

PERMIT NO. 101



**POLLUTION PREVENTION AND CONTROL ACT 1999  
 POLLUTION PREVENTION AND CONTROL (ENGLAND AND WALES)  
 REGULATIONS 2000  
 PERMIT OF PROCESS**

**THIS IS TO CERTIFY THAT** the paper coating process

at: **Anstey Wallpaper Company Ltd, Ladybird House Beeches Road,  
Loughborough. LE11 2NR**

**National Grid Ref: SK 544 196**

has been duly permitted in accordance with Regulation 10 of the Pollution Prevention and Control (England and Wales) Regulations 2000 subject to the conditions outlined in this document.

**Name of Operator: Anstey Wallpaper Company Ltd**

**Registered Office Bradbourne Drive, Tilbrook, Milton Keynes, Bucks. MK7 8BE**

This Permit shall apply only to the premises occupied by the applicant, as specified and described in the Application for Permit submitted to the Borough of Charnwood. This Permit, consisting of twenty-two pages, shall be subject to replacement, variation or amendment, as may be considered appropriate by the Borough of Charnwood at any time, according to provisions of Regulations 12, 15, and 17 of the Pollution Prevention and Control (England and Wales) Regulations 2000

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

Signed on behalf of Charnwood Borough Council

.....Dated... 19 December 2006

Ann Green, Specialist Environmental Health Officer

(Delegated officer for the purpose)

Counter-signed.....

Directorate of Housing and Health , Environmental Protection,  
Southfields, Southfield Road, Loughborough LE11 2TX

**Anstey Wallpaper Company Ltd**  
**Beeches Road, Loughborough. LE11 2NR**

**1.0 Description of Authorised Process**

**1.1 Purpose**

The purpose of the process is the application of solvent and water based inks by 3 gravure (G6, G7 and G8) and 5 flexographic (F1 – F5) (3 of which are dedicated to water based inks), printing machines onto paper and vinyl coated paper to produce wallpaper. The printed surface is then dried in heated ovens.

The process involves the mixing and blending of products to formulate solvent based inks using toner, mediums and solvents of the following part combination: ethyl acetate, N-propylacetate, MEK, Toluene, PM acetate.

Water based inks are purchased directly for a number of suppliers and stored within the building prior to use within the coating process.

The process also involves the bulk storage of solvents, mediums and toners in IBC's, drums and containers in a specially designed and constructed outdoor structure in accordance with HSG 51.

The annual quantity of solvent consumed during the coating process currently exceeds 100 tonnes in any 12-month period, but is below the 200 tonne threshold to constitute a part A (2) process.

The premise therefore consists of a single LAPC installation with one SED activity and no risk phrase substances have been identified.

**1.2 Plant Detail**

The site is located on the corner of Beeches Road and Windmill Road Loughborough (shown in yellow on Plan 01/101). It is currently bordered by residential premise on two sides of the site.

In the ink room, ink is mixed in 25Kg tubs. The automatic mixers are provided with local exhaust ventilation via lip extraction although generally mixing is manual. There are 3 gravure machines (shown G6-G8 on plan 2/101) and 5 flexographic printers (shown F1-F5 on plan 2/101) and 1 hot embossing machines (shown E5 on plan 2/101). Extraction of solvent vapour from the gravures, flexographic printers and hot emboss

machines is via ducting to a regenerative thermal oxidiser (marked in blue on plan 2/101) connected to an 18 metre high stack.

### 1.3 Plant Operation- Ink Manufacture

The inks are mixed from a combination of toner, medium and solvents. The solvents are stored prior to use in the bunded storage compounds (shown in brown on plan 2/101). No powders are handled; metallic pigments are supplied as paste. Vapour evolved during automatic mixing is extracted and vented to atmosphere through the lip extraction system. The vapour evolved from the manual mixing is vented via the air extraction system for the room. Once mixed, ink containers are lidded to minimise fugitive emissions and transported in lidded buckets on trolleys to the printers.

