Telford & Wrekin COUNCIL

Pollution Prevention Control Act 1999

The Environmental Permitting (England & Wales) Regulations 2010 (as amended)

Operator	**Precision Colour Printing Ltd**
Installation Address	Haldane, Halesfield 1, Telford, Shropshire, TF1 4QQ.
Grid Reference	SJ 71398 05392
Company Number	03790889
Registered Office	Precision Colour Printing Ltd Queen Street, Wolverhampton, WV1 3BU

Precision Colour Printing Limited is hereby permitted by Telford & Wrekin Council to carry on printing process under Section 6.4(A2)(a) and Section 7 of the Environmental Permitting (England & Wales) Regulations 2010 (as amended) and other activities as listed and described below within the installation boundary marked red on the attached plan reference Appendix 3 and in accordance with the following conditions.

Provenance	Relevant Dates
Date Application Made (Deemed application)	20th June 2011
Date 'Duly Made'	5th July 2011
Date Permit First Issued	22nd April 2013
Date of Variations	none
Date of Latest Variation	none

This permit consists of 33 numbered pages

Description of the Installation

The installation consists of 6 printing presses and other associated plant and equipment utilised for the production of magazines, brochures and a small quantity of pre printed paper to be used at another news paper printing site. The process prints onto paper and uses two different ink technologies, cold set which dries at room temperature and heat set which requires heat to cure.

The following description divides the Installation into its elements and activities both those activities scheduled under the above regulations and those non scheduled elements required to be regulated because of their polluting potential and that have a direct association and a technical connection to the scheduled activities:

The installation comprises the following activities and elements:

1 Raw material storage element
   - Paper
   - Ink
2 Prepress/Plate making
3 The Printing activity
   - Sheet Fed Offset printing
   - Heatset Web Offset printing
   - Ink jet printing
4 Waste Storage element
5 Finishing area
6 Finishing and mailing area

All process steps encompassed within the printing activity are supported by specific equipment specifications, process controls, planned maintenance, quality assurance and product verification procedures. The printing activities, that include the use of solvent borne materials, have dedicated cycle times at all stages, defined operating efficiency targets, planned preventative maintenance programs, and in built breakdown criteria.

As a whole the installation falls within Section 6.4(A2)(a) and Section 7 of the Environmental Permitting (England & Wales) Regulations 2010 (as amended): as it has a Volatile Organic Compound (VOC) consumption greater than 200 tonnes per year it is a defined Solvent Emissions Directive (SED).

The following text divides the installation as described above into its constituent parts, both those scheduled activities under the above regulations and those non scheduled activities required to be permitted because of their polluting potential and direct association and technical connection with the scheduled activities.

The following describes the above in its constituent parts

1. Raw Material storage Element

Paper storage
Bulk paper is stored in dedicated areas on rolls or on pallets for sheetfed presses within buildings and in smaller amounts close to printing presses in preparation for printing. No emissions are created from this element of the process.

Ink storage
There are 3 ink storage areas within the installation as indicated in appendix 4 All ink is stored within enclosed vessels to prevent any release of solvent.

Area 1 contains a bunded area designed to store 28 IBC silos of 1,000kg capacity, this ink is then used in the Wifag, Goss and Komori printing presses.

Area 2 contains 3 fixed silos of 10,000kg capacity and 1 silo of 12,000 capacity and is for the MAN Rotoman printing press. Ink is pumped directly from these containers to the press.

Area 3 is used to store 5 steel barrels of 205 litre capacity; this is for the two sheetfed printing press. Ink is pumped directly to the 10 colour press and also decanted into 5kg containers for use on the 6 colour press. Ink is also purchased in 5kg containers for the 6 colour machine.

All Ink is only transported from its bunded area to the press when required.

At room temperature there are no emissions to air and emissions to land and water are minimised with the use of bunds.

The Raw material storage element of the installation is technically connected and directly associated with the activities falling within Schedule 1 of the Environmental Permitting (England and Wales) Regulations 2010 (as amended).

3. Prepress/Plate making Element

The latest CTP (computer to plate) technology is used along with virtually process less plates, the plates are imaged by laser and the excess coating is removed in a processor with a gum solution. The spent gum solution is returned to the manufacturer for recycling.

New and used gum is contained in 20 litre containers and stored in bunded areas within the building, the processors used for removing excess coating contain 80 litres of gum and are stored on a bunded tray, there are no emissions to air from this process.

The Press/Plate making element of the installation is technically connected and directly associated with the activities falling within Schedule 1 of the Environmental Permitting (England and Wales) Regulations 2010 (as amended).

4. The Printing activity

The process begins with electronic page images supplied to PCP, these electronic page images are then laid out in the correct sequence and imaged onto the aluminium printing plates. The plates are then mounted on the press, the correct paper size and type is also transported from the storage area and loaded onto the press. The press applies a thin film of ink and fount solution to the plate, to create an inked image on the plate, this image is then printed onto a rubberised blanket and then in turn transferred on to the paper to create printed sections.

Used plates are collected and stored ready for recycling. Waste ink is collected in 205 litre containers and stored ready for collection for recycling. The printed sections are folded, collated and stitched or bound before being packed and shipped.

Sheet Fed Offset printing

Sheetfed 6

This press is prepared using plates from the plate making department, non solvent based inks and a water based fount solution with an additive of 8% IPA. The machine has 6 separate ink trays and the corresponding ink trays are filled from the respective 5kg ink containers. IPA is stored in a bunded flammable stores container, and only when required are quantities of IPA brought into the building.

The machine is operated with inks that dry at normal room temperature by absorption into the substrate or oxidation and give no emission to air. The machine is also equipped with a coating unit which is used to print a clear water based sealer or a UV coating. The sealer dries in the same way as the ink whilst the UV is cured using UV lamps. Rollers on the machine are cleaned using a solvent based cleaning product, which produce a small fugitive emission whilst the printing plates blankets are cleaned automatically using pre impregnated cleaning cloths.

Sheetfed 10

This press operates the same process as Sheetfed 6, except, it uses 10 colours with 10 separate ink trays, the ink is stored in 205 litre sealed steel barrels and pumped automatically to the press, the fount solution has a no IPA additive. The machine is not equipped with a coater.

Rollers on the machine are cleaned using a solvent based cleaning product which produce a small fugitive emission, whilst the printing plates and blankets are cleaned automatically using pre impregnated cleaning cloths.

Heatset Web Offset printing

Wifag OF790,

This press operates in a similar manner to the Sheet Fed Offset machines with exception that the ink contains 33% solvent and requires heating to cure. The OF790 is fitted with two gas dryers, the exhaust from each dryer is connected to the RTO

equipment. On start up the dryers purge to atmosphere until the burners light when the exhaust is directed to the RTO. The fount solution used has no IPA additive. Ink for the press is pumped automatically from 1,000kg containers to the ink trays. The containers are stored outside in a bunded area, and only loaded onto the machine when required. Rollers and blankets on the machine are cleaned using a solvent based cleaning product, which produce some fugitive emissions.

Foreseeable emission would be VOC to atmosphere from the dryers, the dryers are computer controlled with fail safe functionality.

Goss Universal

This press utilises the same process and materials as the Wifag OF790, with the exception of cleaning, rollers are cleaned using a solvent based cleaning product which produces a small amount of fugitive emissions whilst the printing blankets are cleaned automatically using pre impregnated cleaning cloths.

Komori 38 S2

This press utilises the same process and materials as the Wifag OF790, the machine is equipped with a single gas dryer with inbuilt after burner which has a controlled temperature set at 780 ^{0}C to burn off any VOC content. Ink for the press is pumped automatically from 1,000kg containers. The containers are stored outside in a bunded area, and only loaded onto the machine when required.
Rollers are cleaned using a solvent based cleaning product which produces a small amount of fugitive emissions whilst the printing blankets are cleaned automatically using pre impregnated cleaning cloths.

