Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Formica Limited

Coast Road

North Shields,

Tyne and Wear

NE29 8RE

Variation application number

24/00003/VAREPR

Permit number

NT 18/A2/001

Formica Ltd
Permit number NT/A2/001

Introductory note

This introductory note does not form a part of the notice

Under the Environmental Permitting (England & Wales) Regulations 2016 (schedule 5, part 1, paragraph 19) a variation may comprise a consolidated permit reflecting the variations and a notice specifying the variations included in that consolidated permit.

Schedule 2 of the notice comprises a consolidated permit which reflects the variations being made. All the conditions of the permit have been varied and are subject to the right of appeal.

Article 21(3) of the Industrial Emissions Directive (IED) requires the Regulator to review conditions in permits that it has issued and to ensure that the permit delivers compliance with relevant standards, within four years of the publication of updated decisions on Best Available Techniques (BAT) Conclusions. We have reviewed the permit for this installation against the revised BAT Conclusions for surface treatment using organic solvents including preservation of wood and wood products with chemicals published on 9th December 2020. Only activities covered by this BAT Reference Document have been reviewed and assessed.

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:

- Revised emission limits and monitoring requirements for emissions to air applicable from 9th December 2024 in table S3.1 (BREF Limits);
- Inclusion of process monitoring for energy efficiency in table S4.3
- Inclusion of reporting requirements for monitoring data in tablesS4.1 which include for water or sewer and land monitoring.

The rest of the installation is unchanged and continues to be operated as follows:

Description of the process

I. The process operated is paper coating process using more than fifteen tonnes of volatile organic solvent in 12 months. As a whole the installation falls within Section 6.4(A2) of Schedule 1 of the Environmental Permitting Regulations 2016. It is therefore a defined Solvent Emissions Directive activity as well as the other identified activities.

Ii The laminates produced at the installation comprise paper and thermosetting resin. The resin combined with the paper in a process known as impregnation, where two different types of paper and resin are used. Decorative and overlay papers are impregnated with melamine-formaldehyde resins and kraft core papers are impregnated with phenol-formaldehyde resins or phenol melamine formaldehyde resin. The resins are delivered to the site via tank truck and pumped into storage tanks. Resins used in small quantities are delivered to the site in IBC's.

iii The process and main activities consist of the production of decorative laminates by the:

- The core treating machine is known as CT1. Coating is done using a phenolic resin. There are two surface treating machines known as XLF1 and XLF2. All surface treaters coat with a melamine formaldehyde resin.
- The production of a printed layer using water based printing inks.
- The collation and pressing of impregnated and printed paper in five presses, known as 10, 5.5, 7.0 and 8.0 HPL presses and the continuous laminate press (CPL).
- The trimming and sanding of the completed product in the finishing bay.

iv The principal sources of releases to air from the process are:-

(i) Fugitive volatile organic compounds (VOC) emissions from application of impregnation materials and cleaning solvents.

(ii) VOC and formaldehyde emissions from the core treating machine known as CT1 and two surface treating machines known as XLF1 and XLF2.

(iii) Particulate emissions from dust extraction system and curing ovens.

(iv) Carbon monoxide (CO), nitrogen dioxide (NO2) and Particulate from the thermal oxidiser. Abatement system in the form of a thermal oxidiser is used for the core treater.

Key sensitive receptors in the area consist of two ponds located within 275 m of the site, with further ponds located some 440m away. They are considered to support great crested newts. The Northumberland Shore SSSI and Northumbria Coast Ramsar are located to the east of the site.

The plant at North Shields is certified to ISO 14001 :2015 Environmental Management Systems. The EMS applies key performance indicators that are determined and monitored each year. Environmental aspects of tasks, within each department, are mapped along with controls covering normal, abnormal and emergency situations. Internal audits against aspects within the EMS are carried out annually. Incidents, complaints received and non-conformances identified during audits or otherwise, are investigated, communicated, recorded, resolved and reported as required by the EMS.

The key abatement system in use at the site is in the form of a thermal oxidiser, which controls the emissions to air from the core treater, through the use of heat to destroy the emissions, including carbon dioxide and volatile organic compounds, for compliance with the emission limits to atmosphere.

Formica (the Installation) is operated by Formica Limited and is located in North Shields, North Tyneside, England.

The status log of a permit sets out the permitting history, including any changes to the permit reference number.

Status log of the permit		
Description	**Date**	**Comments**
Application received	28/05/2018	Application for an A2 solvent coating activity.
Permit Application Duly Made	20/06/2018	
Permit determined NT/18/A2/001	01/11/2018	Permit issued to Formica Ltd.
Regulation 61 Notice sent to the Operator	11/08/2021	Issue of a Notice under Regulation 61(1) of the EPR. North Tyneside Council initiated review and variation to vary the permit under IED to implement Chapter II following the publication of the revised Best Available Techniques (BAT) Reference Document for surface treatment using organic solvents including preservation of wood and wood products with chemicals.
Regulation 61 Notice response.	09/02/2022	Response received from the Operator.

