

# Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Jaguar Land Rover Limited,

Halewood, Liverpool. L24 9BJ.

Variation application number A2/0703/6.4/1/V001

Permit number

A2/0703/6.4/1

Jaguar Land Rover Halewood Permit number A2/0703/6.4/1

#### 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 2 of the notice 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.

Article 21(3) of the Industrial Emissions Directive (IED) requires the Regulator to review conditions in permits that it has issued and to ensure that the permit delivers compliance with relevant standards, within four years of the publication of updated decisions on Best Available Techniques (BAT) Conclusions. We have reviewed the permit for this installation against the revised BAT Conclusions for surface treatment using organic solvents including preservation of wood and wood products with chemicals published on 9<sup>th</sup> December 2020.

Only activities covered by this BAT Reference Document have been reviewed and assessed.

This variation makes the below changes following the review under Article 21(3) of the IED and the consolidation of the Environmental Permitting Regulations that came into force on the 4 January 2017:

- Revised emission limits and monitoring requirements for emissions to air applicable from 9<sup>th</sup> December 2024 in Schedule 2, Table S2.1.
- The emissions to sewer are in line with their trade effluent licence, see Schedule 2, Table S2.2.
- Provision of a solvent management plan
- Periodic monitoring of groundwater

The rest of the installation is unchanged and continues to be operated as follows:

#### Brief description of the process

The aim of this process is to transform the basic metal body shell into a finished, corrosion resistant, painted body shell, ready for the final assembly as a completed vehicle.

When at capacity the site operates a three-shift system and can produce up to 168,000 vehicles per year.

The production line comprises of the following 9 stages:

- 1. Pre-treatment
- 2. Phosphating
- 3. Electrocoating
- 4. Sealing and Underbody
- 5. Primer Coating
- 6. Colour (base) Coat Application
- 7. Clear Coat Application
- 8. Contrast Roof Application
- 9. Underbody Wax Application

Where necessary, in order to meet emission limit standards imposed on them, abatement techniques have been employed by the company.

#### **Pre-treatment & Phosphating**

The pre-treatment is a cleaning and conditioning process comprising of sprays and dips. The Phosphating process involves the vehicle body shells being dipped into a phosphate solution that reacts with the steel to form a microcrystalline phosphate layer. This process prepares the body shell for electrocoating.

#### Electrocoating

This is the application of an electrophoretic paint, to the body shell, that is effectively the first primer coat and primary corrosion resistant layer.

This process works by dipping the body shell into a bath containing the electrophoretic paint solution. The positively charged paint particles are then attracted to the negatively charged body shell. The thickness of this coat can be altered by varying the voltage across the bath.

#### Sealing & Underbody

In the sealer and underbody section PVC compounds are extruded and brushed into joints and seams of the electrocoated body shell to prevent unwanted ingress of water, fume and dust. The underside of the body shell is sprayed with an underbody PVC coating to protect it from abrasion and to reduce noise levels. The body shell is then cured through the sealer oven.

#### Abatement Technique

Abatement of emissions from the sealer oven is by means of a Regenerative Thermal Oxidiser (RTO 1).

#### **Primer coating**

Each body shell now passes into the first primer coating section. In purpose built spraybooths the external surfaces are sprayed automatically, whilst some of the interior parts are sprayed manually. The body shells are then baked in an oven.

#### Abatement Techniques

The spraybooths are designed to have a downward airflow. Air enters from above and leaves through vents in the base. The air carries the overspray down through the vents in the base and into a collection and removal system.

The oven exhaust vents to a Regenerative Thermal Oxidiser (RTO 2).

#### Enamel – Colour Coating

Each body shell now passes into the colour coating section.

The body shells are inspected and any runs and blemishes are sanded. The body shell is then painted with the selected colour.

#### Abatement Techniques

The colour coat is water based. It is subject to a low temperature infra-red flash off to dry the colour coat prior to the application of the clear-coat.