Man Rotoman 60

This press utilises the same process and materials as the Wifag OF790, the machine is equipped with two gas dryer with inbuilt after burners which have a controlled temperature set at 780 ^{0}C to burn off any VOC content. Ink for the machine is stored in 4 ink silos, 3 at 10,000kg and 1 at 12,000kg, the silos are located within a bunded area. The ink silos are filled from a delivery tanker. The filling area is equipped with spill containment drain covers, sand bags, shovels and empty waste containers.
Rollers are cleaned using a solvent based cleaning product which produce a small amount of fugitive emissions whilst the printing blankets are cleaned automatically using pre impregnated cleaning cloths.

Ink preparation

There is a minimal amount of ink prepared/mixed onsite. Ink is purchased in large quantities due to the large consumption of ink during the printing process. The only ink likely to be mixed is a special colour of sheetfed ink, in quantities of approximately 10kg.

Heatset web Offset is a scheduled Activity within Section 6.4(A2)(a) and section 7 of the Environmental Permitting (England and Wales) Regulations 2010 (as amended). It is therefore subject to SED.

Abatement plant

The Regenerative Thermal Oxidiser (RTO) is a twin chamber device with a controlled bed temperature of 880 ^{0}C to burn off any VOC from the Wifag or Goss press, the machine is computer controlled and interlocked to the Goss and Wifag machines. The Komori 38 S2 and Man Rotoman 60 have inbuilt interlocked afterburners operating at 780 ^{0}C that burn off VOC before being emitted to atmosphere.

Finishing
This process folds, collates and stitches printed sections. There are no solvents or liquids used.

5 – Waste storage element

All waste materials associated with activities 1, 2, 3 and 4 are stored in appropriate sealed drums or containers and stored in the specified waste storage area in appendix 3.

All liquid wastes containing VOC's are stored in the waste storage area noted above with a bunded area capable of containing 110% of the volume of the largest container present.

Solid wastes from the installation are stored in a dedicated skips before collection by a registered waste contractor.

Ink recycling
Small quantities of ink are collected in this area and drained into 205 litre steel barrel ready for collection for recycling.

Plate recycling
Used printing plates are collected in cages by each machine before being transferred to the plate recycling area awaiting collection

The Waste Storage element of the installation is technically connected and directly associated with the activities falling within Schedule 1 of the Environmental Permitting (England and Wales) Regulations 2010 (as amended).

6 - Finishing and mailing

This process binds printed section and poly wraps finished products for despatch, very small quantities of high solvent ink is used in two ink jet printers for addressing the products ready for mailing.

Compliance route.

Precision Colour Printing Ltd have chosen the solvent reduction scheme as the route of compliance with the requirements of the Environmental Permitting (England and Wales) Regulations 2010 (as amended) and The Solvent Emission Directive.

Table 1. Quantities of Materials Used

Raw Material	Usage (tonnes/annum)	Activity/Element
Fount solution	28,800 Litres	1,3,4
Sheetfed ink	26.8	1,3,4
Heatset Ink	177.21	1,3,4
IPA	12.56	1,3,4
Cleaning washes/materials	6.36	1,3,4
Inkjet ink	0.059.4	1,3,4
Printing plates	0	

Table 2. List of plant and equipment concerned with the installation

Plant or Equipment used	Activity/Element	Machine reference numbers	Abatement	Emission Points
Wifag OF790	3		RTO	VOC, CO, NOx
Goss Universal	3		RTO	VOC, CO, NOx
Komori 38 S2	3		Gas dryer with after burner	VOC, CO, NOx
MAN Rotoman 60	3		Gas dryer with after burner	VOC, CO, NOx
6 Colour Mitsubishi Sheet Fed Litho Offset Press	3		Fugitive	VOC
10 Colour Mitsubishi Sheet Fed Litho Offset Press	3		Fugitive	VOC

Plant concerned with preventing emissions to atmosphere

Table 3 (below) identifies the abatement plant or production equipment that discharges to atmosphere via the identified emission stack. Equipment and emission stacks that emit direct to atmosphere are unabated emission points. Emissions that are vented internally to the installation are not listed and should be assumed to be fugitive emissions.

Table 3 Abatement plant and Emissions

Plant or Equipment used	Abatement Type	Emission Points	Pollutants
MegTec 'Millennium' Regenerative Thermal Oxidiser (RTO)	Incineration	A1	VOC, NOx, CO, smoke
Komori 38 S2 Gas dryer with after burner	Incineration	A2	VOC, NOx, CO, smoke
MAN Rotoman 60 Gas dryer with after burner	Incineration	A3	VOC, NOx, CO, smoke

Legend: VOC – Volatile Organic Compound, CO - Carbon Monoxide, NOx – Oxides of Nitrogen

Permit Conditions

Plant & Equipment

1.1 The permitted installation shall consist only of that plant and equipment listed in Table 2 (above). No other relevant plant or equipment capable of emitting pollutants to air shall be used without the prior written consent of the regulator.

1.2 No printing press shall be operated unless the regenerative thermal oxidiser (RTO) and local exhaust ventilation (LEV) are operational and at the correct operating parameters unless it is otherwise agreed with the regulating authority in writing.

Emission Limits and Controls

2.1 There shall be no visible emissions from the permitted installation.

2.2 Emissions from the permitted installation, other than steam or condensed water vapour, shall be free from persistent mist and free from persistent fume.

2.3 Emissions from final point of discharge to atmosphere serving the emission points listed in Table 3 shall not exceed the following concentrations of the substances and chemicals listed in Table 4 below:

Table 4 – Permissible emission limit concentrations

Pollutant	Concentration
Carbon Monoxide (CO)	100 mgm^3 as a 15 min mean
Volatile Organic Compounds (VOC)*	20 mgm^3 as a 15 min mean
Nitrogen Oxides (NOx)	100 mgm^3 as a 15 min mean

*Volatile Organic Compounds, (as Carbon).

The concentrations for the pollutants in table 4 (above) shall only apply where the emission point listed in Table 3 specifically identifies the pollutant as being emitted.

This condition shall remain suspended where the operator can demonstrate compliance with the solvent reduction scheme calculations detailed in condition 2.9 and maintenance requirements in condition 6.1.

2.4 The concentrations of the substances listed in condition 2.3 shall be expressed at reference conditions. 273K, 101.3kPa, without correction for water vapour content and the results of the monitoring shall be expressed in milligrams per cubic metre (mg/m^3) and averaged over 15 minutes unless otherwise stated.

2.5 No piece of plant or equipment mentioned in condition 1.1 above (or any replacement used for the same purpose) shall be operated with an emission point direct to atmosphere unless specifically allowed within this permit or specifically agreed in writing with the regulator.

2.6 The introduction of dilution air to achieve compliance with emission limit values (ELV) shall not be permitted.

In the event that an emission stack can be demonstrated to be compliant with condition 2.3 above, dilution air may be added to render harmless a visible or odorous emission.

2.7 All emissions from the plant listed in Table 2 shall be ducted to suitable abatement plant capable of meeting the same standard as is indicated in condition 2.3.

2.8 Any bypass of the abatement plant, through emission stacks shall be deemed an emergency and steps shall be taken to stop the process (or part thereof). The Council shall be immediately notified of any breakdown of abatement equipment, other than power cuts. In cases where the breakdown lasts more than 24 hours, the Council will agree a written timetable / schedule for the necessary repair work, which thereafter must be strictly adhered to.

2.9 Annually, on the 1st April each year, the operator shall demonstrate by calculation, modelling or sampling as may be required, that the emission of VOC to atmosphere is less than or equal to the Target Emission as per the requirements of Table 5 below:

Table 5 – Compliance Route

Compliance Route	Standard
Reduction Scheme	Target Emission not to be exceeded

Where: TE is Target emission
The target emission shall be calculated as follows:

(i) The operator shall calculate the Annual Reference Emission (ARE) defined as the total mass of solids in the quantity of coating consumed in a year: *ARE = mass of solids in consumed coatings multiplied by 4*

(ii) The operator shall then calculate the Target Emission (TE) by multiply the ARE (calculated in (i) above) by 0.35:
TE = ARE x 0.35

Any calculation submitted to demonstrate compliance with this condition shall have regard to the diagram in Appendix 1 and shall show complete workings associated with the calculation. It is expected that where sampling can be undertaken to provide accurate data this is carried out and the results included within the calculations

Monitoring, Sampling and Measurement of Emissions

3.1 The installation shall be observed for visible emissions at least once per day, or more often as may be prescribed in writing by the regulating authority, from a point providing an unimpeded view of the emissions points for the prescribed process. In the event of visible emissions being observed, immediate action shall be taken to (determine the cause of) and resolve the malfunction responsible for the emission, and, if necessary, action shall be taken to abate the emission.