Status log of the permit		
Description	**Date**	**Comments**
Variation determined 24/00003/VAREPR	26/01/2024	Statutory review of permit – surface treatment using organic solvents including preservation of wood and wood products with chemicals BAT Conclusions published 9/12/2020 Varied and consolidated permit issued. Effective from 26/01/2024

End of introductory note

Notice of variation and consolidation

The Environmental Permitting (England and Wales) Regulations 2016

North Tyneside Council (“the regulator”) in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2016 varies

Permit number

NT 18/A2/001

Issued to

Formica Ltd (“the operator”)

whose registered office is

Coast Road

North Shields,

Tyne and Wear

NE29 8RE

company registration number 00139731

to operate a regulated facility at

Formica

Coast Road

North Shields,

Tyne and Wear

NE29 8RE

to the extent set out in the schedules.

The notice shall take effect from 26/01/2024

Name	Date
Frances McClen **Environmental Health Group Leader**	**26/01/2024**

Authorised on behalf of the North Tyneside Council

Schedule 1

All conditions have been varied by the consolidated permit as a result of a Regulator initiated variation.

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

NT 18/A2/001

This is the consolidated permit referred to in the variation and consolidation notice for application, variation notice number 24/00003/VAREPR, authorising,

Formica Ltd ("the operator"),

of/whose registered office is/whose principal office is

Coast Road

North Shields,

Tyne and Wear

NE29 8RE

company registration number [00139731

to operate an installation at

Formica

Coast Road

North Shields,

Tyne and Wear

NE29 8RE

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

Name	Date
Frances McClen **Environmental Health Group Leader**	**26/01/2024**

Authorised on behalf of the Regulator

Conditions

1 Management

1.1 General management

1.1.1 The operator shall manage and operate the activities:

(a) in accordance with a written 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 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.

1.1.4 Complete and immediate access to the premises shall be granted to a duly authorised officer of the Local Authority upon request.

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 and water are used efficiently in the activities;

(b) maintain records of raw materials and water 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 and water 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.

1.4.2 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 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.

2.3.5 The operator shall ensure that where waste produced by the activities is sent to a relevant waste operation, that 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.

2.3.6 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 3 tables S3.1 and S3.2.

3.1.2 The limits given in schedule 3 shall not be exceeded.

3.1.3 Total and fugitive annual emissions from the emission point(s) set out in schedule 3 tables S3.1, and S3.2 of a substance listed in schedule 3 table S3.4 shall not exceed the relevant limit in table S3.4.

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 operation, 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 total and fugitive VOC emissions by compiling, at least on an annual basis, a solvent mass balance of the solvent inputs and outputs of the plant, as defined in Part 7(2) of Annex VII to Directive 2010/75/EU.

The solvent mass balance shall include:

- identification and documentation of solvent inputs and outputs, (e.g. emissions in waste gases, emissions from each fugitive emission source, solvent output in waste);
- 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);
- identification of the main sources of uncertainty of the aforementioned quantification, and implementation of corrective actions to reduce the uncertainty;
- regular update of solvent input and output data.

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

3.3.2 The operator shall, unless otherwise agreed in writing by the Regulator, undertake the monitoring specified in the following tables in schedule 3 to this permit:

(a) point source emissions specified in tables S3.1 and S3.2

(b) process monitoring specified in table S3.5;

(c) land specified in table S3.6

3.3.3 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.

3.3.4 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.3.2 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by the Regulator.

3.3.5 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 tables S3.1 and S3.2 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 an authorised officer of 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 by an authorised officer of 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 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 4 table S4.1;

(b) for the reporting periods specified in schedule 4 table S4.1 and using the forms specified in schedule 4 table S4.4 ; 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 4 table S4.2; and

(c) the performance parameters set out in schedule 4 table S4.3 using the forms specified in table S4.4 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 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 5 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:

Where the operator is a registered company:

(a) any change in the operator’s trading name, registered name or registered office address; and

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

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

(c) any change in the operator’s name or address; and

(d) 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 Training

4.4.1 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. A record of each person's training and instruction shall be kept for the duration of their employment connected with the equipment described within this Permit.

4.5 Interpretation

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

4.5.2 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.

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Schedule 1 – Operations

Table S1.1 activities		
Activity listed in Schedule 1 of the EP Regulations	**Description of specified activity and WFD Annex I and II operations**	**Limits of specified activity and waste types**
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 lacquers and adhesives onto substrates to produce final composite product
Directly Associated Activities		
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
Effluent discharge to foul sewer	Discharge of process water from the installation	From production of effluent to discharge to external foul sewer
Schedule 25 A	Medium Combustion Plant	
Medium Combustion Plant	Operation of one boiler with an aggregated thermal rated input not exceeding 1 megawatts for process heating .	From receipt of raw materials and fuels, to release of combustion products to air and associated wastes removed from site.

Table S1.2 Operating techniques		
Description	Parts	Date Received
Review of Environmental Management System	Identify all relevant sections of the review, in particular BAT 1, but also BAT 2, BAT 3, 13, 19 and 20.	09/02/2022
BAT Reviews	Summary of the BAT review (BAT 4 and 5)	09/02/2022
	Summary of the BAT review (BAT 6 to 9)	09/02/2022
	Summary of the BAT review (BAT 10, 14 to 17, BAT 21 to 22 and BAT 24	09/02/2022
	Summary of the BAT review (BAT 18)	09/02/2022
Odour management plan	Odour management plan (BAT 23)	09/02/2022

Table S1.2 Operating techniques		
Description	Parts	Date Received
Noise management plan	Noise management plan	09/02/2022

