043

APPLICATION FOR AUTHORISATION UNDER SECTION 6 OF THE ENVIRONMENTAL PROTECTION ACT 1990 TO OPERATE A PRESCRIBED PROCESS FOR AIR POLLUTION CONTROL BY LOCAL AUTHORITIES

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UNDER SECTION 6
OF THE
ENVIRONMENTAL PROTECTION ACT 1990
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AIR POLLUTION CONTROL BY LOCAL AUTHORITIES

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THE ENVIRONMENTAL PROTECTION (PRESCRIBED PROCESSES AND SUBSTANCES) REGULATIONS 1991, SI 472
THE ENVIRONMENTAL PROTECTION (APPLICATIONS, APPEALS AND REGISTERS) REGULATIONS 1991, SI 507

APPLICATION FOR AUTHORISATION UNDER SECTION 6 OF THE ENVIRONMENTAL PROTECTION ACT 1990

1. Process for which authorisation is sought

COATING

OPERATIONS:- PAINT SPRAY; METAL SPRAY; ELECTROPLATING

2. (a) name, address and telephone number of applicant* (or address of applicant's principal place of business—for mobile plant)

AERO-SPACE GROUP
ROLLS-ROYCE plc
PO BOX 17
PARKSIDE, COVENTRY CV1 2LZ 0203 - 227666

(b) name, number and registered office of applicant company* *(if applicable)*

ROLLS-ROYCE plc
65 BUCKINGHAM GATE
LONDON SW1E 6AT
1003142

*the person/consultant who will operate the process, not eg the person/consultant who is writing the application on the operator's behalf

(c) address for correspondence (if different from a) or b) above)

AEROSPACE GROUP
ROLLS-ROYCE plc
ANSTY, COVENTRY. CV7 9JR
F.T.A.O. MR NJH BALLANTINE PROCEDURES MANAGER
TEL: 0203 623048

3. Name and address of premises where process is or will be carried on *(not applicable to mobile processes)*

AEROSPACE GROUP
ROLLS-ROYCE plc
PARKSIDE
COVENTRY CV1 2LZ

4. Name of local authority in whose area the process will be operated (or local authority area in which the operator has his principal place of business—for mobile plant)

COVENTRY CITY COUNCIL

5. List of maps or plans enclosed with the application showing the location of the premises where the process will be carried on.

(i) MAP SHOWING LOCATION OF SITE
(ii) SITE PLAN - DRAWING 'A'
} SECTION 2

Where the process is or will be carried on on only part of the premises whose address is given at 3 above, *either* describe which part of the premises *or* list the plan(s) which identifies these parts.

DRAWING 'B' - WET SPRAY FACILITY
DRAWING 'C' - METAL PROCESS FACILITY
DRAWING 'D' - METAL SPRAY FACILITY

6. List of attached documents comprising part of the application **

SECTION 1 - EMISSIONS
SECTION 3 - PROCESS DESCRIPTION
SECTION 4 - EXHAUST EMISSIONS TO ATMOSPHERE (TABLES)
SECTION 5 - METHODOLOGY
SECTION 6 - ACTION PLANS
SECTION 7 - PROPOSALS FOR MONITORING, SAMPLING AND MEASUREMENT OF EMISSIONS TO THE EXTERNAL FACTORY ATMOSPHERE
SECTION 8 - ASSESSMENT OF ENVIRONMENTAL CONSEQUENCES

use continuation sheet if necessary)

**Regulation 2 of the Environmental Protection (Applications, Appeals and Registers) Regulations 1991 requires that all applications must include the following information (for guidance on these requirements see General Guidance Note No 3—"Secretary of State's Guidance: Applications and Registers", HMSO, 1991: ISBN 0 11 752425 5, £4):

—a description of the prescribed process
—a list of prescribed substances (and any other substances) which might cause harm if released into the air) which will be used in connection with, or will result from the carrying on of the prescribed process
—a description of the techniques to be used for preventing releases into the air of prescribed substances, for reducing such substances to a minimum and for rendering harmless any substances that are released
—details of any proposed release of such substances into the air and an assessment of the environmental consequences
—proposals for monitoring any release of such substances, the environmental consequences or any such release and the use of techniques for preventing etc releases
—the matters on which the applicant relies to establish that the objectives mentioned in section 7(2) of the Act will be achieved and that he will be able to comply with the condition implied by section 7(4) of the Act.

The applicant may also supply any other information he wishes the local authority to take into account in considering his application.

7. Name of newspaper in which it is proposed to advertise the application

COVENTRY EVENING TELEGRAPH

8. Fee enclosed *(cheques to be made payable to* COVENTRY CITY *Council)*

£.900

I hereby certify that all the information contained in this application is, to the best of my knowledge, correct

[redacted] (signature)

NJH BALLANTINE (name in BLOCK CAPITALS and

PROCEDURES MANAGER capacity in which signing)

28/9/92 (date)

SECTION 1 - EMISSIONS

1. Emissions from Process

Refer to emission inventory tables (Section 4)

There is very limited use of paints which contain bonded isocyanates. These paints were not in use at the time of monitoring so further monitoring if necessary, of emissions will be done.

Note:- There are site closure plans for the end of 1994.

2. Sources of emissions

2.1 Paint spray and associated activities:-
Vapour degreasing, abrasive blasting, spray booths and stoving ovens.

2.2 Metal spraying and associated activities:-

Vapour degreasers, abrasive blasting, spray booths.

2.3 Plating and associated activities:-

Vapour degreasing, pre-plating solutions, post-plating solutions, abrasive blasting.

3. Approximate annual consumption

Due to the work load, the use of the plant is varied and intermittent, as a result the type and quantities of substances used vary considerably.

	Tonnes/Year
Total Solvents	65

/Continued ...

SECTION 1 - EMISSIONS

4. Relevant Emission limits

4.1 Secretary of State's Guidance - Coating of metal and plastic PG6/23 (92). February 1992.

The specified emission concentration limits expressed as 15 minute mean emission concentrations are -
Total Particulate Matter - 50 mg/m3.

Volatile organic compounds (expressed as total carbon excluding particulate matter) other than from coating mixing vessels, organic solvent cleaning or degreasing operations or chemical stripping operations 50 mg/m3.

Isocyanates (expressed as total NCO group excluding particulate matter) - 0.1 mg/m3.

Volatile organic compounds (expressed as total carbon excluding particulate matter) from coating mixing vessels, organic solvent cleaning or degreasing operations or chemical stripping operations -

a) the individual source gives rise to a mass emission of non-chlorinated volatile organic compounds which exceed 1 Kg in any 8 hour period - 50 mg/m3.

b) the individual source gives rise to a mass emission of chlorinated volatile organic compounds which exceed 1% of the total solvent holding capacity of the equipment in any 8 hour period - 20 mg/m3.