Used solvents are collected and removed from the site to a solvent recovery process.

### 1.4 Printing

Solvents are stored prior to use in the bunded storage compound (shown on plan 2/101). The new inks are received at the machines in addition with other inks, which are recycled. The inks are applied to the paper on the gravure or flexographic machines and fixed by drying in ovens. Waste solvent is collected and stored in lidded containers in the compound

### 1.5 Emission Monitoring/Abatement Equipment

Both the entrainment systems and the oxidiser have monitors and continuous data logging systems, fitted with high level alarms. The centralised exhaust duct is continuously monitored for: total exhaust airflow, total exhaust temperature, total exhaust solvent concentrations, individual machine run speed, average core temperature of the oxidiser, exhaust temperature of the oxidiser.

The Vocsidizer regenerative thermal Oxidiser consists of a ceramic bed in an airtight steel container, above and below the bed are plenum chambers to facilitate the even distribution of air.

Air containing VOC's from the printing areas enters the Vocsidizer at the top of the chamber and flows downwards through a bed of ceramic material which is heated to high temperature, typically above 850 °C, to oxidisers VOC 's to water and CO<sub>2</sub>.

After cooling in the lower part of the bed, clean air leaves the oxidiser via a lower plenum chamber.

In order to maintain the temperature profile in the bed and to maximise the heat exchange efficiency of the oxidiser, the air flow is reversed to allow air to flow upwards through the bed. This simultaneous changing of the air flow takes place on a cycle time of typically one and a half minutes.

Data is collected and stored on the Teledoc data logger situated in the Megtec control cabin and is manually downloaded at the end of production each week.

## 2.0 Non - VOC Emissions

2.1 The following non-VOC emission limit shall apply.

Substance	Source	Emissions Limit	Monitoring Frequency	Monitoring Method
Particulate matter	All process activities	50mg/Nm <sup>3</sup> as 30 minute mean for contained sources	Annual	Manual extractive testing. See paragraphs 5.23,5.24,5.25 and 5.26 of PG6/23
Oxides of Nitrogen	From incinerators	100 mg/Nm <sup>3</sup> as 30 minute mean for contained sources	Annual	Manual extractive testing. See paragraphs 5.23, 5.24,5.25 and 5.26 of PG6/23
Carbon Monoxide	From Incinerators	100 mg/Nm <sup>3</sup>	Annual	Manual extractive testing. See paragraphs 5.23, 5.24,5.25 and 5.26 of PG6/23

2.2 All pollutant concentrations shall be expressed at reference condition 273k, 101.3kpa without correction for water vapour content.

2.3 Calibration and compliance monitoring shall meet the following requirements as appropriate.

No result obtained from non-continuous monitoring of particulate matter shall exceed the emission concentration limit specified in the above table except where either:-

- a) Data is obtained over at least 5 sampling hours in increments of 30 minutes or less, or
- b) At least 20 results are obtained where sampling time increments of more than 30 minutes are involved  
And in the case of a) or b)
- c) No daily mean of all 30 minutes mean emissions concentrations shall exceed the specified emission concentration limits during normal operation (excluding start-up and shut-down)  
And
- d) No 30 minute mean emissions concentration shall exceed twice the specified emissions concentration limits during normal operations (excluding start-up and shut-down)

**PERMIT NO. 101**

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- 2.4 The introduction of dilution air to achieve the emissions concentration limits specified in condition 2.1 above shall not be permitted.
- 2.5 The frequency of testing shall be increased for example, as part of commissioning of new or substantially changed activities, or where emission levels are near to or approach the emission concentration limit given above.
- 2.6 Adequate facilities for sampling shall be provided on vents and ducts and the sampling points shall be designed to comply with British or equivalent standards.
- 2.7 All continuous monitors on the thermal oxidiser shall be operated, maintained and calibrated in accordance with the manufacturers' instructions.
- 2.8 All continuous monitors readings should be on display to appropriately trained operating staff.
- 2.9 The thermal oxidiser shall be fitted with an audible and visual alarm. To warn of abatement plant failure or malfunctions.