Contingency arrangements shall be instigated to prevent or reduce to a minimum any further visible emissions caused by the malfunction. The regulator shall be notified of any such occurrence as soon as practicable.

The results of the observations shall be recorded in the logbook (required to be kept by condition 3.2), along with details of remedial action taken.

3.2 A logbook shall be established and maintained which contains a record of all visual observations made in accordance with condition 3.1 and the results of the monitoring programme carried out in accordance with conditions 3.4 and 3.5. The records shall include the time and date of the observations, the location from which the observations were made, the wind direction, the weather conditions, the likely source of the emissions to air, details of any corrective action taken, and the name and position within the Company of the person undertaking the observations. The logbook shall be kept available for inspection by an authorised officer from the regulating authority at the premises occupied by the Company, and the records shall be retained for at least two years. The log may be paper based or electronic

The results of all continuous monitoring for abatement plant shall be recorded, and retained for at least two years. These results shall be made available for inspection by an authorised officer on request. All results from periodic monitoring exercises shall be retained for at least two years. The log book shall also include any other information or documentation as may be required to be kept by other conditions within this permit.

3.3 Emissions from the final point of discharge to atmosphere from the emission points detailed in table 3 shall be sampled for concentrations of the substances listed within table 4 on an annual basis.

All Sampling shall be carried out in accordance with recognised standards as agreed with the regulator prior to monitoring taking place. The date of sampling shall be notified to the regulator at least 7 days prior to the sampling taking place. Results shall be expressed in accordance with the requirements of condition 2.3 and the results of monitoring to be supplied to the regulating authority within 28 days of completion of the monitoring. Further, monitoring reports shall be submitted in both paper copy as a summary and in full in an electronic format.

Results exceeding the emission limit value from any monitoring activity (both continuous and non-continuous) and malfunction or breakdown leading to abnormal emissions shall be investigated and corrective action taken immediately. The operator shall ensure that the regulator is notified without delay, identifying the cause and corrective action taken. Where there is immediate danger to human health, operation of the activity shall be suspended.

This condition shall remain suspended where the operator can demonstrate compliance with the solvent reduction scheme calculations detailed in condition 2.9 and maintenance requirements in condition 6.1.

3.4 The operator shall continuously monitor the temperature of the RTO serving the Wifag and Goss print machines and shall ensure that the minimum temperature is 880°C with a tolerance of ±10°C for start up. The RTO is to be fitted with an audible and visual alarm to be triggered in the event that the device ceases to operate within this ±10°C temperature range.

Any sounding of an alarm shall be recorded in the log book required to be kept in accordance with condition 3.2.

The afterburners for the Komori 38 S2 and Man Rotoman presses shall operate at a temperature to be agreed in writing with the regulator within 6 months of the issue of the permit. They shall be interlocked so that if the temperature falls below the agreed level the presses automatically stop printing.

3.5 The operator shall construct an inventory of solvent use within the installation. The inventory shall be carried out by recording:

(i) The mass of solvent contained in inks, coatings, diluents and cleaners in the initial stock (I_S) at the start of the accounting period, plus,
(ii) The mass of solvent contained in inks, coatings, diluents and cleaners in the purchased stock (P_S) during the accounting period,
(iii) Minus the mass of solvent contained in inks, coatings, diluents and cleaners in the final stock (F_S) at the end of the accounting period.

Then Total Solvent Input (I_1) = $I_S + P_S - F_S$

The inventory shall specifically and separately identify any VOCs carrying any of the R-Phrases as prescribed within the Solvent Emissions Directive.

Further, having calculated total solvent Input (I_1), the operator shall then calculate solvent consumption by subtracting from the Input figures any solvent that is sent out for recovery.

Hence: C (consumption) = $I_1 - O_8$

3.6 The inventory and consumption data shall be maintained on a monthly basis and submitted to the regulating authority on 1st April and 1st September for the preceding 6 months solvent use, each year. (see Appendix 1). Discrepancies between the sum of the monthly organic solvent balance and the annual organic solvent balance shall be investigated and reported in the log book required by condition 3.2

3.7 All continuous monitors shall be operated, maintained and calibrated (or referenced) in accordance with the appropriate standards and manufacturers' instructions, which shall be made available for inspection by the regulator. Instruments shall be operated to ensure less than 5% downtime over any 3-

month period and all relevant maintenance and calibration (or referencing) shall be recorded

3.8 Where available, operators shall use monitoring equipment and instruments certified to MCERTS and use a stack-testing organisation accredited to MCERTS standards or such alternative requirements as approved by the regulator.

Materials Handling

4.1 The raw materials used in the installation and all waste materials produced from the activities therein shall be handled with care to prevent or reduce to an absolute minimum any emissions to air.

4.2 Spillages of liquids and finely divided materials shall be cleaned up immediately. Liquid spillages shall be contained and cleaned up by the use of a suitable absorbent material. Spillages of finely divided or powdery materials shall be cleaned with an industrial grade vacuum cleaner or by wet cleaning methods. Dry sweeping shall not be permitted.

4.3 All fixed storage tanks (excluding oil storage) shall be fitted with high-level alarms or volume indicators which shall be interlocked to the filling system to prevent overfilling.

The operator shall supply a plan of the site indicating the location of the fixed storage tanks, their contents, and maximum capacity together with the location of any associated fixed above or below ground pipework .

The plan shall be submitted within 3 months of issue of this permit and updated (and resubmitted) as may be necessary where changes occur or new plant is installed.

4.4 All raw materials and waste materials shall be delivered only into the storage and waste storage areas marked and designated on the plan in Appendix 4 and nowhere else within the installation.

Raw material or waste noted to be outside the designated areas shall be considered a spillage and shall be dealt with in accordance with condition 4.2.

4.5 Drums and containers containing liquid materials, whether full, partly full or empty, shall be stored in a secure, well-ventilated storage area as noted in condition 4.4 (above). All full, partly full or empty drums and containers shall be kept tightly closed to prevent any emissions to air.

4.6 Mixing of inks with solvents shall be carried out in covered or enclosed mixing vessels or within areas where LEV extraction is present, which is ducted to suitable abatement plant.

4.7 Fugitive emissions shall be limited by the use of enclosed mobile containers, containers with close-fitting lids, or, enclosed containers and closed transfer

systems. Programmable scales shall be used during the mixing and preparation of inks to reduce solvent usage

4.8 Application of cleaning solvents shall only be:

- From a contained device or automatic system when applied directly on to machine rollers, or
- Dispensed by piston type dispenser or similar contained device, when used on wipes, or Via the use of Pre-impregnated wipes which shall be held within an enclosed container prior to use.

4.9 Solvent Wipes and other items contaminated with solvent shall be placed in a suitably labelled metal bin fitted with a self-closing lid. Bins shall be emptied at least daily. Special bins ('flame containers' or similar) that allow air to circulate beneath and around them to aid cooling shall be used for materials that may undergo spontaneous combustion.

4.10 Where cleaning solvents are decanted into other containers they shall only be contained in self-closing containers.

A review programme shall be undertaken to determine whether organic solvent free cleaning fluids or significantly less volatile organic solvent cleaning fluids can be used (with or without the addition of mechanical, chemical or thermal enhancements) in preference to the traditional solvent based cleaners in use at the date of issue of this permit. The evaluation shall be completed within 3 months of issue of the permit and shall provide details of potential substitute cleaning materials. Where materials are identified that can replace existing cleaning solvents, these shall be placed in use within 3 months of completing the review programme.

