

PERMIT REFERENCE: PPC 004

Canley Crematorium

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

Process Address	Canley Crematorium Cannon Hill Road Canley Coventry CV4 7DF
Process Type	The cremation of human remains
Current Operator	Coventry City Council Bereavement Services Broadgate House Broadgate Coventry CV1 1NH
Previous Operator	n/a
Date of Application	1 <sup>st</sup> April 2003
Date Permit Issued	16 <sup>th</sup> March 2004

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

**DOCUMENT A : PERMIT**

**Coventry City Council**

Reference Number **PPC/004**

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:

**Coventry City Council**

Whose registered office is:

**City Services Directorate  
Public Protection  
Bereavement Services  
Broadgate House  
Broadgate  
Coventry  
CV1 1NH**

to operate a Part B installation involving the cremation of human remains as prescribed in Section 5.1 part B (c) of Schedule 1 to The Regulations, at:

**Canley Crematorium  
Cannon Hill Road  
Canley  
Coventry  
CV4 7DF**

The permit is subject to the conditions specified in this document consisting of 12 pages and comprising documents A, B and C, plans PPC/004/A, PPC/004/B and Appendix 1.

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

Dated ..... 16 March 2004.....

## **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 are expressed at reference conditions, 273K, 101.3KPa and 11% oxygen.

Technical Guidance documents used in the preparation of this document:

- Secretary of States Guidance Note PG5/2(95).- Crematoria. ISBN 0-11-753153-7
- 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 of Permit Issue

Permit Prepared By: Rachel King

## **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.
- **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

The general location of the Authorised Process is shown on the attached plan PPC/004/A site. Plan PPC/004/B shows the installation boundary and key plant referred to in the permit.

### **Description of Installation**

Coffins are manually loaded into one of four gas-fired cremators with the assistance of a trolley, following removal of non-combustible items such as metal handles, and floral arrangements.

The coffin and human remains are cremated to a fully calcified state.

The remaining bones and ashes are manually transferred into a holding container, and then decanted into the cremulator, where they are ground and reduced in size and transferred into urns.

### **Table 1**

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

<b>Row</b>	<b>Area/Machinery Identification</b>	<b>Pollutants Emitted</b>	<b>Emission Limits</b>	<b>Abatement Plant Required</b>
1	Newton Cremator	Particulates Hydrogen Chloride Carbon Monoxide Organic Compounds	1.1 to 1.4 inclusive	None
2	Newton Cremator	Particulates Hydrogen Chloride Carbon Monoxide Organic Compounds	1.1 to 1.4 inclusive	None
3	Newton Cremator	Particulates Hydrogen Chloride Carbon Monoxide Organic Compounds	1.1 to 1.4 inclusive	None
4	Joule Cremator	Particulates Hydrogen Chloride Carbon Monoxide Organic Compounds	1.1 to 1.4 inclusive	None
5	Cremulator	Particulates	1.5	Fabric filter system

## DOCUMENT B

### CONDITIONS

All conditions shall have immediate effect unless stated otherwise.

#### 1. EMISSION LIMITS AND CONTROLS

- 1.1 There shall be no offensive odour outside the installation boundary, as marked on Plan PPC/004/B, as perceived by an authorised Inspector of the Authority.
- 1.2 All emissions to air, other than steam or condensed water vapour shall be free from droplets and from persistent mist and persistent fume.
- 1.3 Emissions from the cremators shall, in normal operation (including start up and shut down), be free from visible smoke and no emissions from the cremator shall exceed the equivalent of Ringlemann Shade 1.
- 1.4 Emissions from each cremator shall not exceed the following emission concentration limits having regard to clause 1.6 and 1.7 in the case of continuous monitoring. In the case of periodic monitoring the emission limits shall apply as an absolute limit.

Pollutant	Emission Limit
Hydrogen Chloride (excluding particulate matter)	200 mg/m <sup>3</sup>
Total Particulate Matter	80mg/m <sup>3</sup>
Carbon Monoxide	100mg/m <sup>3</sup>
Organic Compounds (excluding particulate matter expressed as total carbon)	20mg/m <sup>3</sup>

- 1.5 Emissions of particulate matter from the Cremulator shall not exceed 50mg/m<sup>3</sup> (expressed as total particulate matter).
- 1.6 No more than 5% of all 60 minute mean emissions from the cremator shall exceed the emission limits specified in 1.4 and no 60 minute mean emission shall exceed twice the emission limits specified in 1.4.

The 60-minute period shall relate to the first 60 minutes of each cremation or such shorter period when the cremation is less than one hour.

#### 2. MONITORING SAMPLING AND MEASUREMENT OF EMISSIONS

- 2.1 The emissions from each cremator shall be continuously monitored whilst in operation for:-
  - Particulate matter/smoke density
  - Carbon Monoxide
  - Oxygen.
- 2.2 The temperature of each cremator shall be continually monitored at the secondary combustion zone outlet, primary combustion zone outlet and in the exit flue.