**3.0 VOC Emissions – Reduction Scheme**

3.1 The company shall submit to Charnwood Borough Council, no later than 31 October 2007, an emission reduction plan for the site. The plan shall have regard to the standards and compliance dates laid down in PG6/18 (04), in particular to:-

- Decrease the average solvent content of the total input; and/or
- Increase efficiency in the use of solids.
- To achieve a reduction of the total emissions from the installation.

The plan shall, from the date of its approval form part of this Permit.

**Reduction Scheme (No VOC Abatement)**

3.2 The Target Emissions Value in the table below shall be complied with.

<b>Target Emission Value (Consumption above 15 Tonnes)</b>	
By the 31 October 2007	Mass of Solids X I

3.3 Calculate your emissions and demonstrate compliance with the target emission detailed above. Details of this calculation and evidence of compliance must be submitted (in the format detailed in appendix 3 of this permit) to Charnwood Borough Council **by 31 October 2007**.

A summary of the calculation required is given below:

Compliance with the reduction scheme is achieved if the annual actual solvent emission is less than or equal to the target emission. The target emission is calculated as follows;

- a) Total mass of solids in the quantity of coatings consumed in the activity in the inventory period (12 months).
- b) The target emission over the same period is equal to: -

**the result of paragraph (a) x I.**

This is the Target emission to be achieved by 31 October 2007

(For further information, together with a spreadsheet to help record the data collected, see AQ 30(04) "Determination of compliance with Reduction Scheme" available on the Defra web site at): -

<http://www.defra.gov.uk/environment/airquality/lapc/aqnotes/index.htm>

Solvent Management Plan

- 3.4 A solvent management plan (SMP) shall be produced to determine the actual annual solvent Emissions; this should be in the form of a mass balance calculation of your annual actual consumption of solvents.

The SMP shall be prepared using the standard definitions and calculations in PG6/18 (04) figure 5.1 and shall be submitted on an annual basis to the local authority by the 30 April each year.

A summary of these calculations are given below:-

The actual annual solvent emission is found from the following equation.

$$\text{Actual solvent emission} = I_1 - O_5 - O_6 - O_7 - O_8$$

Where:

$I_1$  Is 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 of equipment, but not those used for the cleaning of the products).

$O_5$  Is Organic solvents and/or organic compounds lost due to chemical or physical reactions. (Including thermal oxidations or waste gas treatments)

$O_6$  Is Organic solvent contained in collected waste

$O_7$  Is Organic solvent contained in preparations, which are sold or are intended to be sold as commercially valuable product.

$O_8$  Is Organic solvent contained in preparations recovered for reuse but not as input into the process/activity, as long as not counted under  $O_7$ .

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.

$$\text{Total Organic Solvent Input } (I_1) = IS + PS - FS$$

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The Solvent Management Plan should be used to design and implement a programme to monitor and record the consumption of coatings/organic solvents used, against product produced. Using this information opportunities for reducing solvent usage should be identified, assessed and where appropriate implemented. The SMP should also be used to provide information on solvent consumption, solvent emissions and compliance with the Regulations, for the Public.

The submission of the solvent management plan is in addition to the solvent inventory, however once completed it does not need to be completed again until the equipment is modified or there is a substantial change at the installation.

- 3.5 The assessment of compliance using the solvent inventory shall be undertaken a year in arrears. Any proposal, which would introduce a conventional high solvent coating system or replace a low or no solvent coating system or introduce a high solvent product into a process where it was not in use before, shall be approved by the local authority prior to installation.

#### Risk Phrase Materials

- 3.6 No designated risk phrase materials with risk phrases R45, R46, R49, R60 and R61 shall be introduced into this process/ activity without the prior notification and permission of an Authorised Officer from Charnwood Borough Council.