The review programme itself shall be repeated every two years from the date of issue of this permit. A copy of the review programme shall be kept with the log book required to be kept by condition 3.2.

4.11 Where fixed equipment is cleaned in-situ (e.g. print rollers and plates), the area shall be kept enclosed whilst cleaning is carried out. At all times during the cleaning operations the LEV and the RTO shall be fully operational.

Where equipment is cleaned off-line (such as plates, drums, rollers and ink trays) it shall be carried out in enclosed cleaning systems, such as in the Wash Room. Enclosed cleaning systems shall be sealed to prevent emissions whilst in operation, except during purging at the end of the cleaning cycle. Purging of any cleaning systems in use shall only be through the fully operational LEV and incinerator

4.12 Residual ink contained in parts of the press shall be removed prior to cleaning.

Dispersion of Contained Emissions

5.1 The final efflux velocity of all emissions to air from any emission point listed in table 3 must not be less than 15 m/sec.

5.2 All emission stacks shall not be fitted with any restrictive plates, caps or cowls at the final opening with the exception of a cone which may be necessary to increase the exit velocity of the emissions.

5.3 All emission points detailed in table 3 shall discharge vertically at a height above ground level to be agreed in writing with the regulator within 3 months of the issue of the permit. All final stack heights shall be calculated in accordance with the procedural document D1 entitled, "The Determination of Discharge Stack Heights for Polluting Emissions", published by HMIP or another standard to be agreed with the regulator

Final points of discharge to atmosphere shall be maintained at the minimum height as calculated above for the lifetime of the plant. Where guidance, plant or equipment, or the nature of emissions changes; the calculations shall be repeated and the heights modified accordingly.

General Conditions

6.1 Regular cleaning and effective preventative maintenance in accordance with the manufacturer's instructions shall be employed on all plant, equipment and ductwork concerned with the emission, capture, transport and control of emissions to atmosphere. Cleaning and maintenance schedules shall be submitted to the regulator upon written request. Such cleaning and maintenance procedures shall be updated from time to time as may be necessary to account for changes in working practice or plant and machinery or solvents used. Records of such preventative maintenance shall be kept readily available for inspection. If the schedules change, a copy of the new schedules shall submitted to the regulator within 7 working days from changes being made.

Spares and consumables, in particular, those subject to continual wear, shall be held on site, or shall be available at short notice so that plant breakdowns can be rectified rapidly.

6.2 Staff at all levels shall receive the necessary formal training and instruction in their duties relating to control of the process and emissions to air. Records shall be kept which detail all relevant training provided to staff, the records shall be made available for inspection by the regulator. Records of training shall be retained for two years.

6.3 If there is any intention to make any relevant change to any aspect of the installation from that described on pages 2 to 33 of this permit, or any other aspect which may affect the substances or concentration of substances set out in condition 2.3 being emitted to air, the regulating authority shall be notified of the proposed changes at least 4 weeks before the changes take place.

6.4 Any malfunction which results in emissions to atmosphere which are likely to cause an adverse effect on the local community shall be reported to the regulator as soon as reasonably practicable, and a record shall be made of the incident within the logbook required by condition 3.2.

6.5 The best available techniques 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.

Air Quality

7.1 If so required by the Borough of Telford and Wrekin, the operator shall prepare a list of all emission points, and related pollutant emissions to atmosphere based on Table 2 (above). The operator shall provide details (where known) of the emissions of those pollutants to atmosphere as a result of any sampling that may be carried out (see condition 3.3 (above). Where sampling is not carried out, the operator shall prepare an estimate of the emissions to atmosphere based on data collected in accordance with conditions 3.6 and 8.2.

Where sampling is carried out, no correction for atmospheric pressure or water vapour need be made.

If so required by Borough of Telford and Wrekin, the operator shall also submit for each point of emission to atmosphere details of stack height, volume flow rate and stack diameter, as well as the height, width and length of the building to which the stack (or stacks) are attached.

If so required by Borough of Telford and Wrekin, the results shall be tabulated and submitted in Microsoft Excel format and shall be sent to the following email address (or another to be specified by the regulator):
environmental.health@telford.gov.uk
Such information shall be submitted as and when requested by the regulator.

Solvent Emissions Directive Requirements

8.1 The total emissions of VOCs, which are not vented through the abatement equipment listed in Table 2, shall not exceed 30% of the solvent inputs, as determined from the Solvent Management Plan.

This condition shall remain suspended where the operator can demonstrate compliance with the solvent reduction scheme calculations detailed in condition 2.9 and maintenance requirements in condition 6.1.

8.2 Based on the data compiled for condition 3.6 and the descriptions in Appendix 1, the operator shall calculate the percentage of fugitive emissions applicable to the installation.

To demonstrate compliance with fugitive emission values in required in condition (8.1) above, the operator shall determine the fugitive emissions (F) from the activity using the following:

F = I1-O1-O5-O6-O7-O8

Or

F=O2+O3+O4+O9

Definitions of the outputs ("Os" are shown in Appendix 1. Each can be determined by direct measurement of the quantities or, an equivalent calculation can be made by other means, for instance by using the capture efficiency of the process.

The Fugitive Emission value as a percentage of the Solvent Input (I) is determined by

Fugitive Emission Value = 100 x F/I

Where the Solvent Input (I)= I1+ I2

Fugitive emission values must be determined for the activity, and must be repeated when any equipment or process modification is carried out. (see Appendix 1).

This condition shall remain suspended where the operator can demonstrate compliance with the solvent reduction scheme calculations detailed in condition 2.9 and maintenance requirements in condition 6.1.

8.3 At no time shall the operator introduce any substance or preparation into the installation that is labelled with the risk phrase of R45, R46, R49, R60 or R61, without the prior written consent of the regulator. Substances or preparations already in use shall be replaced with non-designated substances in accordance with a scheme to be submitted to the regulator within 3 months of issue of this permit.

8.4 The operator has currently selected the solvent management and reduction route for demonstrating compliance with the requirements of the solvent emissions directive. Should the operator wish to change the compliance method to the alternative emission limit route, an application in writing must be submitted to the regulator four weeks before any change is made demonstrating compliance with all the emission limits attributable to the process at the time.

9 Land Contamination

9.1 Before this permit can be surrendered the operator shall provide the regulator with a validated report showing that all contamination of the site by chemicals listed in Table 1 of any variant of this permit have been so treated as to bring the site back to the same state as before the issue of this permit.

9.2 All containers used for solvents and inks used in the process shall be stored and used in bunded areas which are capable of holding 110% of the largest container used for such storage whether the container is full or nominally empty.

9.3 The operator shall before 31st December 2013

- Devise and record a management plan for ensuring that the installation site hard covering is maintained in such a manner as to remain impervious to any of the items listed in Table 1.
- All drains within the installation shall be identified and a written management plan shall be implemented for ensuring that any items listed in Table 1 are prevented from entering the drains.
- submit to the regulator a management plan for the control of solvents and inks when they are moved outside any bunded area.

9.4 On completion of the management plans required in condition 9.4 the operator will instigate any improvement measures identified as being required in that plan.

10 Noise Emissions

10.1 The operator shall:

- Carry out a survey of the installation and identify any plant or equipment likely to give rise to noise. The survey shall specifically identify plant or equipment capable of being heard at the installation boundary.
- Annually review the noise survey of the installation such that any changes to the plant or equipment noted in Table 2 (above) are identified and the survey updated appropriately.
- Construct a noise management plan based on the survey which shall include the following:
  - ≈ A statement of policy with regard to dealing with complaints
  - ≈ A documented complaint procedure for the investigation, analysis, determination, and solution to noise problems
  - ≈ Details of routine maintenance undertaken in particular to deal with noise issues
- Construct a register of complaints regarding noise emissions from the installation

The operator shall provide the above information by 31st December 2013 and thereafter shall update the information annually or upon written request from the regulator. All documentation required to be produced by this condition shall be retained in the log book required to be kept in accordance with condition 9.5.

