

Permit with Introductory Note

The Pollution Prevention and Control Act 1999
Environmental Permitting (England and Wales) Regulations 2010
The Solvent Emissions Directive



Ancient House Press Plc
8 Whittle Road
Hadleigh Road Industrial Estate
Ipswich
IP2 0HA

LAPPC Permit Ref No:
PR1/VPA/04/10

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Chronicle

Detail	Date	Comments
First authorised	21 st July 1993	6.5/3/CFB
Variation Notice	8 th January 1994	6.5/3/V1
Variation Notice	26 th March 1998	6.5/3/V2
Variation Notice	2 nd March 2000	6.5/3/V3
Notice Requiring Information	13 th October 2000	6.5/3/19.1
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Permit Issued	05 August 2010	PR1/VPA/04/10

Permit issued by:

Environmental Protection Services
Ipswich Borough Council
Grafton House
15-17 Russell Road
Ipswich
IP1 2DE

Telephone: 01473 433115
Fax: 01473 433062
Website: www.ipswich.gov.uk
Email: environmentalprotection@ipswich.gov.uk

INTRODUCTORY NOTE

This introductory note does not form part of the permit

The following Permit is issued under Regulation 13 of the Environmental Permitting (England and Wales) Regulations 2010 (S.I.2010 No. 675), hereinafter referred to as the EP Regulations, to operate a scheduled installation carrying out an activity, or activities covered by the description in section 6.4 and section 7 in Part 2 to Schedule 1 of the EP Regulations, to the extent authorised by the Permit.

Conditions within this Permit detail Best Available Techniques (BAT), for the management and operation of the installation, to prevent, or where that is not practicable, to reduce emissions.

The definition of BAT is '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'.

In determining BAT, the Operator should pay particular attention to relevant sections of the Secretary of State's Guidance for Printing – Process Guidance Note 6/16(04), and any other relevant guidance. Techniques include both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned.

Note that the Permit requires the submission of certain information to Ipswich Borough Council, hereinafter referred to as the Regulator, and in addition, the Regulator has the power to seek further information at any time under Regulation 60 of the EP Regulations provided that the request is reasonable.

Public Registers

Information relating to Permits, including the application, is available on public registers in accordance with the EP Regulations. Certain information may be withheld from the public registers where it is commercially confidential, or if it is in the interest of national security to do so.

Variations to the Permit

The Regulator may vary the permit in the future, by serving a variation notice on the Operator. Should the Operator want any of the conditions of the Permit to be changed, a formal application must be submitted to the Regulator (the relevant forms are available from the Regulator). The Status Log that forms part of this introductory note 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.

Transfer of the Permit or Part of the Permit

Before the Permit can be wholly or partially transferred to another Operator, an application to transfer the Permit has to be made jointly by the existing and proposed Operators. A transfer will not be approved if the Regulator is not satisfied that the proposed Permit holder will be the person having control over the operation of the installation, or will not comply with the conditions of the transferred Permit. In addition, if the Permit authorises

the Operator to carry out a specified waste management activity, the transfer will not be approved if the Regulator does not consider the proposed Permit holder to be a 'fit and proper person' as required by the EP Regulations.

Surrender of the Permit

Where an Operator intends to cease the operation of an installation (in whole or in part) the Regulator should be informed in writing. Such notification must include the information specified in Regulation 24(3) of the EP Regulations.

Responsibility under Workplace Health and Safety Legislation

The permit is given in relation to the requirements of the EP Regulations. It must not be taken to replace any responsibilities an Operator may have under the workplace health and safety legislation.

Appeal Against Permit Conditions

Any person who is aggrieved by the conditions attached to a Permit can appeal to the Secretary of State for Environment, Food & Rural Affairs. Appeals must be received by the Secretary of State no later than 6 months from the date of the decision (the date of the Permit).

Appeals relating to installations in England should be received by the Secretary of State for Environment, Food & Rural Affairs. The address is as follows:

**The Planning Inspectorate
Environmental Appeals Administration
Room 4/19 – Eagle Wing
Temple Quay House
2 The Square
Temple Quay
Bristol, BS1 1PN**

The appeal must be in the form of a written notice or letter stating that the person wishes to appeal and listing the condition(s) which is/are being appealed against. The following five items must be included:

- (a) A statement of the grounds of appeal;
- (b) A copy of any relevant application;
- (c) A copy of any relevant Permit;
- (d) A copy of any relevant correspondence between the person making the appeal and the Council;
- (e) A statement indicating whether the appellant wishes the appeal to be dealt with.
 - by a hearing attended by both parties and conducted by an inspector appointed by the Secretary of State; or
 - by both parties sending the Secretary of State written statements of their case (and having the opportunity to comment upon one another's statements).

At the same time, the notice of appeal and documents (a) and (e) must be sent to the Council, and the person making the appeal should inform the appropriate Secretary of State that this had been done.

- An appeal will not suspend the effect of the conditions appealed against; the conditions must still be complied with.
- 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 and to direct the local authority to either vary any of these conditions or to add new conditions.

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Talking to us

Please quote the Permit Number if you contact the Regulator about this Permit. To give a notification the Operator should telephone 01473 433012 or any other number notified in writing by the Regulator for that purpose.

