

PERMIT AUTHORISATION REFERENCE: PPC / 162  
Benford Ltd

Pollution Prevention and Control Act 1999  
Pollution Prevention and Control (England and Wales)  
Regulations 2000 as amended

Process Address	Benford Ltd Terex Compact Equipment Central Boulevard Prologis Park Keresley Coventry CV6 4BX
Process Type	Coating of shot blasted metal
Current Operator	Benford Ltd 252 Upper Third Street Grafton Gate East Central Milton Keynes Buckinghamshire MK19 1DZ
Previous Operator	N/A
Date of Application	5 <sup>th</sup> December 2002
Date Permit Issued	October 2005

**POLLUTION PREVENTION & CONTROL ACT 1999  
POLLUTION PREVENTION & CONTROL (ENGLAND AND WALES)  
REGULATIONS 2000**

**DOCUMENT A : PERMIT**

**Benford Ltd**

Reference Number **PPC/162**

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:

**Benford Ltd**

Whose registered office is:

**252 Upper Third Street  
Grafton Gate East  
Central Milton Keynes  
Buckinghamshire  
MK19 1DZ**

**Registered in England No. 494347**

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

**Benford Ltd  
Terex Compact Equipment  
Central Boulevard  
Prologis Park  
Keresley  
Coventry  
CV6 4BX**

The permit is subject to the conditions specified in this document consisting of 15 pages and comprising documents A, B and C, plans PPC/162/A, PPC/162/B, PPC/162/C, PPC/162/D and Appendix 1.

Signed.....

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

Dated .....24/10/05.....

## **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 PG 6/23 – Coating of Metal and Plastic
- 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 Wait  
Permit Checked By: Michelle Muller

## **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 (e.g. 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 Process is shown on the attached plan PPC/162/A. The Installation boundary is marked in red on the attached plan PPC/162/B. The internal layout of the paint shop and store is shown on the attached plans PPC/162/C and PPC/162/D.

## **Description of Installation**

This permit is for the application of paint to shot-blasted welded steel fabrications.

Paints are stored within the areas marked (vi) on Plan D marked paint store. The mixing of paint is conducted in the paint mixing booth marked (v) on Plan D marked paint mix.

Multi stage pre-cleaning of shot blasted steel fabrications prior to coating occurs in the main paint plant using aqueous phosphate cleaner.

The application of coatings to components using HVLP, electrostatic and air-assisted airless spray guns in the primer spraybooth marked (i) on Plan B and the topcoat spraybooth marked (ii) on Plan B.

Drying off of liquid residues from component surfaces occurs in dry-off and flash-off enclosures. The oven drying of components in the top coat oven marked (iii) on Plan B.

Preparation and spraying of painted surfaces in the offline preparation and repair spraying facility, incorporating two booths marked (iv) on Plan C.

**Table 1**

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

Substance	Source	Emission limit / provision	Type of monitoring	Monitoring frequency
Particulate matter	Plant extraction system stacks	50 mg /Nm <sup>3</sup> as 30 minute mean for contained sources	See Section 2	Annually
VOC	Plant extraction system stacks	Comply with Solvent Emissions Regulations	See Section 6	Solvent Management Plan submitted annually

## **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, as perceived by the Local Authority inspector.
- 1.2 There shall be no emissions of particulate matter noticeable beyond the process boundary.
- 1.3 The emission limits and provisions shown in Table 1 shall be complied with.
- 1.4 The reference conditions for emission limits are 273.15K, 101.3kPa, without correction for water vapour content, unless stated otherwise.
- 1.5 The introduction of dilution air to achieve the emission concentration limits in this authorisation is not permitted. Exhaust flow rates should be consistent with the efficient capture of emissions.