10.2 It shall be an absolute requirement that any new plant or equipment brought into the installation, or any plant or equipment that undergoes significant modification, shall demonstrate Best Available Technique (BAT).

Unless already meeting BAT requirements, the operator shall demonstrate that sound power levels for substantially changed plant or equipment shall be lower than for existing. The procedure listed in condition 10.3 below shall be used.

10.3 No new plant or equipment shall be permitted within the installation except where:

(i) The plant or equipment can be demonstrated to have a minimal environmental impact. For the purpose of this condition 'minimal' shall be taken to mean that, the plant or equipment, if monitored under requirements of BS4142:1997, has a rating level of –10dB (when compared to the background level), or is otherwise inaudible.

or

(ii) Where plant or equipment cannot be demonstrated to meet the standard above, a full noise survey shall be carried out and the results modelled to show the specific impact of the new plant or equipment on the environment. The modelling exercise shall take account of any relevant noise abatement measures. The results of the modelling shall be submitted to the regulator and shall demonstrate BAT.
The modelled plant or equipment shall be permitted within the installation only where written consent of the regulator has been obtained.

10.4 In the event of the regulator receiving a complaint of noise associated with any element or activity within the installation boundary, the operator shall:
(i) Be required to investigate the source of the complaint.
(ii) Carry out such monitoring, surveys or modelling of the source of the complaint to demonstrate, to the satisfaction of the regulator, either:
(a) that the complaint is unfounded, or
(b) the complaint has substance.

Where (ii)(b) above is found to be the case, the operator shall arrange to carry out such works or change procedures or processes in such a way, that a re-assessment carried out in (ii) above comes to the conclusion in (ii)(a).

All time scales in relation to aspect of this condition to be set by the regulator in the event of complaint being received. Typically, 10.4(i) shall take no longer than 48hrs from the date of notification, whilst 10.4(ii) may take considerably longer dependent on the work required to be undertaken.

11 Waste Minimisation

11.1 The operator shall:

- Maintain an inventory covering the principal types of raw materials used (as listed in Table 1) to be submitted to the regulator annually based on consumption of raw materials for the previous year.

- Review alternatives for the principal types of raw materials used with regard to their environmental impact. Such reviews shall be submitted to the regulator every four years.
- Maintain records to demonstrate that quality control procedures are used to minimise any potential environmental impact of raw materials Notably this shall include ensuring that raw materials are free from contamination, and are supplied and stored in a manner such that contamination cannot occur
- Undertake to complete any long term studies needed into the less polluting options and make any material substitutions identified within the review period. Such studies will be identified as and when required by the regulator and requested in writing.

  All information required by this condition shall be submitted to the regulator annually, or where such information is requested every four years from the date of issue of the permit as may be required for long term studies. All such information shall be retained by the operator and kept with the log book required to be kept in accordance with condition 3.2.

11.2 The operator shall demonstrate that a systematic approach to the reduction of waste at source is being used.

The operator shall carry out a waste minimisation audit within 18 months of the issue of the permit then at a frequency of every 6 years. The methodology used and an action plan for optimising the use of raw materials shall be submitted to the regulator within 2 months of completion of the audit.

Specific improvements resulting from the recommendations of audits shall be carried out within a timescale approved by the regulator.

11.3 The operator shall submit performance indicators to enable measurement of waste minimisation based on the information by condition 11.1, these are to be agreed with the Regulator by 30th September 2013.

The performance indicators shall be submitted to the regulator annually thereafter on the 1st April each year.

11.4 The operator shall carry out an annual review to demonstrate that the best practicable environmental options are being used for dealing with the waste streams.

11.5 At a minimum of every two years, the operator shall investigate potential markets for the recovery/re-use of wastes that are disposed of to landfill.

12 Energy Efficiency

12.1 All raw materials to be used shall be kept covered so as to prevent water ingress into the material, for 24 hrs prior to use, as far as is practicable.

12.2 Where gas-fired heating systems are used within the installation, particular attention shall be paid to good cleaning and maintenance of burner systems.

12.3 The operator shall produce an annual report on the energy consumption of the installation. The report shall monitor energy usage for the installation and identify target areas for reduction and shall be updated annually. ("Sankey" diagrams and energy balances would be useful as aids.)

12.4 The operator shall ensure that all plant listed in Table 2 is operated and maintained to optimise the use and minimise the loss of energy.

12.5 The operator shall submit performance indicators to enable measurement of energy efficiency based on the information by condition 12.3, these are to be agreed with the Regulator by 30th September 2013.

The performance indicators shall be submitted to the regulator annually thereafter on the 1st April each year.

12.6 In respect of energy efficiency, the operator shall meet the requirements of either:
(i) Climate Change Agreement (CCA), or
(ii) Direct Participation Agreement (DPA);
in addition to the requirements of conditions 12.1 to 12.6 (above).

Where neither (i) nor (ii) above are complied with the operator shall notify the regulator immediately.

12.7 The operator shall ensure that all appropriate containment methods, (e.g. seals and self-closing doors) are employed and maintained to minimise energy loss.

13 Prevention of Accidents

13.1 The operator shall produce an accident management plan that identifies the hazards, assesses the risks and identifies the measures required to reduce the risk of potential events or failures that might lead to an environmental impact. The plan shall identify:

- the actions to be taken to minimise these potential occurrences; and
- the actions to deal with such occurrences so as to limit their consequences

In the case of abnormal emissions arising from an accident, such as a spillage for example, the operator shall:

- investigate immediately and undertake remedial action as soon as practicable.
- promptly record the events and actions taken.
- ensure the regulator is made aware, as soon as practicable.

In the event of an accident occurring, the operator shall follow the prescribed instructions within the accident management plan. In an emergency situation it shall be sufficient to demonstrate that any divergence from the plan was necessary either:

- in the interests of health and safety.

- as a result of instructions from a suitably qualified member of the emergency services (fire, ambulance, police).
- as a result of instructions from a duly authorised officer of the Health and Safety Executive.
- as a result of instructions from the regulator.
- As a result of instructions from a duly authorised officer of the Environment Agency.

The accident management plan shall be reviewed annually and a copy shall be submitted to the regulator upon written request.

The information shall be recorded in a form to be agreed with the regulator but can include both electronic and hard copies, and shall be retained for at least two years. This information shall be made available for inspection by an authorised officer of regulating authority on request. Where information is updated or modified, copies of the modified information shall replace those held within the logbook.

13.2 Suitable solvent containment and spillage equipment shall be readily available in all solvent handling areas.

14 Decommissioning the Installation

14.1 A site decommissioning plan shall be submitted to the regulator within 4 months of issue of this permit. The plan shall be prepared and updated as may be necessary due to changes in plant, equipment or materials used within the installation. In any event the plan shall be reviewed and resubmitted every 3 years from the date of the first submission. The plan shall include:

- A complete methodology to be adopted in the decommissioning of the installation, to include:
  - Removal of key plant or machinery likely to be contaminated.
  - Removal of contamination associated with the plant and machinery.
  - Minimising any contamination from the installation buildings during demolition.
  - Removal of contaminated subsurface infrastructure as may be necessary.
- An assessment of the impact of decommissioning on the nearest sensitive receptors.
- The Preparation of a ground contamination report to include the testing of soil within the decommissioned installation to demonstrate contamination levels are no greater than those submitted in Operators application site reports.

