

**Pollution Prevention & Control Act 1999
Pollution Prevention & Control (England and Wales) Regulations 2000**

Document A: Permit

SUPERIOR PAINT & POWDER COATING LIMITED

Reference Number: PPC/168

Coventry City Council ("the Council") in accordance with Section 10(2) of the Pollution Prevention & Control (England and Wales) Regulations 2000 ("The Regulations") hereby permits:

Superior Paint & Powder Coating Ltd

Whose registered office is:

**Units 2A & 3 Curriers Close
Canley
Coventry
CV4 8AW**

To operate a powder coating activity as prescribed in Section 6.4 Part B of Schedule 1 to The Regulations, at:

**Superior Paint & Powder Coating Ltd
Units 2A & 3 Curriers Close
Canley
Coventry
CV4 8AW**

The permit is subject to the conditions specified in this document, consisting of 17 pages and comprising documents A, B & C, and plans PPC/168/A, PPC/168/B and Appendix 1

Signed

Alan Bennett, Head of Environmental Health
A person authorised to sign on behalf of the Council.

Dated

SCOPE

The installation comprises not just any relevant unit carrying out a Part B activity listed in Schedule 1 to the Regulations, but also directly associated activities which have a technical connection with that activity and which could have an effect on pollution.

All pollutant concentrations shall be expressed at reference conditions of 273K and 101.3kPa, without correction for water vapour content.

Technical Guidance documents used in the preparation of this document:

- Secretary of States Guidance Note PG6/31 (04) – Guidance for Powder Coating, Including Sherardizing and Vitreous Enamelling Dry. ISBN 0-85521-107-5
- Secretary of State's Guidance – General Guidance Manual on Policy and Procedures for A2 and B installations. ISBN 0-85521-028-1

Date Annual Fee Required: 1st April of each financial year

Date For Full Compliance: Date permit issued

Permit Prepared By: Neil Chaplin

Permit Checked By: Daniel Rowson

LEGISLATION

1. Pollution Prevention and Control Act 1999.
2. Pollution Prevention and Control Regulations 2000 as amended, schedule 1 as amended

BRIEF DESCRIPTION OF THE INSTALLATION REGULATED BY THIS PERMIT

Definitions referred to in this permit

- An **Activity** is an industrial activity forming part of an installation. Different types of activity are listed within Schedule 1 of the PPC Regulations and are broadly broken down into industrial sectors. Other “associated” activities may also form part of an installation.
- An **Installation** comprises not just any relevant unit carrying out a B activity listed within Schedule 1 to the PPC Regulations, but also directly associated activities which have a technical connection with a schedule 1 activity and which could have an effect on pollution.
- An **Operator** is the person (eg a company or individual) who has control over the operation of an installation.
- **Volatile organic compound (VOC)** shall mean any organic compound having at 293K a vapour pressure of 0.01 kPa or more, or having a corresponding volatility under the particular conditions of use.
- **Organic solvent** shall mean any VOC which is used alone or in combination with other agents, and without undergoing a chemical change, to dissolve raw materials, products or waste materials, or is used as a cleaning agent to dissolve contaminants, or as a dissolver, or as a dispersion medium, or as a viscosity adjuster, or as a surface tension adjuster, or a plasticiser, or as a preservative.
- **Stack** includes structures and openings of any kind from or through which substances may be emitted to air.
- **Duct** includes enclosed structures through which gaseous substances may be conveyed.
- **Process vent** includes open terminations of ducts.
- **Authorised Officer** shall mean an officer authorised to carry out duties under the Pollution Prevention and Control Act 1999 and subordinate regulations
- **Logbook** shall mean any electronic or paper means of storage of the required information as agreed by the regulator
- **Local Authority** shall mean Coventry City Council
- "m" means metre
- "m/s" means metres per second

The general location of the Permitted Installation is shown and the installation boundary is marked in red on the attached plan PPC/168/A. The internal layout of the production unit and installation stacks are marked on the attached plan PPC/168/B.

Description of Installation

This permit is for an installation undertaking the powder coating of architectural and constructional metalwork.