#### **2.0 MONITORING, SAMPLING AND MEASUREMENT OF EMISSIONS**

- 2.1 The operator shall keep a logbook containing records of inspections, tests and monitoring, including all non-continuous monitoring, inspections and visual assessments. The logbook shall be kept on site and made available for the regulator to examine. Records shall be kept by the operator for at least two years.
- 2.2 The operator shall notify the regulator at least 7 days before any periodic monitoring exercise to determine compliance with emission limit values. The operator shall state the provisional time and date of monitoring, pollutants to be tested and the methods to be used.
- 2.3 The results of non-continuous emission testing should be forwarded to the regulator within 8 weeks of the completion of the sampling.
- 2.4 Adverse results from **any** monitoring activity (both continuous and non-continuous) shall be investigated by the operator as soon as the monitoring data has been obtained/received. The operator shall:
  - identify the cause and take corrective action;
  - record as much detail as possible regarding the cause and extent of the problem, and the action taken by the operator to rectify the situation;
  - re-test to demonstrate compliance as soon as possible; and
  - notify the regulator.
- 2.5 In the case of abnormal emissions, malfunction or breakdown leading to abnormal emissions the operator must:
  - investigate immediately and undertake corrective action;
  - adjust the process or activity to minimise those emissions; and

- promptly record the events and actions taken.
- 2.6 The regulator must be informed without delay if there is an emission that is likely to have an effect on the local community.
  - 2.7 All appropriate precautions must be taken to minimise emissions during start-up and shutdown.
  - 2.8 The introduction of dilution air to achieve emission concentration limits must not be permitted.
  - 2.9 Dilution air may be added for waste gas cooling or improved dispersion where justified, but this must not be considered when determining the mass concentration of the pollutant in the waste gases.
  - 2.10 Calibration and compliance monitoring shall meet the following requirements as appropriate. No result shall exceed the emission concentration limits specified, except where either:
    - (a) data is obtained over at least 5 sampling hours in increments of 30-minutes or less; or
    - (b) at least 20 results are obtained where sampling time increments of more than 30-minute are involved; AND in the case of (a) or (b)
    - (c) no daily mean of all 30-minute mean emission concentrations shall exceed the specified emission concentration limits during normal operation (excluding start-up and shut-down); and
    - (d) no 30-minute mean emission concentration shall exceed twice the specified emission concentration limits during normal operation (excluding start-up and shut-down).
  - 2.11 Calibration and compliance monitoring for all substances shall be carried out using the following method, or a method which can be demonstrated to be equivalent to that stated: Non-continuous emissions monitoring of particulate matter shall be carried out according to the main procedural provisions of BS ISO 9096:2003, with averages taken over operating periods excluding start-up and shutdown.
  - 2.12 Where non-continuous quantitative monitoring is required, the frequency may be varied. Where there is consistent compliance with emission limits, regulators may consider reducing the frequency. When determining “consistent compliance” factors to consider include:
    - (a) the variability of monitoring results, for example, results which range from 15 – 45 mg/Nm<sup>3</sup>, against an emission limit of 50 mg/Nm<sup>3</sup> might not qualify for a reduction in monitoring; and
    - (b) the margin between the results and the emission limit, for example, results which range from 45 - 50 mg/Nm<sup>3</sup> when the limit is 50 mg/Nm<sup>3</sup> might not qualify for a reduction in monitoring.
  - 2.13 Consistent compliance shall be demonstrated using the results from at least:

- three or more monitoring exercises within two years; or
  - two or more monitoring exercises in one year supported by continuous monitoring.
- 2.14 Regulators, when considering reducing non-continuous monitoring frequencies shall take any significant process changes, which might have affected the monitored emission, into account.
- 2.15 The frequency of non-continuous quantitative monitoring shall be increased, for example, as part of the commissioning of new or substantially changed activities, or where emission levels are near to or approach the emission concentration limits.
- 2.16 Care is needed in the design and location of sampling systems in order to obtain representative samples. The operator shall ensure that adequate facilities for sampling are provided on vents or ducts. Sampling points on new plant shall be designed to comply with the British or equivalent standards.

