Variation reference number: 466

Schedule 2

Operator	**TCL Packaging Limited**
Installation Address	Opal Building Stafford Park 6 Telford TF3 3AB
Permit Reference	105/240325
Grid Reference	SJ722090
Registered Office	TCL Packaging Ltd Opal Building Stafford Park 6 Telford TF3 3AB
Registered Number	03790889

TCL Packaging Ltd ("The Operator") is hereby permitted by Telford & Wrekin Council ("The Regulator") to carry out the following activities:

Surface treating substances, objects or products using organic solvents, in plant with a consumption capacity of more than 150kg or more per hour than 200 tonnes per year as defined under Schedule 1, Part 2, Section 6.4(A2)(a), of The Environmental Permitting (England and Wales) Regulations 2016 ("the Regulations").

The solvent emission activity known as printing as described under the Industrial Emissions Directive Annex VII, Part 1, 9(a) and Schedule 14 of the Regulations.

To the extent authorised by and subject to the conditions of this permit and within the installation boundary outlined in red within Schedule 7 of this permit.

Signed: 

Name: Clair Travis **Date: 26 March 2025**

Environmental Health Officer
Authorised by the Borough of Telford and Wrekin to sign in that behalf

Contact Details

The contact address, telephone number and email address for all correspondence in terms of the permit is as follows:

Public Protection
Telford and Wrekin Council
Darby House
Lawn Central
Telford
TF3 4JA

Telephone: 01952 381818

Email: environmentalprotectionteam@telford.gov.uk

Contents

Introductory Note 4
Process Description 5
Permit Conditions 7
1 Management 7
1.1 General management 7
1.2 Energy efficiency 7
1.3 Efficient use of raw materials 8
1.4 Avoidance, recovery and disposal of wastes produced by the activities 8
2 Operations 8
2.1 Permitted activities 8
2.2 The site 8
2.3 Operating techniques 8
2.4 Improvement programme 9
3 Emissions and monitoring 9
3.1 Emissions to water, air or land 9
3.2 Emissions of substances not controlled by emission limits 10
3.3 Monitoring 10
3.4 Odour 11
3.5 Noise and vibration 12
4 Information 12
4.1 Records 12
4.2 Reporting 13
4.3 Notifications 14
4.4 Interpretation 15
Schedule 1 - Operations 16
Schedule 2 – Emissions and monitoring 24
Schedule 3 - Reporting 25
Schedule 3.1 - Emissions to Air Reporting Form 27
Schedule 3.2 - Energy Usage Reporting Form 29
Schedule 3.3 - Other Performance Parameters Reporting Form 31
Schedule 4 - Notification 33
Schedule 5 - Interpretation 36

Introductory Note

This Introductory provides relevant information related to this Permit

The 'surface treatment using organic solvents, including wood and wood products preservation with chemicals' BAT reference document (BREF) and BAT conclusions have been reviewed and published on 9 December 2020 as required by Article 13 of the Industrial Emissions Directive (IED).

Article 21 of the IED requires the Regulator to periodically reconsider permit conditions and update them where necessary to ensure compliance with best available techniques described in applicable BAT conclusions.

Telford and Wrekin Council (The Regulator) have reviewed this permit against the revised BAT Conclusions. This variation makes the below changes following the review under Article 21(3) of the IED and the consolidation of the Environmental Permitting Regulations that came into force on the 4 January 2017:

- Inclusion of improvement programme in table S1.3, this requires the operator to provide reports to demonstrate compliance with the new BATC standards and submit information, or modify plant, procedures or controls to satisfy the new standards and for compliance by the due date;

- Revised emission limits and monitoring requirements for emissions to air applicable from 9th December 2024 in table S2.1;

- Revised conditions, structure and layout of the permit to align with the template provide by the LAU to facilitate compliance via the implementation of appropriate management plans prepared by the operator to demonstrate compliance with BAT.

Status Log

Detail	Dates
Date Permit First Issued	16/01/2014
Date of Variations	21/12/2017
Date of Latest Variation - 466 Change of Permit reference number. Permit upgraded with latest Legislation.	26/03/2025

Process Description

The installation manufacturers printed flexible packaging for the commercial industry using flexographic printing method and solvent borne inks.

Raw materials

Ink and solvent are stored within the ink room within a separate building adjacent to the main factory. They are kept in sealed steel drums, sealed containers, buckets and IBCs.

Outside there is a bunded storage area for waste solvent and recycled solvent, as well as Dennios bunded units for raw materials.

Printing

The site has three printing presses. Ink is transferred via a Rexon dispense unit and transferred to the press via lidded buckets into the ink tray transfer system. The ink is dried before the next colour is printed on top. the material then passes through the drying tunnel before being wound into large rolls ready for the next process.

The presses are cleaned using solvent cleaner known as ‘print wash’. The print wash is recycled on site.

Anti-mist

Anti-mist is transferred from the steel container and loaded by hand into the unit’s pump container. It is then transferred by the machine onto the plastic substrate. The anti-mist used is 98% solvent with a 2% surfactant and is applied using gravure rollers.

Anti-misted rolled product is kept in racking before being subjected to any further production process.