4.2 Secretary of State's Guidance - Metal and other thermal spraying processes PG6/35(92) February 1992.

The specified emission concentration limits are:
Total particulate matter 50mg/m3
- of which the contribution of the following metals and their oxides where present should not exceed (as metals) -

Chromium	15	mg/m3
Nickel	15	mg/m3
Copper	7.5	mg/m3
Cobalt	3	mg/m3
Lead	5	mg/m3

SECTION 2 - MAPS AND PLANS

a) Map of Local Area - showing location of Aerospace Group, Rolls-Royce plc, Coventry.

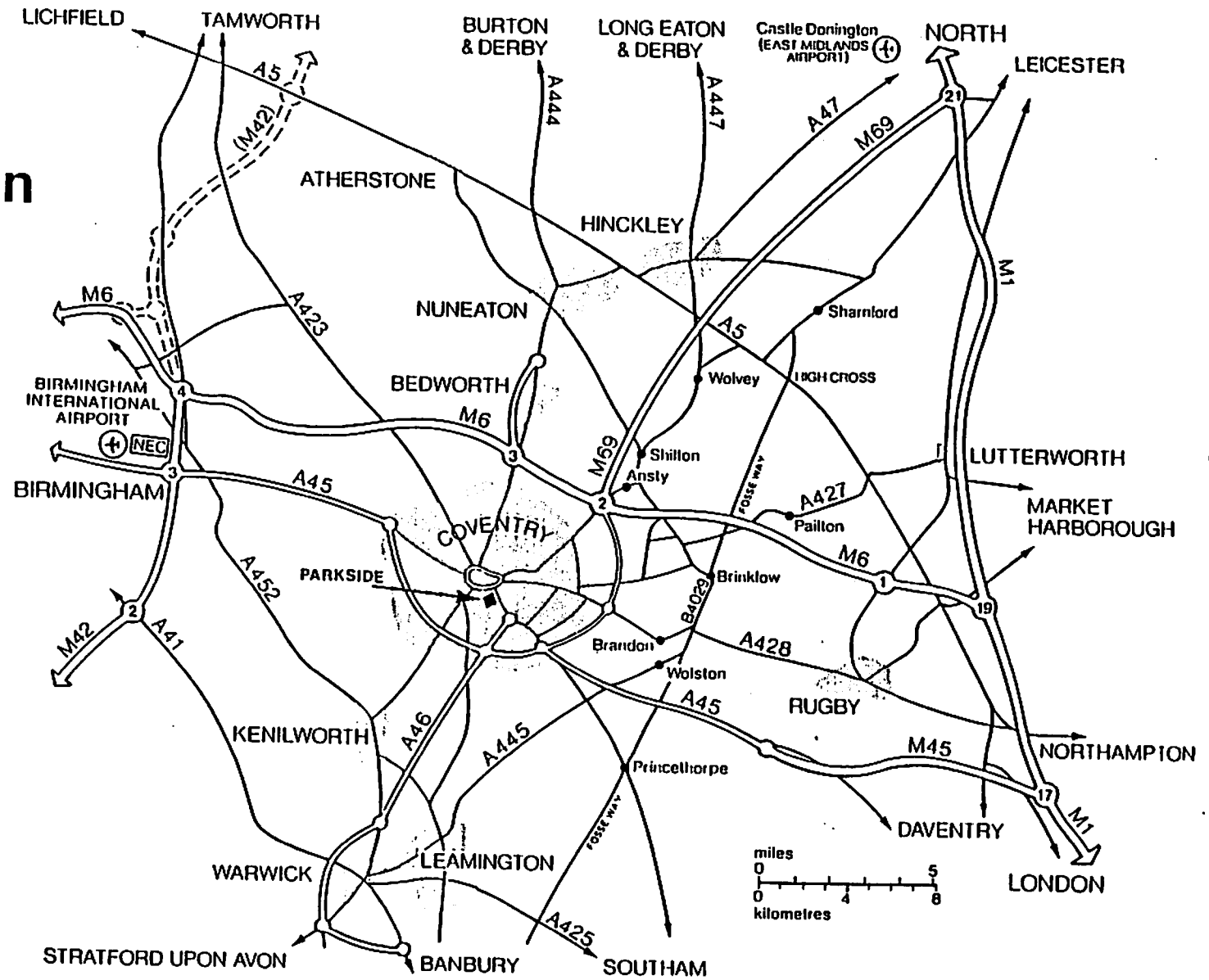
b) Site Plan, Drawing 'A':- Coventry:- showing in 'Pink' areas 'B' and 'C' and 'D' which are shown on separate drawings thus:-