**4.0 Visible and Odorous Emissions**

- 4.1 All emissions to air, other than steam or water vapour, shall be colourless and free from persistent mist.
- 4.2 All emissions to air shall be free from persistent fume and free from droplets.
- 4.3 All emissions shall be free from offensive odour outside the process boundary as perceived by Charnwood Borough Council (marked in green on plan 02/101).
- 4.4 Emissions from combustion processes shall in normal operation be free from visible smoke and in any case shall not exceed the equivalent of Ringelmann Shade I, as described in British Standard BS 2742 : 1969.
- 4.5 The Operator shall within 6 months from the date of this permit assess and review the emissions from the operation of the 'Popet' valves of the Thermal Oxidiser. This shall include an options appraisal of suitable methodology to prevent emissions from these valves to ensure that odour is not detectable at the site boundary. The results of this review shall include a BAT justification of the choices made. A summary of the BAT assessment shall be submitted to the LA together with a timescale to implement any necessary changes.

**5.0 Monitoring, Investigation and Recording**

- 5.1 The thermal oxidiser shall be continuously monitored to determine core temperature, air flow and exhaust temperature from the oxidiser.
- 5.2 All instruments used for continuous monitoring shall be checked weekly and the information shall be downloaded on a weekly basis. All instruments used for continuous monitoring shall be maintained in good working order. They shall be calibrated in accordance with manufacturer's recommendations and at least once a year.
- 5.3 The results of all inspections, tests, monitoring (including all non-continuous monitoring and visual assessments) shall be recorded in a logbook. 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 representative of the Borough of Charnwood.
- 5.4 The Operator shall notify Charnwood Borough Council at least 7 days before any periodic monitoring exercise to determine compliance with the emission limit values. The Operator shall state the provisional time and date of monitoring, pollutants to be tested and the methods to be used.
- 5.5 Within 8 weeks of the completion of monitoring activities, the result of non-continuous emission testing shall be forwarded to Charnwood Borough Council.
- 5.6 In the event of any adverse results from any monitoring activity in relation to the limit specified in condition 2.1 and/or 2.6, the Operator shall investigate as soon as the results are obtained/received. The Operator shall:
- Identify the cause and take corrective action
  - Record as much detail as possible regarding the cause and extent of the problems
  - Record the action taken by the Operator to rectify the situation
  - Re-test to demonstrate compliance as soon as possible and
  - Notify the Regulator.
- 5.7 In the case of abnormal emissions, or malfunctions or breakdown leading to abnormal emissions the Operator shall.
- Investigate immediately and undertake corrective action
  - Adjust the process or activity to minimise those emissions and
  - Promptly record the events and actions taken
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PERMIT NO. 101

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- Notify the Regulator without delay, if the emission is likely to have an effect on the local community.
- 5.8 The process shall not operate with malfunctions or failed air pollution control equipment 48 hours after the time of malfunction/failure or 48 hours after the detection of the malfunction failure if the process was not in operation at the time the malfunction/failure occurred and has not operated since that time, unless written permission to operate has been obtained from the Council.
- 5.9 Visual and olfactory assessments of emissions from the extraction stack shall be made at least once per day and recorded in the log book.
- 5.10 A written management plan or contingency arrangements shall be prepared and maintained in order to deal with plant failure, emergency or breakdown which would have an effect on emissions to atmosphere.
- 5.11 A detailed inventory of the amount of organic solvents used in the process including cleaning solvents and the organic solvent content of inks and proprietary chemicals, shall be kept and this shall separately record organic solvent:-
- a) Used for cleaning purposes
  - b) Present in the inks and coatings as supplied
  - c) The quantity of organic solvent recovered by the solvent recovery process.
  - d) The quantity of organic solvents removed from the site for recovery or disposal.

A copy of the inventory shall be forwarded to the Borough of Charnwood on an annual basis.

