

Report

Marshall Land Systems Ltd Permit Application

**Supplementary Technical Information
Report**

For Bidwells LLP

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1 Introduction

1.1 Purpose of this document

This supplementary technical information report (STIR) supports an application by Marshall Land Systems Ltd ('Marshall's') under the Environmental Permitting (England and Wales) Regulations 2016, as amended (EPR), to operate an installation for the respraying of road vehicles in Huntingdon.

The proposed installation will need to comply with the requirements of the EPR, as well as the best available techniques (BAT) defined by the relevant Defra Process Guidance Note. The STIR has been produced to satisfy those requirements.

This document provides supplementary information to support the application and should be read in conjunction with the completed Huntingdonshire District Council's (HDC) application form which is provided as Appendix A1 to this report.

1.2 Application structure

The application process as prescribed by HDC requires the completion of its permit application form. This requires information on the Operator, technical information about the installation, issues for the application and the financial implications for the Operator.

The nature of the information required for several sections of these forms means that a more comprehensive response, in terms of detailed descriptions and assessments, is needed than can be entered onto the form. Therefore, in order to submit coherent and logical descriptions of the application to HDC, this report contains appropriate supporting information which provides responses to the application form sections.

Table 1-1 outlines the remaining structure of this application report.

Table 1-1 Supplementary technical information report structure

Section Reference	Title	Description of content
2	About the site and operator	Provides a description of the operator, the site, and guidance reviewed when developing the application.
3	Proposed activities	Provides a process description of the proposed installation and activities.
4	Management of activities	This section provides a description of the environmental management system arrangements across the site
5	Emissions to air	Provides details of the point source and fugitive emissions associated with this application and the process and environmental monitoring to be carried out.
6	Environmental risk assessment	Presents an assessment of the environmental risks associated with the application.
7	Appendices	Supporting Information, application forms and technical assessments.
Appendix A1	Application form	Completed copy of HDC application form for a permit to operate a vehicle refinishing installation.

Section Reference	Title	Description of content
Appendix A2	Drawings	Contains site plans and site layout drawings associated with the new installation.
Appendix A3	Pre-application consultation	Email correspondence from HDC containing the full response from pre-application consultation.
Appendix A4	Environmental Management System	Copy of the Operator's Environmental Management System (EMS) certificate.
Appendix A5	Air Quality Impact Assessment	An assessment, using the ADMS-6 dispersion model, that considers the impacts on air quality from emissions of volatile organic compounds (VOCs) and particulate matter (PM ₁₀ and PM _{2.5}).
Appendix A6	Operation and Maintenance Manuals	O&M manuals containing instructions for the correct use and operation of key equipment, and provides a maintenance schedule and procedures for key items of equipment.
Appendix A7	Spray Booth Emission Performance	Emissions monitoring report demonstrating the spray booth abatement system can meet the emission limit for particulate matter in PG 6/34

2 About the application

2.1 The Site and Operator

The proposed installation (the Site) will be operated by Marshalls Land Systems Ltd ('MLS') and involves the refinishing of road vehicles. These activities will not involve application of the original coating to a newly manufactured vehicle.

MLS operates an existing permitted installation¹ for the respraying of road vehicles in the Hangar 13 and Hangar 15 paint shops at Cambridge airport. Due to the redevelopment of the airport, MLS is proposing to relocate the paint installation at Cambridge airport to existing buildings in Huntingdon.

The new Site lies towards the north west of Huntingdon, Cambridgeshire. The Site is adjacent to the A141 and other commercial and industrial development, including a car showroom, offices and warehouses. Vantage Park Day Nursery is located approximately 200 m to the south-east of the proposed installation. The nearest existing residential property is located off Green End, approximately 650 m to the north-west. Although not yet constructed, planning permission has been granted for new residential development adjacent to the western boundary and to the north of the Site, with the nearest proposed receptor being approximately 155 m from centre of the Site where the main emission points are located.

The proposed installation will be operated by, and located at:

Name: Marshall Land Systems Limited

Address: CrossLink 252
Washingley Road
Huntingdon
PE29 6WP

The grid reference of the site centre is 523220, 274153.

Figure 2-1 provides a site location map. The proposed paint installation will be located within an existing building at the site.

¹ Permit Reference Number: LAPPC/PG6/34(1)

Figure 2-1: Site Location and Receptor Map



Imagery ©2025 Airbus, Maxar Technologies. Includes data from JTP Studios (Grange Farm Application) and Savills (Western Application)

2.2 Pre-application consultation

Pre-application consultation was initiated with HDC to discuss several aspects of the application, including:

- The type of activities and resultant type of permit application that is required;
- The relevant process guidance notes and technical standards to refer to; and
- The cost of the permit application.

A technical note was supplied to HDC to support this consultation (document reference J10-16318A-10-F01) and it was confirmed via written reply from HDC on 9 May 2025 that:

- All activities as described in the Technical Note are covered within Schedule 1, Section 6.4, Part B(b) of the EPR; and
- PG6/34 is the most appropriate Process Guidance Note for establishing Best Available Techniques (BAT) for the installation;

Appendix 3 contains details of HDC's pre-application correspondence.

2.3 Applicable guidance

Table 2-1 summarises the applicable legislation, guidance and technical standards that has been reviewed when developing this application.

Table 2-1 Applicable legislation, guidance and technical standards

Publisher/ Document Type	Title
European Legislation and Guidance	Directive 2004/42/EC of the European Parliament and of the Council of 21 April 2004 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products and amending Directive 1999/13/EC
Defra and/or Environment Agency Guidance	Environmental Permitting (England and Wales) Regulations 2016 (as amended)
	Secretary of State's Guidance – General Guidance Manual on Policy and Procedures for A2 and B installations.
	Process Guidance Note: PG6/34 (11) – 'Respraying of road vehicles'
	Environmental Agency Guidance: Risk assessments for your environmental permit
	Environment Agency Guidance: Air emissions risk assessment for your environmental permit
	Environment Agency Guidance: Develop a management system: environmental permits
	Environment Agency Guidance: Control and monitor emissions for your environmental permit

3 Proposed activities

3.1 Overview

As described previously, MLS operates an existing vehicle refinishing installation at Cambridge airport but is proposing to relocate this installation to the new Site due to the redevelopment of the airport. The solvent consumption capacity (> 1 tonne per year) and operations at the Site will be like-for-like with those occurring at Cambridge airport, including the relocation of the existing shot blast booths at Cambridge airport to the new Site in Huntingdon. However, the paint spray booths and other supporting infrastructure e.g., paint mixing room, will be new equipment.

The activities at the existing installation are regulated under Schedule 1, Section 6.4, Part B(b) of the EPR², with Process Guidance Note 6/34³ establishing BAT for the activities. In accordance with PG6/34, these activities fall outside the scope of Chapter V of the Industrial Emissions Directive (Directive 2010/75/EU)⁴ as they use refinish products marketed under the Paints Directive (Directive 2004/42/EC)⁵.

Like the existing activities at Cambridge airport, the proposed operation at Huntingdon will involve the painting and respraying of vehicles, equipment and systems manufactured on or off site within the company's manufacturing division. Painting and respraying processes will involve material usage and application to support the refinishing of vehicles other than those produced "in house" i.e., there will be no application of an original coating to the vehicles. In addition to the spraying of complete vehicles and associated equipment and systems, there will be a small amount of part spraying (interior components) prior to main assembly.

