/VP3430BN

Issued to

Johnson Matthey Plc ("the operator")

whose registered office is

5th Floor
2 Gresham Street
London
EC2V 7AD

company registration number **00033774**

to operate a regulated facility at

Brimsdown Precious Metal Recovery
33 Jeffreys Road
Brimsdown
Enfield
Middlesex
EN3 7PW

to the extent set out in the schedules.

The notice shall take effect from DD/MM/YYYY

Name	Date
Denise Horton	**15/07/2025**

Authorised on behalf of the Environment Agency

Schedule 1

The following conditions were varied as a result of the application made by the operator:

- Condition 2.1.1 relating to Permitting Activities in table S1.1:

  The following changes have been made to table S1.1

  - We have removed activity Section 4.2 A(1)(a)(ii) [Production of Chloro-Platinic Acid by Aquacat route from table S1.1] as this activity has not been operational for a number of years.
    (Not surrender of land. A note has been made in the status log of the permit to ensure record of activity is retained for future surrender).

Section 4.2 A(1)(a)(ii)	Producing inorganic chemicals such as acids (for example chromic acid, hydrofluoric acid, hydrochloric acid, hydrobromic acid, hydroiodic acid, phosphoric acid, nitric acid, sulphuric acid, oleum and chlorosulphonic acid (Production of Chloro-Platinic Acid (Aquacat route)) (R8: Recovery of components from catalysts)	From receipt of raw materials (platinum based wastes) to storage of product. Waste types as specified in Table S2.2

  - We have added recovery code 'R4' (Waste Operation Activities) for the following existing activities in table S1.1:-
    - Section 2.2 Part B(a);
    - Section 2.2 Part A(1)(a), and
    - Section 4.2 Part A(1)(c)

    This has been performed as an administrative correction to align with Pre-consent Certificates. Limitation has been included in Tables S1.1 and S2.2 [EWC 16 02 15*] to ensure there are no POPs (Persistent Organic Pollutants) present.

- Condition 2.3.1 relating to Operating Techniques in table S1.2

  The following changes have been made to table S1.2

  - We have included operating techniques according to the changes made by this variation.

- Condition 2.5.1 relating to Improvement Conditions in table S1.3

  The following changes have been made to table S1.3

  - We have added an additional improvement condition IC4 (relating to the Site Condition Report)
  - We have added an additional improvement condition IC5 (relating to reducing NOx emissions from emission point A20)

Schedule 2

The following conditions were varied as a result of an Environment Agency initiated variation

- Condition 2.3.7 has been included as relevant MCP condition
- Condition 3.1.5 has been included as relevant MCP condition
- Condition 3.1.6 has been included as relevant MCP condition
- Condition 4.2.6 has been included as relevant MCP condition
- Condition 4.3.2 has been updated to wording in our latest permit template.

- Table S3.1 (as referenced by condition 3.1.2) has been updated for emission point A20 by reduction of the emission limit value (from 190 mg/Nm^3 to 95 mg/Nm^3) in order to comply with MCPD requirements. A footnote has been included to correspond to the improvement condition that relates to this condition.
- Schedule 6 – Interpretation (as referenced by condition 4.4.1) has been updated to include interpretations for MCPD references.

Schedule 3 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/VP3430BN

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/VP3430BN/V011 authorising,

Johnson Matthey Plc ("the operator"),

whose registered office is

5th Floor
2 Gresham Street
London
EC2V 7AD

company registration number **00033774**

to operate an installation at

Brimsdown Precious Metal Recovery
33 Jeffreys Road
Brimsdown
Enfield
Middlesex
EN3 7PW

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

Name	Date
Denise Horton	**15/07/2025**

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.

2.3.7 For the Medium Combustion Plant activities referenced in Schedule 1 Table S1.1:

(a) the operator must keep periods of start-up and shut down of the combustion plant as short as possible.

(b) there shall be no persistent emission of 'dark smoke' as defined in section 3(1) of the Clean Air Act 1993.

2.4 Hazardous waste storage and treatment

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

2.5 Improvement programme

2.5.1 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.

2.5.2 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 Total annual emissions from the emission points set out in schedule 3 table S3.3 of a substance listed in schedule 3 table S3.4 shall not exceed the relevant limit in table S3.4.

3.1.4 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.

3.1.5 Monitoring of MCP shall not take place during periods of start-up or shut down.

3.1.6 For new MCP referenced in schedule 1, table S1.1 the first monitoring measurements shall be carried out within four months of the issue date of the permit or of the date when the MCP is first put into operation, whichever is later.

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 S3.4;

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 and S3.3 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, if during that quarter the total amount accepted exceeds 100 tonnes of non-hazardous waste or 10 tonnes of hazardous waste.

4.2.6 The operator shall maintain a record of the type and quantity of fuel used and the total annual operating hours for each MCP.

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:

(c) any change in the operator's name or address; and

(d) any steps taken with a view to the dissolution of the operator.

In any other case:

(e) the death of any of the named operators (where the operator consists of more than one named individual);

