

PERMIT NO. 132



**POLLUTION PREVENTION AND CONTROL ACT 1999
ENVIRONMENTAL PERMITTING (ENGLAND AND WALES)
REGULATIONS 2010**

PERMIT OF PROCESS

THIS IS TO CERTIFY THAT the surface cleaning of metals.

at: **Preci-Spark Ltd, Falcon Street, Loughborough. LE11 1EH**

(National Grid Ref: SK 543 200 and shown in Appendix I which forms part of this permit)

has been duly permitted in accordance with Regulation 13(1) of the Environmental Permitting (England and Wales) Regulations 2010 subject to the conditions outlined in this document.

Name of Operator: Preci-Spark Ltd
Registered Office Preci-spark Ltd, Chapel Street, Syston, Leicestershire

This Permit shall apply only to the installation detailed above. This Permit, consisting of seventeen pages, shall be subject to replacement, variation or amendment, as may be considered appropriate by Charnwood Borough Council at any time, according to provisions of Regulations, 18, 20, and 34 of the Environmental Permitting (England and Wales) Regulations 2010.

The conditions contained herein shall apply from the date of the Permit unless otherwise stated.

Signed on behalf of Charnwood Borough Council

.....
Ann Green, Lead Officer- Environmental Protection
(Delegated officer for the purpose)

Dated 31 March 2011

Counter-signed.....

Regulatory Services, Environmental Protection, Southfields, Southfields Road, Loughborough,
Leicestershire LE11 2TX

PERMIT NO. 132**Introductory note****This introductory note does not form a part of the permit**

The following Permit is issued under Regulation 13 of the Environmental Permitting (England and Wales) Regulations 2010 (SI 2010/675), as amended, ("the EP Regulations") to operate an installation carrying out one or more of the activities listed in Part 2 of Schedule I of the EP Regulations, to the extent authorised by the Permit:

Section 7 of Schedule I

"Any activity using organic solvents to remove contamination from the surface of metal."

Status Log

<i>Detail</i>	<i>Date</i>	<i>Comment</i>
Application 132	Received 31 August 2007	Duley Made 6 Sept 2007
Permit determined	October 2007	Further discussions needed on control of Trike
Permit issued	26 February 2008	
Variation Notice	22 December 2008	Revised Permit Issued
Variation Notice	31 March 2011	Consolidated Permit issued

Superseded Licences/Authorisations/Consents relating to this installation

Holder	Reference Number	Surrender date
Preci-Spark Ltd	135	31 March 2011

Origins of the conditions contained in the permit

The Secretary of State has issued various guidance notes to local authorities to assist with determining those conditions which represent 'best available technique' in the different circumstances which apply to each installation. The conditions within this permit have been derived from the following guidance note;

PG 6/45 (10) Surface Cleaning (as amended)

Process Description

The main features of the installation are as follows:

Purpose

The purpose of the process is the degreasing of aero-engine components to ensure a high standard of cleanliness so as to avoid adverse effects to the engines. The

PERMIT NO. 132

components are all nickel based metal alloys and the sizes vary from small plates 25mm long through to rings 900mm in diameter. The process involves the degreasing of metal by immersion into hot vapours of trichloroethylene (Trike).

Trichloroethylene has been identified as a risk phrase substance (R45). The annual quantity of solvent consumed during the surface cleaning process currently exceeds 1 tonne in any 12-month period and therefore constitute a single SED activity.

Plant Detail

The installation boundary extends to cover surface cleaning operations at both the Falcon Street and Morley Street sites as shown on Plan 01/132. It is bordered by residential premises on two sides of the site.

Plant Operation

Degreasing is carried out in two fully enclosed automated machines as detailed in table I below, by immersion of the components into hot vapours of trichloroethylene by the aid of an electric hoist. Chilled water rings and safety thermostats, linked to an electric control unit on the tank, control the containment of the vapour.

The tank is provided with rim extraction with additional extraction ventilation provided in the surrounding area.