Schedule 2 – Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	**Specification**
Kraft Paper	Wood based cellulose
Decorative Paper	Wood based cellulose plus organic pigments
Release paper	Silicon based cellulose product.
Texture paper	Resin impregnated cellulose product
Methanol Based phenol formaldehyde resin (DV006)	Clear orange/brown liquid with methanol odour. Methanol 22%, Dimethyl Formanide 3.6% Phenol 1.5% Formaldehyde 1%
Water based standard phenol formaldehyde resin (DV001P)	Clear brown liquid Methanol <1% Phenol 5% Formaldehyde <1%
Water based post forming phenol formaldehyde resin DV135	Clear brown liquid Methanol <2% Phenol <5% Formaldehyde <1% Sodium p-toluenesulphonate 1.0 – 1.5%
Water based melamine formaldehyde resin DV535	Colourless white liquid Methanol content <1% Formaldehyde <1%
Phenol formaldehyde resole resin Used as a flame retardant	Clear brown liquid Phenol 8-12% Formaldehyde <5% Triethylamine <0.5%
Methanol/Solvent	Clear liquid. Methanol 100%
Mains water	Main cooling tower and closed loop cooling system. The majority of water is required to top up losses arising from evaporation. High Pressure Hot Water Boiler Feed Cleaning and general use

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	**Specification**
Fuels	
Mains Gas	Utilised for thermal oxidiser and space heating.

Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	**Source**	**Parameter**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
A24-01 [Point A24-01 on site plan in Schedule 7]	Core Treater 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
A24-01 [Point A24-01 on site plan in Schedule 7]	Core Treater Thermal Oxidiser	Carbon monoxide	100 mg/Nm^3	Average over the sampling period	Minimum of once per year	BS EN 15058
A24-01 [Point A24-01 on site plan in Schedule 7]	Core Treater Thermal Oxidiser	TVOC	50 mg/Nm^3	Daily Average	Continuous if mass emission is ≥ 10 kg C/h	BS EN 12619
A24-01 [Point A24-01 on site plan in Schedule 7]	Core Treater Thermal Oxidiser	TVOC	50 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
A24-01 [Point A24-01 on site plan in Schedule 7]	Core Treater Thermal Oxidiser	TVOC	50 mg/Nm^3	Average over the sampling period	Once every 3 years if mass emission is < 0.1 kg C/h	BS EN 12619
A24-01 [Point A24-01 on site plan in Schedule 7]	Core Treater Thermal Oxidiser	Formaldehyde	2mg/Nm3 as 30 minute mean	Average over the sampling period	Annual manual extractive testing	
A24-01 [Point A24-01 on site plan in	Core Treater Thermal Oxidiser	DMF (Dimethylformamide)	2 mg/Nm^3	Average over the sampling period	Once every three months	No EN standard available [Note 2]

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	**Source**	**Parameter**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
Schedule 7]						
A24-01 [Point A24-01 on site plan in Schedule 7]	Core Treater Thermal Oxidiser	Particulate	3 mg/Nm^3	Average over the sampling period	Minimum of once per year	BS EN 13284-1
A24-02 [Point A24-2 on site plan in Schedule 7]	Preparation /Spray Coating XLF 1 Surface Treater	TVOC	50 mg/Nm^3	Daily Average	Continuous if mass emission is ≥ 10 kg C/h	BS EN 15267-3 [Note 1]
A24-02 [Point A24-2 on site plan in Schedule 7]	Preparation /Spray Coating XLF 1 Surface Treater	TVOC	50 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
A24-02 [Point A24-2 on site plan in Schedule 7]	XLF 1 Surface Treater	TVOC	50 mg/Nm^3	Average over the sampling period	Once every 3 years if mass emission is < 0.1 kg C/h	BS EN 12619
A24-02 [Point A24-2 on site plan in Schedule 7]	XLF 1 Surface Treater	DMF (Dimethylformamide)	2 mg/Nm^3	Average over the sampling period	Once every three months	No EN standard available [Note 2]
A24-03 [Point A24-3 on site plan in Schedule 7]	XLF 2 Surface Treater	TVOC	50 mg/Nm^3	Daily Average	Continuous if mass emission is ≥ 10 kg C/h	BS EN 15267-3 [Note 1]
A24-03 [Point A24-3 on site plan in Schedule 7]	XLF 2 Surface Treater	TVOC	50 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

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	**Source**	**Parameter**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
A24-03 [Point A24-3 on site plan in Schedule 7]	XLF 2 Surface Treater	TVOC	50 mg/Nm^3	Average over the sampling period	Once every 3 years if mass emission is < 0.1 kg C/h	BS EN 12619
A24-03 [Point A24-3 on site plan in Schedule 7]	XLF 2 Surface Treater	DMF (Dimethylformamide)	2 mg/Nm^3	Average over the sampling period	Once every three months	No EN standard available [Note 2]
A24-04, A24-05 & A24-06 [Point A24-4, A24-05 & A24-06 on site plan in Schedule 7]	Dust Plants	Particulate matter (Dust)	3 mg/Nm^3	Average over the sampling period	Minimum of once per year	BS EN 13284-1

Note 1: Certification to the MCERTS performance standards indicates compliance with BS EN 15267-3

Note 2: In the absence of an EN standard, the measurement includes the DMF contained in the condensed phase.