#### Enamel – Clear Coating

Each body shell is now painted with a coat of clear enamel. The shell is then dried in the enamel oven.

#### Abatement Techniques

The exhaust gases from the enamel oven vents to the enamel incinerator.

A final inspection and minor repairs are undertaken for polishing and finishing.

#### **Contrast Roof booth**

Each body shell passes into the base and clear coating section. In a purpose built spray booth the surfaces are sprayed automatically. Manual backup is available. The body shells are then baked in an oven.

#### Abatement Techniques

The spraybooths are designed to have a downward airflow. Air enters from above and leaves through vents in the base. The air carries the overspray down through the vents in the base and into a collection and removal system.

The oven exhaust vents to a Regenerative Thermal Oxidiser (RTO 2)

#### **Underbody Wax Application**

Once all painting operations have been completed, box sections and inner door areas are sprayed with a solvent based wax preservative material. Underbody areas are waxed after assembly. The body shells are heated in the re-flow wax oven, to maximise seam penetration.

#### Abatement Techniques

High efficiency manual application guns ensure an accurate repeatable operation. There is a mass emission limit for the VOC emissions.

#### Paint Mix Room, LE Mix Room & Paint and Oil Stores

The paint and oil stores are an intermediate materials store that takes deliveries of totes, IBC's and drums of materials used in the paint process. Materials are selected, mixed if necessary, and the paint used when required.

#### Abatement Techniques

The paint and oil stores are bunded by strip drains around the perimeter that run to an underground sump. Enclosed mixing systems ensure VOC emissions are kept to a minimum. All vessels are sealed when in storage.

#### Paint Booth Waste Treatment Facility

The process uses patented chemicals within the waterwash system that hold paint particles in suspension. The paint particles are then removed by an ultra-filtrate system and the chemicals are recycled back to the booth.

This process removes paint residues from the booth and pipe work to keep them clean. The process makes maximum use of water recycling and minimises effluent discharges.

- Three re-circulation tanks are used at the installation:
  - Primer (solvent based)
  - Basecoat (water-based)
  - Clearcoat (solvent based)

The Paint Booth Waste Treatment Facility separates particulates from all four recirculation tanks.

The process consists of:

- A disperser chemical
- Antifoaming additions, if necessary
- Pro-aqua flocculation for the continuous separation of paint particles.

The current chemical treatment solution enables the paint particles to be held in suspension at an agreed percentage solid concentration. The water is continually circulated whilst a small percentage is streamed to a separation system. This stream is continually processed using two flotation units where the liquid sludge floats to the top of the tank and is skimmed off and held in temporary waste tanks before being pumped to the disposal tank. The clean water is then returned to the main circulation system. This enables the concentrated solution to be disposed of offsite via a licensed waste carrier.

#### Emissions

The principal releases from the process, and the media to which they are released are:

To air:

- Volatile organic compounds
- Nitrogen oxides
- Carbon Monoxide

To sewer:

- Heavy metals
- Adsorbable organically bound halogens, expressed as CL (AOX)
- Fluorides

To atmosphere

• Energy (heat)

Waste - Sent off-site for further recovery or as a last resort to landfill

#### **Environmental Management System**

Jaguar Land Rover has been successfully certified to the ISO 14001 Environmental Management Standard since 1998. This standard helps Jaguar Land Rover to improve their environmental performance through more efficient use of resources and the reduction of waste. The system is audited regularly by an external party.

Jaguar Land Rover Halewood (the installation) is permitted to operate a section 6.4 Part A(2) process under the Environmental Permitting regulations 2016 for the, "Surface treating substances, objects or products using organic solvents, in particular for dressing, printing, coating, degreasing, waterproofing, sizing, painting, cleaning or impregnating, in plant with a consumption capacity of more than 150kg or more per hour than 200 tonnes per year."