- 2.3 All continuous monitoring readings shall be on display to cremator operating staff.
- 2.4 All continuous monitoring readings shall be recorded and where applicable corrected to standard reference conditions.
- 2.5 Continuous monitoring equipment shall be calibrated in accordance with manufacturers instructions but no less than once in every twelve months.
- 2.6 A log book shall be kept at the facility at all times. For each cremation the following information shall be recorded in the log book :-
- Cremator number
  - Cremator used
  - Start and finish time
  - Time taken to complete cremation
  - Pre-heat temperature (in secondary combustion chamber)
  - Charge temperature (main chamber)
  - Maximum temperature in primary chamber at end of cremation
  - Observation of stack emissions
  - Any unusual occurrences including remedial action taken where appropriate
  - Funeral Director
  - The cremation operative responsible.
- 2.7 Emissions from each cremator shall be tested at least once in 12 months to demonstrate compliance with condition 1.4 using a protocol having gained prior written approval from the Authority.
- 2.8 At least 7 days notice of any testing to demonstrate compliance with emission limits shall be given to the Authority.
- 2.9 The results of periodic monitoring required by condition 2.7 shall be recorded in a log book and retained at the facility for a period of no less than two years.
- 2.10 A summary of continuous emission monitoring results to demonstrate compliance with condition 1.4 shall be forwarded to the Authority at least once every six months. This information shall include monthly averages, a list of 60 minute mean emission values exceeding the relevant limit in 1.4 and a list of the weekly 95 percentage of 60 minute mean emissions (that emission level exceeded for 5% of 60 minute period each week). The information shall be presented in a format which allows direct comparison with the criteria in 1.4.
- 2.11 In any case where emission measurements exceed the emission limits in 1.4 and 1.5 the results shall be forwarded to the Authority in line as soon as is practicable. Where any emission level is more than twice the limit specified in 1.4 or 1.5 the Authority shall be advised immediately by telephone or fax.
- 2.12 The results of all non-continuous monitoring shall be forwarded to the Authority within 8 weeks of the monitoring taking place.
- 3. MATERIALS HANDLING**
- 3.1 Coffins containing lead or zinc shall not be cremated, in addition to floral arrangements or non-combustible items such as metal coffin handles.
- 3.2 The remains in the cremators shall only be moved when calcination is completed.

- 3.3 The removal of ash and non-combustible residues from the cremators shall be undertaken carefully, so as to prevent dust emissions.
- 3.4 Cremated remains shall only be moved and stored in a covered container.
- 3.5 The cremulator shall only be operated whilst the local extract ventilation is in operation and connected to the fabric filter system.
- 3.6 Decanting of ashes shall only take place within the ventilated chamber of the cremulator and only at such time that the local ventilation system is in operation and connected to the fabric filter system.
- 3.7 The cremators shall only be operated in accordance with the manufacturers instructions for 'Newton' and 'Joule' cremators.

#### **4. VENTS AND PROCESS EXHAUSTS**

- 4.1 All gaseous products from combustion within the cremators shall be discharged through the 16.5m stack, marked A on the attached Plan No. PPC/004/B.

#### **5. MAINTENANCE OF PLANT AND EQUIPMENT**

- 5.1 Effective preventive maintenance shall be employed on all plant concerned with the control of atmospheric emissions. This shall be done in accordance with the Cremator Operator Maintenance Record, which details daily, weekly and fortnightly check to be completed. Any defect shall be reported to the Crematorium Manager that same day, or prior to the next operation of the cremator. The results of the inspection, whether satisfactory or otherwise, shall be recorded in a log book, to be held at the crematorium, at the time of the inspection. The log book shall be retained at the crematorium for at least two years.
- 5.2 Any defect shall be reported to the manufacturer, agent or holder of a maintenance contract, as soon as possible and repairs initiated as soon as reasonably practicable.
- 5.3 Any cremator which has been identified as being defective and incapable of operation within the conditions of this permit shall not be operated until such time that effective repair has been completed.
- 5.4 Routine maintenance shall be carried out by qualified cremation operators in line with the manufacturers recommendations.
- 5.5 All staff operating the cremators subject to this permit, must be in possession of a certificate of competence in cremation operation from the Institute of Cemetery and Crematoria Management.
- 5.6 A list identifying all operators holding such certificates, as described in condition 5.5, shall be posted close to the cremator control panels. The list shall include the dates on which training was given, the certificate issued and the identity of the instructor.
- 5.7 No person other than those identified on the list in condition 5.5, their instructors or qualified representatives of the plant manufacturers may operate the cremators.

#### **6. GENERAL OPERATIONS**

- 6.1 Any malfunction or breakdown leading to abnormal conditions shall be dealt with immediately and process operations adjusted until normal operations are restored. All

such malfunctions shall be recorded in the log book which will be kept at the crematorium at all times .If there is likely to be an effect on the local community, the operator shall inform the Authority without delay.