~ End of Introductory Note~

Permit

**The Pollution Prevention and Control Act 1999
Environmental Permitting (England and Wales) Regulations 2010
The Solvent Emissions Directive**



LAPPC Permit Ref No: PR1/VPA/04/10

Ipswich Borough Council in exercise of its powers under Regulation 13 of The Environmental Permitting (England and Wales) Regulations 2010, hereby authorises:

Ancient House Press Plc

whose registered office is:

**Ancient House Press Plc
8 Whittle Road
Hadleigh Road Industrial Estate
Ipswich
IP2 0HA**

to operate an installation at:

**Ancient House Press Plc
8 Whittle Road
Hadleigh Road Industrial Estate
Ipswich
IP2 0HA**

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

Signature: 
Steve Rock
Environmental Protection Services Manager
The Authorised Officer for this purpose

Date: 4-8-2010

Permit issued by:

Environmental Protection Services
Ipswich Borough Council
Grafton House
15-17 Russell Road
Ipswich
IP1 2DE

Telephone: 01473 433115
Fax: 01473 433062
Website: www.ipswich.gov.uk
Email: environmentalprotection@ipswich.gov.uk

OPERATING CONDITIONS

Process Description and General Information

The process is carried out by Ancient House Press Plc at Whittle Road, Hadleigh Road Industrial Estate, Ipswich, IP2 0HA within the site boundary shown in Site Plan 1, Appendix A.

The process comprises of four printing presses, two of which are heat-set web offset systems and the other two being sheet-fed offset systems. The activity includes the cleaning of the different parts of the presses, e.g. inking rollers, using organic solvents or solutions.

The site layout is shown in Site Layout 2, Appendix A.

No designated risk phrase materials are used in any part of the process.

Heat Web Offset

Press types: Two Komori 38S.

Heatset web offset printing is from a continuous reel web. It is typically used for magazines and coated papers when printing large numbers of copies. It gives richer colours than cold set printing. Following printing by each of the two heat set web offset presses, the ink dries in separate Megtec Dual Dry TNV9.1 dryers. The inks are solvent based.

The exhaust gases from the dryers contain volatile organic compounds (VOCs) from inks, cleaning agents and propan-z-ol. These emissions are vented through an integrated recuperative thermal oxidiser associated with each dryer to remove VOCs. The residual emissions are exhausted through two separate stacks at a height of 9.3 metres above ground level, as per the installers' D1 calculation.

The heat web offset process and associated activities are required to meet the requirements of the Solvents Emission Directive (SED) and are therefore referred to as SED processes and activities in this permit.

Sheet Fed Offset

Press types: Mitsubishi Diamond 3000TP and KBA Rapida 105.

Sheet fed is the most common printing process used. Printing is carried out on single sheets. The inks dry as a result of absorption by the substrate or oxidation. Ancient House Plc uses vegetable-based inks in this type of process.

The sheet fed offset process and associated activities are not required to meet the requirements of the Solvents Emission Directive (SED) and are therefore referred to as non-SED processes and activities in this permit.

All conditions in this permit apply to both heat web and sheet fed presses except where otherwise specified.

Emission limits, monitoring and other provisions

1. The reference conditions for emission limits specified in this permit shall be expressed as 273.15K, 101.3Kpa without correction for water vapour content.
2. The non-VOC emission limits and monitoring frequencies for all processes and activities shall be as per the table below:

Substance	Source	Emission Limits/ Provisions	Monitoring Frequency
Carbon monoxide	Oxidation plant for heat-web presses	100mg/Nm ³ as 30 minute mean for contained sources	Annual
Particulate matter	All processes/ activities	50mg/Nm ³ as 30 minute mean for contained sources	Annual
Oxides of nitrogen (measured as nitrogen dioxide)	Oxidation plant for heat-web presses	100mg/Nm ³ as 30 minute mean for contained source	Annual

3. Non-SED processes and activities shall use inks which do not contain VOCs.
4. The VOC emission limits and monitoring frequencies for SED processes and activities shall be as per the table below:

Substance	Source	Emission Limits/ Provisions	Fugitive emission values	Monitoring Frequency
VOC	Oxidation plant for heat-web presses	Until 1 April 2013, 50mg Carbon/Nm ³ expressed as total mass of organic carbon. After 1 April 2013, 20mg Carbon/Nm ³ expressed as total mass of organic carbon.	30% of solvent input	Annual
For abatement plant existing prior to 1 April 2001, the higher contained emission figure may be used until 1 April 2013 if: the total emissions of the whole installation (fugitive + contained emission) does not exceed the total emission allowed after 1 April 2013 (fugitive + contained emission after 1 April 2013).				

5. The Operator shall keep records of inspections, tests and monitoring, including all non-continuous monitoring, inspections and visual assessments in such cases:
 - (i) current records shall be kept on site and made available for an authorised officer of Ipswich Borough Council to examine.
 - (ii) records shall be kept by the Operator for at least two years.