Drawing 'B' - Wet Spray Facility

Drawing 'C' - Metal Process Facility

Drawing 'D' - Metal Spray Facility

Parkside location



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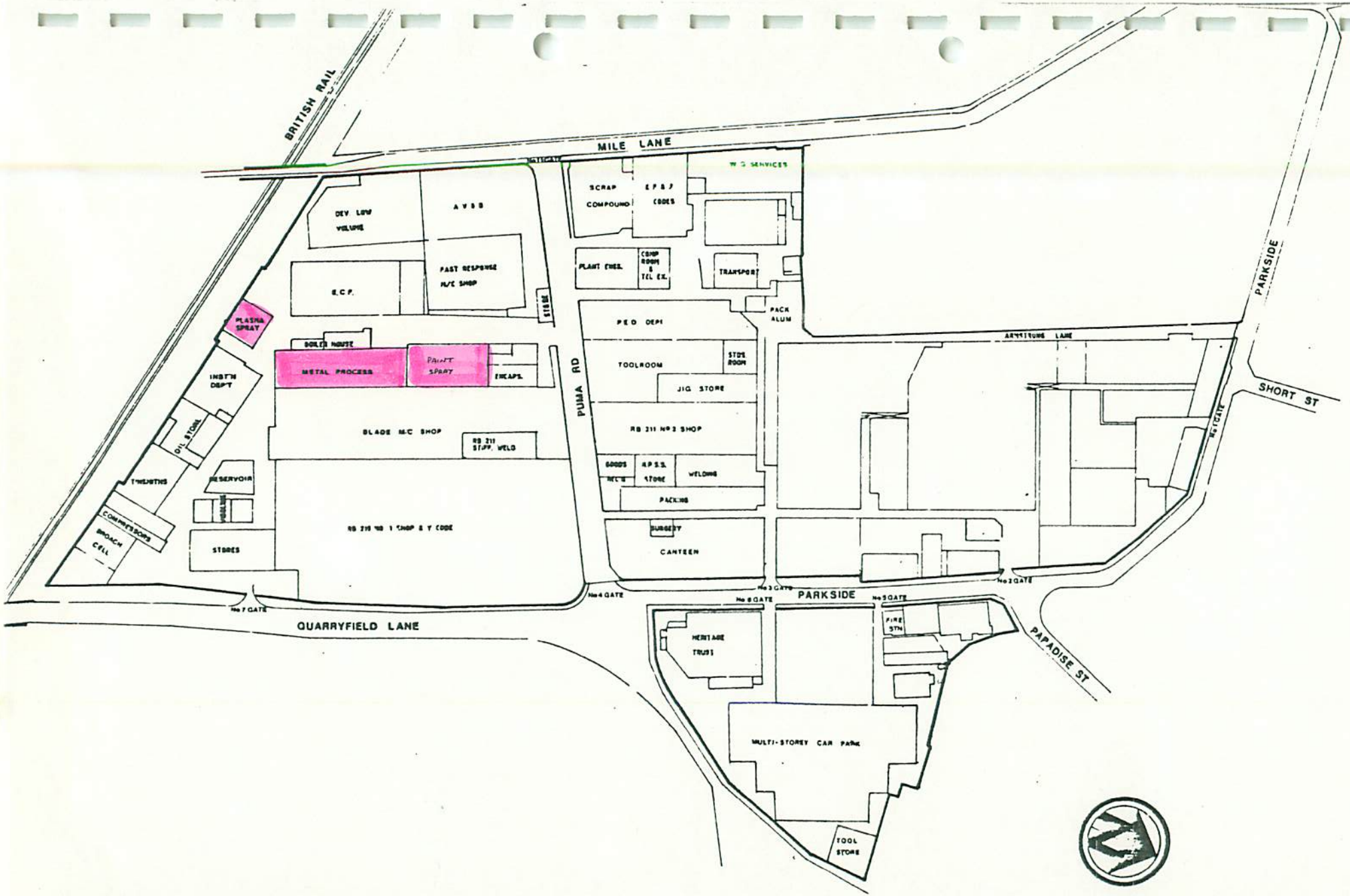
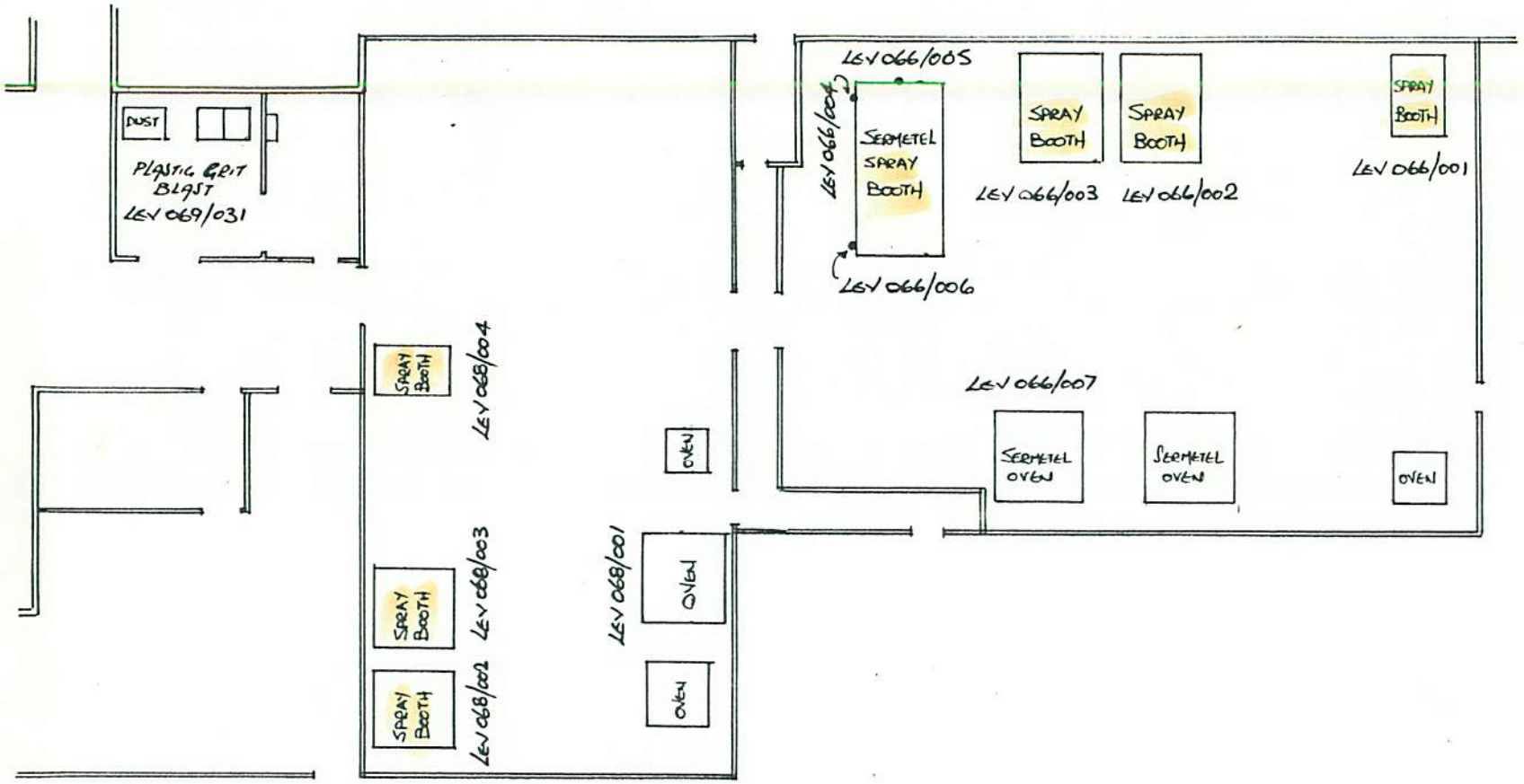


ROLLS-ROYCE plc
Parkside

DRG 'A'

