

# **WYCHAVON DISTRICT COUNCIL**

## **The Environmental Permitting Regulations (England and Wales) Regulations 2010 (as amended).**

<b>Permit Reference;</b>	<b>WD/E/02/02711/AP</b>
Installation address;	E M Coatings Services Enterprise Way Vale Park Eve sham WR11 1GX
Registered Office;	Metal Improvement Company Navigation House Hambridge Lane Newbury Berkshire RG14 5TU
Regulators Address;	Wychavon District Council Civic Centre Queen Elizabeth Drive Persore Worcestershire WR10 1PT
Correspondence Address;	Worcestershire Regulatory Wyre Forest House Finepoint Way Kidderminster Worcestershire DY11 WFH

Wychavon District Council hereby permit E M Coatings Services in accordance with the following conditions numbered 1 to 59 inclusive to carry on a coating process as prescribed in Section 6.4 of Schedule 1 of The Environmental Permitting (England and Wales) Regulations 2010 (as amended) the installation address stated and as outlined in red on the attached appendix 1.

## **Description of Permitted Activity**

The pre-treatment of metal by vapour degreasing and shot blasting, the preparation and manufacture of coatings and the application of coatings to metal, wood, rubber, glass, ceramics and plastic involving the use of no more than 25 tones of organic solvent in any 12 month period and the use of no more than 1 ton of coatings containing isocyanate compounds in any 12 month period comprising the following operations,

- Storage

The storage of thinners and coating materials in containers in a ventilated and bunded store  
The storage of thinners in bulk containers in a bunded area outside the building.

- Cleaning

The cleaning of components by the following methods:

- Vapour Degreasing

The use of Perchloroethylene in sealed, electrically heated bath with a solvent holding capacity of approximately 700 litres. The solvent is heated to 100°C, creating a vapour which covers the items which have been lowered into the tank. Cooling coils are fitted to reduce the amount of vapour circulating within the unit, allowing the vapour to condense below the rim of the tank and returned to the tank. The cleaned items are held in the unit, until the end of the cycle. This activity takes place in area indicated PT3 on figure 1.

Waste solvent is stored in sealed containers pending disposal by an authorised waste disposal contractor.

- Non-solvent based Cleaning

The use of sodium hydroxide to clean components in preparation for pre-treatment with heated zinc or manganese phosphate to reduce corrosion and aid adhesion of coating materials. This activity takes place in pre-treatment area of PT1a indicated on figure 1. Emissions are exhausted to atmosphere from stack PTO1.

- Shot Blasting

Items are cleaned using high pressure application of aluminium oxide, glass bead or plastic media using the following equipment:

- |   |     |
|---|-----|
| - Guyson hand blast cabinet with integral bag filter system   | SB5 |
| - Reed hand blast cabinet with integral bag filter system   | SB6 |
| - Vixen tumble blast cabinet with integral bag filter system  | SB3 |
| - Hodge Clemco pressure blasting pot sited within a walk-in blasting room which exhausts to atmosphere via a bag filter through stack | SB1 |
| - Reed tumble blast cabinet with integral bag filter system   | SB4 |
| - Tilghman Wheelabrator   | SB2 |

These activities take place in the shot blast area as detailed on figure 1.

Zinc and manganese phosphating process PT1a, Titanium anodising line PT4(a) and chemical stripping line discharging to the effluent control plant.

- Coatings

The application of coatings by automatic or hand held methods using the following equipment:

EM Ref	Description	Exhaust Info
FP11	1 x overhead conveyor FDS spray-booth	discharge to atmosphere via stack referenced FP11
FP11	1 x overhead conveyor Gas Oven	discharges to atmosphere via stack referenced re-gen-sorb
FP25	RDM dry filtered spray booth (14' x 14')	discharge to atmosphere via stacks referenced FP25 (1)&(2)
FP20		FP20 Stack Not in Use
FP21	FDS dry filtered spray booth (12' x 8')	discharge to atmosphere via stack referenced FP21
FP28	FDS dry filtered spray booth (12' x 8')	discharge to atmosphere via stack referenced FP28
FP23	1 x FDS dry filtered spray booth (10' x 7.5')	discharges to atmosphere via stack referenced re-gen-sorb FP23 or to atmosphere if no VOC's
FP24	1 x FDS dry filtered spray booth (15' x 7.5')	discharges to atmosphere via stack referenced re-gen-sorb FP24
FP22	1 x FDS dry filtered spray booth (12' x 8')	which discharges to atmosphere via stack referenced FP22
FP5	1 x small Imtec dip spinner with integral spray-booth (3' x 3')	to atmosphere via stack referenced FP5
FP7	1 x FDS dry filtered spray booth (7' x 7')	to atmosphere via stack referenced FP7
FP2	Imtec quadrant coater (bulk application of small parts, including flash off heaters and integral dry back extraction system)	exhausts to abatement re-gen sorb
FP3	Imtec quadrant coater (bulk application of small parts, including flash off heaters and integral dry back extraction system)	exhausts to abatement re-gen sorb
FP10	FDS quadrant coater (bulk application of small parts, including flash off heaters and integral dry back extraction system)	exhausts to abatement re-gen sorb
FP13	FDS quadrant coater (bulk application of small parts, including flash off heaters and integral dry back extraction system)	to atmosphere via stack referenced FP21
FP4	large dip spinner	discharges to atmosphere via stack FP28
FP07	Airflow spray booth	exhausts to atmosphere via stack referenced FP07
FP08	1 x chain on edge spindle line	which exhausts to atmosphere via stack referenced FP08
FP3	1 x micro chain on edge spindle line with integral curing oven	exhausts to atmosphere via stack filtered referenced FP3
FP37	1 x FDS booth located in Aero Materials Store	exhausts to atmosphere via stack filtered referenced FP37
FP01		Not currently in use
FP27		Not currently in use

- Drying and Curing

The curing of solvent based coatings in ovens that exhaust to atmosphere via the incinerator stack referenced re-gen-sorb as follows:

The curing of coatings in a Mindon gas fired oven FP32 with integral afterburner which exhausts to atmosphere via stack referenced FP32. The oven may also be operated without use of the afterburner, but must discharge to air via stack referenced re-gen-sorb if the afterburner is not in use.

The manufacture of coatings in a mixing room referenced "Product Manufacture" on the attached figure 2 using the following equipment:

- 3 x high speed dispersion machines PM50, PM51 and PM52 which mix the raw materials and which exhaust to re-gen-sorb via bag filter systems referenced PM54
- 1 x Hydramill bead milling machine PM53 which pumps un-ground material from the mixing vessel into the grinding chamber and then into a holding vessel. Emissions are captured by means of a bag filter system referenced PM54
- The weighing and batching of prepared coatings from the holding vessel into sealed containers. Emissions are captured by means of a Trion reverse jet cartridge filter that discharges to re-gen-sorb from referenced PM54

- VOC Abatement

VOC laden air from the process ovens is extracted to the Re- Gen- Sorb abatement plant where it is passed through at 250°C max, which destroys the VOC's. The cleaned air is discharged to air from stack TO1.

The VOC laden air from the spray booths is extracted to the Re- Gen- Sorb abatement plant and passed through the zeolite absorber unit where the VOC's are absorbed from the air. The cleaned air is discharged to air from stack ZB1. The VOC's are then thermally desorbed and destroyed in the gas fired catalytic thermal oxidizer.

- Solvent Reclamation

Solvent containing waste will be processed via a distillation process utilising an ATEX explosion proof rated solvent recovering unit. Waste which is not reclaimable by the process will be stored in closed containers in accordance with the requirements for full or new containers.

## Introductory Notes

This introductory note does not form part of the permit

The following permit is issued under Regulation 13 of the Environmental Permitting (England and Wales) Regulations 2010 (the “EP Regulations”) to operate an installation carrying out one or more of the activities listed in Part A2 and B of Schedule 1 of those regulations, to the extent authorised by the permit.