6. The presses shall be designed to shut down automatically in the event of the in-built abatement plants failing, in order to minimise any adverse effects.
7. The Operator shall notify the regulator 7 days before any periodic monitoring exercise to determine compliance with emission limit values. The Operator shall state the provisional time and date of monitoring, pollutants to be tested and methods to be used.
8. The results of non-continuous emission testing shall be forwarded to Ipswich Borough Council within 8 weeks of the completion of sampling.
9. Adverse results from any monitoring activity (both continuous and non-continuous) shall be investigated by the Operator as soon as the monitoring results have been obtained. The Operator shall:
 - (i) identify the cause and take corrective action
 - (ii) record as much detail as possible regarding the cause and extent of the problem, and the action taken by the Operator to rectify the situation.
 - (iii) retest to demonstrate compliance as soon as possible; and
 - (iv) notify Ipswich Borough Council.
10. 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 1 as described in British Standard BS 2742: 1969.
11. All releases to air, other than condensed water vapour, shall be free from persistent visible emissions as perceived by an authorised officer of Ipswich Borough Council.
12. All emissions to air shall be free from droplets.
13. There shall be no offensive odour beyond the site boundary, as perceived by an authorised officer of Ipswich Borough Council.
14. In the case of abnormal emissions, malfunctions or breakdown leading to abnormal emissions the Operator shall:
 - (i) investigate immediately and undertake corrective action
 - (ii) adjust the process or activity to minimise those emissions; and
 - (iii) promptly record the events and actions taken.
15. Ipswich Borough Council shall be informed without delay:
 - (i) if there is an emission that is likely to have an effect on the local community.
 - (ii) in the event of the failure of key abatement plant for example the thermal afterburner.
16. All appropriate precautions shall be taken to minimise emissions during start-up and shutdown.

17. Exhaust flow rates of waste gases shall be consistent with efficient capture of emissions, good operating practice and meeting the requirements of the legislation relating to the workplace environment.
18. The introduction of dilution air to achieve emission concentration limits shall not be permitted.
19. Dilution air may be added for waste gas cooling or improved dispersion, where justified, but this shall not be considered when determining the mass concentration of the pollutant in the waste gases.
20. All operations likely to generate particulate matter shall be abated to achieve the emission limits stated in condition 2 of this permit.

Continuous monitoring

21. The particulate matter abatement plant shall be continuously monitored to indicate its level of performance by using equipment such as a pressure drop indicator.
22. The temperature of the thermal oxidisers on the heat web presses shall be continuously monitored to demonstrate that the temperature remains within 760°C and 790 ° during the printing process such that there is adequate VOC abatement.
23. All continuous monitoring readings shall be on display to appropriately trained operating staff.
24. Instruments shall be fitted with audible and visual alarms, situated appropriately to warn the Operator of abatement plant failure or malfunction.
25. The activation of alarms shall be automatically recorded.
26. All new continuous monitoring equipment shall be designed for less than 5% downtime over any 3-month period.

Calibration and compliance monitoring

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

No result shall exceed the emission concentration limits specified, except where either:

- (i) data is obtained over at least 5 sampling hours in increments of 30 minutes or less; or
- (ii) at least 20 results are obtained where sampling time increments of more than 30-minutes are involved, and in the case of (a) and (b)
- (iii) no daily mean of all 30 minute mean emission concentration limits during normal operation (excluding start up and shutdown); and
- (iv) no 30 minute mean emission concentration, shall exceed twice the specified emission concentration limits during normal operation (excluding start up and shutdown).

28. Calibration and compliance monitoring for all substances shall be carried out using methods below or methods which can be demonstrated to be equivalent to those stated:
- (i) Stationary source emissions – determination of mass concentration of total gaseous organic carbon in flue gases from organic solvent using processes – continuous flame ionisation detector method. EN 13526.
 - (ii) Stationary source emissions – determination of mass concentration of individual gaseous organic compounds. EN 13649.
 - (iii) Non-continuous emission monitoring of particulate matter shall be carried out according to the main procedural provisions of BS ISO 9096: 2003, with averages taken over operating periods excluding start up and shutdown.
 - (iv) Emissions monitoring of nitrogen dioxide shall be carried out in accordance with ISO 10849.
 - (v) Emissions monitoring of carbon monoxide shall be carried out in accordance with ISO 12039.
29. The Operator shall ensure that adequate facilities for sampling are provided on vents or ducts.
30. Sampling points on new plants shall be designed to comply with the British or equivalent standards.

Varying of monitoring frequency

31. The frequency of testing shall be increased as part of commissioning new or substantially changed activities or where emission levels are near to or approaching the emission concentration limits.
32. Unless prior agreement with Ipswich Borough Council is obtained, consistent compliance shall be demonstrated using the results from at least:
- (i) three or more monitoring exercises within two years or
 - (ii) two or more monitoring exercises in one year supported by continuous monitoring.
33. Any consistent process changes which might have affected the monitored emission shall be taken into account before the monitoring frequency is varied.

Oxides of nitrogen

34. Where necessary, the nitrogen content of the fuel and other material being burnt shall be controlled.
35. Where necessary low NO_x burners shall be installed.

VOC control - storage

36. All potentially odorous waste materials e.g. inks/coatings containing VOCs shall be stored in suitable closed containers or bulk storage vessels.
37. Bunding shall:
- (i) completely surround the bulk liquid storage tanks

- (ii) be impervious and resistant to the liquids in storage and
- (iii) be capable of holding 110% of the capacity of the largest storage tank.