- 5.12 The Operator shall within 12 months of the date of this permit review measures for assessing and where possible reducing emissions from the ink mixing room and solvent cleaning machine. This shall include submitting written details as to;
- Under what conditions emissions from these areas are vented to atmosphere without passing through the abatement equipment;
  - Measures for assessing and reviewing the capacity and capabilities of the abatement plant to deal with emissions from these areas;
  - A review of how often these emissions vent to atmosphere unabated;
  - Procedures for reviewing the use and implementing alternatives;
  - Improvement programme should emissions from these areas prove excessive.
- The results of this review shall include a BAT justification of the choices made. A summary of the BAT assessment shall be submitted to the LA together with a timescale to implement any necessary changes.
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5.13 The operator shall within 12 months of the date of this permit undertake a review of the use of the bypass system and shall provide an options appraisal for its continued use. The operator shall also submit written procedures for the use of the by pass stack detailing:

- Under what conditions the process will operate by the bypass stack;
- Measures for assessing the performance of the abatement plant to prevent the need for bypass conditions;
- A review of how often the bypass stack has been used in the last 12 months;
- Method of notifying the Local authority of the use of the by-pass system;
- Procedures for reviewing the use of the by pass system and implementing alternatives;
- Improvement programme should the use of the bypass prove excessive.

The results of this review shall include a BAT justification of the choices made. A summary of the BAT assessment shall be submitted to the LA together with a timescale to implement any necessary changes.

**6.0 Control Techniques****VOC Control – handling and storage**

- 6.1 All coating operations shall be carried out in the areas detailed on site layout plan ref 2/101. With all emissions from the printing machines vented to the thermal oxidiser to prevent fugitive emissions of odour and particulate matter.
- 6.2 All gravure and flexographic process using solvent based inks shall be provided with suitable extraction vented to the thermal oxidiser to achieve the emission limits specified in condition 2.1.
- 6.3 The receipt, handling and storage of organic solvents shall be carried out so as to minimise the emission of volatile organic compounds to air.
- 6.4 All drummed raw materials shall be inspected for leakage on delivery and at least once per day. All drummed waste materials shall be inspected for leakage at least once per day. Any leakage identified shall be dealt with immediately, and the action taken recorded in the log book.
- 6.5 The exterior of bulk storage tanks shall be light coloured to avoid excessive solar heat absorbency.
- 6.6 Spillage containment kerbs shall be provided to areas set aside for the storage of drums containing used solvent. Spillage containment kerbs shall also be provided around the bulk storage tank. The bunding shall:
- a) Completely surround the bulk liquid storage tanks
  - b) Be impervious and resistant to the liquids in storage and
  - c) Be capable of holding 110% of the capacity of the largest storage tank.
- 6.7 Where inks containing volatile organic compounds are used in gravure and flexographic printing, the ink tanks and supply vessels shall be enclosed or in lidded containers.
- 6.8 All vessels or containers containing materials with an organic solvent content shall be lidded or enclosed when not in use.
- 6.9 All mixing, emptying and transfer of raw materials containing VOC's shall be undertaken in covered or closed vessels so as to minimise the emissions of VOC's.
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VOC Control – cleaning ( including surface cleaning)

- 6.10 The cleaning of plant and equipment (including application equipment) shall be carried out in such a way that emissions of volatile organic compounds to air are prevented or controlled to meet the requirements of conditions 4.3 of this Permit.
- 6.11 The operator shall periodically review (at least once every 2 years) cleaning operations at the 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 the Local Authority.
- 6.12 Residual ink/coating contained in parts of the application equipment shall be removed prior to cleaning.
- 6.13 Where equipment is cleaned off-line (such as screens, plates, drums, rollers and coating/ink trays) the cleaning shall be carried out using an enclosed cleanings system.
- 6.14 In order to prevent fugitive emissions the solvent wash machine should be full before it is used and if second or third washes are required these should be performed without opening the doors.
- 6.15 To ensure compliance with the fugitive emission requirements of the Solvent Emission Directive, **from the 31 October 2007** the exhaust duct system from the solvent wash machine shall be continuously monitored for exhaust airflow and solvent content.