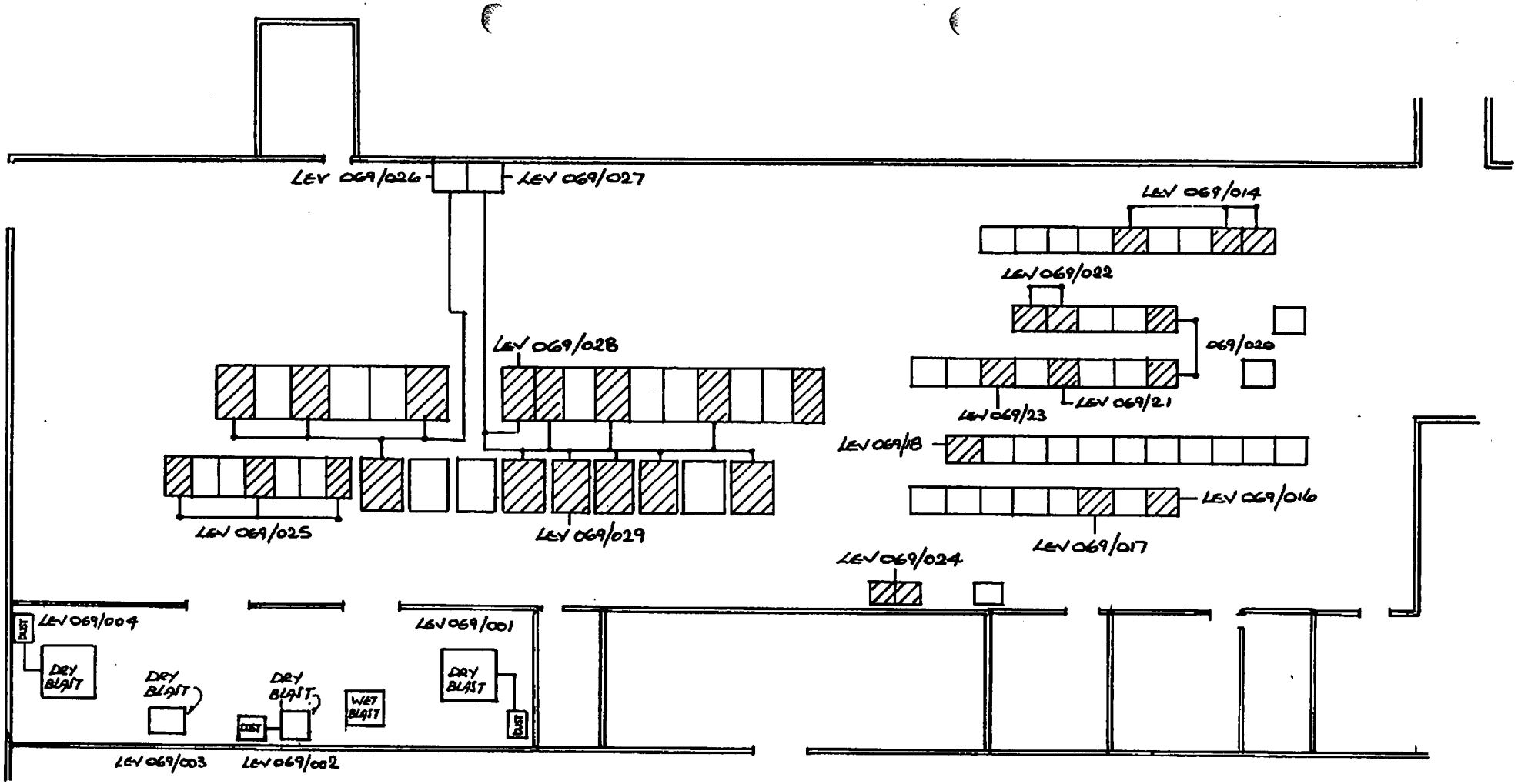
UPDATED JULY 1990

SCALE



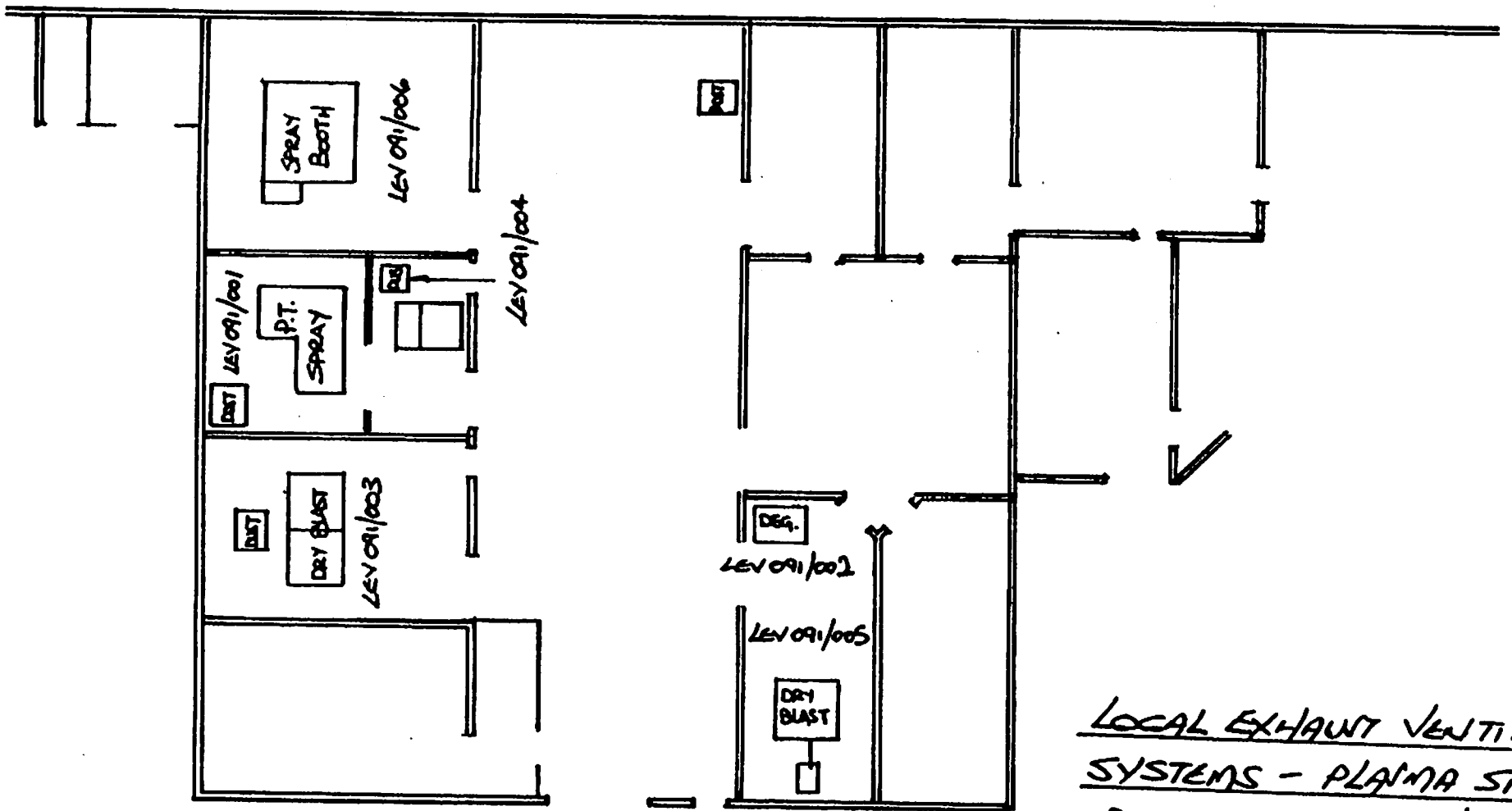
LOCAL EXHAUST VENTILATION SYSTEMS – METAL PROCESS DEPT (NORTH END) DRAWING 'B'

AEROSPACE GROUP, ROLLS ROYCE PLC.
PARKSIDE, COVENTRY.