The site is located to the south of Halewood and key sensitive receptors include residents of both Liverpool and Knowsley. The site is also within 2km of the Mersey Estuary, a Site of Specific Scientific Interest (SSSI).

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			
	2.11.1993	First authorisation			
Ref: B3/0992/6.5/7					
Authorisation varied	20.04.1994 and 25.08.1999	Variation of authorisation			
Authorisation varied, reference: EPA IB.B3/0992/6.5/7/6.20/S-	13.06.2001	Substantial change			
Authorisation varied, reference EPA IB B3/0992/6.5/7/6.20/S- 1(V-1)	31.08.2001	Variation to update permit			
Application received	25.07.2003	Application for an A2 solvent coating activity namely heatset printing			
Authorisation transferred to permit under new scheme. Reference A2/0703/6.4/1	18.08.2005	New scheme introduced. Transfer from a part B process to a part A2 process. New guidance issued (SG6)			
Permit reviewed	12.09.2012	Updated guidance (SG6(11))			
Variation determined A2/0703/6.4/1/V001	06.12.2024	Statutory review of permit – surface treatment using organic solvents including preservation of wood and wood products with chemicals BAT Conclusions published 9/12/2020 Varied and consolidated permit issued. Effective from 06/12/2024			

#### End of introductory note

# Notice of variation and consolidation

### The Environmental Permitting (England and Wales) Regulations 2016

The Knowsley Metropolitan Borough Council, in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2016 varies,

#### Permit number

A2/0703/6.4/1

#### Issued to

Jaguar Land Rover Limited ("the operator")

whose registered office is

Abbey Road, Whitley, Coventry. CV3 4LF.

company registration number 01672070

to operate a regulated facility at

Jaguar Land Rover Limited, Halewood, Liverpool. L24 9BJ.

to the extent set out in the schedules.

The notice shall take effect from 06/12/2024

Name	Date
Ms. Rachel Gibson	06/12/2024

Signed R.A. Gubson

Authorised on behalf of the Knowsley Metropolitan Borough Council

# Schedule 1

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

# Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.



# Permit

## The Environmental Permitting (England and Wales) Regulations 2016

#### Permit number

A2/0703/6.4/1

This is the consolidated permit referred to in the variation and consolidation notice for application A2/0703/6.4/1/V001 authorising,

Jaguar Land Rover Limited ("the operator"),

whose registered office is

Abbey Road, Whitley, Coventry. CV3 4LF.

company registration number 01672070

to operate an installation at

Jaguar Land Rover Limited, Halewood, Liverpool. L24 9BJ.

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

Name	Date
Ms. Rachel Gibson	06/12/2024

Signed R.A. autoson

Authorised on behalf of the Knowsley Metropolitan Borough Council

# 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 yellow on the site plan in schedule 6a to this permit.

#### 2.3 Operating techniques

- 2.3.1 For the activities referenced in Schedule 1, Table S1.1 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 Regulator.
- 2.3.2 If notified by the Regulator that the activities are giving rise to pollution, the operator shall submit to the Regulator 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 Regulator.
- 2.3.3 The operator shall
  - (a) identify the process areas, sections or steps that make the greatest contribution to VOC emissions and energy consumption, which have the greatest potential for improvement;

- (b) identify and implement actions to minimise VOC emissions and energy consumption;
- (c) review progress and update actions on an annual basis.
- 2.3.4 The operator shall ensure that where waste produced by the activities is sent to a relevant waste operation, that operation is provided with the following information, prior to the receipt of the waste:
  - (a) the nature of the process producing the waste;
  - (b) the composition of the waste;
  - (c) the handling requirements of the waste;
  - (d) the hazardous property associated with the waste, if applicable; and
  - (e) the waste code of the waste.
- 2.3.5 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.