VOC control - handling

- 38. All measures shall be taken to minimise VOC emissions during mixing by using covered or closed mixing materials.
- 39. Emissions from the emptying of mixing vessels and transfer of materials shall be adequately contained, preferably by the use of closed transfer systems.
- 40. For sheet fed offset, the composite vapour pressure at 20°C (293K) of the cleaning solvents used shall be no greater than: 0.2Kpa.
- 41. Where organic compounds are present in dampening, the proportion of organic compounds in dampening solutions shall not exceed 10% (by weight) in the case of existing presses, except where these are incapable of running at that level.
- 42. Cooling in order to reduce the evaporation of dampening solutions containing organic compounds shall be installed.

VOC control - cleaning

- 43. Cleaning operations involving organic solvents shall be periodically reviewed, normally at least once every two years, to identify opportunities for reducing VOC emissions. Ipswich Borough Council shall be provided with a report on the conclusions of the review.
- 44. Application of cleaning solvents shall be:
 - (i) from a contained device or automatic system when applied directly on to machine rollers; and
 - (ii) dispensed by piston type dispenser or similar contained device, when used on wipes.
- 45. When organic solvent is used on wipes:
 - (i) pre-impregnated wipes shall be held within an enclosed container prior to use.
 - (ii) no organic solvent cleaning fluids or significantly less volatile organic solvents cleaning fluids shall be used.
- 46. Where equipment is cleaned off-line, cleaning shall be carried out using enclosed cleaning systems. Enclosed cleaning systems shall be sealed to prevent emissions whilst in operation.
- 47. Residual ink/coating contained in parts of the application equipment shall be removed prior to cleaning.

VOC control - waste

48. All reasonably practicable efforts shall be made to minimise the amount of residual organic solvent bearing material left in drums and other containers after use. All organic solvent contaminated waste shall be stored in closed containers.
49. Prior to disposal, empty drums and containers contaminated with organic solvent shall be closed to minimise emissions from residues during storage prior to disposal and labelled so that all that handle them are aware of their contents and hazardous properties.
50. Nominally empty drums or drums containing waste contaminated with VOC awaiting disposal shall be stored in accordance with the requirement for full or new containers.
51. Prior to disposal used wipes and other items contaminated with organic solvent shall be placed in a suitably labelled metal bin fitted with a self-closing lid.

Solvent usage

52. A programme to monitor and record the consumption of inks/coatings/organic solvent against product produced shall be used to minimise the amount of excess organic solvent/coating/ink used.
53. A solvent inventory showing the organic solvent consumption in a 12-month period for the sheet fed presses and the heat-web presses shall be submitted to Ipswich Borough Council annually.

The inventory shall be in the form of a mass balance in order to determine the annual actual consumption of organic solvent, C.

The Operator shall calculate the value of C as follows:

$$C = I_1 - O_8$$

where,

The value of O_8 shall be worked out as per its definition in condition 62.

and where,

I_1 which is the total quantity of organic solvents, or their quantity in preparations purchased which are used as input into the process/activity is calculated as follows:

$$I_1 = IS + PS - FS$$

where,

IS – is the mass of organic solvent contained in inks, coatings, diluents and cleaners in the initial stock at the start of the accounting period;

PS – is the mass of organic solvent contained in inks, coatings, diluents and cleaners in the purchased stock during the accounting period;

FS – is the mass of organic solvent contained in inks, coatings, diluents and cleaners in the final stock at the end of the accounting period

54. A solvent management plan (SMP) shall be used by the operator to demonstrate by calculation that the fugitive emission limits requirements for the heat web presses as per condition 4 of this permit, do not exceed 30% of the organic solvent input. Once completed, it need not be done until the equipment is modified or the process is modified. The SMP shall be as described in Appendix 2, SED Annex III of the Secretary of State's Guidance for Printing, Process Guidance Note 6/16(04). For ease of reference, this document is included in Appendix B of this permit.
55. Fugitive emissions (F) shall be calculated in the following way:

$$F = I_1 - O_1 - O_5 - O_6 - O_7 - O_8$$

or

$$F = O_2 + O_3 + O_4 + O_9$$

The percentage of fugitive emission (F) to the solvent input is calculated as follows:

$$\text{Fugitive emission value (\%)} = 100 \times F/I$$

where solvent input, $I = I_1 + I_2$ (determined as part of the Solvent Management Plan)

The variables in the formulae above are as follows:

- I stands for the inputs of organic solvents in the time frame over which the mass balance is being calculated.
- I_1 stands for 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).
- I_2 stands for 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).
- O stands for the outputs of organic solvents in the time frame over which the mass balance is being calculated.
- O_1 stands for the emissions in waste gases
- O_2 stands for the organic solvents lost in water, if appropriate taking into account waste water treatment when calculating O_5 .
- O_3 stands for the quantity of organic solvents which remains as contamination or residue in products output from the process/activity.

Note: For heat set web offset printing activities, the residual quantity of solvent in the finished product, O_3 , shall not be included as part of the fugitive emissions, i.e. $O_3 = 0$.