### **3.0 OPERATIONAL CONTROLS**

- 3.1 Spraying shall only be carried out in the spraybooths. This shall be achieved by a closed delivery system; this system must be in proper working order.
- 3.2 The cleaning and testing of any spray guns and other equipment shall only be carried out in spraybooths and the mixing room. This shall only be undertaken whilst the extraction system is in operation and in proper working order. Spray out shall be collected into a separate receptacle and not sprayed directly into the spraybooth.
- 3.3 The mixing of paint shall only be carried out in the paint mixing room.
- 3.4 The spraying of paint in the spray booths shall only be carried out whilst the extraction system is in operation.
- 3.5 All full and partially full containers, which hold or have held materials consisting of organic solvents, shall be lidded whilst not in use.
- 3.6 The application equipment for all coatings shall be capable of achieving a transfer efficiency of solids of at least 65%.
- 3.7 All solvent-based materials shall be stored in sealed containers impervious and resistant to all chemicals stored within them.
- 3.8 All full, partially full and nominally empty containers which hold or have held materials which contain organic solvents must be stored in the paint mixing room and have lidded containers or must be stored in a covered skip.

### **4.0 STACKS, DUCTS AND PROCESS VENTS**

- 4.1 The following stacks shall be 3m above the roof level and achieve a minimum discharge efflux velocity of 15m/s at the final discharge point. Chimney or process vents shall not be fitted with any restriction at the final opening, for example, a plate, cap or cowl:

Stacks serving primer spraybooth marked (i) on Plan B;  
Stacks serving topcoat oven marked (iii) on Plan B;  
Stacks serving topcoat spraybooth marked (ii) on Plan B.

## **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 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 shall 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 Staff at all levels shall receive the necessary training and instruction in their duties relating to control of the activities and emissions to air. Records shall be kept which details all relevant training provided to staff, and these records shall be kept for a minimum of 2 years.
- 5.4 Any malfunction of plant or spillage of solvent-based materials shall be remedied as soon as possible and process operations altered whilst the necessary work is undertaken.
- 5.5 Any incident likely to give rise to adverse atmospheric emissions or emissions that may have an impact on the local community shall be notified to the local authority immediately, and the details of incident including remedial action taken recorded in the process log book.
- 5.6 The operator shall make available on demand and without charge any of the records required to be kept by this permit.
- 5.7 Operators 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.
- 5.8 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.

## **6.0 COMPLIANCE WITH SOLVENT EMISSIONS REGULATIONS**

- 6.1 The operator shall identify products or materials that are/contain risk phrased substances/materials R40, R45, R46, R49, R60 and R61 and formulate and implement a timetable to replace, control and limit designated risk phrase materials as soon as possible, as defined and agreed by the Local Authority.
- 6.2 The operator shall demonstrate compliance with the Solvent Emissions (England & Wales) Regulations 2004 in relation to the coating operation by one of the following methods:
- 1) By 31<sup>st</sup> October 2007 achieve the following VOC emission limits expressed as total excluding particulate matter over a 30 minute mean:

Release Point	Emission Limit
Waste gases from oxidation plant	50 mg/Nm <sup>3</sup>
Waste gases from turbines reciprocating engines or boilers used as abatement plant	150 mg/Nm <sup>3</sup> till 2013 50 mg/Nm <sup>3</sup> after 2013 for drying processes 50 mg/Nm <sup>3</sup> after 2013 for other processes
Waste gases from drying processes	50 mg/Nm <sup>3</sup>
Any other waste gases	75 mg/Nm <sup>3</sup>

Fugitive Emission Limit Value = 20 % of solvent input

**Or**

- 2) The use of a Solvent Reduction Scheme to demonstrate the achievement of a Target Emission which is calculated by identifying the total amount of solids used in coating material in a 12 month period (all ingredients other than water and organic solvents should be assumed to form part of the solid coating). A Solvent Management Plan shall be submitted annually to demonstrate compliance. The Target Emission is as follows:

Existing Installations at 31/10/05	Existing Installations at 31/10/07
Total Mass of Solid x 0.56	Total Mass of Solid x 0.37

- 6.2 The operator must comply wholly with the Solvent Emission Regulations for the compliance route the operator chooses. The requirements of the Solvent Emissions Regulations are detailed in Process Guidance Note 6/23 (04).
- 6.3 The flexibility inherent in the reduction scheme compliance route shall not be taken to encourage:
- the replacement of a low or no organic solvent coating system with a conventional high organic solvent coating system; or
  - the introduction of such a conventional high organic solvent coating system into a activity; or
  - the introduction of such a conventional high organic solvent coating system onto a product where it was not in use before; or

- the introduction of high solids formulations which have no beneficial effect on the product but increase the solids used, except where a reduction in the overall VOC emissions can be demonstrated.
- 6.4 The regulators shall be given prior notification of any proposal to introduce such systems described in 6.3, which shall include reasons why lower organic solvent systems are not considered technically appropriate or practicable.
- 6.5 Written notification that the operator wishes to comply with the solvent reduction scheme shall be sent to the Local Authority by 31st October 2005.

## **RESIDUAL DUTY**

In relation to any aspect of the process 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.

## **SUPPLEMENTARY NOTES**

These notes do not comprise part of the Permit PPC/162 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.

Installation 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](mailto:book.orders@tso.co.uk)

### **Emission Monitoring Protocol**

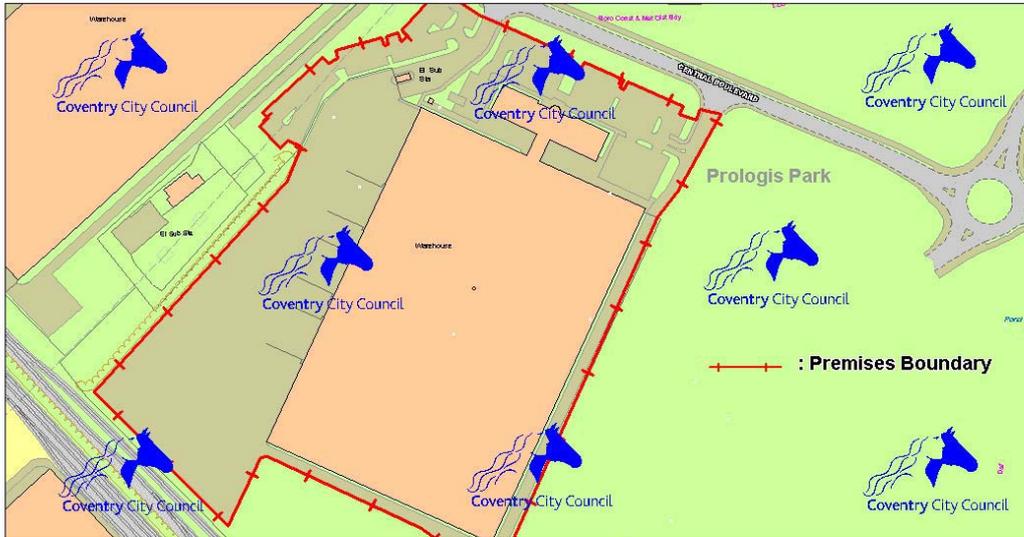
The documented procedure by which reliable and comparable results are obtained from measurements at source is known as a Protocol.

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.