Table S3.2 Point source emissions to sewer						
Emission point ref. & location	**Parameter**	**Source**	**Limit (incl. Unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
S24-01 [Point S4-01 on site plan in Schedule 7]	pH	Cooling Tower Pond Discharge	6-10	Annual	Annual	BS6068-2.50
	Total daily volume of discharge	Cooling Tower Pond Discharge	1000m3	24-hour total	Continuous	MCERTS self-monitoring of effluent flow scheme
	Total Chemical Oxygen Demand	Cooling Tower Pond Discharge	125 mg/litre	Annual	Annual	BS6068-2.50

Table S3.2 Point source emissions to sewer						
Emission point ref. & location	**Parameter**	**Source**	**Limit (incl. Unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
	Suspended Solids (dried at 105^{oC}	Cooling Tower Pond Discharge	200mg/litre	Annual	Annual	BS6068-2.50
S24-02 [Point S24-02 on site plan in Schedule 7]	pH	Oil Water Separator	6-10	Annual	Annual	BS6068-2.50
	Total daily volume of discharge	Oil Water Separator	20m3	24-hour total	Continuous	MCERTS self-monitoring of effluent flow scheme
	Total Chemical Oxygen Demand	Oil Water Separator	1000 mg/litre	Annual	Annual	BS6068-2.50
	Suspended Solids (dried at 105^{oC}	Oil Water Separator	500mg/litre	Annual	Annual	BS6068-2.50
	Non-volatile matter extractable by 40/60 petroleum spirit	Oil Water Separator	200mg/litre	Annual	Annual	BS6068-2.50
	Total Phenols	Oil Water Separator	1mg/litre	Annual	Annual	BS6068-2.50
	Total Formaldehyde	Oil Water Separator	5mg/litre	Annual	Annual	BS6068-2.50

Table S3.3 Annual limits for total and fugitive emissions		
Substance	**Medium**	**Limit (including unit)**
TVOC	Fugitive	5% of the solvent input. (As calculated by the solvent mass balance).

-

Table S3.4 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	Set based on TO design	With alarm if temperature drops below 745°C

Schedule 4 – Reporting

Parameters, for which reports shall be made, in accordance with conditions of this permit, are listed below.

Table S4.1 Reporting of monitoring data			
Parameter	**Emission or monitoring point/reference**	**Reporting period**	**Period begins**
Emissions to air Parameters as required by condition 3.5.1.	A1, A2, A3, A4, A5	Every 12 months	1 January
Emissions to water or sewer Parameters as required by condition 3.5.1	S1, S2, S3	Every 12 months	1 January
Land monitoring Parameters as required by condition 3.5.1	L1	Every 10 years	01/01/2033

Table S4.2: Annual production/treatment	
Parameter	**Units**
Volatile organic solvent utilised in the paper coating process	Tonnes

Table S4.3 Performance parameters		
Parameter	**Frequency of assessment**	**Units**
Specific energy consumption	Annually	kWh/m^2 of coated surface / unit of production

Table S4.4 Reporting forms		
Media/parameter	**Reporting format**	**Date of form**
Air	Form ~~air 1~~ Pollution Inventory Form Part 2 or other form as agreed in writing by the Regulator	24/08/2023
Sewer	Form Pollution Inventory Form Part 4 or other form as agreed in writing by the Regulator	24/08/2023
Performance parameters	Form Pollution Inventory Form Part 8 or other form as agreed in writing by the Regulator	24/08/2023

Schedule 5 – 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 unless otherwise specified below	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
Measures taken, or intended to be taken, to stop the emission	

Time periods for notification following detection of a breach of a limit	
Parameter	**Notification period**

(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	
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*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 – 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 5 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.

“background concentration” means such concentration of that substance as is present in:

- for emissions to surface water, the surface water quality up-gradient of the site; or
- for emissions to sewer, the surface water quality up-gradient of the sewage treatment works discharge.

“calendar monthly mean” means the value across a calendar month of all validated hourly means.

“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 3 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.

“groundwater protection zones 1 and 2” have the meaning given in the document titled "Groundwater Protection: Policy and Practice" published by the Environment Agency in 2006.

“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.

“Medium Combustion Plant” or ”MCP” means a combustion plant with a rated thermal input equal to or greater than 1 MW but less than 50 MW.

Drafting note: Only use if a MCP is included in the permit.

“Medium Combustion Plant Directive” or “MCPD” means Directive 2015/2193/EU of the European Parliament and of the Council on the limitation of emissions of certain pollutants into the air from medium combustion plants, as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016.

Drafting note: Only use if a MCP is included in the permit.

“quarter” means a calendar year quarter commencing on 1 January, 1 April, 1 July or 1 October.

“quarterly” for reporting/sampling means after/during each 3 month period, January to March; April to June; July to September and October to December and, when sampling, with at least 2 months between each sampling date.

“SI” means site inspector.

“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.

“Solvent Emissions Directive” means Directive 1999/13/EC (as amended by Directive 2004/42/EC) on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain activities and installations.