The Permit includes conditions that have to be complied with.

Techniques include both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned.

## Sector and Process Guidance Notes

This permit has been based on the statutory guidance note published by Department for Environment and Rural Affairs in relation to this installation.

Process Guidance Note for coating of metal and plastic processes PG 6/23 (11).

This permit consists of 16 pages including this explanatory note. The site plan figured are attached and form part of the permit:

Appendix 1 – Site installation boundary

Appendix 2 – Site plan

Appendix 3 – key to site plan

## Annual subsistence charge

The holder of the permit is required to pay an annual subsistence charge, set by the Secretary of State. Failure to pay this fee could result in the revocation of this permit.

## Variations to the permit

This permit may be varied in the future. If at any time the activity or any aspect of the activity regulated by the following conditions, changes such that the conditions no longer reflect the activity and require alteration, the regulator shall be consulted on this process.

## Surrender of the permit

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

## Transfer of the permit or part of the permit

Before the permit can be wholly or partially transferred to another person, a joint application to transfer the permit has to be made by both the existing and proposed holders, in accordance with Regulation 21 of the EP regulations. A transfer will be allowed unless the Regulator considers that the proposed holder will not be the person who will have control over the operation of the installation or will not ensure compliance with the

conditions of the transferred permit.

#### Responsibility under workplace health and safety legislation

This permit is given in relation to the requirements of the EP regulations. It must not be taken to replace any responsibilities you may have under Workplace Health and Safety legislation.

#### Appeal against permit conditions

Anyone who is aggrieved by the conditions attached to a permit can appeal to the Secretary of State for the Environment, Food and Rural Affairs. Appeals must be made in accordance with the requirements of Regulation 31 and Schedule 6 of the EP regulations.

Appeals should be received by the Secretary of State for Environment, Food and Rural Affairs. The address is as follows:

The Planning Inspectorate  
Environment Team, Major and Specialist Casework  
Room 4/04 Kite Wing  
Temple Quay House  
2 The Square  
Temple Quay  
Bristol BS1 6PN

Please note

If an appeal is brought under Regulation 31 (1) (b) and Schedule 6, in relation to the conditions in a permit, the effect of the conditions will not suspend the effect of the conditions appealed against; they must still be complied with.

In determining an appeal against one or more conditions, the Act allows the Secretary of State to quash any condition, subject to appeal or not and direct the Regulator to vary any conditions or to add new conditions accordingly.

End of introductory note

**CONDITIONS**

The requirements of the conditions attached to this permit shall come into effect immediately.

**Emission and Controls**

1. The following concentration limits shall apply to emissions to air

Substance	Emission Provisions	Limit	Monitoring Frequency	Fugitive Emission Value
VOC emitted from RE-GENSORB.	VOC expressed as total mass of organic carbon.	50 mg C/Nm <sup>3</sup>	Annual manual extractive testing	Solvent consumption 15 tonnes or greater, 20% of organic solvent input. Solvent consumption 5- 15 tonnes, 25% of organic solvent input.
VOC emitted from waste gases from drying processes.	VOC expressed as total mass of organic carbon.	50 mg C/Nm <sup>3</sup>		
VOC emitted from any other waste gases.	VOC expressed as total mass of organic carbon.	75 mg C/Nm <sup>3</sup>		
Carbon Monoxide emitted from the RE-GENSORB.	Expressed as a 30 minute mean for contained sources.	100 mg/Nm <sup>3</sup>	Annual manual extractive testing.	
Particulate matter emitted from the RE-GENSORB.		50 mg/Nm <sup>3</sup>	By guarantee supplied by spray booth installer or annual manual extractive testing.	
Oxides of Nitrogen (Nitrogen Dioxide)		100 mg/Nm <sup>3</sup>	Annual manual extractive testing.	
Isocyanates	Expressed as a 30 minute mean for contained sources excluding particulate and expressed as NCO.	0.1 mg/Nm <sup>3</sup>	Annual manual extractive testing.	
Hazard statement H341	The sum of the mass flows of all the discharges of all the compounds causing the hazard statement labeling is greater or equal to 100g/h.	20 mg/m <sup>3</sup> for the mass sum of the individual compounds.	Manual extractive testing.	