LOCAL EXHAUST VENTILATION SYSTEMS - METAL PROCESS DEPT. (SOUTH END) DRAWING 'C'

AEROSPACE GROUP, ROLLS ROYCE PLC
PARKSIDE, COVENTRY



LOCAL EXHAUST VENTILATION SYSTEMS - PLASMA SPRAY DEPT. DRAWING 'D'

AEROSPACE GROUP, ROLLS ROYCE PLC.
PARKSIDE COVENTRY

SECTION 3 - PROCESS DESCRIPTION

3.1 PAINT SPRAY AREA:- SACRIFICIAL COATINGS

The engine components are received into the shop where the parts have their surfaces prepared by vapour degreasing in a purpose built tank with lip extraction to atmosphere, then dry blasted in enclosed cabinets with exhaust ventilation and air filtration to atmosphere.

The components then pass to the spray area where the coatings are applied in spray booths with exhaust ventilations and water wash air filtration to atmosphere.

The components are then stove/cured in thermostatically controlled ovens which vent to atmosphere, followed up by a glass bead burnish in an enclosed booth with venting to atmosphere. If required, the coatings can be sealed by an extra spray coating then followed by a stove/cure.

3.2 PAINT SPRAY AREA:- BARRIER COATINGS

Engine components are received into the shop where the parts have their surfaces prepared by vapour degreasing in a purpose built tank with lip extraction to atmosphere, then depending on the material of the part they are either dry blasted in enclosed cabinets with air filtration to atmosphere or chemically dipped or electroplated in enclosed tanks with ventilation to atmosphere or oven dried with venting to atmosphere.

The components then pass to the spray area where the coatings are applied in spray booths with exhaust ventilation and air filtration via water troughs.

The components are then stove/cured in thermostatically controlled ovens which vent to atmosphere.

3.3. PLASMA SPRAY AREA:- PLASMA SPRAY COATINGS

Engine components are received into the shop where the parts have their surfaces prepared by vapour degreasing in a purpose built tank with lip extraction to atmosphere; dry abrasive blasting in an enclosed cabinet with exhaust ventilation and air filtration to atmosphere; pre-heat.

The components then pass to the spray area where they are metal sprayed by combustion/plasma flame deposition in one of 2 enclosed booths with local exhaust ventilation and filtration to atmosphere.

The components then leave the shop for the Machining Area.

SECTION 4 - EXHAUST EMISSION TO ATMOSPHERE

See following grouped pages:-

Pages 1 - 11 Exhaust Ventilation Systems without air cleaning units.

Pages 1 - 9 Exhaust Ventilation Systems with air cleaning units.

Your Reference : EH/EP/JNR/em
Our Reference : J N Rush
Please ask for : 831806
Direct Dialling No : 8th October 1993
Date :

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City of Coventry

HOUSING AND ENVIRONMENTAL SERVICES DIRECTORATE

Director Howard T. Farrand
Providing Housing, Environmental and Client Agency Services

Michael Green
City Environment Officer
Broadgate House
Broadgate
Coventry, CV1 1NH

Telephone : 0203 83 3333
Fax : 0203 83 1831

THE ENVIRONMENTAL PROTECTION ACT 1990

The Environmental Protection (Prescribed Processes and Substances) Regulations 1991, SI 472.

The Environmental Protection (Application, Appeals and Registers) Regulations 1991, SI 507.

Authorisation No: 043
Application Received: 28th September 1992

Notice is hereby given that under the Environmental Protection Act 1990 Coventry City Council (hereafter called the Authority) gives authorisation to:

Rolls Royce plc
65 Buckingham Gate
London
SW1E 6AT

Register in England No: 1003142

For the wet spraying, metal spraying and electroplating of metal components as described on Page 2 at:

Aerospace Group
Rolls Royce plc
Parkside
Coventry
CV1 2LZ

Subject to the conditions specified on the attached pages, Nos 1 to 4, and within the process boundary as indicated on Plan No. 1.

Signed [redacted] ..... Dated 13th day of October 1993
City Environment Officer

1. DESCRIPTION OF PROCESS

1.1 This authorisation is for the wet spraying, metal spraying and electroplating of metal components, as described in the Environmental Protection (Prescribed Processes and Substances) Regulations 1991, SI472, Section 6.5 Part B paragraph (b) within the process boundary outlined in red on the attached Plan numbered 1 and specifically relates to the processes outlined below.

1.2 The delivery and storage of paints, diluents, metalpowder and cleaning solvents in the internal paint store, powder store and oil store as shown in the Plans numbered 1, 2 and 4.

1.3 The degreasing and rinsing of metal components.

1.4 The dry blasting of metal components in four Aluminia abrasive Grit cabinets identified as 069/002, 069/004, 091/005 and 091/003, two Glass bead media cabinets identified as 069/001 and 069/003 and a Plastic Media Cabinet identified as 069/031 as shown on plans numbered 2 to 4.

1.5 The chemical dipping or electroplating of metal components.

1.6 The spraying of metal components in the seven Binks Bullows spraybooths and the oven curing in the 6 Barlow Whitney ovens as shown on Plan numbered 2, employing conventional spray guns.

1.7 The metal spraying of components in the Plasma Technik and Metco spraybooths as shown on the Plan numbered 4, employing combustion/plasma flame deposition.

1.8 Any change to the above descriptions must not take place without the prior consent from this Authority.

2. EMISSION LIMITS AND CONTROLS

2.1 All emissions to air shall be free from offensive odour outside the process boundary, as perceived by the local Authority Inspector.

2.2 There shall be no visible emissions of particulate matter noticeable beyond the process boundary.

2.3 All pollution concentrations shall be expressed at standard conditions of 273K and 101.2Kpa without correction for water vapour content.

2.4 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.

3. MONITORING SAMPLING AND MEASUREMENT OF EMISSIONS

3.1 A visual assessment of particulate emissions from the spray booths shall be carried out at least once a day while spraying operations are in progress. This shall be carried out by making an assessment of paint deposits beyond the process boundary.

3.2 An olfactory assessment of emissions of volatile organic compounds shall be carried out at least once a day, whilst spraying operations are in progress. This shall be carried out by making an assessment of odour beyond the process boundary.

3.3 The results of monitoring to comply with 3.1 and 3.2 shall be recorded in a log book. This shall include the date, time, wind strength and direction, the name of the observer and an assessment of the emissions. This log book shall be retained, on site, for a minimum of four years.

3.4 Any adverse results from the monitoring required in 3.1, and 3.2 shall be followed up immediately by the investigation of the cause of the emission and any corrective action taken, with this also being recorded in the log book.

3.5 A detailed record shall be kept of all organic solvents used in the prescribed processes. This shall include cleaning solvent usage, diluent solvent usage and solvents contained within coatings used. This inventory shall be forwarded to the local authority at least once every six months and shall include a determination for the total organic solvent usage for that period.