Lamination

Lamination of the plastic film substrate utilises Methyl Di-phenyl Isocyanate (MDI) as part of the adhesive mixture. The laminated substrates are rolled onto a dedicated turret, and then offloaded for transfer to the Warm Room area. They are kept in the room for up to five days before product is dispatched. The installation also has a solvent free laminator.

Solvent recovery

There are two solvent reclamation units located outside on a bunded area, which is covered by a three-sided building. Solvent is distilled removing impurities and the remaining collected clean solvent is recycled within the printing activity. The remaining waste product is sent off-site.

Abated and unabated emissions

The site operates a gas fired Regenerative Thermal Oxidiser (RTO), which is located outside adjacent to the waste storage and solvent recovery areas. Gas is used to heat the unit to the required temperature, then the solvent laden waste emissions from the printer ovens, fuel the RTO. Waste emissions from the RTO are then extracted to atmosphere via the stack.

Unabated emissions are extracted direct to atmosphere. There is one on each of the 3 printers, 1 on the laminator and an unabated bypass stack on the RTO. The stacks

on the printers will emit direct to atmosphere until the RTO is up to temperature and every time the printer drops below the required temperature to 'switch' it back to the RTO. A list of stacks and their location is provided in the table below and on the site plan in Schedule 7.

Stack number	Location	Description
1	Uteco 8-colour Emerald gearless printing press	Unabated bypass stack
2	Onyx printing press 1	Unabated bypass stack
3	Onyx printing press 2	Unabated bypass stack
4	Nordmeccia Super Combi 2000 laminator	Unabated bypass stack
5	RTO	Unabated bypass stack
6	RTO	Abated stack

Waste
Waste adhesive is transferred to suitable drum stock and transported, via FLT, to the dedicated bunded area. Any solvent contaminated waste that cannot be recycled is sent off site by authorised waste collectors.

End of Introductory Note

Permit Conditions

1 Management

1.1 General management

1.1.1 The operator shall manage and operate the activities;

a. in accordance with a written environmental management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and

b. using sufficient competent persons and resources.

1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.

1.1.3 The environmental management system shall be subject to regular independent external auditing.

1.1.4 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

1.1.5 The best available techniques shall be used to prevent, or where that is not practicable, reduce the emissions from the installation in relation to any aspect of the activity which is not specifically regulated by any condition of this permit.

1.2 Energy efficiency

1.2.1 The operator shall;

a. take appropriate measures to ensure that energy is used efficiently in the activities;

b. review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and

c. take any further appropriate measures identified by a review.

1.3 Efficient use of raw materials

1.3.1 The operator shall;

a. take appropriate measures to ensure that raw materials are used efficiently in the activities;

b. maintain records of raw materials used in the activities;

c. review and record at least every four years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material use; and

d. take any further appropriate measures identified by a review.

1.4 Avoidance, recovery and disposal of wastes produced by the activities

1.4.1 The operator shall take appropriate measures to ensure that;

a. the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities; and

b. any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and

c. where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.

d. The operator shall review and record at least every four years whether changes to those measures should be made and take any further appropriate measures identified by a review.

2 Operations

2.1 Permitted activities

2.1.1 The operator is only authorised to carry out the activities specified in schedule 1 table S1.1 (the activities).

2.2 The site

2.2.1 The activities shall not extend beyond the site, being the land shown edged in red on the site plan at schedule 7 to this permit.

2.3 Operating techniques

2.3.1 For the activities referenced in schedule 1, table S1.1, the activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by the Regulator.

2.3.2 If notified by the Regulator that the activities are giving rise to pollution, the operator shall submit to the Regulator for approval within the period specified, a revision of any plan or other documentation ("plan") specified in schedule 1, table S1.2, or otherwise required under this permit, which identifies and minimises the risks of pollution relevant to that plan, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Regulator.

2.3.3 The operator shall;

a. identify the process areas, sections or steps that make the greatest contribution to VOC emissions and energy consumption, which have the greatest potential for improvement;

b. identify and implement actions to minimise VOC emissions and energy consumption;

c. review progress and update actions on an annual basis.

2.3.4 The operator shall ensure that where waste produced by the activities is sent to a relevant waste operation, the waste operation is provided with the following information, prior to the receipt of the waste;

a. the nature of the process producing the waste;

b. the composition of the waste;

c. the handling requirements of the waste;

d. the hazardous property associated with the waste, if applicable; and

e. the waste code of the waste.

2.3.5 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.

2.4 Improvement programme

2.4.1 The operator shall complete the improvements specified in schedule 1, table S1.3 by the date specified in that table unless otherwise agreed in writing by the Regulator.

2.4.2 Except in the case of an improvement which consists only of a submission to the Regulator, the operator shall notify the Regulator within 14 days of completion of each improvement.

3 Emissions and monitoring

3.1 Emissions to water, air or land

3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 2 table S2.1.

3.1.2 The limits given in schedule 2 shall not be exceeded.

3.1.3 The fugitive annual emissions from the emission point(s) set out in schedule 2 table S2.1, of a substance listed in schedule 2 table S2.2 shall not exceed the relevant limit in table S2.2.

3.1.4 Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil unless such monitoring is based on a systematic appraisal of the risk of contamination.

3.1.5 The operator shall;

a. maximise the availability and performance of equipment critical to the protection of the environment;

b. record all periods of other than normal operating conditions (OTNOC), their cause and duration and where possible their effect on emissions.