2. All other releases to air, other than condensed water vapour, should be free from persistent visible emissions and droplets.
3. Emissions from combustion processes in normal operation should be free from visible smoke. During start up and shut down the emissions should not exceed the equivalent of Ringlemann Shade 1 as described in British Standard BS 2742.
4. The introduction of dilution air to achieve emission concentration limits should not be permitted.
5. There shall be no dust or offensive odour outside the site boundary, as perceived by the regulator.
6. The use of odour masking agents and counteractants is not permitted.
7. Instruments should be fitted with audible and visual alarms, situated appropriately to warn the operator of arrestment plant failure or malfunction.
8. The activation of alarms should be automatically recorded.
9. The relevant maintenance and calibration (or referencing, in the case of indicative monitors) should be recorded.
10. For batch processes, the extractive sampling should take place over a complete cycle of the activity.
11. Should the activity either be continuous, or have a batch cycle that is not compatible with the time available for sampling, then the data required should be obtained over a minimum period of 2 hours in total.
12. For extractive testing, no result of monitoring should exceed the emission limit concentrations specified.

#### **Solvent Emissions Directive**

13. The operator shall prepare and fully implement annually a Solvent Management Plan to demonstrate compliance with the volatile organic compound requirements of this permit by meeting the emission concentration limits detailed in the table of condition 1. (see PG 6/23(11) for the details of the methodology to be used).
14. A report shall be made annually of the total organic solvent consumption including solvents in the coatings, those used for cleaning or other purposes and total discountable solvent output (that is solvents that are removed from the process for reuse or recovery for reuse used in the process) and to demonstrate compliance with the solvent management plan requirements in condition 18. A copy of such report should be forwarded to the Regulator by 31<sup>st</sup> January each year.
15. The operator shall ensure that the use of hazard statements H340, H350, H350i, H360D, or H360F and of halogenated compounds involving hazard statements H341 or H351 are replaced as far as possible, controlled or contained as far as technically and economically feasible or limited as much as possible within the shortest possible time.
16. If there is an increase in use or any additional or new hazard statements are introduced to the process, the operator must inform the regulator of such immediately.

### **Monitoring, investigation and reporting.**

17. The operator should keep records of inspections, tests and monitoring, including all non-continuous monitoring, inspections and visual assessments. Records should be:
  - kept on site;
  - kept by the operator for at least two years; **and**
  - made available for the regulator to examine.
18. If any records are kept off-site they should be made available for inspection within one working week of any request by the regulator.
19. The operator should notify the regulator at least 7 days before any periodic monitoring exercise to determine compliance with emission limit values. The operator should state the provisional time and date of monitoring, pollutants to be tested and the methods to be used.
20. The results of non-continuous emission testing should be forwarded to the regulator within 8 weeks of completion of the sampling.
21. Adverse results from any monitoring activity (both continuous and non-continuous) should be investigated by the operator as soon as the monitoring data has been obtained. The operator should:
  - identify the cause and take corrective action;
  - clearly record as much detail as possible regarding the cause and extent of the problem, and the remedial action taken;
  - re-test to demonstrate compliance as soon as possible; and inform the regulator of the steps taken and the re-test results.
22. In the case of abnormal emissions, malfunction or breakdown leading to abnormal emissions the operator should:  
investigate and undertake remedial action immediately;
  - adjust the process or activity to minimise those emissions; **and**
  - promptly record the events and actions taken.
23. The regulator should be informed without delay, whether or not there is related monitoring showing an adverse result:
  - if there is an emission that is likely to have an effect on the local community; **or**
  - in the event of the failure of key arrestment plant, for example, bag filtration plant or scrubber units.
24. The operator should provide a list of key arrestment plant and should have a written procedure for dealing with its failure, in order to minimise any adverse effects.