## 3 Emissions and monitoring

#### 3.1 Emissions to water, air or land

- 3.1.1 There shall be no point source emissions to air, sewer or land except from the sources and emission points listed in Schedule 2 Tables S2.1 and S2.2.
- 3.1.2 The limits given in schedule 2 shall not be exceeded.
- 3.1.3 Total annual emissions from the emission point(s) set out in schedule 2 Tables S2.1 and S2.2 of a substance listed in Schedule 2 Table S2.3 shall not exceed the relevant limit in Table S2.3.
- 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 The operator shall,
  - (a) maximise the availability and performance of equipment critical to the protection of the environment;
  - (b) record all periods of other than normal operation, their cause and duration and where possible their effect on emissions.

#### 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 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 Monitoring

3.3.1 The operator shall, unless otherwise agreed in writing by Knowsley Metropolitan Borough Council (Knowsley MBC), monitor total and fugitive VOC emissions by compiling, at least on an annual basis, a solvent mass balance of the solvent inputs and outputs of the plant, as defined in Part 7(2) of Annex VII to Directive 2010/75/EU.

The solvent mass balance shall include:

- identification and documentation of solvent inputs and outputs, (e.g. emissions in waste gases, emissions from each fugitive emission source, solvent output in waste);
- substantiated quantification of each relevant solvent input and output and recording of the methodology used (e.g. measurement, calculation using emission factors, estimation based on operational parameters);
- identification of the main sources of uncertainty of the aforementioned quantification, and implementation of corrective actions to reduce the uncertainty;
- regular update of solvent input and output data.

The solvent mass balance calculation methodology shall be agreed in writing by the Regulator.

- 3.3.2 The operator shall, unless otherwise agreed in writing by Knowsley MBC, undertake the monitoring specified in the following tables in Schedule 2 to this permit:
  - (a) point source emissions specified in Tables S2.1 and S2.2;
  - (b) process monitoring specified in Table S2.4;
- 3.3.3 The operator shall maintain records, for a minimum of 2 years, 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.
- 3.3.4 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.3.2 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by an authorised officer of Knowsley MBC.

3.3.5 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in Schedule 2, Tables S2.1 and S2.2 unless otherwise agreed in writing by an authorised officer of Knowsley MBC.

#### 3.4 Odour

3.4.1 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 Knowsley MBC, 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.

#### 3.5 Noise and vibration

- 3.5.1 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 Knowsley MBC, 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.
- 3.5.2 The operator shall:
  - (a) if notified by an officer of Knowsley MBC that the activities are giving rise to pollution outside the site due to noise and vibration, submit to Knowsley MBC 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 Knowsley MBC.

# 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 Knowsley MBC, 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 Knowsley MBC.

#### 4.2 Reporting

- 4.2.1 The operator shall send all reports and notifications required by the permit to Knowsley MBC using the contact details supplied in writing by Knowsley MBC.
- 4.2.2 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by Knowsley MBC, 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 3 table S3.1;
  - (b) for the reporting periods specified in Schedule 3 Table S3.1 and using the forms specified in Schedule 3 Table S3.4; and
  - (c) giving the information from such results and assessments as may be required by the forms specified in those tables.
- 4.2.3 A report or reports on the performance of the activities over the previous year shall be submitted to Knowsley MBC by 31 January (or other date agreed in writing by Knowsley MBC) 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 3 Table S3.2; and
  - (c) the performance parameters set out in Schedule 3 Table S3.3 using the forms specified in Table S3.4 of that schedule.
- 4.2.4 The operator shall, unless notice under this condition has been served within the preceding four years, submit to Knowsley MBC, 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 The operator shall submit an annual solvent management plan in order to demonstrate compliance with the requirements of the Industrial Emissions Directive, by 31 January each year in respect of the previous year.