“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:

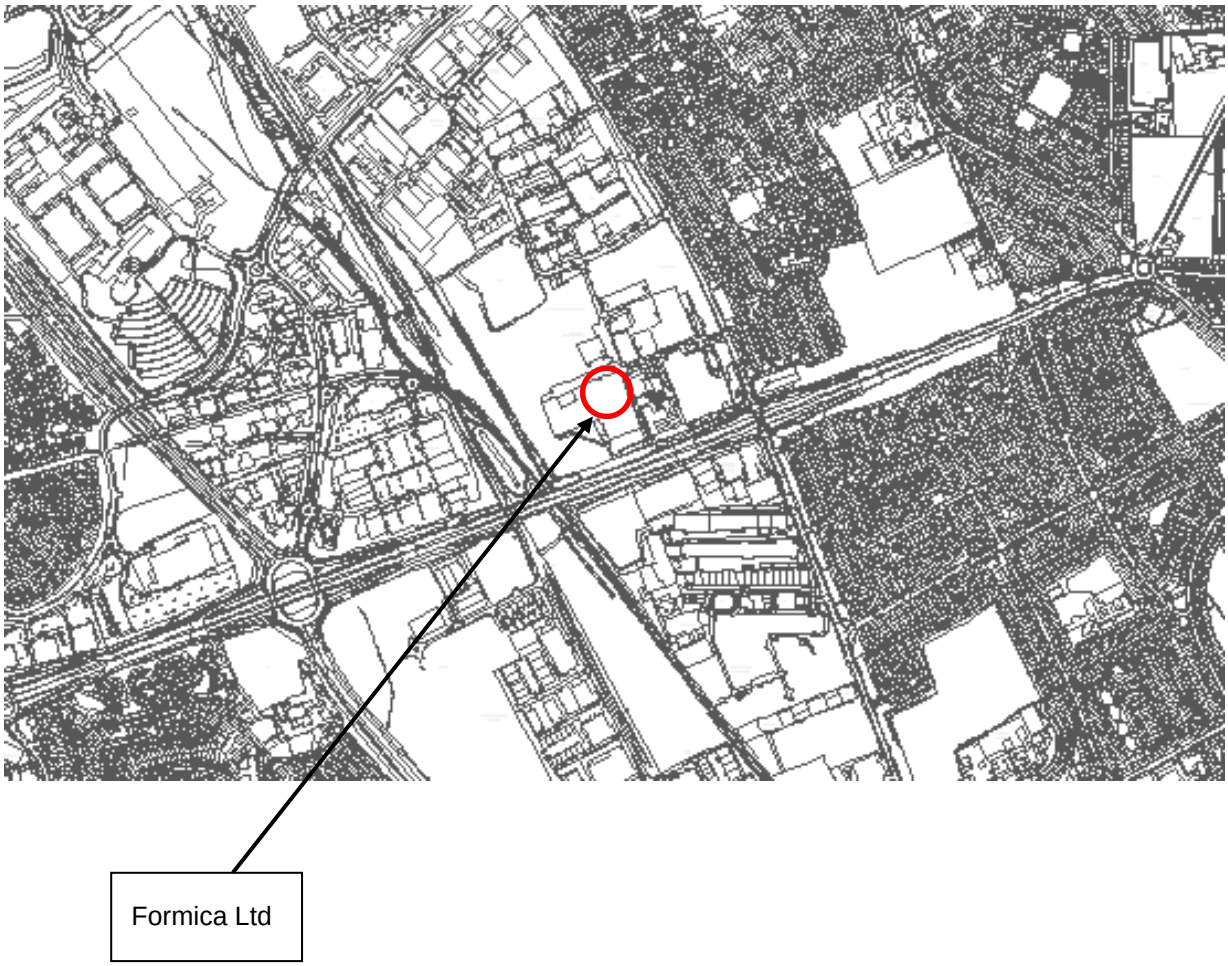
(a) in relation to emissions from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid and gaseous fuels, 6% dry for solid fuels; and/or

(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.

(c) in relation to emissions from gas engines or gas turbines, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 15% dry for liquid and gaseous fuels ; and/or