### Control techniques

25. The number of start ups and shut downs should be kept to the minimum that is reasonably practical.
26. Where necessary, the nitrogen content of the fuel and other material being burnt should be controlled and if necessary, low NOx burners should be installed.
27. Residues collected by the particulate matter control equipment, referenced SB1 and PM50-PM53 inclusive shall be removed from the equipment on a regular basis. The method of removal shall be through an enclosed system to enclosed containers or bags which shall be emptied into a separate bag or container by methods which minimise the emission of dust. These shall be closed before deposit into an enclosed or covered skip. The equipment shall not be in use when the collection containers are emptied.
28. The incineration temperature of the thermal oxidiser system shall be continuously monitored and recorded. All continuous monitoring readings shall be on display to appropriately trained operating staff.
29. Audible and visual alarms shall be fitted to temperature monitoring equipment to warn of plant failure or malfunction. All activations of alarms shall be recorded.

### VOC and odour control - storage.

30. All potentially odorous waste materials should be stored in suitable closed containers or bulk storage vessels, where appropriate vented to suitable abatement plant.
31. Bunding should be provided for all bulk storage of solvents and shall:
  - be impervious and resistant to the liquids in storage; and
  - be capable of holding 110% of the capacity of the largest storage tank.

### VOC control – handling

32. Inks/coatings containing VOC should be stored in closed storage containers.
33. All measures should be taken to minimise VOC emissions during mixing, i.e. the use of covered or closed mixing vessels.
34. Emissions from the emptying of mixing vessels and transfer of materials should be adequately contained, preferably by the use of closed transfer systems. This may be achieved by the use of closed mobile containers, containers with close-fitting lids, or, preferably, closed containers with pipeline delivery.

### VOC control - cleaning

35. Cleaning operations involving organic solvents should be periodically reviewed, normally at least once every two years, to identify opportunities for reducing VOC emissions (e.g. cleaning steps that can be eliminated or alternative cleaning methods). The regulator should be provided with a report on the conclusions of the review.
36. Application of cleaning solvents should be:

- from a contained device or automatic system when applied directly on to machine rollers; and
- dispensed by piston type dispenser or similar contained device, when used on wipes.

37. When organic solvent is used on wipes:

- pre-impregnated wipes should be held within an enclosed container prior to use;
- where practicable no organic solvent cleaning fluids or significantly less volatile organic solvents cleaning fluids should be used (with or without the addition of mechanical, chemical or thermal enhancements).

38. Where practicable, fixed equipment should be cleaned in-situ and such equipment should, where practicable, be kept enclosed whilst cleaning is carried out.

39. Where equipment is cleaned off-line (such as screens, plates, drums, rollers and coating / ink trays) cleaning should be carried out using enclosed cleaning systems, wherever possible. Enclosed cleaning systems should be sealed to prevent emissions whilst in operation, except during purging at the end of the cleaning cycle. If this is not practicable emissions should be contained and vented to abatement plant where necessary.

40. Residual ink / coating contained in parts of the application equipment should be removed prior to cleaning.

#### VOC control - operational

41. Programmable scales should be used during the mixing and preparation of inks/coatings to reduce organic solvent usage.

42. A programme to monitor and record the consumption of inks/coatings/ organic solvent against product produced should be used to minimise the amount of excess organic solvent /coating /ink used.

#### VOC control - waste

43. All reasonably practicable efforts should be made to minimise the amount of residual organic solvent bearing material left in drums and other containers after use. All organic solvent contaminated waste should be stored in closed containers to be processed for solvent recovery.

44. Prior to disposal, empty drums and containers contaminated with organic solvent should be closed to minimise emissions from residues during storage prior to disposal and labelled, so that all personnel who handle them are aware of their contents and hazardous properties.

45. Nominally empty drums or drums containing waste contaminated with VOC awaiting disposal and / or solvent recovery, should be stored in accordance with the requirements for full or new containers.