#### 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 Knowsley MBC
- (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, within 24 hours
  - (i) inform Knowsley MBC, 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 4 to this permit within the time period specified in that schedule.
- 4.3.3 Where Knowsley MBC has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform Knowsley MBC when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to Knowsley MBC Environmental Health team at least 14 days before the date the monitoring is to be undertaken.
- 4.3.4 Knowsley MBC 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.
- 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) Knowsley MBC 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 Knowsley MBC 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, Knowsley MBC 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 5 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
S6.4 A(2) (a)	Surface treating substances, objects or products using organic solvents, in particular for dressing, printing, coating, degreasing, waterproofing, sizing, painting, cleaning or impregnating, in plant with a consumption capacity of more than 150kg or more per hour than 200 tonnes per year.	Receipt of raw materials to application of coating onto the vehicles.
S6.5 B (a)(i)	Manufacture of finished coatings containing or involving the use of 100 or more tonnes of organic solvents in any 12-month period.	From receipt and storage of raw materials through formulation stages to production and despatch/use of finished coatings, including the handling, storage and disposal of wastes.
S2.3 A(2) (a)	Surface treating metals using an electrolytic process where the aggregated volume of treatment vats is more than 30m <sup>3</sup>	Receipt of raw materials to assembly of surface treated finished parts and despatch of finished parts. Total scheduled activity vat volume capacity is 1151m <sup>3</sup> .
Directly Associated Activ	vities	
Storage and handling of raw materials	Storage of solid and liquid materials in bulk storage tanks, drums, IBCs, bags and other containers	Receipt and storage of raw materials to transfer to process areas
Storage, handling and dispatch of intermediates, finished products, waste & other materials	Storage of intermediates and finished products. Process waste segregation and storage	Internal & external storage of finished products, storage of waste in designated areas and loading for transit off site
Control & abatement systems for emissions to air	Abatement of releases to air	Extraction and collection of waste gases and treatment in condensers, recovery units, carbon beds and thermal oxidisers
Effluent discharge to foul sewer	Discharge of process water from the installation	From production of effluent to discharge to external foul sewer

Table S1.2 Operating techniques						
Description	Parts	Date Received				
Review of Environmental Management	Site operates under the Environmental Management System ISO 14001. Identify all relevant sections of the review, in particular BAT 1, but also BAT 2, 13 and 20.	02/08/2024				
System	Management plan for the prevention and control of leaks and spillages (BAT 5)	14/10/2024				
	Summary of the BAT review (BAT 3 and 4)	14/10/2024				
	Summary of the BAT review (BAT 6 to 9)	14/10/2024				
DAT Reviews	Summary of the BAT review (BAT 14 to 17) and BAT 24	14/10/2024				
	Summary of the BAT review (BAT 18)	14/10/2024				
Energy Efficiency	Energy Efficiency Plan (BAT 19)	02/08/2024				
Odour management plan	Odour management plan (BAT 23)	06/08/2024				

#### Schedule 2 – Emissions and monitoring

Table S2.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
200 – Enamel Incinerator 201 – RTO 1 204 – RTO 2	Thermal Oxidiser	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	100 mg/Nm <sup>3</sup>	Average over the sampling period	Minimum of once per year	BS EN 14792
200 – Enamel Incinerator 201 – RTO 1 204 – RTO 2	Thermal Oxidiser	Carbon monoxide	100 mg/Nm <sup>3</sup>	Average over the sampling period	Minimum of once per year	BS EN 15058
200 – Enamel Incinerator 201 – RTO 1 204 – RTO 2	Thermal Oxidiser	TVOC	20 mg/Nm <sup>3</sup> from 09/12/2024	Average over the sampling period	Minimum of once per year if mass emission is 0.1 to 10 kg C/	BS EN 12619
200 – Enamel Incinerator 201 – RTO 1 204 – RTO 2	Thermal Oxidiser	TVOC	20 mg/Nm <sup>3</sup> from 09/12/2024	Average over the sampling period	Once every 3 years if mass emission is < 0.1 kg C/h	BS EN 12619
Oxidisers: Stacks 200, 201 and 204. Contrast roof: Stacks 72 to 75 Primer 2: Stacks 76 to 79 Basecoat: Stacks 68 to 71 Clearcoat: Stacks 64 to 67 [Note 1]	Thermal oxidiser Preparation /Spray Coating	Particulate matter (Dust)	3 mg/Nm <sup>3</sup> from 09/12/2024	Daily average or Average over the sampling period	Minimum of once per year, in accordance with the agreed monitoring schedule. (3.3.2)	BS EN 13284-1

Note 1: At least one stack from each paint booth block to be monitored each year.