Spent Trichloroethylene is drained from the degreasing tank every 12 months and stored in sealed drums in the external storage area (shown in blue on site plan 2/132).

Table I

Plan Ref	Model Serial Number	Load Capacity	Refilling	Extraction
D1 Morley St	Layton Technologies - Bluestone low emission fully enclosed tank.	25Kg	Pump	External
D2 Falcon St	Layton Technologies - Bluestone low emission fully enclosed tank with carbon abatement system.	100 Kg	Pump	Carbon abatement system

End of Introductory Note.

The above named company is permitted to operate the activities and /or associated activities as specified in table 2 below:-

Table 2		
Activities listed in Schedule I of EP Regulations/associated activity	Description of specified activity	Limits of specified activity
Section 7 of Schedule I and Annex II of the Solvent Emission directive	Surface-Cleaning Activities	Any activity using organic solvents to remove contamination from the surface of metal.

Subject to compliance with the following conditions:

Permit conditions

Standard Conditions

1. If the operator proposes to make a change in operation of the installation he shall, at least 14 days before making the change, notify Charnwood Borough Council in writing. The notification must contain a description of the proposed change in operation. It is not necessary to make such a notification if an application to vary this permit has been made and the application contains a description of the proposed change. In this condition 'change of operation' means a change in the nature or functioning, or an extension, of the installation, which may have consequences for the environment.
2. The best available techniques shall be used to prevent or, where that is not practicable, reduce emissions from the installation which is not regulated by any other condition of this permit.

Emission Limits and Controls

VOC Emissions

3. A fugitive emission limit of 15% of the total input shall apply to solvents.

VOC Emissions- Solvent Management Plan

4. A Solvent Management Plan (SMP) shall be produced annually by the operator and submitted to Charnwood Borough Council by 31 March each year. This shall be used to determine fugitive emissions from the installation, identify future reduction options and calculate solvent consumption (i.e. a detailed solvent inventory). The SMP shall

cover the period of 1 January to 31 December of the previous year. It shall be produced using the definitions and calculations set out in Annex III of the SED and reproduced in Schedule A of this permit. The SMP shall be forwarded to Charnwood Borough Council annually by the date stated above.

Risk Phrase Materials

5. No designated risk phrase materials with risk phrases R45, R46, R49, R60 and R61 or hazard statement H340, H350, H350i, H360D, or H360F shall be introduced into this process/ activity without the prior notification and permission of an Authorised Officer from Charnwood Borough Council.

Other Provisions

Monitoring, investigation and recording

6. The operator shall keep a record (log book) of all inspections, tests, monitoring including all non-continuous monitoring and visual assessments. The log book and any continuous monitor charts or records shall be kept on site and retained by the operator for a minimum of two years and made available for examination by an Authorised Officer of Charnwood Borough Council on request.
7. The operator shall provide a list of key abatement plant and shall have a written plan for dealing with its failure.

Visible and odorous emissions

8. All release to air, other than condensed water vapour, shall be free from droplets and persistent visible emissions .
 9. Visual and olfactory assessments of emissions from the stack serving degreasing machine D1 shall be made at least once per day for a period of at least two minutes when cleaning activities are being carried out. The results of all observations shall be recorded in the log book in accordance with condition 6 of this permit. Observation points must provide an unimpeded view of the emission points listed in table 1 above and at appropriate points around the installation boundary. In the event of one or more visible emission being observed, immediate action shall be taken to determine the cause of the emission and action shall be taken to abate the emission.
 10. There shall be no offensive odour beyond the site boundary, as perceived by a duly authorised officer of Charnwood Borough Council (marked in blue on plan 02/132). Where there are problems that, in the opinion of the regulator may be attributable to the installation the operator shall;
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- Inspect the process to determine which operation(s) is the cause, and

Whilst the problems are ongoing the operator shall;

- Ensure boundary checks are completed on a daily basis whenever the installation is in operation.
- Make a record of the time, location and results of these checks, together with weather conditions, wind direction and wind strength.

Once the source of the emission has been identified corrective action shall be taken by the operator to rectify the problem without delay.