The fabricated metalwork arrives on site and is loaded into mesh baskets. The metalwork is first acid etched to clean the surface, rinsed and allowed to drip dry. The metalwork is then dipped into a chrome phosphate solution which primes the surface of the metal for powder coating. The metal is rinsed again in deionised water and then oven dried. Any defects may be spot cleaned using solvent or sanded. The metalwork is then hung onto a conveyor line and the powder applied electro statically. Waste overspray powder is collected via the cyclone filter.

When the company are busy, powder coating takes place in the wet spray booth. The metalwork is conveyed between the booth and curing oven and waste powder is collected via the extraction system and filtered via the 3 stage filter prior to emission.

On both lines the coated metalwork is conveyed through the curing oven and at 200°C the powder is converted into a continuous film. This is then allowed to air cool and the final product is packed and dispatched.

Table 1

List of Process Areas within the Installation and Associated Emission Points, Pollutants of Concern and Abatement Plant Required

Row Number	Area/Machinery Identification	Pollutants Emitted	Condition in Permit	Abatement Plant Required
1.	Powder Coating line	Particulate	1.4	Cyclone collection (not emitted to atmosphere)
2.	Powder coating in wet paint spraying booth	Particulate	1.6, 1.7	Dry Filtration
3.	Spot cleaning with organic solvent	VOC	3.7 – 3.10	None

DOCUMENT B

CONDITIONS

All conditions shall have immediate effect unless stated otherwise.

1.0 EMISSION LIMITS AND CONTROLS

- 1.1 All emissions to air shall be free from offensive odour outside the installation boundary.
- 1.2 There shall be no emissions of particulate matter noticeable beyond the installation boundary.
- 1.3 All reasonably practicable steps should be taken to minimise the duration and visibility of emissions during start-up and shut down, and the cooling of the product. In particular:
 - All releases to air, other than condensed water vapour, should be free from persistent visible emissions.
 - All emissions to air should be free from droplets.
- 1.4 Emissions of waste powder from the powder coating line shall be abated via the cyclone collection system and not emitted directly to atmosphere. Powder coating shall only take place when the cyclone collector is turned on and fully functional.
- 1.5 Emissions from combustion processes should in normal operation be free from visible smoke, and in any case should not exceed the equivalent of Ringelmann Shade 1 as described in British Standard BS2742:1969.
- 1.6 Emissions of particulate matter to atmosphere shall not exceed the following levels:
 - Total particulate matter from stack A from powder coating undertaken in spray painting booth as shown on Plan PPC/168/B – 10mg/m³.

- 1.7 Emissions from powder coating in the wet spray booth shall only be extracted via the 3-stage filtration system and not emitted directly to atmosphere. Powder coating shall only take place in the wet spray booth with the extraction system turned on and fully functional.
- 1.8 The introduction of dilution air to achieve emission concentration limits in this Permit is not permitted. Exhaust flow rates should be consistent with the efficient capture of emissions.
- 1.9 The application of powder coating shall use efficient spray equipment which has a high solids transfer rate or an electrostatic application system.
- 1.10 The powder coating line and wet spray booth shall undergo maintenance and servicing inspections in accordance with the recommendations of the manufacturer. Any faults noted shall be remedied as soon as possible and process operations altered until such remedial action has been completed. Service records shall be kept and detail the parts inspected, any faults noted and repairs undertaken. The records shall be kept on site for a minimum of 2 years.

2.0 MONITORING, SAMPLING AND MEASUREMENT OF EMISSIONS

- 2.1 The monitoring required by Conditions 1.1, 1.2, 1.3 & 1.5 shall be undertaken at least once per week whilst powder coating is in progress. Additional checks shall also be made when the wet spray booth is being used for powder coating. The results of this monitoring shall be recorded in a logbook and shall include the time, date and wind direction of when the assessment was made. Any adverse results, together with corrective action taken shall also be recorded. This logbook shall be retained on site for a minimum of 2 years.
- 2.2 To demonstrate compliance with clause 1.5 particulate emissions from stack A as shown on Plan PPC/168/B shall be tested once every 12 months whilst powder coating is taking place. Non-continuous emissions monitoring of particulate matter from the vent of the spray booth should be carried out according to the main procedural requirements of BS ISO 9096:2003, with averages taken over operating periods, excluding start-up and shut down.