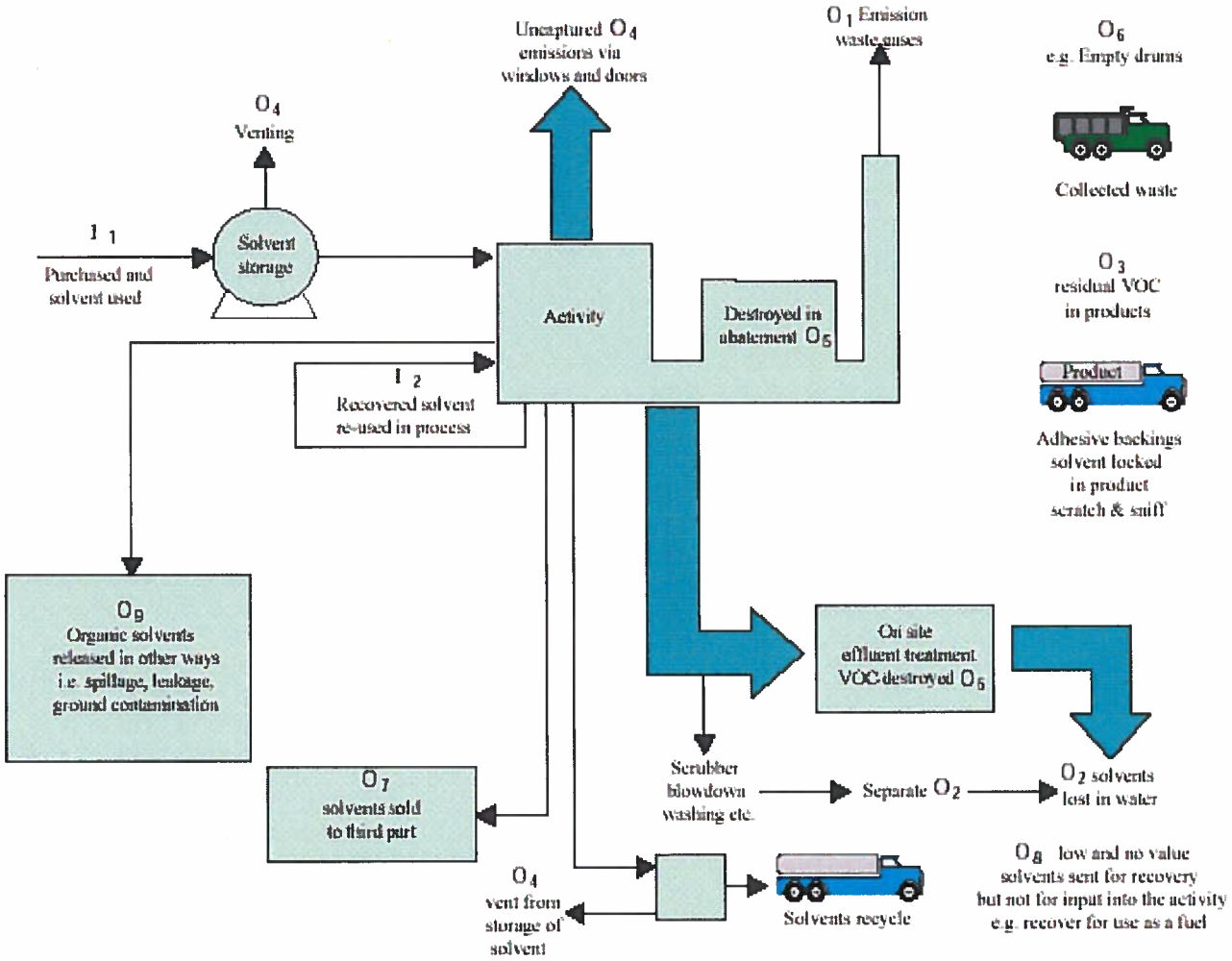
In relation to this permit, any reference to the 'Local Authority' or 'the regulator' shall mean the Borough of Telford and Wrekin. Any information required by this authorisation to be sent to the Local Authority or the regulator shall be sent to the address noted below:

Signed..... Date..22nd April 2013.....
Scientific Officer

Authorised by the Borough of Telford and Wrekin
To sign in that behalf

Borough of Telford & Wrekin
Pollution Control Section
Social Care
P.O. Box 214
Civic Offices
Telford TF3 4LE