- O_4 stands for the uncaptured emissions of organic solvents to air. This includes the general ventilation of rooms, where air is released to the outside environment via windows, doors, vents and similar openings.
- O_5 stands for the organic solvents/ and or organic compounds lost due to chemical or physical reactions (including for e.g. those which are destroyed by for e.g. thermal oxidation or other waste gas or waste water treatments or captured for e.g. by adsorption as long as they are not counted under O_6 , O_7 or O_8).
- O_6 stands for the organic solvents contained in collected waste.
- O_7 stands for the organic solvents or organic solvents contained in preparations which are sold or are intended to be sold as a commercially valuable product.
- O_8 stands for organic solvents contained in preparations recovered for reuse but not as input into the process/activity, as long as not counted under O_7 .
- O_9 stands for organic solvents released in other ways, e.g. spillage, leakage etc.

A SMP inputs and outputs diagram showing the above variables is included in Appendix C for reference.

- 56. Fugitive emission values shall be determined for each heat-web installation and shall be repeated when any equipment modification or process changes are made on this type of press.

Dust and spillage control

- 57. Dusty wastes shall be stored in closed containers and handled in a manner that avoids emissions.
- 58. Dry sweeping of dusty materials shall not normally be permitted unless there are environmental or health and safety risks in using alternative techniques.
- 59. Suitable organic solvent containment and spillage equipment shall be readily available in all organic solvent handling areas.
- 60. A high standard of housekeeping shall be maintained.

Stacks, vents and process exhausts

- 61. Adequate insulation shall be provided to minimise the cooling of waste gases and prevent liquid condensation from stacks, vents and process exhausts by keeping the temperature of the exhaust gases above the dewpoint.

62. Stacks and ductwork shall be cleaned to prevent accumulation of materials, as part of the routine maintenance programme.
63. The minimum discharge velocity of gases, from the thermal oxidation unit on the heat web presses, at the point of efflux shall be 10ms^{-1} .
64. Stacks or vents shall not be fitted with any restriction of the final opening such as a plate, cap or cowl, with exception of a cone which may be necessary to increase exit velocity of the emissions.
65. The chimney stack serving the thermal oxidation units shall be no less than 9.3 metres in height.

Management

66. The Operator shall be aware that important elements for effective control of emissions shall include:-
 - (i) proper management, supervision and training for process operations
 - (ii) proper use of equipment
 - (iii) effective preventative maintenance on all plant and equipment concerned with the control of emissions to the air, and
 - (iv) ensuring that spares and consumables are available at short notice in order to rectify breakdowns rapidly. This is important with respect to arrestment plant and other necessary environmental control. It is useful to compile a list of essential items.
67. The Operator shall keep spares and consumables on site, in particular those subject to continual wear, or shall be available at short notice from a guaranteed supplier.
68. The Operator shall implement suitable and sufficient management systems to provide an effective technique for ensuring that all pollution prevention and control techniques (BAT) are delivered reliably and on an integrated basis.

Training

69. The Operator shall ensure staff at all levels receive the necessary training and instruction in their duties relating to control of the process and emissions to air.
70. The Operator shall ensure that training of all staff with responsibility for operating the process shall include:
 - (i) awareness of their responsibility under the permit
 - (ii) actions to minimise emissions during abnormal conditions
71. The Operator shall maintain a statement of training requirements for each operational post and keep a record of the training received by each person whose actions may have an impact on the environment. These documents shall be made available to an authorised officer of Ipswich Borough Council at their request.

Maintenance

72. The Operator shall employ an effective preventative maintenance on all aspects of the process, including all plant, buildings and the equipment concerned with control of emissions to air. In particular:
- (i) a written maintenance programme shall be provided to the regulator with respect to pollution control equipment, and
 - (ii) a record of such maintenance shall be made available for inspection