The proposed installation will comprise six spray booths (the largest two of these can be further sub-divided to form four smaller spray booths), aluminium shot blast booth, steel shot blast booth, underseal wax application, mixing room, paint kitchen, recycling room, extraction and dust arrestment systems, and dedicated paint and waste storage areas. The solvent consumption of coating activity at the proposed installation will be greater than 1 tonne or more in any 12-month period.

All coatings used at the installation will be compliant with Annex II, Table B of the Paints Directive and Table 4.2 of PG 6/34, which is provided for reference in Table 3-1 below.

Table 3-1: Paints Directive compliant coatings to be used at the installation

Product subcategory	Coatings	Maximum VOC content (g/l) ^A
(a) Preparatory and cleaning	Preparatory Pre-cleaner	850 200
(b) Bodyfiller/stopper	All types	250
(c) Primer	Surface / filler and general primer Wash primer	540 780
(d) Topcoat	All types	420
(e) Special finishes	All types	840

^A g/l of ready use for product. Except for subcategory (a) any water content of the product ready for use should be discounted

² <https://www.legislation.gov.uk/uksi/2016/1154/schedule/1>

³ https://assets.publishing.service.gov.uk/media/5a80754740f0b623026939fc/respraying-of-road-vehicles-process-guidance-note-6-34_11_.pdf

⁴ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32010L0075>

⁵ <https://www.legislation.gov.uk/eudr/2004/42>

The overall process will be separated into distinct activities described below.

3.1.1 Vehicle preparation

When a vehicle is brought into the paint shop, it will be masked using tape and paper or, for large areas, plastic sheet. The vehicle is then filled, sanded down and cleaned prior to entry to the spray booth. Activated polyester fillers will be used to repair any damaged bodywork or to optimise the body finish by smoothing out any body panel imperfections. The sanding down of vehicles is carried out using sanding equipment connected to individual vacuum units that provide localised dust extraction. Waste from these sanders will be collected in a sealed heavy-duty polythene bag and disposed into the general waste skip. This system is used to minimise the amount of particulate matter released into the atmosphere. Shot blasting will be carried out within the two shot blast booths using manual gun blasting equipment with extracted air routed to dust arrestment plant before being discharged to atmosphere through wall-mounted fans at an approximate velocity of 20 m/s.

3.1.2 Paint delivery and mixing

Paint will be delivered to the site and stored in one of two dedicated external paint stores areas. Paints are then pre-mixed in a mixing room and paint kitchen with an emphasis on mixing just enough paint to complete each stage of the process. Both rooms contain gun cleaning equipment and paint mixing schemes which will be fitted with an extraction system providing negative pressure within the rooms. The ventilation system will discharge the extracted air through the roof at a height of 3 m above ridge at a velocity exceeding 15 m/s. The extraction rate will be designed to be sufficient to prevent solvent vapour from escaping to the main workshop. All rooms are fitted with self-closing doors and ventilation is electronically interlocked with the light switch.

3.1.3 Paint application

Paint will, by majority, be applied in the spray booths using High-Volume Low-Pressure (HVLP) spray equipment or equivalent equipment with a transfer of paint efficiency of 65% or better. Certain operations will also be carried out using Body Schutz air-assisted airless spray equipment. The compressed air supply for the spray guns and the air feed to the operators (personal air fed respiration equipment will be used to carry out all spraying operations) will be from two separate supply points in the spray booth and will be supplied by an electrically driven compressor.

All spray booths will be combined spray/bake booths with a booth extraction system providing the following extraction rates:

- Junair 9 Series Spray Booth Oven (24 m x 5.5 m x 5.5 m) – four air handling units per spray booth, each rated at a nominal 35,000 m³/h (192 ACH in total).
- Junair 1 Series Spray Booth Oven (8 m x 4.2 m x 2.5 m) – one air handling unit per spray booth rated at a nominal 20,000 m³/h (108 ACH)

In order to ensure that no dust is drawn into the spray booths, all inlet air will first be drawn through a set of ceiling-mounted fabric panel air filters. Air flows round the vehicle being painted and passes out through floor level grilles mounted towards the rear of the booth. Fabric filters installed within/behind these grilles remove the paint particulate overspray from the extracted air stream. The extracted air will then be discharged to atmosphere through exhaust stacks meeting the requirements of PG 6/34 i.e., they will discharge a minimum 3 m above roof level and at a velocity of at least 15 m/s.

When painting is complete, paint drying is achieved by reducing the extraction rate of the booth and heating the inlet air through direct fired gas heaters equipped with low NO_x burners. The larger spray booths will be equipped with four direct fired heaters with a thermal input of 150 kW each, whilst the smaller spray booths will each be equipped with a single 90 kW direct fired heater. Heat recovery systems will be installed on the exhaust as an energy efficiency measure.

The majority of paints are baked for a period of 40 to 60 minutes at a temperature of 60°C, although the temperature and duration can be varied to suit the nature of the particular vehicle or part. After the bake cycle has been completed, the vehicle is removed and allowed to cool. The masking is removed, and any touching up carried out before returning it to the customer. Some paint systems cannot be forced dried, in which case the vehicle is flashed off in the spray booth to remove all remaining solvents, and then may be left in the shop to fully cure.

3.1.4 Wax application

Vehicle chassis' require underseal corrosion protection prior to delivery to the end customer. The underseal protection is a low-VOC thixotropic/wax coating applied by spray gun application to leave a firm quick drying film. The wax application will be undertaken within the Underseal Bay. The Underseal Bay will have a series of fabric wall filters to allow airflow and a further fabric filter in front of a bifurcated aerofoil extract fan to remove any particulate overspray from the extracted air stream prior to being discharged to atmosphere through a single exhaust stack.

3.1.5 Spray gun cleaning

This operation will be carried out in the mixing rooms with the cleaning operation employing a fully enclosed automated gun cleaner unit. This machine will be fitted with an extract system which prevents the escape of solvent vapour into the mixing room, which itself is equipped with a room level extraction system. The mixing room extract system, which is activated by turning the main room lights on, will run continuously when the cleaning machine is in operation. Air extracted from the machine will be passed through the mixing room wall and to mixing room extract system before being discharged through roof mounted vents meeting the requirements of PG 6/34.

3.1.6 Waste handling

When the gun wash in the cleaning machine is contaminated, it will be replaced with clean wash and the dirty gun wash will be taken directly to the recycling room. The equipment within this room will comprise an explosion proof distiller unit. Contaminated solvents will be heated up and brought to boiling point. The resulting vapour given off by this process will pass through a condenser unit and cooled down by an electric fan. The resulting clean and clear vapour will then be converted back into a liquid and collected via an outlet pipe into a clean drum. Any materials spilled whilst being handled or stored are cleared up by the member of staff closest to hand using an emergency spillage kit located within the building. Any solvent contaminated wipes during clean-up of spills will be stored in enclosed containers pending removal from site by an appropriately licensed waste contractor.

All other waste material generated from the paint shop, including masking paper, will be placed into skips pending removal off site. Empty paint and thinner cans will be placed within a spray booth and baked for a given period to remove all liquid residues. These cans will then be crushed and baled before being placed into the special waste empty paint tin skip where a waste contractor will collect this skip upon request. Care will be exercised to keep paint waste to a minimum; however, any waste paint will be stored in a sealed container and removed from site by a dedicated waste contractor to a suitably licensed waste management facility.