- 2.3 At least 14 days prior to the monitoring required by Clause 1.5 the operator shall notify the local authority of the provisional date and time of monitoring and the proposed methods to be used. Guidance on the preparation of such Protocols can be found in the supplementary notes appended to this Permit.
- 2.4 Any adverse results from the monitoring required in 2.2 shall be investigated immediately and the appropriate remedial action undertaken immediately. The cause of the adverse emission and the remedial action taken shall be recorded in detail in the process logbook and be retained for a minimum of 2 years.
- 2.5 The Regulator must be notified about certain events, whether or not there is related monitoring showing an adverse result, and the operator should respond to problems which may have an adverse effect on emissions to air. In the case of abnormal emissions, malfunction or breakdown leading to abnormal emissions, the operator must:
- Investigate and undertake remedial action immediately,
 - Adjust the process or activity to minimise those emissions; and
 - Promptly record the events and actions taken in the premises logbook, and keep on site for a minimum of 2 years.
- 2.6 The Regulator must be informed without delay;
- If there is an emissions that is likely to have an effect on the local community;
- or
- In the event of the failure of key arrestment plant (e.g. bag filtration, plant or scrubber units that vent externally).

3.0 OPERATIONAL CONROLS

- 3.1 Empty powder packaging, waste powder and other dusty wastes (including wastes from the pyrolysis oven) should be stored in closed containers and handled in a manner that avoids emissions prior to disposal.

- 3.2 Waste filters from the powder coating line and wet paint booth shall be stored in sealed bags prior to disposal.
- 3.3 Cleaning of particulate matter arrestment plant, coating application plant, and extract ductwork that may contain finely divided materials, should be carried out so as to minimise emissions into the air.
- 3.4 Cleaning of powder coating application plant, (e.g. during colour changes) should be carried out with the booth extract and arrestment kept running.
- 3.5 All spillages of powder or dusty materials should be cleared as soon as possible by vacuum cleaning. Dry sweeping of dusty spillages shall not be permitted.
- 3.6 A high standard of housekeeping should be maintained in all areas of the factory.
- 3.7 Containers which hold materials that contain organic solvent based materials shall be kept closed whilst not in active use. Empty containers shall remain sealed prior to disposal.
- 3.8 All dirty solvents and other liquid wastes containing volatile organic compounds shall be dispatched for recycling off the premises. Copies of the dispatch receipts shall be retained for 2 years.
- 3.9 Solvent contaminated waste materials shall be stored in suitable sealed containers prior to disposal and clearly labelled so that all persons that handle them are aware of their contents.
- 3.10 Any spillage of organic solvent based material shall be remedied as soon as possible and process operations altered whilst the necessary work is undertaken. Organic solvent containment and spillage equipment shall be readily available in all organic solvent handling areas. Any waste arising from such remedial action shall be treated as per Clause 3.9.
- 3.11 The temperature of the drying, curing and pyrolysis ovens shall be carefully controlled to minimise the emissions of coating breakdown products.

4.0 STACKS, DUCTS AND PROCESS VENTS

- 4.1 Emissions from the wet spray booth shall only be emitted to the atmosphere via stack A, marked on the plan referenced PPC/168/B
- 4.2 Stack A marked on the plan referenced PPC/168/B shall be at least 3m above roof ridge level and have an efflux velocity of 15 m/s at the final discharge point of the stack when the extraction system is in operation.
- 4.3 Stack A marked on the plan referenced PPC/168/B shall not be fitted with caps, cowls or any other restrictive devices, (with the exception of a cone which may be necessary to increase the exit velocity of the emissions) except by prior written approval from the Local Authority.
- 4.4 Flues and ductwork should be cleaned to prevent accumulation of materials, as part of the routine maintenance programme.