3.2 Emissions of substances not controlled by emission limits

3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.

3.2.2 The operator shall;

a. if notified by the Regulator that the activities are giving rise to pollution, submit to the Regulator for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;

b. implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Regulator.

3.2.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

3.3 Monitoring

3.3.1 The operator shall, unless otherwise agreed in writing by the Regulator, monitor fugitive VOC emissions by compiling, at least on an annual basis, a solvent mass balance (SMB) of the solvent inputs and outputs of the plant, as defined in Part 7(2) of Annex VII to Directive 2010/75/EU.

3.3.2 The solvent mass balance shall include:

a. identification and documentation of solvent inputs and outputs, (e.g. emissions in each waste gases source, emissions from each fugitive emission source, solvent output in waste);

b. substantiated quantification of each relevant solvent input and output and recording of the methodology used (e.g. measurement, calculation using emission factors, estimation based on operational parameters);

c. identification of the main sources of uncertainty of the aforementioned quantification, and implementation of corrective actions to reduce the uncertainty;

d. regular update of solvent input and output data.

3.3.3 The solvent mass balance calculation methodology shall be agreed in writing by the Regulator.

3.3.4 The operator shall, unless otherwise agreed in writing by the Regulator, undertake the monitoring specified in the following tables in schedule 2 to this permit:

a. point source emissions specified in tables S2.1,

b. process monitoring specified in table S2.3.

3.3.5 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.

3.3.6 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.3.4, shall have either MCERTS certification or MCERTS accreditation (as appropriate), unless otherwise agreed in writing by the Regulator.

3.3.7 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 2 table S2.1, unless otherwise agreed in writing by the Regulator.

3.4 Odour

3.4.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by the Regulator, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.

3.4.2 The operator shall:

a. if notified by the Regulator that the activities are giving rise to pollution outside the site due to odour, submit to the Regulator for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;

b. implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Regulator.

3.5 Noise and vibration

3.5.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived the Regulator, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.

3.5.2 The operator shall;

a. if notified by the Regulator that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Regulator for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;

b. implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Regulator.

4 Information

4.1 Records

4.1.1 All records required to be made by this permit shall:

a. be legible;

b. be made as soon as reasonably practicable;

c. if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and

d. be retained, unless otherwise agreed in writing by the Regulator, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender;

i. off-site environmental effects; and

ii. matters which affect the condition of the land and groundwater.

4.1.2 The operator shall keep on site all records, plans and the environmental management system required to be maintained by this permit, unless otherwise agreed in writing by the Regulator.

4.2 Reporting

4.2.1 The operator shall send all reports and notifications required by the permit to the Regulator using the contact details supplied in writing by the Regulator.

4.2.2 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Regulator, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:

a. in respect of the parameters and emission points specified in schedule 3 table S3.1;

b. for the reporting periods specified in schedule 3 table S3.1 and using the forms specified in schedule 3 table S3.4; and

c. giving the information from such results and assessments as may be required by the forms specified in those tables.

4.2.3 A report or reports on the performance of the activities over the previous year shall be submitted to the Regulator by 31 January (or other date agreed in writing by the Regulator) each year. The report(s) shall include as a minimum:

a. a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data;

b. the annual production/treatment data set out in schedule 3 table S3.2; and

c. the performance parameters set out in schedule 3 table S3.3 using the forms specified in table S3.4 of that schedule.

4.2.4 The operator shall, unless notice under this condition has been served within the preceding four years, submit to the Regulator, within six months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.

4.2.5 The operator shall submit an annual solvent management plan (SMP) in order to demonstrate compliance with the requirements of the Industrial Emissions Directive, by 31 January each year in respect of the previous year.

4.3 Notifications

4.3.1 In the event:

a. that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately;

i. inform the Regulator,

ii. take the measures necessary to limit the environmental consequences of such an incident or accident, and

iii. take the measures necessary to prevent further possible incidents or accidents;

b. of a breach of any permit condition the operator must immediately;

i. inform the Regulator, and

ii. take the measures necessary to ensure that compliance is restored within the shortest possible time;

c. of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.

4.3.2 Any information provided under condition 4.3.1 shall be confirmed by sending the information listed in schedule 4 to this permit within the time period specified in that schedule.

4.3.3 Where the Regulator has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Regulator when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to the Regulator at least 14 days before the date the monitoring is to be undertaken.

4.3.4 The Regulator shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:

a. Where the operator is a registered company:

i. any change in the operator's trading name, registered name or registered office address; and

ii. any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

b. Where the operator is a corporate body other than a registered company:

i. any change in the operator's name or address; and

ii. any steps taken with a view to the dissolution of the operator.

4.3.5 Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:

a. the Regulator shall be notified at least 14 days before making the change; and

b. the notification shall contain a description of the proposed change in operation.

4.3.6 The Regulator shall be given at least 14 days' notice before implementation of any part of the site closure plan.

4.3.7 Where the operator has entered into a climate change agreement with the Government, the Regulator shall be notified within one month of:

a. a decision by the Secretary of State not to re-certify the agreement;

b. a decision by either the operator or the Secretary of State to terminate the agreement; and

c. any subsequent decision by the Secretary of State to re-certify such an agreement.

4.4 Interpretation

4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.

4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made "immediately" in which case it may be provided by telephone.