VOC Control - Operational

- 6.16 Devise and implement a programme to monitor and record the consumption of organic solvent against product produced, to identify ways of minimising the use of organic solvent.

VOC Control -Waste

- 6.17 All potentially odorous waste materials shall be handled in accordance with a written procedure a copy of which shall be made available to the Local authority upon request. This shall include a procedure, where waste cleaning solvents, wipes, full or partially full and nominally empty containers, which hold or have held waste which contained organic solvents are stored in either:-
- a) a suitable enclosed containers or
  - b) In bulk storage vessels vented to suitable arrestment plant.

In addition by 31 October 2007 containers for storage of organic solvent and organic solvent contaminated materials shall be self-closing.

- 6.18 The storage of nominally empty drums, which have previously contained materials with an organic solvent content, or other odorous substances shall be effected in a manner to prevent the emission of volatile organic compounds and odours to air, i.e stored with lids securely fastened to minimise the emission of residues prior to disposal.

The containers shall be clearly labelled prior to disposal, so that all that handle them are aware of their content and hazardous properties.

- 6.19 Prior to disposal, used wipes or other items contaminated with organic solvent shall be placed in a suitably labelled metal bin fitted with a self-closing lid, with the lid securely fastened at all times other than when in use.

This bin shall be emptied at least daily to prevent a fire hazard or spontaneous combustion.

For material that may undergo spontaneous combustion, special bins that allow air to circulate beneath and around them to aid cooling, may be used.

- 6.20 The location of open air storage areas for nominally empty drums and containers shall be carefully selected to meet the requirement of condition 4.3 and should include being:

- d) sited on a suitably impervious floor
- e) away from any drains which may become contaminated with residues as a result of spillage or leakage.
- f) away from sources of heat
- g) with access restricted to only appropriately trained staff

#### VOC Control - Dust and spillage control

- 6.21 A supply of absorbent material should be held on site for use in the event of spillage of organic solvents. Such spillages should be cleaned up immediately and the collected material should be held in an enclosed container pending removal from site.
- 6.22 All arising of dry dust materials shall be stored in closed containers and handled in a manner that avoids emissions.
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**7.0 Vents and Process Exhausts**

- 7.1 All emissions from the gravure printing machines G1-G6 and the flexographic presses F1-F3 and the hot emboss machines which are contained by the use of extract ventilation shall be vented to the oxidiser.
- 7.2 The core temperature of the thermal oxidiser shall be continuously monitored and the results continuously recorded.
- 7.3 The temperature monitors required by condition 7.2 shall be fitted with audible and visual alarms which shall activate if the temperature of the thermal oxidiser falls below 800°C when the equipment served by the oxidiser is in operation.
- 7.4 The waste gases from the thermal oxidiser shall be discharged via the 18metre stack.
- 7.5 Process vents shall normally be designed for an efflux velocity of not less than 15m/sec for normal load operation when dry arrestment is used.
- 7.6 Process vents shall not be fitted with any restriction at the final opening, for example, a plate, cap or cowl.
- 7.7 Stacks and ductwork shall be cleaned regularly to prevent the accumulation of material and inspected at least once every 12 months. Details of inspections shall be recorded in the log book and be made available for examination by an authorised representative of Charnwood Borough Council upon request.
- 7.8 All chimneys and ducts shall be leak proof and insulated to minimise cooling of waste gases.