5.0 GENERAL OPERATIONS

- 5.1 The operator shall undertake regular cleaning and preventative maintenance including inspection and repair/replacement on all plant and equipment concerned with the emission, capture, transport and control of emissions to atmosphere. Where necessary manufacturers guidelines shall be used to determine the regularity of maintenance. Records of preventative maintenance including inspections and any works undertaken shall be kept on site for a minimum of 2 years and made available to the local authority inspector on request.
- 5.2 Spares and consumables for plant and equipment used in the installation in particular that subject to continual use or wear shall be held on site or be available at short notice. Such plant or equipment shall not be used unless that plant or equipment is capable of working in accordance with the conditions of this permit.
- 5.3 The operator shall maintain a statement of training requirements for each operational post and keep a record of the training received by each person

whose actions may have an impact on the environment. These documents shall be made available to the regulator on request.

The training of all staff with responsibility for operating the activity shall include:

- Awareness of their responsibilities under the Permit; in particular how to deal with conditions likely to give rise to emissions, such as in the event of spillage;
- Minimising emissions on start up and shut down
- Action to minimise emissions during abnormal conditions.

5.4 The operator shall make available on demand and without charge any of the records required to be kept by this permit.

5.5 If there is any intention to change any aspect of the prescribed installation from the description contained in the beginning of this permit, or any other aspect which may affect the substances or concentration or amount of substances being emitted to atmosphere, the operator shall notify the regulator of the proposed changes at least 4 weeks in advance before the changes take place.

5.6 The operator shall put in place some form of structured environmental management system (EMS), whether by adopting published standards (ISO 14001 or the EU Eco Management and Audit Scheme [EMAS]) or by setting up an EMS tailored to the nature and size of the particular process.

DOCUMENT C

RESIDUAL DUTY

In relation to any aspect of the installation not regulated by specific conditions in this permit, then Best Available Techniques shall be used:

For the purposes of the Pollution Prevention and Control (England and Wales) Regulations 2000, “best available techniques” means the most effective and advanced stage in the development of activities and their methods of operation which indicates the practical suitability of particular techniques for providing in principle the basis for emission limit values designed to prevent and, where practicable, generally to reduce emissions and the impact on the environment as a whole; and for the purpose of this definition –

- a) “available techniques” means those techniques which have been developed on a scale which allows implementation in the relevant industrial sector, in the economically and technically viable conditions, taking into consideration the cost and advantages, whether or not the techniques are used or produced inside the United Kingdom, as long as they are reasonably accessible to the operator;
- b) “best” means, in relation to techniques, the most effective in achieving a high general level of protection of the environment as a whole;
- c) “techniques” includes both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned.

Appendix 1

SUPPLEMENTARY NOTES

These notes do not comprise part of the Permit PPC/168 but contain guidance relevant to the Permit.

Inspections and Powers of Entry

Regular inspections will be carried out by officers of the Council (the Local Authority Inspectors) to check and ensure full compliance with the Permit conditions and residual duties. These inspections may be carried out without prior notice.

Under section 108(6) of the Environment Act 1995 authorised Local Authority Inspectors have been granted powers of entry into any premises for the purposes of discharging relevant duties.

Reviews

The Local Authority has a statutory duty to review the permit at least once every 6 years or in the following circumstances set out in regulation 15 of the Pollution Prevention and Control regulations 2000:

- a) The pollution from the installation is of such significance that the existing emission limit values for the permit need to be revised or new emission limit values need to be included in the permit
- b) Substantial changes in BAT make it possible to reduce emissions from the installation or mobile plant significantly without imposing excessive costs; or
- c) Operational safety of the activities carried out in the installation or mobile plant requires other techniques to be used

Health and Safety

This Permit is given in relation to the requirements of the Pollution Prevention and Control (England and Wales) Regulations 2000. It must not be taken to replace any workplace responsibilities the operator has under Health & Safety legislation. Whenever emission limits quoted in this Permit conflict with occupational exposure limits set under the Health and Safety at Work Act 1974 to secure the health, safety or welfare of persons at work, the tighter limit should prevail.

Installations must be operated in order to protect persons at work as well as the environment. In achieving conditions in this Permit the operator must not adopt any course of action that would put at risk the health, safety or welfare of persons at work.