Schedule 1 - Operations

Table S1. 1 - The activities		
Activity listed in Schedule 1 of the EP Regulations	**Description of specified activity**	**Limits of specified activity**
S6.4 A(2) (a)	Surface treating substances, objects or products using organic solvents, in particular for dressing, printing, coating, degreasing, waterproofing, sizing, painting, cleaning or impregnating, in plant with a consumption capacity of more than 150kg or more per hour than 200 tonnes per year.	Receipt of raw materials to application of inks, coatings, lacquers and adhesives onto substrates to produce final composite product
Directly Associated Activities		
Lamination	the use in any 12-month period of 5 or more tonnes of any di-isocyanate or of any partly polymerised di-isocyanate or, in aggregate, of both.	Receipt of raw materials to application onto substrate.
Storage and handling of raw materials	Storage of solid and liquid materials in bulk storage tanks, drums, IBCs, bags and other containers	Receipt and storage of raw materials to transfer to process areas
Storage, handling and dispatch of intermediates, finished products, waste & other materials	Storage of intermediates and finished products. Process waste segregation and storage	Internal & external storage of finished products, storage of waste in designated areas and loading for transit off site
Control & abatement systems for emissions to air	Abatement of releases to air	Extraction and collection of waste gases and treatment in condensers, recovery units, carbon beds and thermal oxidisers

Table S1. 2 - Operating techniques		
Description	**Parts**	**Date Received**
Review of Environmental Management System (EMS)	Summary of review of BAT 1. Site has a certified ISO14001:2015 Environmental Management System. Dated 29.10.21 System procedures are as follows: SOP 901 Environmental management system scope SOP 902 Introduction to the Environmental management system manual SOP 903 Environmental management system requirements SOP 905 Environmental objectives SOP 906 Environmental emergency plan SOP 907 Environmental monitoring and measurement SOP 908 Environmental emergency plan SOP 909 Internal/external communication SOP 910 Control of emissions SOP 911 Solvent abatement SOP 912 Control of contractors SOP 913 Producer responsibility obligations (packaging waste) SOP 914 Compressor /drier condensate SOP 915 Environmental audits SOP 916 Integrated pollution prevention and control (IPPC) SOP 917 control of discharges SOP 918 Energy efficiency plan SOP 919 Environmental permit	29/01/2022

Table S1. 2 - Operating techniques		
Description	**Parts**	**Date Received**
Review of Environmental Management System (EMS)	Review of BAT 2: Procedures as follows: Solvent Management Plan SOP 918 Energy efficiency plan	03/02/2022
	Review of BAT 13: HSE 044 – Critical equipment risk assessment	06/03/2025
	Review of BAT 20: Not applicable to this site	Not applicable
	Management plan for the prevention and control of leaks and spillages (BAT 3) and Summary review of BAT 5 Procedures as follows: SOP 002 training presentation and tests SOP 908 Environmental emergency plan SOP 917 Control of discharges SOP 1007 10-step spill control SOP 1008 Understanding spill kits SOP 1003 solvent management in storage SOP 1004 Solvent management in production Also: Maintenance procedures SOP 150, SOP 451 and SOP 456	03/02/2022

Table S1. 2 - Operating techniques		
Description	**Parts**	**Date Received**
BAT Reviews	Summary of the BAT review (BAT 4) Site uses: high-solids solvent-based paints/coatings/ varnishes/inks/ adhesives Use of solvent-free two-component adhesive Use of laminate film for web or coil coatings Procedures as follows: SOP 405 Printing SOP 407 Lamination	03/02/2022
	Summary of the BAT review (BAT 6 to 9) BAT 6 procedures as follows: SOP 401 production, planning & progress chasing SOP 404 ink preparation & ink types SOP 405 Printing BAT 7: Use of doctor blade over roller BAT 8: see Table S1.3, IP3 BAT 9: see Table S1.3, IP3	BAT 6 and 7 03/02/2022 BAT 8 and 9 Partially complete.

Table S1. 2 - Operating techniques		
Description	**Parts**	**Date Received**
	BAT review BAT 14 to 17 and BAT 29, section 1.12, table 29 and 30 BAT 14 to 17 Regenerative Thermal Oxidiser (RTO) abatement system. Printers with curing ovens. Emissions sent to RTO. Use of Plenum technique to reduce gas volume. Maintaining the VOC concentration sent to the off-gas treatment system using variable-frequency drive fans. Procedures as follows: SOP 911 Solvent abatement	03/02/2022
	Summary of the BAT review (BAT 18) Not applicable to this site	Not applicable
Energy Efficiency	Energy Efficiency Plan (BAT 19) Procedures as follows: SOP 918 Energy efficiency plan Also see Table S1.3 IP2	Partial completion

Table S1. 2 - Operating techniques		
Description	**Parts**	**Date Received**
Waste management	Review of BAT 22 Procedures as follows: SOP 425 Solvent reclaim SOP 513 waste management Also see Table S1.3 IP4	Partial completion
Odour management plan	Odour management plan (BAT 23) Procedure as follows: SOP 908 Environmental emergency plan SOP 910 Control of Emissions	03/02/2022
Site closure plan	Site closure plan Procedures as follows: SOP 453 Equipment decommissioning SOP 457 Site decommissioning	03/02/2022