(f) any change in the operator's name(s) or address(es); and

(g) 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 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 B(a)	Melting, including making alloys of non-ferrous metals (other than tin or any alloy which in molten form contains 50 per cent or more by weight of tin), including recovered products (such as refining or foundry casting) in plant with a melting capacity of 4 tonnes or less per day for lead or cadmium or 20 tonnes or less per day for all other metals (Evaluation, including three thermal treatment furnaces and nine small induction furnaces etc) (R4: Recycling / reclamation of metal and metal compounds) (R8: Recovery of components from catalysts)	From receipt of raw materials (precious metal wastes) to transfer to smelting operation, including particulate abatement processes (caustic scrubber and WESP). Waste types as specified in Table S2.2. [R4 operation shall not include waste containing POPs (Persistent Organic Pollutants)
Section 4.2 A(1)(a)(ii)	Producing inorganic chemicals such as acids (for example chromic acid, hydrofluoric acid, hydrochloric acid, hydrobromic acid, hydroiodic acid, phosphoric acid, nitric acid, sulphuric acid, oleum and chlorosulphonic acid (Production of Chloro-Platinic Acid)	From smelting to storage of product.
Section 2.2A(1)(a)	Producing non-ferrous metals from ore, concentrates or secondary raw materials by metallurgical, chemical or electrolytic activities (Gold production) (R4: Recycling / reclamation of metal and metal compounds)	From silver process to storage of product. [R4 operation shall not include waste containing POPs (Persistent Organic Pollutants)
Section 2.2A(1)(a)	Producing non-ferrous metals from ore, concentrates or secondary raw materials by metallurgical, chemical or electrolytic activities (Silver powder production) (R4: Recycling / reclamation of metal and metal compounds)	From silver nitrate production to storage of product. [R4 operation shall not include waste containing POPs (Persistent Organic Pollutants)
Section 4.2A(1)(a)(v)	Producing inorganic chemicals such as non-metals, metal oxides, metal carbonyls or other inorganic compounds (for example calcium carbide, silicon, silicon carbide, titanium dioxide)	From silver nitrate production to storage of product.

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**
	(Silver Oxide production)	
Section 4.2A(1)(a)(iv)	Producing inorganic chemicals such as salts (for example ammonium chloride, potassium chlorate, potassium carbonate, sodium carbonate, perborate, silver nitrate, cupric acetate, ammonium phosphomolybdate) (Production of $AgNO_3$)	From smelting to storage of product
Section 4.2A(1)(a)(iv)	Producing inorganic chemicals such as salts (for example ammonium chloride, potassium chlorate, potassium carbonate, sodium carbonate, perborate, silver nitrate, cupric acetate, ammonium phosphomolybdate) (Production of AgNO3)	From silver nitrate production to storage of product.
Section 4.2A(1)(c)	Any manufacturing activity (other than the application of a glaze or vitreous enamel) involving the use of, or the use or recovery of, any compound of any of the following elements – (i) antimony, (ii) arsenic, (iii) beryllium, (iv) gallium, (v) indium, (vi) lead, (vii) palladium, (viii) platinum, (ix) selenium, (x) tellurium, (xi) thallium, where the activity may result in the release into the air of any of those elements or compounds or the release into water of any substance listed in paragraph 7(1) of Part 1 of this Schedule. (Smelting, including three reverberatory furnaces, two 2 tonne induction furnaces and an atomising furnace) (R4: Recycling / reclamation of metal and metal compounds) (R8: Recovery of components from catalysts)	From evaluation to transfer to chemicals department. Waste types as specified in Table S2.2 [R4 operation shall not include waste containing POPs (Persistent Organic Pollutants)
Directly Associated Activity		
Effluent discharge to foul sewer	Discharge of process water from the installation	From production of effluent to discharge to external foul sewer.

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**
Raw materials storage and handling	Receipt, handling and storage of metal scrap and all process substances	Receipt of raw materials until used in the process.
Storage and handling of wastes	Handling, storing and removal of all wastes from site	From waste production by the specified activities to waste leaving the site. Except wastes from finished products packaging and storage.
Medium Combustion Plant: Combined Heat and Power Plant	New MCP consisting of natural gas fired Combined Heat & Power (CHP) unit (5.75MWth), including provision of steam and hot water	From receipt of fuel to release of waste gases from stack. [8400 hours annually]
Medium Combustion Plant: Boiler House	Existing MCP consisting of natural gas fired boilers - Boiler 1 (3.58MWth) and Boiler 2 (4.48MWth).	From generation of steam and hot water from process to release of waste gases from stack. [8400 hours each annually]
Utilities	Utilities and other services including compressed air plant, cooling towers, refrigeration, nitrogen, repairs and maintenance and laboratories	From receipt to delivery.
Flue Dust Washing	Flue Dust Washing (R8: Recovery of components from catalysts)	From storage of waste dust to reprocessing in main processes and effluent production.

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Application	The response to questions 2.1 and 2.2 given in sections 2.1 and 2.2 of the Permit Application	09/02/2005
Additional information	Further information regarding security arrangements on site, submitted on 11/10/2005	11/10/2005
Multi Product Protocol	As submitted on 13/10/2005	13/10/2005
Variation Application UP3835MA	As submitted	21/09/2006
Additional information	Further information relating to the Variation Application UP3835MA	16/10/2006, 18/10/2006, 26/10/2006, 09/11/2006 and 20/11/2006
Variation Application UP3637US	As submitted	22/09/2007
Additional information	Further information relating to the Variation Application UP3637US	11/09/2007, 05/11/2007, 12/11/2007