Other Statutory Requirements

This Permit does not detract from any other statutory requirement, such as the need to obtain planning permission, hazardous substances consent, discharge consent from the Environment Agency, building regulations approval, or a waste disposal licence.

This Permit does not authorise a contravention of any other enactment or any order made, granted or issued under any enactment, nor does it authorise a contravention of any rule or breach of any agreement.

The Operator is advised to consult the relevant Planning Department regarding changes that may be required as a result of this Permit (e.g. stack heights) as they may require planning permission.

Transfer of Permits

Where the operator of an installation wishes to transfer, in whole or in part, his permit to another person, the operator and the proposed transferee shall jointly make an application to the regulator to effect the transfer. Such an application shall be accompanied by the permit and any fee prescribed in respect of the transfer.

In the case of partial transfer, where the original operator retains part of the permit, the application must make clear who will retain control over the various parts of the installation. The application must include a plan identifying which parts of the site and which activities the operator proposes transferring.

The local authority will then determine whether to allow the transfer within a two-month period, unless the local authority and the applicants agree a longer period. Where the local authority approves the transfer, the transfer will take effect from the date requested by the operator or a date that may be agreed by the local authority and the applicants.

Variation to Permits

Variation to permits may be initiated either by the local authority or the operator, either in response to changes in the operation of an installation or if new conditions are needed to deal with new matters. Variations may be required in response to the following.

- Change of operation of the installation. (The operator shall notify the local authority under Section 16(1) of the Regulations.)
- In response to the findings of a periodic review of conditions.
- In response to the findings of an inspection.
- New or revised sector guidance notes

The operator should apply to the Local Authority in order to vary a permit under regulation 17 of the Regulations. The application must be in writing and, in accordance with Part 1 of Schedule 7 to the Regulations contain:

- The name, address and telephone number of the operator.
- The address of the installation.
- A correspondence address.

- A description of the proposed changes.
- An indication of the variations the operator would like to make.
- Any other information the operator wants the authority take account of.

Substantial Change

A substantial change means, in relation to an installation, a change in operation, which in the opinion of the local authority may have significant negative effects on human beings or the environment.

Where the local authority deems that a proposed variation constitutes a substantial change, the operator will be informed of the process to follow.

Noise

This Permit does not include reference to noise. Statutory noise nuisance is regulated separately under the provisions of Part III of the 1990 Act.

Appeals

An Appeal can be made against the conditions in, or variations to this Permit as per Part IV of the Regulations. Appeals are made to the Planning Inspectorate who acts on behalf of the Secretary of State. Appeals against conditions within a Permit must be submitted within 6 months of the date of issue of the permit. Appeals against variation notices must be submitted within 2 months of the date of issue of the notice. Appeals should be despatched on the day they are dated and sent to:

The Planning Inspectorate
Environmental Appeals Administration
Room 4/19 – Eagle Wing
Temple Quay House
2 The Square
Temple Quay
BRISTOL
BS1 6PN

HMSO Publications

All HMSO publications can be ordered by telephone on Tel: 0870 600 5522, Fax: 0870 600 5533 or e-mail: book.orders@tso.co.uk