Table S1. 3 - Improvement programme requirements		
Reference	**Requirement**	**Date**
IP1	The operator shall submit for approval a baseline report to both assess the current state of the site of the installation and propose a satisfactory programme of monitoring and risk management where the process involves the use, production or release of hazardous substances as defined by Article 3(18) of the Industrial Emissions Directive. The report shall follow both the revised H5 guidance on Site Condition reports and the Defra guidance baseline report- Defra guidance – Industrial emissions Directive EPR guidance on Part A installations (section 5.10-5.15, pages 28-29)]	31 December 2025
IP2	As part of the Energy Efficiency Plan as required by condition 1.2.1, (BAT 2) the operator shall produce an annual energy balance record which provides a breakdown of the energy consumption and generation (including energy export) by the type of source (e.g. electricity, fossil fuels, renewable energy, imported heat and/or cooling). This includes: (i) defining the energy boundary of the STS activity; (ii) information on energy consumption in terms of delivered energy; (iii) information on energy exported from the plant; (iv) energy flow information (e.g. Sankey diagrams or energy balances) showing how the energy is used throughout the process. The energy balance record is adapted to the specificities of the plant in terms of process(es) carried out, materials, etc as detailed by BAT 19(b)	9 December 2024
IP3	The operator will carry out a review of its operating techniques for the; distribution of coating and printing materials within the installation, their application, their drying and/or curing, against the requirements of BAT 8 of the STS BAT conclusions. The operator will produce a report describing how the installation is BAT, in particular where techniques other than those described in BAT 8 are used and how these achieve an equivalent level of performance	9 December 2024
IP4	The operator will produce an annual reporting system of all waste streams including, recovery and disposal of wastes taking account of BAT 22 of the STS BAT conclusions.	9 December 2024
IP5	The operator shall carry stack monitoring as required by table S2.1 and carry out an investigation to determine the Kg C/h of the following stack numbers 1, 2, 3, 4 and 5. The Operator will produce a report which details the results.	9 December 2024

Table S1. 3 - Improvement programme requirements		
Reference	**Requirement**	**Date**
IP6	The Operator shall submit the proposal for solvent mass balance methodology for approval, as required by condition 3.3.3. Taking into account the requirements of conditions 3.3.1 and 3.3.2. (BAT 10)	9 December 2024

Schedule 2 – Emissions and monitoring

Table S2.1- Point source emissions to air – emission limits and monitoring requirements						
Schedule 7, site plan emission point ref. & location	**Source**	**Parameter**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
Stack 6	Thermal Oxidiser	Oxides of Nitrogen (NO and NO_2 expressed as NO^2)	100 mg/Nm^3	Average over the sampling period	Minimum of once per year	BS EN 14792
Stack 6	Thermal Oxidiser	Carbon monoxide	100 mg/Nm^3	Average over the sampling period	Minimum of once per year	BS EN 14792
Stack 6	Thermal Oxidiser	TVOC	20 mg/Nm^3	Average over the sampling period	Minimum of once per year if mass emission is 0.1 to 10 kg C/h	BS EN 12619
Stacks 1,2, 3, 4 and 5	Unabated stacks	TVOC	To determine Kg C/h from each stack.	Average over the sampling period	Once every 3 years for any stack with a TVOC load of 0.3Kg C/h Or Once per year if the TVOC load is less than 10Kg C/h but more than 0.3Kg C/h Or continuous for any stack with a TVOC load of more than 10 Kg C/h	BS EN 12619

Table S2.2- Annual limits for fugitive emissions		
Substance	**Medium**	**Limit (including unit)**
TVOC	Fugitive emissions	< 12% of the solvent input

Table S2. 3- Process monitoring requirements				
Emission point reference or source or description of point of measurement	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
Thermal oxidiser	Combustion Temperature	Continuous recorded	Set based on thermal Oxidiser design	Operation minimum temperature 760^{o}C. Alarm activation if temperature drops below 690^{0}C

Schedule 3 - Reporting

Table S3. 1- Reporting of monitoring data			
Parameter	**Emission or monitoring point/reference**	**Reporting period**	**Period begins**
Emissions to air Parameters as required by condition 3.3.4.	Stack 6	Every 12 months	1 January 2025
Groundwater monitoring parameters as required by 3.1.4	Within the site boundary detailed in Schedule 7	Every 5 years	1 January 2025
Soil monitoring parameters as required by 3.1.4	Within the site boundary detailed in Schedule 7	Every 10 years	1 January 2025

Table S3. 2- Annual production/treatment	
Parameter	**Units**
Solvent Consumption	tonnes
Solvent Mass Balance (SMB) as required by condition 3.3.1	As required in SMB
Solvent management plan (SMP) as required by condition 4.2.5	As required in

Table S3. 2- Annual production/treatment	
Parameter	**Units**
	SMP

Table S3. 3- Performance parameters		
Parameter	**Frequency of assessment**	**Units**
Specific energy consumption	Annually from 1 January 2025	Wh/m^2 of printed area
Energy review as described in condition 1.2.1 (b)	Every four years from 1 January 2025	As described within the condition
Raw material review as described in condition 1.3.1 (c)	Every four years from 1 January 2025	As described within the condition
Waste review as described in condition 1.4.1 (d)	Every four years from 1 January 2025	As described within the condition
Efficient use of raw materials as described in condition 2.3.3	Annually from 1 January 2025	As described within the condition