**8.0 Management**

- 8.1 A high standard of housekeeping shall be maintained.
- 8.2 Essential spares and consumables, particularly those subject to continual wear, shall be held on site when the supplier is not able to provide items from stock within one working day, so that spray booth breakdowns can be rectified rapidly.
- 8.3 Staff at all levels shall receive the necessary formal training and instructions in their duties relating to control of the process and emissions to air. Particular emphasis shall be given to;
- Awareness of their responsibilities under this permit in dealing with conditions likely to give rise to VOC emissions, such as in the event of spillage;
  - Minimising emission on start up and shut down
  - Action to minimise emissions during abnormal conditions
- 8.4 A statement of training requirements for each operational post and a training record shall be kept for each person whose actions may have an impact on the environment. These documents shall be kept available for inspection by representatives from Charnwood Borough Council.
- 8.5 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, implemented and maintained and it shall be made available for inspection by representatives from Charnwood Borough Council.
  - A written record of all maintenance carried out shall be made available for the inspection by the regulator.
- 8.6 The activity shall operate in accordance with an effective management system. This shall include a commitment to achieving compliance with the permit conditions and ensuring SED considerations are taken account of in the day-to-day running of the process. It may include establishing objectives for improved environmental performance by setting targets, measuring progress and revising the objectives according to results. The system shall include managing risks under normal operating conditions and in accident and emergency situations.
- 8.7 The local authority shall be notified at least 28 days before any of the following changes are made to the process: -
- a) Any change to the organic solvent storage arrangements.
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**PERMIT NO. 101**

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- b) Any new or replacement mixing equipment.
- c) The installation of new or replacement equipment where this will increase the process capacity or involve an increase or change in the nature of emissions into the air.
- d) Any new or replacement air pollution control equipment
- e) Any new or replacement printing process or cleaning equipment.
- f) The installation of any continuous monitoring equipment for emission measurement.