46. All reasonably practical efforts should be made to reclaim and reuse solvents for non critical applications from solvent containing waste as described in condition 43 and condition 45.

47. Prior to disposal used wipes and other items contaminated with organic solvent should be placed in a suitably labelled metal bin fitted with a self-closing lid.

### General control

48. Dusty wastes should be stored in closed containers and handled in a manner that avoids emissions.
49. Dry sweeping of dusty materials should not normally be permitted unless there are environmental or health and safety risks in using alternative techniques.
50. Suitable organic solvent containment and spillage equipment should be readily available in all organic solvent handling areas.
51. A high standard of housekeeping should be maintained.
52. Flues and ductwork should be cleaned to prevent accumulation of materials, as part of the routine maintenance programme.

### Management, Training and Maintenance

53. An effective environmental management system should be in place. This ensures the proper use of equipment, proper management, supervision and training for process operations. If effective control of emissions can be demonstrated, BAT should be achieved.
54. All staff whose functions could impact on air emissions from the activity should receive appropriate training on those functions. This should include:
  - awareness of their responsibilities under the permit;
  - steps that are necessary to minimise emissions during start-up and shutdown;
  - actions to take when there are abnormal conditions, or accidents or spillages that could, if not controlled, result in emissions.
55. The operator should maintain a statement of training requirements for each post with the above mentioned functions and keep a record of the training received by each person. These documents should be made available to the regulator on request.
56. The operator should have the following available for inspection by the regulator:
  - a written maintenance programme for all pollution control equipment; and
  - a record of maintenance that has been undertaken.
57. The vapour degreasing equipment shall be maintained in accordance with the manufactures instructions.
58. The best available techniques shall be used to prevent or, where that is not practicable, reduce emissions from the installation in relation to any aspect of the operation of the installation which is not regulated by any other condition of this permit.

59. If the operator proposes to make a change in operation of the installation, he must, at least 14 days before making the change, notify the regulator in writing. The notification must contain a description of the proposed change in operation. It is not necessary to make such a notification if an application to vary this permit has been made and the application contains a description of the proposed change. In this condition 'change in operation' means a change in the nature or functioning, or an extension, of the installation, which may have consequences for the environment