Table S3. 4 - Reporting forms		
Media/parameter	**Reporting format**	**Form Version Number and date**
Air	Emissions to Air Reporting Form	V1. 01/01/2025
Energy	Energy usage reporting form located in schedule 3	V1. 01/01/2025
Performance parameters	Performance parameters reporting form in Schedule 3	V1. 01/01/2025

Schedule 3.1 - Emissions to Air Reporting Form
version 1, 01/01/2025

Permit number: [permit number] **Operator:** [e.g Smith and Jones Ltd] **Address:** [site address]

Reporting of emissions to air for the period from **[DD/MM/YY]** to **[DD/MM/YY]**

Emission point	**Substance / parameter**	**Emission Limit Value**	**Reference period**	**Test method[1]**	**Result [2]**	**Sample dates and times [3]**	**Uncertainty [4]**
[e.g. Stack 1]	[e.g. carbon monoxide]	[e.g. 100 mg/m^3]	[e.g. daily average]	[e.g. BS EN 14792]	[State result]	[State relevant dates and time periods]	[State uncertainty if not 95% confidence interval]

Signed: [signature] **Print Name:** [Name] **Date:** [DD/MM/YY]
(Authorised to sign as representative of the operator)

Guidance for use of Air Reporting Form: Use this form to report your monitoring results.

Example text is shown in brackets. Replace the example text by entering your own site specific information. Complete columns 1 to 5 using the information from schedule 2 of your permit. Complete columns 6 to 8 with your monitoring data. Add additional rows as necessary.

[1] Where an internationally recognised standard test method is used, give the reference number. Where another method that has been formally agreed with the Regulator, give the appropriate identifier. In other cases state the principal technique, for example gas chromatography.

[2] Give the result as the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, give the result as the 'minimum to maximum' of the measured values.

[3] For non-continuous measurements give the date and time of the sample that produced the result. For continuous measurements give the percentage of the process operating time covered by the result.

[4] Complete if the uncertainty associated with the result is not a 95% confidence interval. Leave blank for 95% confidence intervals.

Schedule 3.2 - Energy Usage Reporting Form

version 1, 01/01/2025

Permit number: [permit number] **Operator:** [e.g Smith and Jones Ltd] **Address:** [site address]

Reporting of energy usage for the year **[YYYY]**

Energy source	Energy consumption / production (MWh)	Specific energy consumption (MWh/unit) [2]
Electricity imported as delivered - source [specify source, e.g. supplied from the national grid]	[insert annual consumption in MWh where electricity is imported]	[insert annual consumption in MWh/unit where electricity is imported]
Electricity imported as primary energy 1 – conversion factor of [specify conversion factor used to convert electricity delivered to primary energy]	[insert annual consumption in MWh where electricity is imported]	[insert annual consumption in MWh/unit where electricity is imported]
Natural gas	[insert annual consumption in MWh where natural gas is used]	[insert annual consumption in MWh/unit where natural gas is used]
Gas oil – conversion factor of [specify conversion factor used to convert tonnes to MWh]	[insert annual consumption in MWh where gas oil is used]	[insert annual consumption in MWh/unit where gas oil is used]
Imported heat	[insert annual consumption in MWh where heat is imported]	[insert annual consumption in MWh/unit where heat is imported]
Other – [specify other energy source and conversion factors where applicable, e.g. renewable fuel. Add extra rows where needed]	[insert annual consumption in MWh where applicable]	[insert annual consumption in MWh/unit where applicable]
Electricity exported	[insert annual production in MWh where electricity is exported]	Not applicable
Heat exported	[insert annual production in MWh where heat is exported]	Not applicable

Operator's comments

Signed: [Signature] **Name**: [Print Name] **Date:** [DD/MM/YY]
(Authorised to sign as representative of the operator)

Guidance for use of Energy Usage Reporting Form: Use this form to report your annual energy usage.

Example text is shown in brackets. Replace the example text by entering your own site-specific information. Add additional rows as necessary or remove rows not relevant to your energy use.

[1] Multiply delivered electricity by 2.4 to convert to primary energy where the electricity is supplied from the national grid. If the electricity is supplied from another source, specify the conversion factor used. Add additional rows as needed if electricity is imported from multiple sources.

[2] Divide energy consumption by an appropriate unit of raw material processed or product output.

Schedule 3.3 - Other Performance Parameters Reporting Form
version 1, 01/01/2025

Permit number: @@@ **Operator:** @@@
Address: @@@

Reporting of other performance parameters for the period from **[DD/MM/YY]** to **[DD/MM/YY]**

Parameter	Units
[e.g. Total raw material usage]	[e.g. tonnes per production unit]

Operator's comments

Signed: [signature] **Name:** [print name] **Date:** [DD/MM/YY]
(Authorised to sign as representative of the operator)

Guidance for use of Other Performance Parameters Reporting Form:
Use this form to report the performance parameters (other than energy) required by your permit.
Example text is shown in brackets. Replace the example text by entering your own site-specific information. The parameters to report and units to be used can be found in the 'Performance parameters' table in schedule 3 of your permit. Add additional rows as necessary.

Schedule 4 - Notification

These pages outline the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the EP Regulations.