4. MATERIALS HANDLING

4.1 The mixing of paint shall only be carried out in the area marked paint mixing area as shown on the Plan numbered 2.

4.2 Spray gun testing, following cleaning shall only be carried out in the spray booths. This shall only be undertaken while the spray booths are in proper working order.

4.3 Spraying shall only be carried out in the spraybooths and these must be in proper working order.

4.4 All full, partially full and nominally empty containers which hold or have held materials which contain organic solvents or particulate matter must be stored in the internal paint store and powder store respectively and have lidded containers.

4.5 All full containers which hold organic solvents must be stored in the area marked oil store on the plan numbered 1 and have lidded containers.

5. CHIMNEYS, VENTS AND PROCESS EXHAUSTS

5.1 Emissions from the dry blasting of components in the four Aluminia abrasive grit cabinets, the two Glass Bead media cabinets and the Plastic Media Cabinet shall only be emitted to atmosphere via the dry dust collectors.

5.2 Emissions from the spraying of coatings in the seven Binks Bullows spraybooths shall only be emitted to atmosphere via the water wash filtration system.

5.3 Emission from the metal spraying of components in the Plasma Technik spraybooth shall only be emitted to atmosphere via the dry dust collection system.

5.4 Emissions from the metal spraying of components in the Metco spraybooth shall only be emitted to atmosphere via the water wash filtration system.

6. GENERAL OPERATIONS

6.1 Any mechanical malfunction or spillage of material shall be attended to and remedied as soon as possible. Any incident likely to give rise to atmospheric emissions shall be noted in detail in the process log book as described in 3.4.

6.2 Any incidents likely to give rise to emissions which may have an impact on neighbouring residents shall be reported immediately to this Authority.

6.3 A copy of this authorisation shall be displayed so it can be conveniently read by persons having duties which are or maybe affected by this authorisation.

6.4 The operator shall supply, to this Authority, on demand and without charge, a copy of all or part of the monitoring records kept in accordance with this authorisation.

7. UPGRADING OF THE PROCESS

7.1 No later than six months from the date of this authorisation, a programme for upgrading the process shall be submitted to this Authority. The upgrading programme shall have regard to the Secretary of State's Guidance:

Coating of metal and plastic	PG 6/23 (92)
Metal and other thermal spraying processes	PG 6/35 (92)

7.2 Any proposed methods for non-continuous emission sampling for the purposes of complying with the authorisation must be agreed in writing with this Authority.

SUPPLEMENTARY NOTES

THESE NOTES ARE NOT PART OF THE AUTHORISATION

1. Your attention is drawn to your obligation under Section 7(2) of the Environmental Protection Act 1990 to ensure that the best available techniques, not entailing excessive cost (BATNEEC) for:

   A) preventing the release of prescribed substances into the air or where that is not practicable by such means, for reducing the release into the air of such substances to the minimum and for rendering harmless any such substances that are so released

   and

   B) for rendering harmless any other substances which might cause harm if released into the air.

2. The authority for contact purposes should be taken to mean the head of the Environmental Protection Section, Tel 831810 during office hours, 832222 outside office hours.

3. You will note that condition 7.1 of the authorisation requires you to submit a schedule of works for approval by this Authority, within six months of the issue date. This schedule must describe the procedures and improvements that you intend to implement in order to meet the requirements of the relevant guidance notes referenced within the authorisation. From observations and inspections of the process I would recommend that the following topics are specifically included.

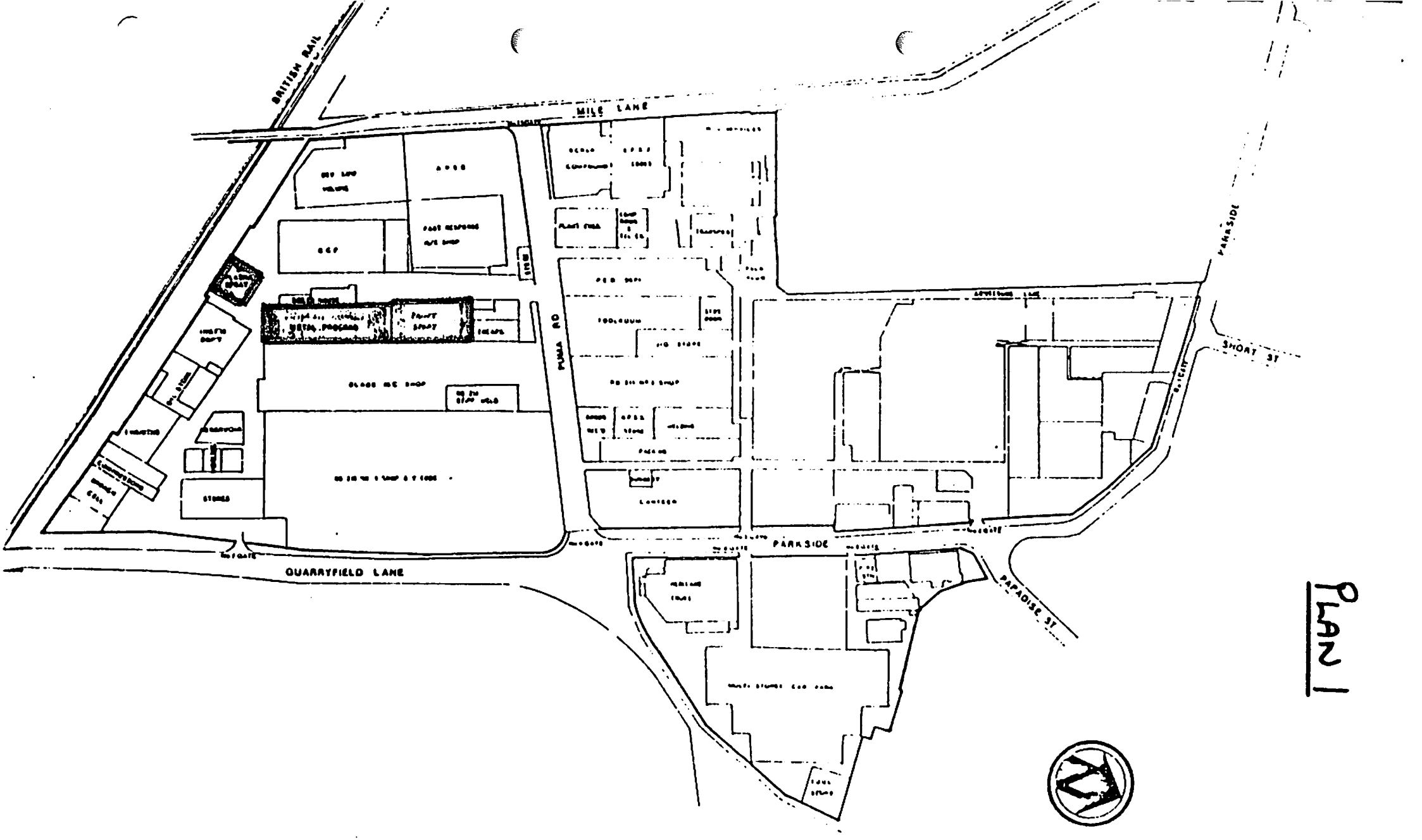
   a) The results of non-continuous emission sampling of emissions from the seven dry blast cabinets, the seven Binks Bullows spraybooths, the six Barlow Whitney ovens, the chemical process tanks, the vapour degreasing tanks, the Plasma Technik Spraybooth and the Metco spraybooth to indicate what improvements (if any) are required to ensure compliance with the emission limits stated in the Process Guidance Notes.