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Variation Application EPR/VP3430BN/V004	As submitted	05/07/2011
Additional information	Further information relating to the Variation Application EPR/VP3430BN/V004	07/09/2011
Variation Application EPR/VP3430BN/V005	Parts C2 and C3 and the supplementary information supplied with these parts.	23/04/2012
Additional information	Details on proposed change to Top Blown Rotary Converters (TBRCs) exhaust gasses - to be re-routed from an existing bag filter plant F6 to a new dedicated bag filter plant F9.	07/04/2014
Response to Regulation 60 Notice – request for further information dated 06/12/2016	Technical standards detailed in response to BAT Conclusions 1-11, 13-19, 134-138, 140, 141, 143, 144 and 146-149 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 09/06/2017
Application	EPR Application for a Minor Technical Change to Permit No. EPR/VP3430BN for the replacement of the Combined Heat and Power (CHP) engine and ancillary equipment.	16/03/2018
Receipt of additional information - reply to email from the site officer on 01/06/18	Details regarding scheduled activities and release points	Received 01/06/2018
Revision provided at operator review	Revised site plan with boundary outlined in green	Received 26/06/2018
Application	EPR Application for a normal variation change to permit EPR/VP3430BN for the addition and operation of a Wet Electrostatic Precipitator (WESP) and associated effluent storage treatment tank, serving the Pyrocat process in the Evaluation department	Received 13/09/2021
Receipt of additional information - reply to email request for further information – 12/09/22	Details regarding updated noise and air emissions risk assessments.	12/09/2022
Receipt of additional information – reply to email request for further information – 12/10/22	Confirmation of diversion of uncontaminated site surface previously discharged via W1 to site ETP (and offsite via S1)	12/10/22
Application	EPR Application for a normal variation for “Phase 0 Leach and Dissolve” project.	Duly made 06/01/2025
Additional information	Response to queries raised in relation to addendum to Brimsdown environmental permit variation application [CRM:0311025]	20/01/2025
	MCP response to Reg61 Notice by email	17/06/2025

Table S1.3 Improvement programme requirements		
Reference	**Improvement Condition**	**Completion date**
IC1	The operator shall submit, for approval by Environment Agency, a report setting out progress to achieving the BAT conclusion AELs 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: 1) Current performance against the BATc AEL. 2) Methodology for reaching the AELs. 3) Associated targets / timelines for reaching compliance by 30/06/20. 4) Any alterations to the initial plan The report shall address the following BAT Conclusions: **BAT 140** ("…reduce dust and metal emissions to air from all dusty operations…") **BAT 141** ("…reduce NOx emissions to air from a hydrometallurgical operation involving dissolving/leaching with nitric acid…") **BAT 144** ("…reduce HCl and Cl_2 emissions to air from a hydrometallurgical operation…")	Completed: 31st October 2021 31/10/2021
IC2	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: 1) Methodology for achieving BAT. 2) Associated targets / timelines for reaching compliance by 30/06/20. 3) Any alterations to the initial plan The report shall address the following BAT Conclusions: **BAT 5** ("…prevent or…reduce diffuse emissions to air and water, BAT is to collect diffuse emissions as much as possible nearest to the source and treat them.) **BAT 6** ("…to set up and implement an action plan on diffuse dust emissions, as part of the environmental management system...") **BAT 16** ("…use ISO 5667 for water sampling and to monitor the emissions to water at the point where the emission leaves the installation at least once per month…) **BAT 137** ("…reduce diffuse emissions from a hydrometallurgical operation…")	Completed
IC3	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:	Completed

Table S1.3 Improvement programme requirements		
Reference	**Improvement Condition**	**Completion date**
	(a) 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 M18 guidance; and (b) a risk assessment in accordance with the screening procedures in Environment Agency guidance "Surface water pollution risk assessment for your environmental permit", using the representative emissions data obtained in (a) above.	
IC4	The Operator shall carry out a review of the existing SCR (site condition report) as a result of the changes introduced by variation EPR/VP3430BN/V012, including but not limited to:- • new bulk storage infrastructure for hydrogen peroxide • new infrastructure for sodium formate and sodium thiosulphate An updated site condition report shall be provided following the review (highlighting any changes made to the existing SCR) and submitted to the Environment Agency.	15/01/2026
IC5	The Operator shall submit a report on the opportunity to reduce NOx emissions from emission point A20, to ensure continuing compliance with the Emission Limit Values (ELV) in this permit. Where emissions are currently above ELV, the operator shall undertake a review in accordance with the combustion plant original equipment manufacturer, qualified combustion engineer and/or burner manufacture. Where emissions are not currently exceeding but are close to the ELV the review can be carried out without external support. The review shall include, but not be limited to a review of air/fuel ratio, burner configurations and opportunities for burner upgrade, maintenance regimes, fuel quality, and operating patterns.	15/04/2026

Schedule 2 – Waste types, raw materials and fuels

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

Table S2.2 Permitted waste types and quantities for precious metal production	
Maximum Quantity	The total quantity of non-hazardous waste accepted shall be less than 18,000 tonnes a year. The total quantity of hazardous waste accepted shall be less than 12,000 tonnes a year. Total capacity for the site shall not exceed 30,000 tonnes per annum.
Waste code	**Description**
01	**Wastes resulting from exploration, mining, quarrying, and physical and chemical treatment of minerals**
01 03	**wastes from physical and chemical processing of metalliferous minerals**
01 03 06	tailings other than those mentioned in 01 03 04 and 01 03 05.
01 03 07*	other wastes containing hazardous substances from physical and chemical processing of metalliferous minerals
01 03 08	dusty and powdery wastes other than those mentioned in 01 03 07
01 03 99	wastes not otherwise specified
06	**Wastes from inorganic chemical processes**
06 01	**wastes from the manufacture, formulation, supply and use (MFSU) of acids**
06 01 02*	hydrochloric acid
06 01 05*	nitric acid and nitrous acid
06 01 99	wastes not otherwise specified
06 03	**wastes from the MFSU of salts and their solutions and metallic oxides**
06 03 11*	solid salts and solutions containing cyanides
06 03 13*	solid salts and solutions containing heavy metals
06 03 14	solid salts and solutions other than those mentioned in 06 03 11 and 06 03 13
06 03 15*	metallic oxides containing heavy metals
06 03 16	metallic oxides other than those mentioned in 06 03 15
06 03 99	wastes not otherwise specified
06 04	**metal-containing wastes other than those mentioned in 06 03**
06 04 05*	wastes containing other heavy metals
06 04 99	wastes not otherwise specified
06 05	**sludges from on-site effluent treatment**
06 05 02*	sludges from on-site effluent treatment containing hazardous substances
06 05 03	sludges from on-site effluent treatment other than those mentioned in 06 05 02
06 08	**wastes from the MFSU of silicon and silicon derivatives**
06 08 99	wastes not otherwise specified
06 10	**wastes from the MFSU of nitrogen chemicals, nitrogen chemical processes and fertiliser manufacture**
06 10 02*	wastes containing dangerous substances
06 10 99	wastes not otherwise specified
06 11	**wastes from the manufacture of inorganic pigments and opacificiers**
06 11 99	wastes not otherwise specified
06 13	**wastes from inorganic chemical processes not otherwise specified**
06 13 02*	spent activated carbon (except 06 07 02)
06 13 03	carbon black
07	**Wastes from organic chemical processes**
07 01	**wastes from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals**
07 01 03*	organic halogenated solvents, washing liquids and mother liquors