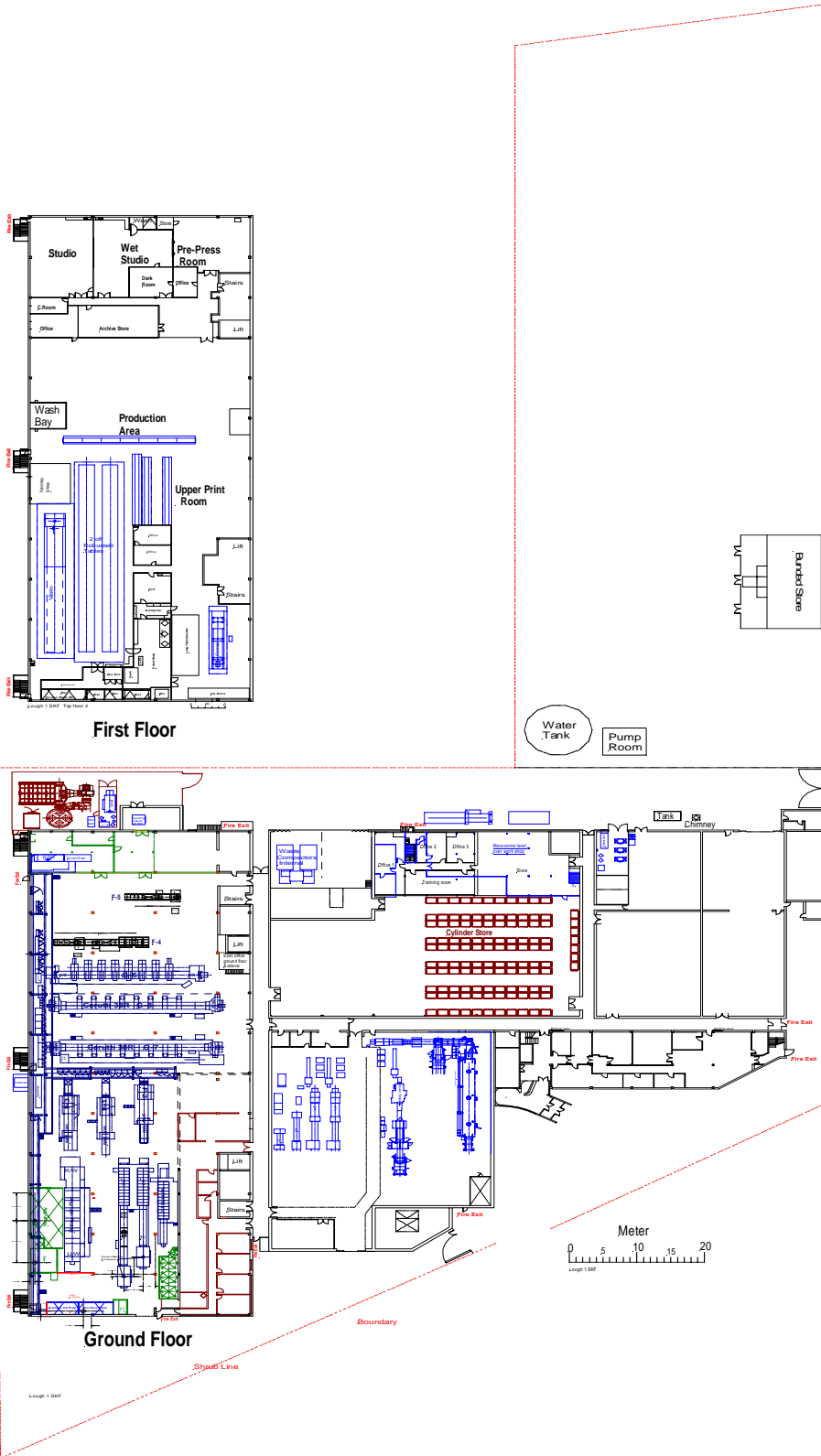
**Appendix I**

**Site Location Plan (01/101)**

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Appendix 2 Site Layout (2/101)



**Appendix 3** Determination of Solvent Consumption, work sheet  
**for PG6/18 (04)**

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 should be added in kilogrammes	Contact Tel No
I <sub>1</sub> 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 ( <b>IS</b> ) 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 ( <b>PS</b> )during the accounting period. (in Kg)	c) minus the mass of organic solvent contained in coatings, diluents and cleaners in the final stock( <b>FS</b> ) at the end of the accounting period.(in Kg)
Total Organic Solvent Input (I <sub>1</sub> )=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 <sub>8</sub> ) (in Kg)		
Actual consumption of organic solvent =		
Organic solvents contained in waste gases from stacks (O <sub>1</sub> )		
Organic solvents destroyed by abatement (O <sub>5</sub> )		
Organic solvents contained in collected solid waste (ie. solvent remaining in tins/on waste rags) (O <sub>6</sub> )		
Organic solvents contained in product (O <sub>7</sub> )		
Organic solvents used in recycling (O <sub>8</sub> )		
Fugitive emission = (I <sub>1</sub> - O <sub>1</sub> -O <sub>5</sub> -O <sub>6</sub> -O <sub>7</sub> -O <sub>8</sub> )		

## EXPLANATORY NOTES

These notes do not comprise part of Permit Serial No.101 but contain guidance relevant to the Permit.

1. You should note that Regulation 12(10) of the Regulations provides that in relation to any aspect of the process not regulated by conditions 2.1 to 8.7 the best available techniques ('BAT') shall be used for the purpose of preventing or, where that is not practicable, reducing emissions into the air.

Section 3(7) of the Regulations describes 'BAT' as meaning the most effective and advanced stage in the development of activities and their methods of operation which indicates the practical suitability of particular techniques for providing in principle the basis for emission limit values designed to prevent and, where that is not practicable, generally to reduce emissions and the impact on the environment as a whole.

2. This Permit is issued under the Pollution Prevention and Control (England and Wales) Regulations 2000. 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 a Waste Disposal Licence.
  3. Any proposed 'change in operation' in the process (within the meaning of Regulation 2(1)) shall be notified to Charnwood Borough Council as required by Section 16(1) of the Regulations.
-