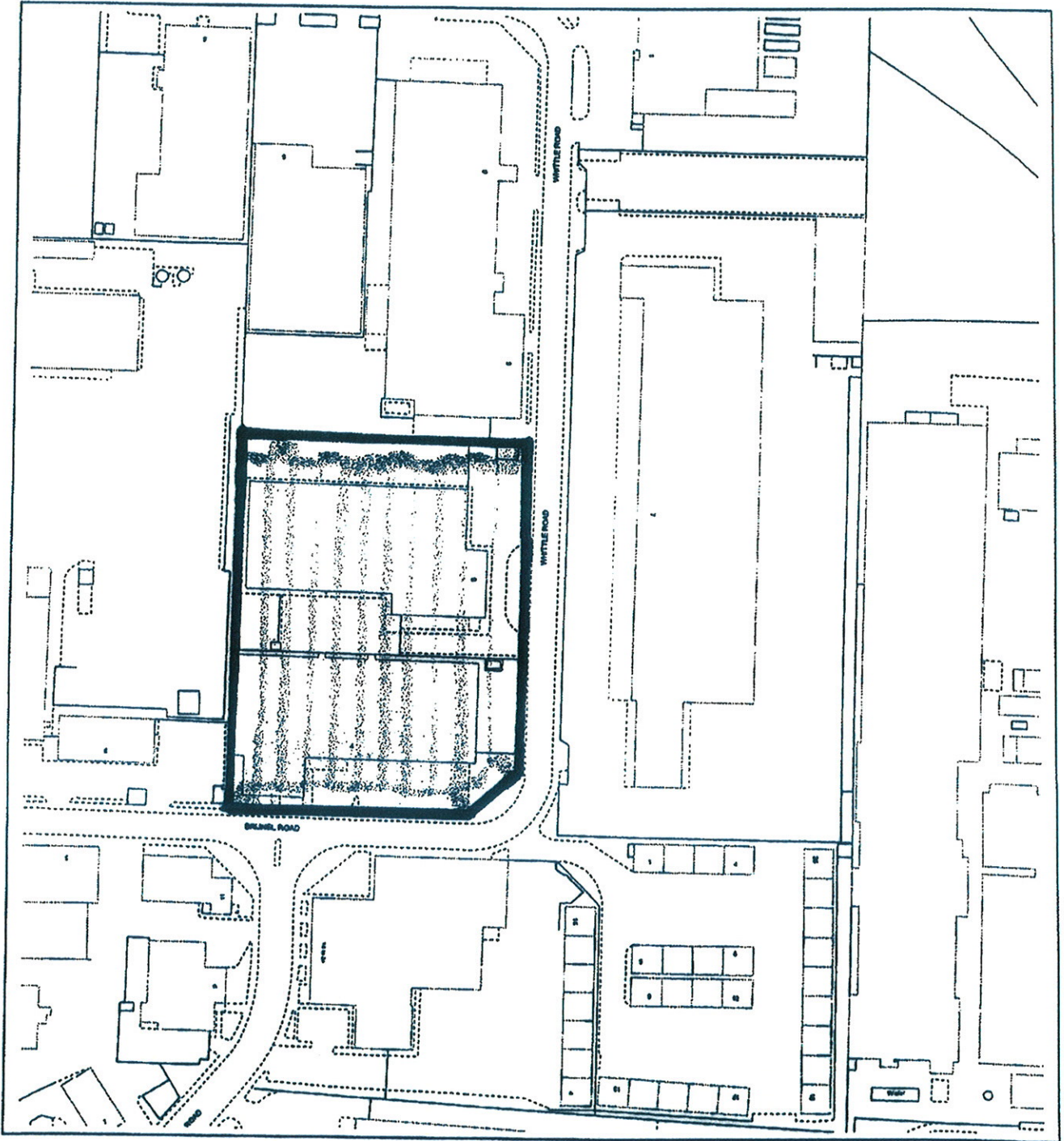
Notifications

73. The Operator shall notify Ipswich Borough Council without delay of:
- (i) the detection of any malfunction, breakdown or failure of plant or techniques which has caused, is causing or has the potential to cause significant pollution; and
 - (ii) any accident, which has caused, is causing or has the potential to cause significant pollution.
74. The Operator shall give written notification as soon as practicable prior to any of the following:
- (i) permanent cessation of the operation of part or all of the Permitted Installation
 - (ii) cessation of operation of part or all of the Permitted Installation for a period likely to exceed one year, and
 - (iii) resumption of the operation of part or all of the Permitted Installation after a cessation has been notified.
75. The Operator shall notify the following matters to Ipswich Borough Council in writing within 14 days of their occurrence:
- (i) any change to the operation capable of altering the substances from the operation
 - (ii) any change in the Operator's trading name, registered name or registered office address
 - (iii) any change to particulars of the Operator's ultimate holding company (including details of an ultimate holding company where an Operator has become a subsidiary)
 - (iv) any steps taken with a view to the Operator going into administration, entering into a company voluntary arrangement, or being wound up.
76. The Best Available Techniques (BAT) shall be used to prevent, or where that is not practicable, reduce emissions from the installation in relation to any aspect of the operation of the installation which is not regulated by any other condition of this permit.