Table S2.2 Permitted waste types and quantities for precious metal production	
Maximum Quantity	The total quantity of non-hazardous waste accepted shall be less than 18,000 tonnes a year. The total quantity of hazardous waste accepted shall be less than 12,000 tonnes a year. Total capacity for the site shall not exceed 30,000 tonnes per annum.
Waste code	**Description**
07 01 10*	other filter cakes and spent absorbents
07 01 11*	sludges from on-site effluent treatment containing dangerous substances
07 01 12	Sludges from on-site effluent other than those mentioned in 07 01 11
07 02	**wastes from the MFSU of plastics, synthetic rubber and man-made fibres**
07 02 10*	other filter cakes and spent absorbents
07 02 11*	sludges from on-site effluent treatment containing dangerous substances
07 02 12	sludges from on-site effluent treatment other than those mentioned in 07 02 11
07 03	**wastes from the MFSU of organic dyes and pigments (except 06 11)**
07 03 10*	other filter cakes and spent absorbents
07 04	**wastes from the MFSU of organic plant protection products (except 02 01 08 and 02 01 09), wood preserving agents (except 03 02) and other biocides**
07 04 10*	other filter cakes and spent absorbents
07 05	**wastes from the MFSU of pharmaceuticals**
07 05 10*	other filter cakes and spent absorbents
07 05 11*	sludges from on-site effluent treatment containing dangerous substances
07 05 12	sludges from on-site effluent treatment other than those mentioned in 07 05 11
07 05 13*	solid wastes containing dangerous substances
07 05 14	solid wastes other than those mentioned in 07 05 13
07 06	**wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics**
07 06 10*	other filter cakes and spent absorbents
07 06 12	sludges from on-site effluent treatment other than those mentioned in 07 06 11
07 07	**wastes from the MFSU of fine chemicals and chemical products not otherwise specified**
07 07 10*	other filter cakes and spent absorbents
07 07 11*	sludges from on-site effluent treatment containing dangerous substances
07 07 12	sludges from on-site effluent treatment other than those mentioned in 07 07 11
08	**Wastes from the manufacture, formulation, supply and use (MFSU) of coatings (paints, varnishes and vitreous enamels), adhesives, sealants and printing inks**
08 02	**wastes from MFSU of other coatings (including ceramic materials)**
08 02 01	waste coating powders
08 02 02	aqueous sludges containing ceramic materials
08 02 03	aqueous suspensions containing ceramic materials
08 03	**wastes from MFSU of printing inks**
08 03 12*	waste ink containing dangerous substances
08 03 13	waste ink other than those mentioned in 08 03 12
09	**Wastes from the photographic industry**
09 01	**wastes from the photographic industry**
09 01 06*	wastes containing silver from on-site treatment of photographic wastes
09 01 07	photographic film and paper containing silver or silver compounds
10	**Wastes from thermal processes**
10 04	**wastes from lead thermal metallurgy**
10 04 01*	slags from primary and secondary production
10 04 02*	dross and skimmings from primary and secondary production
10 04 03*	calcium arsenate
10 04 04*	flue-gas dust
10 04 05*	Other particulates and dust
10 04 06*	solid wastes from gas treatment
10 04 07*	sludges and filter cakes from gas treatment
10 04 09*	wastes from cooling-water treatment containing oil
10 04 10	wastes from cooling-water treatment other than those mentioned in 10 04 09
10 04 99	wastes not otherwise specified
10 05	**wastes from zinc thermal metallurgy**

Table S2.2 Permitted waste types and quantities for precious metal production	
Maximum Quantity	The total quantity of non-hazardous waste accepted shall be less than 18,000 tonnes a year. The total quantity of hazardous waste accepted shall be less than 12,000 tonnes a year. Total capacity for the site shall not exceed 30,000 tonnes per annum.
Waste code	**Description**
10 05 01	slags from primary and secondary production
10 05 03*	flue-gas dust
10 05 04	other particulate and dust
10 05 05*	solid waste from gas treatment
10 05 06*	sludges and filter cakes from gas treatment
10 05 08*	wastes from cooling-water treatment containing oil
10 05 09	wastes from cooling-water treatment other than those mentioned in 10 05 08
10 05 10*	dross and skimmings that are flammable or emit, upon contact with water, flammable gases in dangerous quantities
10 05 11	dross and skimmings other than those mentioned in 10 05 10
10 05 99	wastes not otherwise specified
10 06	**wastes from copper thermal metallurgy**
10 06 01	dross and skimmings from primary and secondary production
10 06 02	slags from primary and secondary production
10 06 03*	flue-gas dust
10 06 04	other particulates and dust
10 06 06*	solid wastes from gas treatment
10 06 07*	sludges and filter cakes from gas treatment
10 06 09*	wastes from cooling-water treatment containing oil
10 06 10	wastes from cooling-water treatment other than those mentioned in 10 06 09
10 06 99	wastes not otherwise specified
10 07	**wastes from silver, gold and platinum thermal metallurgy**
10 07 01	slags from primary and secondary production
10 07 02	dross and skimmings from primary and secondary production
10 07 03	solid wastes from gas treatment
10 07 04	other particulates and dust
10 07 05	sludges and filter cakes from gas treatment
10 07 07*	wastes from cooling-water treatment containing oil
10 07 08	wastes from cooling-water treatment other than those mentioned in 10 07 07
10 07 99	wastes not otherwise specified
10 08	**wastes from other non-ferrous thermal metallurgy**
10 08 04	particulates and dust
10 08 09*	other slags
10 08 15*	flue-dust gas containing dangerous substances
10 08 16	flue-dust gas other than those mentioned in 10 08 15
10 08 17*	sludges and filter cakes from flue-gas treatment containing dangerous substances
10 08 18	sludges and filter cakes from flue-gas treatment other than those mentioned in 10 08 17
10 08 99	wastes not otherwise specified
10 09	**casting of ferrous pieces**
10 09 11*	other particulates containing hazardous substances
10 10	**wastes from casting of non-ferrous pieces**
10 10 05*	casting cores and moulds which have not undergone pouring, containing hazardous substances
10 10 06	casting cores and moulds which have not undergone pouring, other than those mentioned in 10 10 05
10 11	**wastes from manufacture of glass and glass products**
10 11 99	wastes not otherwise specified
11	**Wastes from chemical surface treatment and coating of metals and other materials; non-ferrous hydro-metallurgy**