The following measures will be in place to ensure fugitive emissions (including of odour) from waste handling is minimised:

- All drums will be kept tight shut;
- Empty paint and thinner cans will be dried during the spray booth bake cycle to remove all liquid residues;
- Suitable organic solvent containment and spillage equipment should be readily available in all organic solvent handling areas. Any solvent contaminated wipes will be stored in enclosed containers/bins;

- Dusty wastes will be stored in enclosed containers and handled in a manner that avoids emissions; and
- High standards of housekeeping will be maintained.

4 Managing the activities

4.1 Management systems

4.1.1 General

MLS operates an Environmental Management System (EMS)⁶ at their existing permitted installation at Cambridge Airport, which is certified to ISO 14001:2015. A copy of this certificate is in Appendix A4. The scope of this approval is applicable to the following aspects:

- Research and development, design, systems engineering integration, subcontract management and manufacture of deployable operational infrastructure products and associated equipment.
- Through life management support services including full integrated logistical support, installation.
- Maintenance and product training.

The EMS provides a framework through which the Operator's environmental performance can be monitored, controlled, and improved upon. The EMS sets out supporting information on plant technology and operations, and the appropriate level of information to provide:

- Effective preventative maintenance on all plant and equipment concerned with the control of emissions to the air;
- Ensuring that spares and consumables - in particular, those subject to continual wear – are held on site, or available at short notice from guaranteed local suppliers, so that any potential plant breakdowns can be rectified rapidly;
- Mechanisms for defining environmental responsibilities for all staff, helping them to understand the environmental impact of their activities and individual actions;
- Records of environmental performance against set targets; and
- Can be audited.

Although this EMS certificate is applicable to the existing installation at Cambridge Airport, as the proposed installation is a relocation of the existing paint shop installation, with like-for-like operations occurring at the proposed site in Huntingdon, the EMS will remain applicable for operations at the Site but will be updated accordingly to reflect site-specific aspects e.g., new site plans will be included.

4.1.2 Operations and maintenance

Operations at the Site will be delivered by a dedicated Operations department. This will include a highly skilled team of trained site operatives and mechanical and electrical engineers reporting to an Operations Manager who reports directly to the Site Manager. Also reporting to the Site Manager will be a QHSE Manager.

Effective preventative maintenance plays a key part in achieving compliance with emission limits and other relevant compliance provisions in relation to PG 6/34. The EMS, and its associated procedures, will describe how to operate the installation in order to comply with permit conditions and avoid, or minimise, the environmental risks during both normal and abnormal operation of the Site. The procedures will also include contingency plans to ensure minimal impact on the environment in the case of breakdown or enforced shutdown.

⁶ Certificate identity number: 10528911

Planned maintenance procedures will be established in accordance with the EMS and major plant suppliers' Operating and Maintenance (O&M) manuals to ensure all key plant components that have the potential to affect the environmental performance of the Site, or compliance with the environmental permit, remain in good working order. These maintenance procedures will apply to all individual items of main operating plant and equipment, environmentally critical equipment such as the dust arrestment equipment, and also minor items and components such as seals on doors, electric motors etc. The maintenance procedures and instructions will define the frequency and nature of testing, servicing, inspections, checks, cleaning needs, calibration and adjustment etc.

Maintenance at the Site is expected to be undertaken by internal resources or specialist external contractors dependent on the specific activity, the skills and experience required, and availability. Where maintenance is required to be performed by external contractors, it will be managed by procedures established by the EMS. Prior to any work being undertaken by external contractors, the contractor will be required to submit for approval a method statement, risk assessment, liability insurance, company health, safety and environmental policies and how compliance with the site operating procedures will be met. The competence of contractors will be assessed in accordance with procedures established in the EMS. The contractor will be required to sign a form to confirm that they understand and will comply with the permit to work system described above.

Maintenance activities will be planned in advance in line with manufacturers maintenance manuals, or will be reactive e.g., in response to breakdowns or performance deterioration resulting from a fault. Routine maintenance and planned downtime reduce the likelihood of unexpected abnormal conditions or reactive maintenance issues arising. Unplanned maintenance generally covers breakdown and other emergency situations and is initiated by a divergence from normal operating parameters, as specified by the manufacturers.

Automated monitoring systems will detect any situations outside of the pre-set parameters and alert MLS' maintenance team and/or authorised maintenance contractor that a fault has occurred to ensure that it can quickly be rectified. If the fault cannot be rectified by the automatic system, or remotely by the manufacturer or Operator, the system will initiate a shutdown of the affected equipment.

MLS will maintain a list of key equipment, including, for example, dust arrestment equipment, with a critical spares inventory maintained on-site to allow plant to be returned to normal operating conditions in the shortest practicable time frame. The key equipment list, and planned preventative maintenance regime at the Site, will be established by the key plant supplier O&M manuals which include detailed maintenance procedures to include time-based inspections, investigation of alarms (and identification of root cause), retention of spare parts at site, wear parts replacement intervals, service schedule and testing. These O&M manuals are provided in Appendix A6.

All paint spray booths and shot blast booths will be serviced and maintained in accordance with manufacturers' recommendations so as to maintain the validity of the guarantee of relevant emission concentration limits. For example, flues and ductwork will be cleaned to prevent accumulation of materials, filters on inlet and exhaust points will be cleaned and/or changed in accordance with the O&M manuals.

4.1.3 Competence and training

The competency of resources to operate the process in compliance with permit conditions requires a number of steps linked to operational procedures. These include:

- Defining roles and responsibilities;
- Defining competency requirements;
- Competency assessment;
- Training needs analysis;

- Training provision;
- Training records and register; and
- Periodic competency and operational review and assessment.

Procedures will be in place to identify the minimum competencies required for each role at the Site. These will then be applied to recruitment and training processes for both internal resources and external contractors. Job specifications will be defined which, amongst others, will provide details on relevant qualifications and experience required. The required staffing levels will be determined by MLS based on its experience of operating the like-for-like facility at Cambridge airport.

Initial training of personnel will be delivered by the plant supplier during the commissioning phase, prior to the Site entering full operation. This training will address both normal plant operation, but also actions to be taken in the event of abnormal operation or emergency scenarios.

From this point, Managers will identify and monitor staff training needs and competency levels as part of an ongoing appraisal system. Training will be delivered using a combination of on-the-job training, mentoring, internal training courses and external training courses/events as required. These training programmes will also make employees aware of:

- The EMS and the importance of operating in line with the policies and procedures contained therein;
- Their individual role and responsibilities in achieving compliance with the EMS and the environmental permit;
- The environmental aspects associated with their role and site operations; and
- The consequences of departing from the procedures in the EMS.

Staff induction programmes will be specific to each role but will cover, as a minimum:

- MLS environmental policy;
- The requirements of the environmental permit; and
- EMS awareness raising.

Staff at all levels shall receive and have the necessary training and instruction commensurate with their duties relating to the control of the sites activities and their emissions to air. Training will include an awareness of staff responsibilities under the permit, steps that are necessary to minimise emissions during start-up and shutdown (e.g. due to damper failings), actions to take when there are abnormal conditions, or accidents or spillages that could, if not controlled, result in emissions.

Written records of all staff training in relation to the operation and maintenance of equipment and activities and instruction will be maintained, updated where necessary, and be available to the regulator on request. These records will include, as a minimum, the date, type of training, training provider and any associated assessment scores. The EMS will specify a procedure for archiving records to ensure all training is recorded and training outcomes retained.