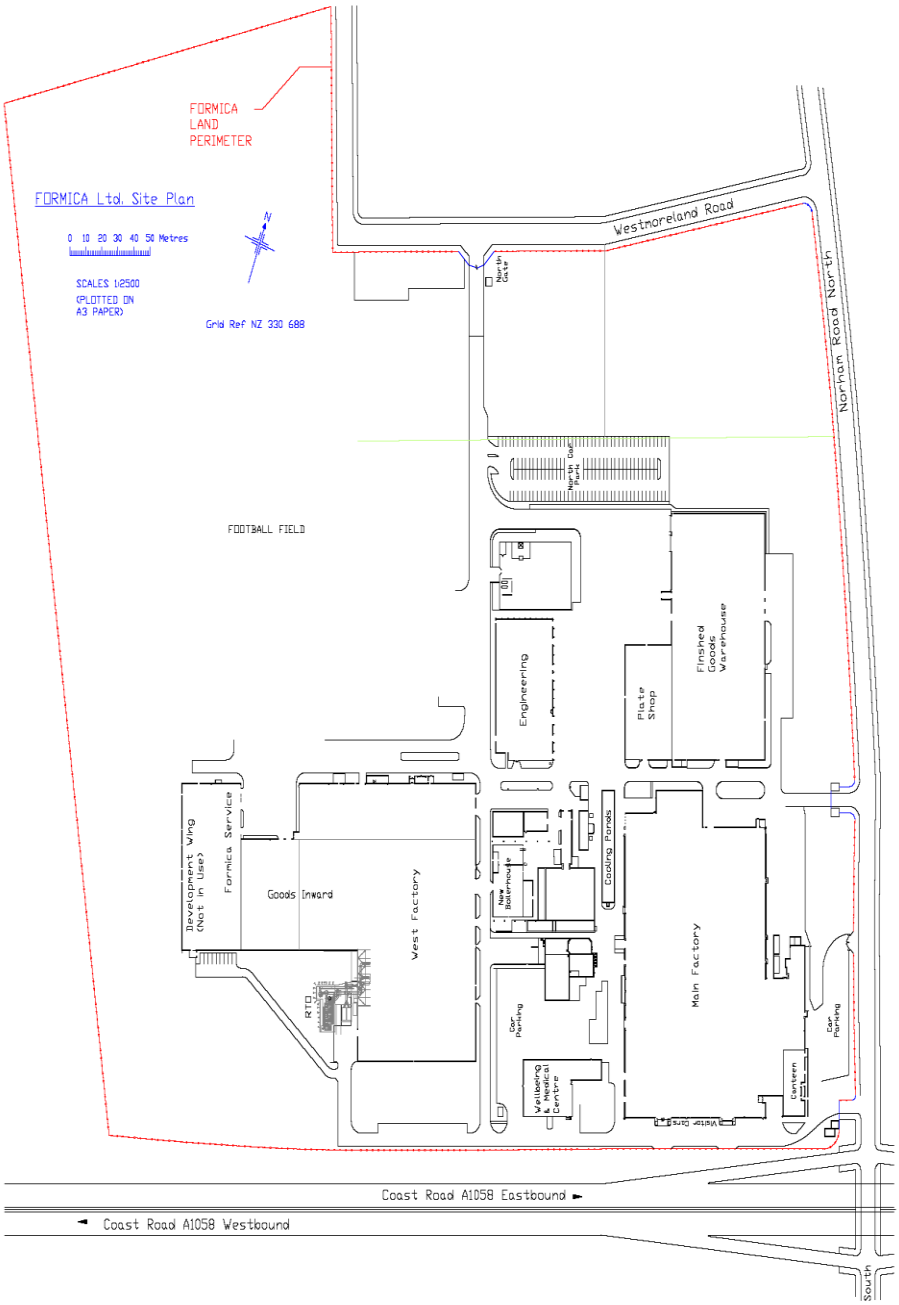
Schedule 7 – Site plan

Site Location Map (NT 18/A2/001.A)