Table S2.2 Permitted waste types and quantities for precious metal production	
Maximum Quantity	The total quantity of non-hazardous waste accepted shall be less than 18,000 tonnes a year. The total quantity of hazardous waste accepted shall be less than 12,000 tonnes a year. Total capacity for the site shall not exceed 30,000 tonnes per annum.
Waste code	**Description**
11 01	**wastes from chemical surface treatment and coating of metals and other materials (for example galvanic processes, zinc coating processes, pickling processes, etching, phosphating, alkaline degreasing, anodising)**
11 01 05*	pickling acids
11 01 06*	acids not otherwise specified
11 01 09*	sludges and filter cakes containing hazardous substances
11 01 10	sludges and filter cakes other than those mentioned in 11 01 09
11 01 12	aqueous rinsing liquids other than those mentioned in 11 01 11
11 01 16*	saturated or spent ion exchange resins
11 01 98*	other wastes containing hazardous substances
11 01 99	wastes not otherwise specified
11 02	**wastes from non-ferrous hydrometallurgical processes**
11 02 02*	sludges from zinc hydrometallurgy (including jarosite, goethite)
11 02 03	wastes from the production of anodes for aqueous electrolytical processes
11 02 05*	wastes from copper hydrometallurgical processes containing hazardous substances
11 02 06	wastes from copper hydrometallurgical processes other than those mentioned in 11 02 05
11 02 07*	other wastes containing hazardous substances
11 02 99	wastes not otherwise specified
12	**Wastes from shaping and physical and mechanical surface treatment of metals and plastics**
12 01	**wastes from shaping and physical and mechanical surface treatment of metals and plastics**
12 01 03	non-ferrous metal filings and turnings
12 01 04	non-ferrous metal dust and particles
12 01 16*	waste blasting material containing hazardous substances
12 01 17	waste blasting material other than those mentioned in 12 01 16
12 01 18*	metal sludge (grinding, honing and lapping sludge) containing oil
15	**WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED**
15 01	**packaging (including separately collected municipal packaging waste)**
15 01 02	plastic packaging
15 01 03	wooden packaging
15 02	**absorbents, filter materials, wiping cloths and protective clothing**
15 02 02*	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances
15 02 03	absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02
16	**Wastes not otherwise specified in the list**
16 01	**end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08)**
16 01 17	ferrous metal
16 01 18	non-ferrous metal
16 01 22	components not otherwise specified
16 01 99	wastes not otherwise specified
16 02	**wastes from electrical and electronic equipment**
16 02 15*	hazardous components removed from discarded equipment that does not contain POPs
16 02 16	components removed from discarded equipment other than those mentioned in 16 02 15.
16 03	**off-specification batches and unused products**

Table S2.2 Permitted waste types and quantities for precious metal production	
Maximum Quantity	The total quantity of non-hazardous waste accepted shall be less than 18,000 tonnes a year. The total quantity of hazardous waste accepted shall be less than 12,000 tonnes a year. Total capacity for the site shall not exceed 30,000 tonnes per annum.
Waste code	**Description**
16 03 03*	inorganic wastes containing dangerous substances
16 03 04	inorganic wastes other than those mentioned in 16 03 03
16 05	**gases in pressure containers and discarded chemicals**
16 05 09	discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08
16 07	**wastes from transport tank, storage tank and barrel cleaning (except 05 and 13)**
16 07 09*	wastes containing dangerous substances
16 07 99	wastes not otherwise specified
16 08	**spent catalysts**
16 08 01	spent catalysts containing gold, silver, rhenium, rhodium, palladium, iridium or platinum (except 16 08 07)
16 08 02*	spent catalysts containing dangerous transition metals[1] or dangerous transition metal compounds
16 08 06*	spent liquids used as catalysts
16 08 07*	spent catalysts contaminated with hazardous substances
16 09	**oxidising substances**
16 09 03*	peroxides, e.g. hydrogen peroxide
16 10	**aqueous liquid wastes destined for off-site treatment**
16 10 03*	aqueous concentrates containing hazardous substances
16 11	**waste linings and refractories**
16 11 03*	other linings and refractories from metallurgical processes containing hazardous substances
16 11 04	other linings and refractories from metallurgical processes other than those mentioned in 16 11 03
17	**Construction and demolition wastes (including excavated soil from contaminated sites)**
17 01	**concrete, bricks, tiles and ceramics**
17 01 06*	mixtures of, or separate fractions of concrete, bricks, tiles and ceramics containing hazardous substances
17 01 07	mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06
17 04	**metals (including their alloys)**
17 04 07	mixed metals
17 04 09*	metal waste contaminated with dangerous substances
18	**Wastes from human or animal health care and/or related research (except kitchen and restaurant wastes not arising from immediate health care)**
18 01	**wastes from natal care, diagnosis, treatment or prevention of disease in humans**
18 01 07	chemicals other than those mentioned in 18 01 06
19	**Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use**
19 01	**wastes from incineration or pyrolysis of waste**
19 01 11*	bottom ash and slag containing dangerous substances
19 01 12	bottom ash and slag other than those mentioned in 19 01 11
19 01 18	pyrolysis wastes other than those mentioned in 19 01 17