Training will be provided by the suppliers of new equipment to competent engineers and/or personnel at the proposed installation to perform visual checks and fault diagnosis. Procedures will be implemented to ensure that contractors are suitably qualified and experienced for the task they will be performing. This requirement will be enforced by the terms of contract with the contractor.

4.1.4 Accidents, incidences and non-conformances

Effective written environmental management systems are central to environmental performance; it is an important component of BAT and of achieving compliance with permit conditions. This includes managing risks under normal operating conditions and in accidents and emergencies. As described previously, the Site will have in place an EMS that is accredited to ISO 14001:2015. The EMS addresses a range of issues including emergency response and managing the consequences of accidents.

The EMS provides a process which addresses the detection, response and investigation of the causes of operating conditions that may give rise to incidents, or any non-conformances with the procedures in the EMS. These procedures define the short-term actions to return the Site to normal operation, and long-term actions to prevent the same incident or non-conformance occurring again.

In respect of managing complaints concerning the environmental impact of the installation activities, any complaints will be referred to the appropriate Manager (as defined by the EMS), or a nominated responsible individual in their absence who will initiate an investigation of the complaint as soon as possible. The complaint will be recorded on a complaint log form, and the time/date it was received, the outcome of the investigation, and any remedial steps taken to address the complaint.

The complainant will be contacted by the appropriate Manager to confirm the details of the complaint, the outcome of the subsequent investigation and any remedial steps taken. This feedback and communication will be recorded on the incident management reporting system. Contact will also be made with the Environmental Health team in accordance with any permitted conditions and notification requirements

4.1.5 Emergency and abnormal operations

As described previously, written emergency procedures and responses to abnormal operating conditions including breakdowns, will be in place for the Site based on equivalent procedures established at the existing installation at Cambridge Airport. These procedures will be documented in the EMS.

In accordance with the requirements of BS EN 16985:2018⁷, solvent and paint application and associated release is prevented when booth extraction fails via the control system, which monitors for correct booth performance and activates a solenoid if performance criteria are not met.

In the case of an abnormal operational event, malfunction or breakdown leading to abnormal emissions, MLS will investigate immediately and undertake corrective action, adjust the process or activity to minimise those emissions, and promptly record the events and actions taken. If the abnormal event is likely to have emissions that have an effect on the local community, or in the event of the failure of key abatement plant, MLS will notify the regulator without delay.

As described in Section 4.1.2, MLS will maintain a list of key equipment, including, for example, dust arrestment equipment, with a critical spares inventory maintained on-site to allow plant to be returned to normal operating conditions in the shortest practicable time frame.

4.1.6 Summary

Table 4-1 provides a summary of the Environment Agency's guidance and indicative standards for EMS, and the requirements of PG 6/34 with respect to management of activities, and compares how the installation will be managed by the Operator against this guidance.

⁷ <https://knowledge.bsigroup.com/products/spray-booths-for-organic-coating-material-safety-requirements>

Table 4-1: Summary Environment Agency and PG 6/34 requirements for Environmental Management Systems

No	Indicative Standard	Controls to be adopted by the Operator
1	It is desirable that installations put in place some form of structured environmental management approach, whether by adopting published standards (ISO 14001 or the EU Eco Management and Audit Scheme [EMAS]) or by setting up an environmental management system (EMS) tailored to the nature and size of the particular process.	MLS operates its existing installation in Cambridge under an EMS accredited to ISO 14001. This EMS will be transferred to the proposed installation at Huntingdon and any procedures amended accordingly to account for site-specific factors.
2	The EMS and associated management arrangements must have the means available to provide the required standards of environmental protection.	The EMS documents all the necessary control procedures required to operate the processes in a safe and controlled manner. procedures for spillage, waste management etc., are all documented in the EMS.
3	Equipment must be designed and installed to a suitable standard.	The design and operation of the Site will ensure that equipment is designed and installed to a suitable standard.
4	All equipment whose failure may lead to pollution must be operated and maintained so that it continues to operate effectively.	Planned maintenance procedures will be established to ensure all key plant components that have the potential to affect the environmental performance of the Site, or compliance with the environmental permit, remain in good working order.
5	Potential abnormal operating and accident scenarios must be identified, any necessary measures to minimise the chances of them happening put in place and plans to minimise the effects if the worst occurs put in place.	Written emergency procedures and responses to abnormal operating conditions including breakdowns, will be in place for the Site based on equivalent procedures established at the existing installation at Cambridge Airport. These procedures will be documented in the EMS.
6	Sufficient staff must be provided, they must be adequately trained in those aspects which could lead to pollution and they must know how to deal with accidents and understand the responsibilities of the permit.	<p>Staffing levels for the Site will be defined by the Operator based on its extensive experience operating the existing paint installation at its Cambridge without incident.</p> <p>Formal training will take place, both during induction, but also as part of ongoing refresher training, that will explain the importance of operating the Site in accordance with the requirements of the environmental permit and the operational procedures in the EMS, including responding to any accident, incident or operational non-conformance that may have an associated environmental impact.</p> <p>Ongoing training needs will be identified as part of ongoing employee appraisals.</p>

5 Emissions and monitoring

This section describes how the release of any substance that might cause harm to human health or the environment will be prevented, or reduced, to achieve a high level of protection to the environment. The overall design philosophy of the installation will be to:

- Achieve or exceed the environmental standards applicable under applicable legislation and/or guidance;
- Maximise the protection of human health and the environment by preventing or reducing emissions to a practicable minimum; and
- Be adaptable to changes or evolution in environmental standards or changes in available techniques for emissions control.

5.1 Point source emissions to air

5.1.1 Location and nature of point source emissions to air

Point source emissions to air from the Site will occur from the spray booths, blast booths, paint preparation / waste recycling areas, the underseal process, and gas heaters supporting operations in the spray booths. These emissions may include VOCs (emissions from the blast booths will not include VOCs), isocyanates, particulate matter, oxides of nitrogen (NOx) and carbon monoxide (CO). The latter two pollutants are associated with operation of the gas heaters only. As the heaters are gas-fired, there will be no emissions of sulphur dioxide (SO₂).

All stacks where the discharge does not contain only air and particulate matter will be designed accounting for the minimum overriding conditions in the HMIP Technical Guidance Note (Dispersion) D1, including the stack height terminating a minimum of 3 m above roof level and discharging at a minimum velocity of 15 m/s. The suitability of the stack heights has been demonstrated in the air quality assessment in Appendix A5 using dispersion modelling.