~End of Permit~

Appendix A

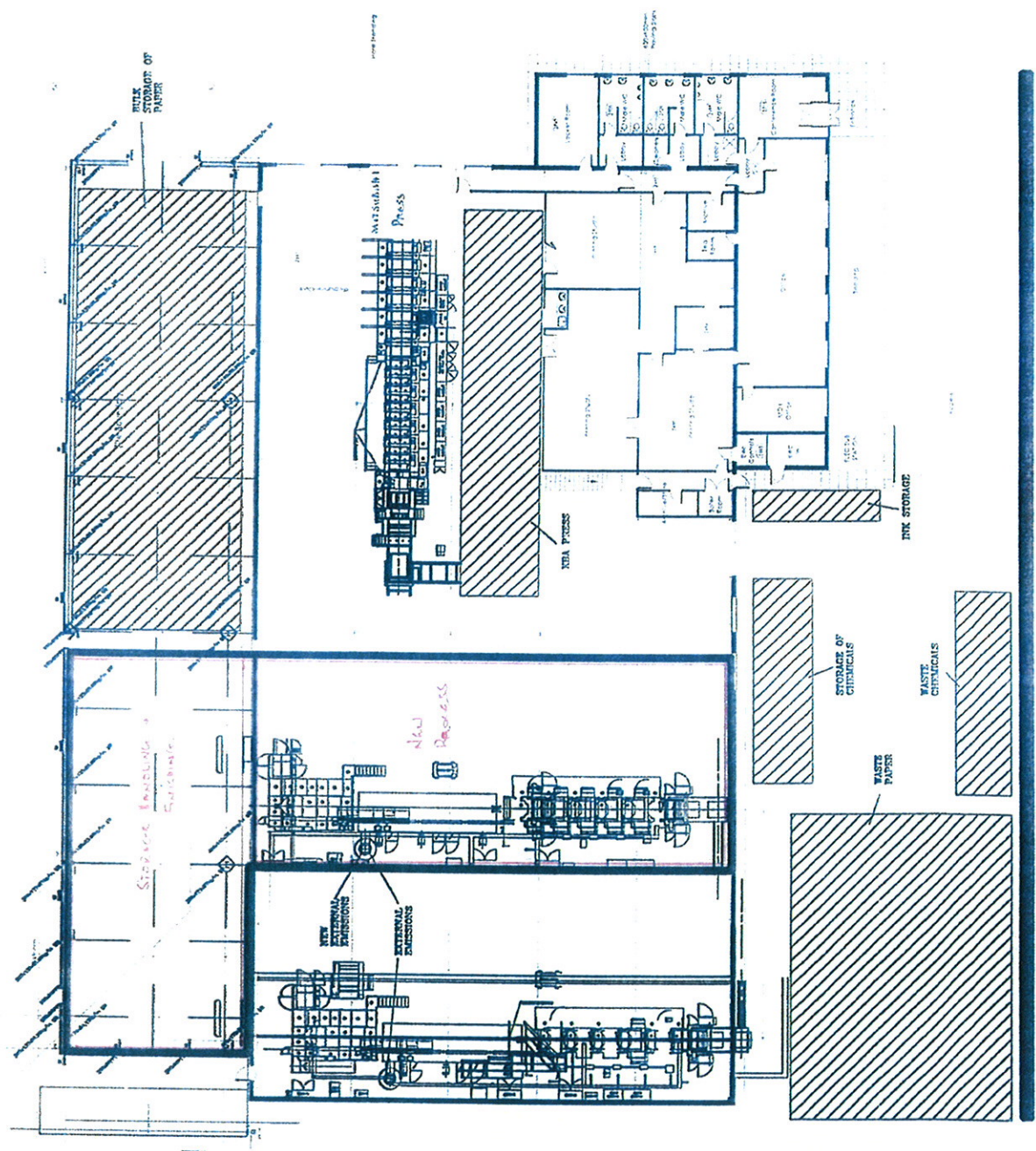
MVM SE GIS Print Template



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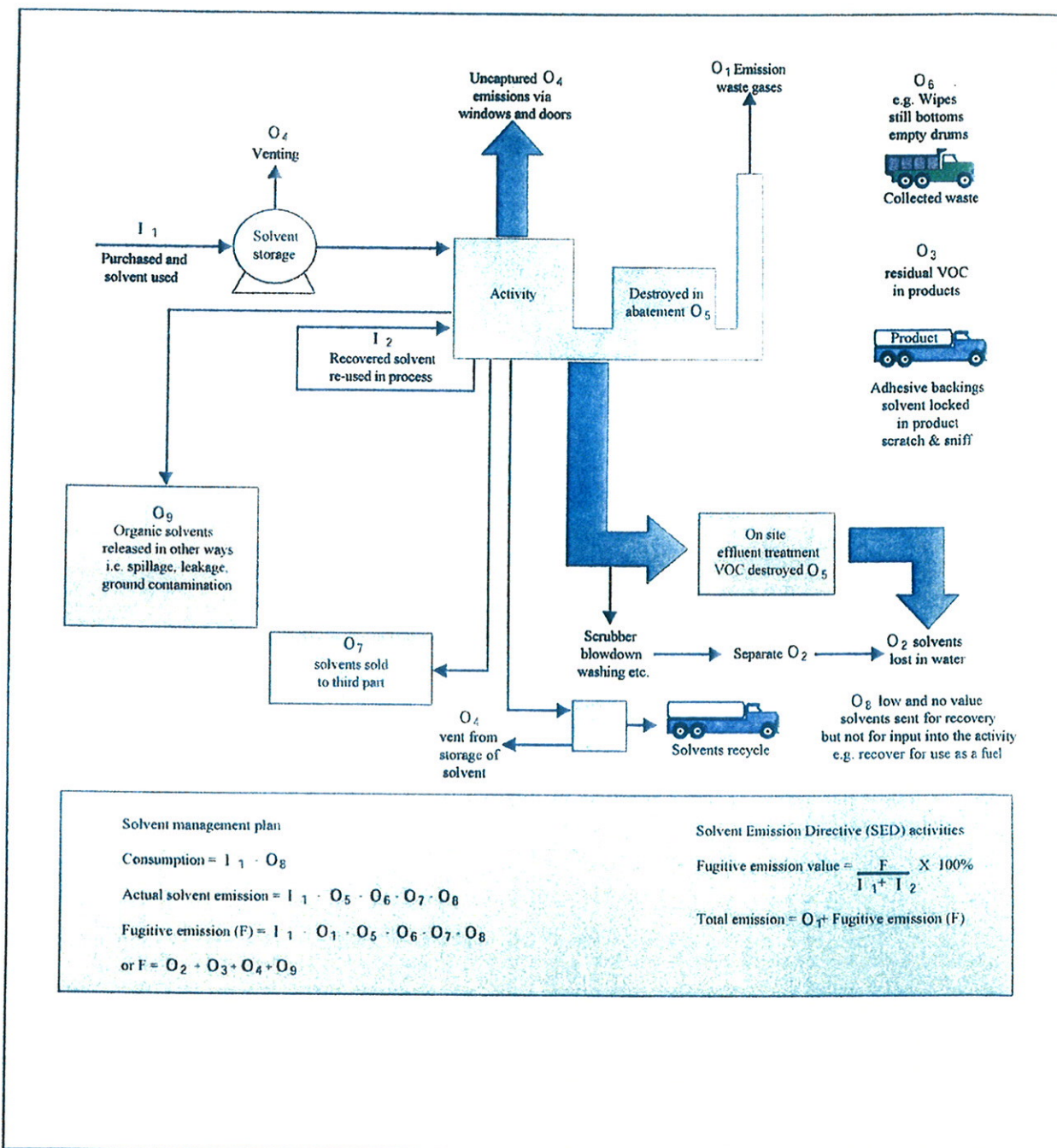
DOCUMENT REFERENCE B13