Abnormal events

11. When any visible airborne emission is observed or when any abnormal emission, malfunction or breakdown leading to a significant escape of odour or fume occurs, the operator shall:-
 - i. Investigate and undertake remedial action immediately
 - ii. Adjust the process or activity to minimise the emissions
 - iii. Promptly record the events and actions taken in the log required by condition 6 within 1 working day.
12. All malfunctions or breakdowns leading to an abnormal emission likely to have an effect on the local community or failure of key arrestment plant shall be notified to Charnwood Borough Council immediately by telephone. A record shall be made of the incident within the logbook required by condition 6.
13. In cases where emissions are likely to cause an immediate danger to human health, the operation of the activity shall be suspended.

Continuous monitoring VOC abated releases

14. The operator shall devise and implement a procedure of assessing the performance of the Layton Technologies - Bluestone carbon abatement system fitted to degreasing machine D2. Any continuous monitoring device fitted shall be capable of identifying trends in emissions. The monitor shall be set up to provide a baseline output when the plant is known to be operating under the best possible conditions i.e. when emissions are fully compliant with the limit specified in condition 3 above. An alarm shall activate in response to any significant increase above this level.
 15. The operator shall clearly demonstrate that all vapour degreasing machines comply with the emission requirements of condition 3 above. The frequency of start up and
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- shut down of the degreasing machine shall be minimised to restrict the amount of organic solvent emissions.
16. All continuous monitoring readings shall be on display to appropriately trained staff.
 17. All continuous monitoring instruments shall be fitted with audible and visual alarms, situated to warn the operator of abatement plant failure or malfunction.
 18. The activation of alarms shall be automatically recorded.
 19. All continuous monitoring equipment shall be operated, maintained and calibrated in accordance with the manufacturer's instructions. Maintenance and calibration results shall be recorded in the logbook and made available for inspection by an authorised officer of Charnwood Borough Council on request.
 20. All new continuous monitoring equipment shall be designed for less than 5% downtime over any 3-month period. A manual or automatic procedure shall be implemented to detect instrument malfunction.

Control Techniques

VOC and odour control - storage

21. The receipt, handling and storage of organic solvents shall be carried out so as to minimise the emission of volatile organic compounds to air.

VOC Control - handling

22. All vessels or containers containing materials with an organic solvent content shall be lidded or enclosed when not in use.
23. All emptying and transfer of materials containing VOC's shall be undertaken by use of a closed transfer system so as to minimise the emissions of VOC's.

VOC Control – equipment, location and design

24. All degreasing operations using chlorinated organic solvent shall be carried out in a fully enclosed degreasing machine, designed and operated to meet the emission limit requirements as stipulated in condition 3.
 25. Where practicable cleaning fluids which do not contain organic solvent or cleaning fluids with significantly less volatile organic solvent shall be used. The operator shall periodically review (at least once every 2 years) surface cleaning operations at the
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installation to identify opportunities for reducing VOC emissions. The results of this review, justification for the choices made together with timescales to implement any changes identified, shall be submitted to Charnwood Borough Council.

26. The degreasing machines shall be fitted with an energy control system to sense the solvent temperature and control heat input to meet the requirements of the degreasing process and minimise emissions during not-process periods
27. The automated work-handling equipment for transporting the product into the degreasing chamber shall be integral to the machine. The equipment shall provide the appropriate speed of travel and process dwell times and provide a ventilation system to minimise disturbance of vapours within the degreasing chamber during degreasing and transportation of loads. The loading and unloading equipment shall be used for all loads.
28. The baskets used for loading the degreasing machines shall be designed to enhance the cleaning efficiency, whilst also minimising the retention of organic solvent and vapours with each load cleaned.
29. The programming, loading of work into and use of the vapour degreasing machine, shall be controlled monitored and reviewed to minimise the number of surface cleaning operations. The basket shall be loaded to its maximum capacity whilst ensuring that the orientation and packing of the components is optimised to reduce possible retention and drag of organic solvents.