**Plan PPC/162/A Premises Boundary of Benford Ltd.**



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City Services Directorate,  
 Environmental Health,  
 Environmental Protection,  
 Broadgate House, Broadgate  
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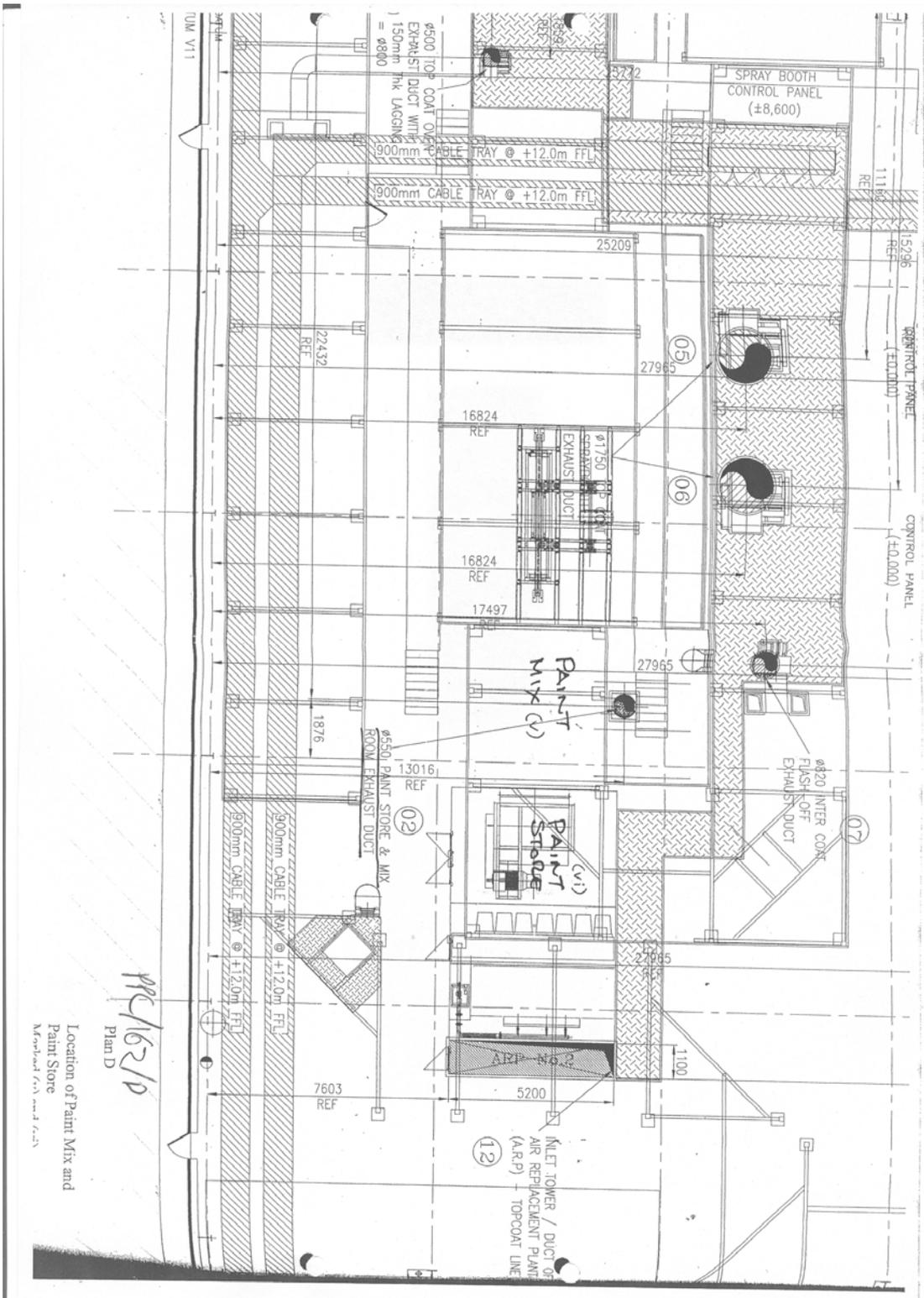
Tel: 024 7683 1832



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Location of Paint Mix and  
Paint Store  
Approved for use

PPC/162/D  
Plan D