[1] For the purpose of this entry, transition metals are: scandium, vanadium, manganese, cobalt, copper, yttrium, niobium, hafnium, tungsten, titanium, chromium, iron, nickel, zinc, zirconium, molybdenum and tantalum. These metals or their compounds are dangerous if they are classified as dangerous substances. The classification of dangerous substances shall determine which among those transition metals and which transition metal compounds are hazardous.

Table S2.2 Permitted waste types and quantities for precious metal production	
Maximum Quantity	The total quantity of non-hazardous waste accepted shall be less than 18,000 tonnes a year. The total quantity of hazardous waste accepted shall be less than 12,000 tonnes a year. Total capacity for the site shall not exceed 30,000 tonnes per annum.
Waste code	**Description**
19 02	**wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)**
19 02 03	premixed wastes composed of only non-hazardous wastes
19 02 04*	premixed wastes composed of at least one hazardous waste
19 02 05*	sludges from physico/chemical treatment containing dangerous substances
19 02 06	sludges from physic/chemical treatment other than those mentioned in 19 02 05
19 02 07*	oil and concentrates from separation
19 02 08*	liquid combustible wastes containing dangerous substances
19 02 09*	solid combustible wastes containing dangerous substances
19 02 10	combustible wastes other than those mentioned in 19 02 08 and 19 02 09
19 02 11*	other wastes containing dangerous substances
19 02 99	wastes not otherwise specified
19 03	**stabilised/solidified wastes**
19 03 04*	wastes marked as hazardous, partly stabilised
19 03 05	stabilised wastes other than those mentioned in 19 03 04
19 03 06*	wastes marked as hazardous, solidified
19 03 07	solidified wastes other than those mentioned in 19 03 06
19 04	**vitrified waste and wastes from vitrification**
19 04 01	vitrified waste
19 08	**wastes from waste water treatment plants not otherwise specified**
19 08 06*	saturated or spent ion exchange resins
19 08 07*	solutions and sludges from regeneration of ion exchangers
19 08 13*	sludges containing dangerous substances from other treatment of industrial waste water
19 08 14	sludges from other treatment of industrial waste water other than those mentioned in 19 08 13
19 09	**wastes from the preparation of water intended for human consumption or water for industrial use**
19 09 04	spent activated carbon
19 09 05	saturated or spent ion exchangers
19 09 06	solutions and sludges from regeneration of ion exchangers
19 12	**wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified**
19 12 03	non-ferrous metal
19 12 11*	other wastes (including mixtures of materials) from mechanical treatment of waste containing hazardous substances
19 12 12	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11
19 13	**wastes from soil and groundwater remediation**
19 13 03*	sludges from soil remediation containing dangerous substances
19 13 04	sludges from soil remediation other than those mentioned in 19 13 03

Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air – emission limits and monitoring requirements. Effective from 30 June 2020						
Emission point ref. & location	**Source**	**Parameter**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
A1 shown on site plan BATC NFM Review Stacks and vents-Layout1	Exhaust from abatement system serving Pyrocat (Caustic scrubber and WESP)	Dioxins and furans (PCDD/F) (I-TEQ)	0.1 ng/m^3	Average over the sampling period	Once a year	BS EN 1948 parts 1, 2 & 3 and MID
		TVOC (as Carbon)	30 mg/m^3	Daily average	Continuous	BS EN 12619
		Mercury and its compounds (as Hg)	0.05mg/m^3	Average over the sampling period	Once a year	EN 13211 (see MID for BS EN 14385)
		Particulate matter	5 mg/m^3	Daily average	Continuous	BS EN 13284-2
A3 shown on site plan BATC NFM Review Stacks and vents-Layout1	Exhaust from Bag plants F10, F9, F4 and F8 serving smelting and melting operations	Dioxins and furans (PCDD/F) (I-TEQ)	0.1 ng/m^3	Average over the sampling period	Once a year	BS EN 1948 parts 1, 2 & 3 and MID
		Particulate matter	5 mg/m^3	Daily average	Continuous	BS EN 13284-2
		Mercury and its compounds (as Hg)	0.05mg/m^3	Average over the sampling period	Once a year	EN 13211 (see MID for BS EN 14385)
		Ag	1 mg/m^3	Extractive Sample	Once a year	BS EN 14385 and MID
		PGM (as metals)	0.5 mg/m^3	Extractive Sample	Once a year	BS EN 14385 and MID
		Cd + Tl	0.1 mg/m^3	Extractive Sample	Once a year	BS EN 14385 and MID
A4 shown on site plan BATC NFM Review Stacks and vents-Layout1	Exhaust from Bag plant F6, F1, F2, F3, F5 and F7 serving smelting and melting operations	Dioxins and furans (PCDD/F) (I-TEQ)	0.1 ng/m^3	Average over the sampling period	Once a year	BS EN 1948 parts 1, 2 & 3 and MID
		Particulate matter	5 mg/m^3	Daily average	Continuous	BS EN 13284-2
		Mercury and its compounds (as Hg)	0.05mg/m^3	Average over the sampling period	Once a year	EN 13211 (see MID for BS EN 14385)
		Ag	1 mg/m^3	Extractive Sample	Once a year	BS EN 14385 and MID
		PGM (as metals)	0.5 mg/m^3	Extractive Sample	Once a year	BS EN 14385 and MID
		Cd + Tl	0.1 mg/m^3	Extractive Sample	Once a year	BS EN 14385 and MID