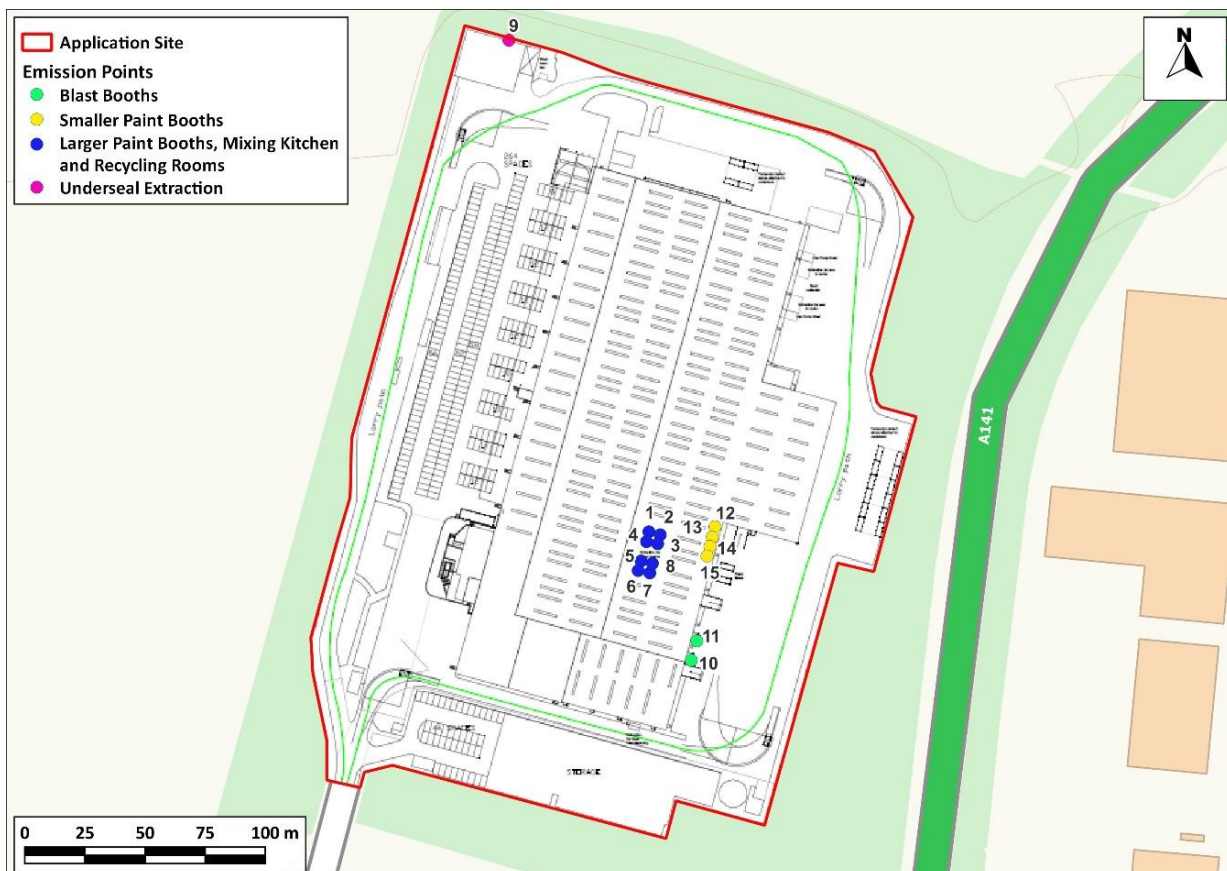
The proposed installation will introduce the following point source emissions to air, as summarised in Table 5-1.

Table 5-1: Point source emissions to air

Source Reference	Description	Location co-ordinates (X,Y)	Nature of emissions
Stack 1	Emissions from larger paint booths, mixing areas and recycling rooms	523236, 274112	VOCs, particulate matter, isocyanates, NOx, CO
Stack 2	Emissions from larger paint booths, mixing areas and recycling rooms	523241, 274111	VOCs, particulate matter, isocyanates, NOx, CO
Stack 3	Emissions from larger paint booths, mixing areas and recycling rooms	523240, 274107	VOCs, particulate matter, isocyanates, NOx, CO
Stack 4	Emissions from larger paint booths, mixing areas and recycling rooms	523235, 274108	VOCs, particulate matter, isocyanates, NOx, CO
Stack 5	Emissions from larger paint booths, mixing areas and recycling rooms	523233, 274100	VOCs, particulate matter, isocyanates, NOx, CO
Stack 6	Emissions from larger paint booths, mixing areas and recycling rooms	523232, 274096	VOCs, particulate matter, isocyanates, NOx, CO
Stack 7	Emissions from larger paint booths, mixing areas and recycling rooms	523237, 274095	VOCs, particulate matter, isocyanates, NOx, CO

Source Reference	Description	Location co-ordinates (X,Y)	Nature of emissions
Stack 8	Emissions from larger paint booths, mixing areas and recycling rooms	523238, 274099	VOCs, particulate matter, isocyanates, NOx, CO
Stack 9	Emissions from application of underseal protection in the vehicle maintenance workshop	523178, 274317	VOCs, particulate matter
Stack 10	Emissions from aluminium shot blast booth	523254, 274059	Particulate matter
Stack 11	Emissions from steel shot blast booth	523256, 274067	Particulate matter
Stack 12	Emissions from smaller paint booths	523264, 274114	VOCs, particulate matter, isocyanates, NOx, CO
Stack 13	Emissions from smaller paint booths	523263, 274110	VOCs, particulate matter, isocyanates, NOx, CO
Stack 14	Emissions from smaller paint booths	523262, 274106	VOCs, particulate matter, isocyanates, NOx, CO
Stack 15	Emissions from smaller paint booths	523260, 274102	VOCs, particulate matter, isocyanates, NOx, CO

Figure 5-1: Point source emissions to air plan



5.1.2 Emission control techniques

General techniques

Adequate provision will be in place to contain any spillage. Any dusty wastes will be stored in closed containers, with suitable organic solvent containment and spillage equipment available in all organic solvent handling areas, including the paint mix room and spray booths. A high standard of housekeeping will be maintained across all operational aspects of the proposed installation in Huntingdon.

VOCs and isocyanates

There will be no secondary (end-of-pipe) abatement for VOC and isocyanate emissions. Instead, point source emissions of these compounds will primarily be controlled through primary measures i.e., all coatings and cleaning solutions that are used at the Site will be compliant with the specifications outlined in Table 4.2 of PG6/34. The emission concentration of VOCs will also be controlled by way of dilution of exhaust air due to the booth extraction rate, which will ensure that the VOC concentration at the exhaust discharge point is < 50 mg/Nm³.

Emissions of VOC and isocyanates to atmosphere will also be minimised and/or controlled by the following techniques:

- Coatings containing VOCs will be stored in enclosed containers.
- All paint spraying operations will be carried out in a totally enclosed booth maintained under negative pressure. Through the control system, paint application will be interlocked with the operational status of the extract system to ensure paint cannot be applied if there is any fault with the extract system.
- Spray coatings will be applied to vehicles using HVLP spraying equipment, air assisted airless spraying equipment or an equivalent system achieving a transfer efficiency of at least 65%.
- Measures for minimising emissions from waste handling have previously been described in Section 3.1.6, including all drums being kept tight shut and empty tins being dried during the spray booth bake cycle to remove all liquid content.
- Spray gun cleaning will be carried out in the mixing rooms with the cleaning operation employing a fully enclosed automated gun cleaner unit. This machine will be fitted with an extract system which prevents the escape of solvent vapour into the mixing room, which itself is equipped with a room level extraction system
- Spray gun testing and spray out following cleaning will be into the equipment cleaning machine with the extraction system running.
- The clean and clear vapour from the solvent recycling process will be converted back into a liquid and collected via an outlet pipe into a clean drum. When not in use, this drum will be kept lidded to prevent evaporation and fugitive emissions of organic solvent vapour.
- Dispensing of cleaning solutions onto wipes will be via a piston-type dispenser. Pre-impregnated wipes will be stored in an enclosed container prior to use.