Emission Monitoring Protocol

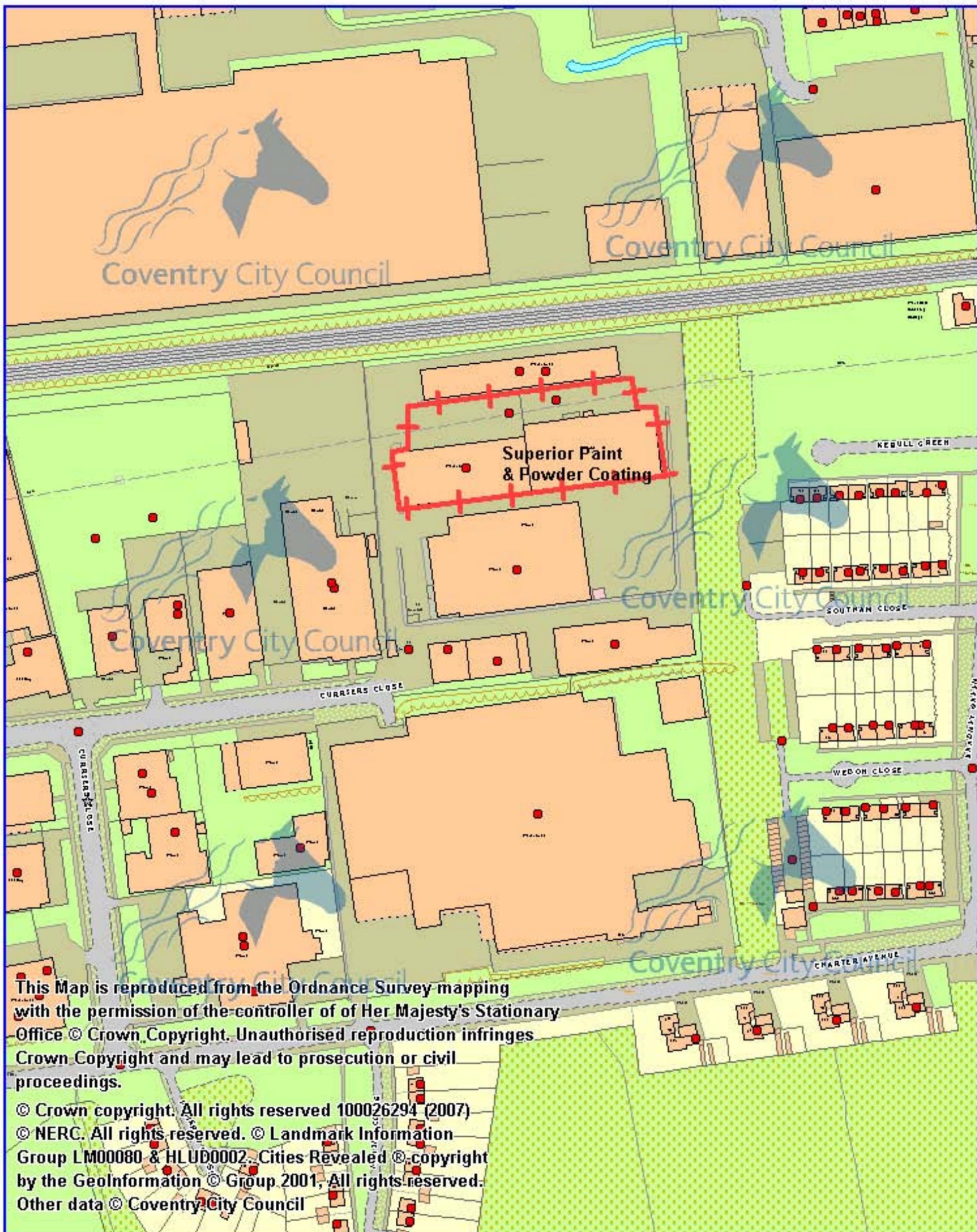
The documented procedure by which reliable and comparable results are obtained from measurements at source is known as a Protocol.

Protocols ensure that the sampling procedures are carried out correctly and that the results obtained accurately characterise the process.

The main components of a Protocol are as follows:-

1. Calibre and quality of the sampling team.
2. A reference measurement method (standard methods may not always be available)
3. A standard methodology setting out:
 - Health and safety considerations
 - Pollutants of interest
 - Plant operating conditions required
 - Selection and location of sampling position
 - Sampling characteristics (e.g. isokinetic etc) and techniques
 - Sampling frequency
 - Sampling duration
 - Number of samples
 - Type (including make and model), condition and suitability of sampling equipment
 - Required accuracy
 - Variability of emissions
 - Analytical methods including laboratory competence and NAMAS accreditation certificate copy for each pollutant of interest
 - Analytical precision
 - Procedures to be adopted if standard methods unavailable
 - Calibration certificate(s) for sampling equipment
 - Quality Control and Quality Assurance procedures
 - Presentation of results and associated information.

PPC 168 Plan A - Superior Paint & Powder Coating, Process Boundary



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2005-2006
Effective Environmental Health

PPC/168 Plan B Superior Paint & Powder Coating