#### Emissions to sewer

Table S2.2 Point source emissions to sewer						
Emission point ref. & location	Parameter	Source	Limit (incl. Unit)	Reference period	Monitoring frequency	Monitoring standard or method
Gate 4 and Dispatch Yard [See Schedule 6c]	Toxic metals (Cr, Sb, Be, Cu, Pb, Ni, Se, Ag, Sn, V and Zn)	Trade effluent	10000 ug/l either individually or total	24-hour flow proportional composite sample	Once every month	EN ISO 11885, EN ISO 17294-2, EN ISO 15586)
	Cr(VI)	Trade Effluent	0.05mg/l	24-hour flow proportional composite sample	Once every month	EN ISO 10304-3 or EN ISO 23913
	Fluorides		25 mg/l	24-hour flow proportional composite sample	Once every month	EN ISO 10304-1
	рН	Trade effluent	6-10	Instantaneous	Continuous	BS6068-2.50
	Total daily volume of discharge	Trade effluent	1700 m <sup>3</sup>	24-hour total	Continuous	MCERTS self- monitoring of effluent flow scheme

Table S2.3: Annual limits for total emissions (BAT- associated emission levels) (1)				
Substance         Medium         Limit (including unit)				
TVOC	/OC     Total     30 g VOC's per m <sup>2</sup> of surface area ( <sup>2</sup> )			
<ul> <li>(<sup>1</sup>) The BAT-AELs refer to e other kind of coating process production equipment, both</li> <li>(<sup>2</sup>) The surface area is defined</li> </ul>	emissions from all process stag ss up to and including the final a during and outside the produc ned as set out in Part 3 of Anne	ges, carried out at the same installation from the electrophoretic coating or any wax and polish of the topcoat, as well as solvents used in cleaning of ction period. ex VII to Directive 2010/75/EU		

Table S2.4 Process monitoring requirements						
Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications		
200 – Enamel Incinerator	Combustion Temperature	Continuous	Set based on TO design	With alarm if temperature drops 710 °C		
201 – RTO 1	Combustion Temperature	Continuous	Set based on TO design	With alarm if temperature drops below 780 °C		
204 – RTO 2	Combustion Temperature	Continuous	Set based on TO design	With alarm if temperature drops below 780 °C		

# Schedule 3 – Reporting

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

Table S3.1 Reporting of monitoring data						
Parameter	Emission or monitoring point/reference	Reporting period	Period begins			
Emissions to air Parameters as required by condition 3.1.3. (See Schedule 2, Table S2.1)	Stacks 200, 201 and 204. Contrast roof: Stacks 72 to 75 Primer 2: Stacks 76 to 79 Basecoat: Stacks 68 to 71 Clearcoat: Stacks 64 to 67	Every 12 months, in accordance with the agreed monitoring schedule.	1 January			
Emissions to water or sewer Parameters as required by condition 3.1.3. (See Schedule 2, Table S2.2)	Gate 4 and Dispatch Yard	Every 12 months	1 January			

Table S3.2: Annual production/treatment			
Parameter Units			
TVOC	30 g VOC's per m <sup>2</sup> of surface area		

Table S3.3 Performance parameters				
Parameter	Frequency of assessment	Units	Target (Indicative)	
Specific water consumption	Annually	M <sup>3</sup> / vehicle coated	1.3	
Specific energy consumption	Annually	MWh / vehicle coated	1.3	
Specific waste sent offsite	Annually	Kg / vehicle coated	9	