Particulate matter

Point source emission control for particulate matter will be by way of fabric filters installed on the spray booth, blast booth and underseal bay extraction system exhausts. The proposed filters have a tested design efficiency that will ensure that particulate matter emissions will typically be between 3-4 mg/Nm³ which is less than the 50 mg/Nm³ emission limit under PG 6/34.

The filters will be checked and replaced in accordance with a routine schedule of filter changes, in line with manufacturers guidelines, or sooner, if required, subject to throughput volume.

All grinding and sanding operations at the vehicle preparation stage will take place within the workshop building and will be undertaken using a vacuum extraction system providing localised dust extraction from the head of each individual sander.

Regular visual checks on the integrity of dust arrestment equipment will be made on a routine basis to ensure the equipment is operating optimally.

Combustion products

Emissions of combustion products from heaters during the bake cycle of the spray booths will be minimised by:

- Use of natural gas in preference to liquid fuels to reduce SO₂ emissions.
- Use of low-NO_x burners; and
- Use of an automated control system which continuously monitors and controls key combustion parameters (e.g., fuel flow rate, excess air etc..) to ensure combustion is optimised and to minimise emissions of NO_x and CO.

Odour

Odours can arise from the receipt, handling and storage of organic solvents. In order to reduce odour emissions, and to ensure there is no offensive odour beyond the site boundary, MLS will ensure that:

- All potentially odorous waste materials will be stored in suitable enclosed containers;
- The mixing rooms contain gun cleaning equipment and paint mixing schemes which are all fitted with power extraction causing a negative pressure within the room to contain and discharge any airborne contamination;
- Generation of VOCs within the spray booths will be minimised by adopting good paint spraying techniques, including the use of systems achieving a transfer efficiency of at least 65%, to minimise overspray and paint usage; and
- All paint spraying operations will be carried out in a totally enclosed booth under negative pressure maintained by an extraction system operating to provide a large air change rate. This also dilutes the VOCs released and, in conjunction with optimisation of the stack discharge characteristics (i.e., height and velocity) helps to minimise off-site ground level concentrations of odorous compounds.

5.2 Fugitive emissions to air

The receipt, handling, use and storage of organic solvents can give also give rise to fugitive emissions.

In order to control fugitive emissions, all paint spraying operations will be carried out in totally enclosed spray booths under negative pressure. Coatings and wastes containing organic solvents will be stored in enclosed storage containers and the VOC content of coatings will be compliant with the requirements of the Paints Directive and PG 6/34.

All spray gun and equipment cleaning will be carried out in an automatic totally enclosed equipment cleaning machine. The cleaning machine shall be provided with the minimum of exhaust ventilation that is necessary to prevent the fugitive emission of organic solvent vapour when the machine is opened for introduction or removal of equipment, or for the changing of cleaning solvent.

Dusty wastes, including collected material from the localised extraction system on sanders, will be stored in closed containers or sealed heavy-duty polythene bags, and handled in a manner that avoids emissions, whilst there will be no dry sweeping of spilt dusty materials. High standards of housekeeping will be maintained.

Regular visual checks will be carried out on the efficiency of plant and equipment, with additional visual checks to ensure that all emissions to air are free from droplets and from persistent mist and fumes.

5.3 Monitoring and reporting of emissions

Monitoring of emissions to air will be carried out in accordance with PG 6/34 for the relevant point source emissions to air. In accordance with PG 6/34, there is no emission limit value for emissions of VOCs. Instead, compliance with VOC requirements is achieved by applying coatings which have a VOC content within the product content limit established by the Paints Directive, as summarised by Table 4.2 of PG 6/34. Consequently, no monitoring of VOC emissions is proposed but, under its EMS procedures, MLS will maintain an inventory which tracks the quantity of individual coating products purchased and used at the installation, including the associated VOC content, allowing the total mass of VOCs used at the Site to be estimated. These inventory reports can be provided to the Regulator upon request.

Similarly, there will be no requirement to monitor SO₂ as only gaseous fuels will be used at the Site.

For other non-VOC releases described in PG 6/34 i.e., particulate matter, the associated emission limits and proposed monitoring methods are provided in Table 5-2.

Table 5-2: Emission limits and proposed monitoring for non-VOC releases per PG 6/34

Parameter	Emission source	Emission limit (mg/Nm ³)	Type of monitoring	Monitoring frequency
Particulate matter	Spray booth 1	10	Supplier guarantee or manual extractive testing	Annual
	Spray booth 2	10	Supplier guarantee or manual extractive testing	Annual
	Spray booth 3	10	Supplier guarantee or manual extractive testing	Annual
	Spray booth 4	10	Supplier guarantee or manual extractive testing	Annual
	Spray booth 5	10	Supplier guarantee or manual extractive testing	Annual
	Spray booth 6	10	Supplier guarantee or manual extractive testing	Annual
	Aluminium shot blast booth	50	Supplier guarantee or manual extractive testing	Annual

Parameter	Emission source	Emission limit (mg/Nm ³)	Type of monitoring	Monitoring frequency
	Steel shot blast booth	50	Supplier guarantee or manual extractive testing	Annual
	Undersal bay extraction	10	Supplier guarantee or manual extractive testing	Annual

PG 6/34 allows compliance with the particulate matter emission limits to be demonstrated through provision of a supplier guarantee in the form of a certificate of the spray booth performance, or through manual extractive testing. Supplier certification of the paint spray booth performance is provided in Appendix A7.

For the shot blast booths, and if the Regulator requires manual extractive testing to be performed on the paint spray booths, this monitoring would be undertaken by a MCERTS accredited test team certified to BS EN ISO/IEC 17025. The monitoring surveys will follow relevant Environment Agency guidance to ensure the design and location of sampling is appropriate and conducive to obtaining representative samples for potential pollutants at all relevant release points.

Sampling locations and sockets compliant with the Environment Agency Guidance *Monitoring stack emissions: measurement locations*⁸ will be incorporated into the design for the point source emission release points, where possible, but it is acknowledged some of the emissions points and sample positions will need to be in a horizontal length of ductwork⁹. The sampling sockets will allow for the appropriate type of monitoring and will have appropriate sampling platforms provided, either temporary scaffolding or permanent platforms with suitable access to power, lighting and water as required by the test methodologies.

Environment Agency guidance documents *Monitoring stack emissions: guidance for selecting a monitoring approach*¹⁰ and *Monitoring stack emissions: techniques and standards for periodic monitoring*¹¹ (formerly EA TGN M1 and M2) will be used for informing the monitoring approach and method that is required, dependent on the pollutant that is being monitored. For example the standard reference method for the periodic monitoring of particulate matter is BS EN 13284-1.

MLS is committed to monitoring its pollutant releases and has an appropriate management structure in place to ensure monitoring is carried out effectively and reported to HDC. All results reported to the regulator will include the time date of monitoring, the methods that were used, any deviations to the monitoring methods, and process conditions at the time of monitoring. The report providing the results of the monitoring surveys will be provided to HDC within 8 weeks of completion of the sampling.

Should there be any abnormal results from the emissions monitoring surveys, this will be investigated by MLS at the earliest opportunity in order to identify the cause and take corrective action (including completion of a re-test to demonstrate compliance as soon as possible).

As part of the procedures established under its EMS, MLS will maintain on-site records of all inspections, investigations, tests and monitoring, including visual observations, for a minimum period of two years, or as required by conditions in the permit. These records will be made available for examination by the Regulator upon request.