Part A

Permit Number	
Name of operator	
Location of Facility	
Time and date of the detection	

(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution	
To be notified within 24 hours of detection	
Date and time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

(b) Notification requirements for the breach of a limit
To be notified within 24 hours of detection

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	
Measures taken, or intended to be taken, to stop the emission	

(c) Notification requirements for the breach of permit conditions not related to limits	
To be notified within 24 hours of detection	
Condition breached	
Date, time and duration of breach	
Details of the permit breach i.e. what happened including impacts observed.	
Measures taken, or intended to be taken, to restore permit compliance.	

(d) Notification requirements for the detection of any significant adverse environmental effect
To be notified within 24 hours of detection

(d) Notification requirements for the detection of any significant adverse environmental effect	
To be notified within 24 hours of detection	
Description of where the effect on the environment was detected	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

Part B – to be submitted as soon as practicable

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission	
The dates of any unauthorised emissions from the facility in the preceding 24 months.	

Name (authorised to sign on behalf of the operator)	
Position in company	
Signature	
Date	

Schedule 5 - Interpretation

"**abatement equipment"** means that equipment dedicated to the removal of polluting substances from releases from the installation to air or water media.

"**accident"** means an accident that may result in pollution.

"**application"** means the application for this permit, together with any additional information supplied by the operator as part of the application and any response to a notice served under Schedule 4 to the EP Regulations.

"**authorised officer**" means any person authorised by the Regulator under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, any power specified in section 108(4) of that Act.

"CEM" Continuous emission monitor

"EP Regulations" means The Environmental Permitting (England and Wales) Regulations SI 2016 No.1154 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

"emissions of substances not controlled by emission limits" means emissions of substances to air, water or land from the activities, either from the emission points specified in schedule 2 or from other localised or diffuse sources, which are not controlled by an emission or background concentration limit.

"**emissions to land"** includes emissions to groundwater.

"groundwater" means all water, which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

"hazardous waste" has the meaning given in the Hazardous Waste (England and Wales) Regulations 2005 No.894, the Hazardous Waste (Wales) Regulations 2005 No. 1806 (W.138), the List of Wastes (England) Regulations 2005 No.895 and the List of Wastes (Wales) Regulations 2005 No. 1820 (W.148).

"**Industrial Emissions Directive"** means Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016.

"**ISO**" means International Standards Organisation.

"MCERTS" means the Environment Agency's Monitoring Certification Scheme.

"**pollution"** means emissions as a result of human activity which may—

(a) be harmful to human health or the quality of the environment,
(b) cause offence to a human sense,
(c) result in damage to material property, or
(d) impair or interfere with amenities and other legitimate uses of the environment.

“sealed drainage system” in relation to an impermeable surface, means a drainage system with impermeable components which does not leak and which will ensure that:

- no liquids will run off the surface otherwise than via the system.
- all liquids entering the system are collected in a sealed sump, except where liquids may be lawfully discharged.

“**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.

“STS BAT Conclusions” BAT Conclusions for surface treatment using organic solvents including preservation of wood and wood products with chemicals published on 9th December 2020

“Volatile Organic Compound (VOC)’’ means any organic compound means any organic compound as well as the fraction of creosote, 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.

“**Waste code”** means the six digit code referable to a type of waste in accordance with the List of Wastes (England) Regulations 2005, or List of Wastes (Wales) Regulations 2005, as appropriate, and in relation to hazardous waste, includes the asterisk.

“**Waste Framework Directive”** or “WFD” means Waste Framework Directive 2008/98/EC of the European Parliament and of the Council on waste.

“year” means calendar year ending 31 December.

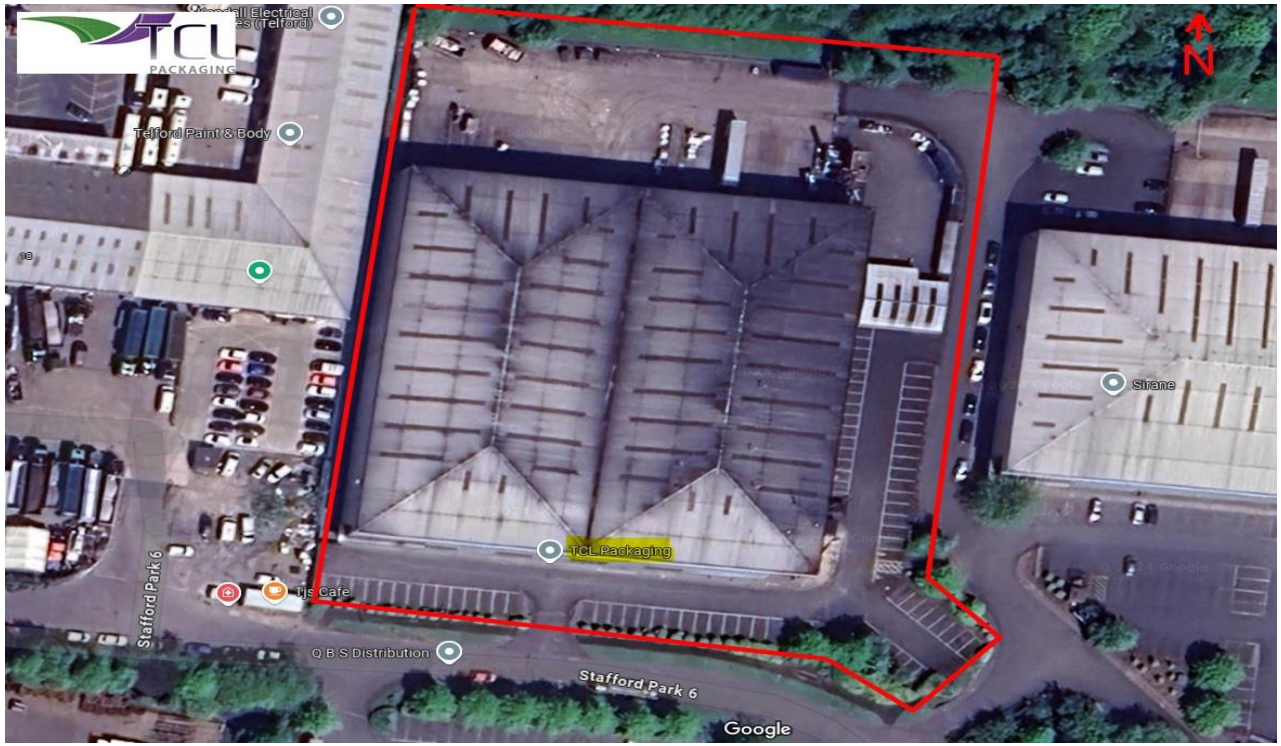
Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