CONTAINER	FILE	PROJECT NO.	SCALE	DRAWN BY	CHECKED BY	DATE
KOMORI						
KOMORI UK LTD						

Appendix B

Solvent Management Plan Inputs and Outputs



Solvent management plan

Consumption = $I_1 \cdot O_8$

Actual solvent emission = $I_1 \cdot O_5 \cdot O_6 \cdot O_7 \cdot O_8$

Fugitive emission (F) = $I_1 \cdot O_1 \cdot O_5 \cdot O_6 \cdot O_7 \cdot O_8$

or $F = O_2 + O_3 + O_4 + O_9$

Solvent Emission Directive (SED) activities

Fugitive emission value = $\frac{F}{I_1 + I_2} \times 100\%$

Total emission = $O_7 + \text{Fugitive emission (F)}$

Appendix C

SED - ANNEX III

SOLVENT MANAGEMENT PLAN

1. Introduction

This Annex provides guidance on carrying out a solvent management plan. It identifies the principles to be applied (item 2) and provides a framework for the mass balance (item 3) and an indication of the requirements for verification of compliance (item 4).

2. Principles

The solvent management plan serves the following purposes:

- (i) verification of compliance as specified in Article 9(1);
- (ii) identification of future reduction options;
- (iii) enabling of the provision of information on solvent consumption, solvent emissions and compliance with the Directive to the public.

3. Definitions

The following definitions provide a framework for the mass balance exercise.

Inputs of organic solvents (I):

I₁ The quantity of organic solvents or their quantity in preparations, purchased which are used as input into the process in the time frame over which the mass balance is being calculated.

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

Outputs of organic solvents (O):

O₁ Emissions in waste gases.

O₂ Organic solvents lost in water, if appropriate taking into account waste water treatment when calculating O₅.

O₃ The quantity of organic solvents which remains as contamination or residue in products output from the process.

O₄ Uncaptured emissions of organic solvents to air. This includes the general ventilation of rooms, where air is released to the outside environment via windows, doors, vents and similar openings.

O₅ Organic solvents and/or organic compounds lost due to chemical or physical reactions. (including for example those which are destroyed, e.g. by thermal oxidation or other waste gas or waste water treatments, or captured, e.g. by adsorption, as long as they are not counted under O₆, O₇ or O₈).

O₆ Organic solvents contained in collected waste.

O₇ Organic solvents, or organic solvents contained in preparations, which are sold or are intended to be sold as a commercially valuable product.

O₈ Organic solvents contained in preparations 'recovered for reuse but not as input into the process, as long as not counted under O₇.

O₉ Organic solvents released in other ways.

4. Guidance on use of the solvent management plan for verification of compliance

The use made of the solvent management plan will be determined by the particular requirement which is to be verified, as follows:

(i) Verification of compliance with the reduction option in Annex IIB, with a total emission limit value expressed in solvent emissions per unit product, or otherwise stated in Annex IIA.

(a) For all activities using Annex IIB the solvent management plan should be done annually to determine consumption (C). Consumption can be calculated according to the following equation:

$$C = I_1 - O_8$$

A parallel exercise should also be undertaken to determine solids used in coating in order to derive the annual reference emission and the target emission each year.

(b) For assessing compliance with a total emission limit value expressed in solvent emissions per unit product or otherwise stated in Annex IIA, the solvent management plan should be done annually to determine emissions (E). Emissions can be calculated according to the following equation:

$$E = F + O_1$$

where F is the fugitive emission as defined in section (ii)(a). The emission figure should then be divided by the relevant product parameter.

(c) For assessing compliance with the requirements of Article 5(5)(b)(ii), the solvent management plan should be done annually to determine total emissions from all activities concerned, and that figure should then be compared with the total emissions that would have resulted had the requirements of Annex II been met for each activity separately.

(ii) Determination of fugitive emissions for comparison with fugitive emission values in Annex IIA:

(a) Methodology

The fugitive emission can be calculated according to the following equation:

$$F = I_1 - O_1 - O_5 - O_6 - O_7 - O_8$$

or

$$F = O_2 + O_3 + O_4 + O_9$$

This quantity can be determined by direct measurement of the quantities. Alternatively, an equivalent calculation can be made by other means, for instance by using the capture efficiency of the process.

The fugitive emission value is expressed as a proportion of the input, which can be calculated according to the following equation:

$$I = I_1 + I_2$$

(b) Frequency

Determination of fugitive emissions can be done by a short but comprehensive set of measurements. It need not be done again until the equipment is modified.