   b) The proposed frequency of further non-continuous emission sampling, taking into account the results of the initial monitoring exercise.

   c) The adoption of HVLP or other spraying techniques to ensure a transfer efficiency of >65%.

   d) Provision of a fully enclosed gun wash machine.

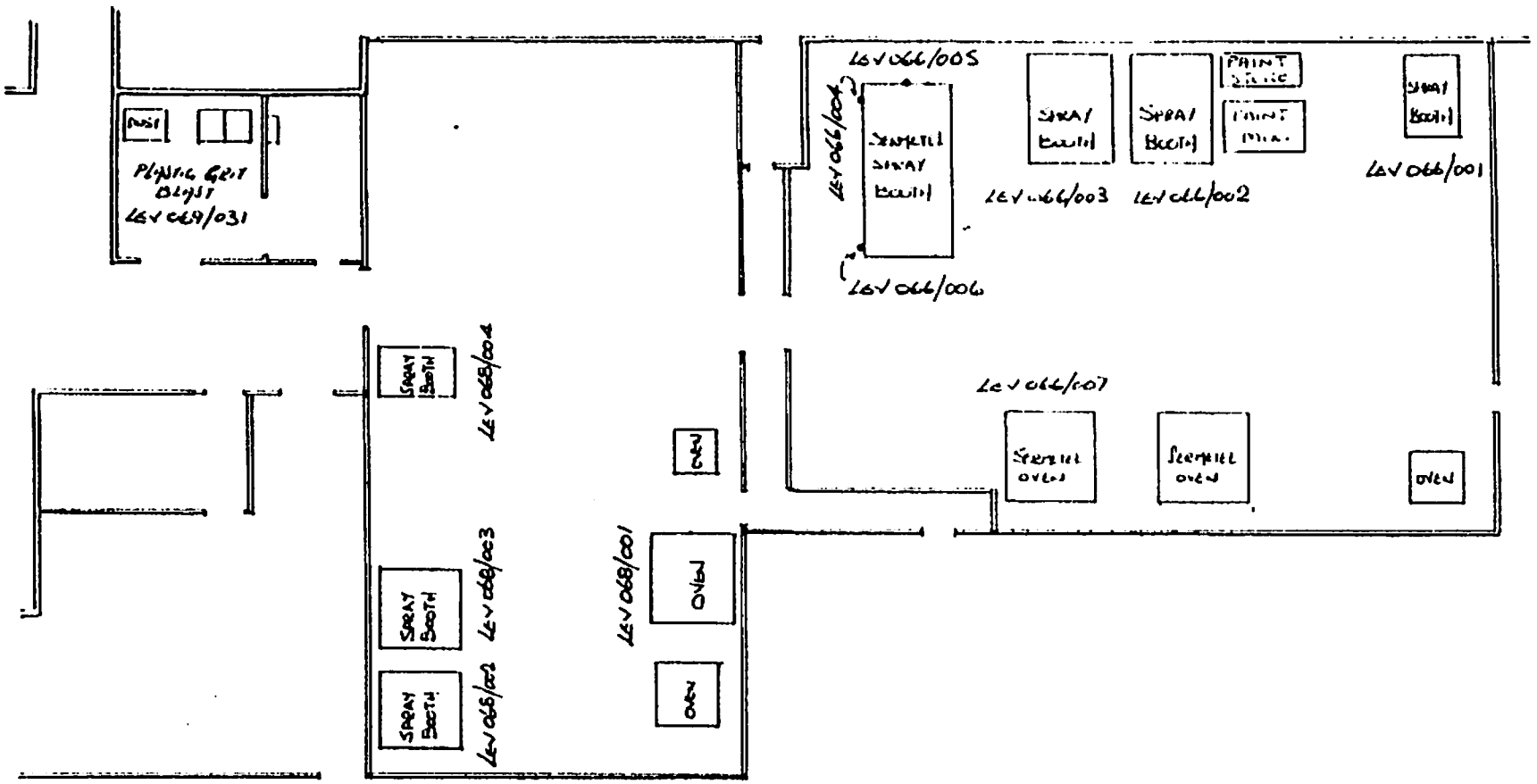
epa/rollsroyce



PLAN 1

ROLLS-ROYCE plc
Parkside

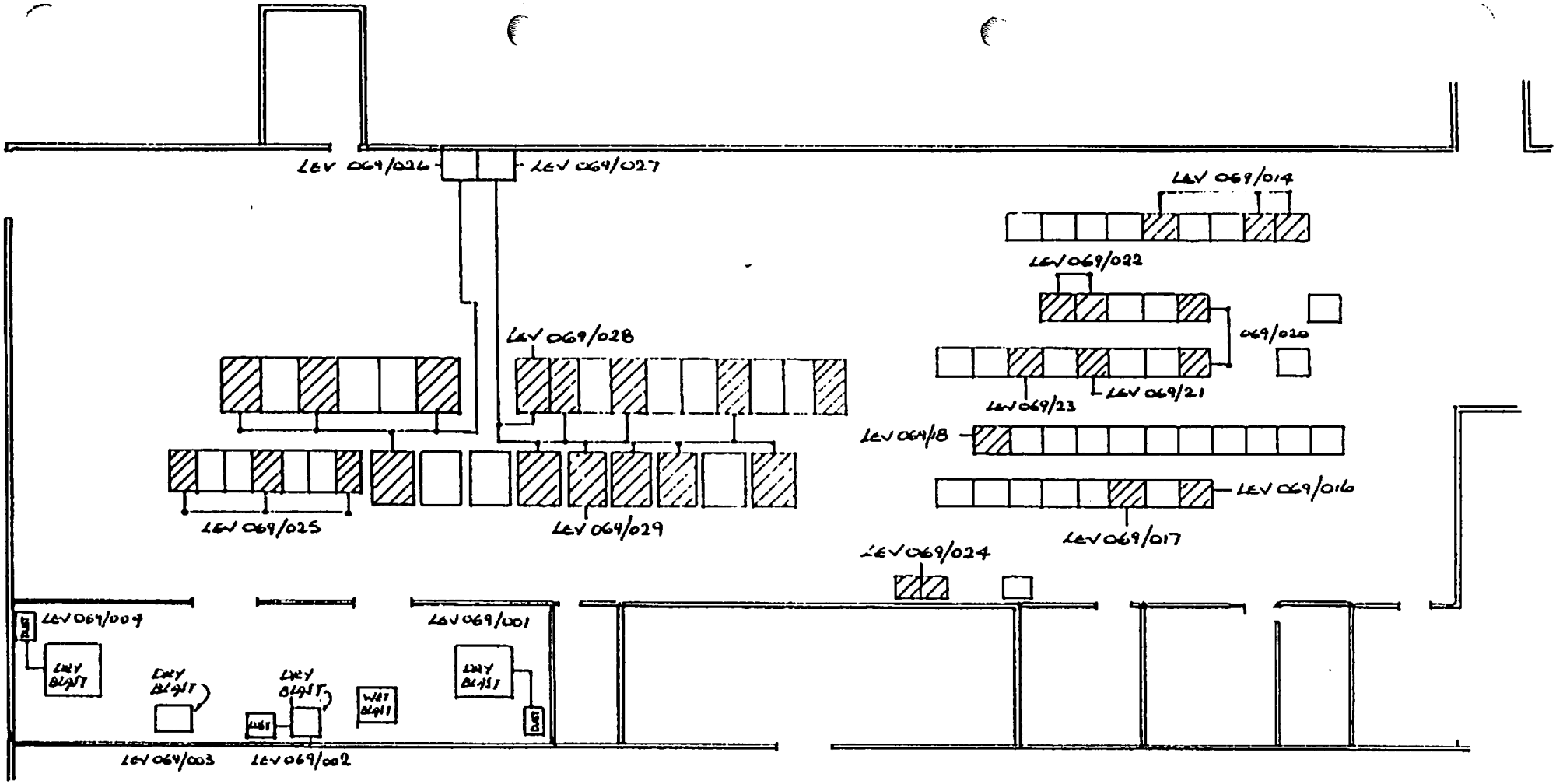
SCALE



PLAN 2