Appendix 1: Solvent Management Diagram



Solvent management plan

Consumption = $I_1 - O_8$

Actual solvent emission = $I_1 - O_5 - O_6 - O_7 - O_8$

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

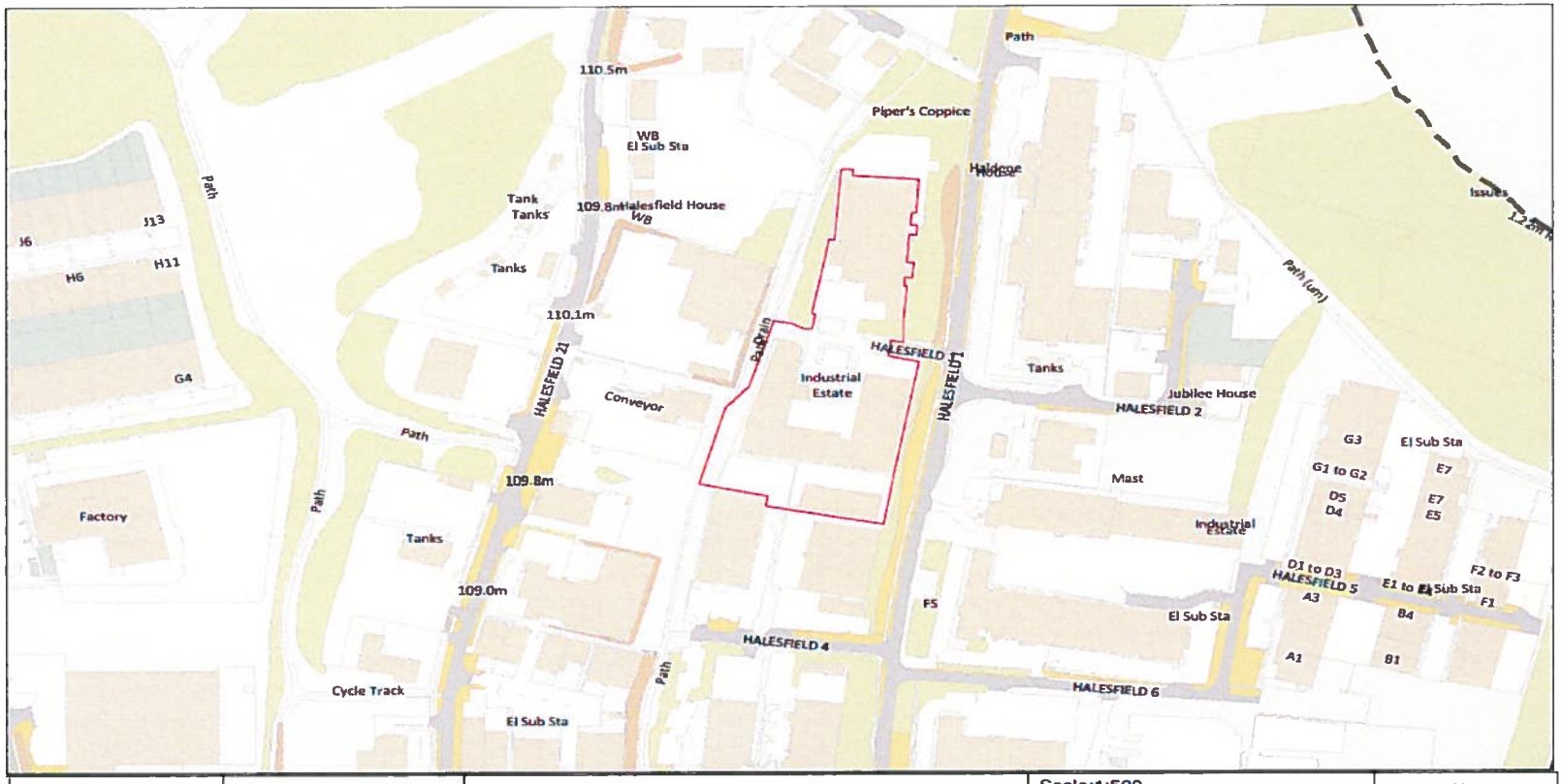
or $F = O_2 + O_3 + O_4 + O_9$

Solvent Emission Directive (SED) activities

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

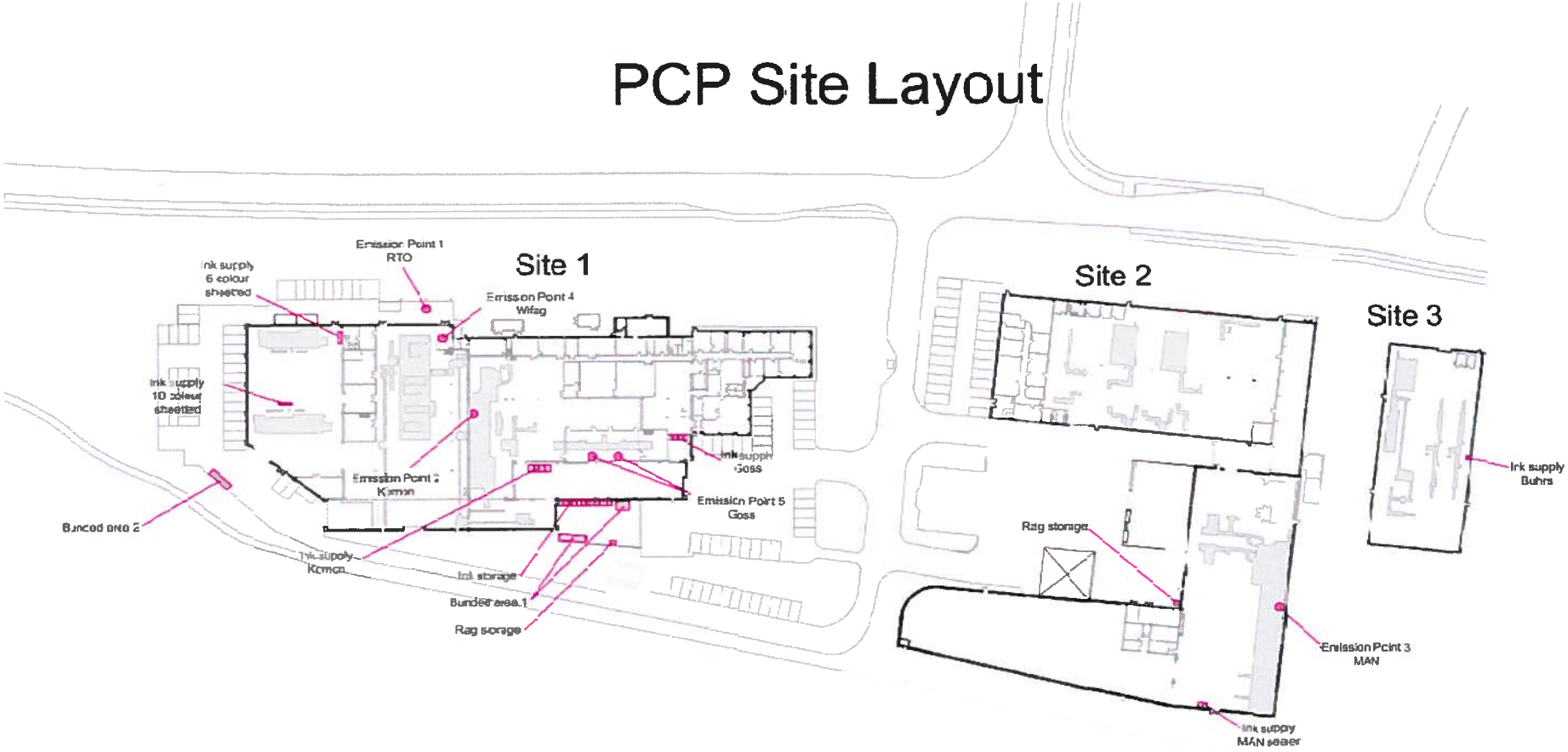
Total emission = O_1 + Fugitive emission (F)

Appendix 2 Installation boundary

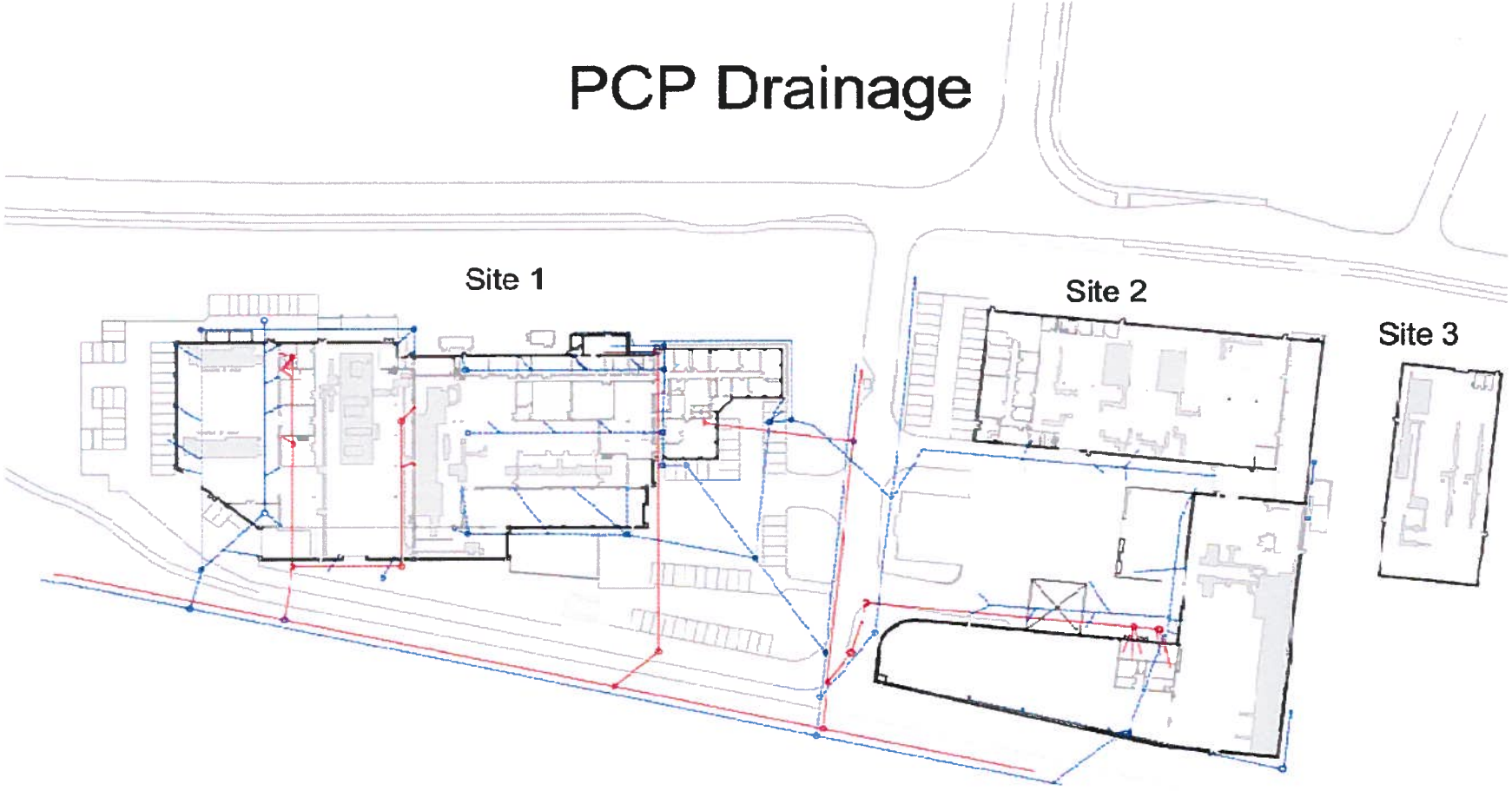


Public Protection c/8 Darby House PO BOX 214 Telford TF3 4LE		**Precision Colour Printing** **Installation Boundary** Reproduced From the Ordnance Survey mapping with the permission of the Controller of Her Majesty's Stationery Office © Crown copyright. Unauthorised reproduction infringes Crown copyright and may lead to prosecution or civil proceedings Borough of Telford & Wrekin License No 100019650, Date, 2008	Scale:1:500 Meters 0 10 20 40 60 80 Date: 17/01/2013 Drawn By: Chris Last	N W E S