VOC Control – cleaning

30. The charging and emptying of the degreasing machines shall only be undertaken by a totally contained transfer system. Condensing and ventilation systems shall be in operation when transferring organic solvent.
 31. Solvent heating and degreasing operations shall not be undertaken without the extraction systems fitted and working.
 32. When removing work pieces from the degreasing unit the jig shall be held as much within the freeboard as possible to allow evaporation of residual organic solvents.
 33. After degreasing activities have been completed the heaters within the degreasing vessel shall be switched off, whilst the cooling coils and ventilation system is left running for a further 30 minutes.
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VOC Control - Operational

34. A programme to monitor and record the consumption of organic solvents against product cleaned shall be used to minimise the amount of excess organic solvent used.

VOC Control -Waste

35. All potentially odorous waste materials shall be handled in accordance with a written procedure a copy of which shall be made available to a duly authorised officer of Charnwood Borough Council upon request.
36. All potentially odorous waste materials shall be stored in suitable enclosed containers
37. Prior to disposal empty/nominally empty containers and drums shall be closed to minimise emissions. These containers shall be labelled, so that all that handle them are aware of their contents and hazardous properties.
38. The location of open air storage areas for nominally empty drums and containers shall be carefully selected to meet the requirement of condition 10 and shall include being:
- sited on a suitably impervious floor
 - away from any drains which may become contaminated with residues as a result of spillage or leakage.
 - away from sources of heat
 - with access restricted to only appropriately trained staff

General Control Techniques**Dust and spillage control**

39. Organic solvent containment and spillage equipment shall be readily available in all organic solvent handling areas. All spillages and leaks of VOC shall be cleaned up immediately and the collected material held in an enclosed container pending removal from site.

Air Quality**Dispersion and dilution from stacks**

40. The minimum height for process vents serving local exhaust ventilation from plant or areas associated with the permitted process shall be 3m above the roof ridge height
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41. Process vents shall not be fitted with any restriction at the final opening, for example, a plate, cap or cowl. All discharge points shall be vertically upwards.

Management

Training

42. All staff with duties related to the control of emissions to air shall receive formal training which shall include how to deal with conditions likely to give rise to visible emissions, such as in the event of spillage, action to minimise emissions during abnormal conditions, emergency procedures and reporting requirements.
43. The operator shall maintain a statement of training requirements for each operational post and keep a record of the training received by each person. These documents shall be made available for inspection to a duly authorised officer of Charnwood Borough Council on request.

Maintenance

44. Effective preventative maintenance shall be employed on all aspects of the process including all plant, buildings and the equipment concerned with the control of emissions to air. In particular:
- A written maintenance, inspection and replacement programme for all aspects of the process shall be prepared by the operator, implemented and maintained and it shall be made available for inspection by an authorised officer from Charnwood Borough Council on request.
 - A written record of all maintenance carried out shall be made available for inspection by an authorised officer from Charnwood Borough Council on request.
45. Essential spares and consumables for all arrestment plant shall be held on site when the supplier is not able to provide items from stock within one working day, so that plant breakdowns can be rectified rapidly.

Substitution Plan

46. The Operator shall submit a substitution plan as specified in Table 3 below to Charnwood Borough Council's Environmental Protection team by the time specified.

Table 3. Substantiation Plan Requirements		
Reference	Requirements	Monitoring/timescales

PERMIT NO. 132

SPI	Designated risk phrase materials with risk phrases R45, R46, R49, R60, R61 shall be replaced, as set out below	
	<p>Replace as far as possible by less harmful substances or preparations:</p> <p>Designate Risk Phrase Material as identified in the permit application as;</p> <p>Trike – R45 Degreasing of metal</p>	Within the shortest possible time.
<p>The plan shall detail how the operator is to replace designated substances detailed above. If replacements of the Risk Phrase substance are not practical, the plan shall include details of the reasons for this, and details of how the operator is controlling and limiting the use of these substances.</p>		

47. The plan as detailed in conditions 46 above shall be updated on an annual basis. Copies of the updated plan shall be forwarded to Charnwood Borough Council's Environmental Protection Team by the 31 March each year.