Site Plan NT 18/A2/001.B1

Site boundary in red



Permit number
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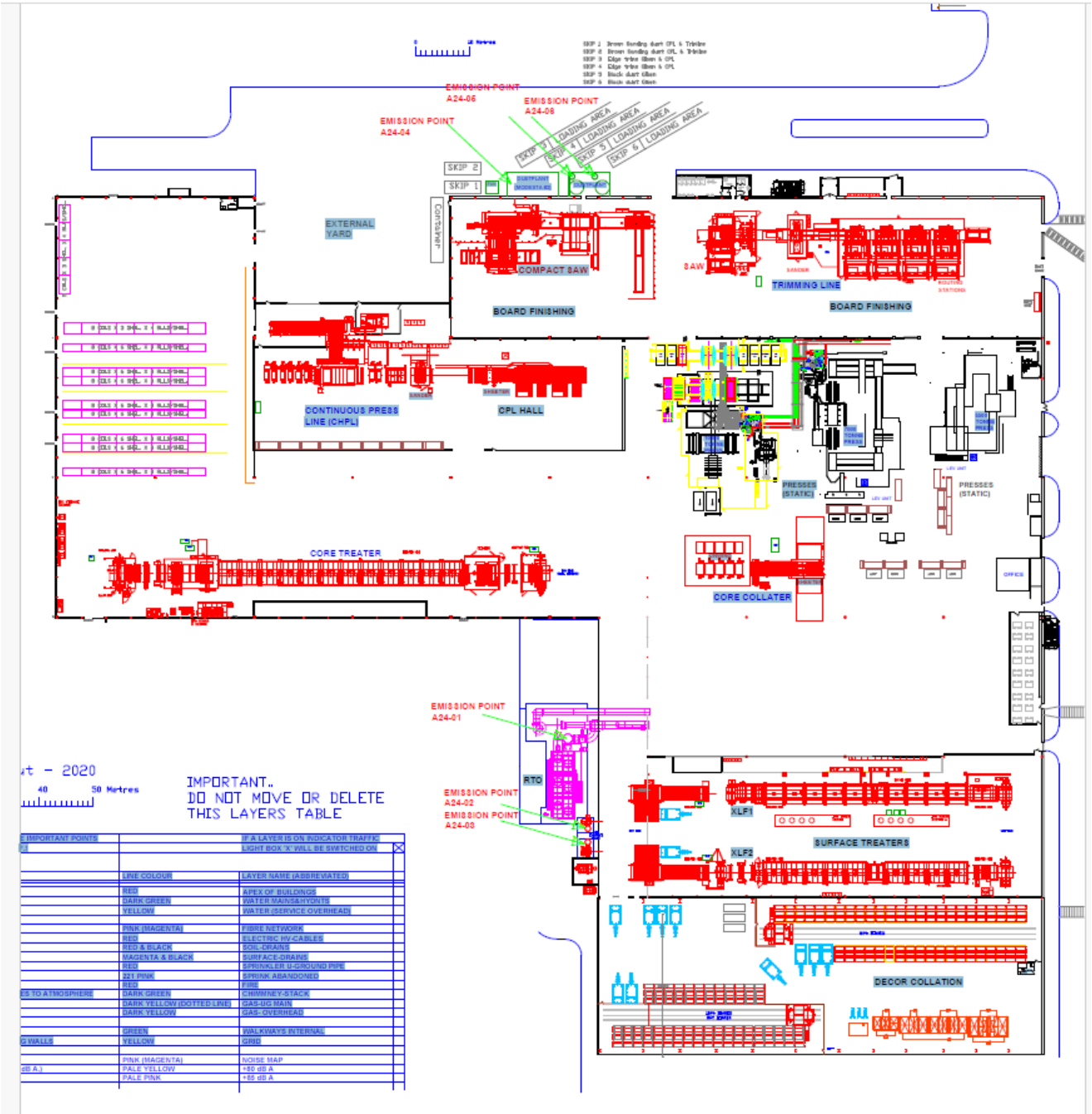
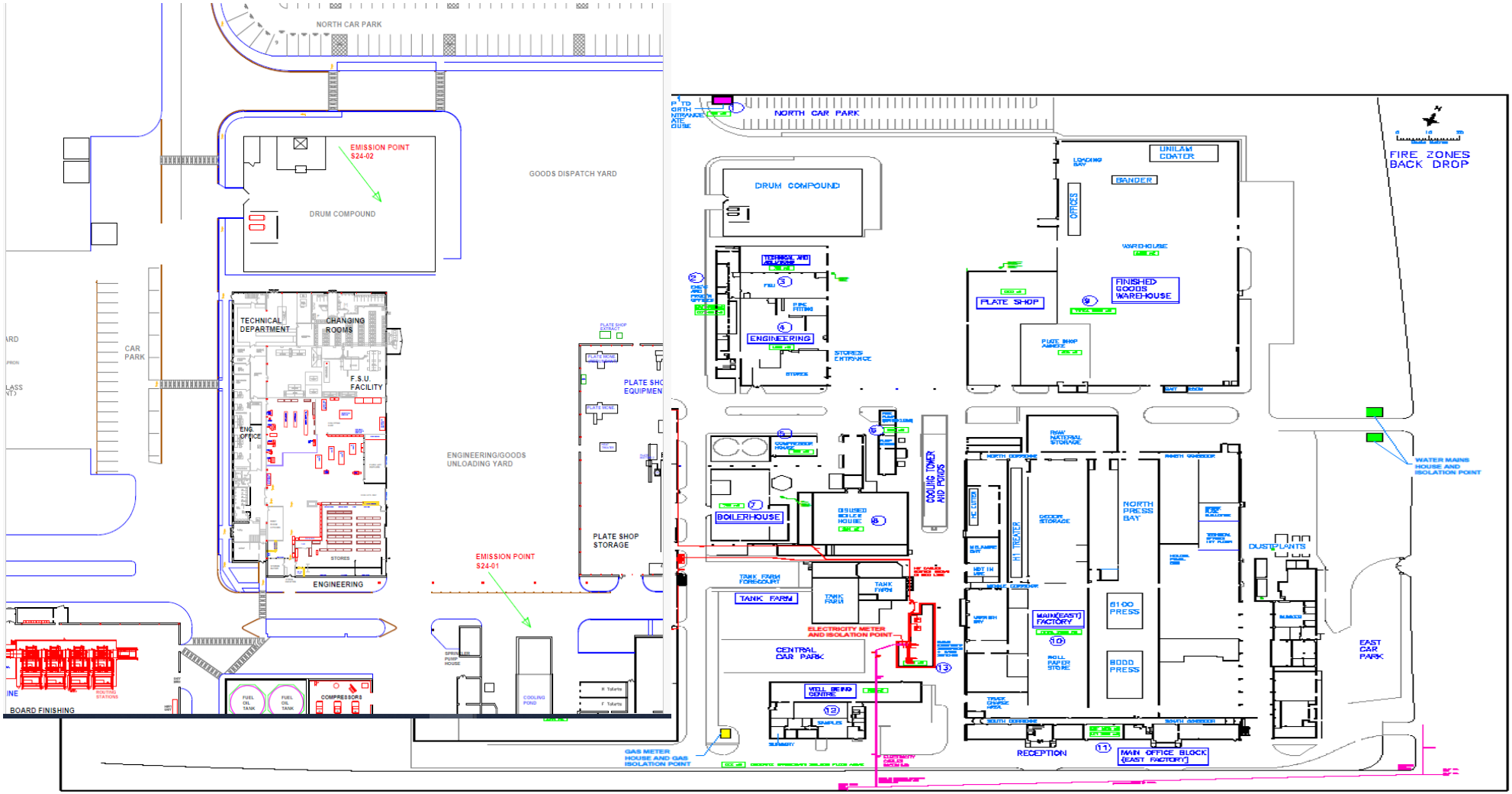
Site Plan NT 18/A2/001.B2 Air Emission Points



