



**POLLUTION PREVENTION AND CONTROL ACT 1999
ENVIRONMENTAL PERMITTING (ENGLAND & WALES) REGULATIONS 2010
(As Amended)**

Permit Number: 5.1/040864/JT3

**Installation Address:
Sheffield City Council
Bereavement Services
City Road Crematorium
City Road
SHEFFIELD
S2 1GD**

In accordance with Regulation 13(1) of the Environmental Permitting (England and Wales) Regulations 2010 as amended, Sheffield City Council Bereavement Services is hereby permitted to operate a scheduled activity at City Road Crematorium, namely the cremation of human remains, as described in Schedule 1, Part 2, Chapter 5, Section 5.1, Part B subsection (d) and subject to the following Permit conditions.

Signed

Dated this day: 20th January 2016

**Assistant Manager
Authorised by Sheffield City Council to sign on their behalf**

The Secretary of State's Statutory Guidance for Crematoria PG5/2(12) has provided the framework for the conditions in this Permit.

Name & Address of Operator:

**Sheffield City Council
Bereavement Services
City Road Crematorium
City Road
SHEFFIELD S2 1GD**

Contact: Sue Nadin, Kay Rodgers Tel 2037814, 2396068, 07794 070530
Susan.nadin@sheffield.gov.uk, kay.rodgers@sheffield.gov.uk

Registered Office:

**Sheffield City Council
Bereavement Services
City Road Crematorium
City Road
SHEFFIELD S2 1GD**

Address of Permitted Installation:

**Sheffield City Council
Bereavement Services
City Road Crematorium
City Road
SHEFFIELD S2 1GD**

Holding Company:

No

Talking to Us

Any communication with Sheffield City Council should be made to the following address quoting the Permit Number: epsadmin@sheffield.gov.uk or ippc@sheffield.gov.uk

**ENVIRONMENTAL PROTECTION SERVICE
SHEFFIELD CITY COUNCIL
5TH FLOOR (NORTH)
HOWDEN HOUSE
1 UNION STREET
S1 2SH**

Telephone: (0114) 273 4651
Fax: (0114) 273 6464

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Explanatory Note to Pollution Prevention and Control Permit for Part B Installations.

(This note does not form a part of the Permit)

The following Permit is issued under Regulation 13 of the Environmental Permitting (England and Wales) Regulations 2010 (S.I. 2010 No.675), as amended, (“the EP Regulations”) to operate an installation carrying out activities covered by the description in Section 5.1, Part B (d) of Schedule 1 of those Regulations, to the extent authorised by the Permit.

Process Changes

Under the provisions of the EP Regulations, you are required to notify the Council of any proposed change in operation at least 14 days before making the change. This must be in writing and must contain a full description of the proposed change in operation and the likely consequences. Failure to do so is an offence.

If you consider that a proposed change could result in the breach of the existing permit conditions or is likely to require the variation of permit conditions then you may apply in writing under Regulation 20(1) of the EP Regulations. Additionally, if this involves a SUBSTANTIAL CHANGE to the installation you will be required to submit an application, pay the relevant fee and advertise the application accordingly. You may serve a Notice on the Council requesting that they determine whether any change that is proposed would constitute a substantial change before you proceed with application.

Variations to the Permit

The Permit may be varied in the future by the Council serving a Variation Notice on the Operator. If the Operator wishes any of the Conditions of the Permit to be changed, a formal Application must be submitted.

Surrender of the Permit

Where the Operator of a Part B installation or mobile plant ceases or intends to cease the operation of the activity the Operator may notify the Regulator of the surrender of the whole permit, in any other case, notify the Regulator of the surrender of the permit in so far as it authorises the operation of the installation or mobile plant which he/she has ceased or intends to cease operating. The notification shall contain information as described in Regulation 24 or 25 of the EP Regulations.

Transfer of the Permit or Part of the Permit

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

Annual Subsistence Fee

In accordance with the Regulations, the holder of a permit is required to pay a fee for the subsistence of the Permit. This fee is payable annually on 1st April. You are advised that under the provisions of the EP Regulations, if you fail to pay the fee due promptly, Sheffield City Council may revoke the Permit. You will be contacted separately each year in respect to this payment.

Public Register

The Council is required by Regulation 46 of the EP Regulations to maintain a Public Register containing information on all LAPPC installations and mobile plant. The register is available for inspection by the public free of charge during office hours (Monday to Friday 9.00 am to 5.00 pm) by appointment at the following address:

Environmental Protection Service
Sheffield City Council
5th Floor (North)
Howden House
1 Union Street
S1 2SH

Tel: 0114 273 4651 or email epsadmin@sheffield.gov.uk

Confidentiality

Sheffield City Council has a duty to consider the question of confidentiality of information supplied to it. If any information supplied is considered confidential, a statement of which information this applies to and the reasons why it is considered confidential should be specified. The Operator is reminded that he may apply to Sheffield City Council for the exclusion of information from the public register under the provisions of the Environmental Permitting (England and Wales) Regulations 2010 as amended.