End of conditions

Schedule A

Determination of solvent consumption (reproduced from PG 6/45 (10))

A determination of the organic solvent consumption, the total mass of organic solvents inputs minus any solvents sent for reuse/recovery offsite, shall be made and submitted to Charnwood Borough council annually, preferably to coincide with the operators stocktaking requirements, in the form of a mass balance in order to determine the annual actual consumption of organic solvents (c)

Where: $C = I_1 - O_8$

I_1 is the total quantity of organic solvent, or their quantity in preparations purchased which are used as input into the activity.

A calculation of the purchased organic solvent Input (I_1) to the process/activity, is found by recording:

- (i) The mass of organic solvent contained in coatings, diluents and cleaners in the initial stock (IS) at the start of the accounting period; plus
- (ii) The mass of organic solvent contained in coatings, diluents and cleaners in the purchased stock (PS) during the accounting period.
- (iii) Minus the mass of organic solvent contained in coatings, diluents and cleaners in the final stock (FS) at the end of the accounting period.

Total Organic Solvent Input (I_1) = **IS + PS - FS**

Solvent Management Plan

The solvent Management Plan provides definition and calculation to demonstrate compliance with the VOC requirements of this note. The use of standard definitions and calculations also ensures consistency of VOC compliance across the installations with an industrial sector.

The definitions provided must be used in all calculations relating to the Solvent Management Plan (SMP) (Figure 4.1)

- For SED installations using the emission and fugitive limits, the SMP shall be used for determining the fugitive emissions (SED Box9). Once completed it need not be done until the equipment is modified.

Definitions

The following definitions provide a framework for the mass balance calculations used in determining compliance.

PERMIT NO. 132

Inputs of Organic solvent in the time frame over which the mass balance is being calculated (I).

- I₁ The quantity of organic solvents or their quantity in preparations purchased which are used as input into the process/activity (including organic solvents used in the cleaning).
- I₂ The quantity of organic solvents or their quantity in preparations recovered and reused as solvent input into the process/activity. (The recycled solvent is counted every time it is used to carry out the activity.)

Outputs of Organic solvents in the time frame over which the mass balance is being calculated (O)