⁸ <https://www.gov.uk/government/publications/monitoring-stack-emissions-measurement-locations>

⁹ On the shot blast booths fan extracts

¹⁰ <https://www.gov.uk/guidance/monitoring-stack-emissions-technical-guidance-for-selecting-a-monitoring-approach>

¹¹ <https://www.gov.uk/government/publications/monitoring-stack-emissions-techniques-and-standards-for-periodic-monitoring>

6 Environmental risk assessment

6.1 Introduction

The following section seeks to describe and assess the environmental impact resulting from the proposed installation, and to identify the nearby receiving environments and sensitive receptors which may be affected from the activities undertaken.

6.2 Receptors

The nearest human and ecological receptors considered in the environmental risk assessment are provided in Table 6-1. More exhaustive lists of relevant receptors can be found in the air quality assessment contained within Appendix A5.

Table 6-1: Identification of relevant receptors

Receptor Type	Receptor name	Approximate distance and direction from centre of Site (m)
Human population	New residential property to the west of the facility within planning application 20/00847/OUT	155 m west
Receptors designated under the Habitats Regulations	Portholme SAC	2.7 km south-south-east
Sites of Special Scientific Interest or local/non-statutory habitat sites	Great Stukeley Railway Cutting SSSI	200 m east
Air Quality Management Areas	No AQMA declared for relevant pollutants within Huntingdon	N/A

6.3 Air quality impact assessment

An air quality assessment of emissions from the Site using detailed dispersion modelling has been completed and included as Appendix A5.

The assessment, using the ADMS dispersion model (Version 6), considered the impacts on human health from emissions of VOCs, PM₁₀ and PM_{2.5}. The assessment adopted a conservative approach, which assumed both continuous operation of the installation throughout the year at its maximum capacity, and emissions being modelled at the respective emission limit values (it should be noted that in actual operation, emissions are expected to be less than the emission limit values).

The assessment showed that the predicted environmental concentrations (PECs) of VOCs are well below the relevant environmental assessment levels (EALs) at all receptors locations. The assessment also demonstrated that the maximum PECs for PM₁₀ and PM_{2.5} at locations where there is relevant exposure were less than the relevant Air Quality Standard (AQS) and Objectives (AQOs). Accounting for the worst-case assumptions adopted within this assessment, there is a negligible risk that emissions from the installation will cause an exceedance of any assessment level at locations of relevant exposure and, consequently, air quality impacts are assessed as not significant.

6.4 Odour

The control measures for VOCs and odour described in Section 5.1.2, which are consistent with measures described in PG 6/34, are considered effective at ensuring that any odour beyond the site boundary would not be detectable. Furthermore, as evident from the wind roses in the air quality assessment in Appendix A5, there is a strong bias in the prevailing wind such that emissions from the installation will be dispersed towards the north-east and away from the nearest receptors.

Under procedures established by the EMS, MLS will perform daily boundary walkover surveys to confirm the control measures in place are effective at ensuring odour is not detectable beyond the site boundary.

6.5 Accidents and unintentional releases

The assessment of accident and unintentional release scenarios, and associated environmental risks, follows the requirements of Environment Agency Guidance¹². The potential environmental risks as a result of credible accident scenarios were evaluated using the following approach:

- 1) Hazard - what accident event has the potential to cause an environmental impact (harm)?
- 2) Receptor - what environmental receptor is at risk and needs protecting?
- 3) Pathway - what is the environmental pathway by which the hazard can reach the receptor?
- 4) Risk management - what measures are proposed to be implemented to reduce the risk of the hazard reaching the receptor? If the hazard reaches the receptor, who is responsible for responding to mitigate the hazard?
- 5) Probability of exposure – how likely is the hazard to reach the receptor such that the contact (receptor) is exposed?
- 6) Consequence – what is the harm that can be caused to the receptor if exposure occurs?
- 7) What is the overall risk – after the implementation of the risk management measures, what is the risk that still remains? This takes into account the balance between probability and consequence.

The probability of exposure is an assessment of the probability of the selected source and receptor being linked by the identified pathway. The consequence provides an indication of the sensitivity of a given receptor to a particular source or contaminant of concern under consideration. It is a worst-case classification and is based on full exposure via the particular linkage being examined.

The overall risk column is an overall assessment of the actual risk, which considers the likely effect on a given receptor, taking account of the controls present on the Site. The criteria are set out in Table 6-2.

Table 6-2: Risk assessment criteria

Factor and definition	Description
Probability of exposure	
High likelihood	An event that could result in exposure of the contact/receptor is very likely to occur in the short-term and is almost inevitable over the long-term.

¹² <https://www.gov.uk/guidance/develop-a-management-system-environmental-permits#accident-prevention-and-management-plan>

Factor and definition	Description
Likely	It is probable that an event that could result in exposure of the contact/receptor will occur. It is not inevitable, but possible in the short-term and likely over the long-term.
Low likelihood	Circumstances are possible under which an event that could result in exposure of the contact/receptor could occur. It is by no means certain that even over a longer period such an event would take place, and less likely in the short-term.
Unlikely	It is improbable that an event that could result in exposure of the contact/receptor even in the very long-term.
Consequences	
Severe	Acute harm to human health. Immediate pollution impact of sensitive water resource (e.g., major spillage into controlled waters). Impact on controlled waters e.g., large-scale pollution or very high levels of contamination. Catastrophic damage to buildings or property (e.g., explosion causing building collapse). Ecological system effects – irreversible adverse changes to a protected location. Immediate risks.
Medium	Chronic harm to human health. Pollution of sensitive water resources (e.g., leaching of contaminants into controlled waters). Ecological system effects – substantial adverse changes to a protected location. Significant damage to buildings, structures and services (e.g., damage rendering a building unsafe to occupy, such as foundation damage).
Mild	Non-permanent health effects to human health. Pollution of non-sensitive water resources (e.g., pollution of non-classified groundwater). Damage to buildings, structures and services (e.g., damage rendering a building unsafe to occupy, such as foundation damage). Substantial damage to non-sensitive environments (unprotected ecosystems e.g., crops).
Minor/negligible	Non-permanent health effects to human health (easily prevented by appropriate use of PPE) or loss of amenity rather than health effects. Minor pollution to non-sensitive water resources. Minor damage to non-sensitive environments (unprotected ecosystems e.g., crops). Easily repairable effects of damage to buildings, structures, services or the environment (e.g., discoloration of concrete, loss of plants in a landscaping scheme).
Overall risk	
Very high risk	Severe harm to a receptor may already be occurring OR a high likelihood that severe harm will arise to a receptor, unless immediate remedial works/mitigation measures are undertaken.
High risk	Harm is likely to arise to a receptor, and is likely to be severe, unless appropriate remedial actions/mitigation measures are undertaken. Remedial works may be required in the short-term, but likely to be required over the long-term.
Moderate risk	Possible that harm could arise to a receptor, but lower likelihood that such harm would be severe. Harm is likely to be medium. Some remedial works may be required in the longer term.
Low risk	Possible that harm could arise to a receptor. Such harm would at worst normally be mild and temporary.
Very low risk	Low likelihood that harm could arise to a receptor. Such harm unlikely to be any worse than mild.

The potential overall risk for each accident is calculated from the following matrix included as Table 6-3. A classification of 'Moderate' overall risk and above is considered not acceptable and requires possible further remedial measures/control mechanisms to mitigate the overall risk to an acceptable level.