Table S3.4 Reporting forms	
Media/parameter	Reporting format
Air	As agreed in writing by Knowsley MBC
Sewer	As agreed in writing by Knowsley MBC
Performance parameters (RTO temperature)	As agreed in writing by Knowsley MBC
Energy consumption	As agreed in writing by Knowsley MBC
Water consumption	As agreed in writing by Knowsley MBC
Emission monitoring	As agreed in writing by Knowsley MBC
Waste	As agreed in writing by Knowsley MBC

# Schedule 4 – 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 nonconfidential 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		
Emission point reference/ source		
Parameter(s)		
Limit		
Measured value and uncertainty		
Date and time of monitoring		
Measures taken, or intended to be taken, to stop the emission		

# (c) Notification requirements for the breach of permit conditions not related to limits

To be notified within 24 hours of detection	
Condition breached	
Date, time and duration of breach	
Details of the permit breach i.e. what happened including impacts observed.	
Measures taken, or intended to be taken, to restore permit compliance.	

(d) 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 5 – Interpretation

"abatement equipment" means that equipment dedicated to the removal of polluting substances from releases from the installation to air or water media.

"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 Knowsley MBC under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, any power specified in section 108(4) of that Act.

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

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

"calendar monthly mean" means the value across a calendar month of all validated hourly means.

"CEM" Continuous emission monitor

"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.

"emissions to land" includes emissions to groundwater.

"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.

"groundwater protection zones 1 and 2" have the meaning given in the document titled "Groundwater Protection: Policy and Practice" published by the Environment Agency in 2006.

"hazardous waste" has the meaning given in the Hazardous Waste (England and Wales) Regulations 2005 No.894, the Hazardous Waste (Wales) Regulations 2005 No. 1806 (W.138), the List of Wastes (England) Regulations 2005 No.895 and the List of Wastes (Wales) Regulations 2005 No. 1820 (W.148).

"Industrial Emissions Directive" means DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016.

"ISO" means International Standards Organisation.

"MCERTS" means the Environment Agency's Monitoring Certification Scheme.

"pollution" means emissions as a result of human activity which may-

(a) be harmful to human health or the quality of the environment,

- (b) cause offence to a human sense,
- (c) result in damage to material property, or

(d) impair or interfere with amenities and other legitimate uses of the environment.

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

"quarterly" for reporting/sampling means after/during each 3 month period, January to March; April to June; July to September and October to December and, when sampling, with at least 2 months between each sampling date. "sealed drainage system" in relation to an impermeable surface, means a drainage system with impermeable components which does not leak and which will ensure that:

- no liquids will run off the surface otherwise than via the system
- all liquids entering the system are collected in a sealed sump, except where liquids may be lawfully discharged

"SI" means site inspector.

"Organic Compound" means any compound containing at least the element carbon and one or more of hydrogen, halogens, oxygen, sulphur, phosphorus, silicon or nitrogen, with the exception of carbon oxides and inorganic carbonates and bicarbonates.

"STS BAT Conclusions" BAT Conclusions for surface treatment using organic solvents including preservation of wood and wood products with chemicals published on 9<sup>th</sup> December 2020

"Volatile Organic Compound" (VOC) means any organic compound means any organic compound as well as the fraction of creosote, having at 293.15 K, a vapour pressure of 0.01 kPa or more, or having a corresponding volatility under the particular conditions of use.

"Waste code" means the six digit code referable to a type of waste in accordance with the List of Wastes (England) Regulations 2005, or List of Wastes (Wales) Regulations 2005, as appropriate, 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.

"year" means calendar year ending 31 December.

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:

- (a) 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
- (b) 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.

# Schedule 6

Schedule 6a – Jaguar Land Rover site plan (boundary)

Schedule 6b – Jaguar Land Rover point source emissions

Schedule 6c – Jaguar Land Rover water sampling locations

END OF PERMIT