Table S3.1 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**
A6 shown on site plan BATC NFM Review Stacks and vents-Layout1	Exhaust from scrubber serving chemical operations	NO_x (as NO_2)	150 mg/m^3	Average over the sampling period	Once a year	BS EN 14792
		SO_2	100 mg/m^3	Average over the sampling period	Once a year	BS EN 14791
		HCl	10 mg/m^3	Average over the sampling period	Once a year	BS EN 1911
		Cl_2	2 mg/m^3	Average over the sampling period	Once a year	US EPA 26a
		Ag	2 mg/m^3	Extractive Sample	Once a year	BS EN 14385 and MID
A8 shown on site plan BATC NFM Review Stacks and vents-Layout1	Exhaust from boiler house	NO_x (as NO_2)	140 mg/m^3	Extractive Sample	Once a year	BS EN 14792
		CO	100 mg/m^3	Extractive Sample	Once a year	BS EN 15058
A9 shown on site plan BATC NFM Review Stacks and vents-Layout1	Exhaust from boiler house	NO_x (as NO_2)	140 mg/m^3	Extractive Sample	Once a year	BS EN 14792
		CO	100 mg/m^3	Extractive Sample	Once a year	BS EN 15058
A20 shown on site plan BATC NFM Review Stacks and vents-Layout1	Exhaust from Combined heat and power plant	NO_x (as NO_2)	95 mg/Nm^3 Note 1	Extractive Sample	Every 3 years	BS EN 14792
		CO	No limit set.	Extractive Sample	Every 3 years	BS EN 15058
Note 1:- Compliance to this ELV is required after the completion of improvement condition IC5, table S1.3. Until this time, the previous ELV of 190 mg/Nm^3 shall remain effective during this period.						

Table S3.2 Point Source emissions to water (other than sewer) and land – emission limits and monitoring requirements						
Emission point ref. & location	**Source**	**Parameter [1]**	**Limit (incl. unit) [1]**	**Reference Period**	**Monitoring frequency**	**Monitoring standard or method**
W2, emission to Lee Valley Conservancy culvert	Rainfall dependant site drainage from western part of site	No parameter set	No limit set	-	-	-
1. If appropriate, emissions limits and monitoring requirements will be determined following completion of IC3 in Table S1.3						

Table S3.3 Point source emissions to sewer, effluent treatment plant or other transfers off-site– emission limits and monitoring requirements						
Emission point ref. & location	**Source**	**Parameter**	**Limit (incl. Unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
S1 on site plan in schedule 7 emission to Meadows Sewer (Thames Water)	Effluent treatment plant	Nickel	No limit set	-	-	-
		Lead				
		Arsenic				
		Zinc				
		Chlorine				
		Copper				
		Mercury				
		Cadmium				

Table S3.4 Annual limits				
Emission point ref. & location	**Source**	**Parameter**	**Limit (incl. Unit)**	**Monitoring standard or method**
S1 on site plan in schedule 7 emission to Meadows Sewer (Thames Water)	Effluent treatment plant	Mercury and its compounds	1 kg in a year	Atomic Fluorescence
		Cadmium and its compounds	5 kg in a year	ICP-OES

Schedule 4 – Reporting

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

Table S4.1 Reporting of monitoring data			
Parameter	**Emission or monitoring point/reference**	**Reporting period**	**Period begins**
Emissions to air Parameters as required by condition 3.5.1.	A1, A3, A4, A6, A20	Every 6 months	1 January, 1 July
	A8, A9	Every 12 months	1 January
	A20	Every 3 years	1 January
Emissions to sewer	S1	Annual	1 January

Table S4.2: Annual production/treatment	
Parameter	**Units**
Production of Bullion (SPG)	tonnes
Production of PGMs	tonnes

Table S4.3 Performance parameters		
Parameter	**Frequency of assessment**	**Units**
Water usage	Annually	tonnes
Energy usage	Annually	MWh
Total raw material used	Annually	tonnes
Waste disposal (including material sent for recovery).	Annually	tonnes

Table S4.4 Reporting forms		
Media/parameter	**Reporting format**	**Date of form**
Air	Form air 1 or other form as agreed in writing by the Environment Agency	27/06/18
Water usage	Form water usage 1 or other form as agreed in writing by the Environment Agency	27/06/18
Energy usage	Form energy 1 or other form as agreed in writing by the Environment Agency	27/06/18
Annual Production	Form performance 1 or other form as agreed in writing by the Environment Agency	27/06/18
Waste subject to condition 4.2.5	Waste tonnage return from the Environment Agency website or other form as agreed in writing by the Environment Agency	As specified on .GOV.UK website

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	**EPR-VP3430BN**
Name of operator	**Johnson Matthey Plc**
Location of Facility	**Brimsdown Precious Metal Recovery**
Time and date of the detection	

(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution	
To be notified within 24 hours of detection	
Date and time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

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

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

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

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

Part B – to be submitted as soon as practicable

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

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 – Interpretation

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

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

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

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

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

“Compliance date” means 01/01/2025 for existing MCPs with net rated thermal input of greater than 5MWth or 01/01/2030 for existing MCPs with a net rated thermal input of less than or equal to 5MWth.

“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.

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

“emissions to land” includes emissions to groundwater.

“EP Regulations” means The Environmental Permitting (England and Wales) Regulations SI 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.

“existing medium combustion plant” means an MCP in operation before 20 December 2018.