Appendix 3 Plant Layout, including Ink and Waste storage



Appendix 4: Site Drainage Plan



Glossary of Terms/Definitions:

Activity	One or more stationary technical units falling within the defined sections of the Schedule 1 of the Environmental Permitting (England and Wales) Regulations 2010 (as amended)
Coating	Means a preparation, including all the organic solvents or preparations containing organic solvents necessary for its proper application, which is used in a vehicle refinishing activity to spray onto a motor vehicle.
ELV	Emission Limit Values, those values stipulated in the SED or in guidance for emission of particular pollutants to atmosphere.
Halogenated Organic solvent	shall mean an organic solvent which contains at least one atom of bromine, chlorine, fluorine or iodine per molecule
Installation	One or more stationary technical units comprising at least one activity or activities falling within the description of Schedule 1 of the Environmental Permitting (England and Wales) Regulations 2007 within a defined area.
LEV	Local Exhaust Ventilation – ducting and hoods normally associated with small uncontained plant or equipment.
Organic solvent	Means any VOC which is used alone or in combination with other agents, and without undergoing a chemical change, to dissolve raw materials, products or waste materials, or is used as a cleaning agent to dissolve contaminants, or as a dissolver, or as a dispersion medium, or as a viscosity adjuster, or as a surface tension adjuster, or a plasticiser, or as a preservative.
Organic compound	Means any compound containing at least the element carbon and one or more of hydrogen, halogens, oxygen, sulphur, phosphorus, silicon or nitrogen, with the exception of carbon oxides and inorganic carbonates and bicarbonates.
EPR	Environmental Permitting Regulations , the new pollution control regime replacing that under PPC.
Regulator	Means the Pollution Control Section of the Telford & Wrekin Council. When contacting the regulator it is not sufficient to contact any other part of the council other than the Pollution Control Section at the address specified in the additional notes or at the telephone numbers provided.

R-Phrase

Means the same as in Directive 67/548/EEC as follows:

R Phrase	Definition
R40	Limited evidence of carcinogenic effects
R45	May cause cancer
R46	May cause heritable genetic damage
R49	May cause cancer by inhalation
R60	May impair fertility
R61	May cause harm to the unborn

Designated risk phrase

the designation or label given to a coating or preparation (as a whole). The mere fact that a preparation or coating contains r-phase chemicals does not in itself always make a material r-phrase.

SED

Solvent Emissions Directive or 'COUNCIL DIRECTIVE 1999/13/EC of 11 March 1999 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain activities and installations'.

STU

Stationary Technical Unit shall have the same meaning as in the Pollution Prevention and Control Regulations, but in summary shall mean, one machine used for the purpose of printing on flexible packaging or one machine used in connection with that activity, e.g. an RTO. There must be at least 1 STU per activity, but it is possible to have multiple STU's still comprising only one activity.

Volatile Organic Compound (VOC)

Shall mean any organic compound having at 293,15 K a vapour pressure of 0.01 kPa or more, or having a corresponding volatility under the particular conditions of use. For the purpose of the Solvents Emissions Directive, the fraction of creosote which exceeds this value of vapour pressure at 293.15 K shall be considered as a VOC.

Cyclone

An inertial gas cleaning device, which separates dust from the gas stream when the direction of the gas flow is changed and the dust continues in the original direction by virtue of its inertia and is deposited on a collection surface / catch pot. The inlet gas is channeled into a spiral flow. Centripetal forces operating in the spiral provide the change of direction and the larger particles above a critical mass will be deposited on the cyclone walls.

Bag filter

These are fabric filters and are comprised of a filter medium, usually manufactured in the form of bags, through which material over a certain size cannot pass. There are three

	types: mechanical shakedown, reverse air jet and pulse jet. Bags are capable of filtration of finer particles than cyclones, but do not perform well with wet particulate such as wood with a moisture content > 20% (i.e. they clog up).
Indicative monitoring	Monitoring which measures the performance of the abatement plant, rather than the quantity of dust etc emitted. In the case of bag filtration, this is normally achieved by alarming the pressure drop across the abatement plant, so that an alarm is set off should a bag / sleeve split.
Ringelmann Chart	A chart set by British Standard B.S.2742:2009 which divides smoke into 4 shades by colour. Shades 2 to 3 are dark and 4 is black.
RTO	Regenerative Thermal Oxidiser: Heat from the combustion of waste VOCs is recycled onto a ceramic bed to provide pre-heating to the process and reduce the input of primary fuel.
IBC	Intermediate Bulk Container: A 1000 litre container mounted on a euro-pallet and provided with a means of connecting the container into the process directly. It removes the need to decant liquids from one place to another and the attendant risk of spillage.

Telford & Wrekin
COUNCIL

Pollution Prevention Control Act 1999

The Environmental Permitting (England & Wales) Regulations 2010 (as amended)

This note does not comprise part of the permit, but contains guidance relevant to it.

Inspections

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

BAT (Best Available Techniques)

Article 2(11) of the IPPC Directive defines "best available techniques" as follows:
"*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*".

- "techniques" shall include both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned,
- "available" techniques shall mean those developed on a scale which allows implementation in the relevant industrial sector , under economically and technically viable conditions, taking into consideration the costs and advantages, whether or not the techniques are used or produced inside the Member State in question, as long as they are reasonably accessible to the operator,
- "best" shall mean most effective in achieving a high general level of protection if the environment as a whole.

In determining the best available techniques, special consideration should be given to the items listed in Annex IV of the Directive.

Health and Safety at Work and Other Statutory Requirements

Compliance with this permit does not necessarily infer compliance with any other legislation.

Notification of Operation Changes

The operator will be liable to prosecution if they operate otherwise than in accordance with the conditions and plant described in this permit.

The operator shall contact the regulator to discuss any proposed changes.

Enforcement

The operator will be liable to enforcement action where: -

a) the operator fails to comply with or contravenes any permit condition;

b) a change is made to the installation operation without prior notification of the change to the regulator;

c) intentional false entries are made in any record required to be kept under the conditions of the permit;

d) false or misleading statement is made.

Any enforcement action is taken in accordance with the regulator's enforcement policy.

Annual Subsistence Charge

A subsistence charge is payable on the 1st April each year. An invoice will be issued by the regulator providing further details of how to pay. The charges are based on a risk based system. Details of the risk assessment can be found at http://www.defra.gov.uk/environment/quality/pollution/ppc/localauth/fees-risk/fees.htm

Appeal against Regulatory Action

The operator can appeal against regulatory action by the regulator to the Secretary of State for Environment, Food & Rural Affairs. Appeals must be sent to the Secretary of State on a form found at
http://www.planning-inspectorate.gov.uk/pins/environment/environment/environmental_appeals/environmental_permitting_appeal_form.pdf
Guidance on the appeal procedure can be found at
http://www.planning-inspectorate.gov.uk/pins/environment/environment/environmental_appeals/environmental_permitting_guidance_notes.pdf

There are time limits for making an appeal as follows:

a) in relation to an appeal against a revocation notice, before the notice takes effect;
b) in relation to the withdrawal of a duly-made application under paragraph 4(2) of Schedule 5, not later than 15 working days from the date of the notice served under that paragraph;
c) in relation to a variation notification, a suspension notice, an enforcement notice or a landfill closure notice, not later than 2 months from the date of the notification or notice;
d) in any other case not later than 6 months from the date of the decision or deemed decision.

Please note:

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 either to vary any of these other conditions or to add new conditions.

Contact Numbers for the Regulator

The Regulator is the Pollution Control Section of Telford & Wrekin Council. They can be contacted on 01952 381818. You may also contact them by email at any time. Environmental.health@telford.gov.uk

Correspondence Address

All correspondence to Telford & Wrekin Council relating to this information shall be addressed
Environmental Health, Telford & Wrekin Council, Darby House, P.O. Box 214, Telford, TF3 4LE