- O₁ Is Organic solvent in waste gases.
 - O₂ Is Organic solvent lost in water, if appropriate taking into account waste water treatment when calculating O₅
 - O₃ Is Organic solvent remaining as a contamination or residue in products output from the process/activity..
 - O₄ Is Organic solvent released uncaptured to air, via doors and windows
 - O₅ Is Organic solvent destroyed by abatement/treatment
 - O₆ Is Organic solvent contained in collected waste
 - O₇ Is Organic solvent contained in preparations, which are sold or are intended to be sold as commercially valuable product.
 - O₈ Is Organic solvent contained in preparations recovered for reuse but not as input into the process/activity, as long as not counted under O₇ .
 - O₉ Is Organic solvent released in other ways i.e. spillages, leaks and ground contamination.
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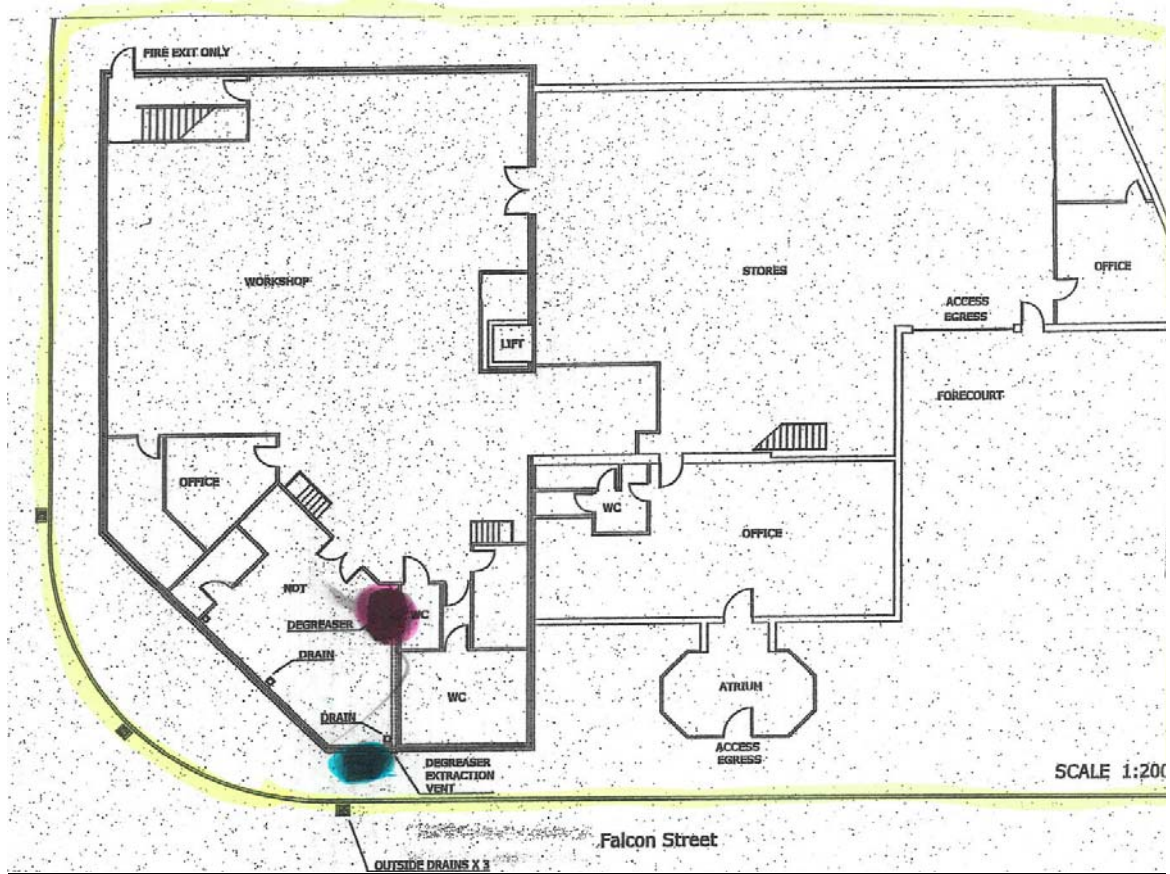
Appendix I