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

“Hazardous property” has the meaning in Annex lll of the Waste Framework Directive.

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

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

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

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

“medium combustion plant” or ”MCP” means a combustion plant with a net rated thermal input equal to or greater than 1 MW but less than 50 MW.

“Medium Combustion Plant Directive” or “MCPD” means Directive 2015/2193/EU of the European Parliament and of the Council on the limitation of emissions of certain pollutants into the air from medium combustion plants, into the air from medium combustion plants, as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016.

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

“new MCP” means an MCP first put into operation on or after 20/12/2018.

“operating hours” means the time, expressed in hours, during which a combustion plant is operating and discharging emissions into the air, excluding start-up and shut-down periods.

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

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

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

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

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

- in relation to emissions from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid and gaseous fuels, 6% dry for solid fuels; and/or
- in relation to emissions from gas engines or gas turbines, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 15% dry for liquid and gaseous fuels ; and/or
- in relation to emissions from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content.

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

Equivalence factor:

Dioxins

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

Furans

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

“year” means calendar year ending 31 December.

When the following terms appear in the waste code list in Schedule 2, table 2.2 for that tab they have the meaning given below:

‘hazardous substance’ means a substance classified as hazardous as a consequence of fulfilling the criteria laid down in parts 2 to 5 of Annex I to Regulation (EC) No 1272/2008

‘heavy metal’ means any compound of antimony, arsenic, cadmium, chromium (VI), copper, lead, mercury, nickel, selenium, tellurium, thallium and tin, as well as these materials in metallic form, as far as these are classified as hazardous substances

‘PCBs’ means

- polychlorinated biphenyls
- polychlorinated terphenyls
- monomethyl-tetrachlorodiphenyl methane, Monomethyl-dichloro-diphenyl methane, Monomethyldibromo-diphenyl methane
- any mixture containing any of the above mentioned substances in a total of more than 0,005 %by weight

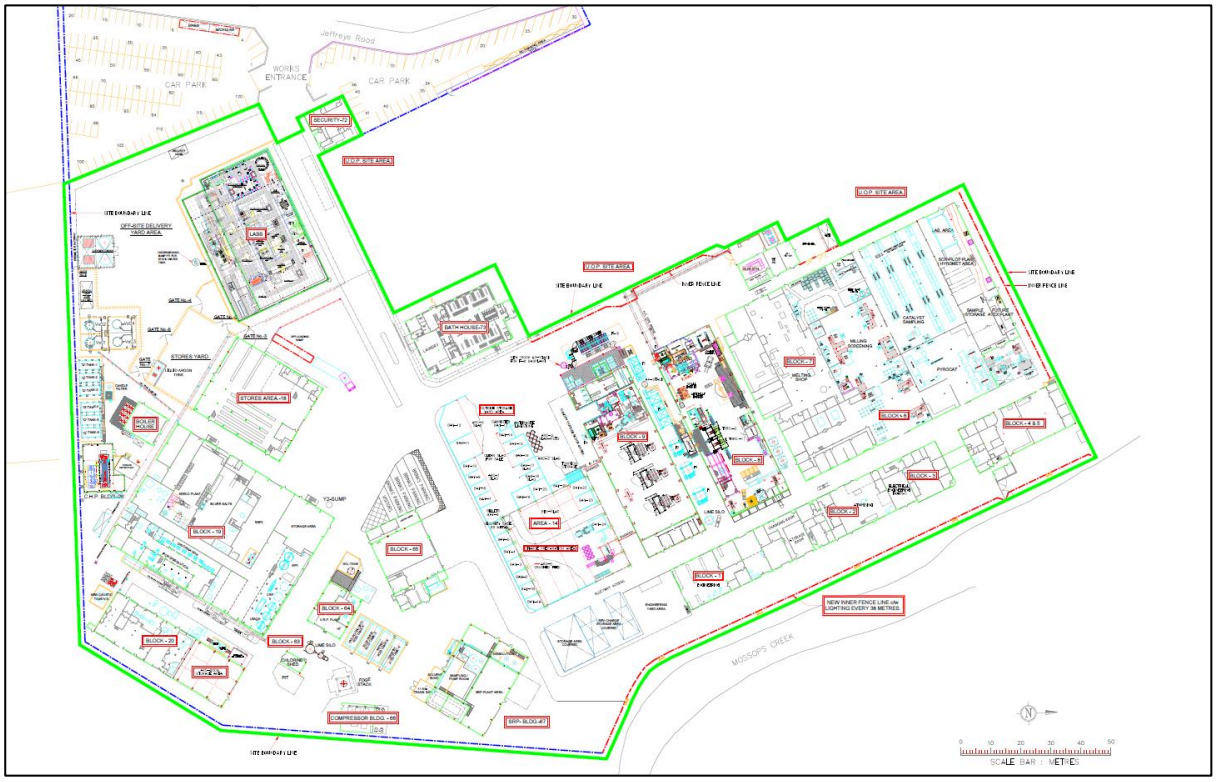
‘transition metals’ means any of the following metals: any compound of scandium, vanadium, manganese, cobalt, copper, yttrium, niobium, hafnium, tungsten, titanium, chromium, iron, nickel, zinc, zirconium, molybdenum and tantalum, as well as these materials in metallic form, as far as these are classified as hazardous substances

‘stabilisation’ means processes which change the hazardousness of the constituents in the waste and transform hazardous waste into non-hazardous waste

‘solidification’ means processes which only change the physical state of the waste by using additives without changing the chemical properties of the waste

‘partly stabilised wastes’ means wastes containing, after the stabilisation process, hazardous constituents which have not been changed completely into non-hazardous constituents and could be released into the environment in the short, middle or long term

Schedule 7 – Site plan



As provided by the operator.

END OF PERMIT