Table 6-3: Overall risk definition

Potential consequence	Probability of exposure			
	Unlikely	Low likelihood	Likely	High likelihood
Minor/negligible	Very Low	Very Low	Low	Moderate/Low
Mild	Very Low	Low	Moderate/Low	Moderate
Medium	Low	Moderate/Low	Moderate	High
Severe	Moderate/Low	Moderate	High	Very High

Notes: Unacceptable risk level shaded in red.

Table 6-4 provides an assessment of the accidents associated with the operation of the Site that may cause harm to the environment. For all identified potential accident scenarios, there will be a number of risk management measures in place to avoid such events and/or mitigate their impacts should they occur. The final column (Overall Risk) comments on the acceptability of the risk and whether further control measures are required.

Table 6-4: Qualitative environmental risk assessment of accident and unintentional release scenarios

Hazard What has the potential to cause harm?	Receptor What is at risk? What needs protection?	Pathway How can the hazard get to the receptor?	Risk management What measures are in place to reduce risk? If it occurs, who is responsible?	Probability of exposure How likely is this contact?	Consequence What is the harm that can be caused?	Overall Risk What is the risk that still remains? The balance of probability and consequence
Failure of booth and/or local extraction systems resulting in loss of negative pressure and potential fugitive emissions of VOCs, particulate matter and odour	Local residents/businesses	Transportation through the air	<p>The booths are designed in accordance with BS EN 16985:2018. This requires application of paint to be interlocked with the extraction system. If the control system identifies the extraction system is operating outside of set parameters, a solenoid on the spray application system will automatically close preventing further application of paint.</p> <p>Planned preventative maintenance programme in accordance with manufacturer recommendations reduces the potential for failure of the extraction systems.</p> <p>MLS will maintain a key inventory of spare parts on-site to return the Site to normal operation in the shortest practicable time frame should the booth and other local extraction systems fail.</p>	Unlikely	Mild	Very low

Hazard What has the potential to cause harm?	Receptor What is at risk? What needs protection?	Pathway How can the hazard get to the receptor?	Risk management What measures are in place to reduce risk? If it occurs, who is responsible?	Probability of exposure How likely is this contact?	Consequence What is the harm that can be caused?	Overall Risk What is the risk that still remains? The balance of probability and consequence
Failure of dust arrestment equipment e.g., tear of filter material	Local residents/ businesses	Transportation through the air	<p>Tear of a filter will result in a step change in the differential pressure across the unit which would be detected by the control and monitoring system alerting the Operator to a potential failure of the filter units.</p> <p>Observations during daily site walkover surveys by site operatives will note any visible emissions from the stacks which may indicate a failure of the abatement equipment.</p> <p>Planned preventative maintenance programme in accordance with manufacturer recommendations reduces the potential for failure of the abatement systems.</p> <p>MLS will maintain a key inventory of spare parts on-site to return the Site to normal operation in the shortest practicable time frame should there be a failure of the dust arrestment equipment.</p>	Low	Mild	Low

Hazard What has the potential to cause harm?	Receptor What is at risk? What needs protection?	Pathway How can the hazard get to the receptor?	Risk management What measures are in place to reduce risk? If it occurs, who is responsible?	Probability of exposure How likely is this contact?	Consequence What is the harm that can be caused?	Overall Risk What is the risk that still remains? The balance of probability and consequence
Spillage of raw materials / wastes containing solvents or dusty materials	Local residents/ businesses	Transportation through the air	<p>Procedures for managing spillages are contained within the EMS.</p> <p>All raw and waste materials containing solvents or dusty wastes will be stored in enclosed containers in appropriately segregated areas.</p> <p>Any materials spilled whilst being handled or stored are cleared up by the member of staff closest to hand using an emergency spillage kit located at multiple defined points within the building. Any solvent contaminated wipes during clean-up of spills will be stored in enclosed containers pending removal from site by an appropriately licensed waste contractor.</p> <p>There will be no dry sweeping of spillages of dusty material.</p>	Low	Mild	Low

6.6 The Conservation of Habitats and Species

Protection of certain habitat sites is provided via Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (the 'Habitats Directive') and Council Directive 2009/147/EC on the conservation of wild birds (the 'Birds Directive'). These directives are transposed in England on land within 12 nautical miles of the coast through the Conservation of Habitats and Species Regulations 2017, as amended (the 'Habitats Regulations').

The Habitats Regulations implement the EU Bird and Habitats Directives, both of which aim to protect a network of sites in the UK that have rare or important habitats and species. The sites designated under the Birds Directive are known as SPAs and aim to conserve the habitats that support regularly occurring migratory, or certain rare or vulnerable birds, to ensure their survival and reproduction in their area of distribution. Prior to classification by the UK Government, the sites are known as potential SPAs (pSPAs).

The Habitats Directive establishes the process for the designation of SACs; these are sites that support habitats and/or species which are rare or threatened on a European scale. Before the SAC designation is ratified by the European Commission the sites are referred to as candidate SACs (cSACs).

SPAs and SACs are collectively known as 'European sites' or 'Habitats sites' and form part of a European network known as Natura 2000. It is also Government policy for sites designated under the Convention on Wetlands of International Importance (Ramsar sites) to be treated as having equivalent protection status as Natura 2000 sites.

The EPR require that the Habitats Regulations are taken into consideration and, if the installation activity may have a likely significant effect on any of the sites protected under these regulations, the Habitats Regulations require that competent authorities are satisfied that an appropriate assessment on such habitats has been conducted.

The Habitat Regulations define the process for the assessment of the implications of plans and projects on European sites. Whilst it is the responsibility of the competent authority to determine whether it can be concluded there is no significant adverse effect, it is the responsibility of applicants to ensure sufficient information is submitted to enable a robust determination of these issues.

As established by the Air Pollution Information System (APIS)¹³, protected habitats and ecosystems are typically most sensitive to the effects of NO_x, SO₂ and nutrient nitrogen/acid deposition. The proposed installation is not a significant emitter of these pollutants, and this is reflected by there being no emission limit or monitoring requirement for these pollutants in PG 6/34.

Ecosystems may be affected by certain types of VOCs, such as benzene, toluene and styrene. However, as reported by APIS, there is "*almost no information on the effects of volatile organic compounds (VOCs) on vegetation at concentrations likely to be experienced even in polluted urban air*". Furthermore, APIS establishes that whilst some VOCs may accumulate in the leaves of some fruit species, this is unlikely to be of concern for concentrations typically found in ambient air.

Particulate matter may cover leaf surfaces and reduce the amount of light available for photosynthesis. However, this is more of a concern for larger particles and 'soot' than the fine fraction of particulate matter that is likely to be emitted to air after the fabric filters (fabric filters are most effective at removing larger particle sizes). Furthermore, the nearest SPA or SAC is the Portholme SAC located approximately 2.7 km to the south-east. Due to this significant distance, and the prevailing south-westerly wind which would cause emissions to be dispersed away from the SAC, emissions of PM₁₀ and PM_{2.5} will have diluted to such an extent at the location of the SAC that any associated soiling effect would be negligible.

¹³ <https://www.apis.ac.uk/>

Consequently, it is considered that there is no likely significant effect on protected habitats and species due to the operation of the proposed installation.

7 Appendices

A1 HDC application form

A2 Drawings

A3 HDC pre-application consultation

A4 Environmental Management System certificate

A5 Air quality impact assessment

A6 Operation and maintenance manuals

A7 Spray booth emissions performance report



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