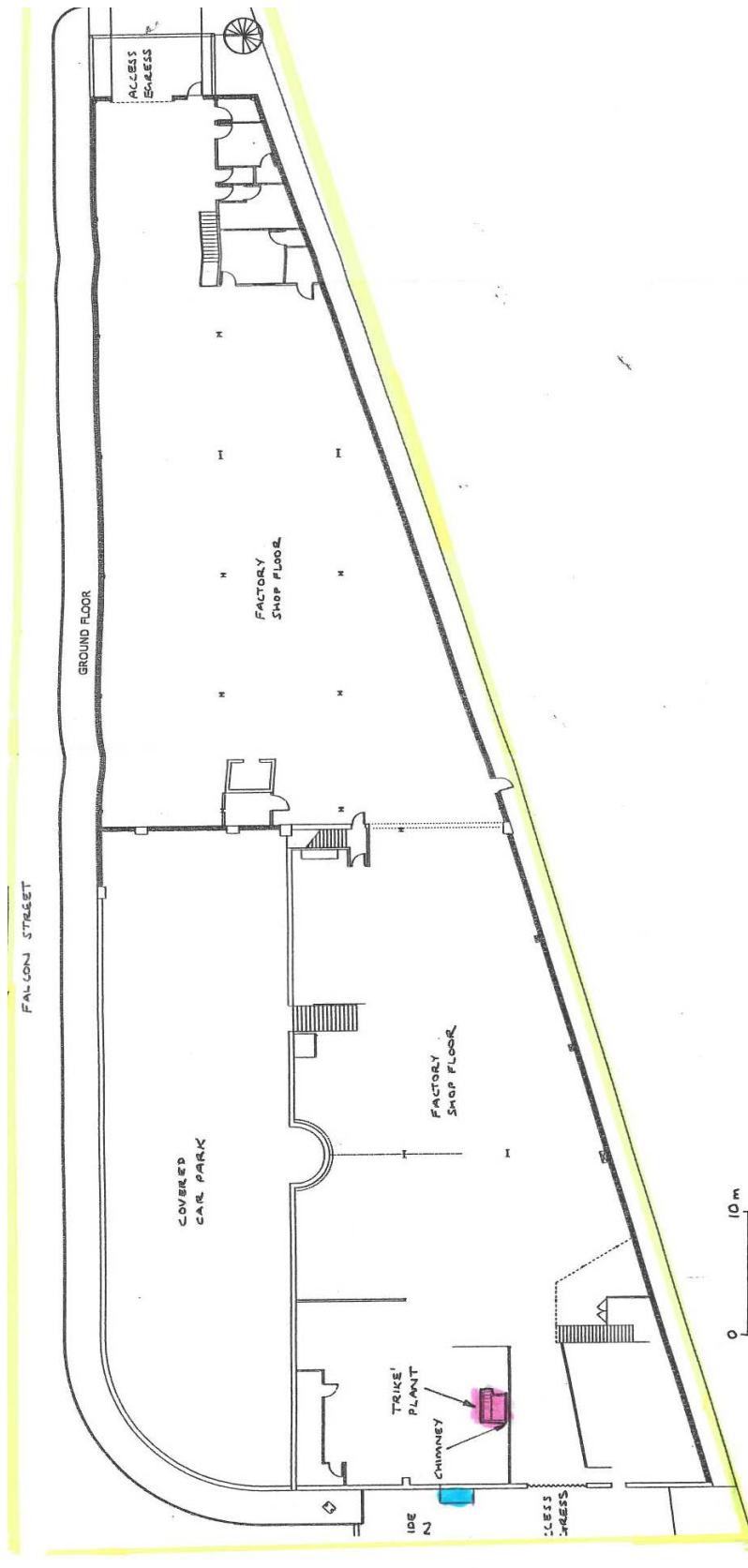
Site Location Plan (01/132)

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Appendix 2 Site Layout (2/132)





Appendix 3**Determination of Solvent Consumption, work sheet
for PG6/45 (10)**

Solvent Management Plan		
Installation and address	For year (provide dates for accounting period)	Name and position of respondent
Consumption of organic solvent (C) Where C= I1-O8	Note – all data shall be added in kilogrammes	Contact Tel No
I ₁ is the total quantity of organic solvents or their quantity in preparations purchased which are used as input into the activity		
a) the mass of organic solvent contained in coatings, diluents and cleaners in the initial stock (IS) at the start of the accounting period.(in Kg)	b) the mass of organic solvent contained in coatings, diluents and cleaners in the purchased stock (PS)during the accounting period. (in Kg)	c) minus the mass of organic solvent contained in coatings, diluents and cleaners in the final stock(FS) at the end of the accounting period.(in Kg)
Total Organic Solvent Input (I ₁)=IS+PS-FS(in Kg)		
Organic solvents contained in preparations recovered for reuse(ie. solvent taken away by recycling company)(but not as input into the process/activity) (O ₈) (in Kg)		
Actual consumption of organic solvent =		
Organic solvents contained in waste gases from stacks (O ₁)		
Organic solvents destroyed by abatement (O ₅)		
Organic solvents contained in collected solid waste (ie. solvent remaining in tins/on waste rags) (O ₆)		
Organic solvents contained in product (O ₇)		
Organic solvents used in recycling (O ₈)		
Fugitive emission = (I ₁ – O ₁ -O ₅ -O ₆ -O ₇ -O ₈)		

Explanatory Notes

These notes do not comprise part of the permit but contain guidance relevant to it.