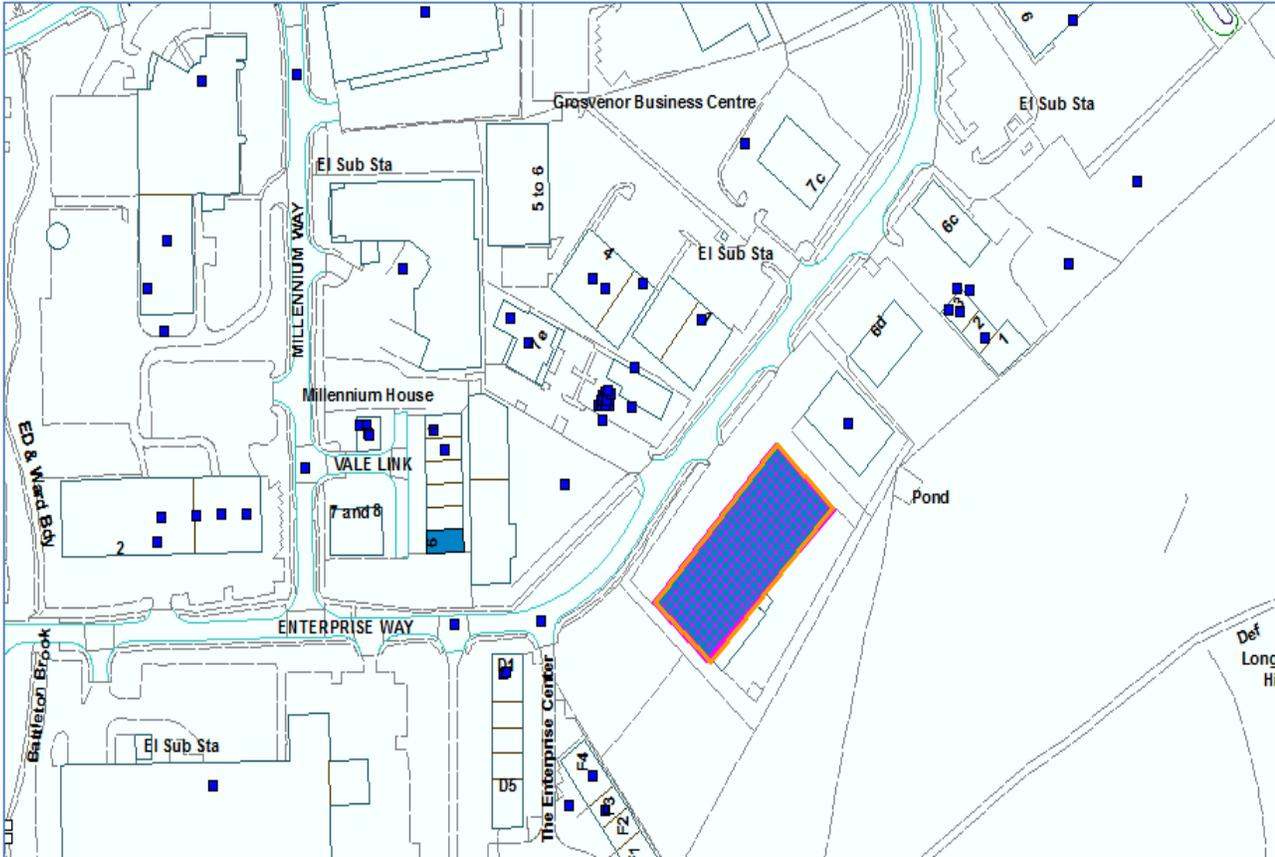
Date: 26<sup>th</sup> September 2016

A handwritten signature in black ink, appearing to read 'Toni Ainscough', followed by a period.