- 6.2 A copy of this permit shall be located on site such that all operatives involved in the process have unrestricted access to it.
- 6.3 The operator shall supply to this Authority, on demand and without charge, a copy of all or part of the records required to be kept by this permit.
- 6.4 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.
- 6.5 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.
- 6.6 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.

## **DOCUMENT C**

### **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.

## **Appendix 1**

### **SUPPLEMENTARY NOTES**

These notes do not comprise part of the Permit PPC/004 but contain guidance relevant to the Permit.

#### **Inspections**

Regular inspections will be carried out by officers of the Council to check and ensure full compliance with the Permit. These inspections may be carried out without prior notice.

#### **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:-

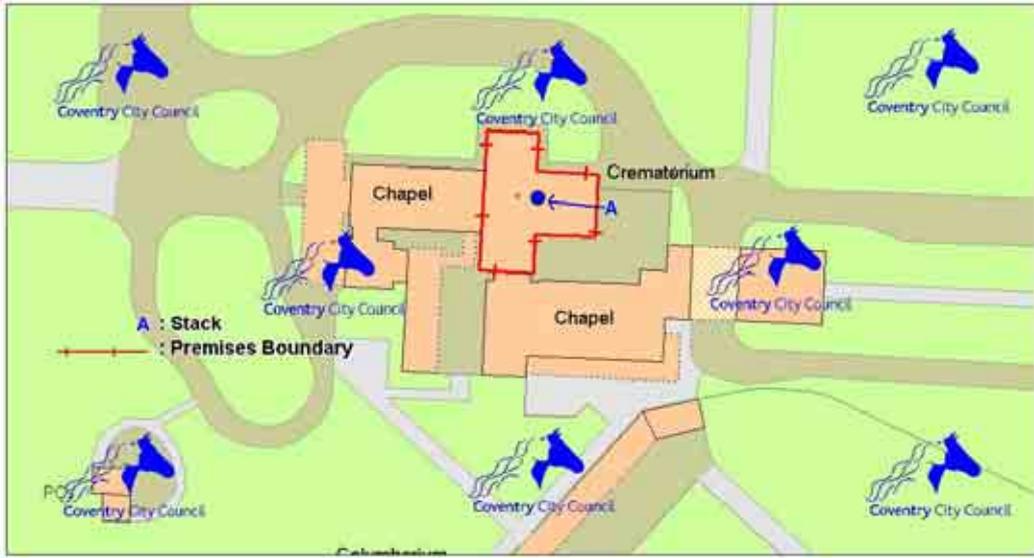
Calibre and quality of the sampling team.

A reference measurement method (standard methods may not always be available)

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/004/A Premises Boundary of Canley Crematorium



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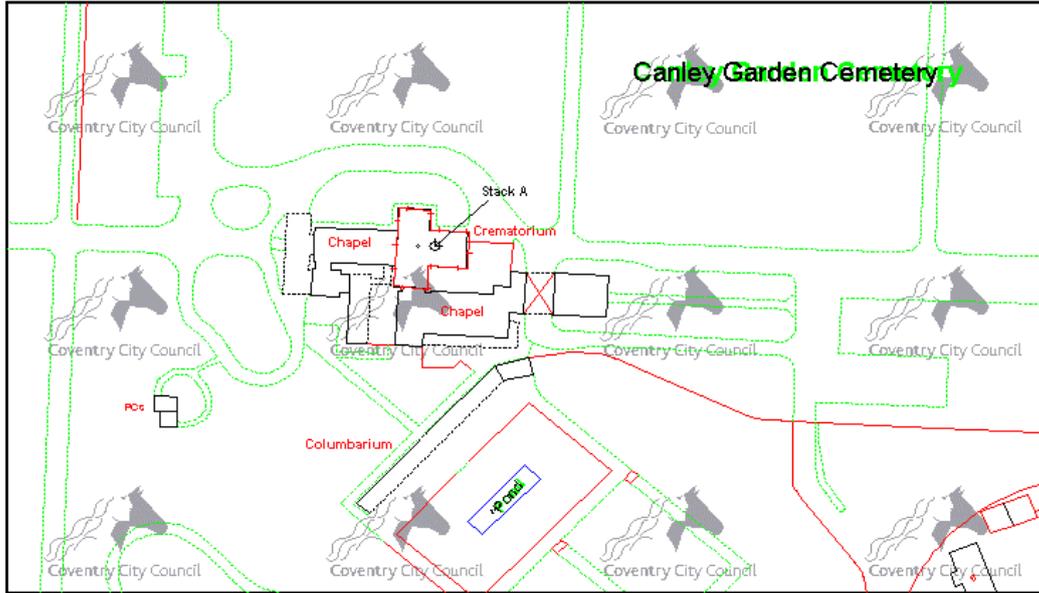
City Services Directorate,  
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Permit Plan Reference: PPC/004/B - plan showing installation boundary and general plant at Canley Crematorium



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