Unless otherwise stated, any references in this permit to concentrations of substances in emissions into air means:

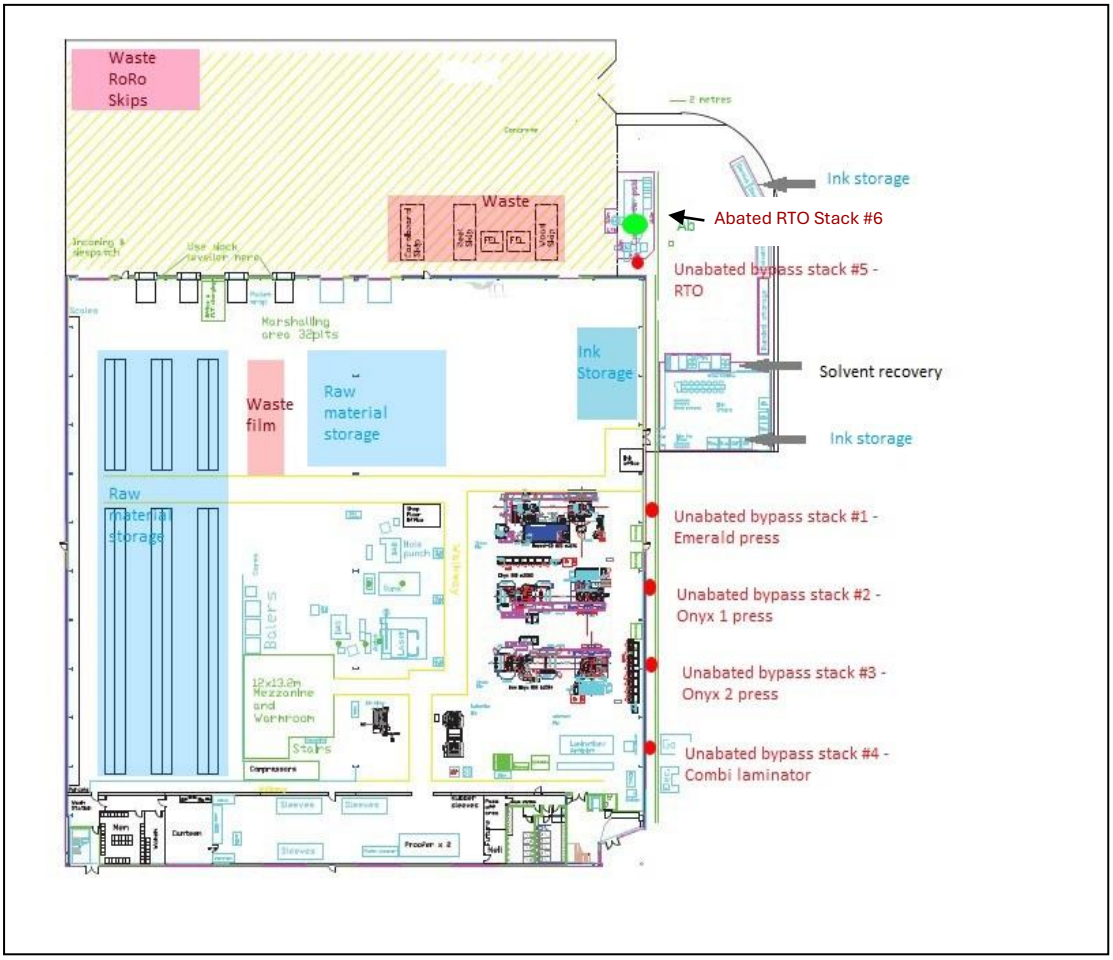
(a) in relation to emissions from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid and gaseous fuels, 6% dry for solid fuels; and/or

(b) in relation to emissions from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content.

Schedule 7 – Site boundary



Schedule 7 continued – Site layout plan



End of Permit