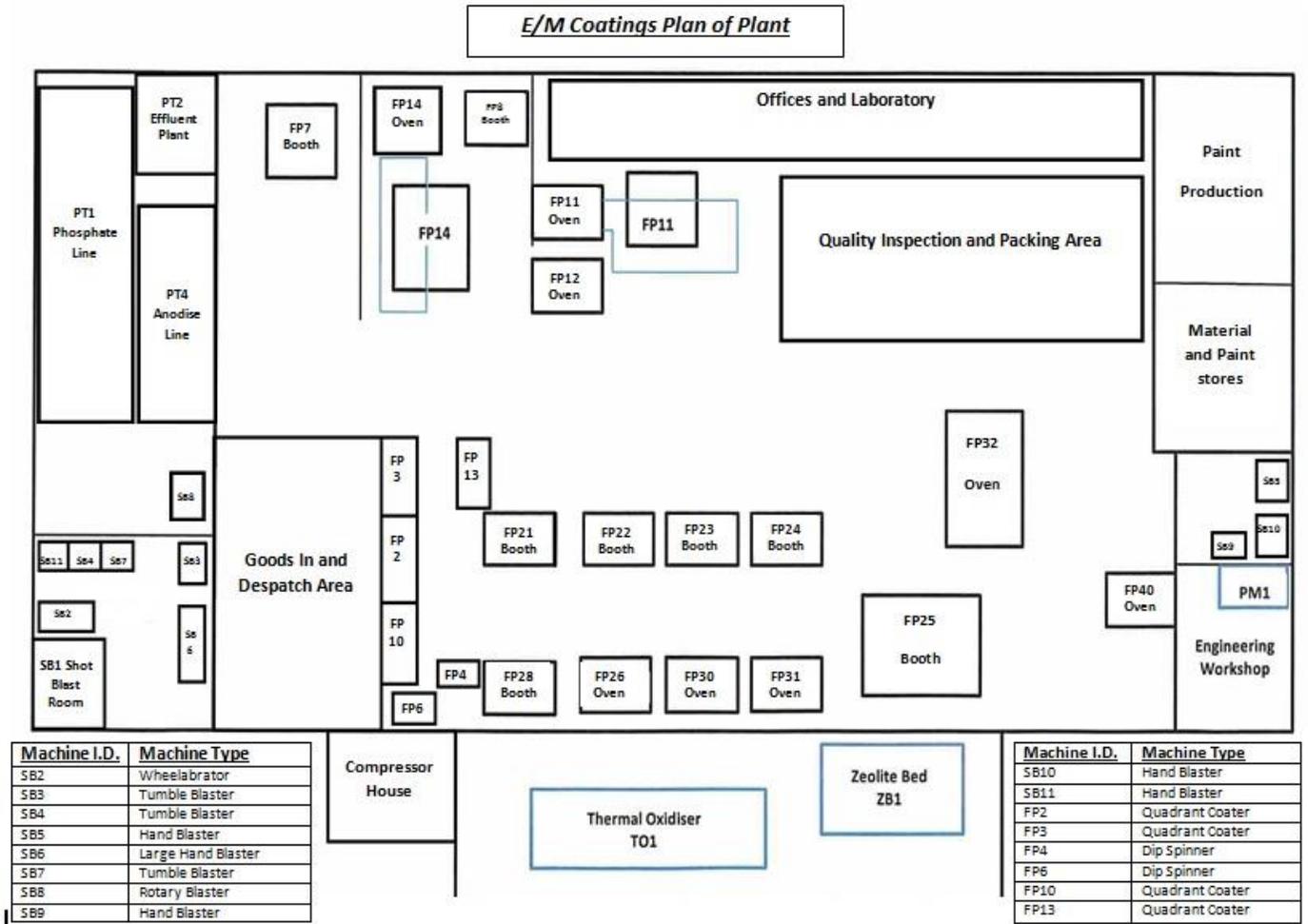
**Toni Ainscough**  
Environmental Health Officer  
Worcestershire Regulatory Services  
An authorised officer of the Council

**Appendix 1 – Site Installation boundary**

Site installation outlined in orange detail in purple



## Appendix 2 – Site Plan



Machine I.D.	Machine Type
SB2	Wheelabrator
SB3	Tumble Blaster
SB4	Tumble Blaster
SB5	Hand Blaster
SB6	Large Hand Blaster
SB7	Tumble Blaster
SB8	Rotary Blaster
SB9	Hand Blaster

Machine I.D.	Machine Type
SB10	Hand Blaster
SB11	Hand Blaster
FP2	Quadrant Coater
FP3	Quadrant Coater
FP4	Dip Spinner
FP6	Dip Spinner
FP10	Quadrant Coater
FP13	Quadrant Coater

**Appendix 3 – Key to site plan.**

Machine	Type	Machine	Type
PM50a	stirrer	FP30a	oven
PM51a	stirrer	FP29a	oven
PM52a	stirrer	FP28a	spraying booth
PM53a	granule breaker	FP240	spraying booth
FP37a	extraction booth	FP23z	spraying booth
PM54a	extraction unit	FP22a	spraying booth
FP400	oven	FP21a	spraying booth
FP320/a	oven	FP13a	quadrant coater
FP25a	spraying booth	FP30	quadrant coater
FP34a	oven	FP20	quadrant coater
FP31a	oven	FP100	quadrant coater
FP4a	dip spin	PT1a	phosphate line
FP6a	dip spin	PT4a	titanium anodising
FP5a	extraction booth	PT3	Vapour de-greaser
SB6 a	hand blaster	FP33z	micro spindle
SB3 a	tumble blaster	FP7aa	spraying booth
SB4 a	tumble blaster	FP8aa	spraying booth (chain on edge)
SB5 a	hand blaster	FP120a	oven
SB7 a	shot blast	FP110/a	over head conveyor
SB2 a	wheelabrator (tumble blaster)		
SB1 a	shot blast		