Inspections

Regular inspections will be made by officers of Charnwood Borough Council (without prior notice), in order to check and ensure full compliance with this permit.

BAT (Best Available Techniques)

The Permit includes conditions that have to be complied with. It shall be noted that aspects of the operation of the installation which are not regulated by conditions of the Permit are subject to the implied condition that the Operator shall use the best available techniques for preventing or, where that is not practicable, reducing emissions from the installation. Techniques include both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned.

Health and Safety at Work and Other Statutory Requirements

The responsibility you have under legislation for Health, Safety and Welfare in the workplace remains in force. In addition, the Permit does not relieve you of your obligations to obtain planning permission, hazardous substances consent, discharge consent from the Environment Agency, Building Regulations approval, or some Waste Disposal Licences.

Submission of Information

Note that the Permit requires the submission of certain information to the Local Authority (LA). In addition, the LA has the power to seek further information at any time under Regulation 60(1) EP Regulations provided that it acts reasonably.

Public Registers

Considerable information relating to Permits including the Application is available on public registers in accordance with Requirement 46(1) EP Regulations. Certain information may be withheld from public registers where it is commercially confidential or contrary to national security.

Variations to the Permit

This Permit may be varied in the future (by the LA serving a Variation Notice on the Operator). If the Operator itself wants any of the Conditions of the Permit to be changed, it must submit a formal Application. The Status Log within the Introduction will include summary details of this Permit, variations issued up to that point in time and state whether a consolidated version of the Permit has been issued.

Surrender of the Permit

Where the Operator intends to cease the operation of an installation (in whole or in part) The LA shall be informed in writing, such notification must include the information specified in Regulation 24 or Regulation 25 and Part 1 of Schedule 5 of the EP Regulations.

Transfer of the Permit or part of the Permit

Before the Permit can be wholly or partially transferred to another person, an Application to transfer the Permit has to be made jointly by the existing and proposed holders. A transfer will be allowed unless the LA considers that the proposed holder will not be the person who will have control over the operation of the installation or will not comply with the conditions of the transferred Permit.

Annual Subsistence Fee

In accordance with Regulation 65(1) of the EPR Regulations the holder of a permit is required to pay a fee for the subsistence of the permit. This fee is payable annually on 1st April. You are advised that under the provisions of Regulation 22 of the EPR Regulations, if you fail to pay the fee due promptly, Charnwood Borough Council may revoke the permit. You will be contacted separately each year in respect to this payment.

Talking to us

Please quote the Permit Number if you contact Charnwood Borough Council about this Permit. To give a Notification under Condition 12 the Operator shall use the telephone number 01509 634636 or any other number notified in writing to the Operator by Charnwood Borough Council for that purpose.

Appeals in relational to Environmental Permits

1. Anyone who is aggrieved by the conditions attached to a Permit can appeal to the Secretary of State for the Environment, Food and Rural Affairs within 6 months from the date of the permit issue.
2. Appeals must be made in accordance with the requirements of Regulation 31 and Schedule 6 of the EP Regulations and shall be addressed as follows:

The Planning Inspectorate
Environment Team, Major and Specialist Casework
Room 4/04 Kite Wing
Temple Quay House,
2 The Square,
Temple Quay,
Bristol, BS1 6PN

3. An appeal brought under Regulation 31(b) in relation to the conditions in a permit will not suspend the effect of the conditions appealed against: the conditions must still be complied with.
4. There are no forms or charges for appealing. However for an appeal to be valid, appellants are legally required to provide information as detailed in paragraphs 2(1) and (2) of Schedule 6 of the EP Regulations., namely:
 - I. A statement of the grounds of appeal
 - II. A copy of any relevant permit
 - III. A copy of any relevant correspondence between the appellant and the regulator
 - IV. A statement indicating whether the appellant wishes the appeal to be in the form of a hearing or dealt with by way of written representations.
5. In determining an appeal against one or more conditions, the Act allows the Secretary of State in addition to quash any of the other conditions not subject to the appeal, to direct the local authority either to vary any of these other conditions or to add new conditions.