LOCAL EXHAUST VENTILATION SYSTEMS - METAL PROCESS DEPT (NORTH END) DRAWING 'B'

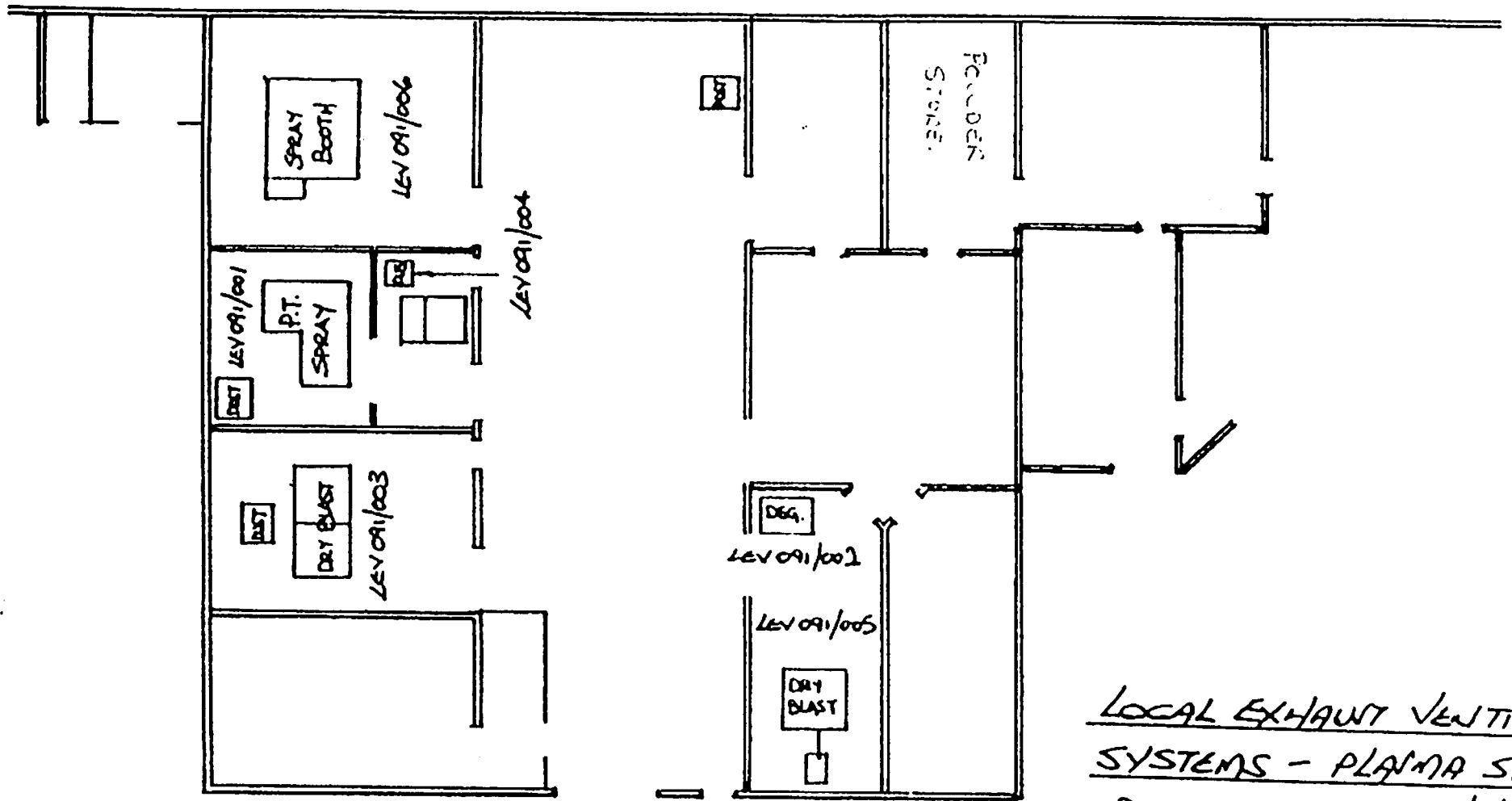
AEROSPACE GROUP, ROLLS ROYCE PLC. PARKSIDE, COVENTRY.



PLAN 3

LOCAL EXHAUST VENTILATION SYSTEMS - METAL PROCESS DEPT. (SOUTH END) DRAWING 'C'

AEROSPACE GROUP, ROLLS ROYCE PLC
PARKSIDE, COVENTRY



LOCAL EXHAUST VENTILATION SYSTEMS - PLASMA SPRAY DEPT. DRAWING 'D'

AEROSPACE GROUP, ROLLS ROYCE PLC.
PARKSIDE COVENTRY