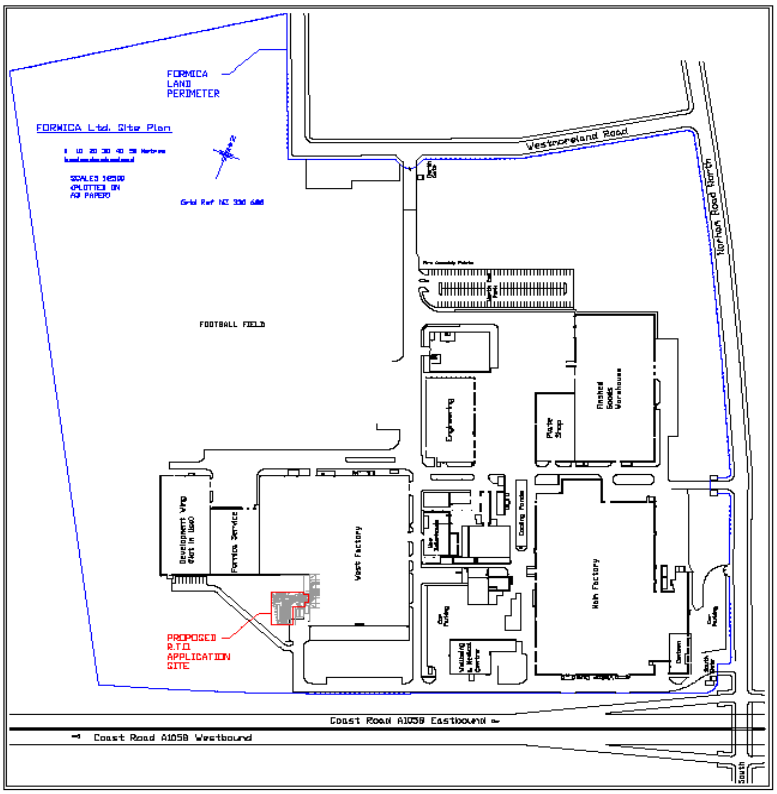
Permit number
NT 18/A2/001

Site Plan NT 18/A2/001.B3 Sewer Emission Points

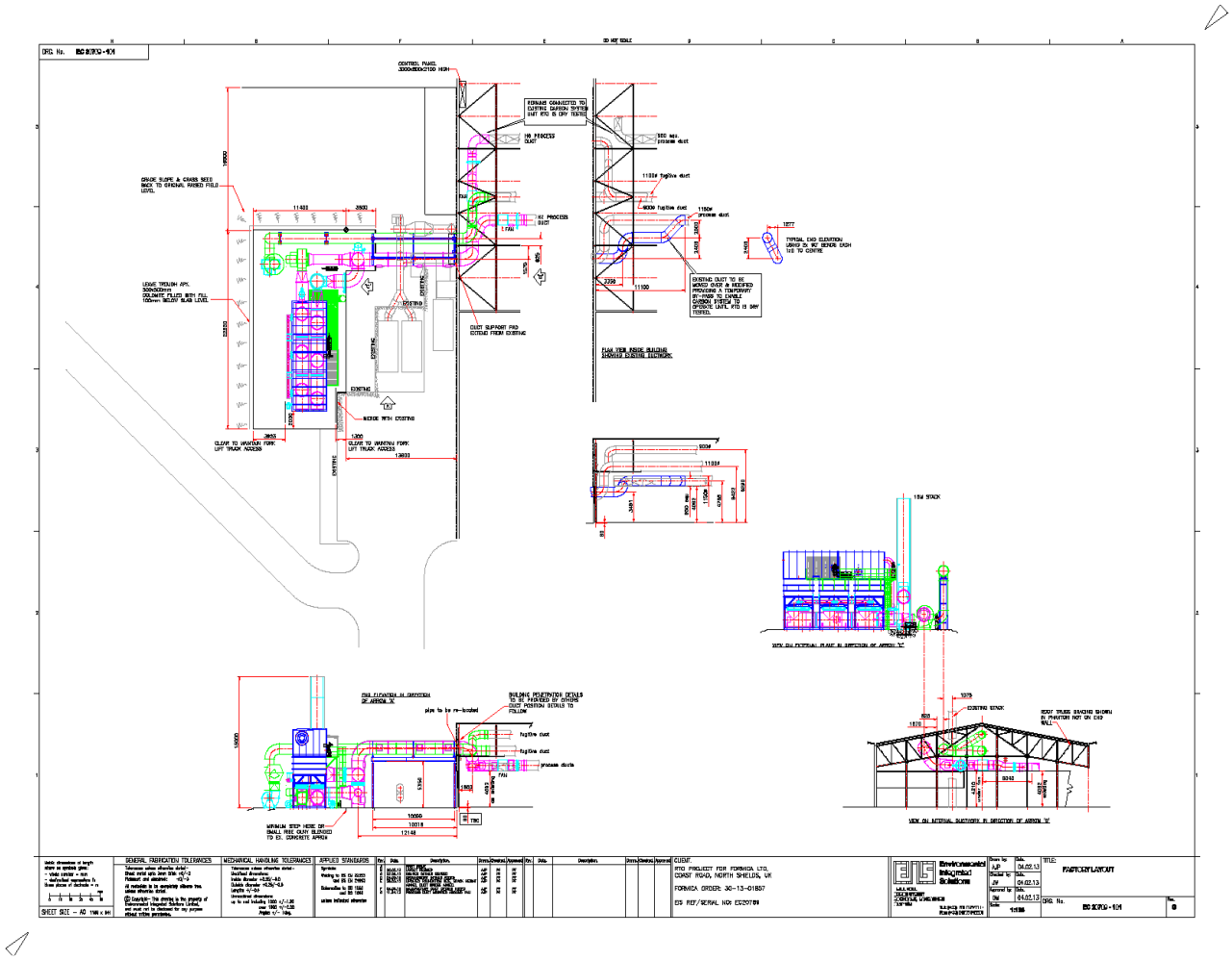


Permit number
NT 18/A2/001

Plan NT 18/A2/001.C Plan Showing Thermal Oxidiser



Plan NT 18/A2/001.C Plan Schematic of Thermal Oxidiser, Stack Height 15 metres.



Permit number
NT 18/A2/001

END OF PERMIT