Appeals

Under Regulation 31 of the EP Regulations, Operators have the right of appeal against the conditions attached to their Permit. Schedule 6 of the EP Regulations sets out the detailed procedures.

Appeals against a Variation Notice do not have the effect of suspending the operation of the Notice. Appeals do not have the effect of suspending Permit conditions.

Notice of appeal against the conditions attached to the Permit must be given within six months of the date of the Notice, which is the subject matter of the appeal.

How to Appeal

There are no forms or charges for appealing. However, for an appeal to be valid, appellants (the person/Operator making the appeal) are legally required to provide:

- Written notice of the appeal;
- A statement of the grounds of appeal;
- A statement indicating whether the appellant wishes the appeal to be dealt with by written representations procedure or a hearing – a hearing must be held if either the appellant or enforcing authority requests this, or if the Planning Inspector or the Secretary of State decides to hold one.
- (Appellants must copy the above three items to the local authority when the appeal is made)
- A copy of any relevant application;
- A copy of any relevant permit;
- A copy of any relevant correspondence between the appellant and the regulator; and
- A copy of any decision or notice, which is the subject matter of the appeal.

Where to Send Your Appeal Documents

Appeals should be addressed to:

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

In the course of an Appeal process the main parties will be informed of procedural steps by the Planning Inspectorate.

To withdraw an appeal the appellant must notify the Planning Inspectorate in writing and copy the notification to the local authority.

Enforcement

An **Enforcement Notice** may be served if the Local Authority believes an Operator has contravened, is contravening or is likely to contravene any condition of his Permit.

A **Suspension Notice** may be served if in the opinion of the Local Authority the operation of an installation involves an imminent risk of serious pollution. This applies whether or not the Operator has breached a Permit condition.

The Local Authority can revoke a Permit by written notice at any time by serving a **Revocation Notice**. The Permit then ceases to authorise the operation of the installation.

Offences

A limited summary of the offences is listed below:

- a) operation of an installation without a Permit
- b) failure to comply with or contravene a Permit condition
- c) failure to comply with the requirements of an enforcement or suspension notice

A full list is available under Regulation 38 of the Environmental Permitting (England & Wales) Regulations 2010 as amended.

Penalties

The maximum penalties for the above offences are a fine not exceeding £50,000 and/or up to twelve months imprisonment per offence for a summary conviction (in a Magistrates Court); and a fine and/or up to five years imprisonment for conviction on indictment (in a Crown Court).

Definitions

In relation to this Permit, the following expressions shall have the following meanings:

“Application” means the application for this Permit, together with any response to a notice served under Schedule 4 to the EPR Regulations and any operational change agreed under the conditions of this Permit.

“EPR Regulations” means the Environmental Permitting (England and Wales) Regulations S.I.2010 No. 675 (as amended) and words and expressions defined in the EPR Regulations shall have the same meanings when used in this Permit save to the extent they are explicitly defined in this Permit.

“Permitted Installation” means the activities and the limits to those activities described in this Permit.

“Monitoring” includes the taking and analysis of samples, instrumental measurements (periodic and continual), calibrations, examinations, tests and surveys.

“Regulator” means any officer of Sheffield City Council who is authorised under section 108(1) of the Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, any power specified in Section 108(1) of that Act.

“BAT” 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 bases for emission limit values designed to prevent, and where that is not practical, generally to reduce emissions and the impact on the environment as a whole. For those purposes:

“available techniques” means those techniques which have been developed on a scale which allows implementation in the relevant industrial sector, under 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;

“best” means, in relation to techniques, the most effective in achieving a high general level of protection of the environment as a whole; *“techniques”* include both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned. Schedule 2 of the Regulations shall have effect in relation to the determination of best available techniques, and;

“Fugitive Emission” means an emission to air from the permitted installation that is not controlled by an emission limit imposed by a condition of this Permit.

Where any condition of this Permit refers to the whole or parts of different documents, in the event of any conflict between the wording of such documents, the document with the most recent publication date shall be taken to be the most appropriate document to be used.

Description of Activities.

This Permit relates to the operation of three gas fired Newton Cremators for the cremation of human remains. It also covers the removal of ashes following cremation from the cremator and the size reduction of ashes using a Facultatieve Technologies cremulator. The activities are carried out within the installation boundary marked in green on Schedule 1.

CONDITIONS OF PERMIT.

The following conditions shall be complied with immediately unless otherwise stated.

Section 1 – Upgrading.

- 1.1 There are no Upgrading requirements.

Section 2 – Plant and Equipment.

- 2.1 The activities at the installation shall be carried out within the installation boundary outlined in green as indicated on the Installation Location and Boundary plan shown in Schedule 1 of this Permit.
- 2.2 Permitted activities shall only be carried on using the plant and equipment as detailed in the Description of Activities and on the Installation Layout reproduced in Schedule 2 of this Permit.
- 2.3 The Operator shall notify Sheffield City Council's Environmental Protection Service of any proposed operational changes, including any alterations to the process involving the provision of new plant or equipment which may affect emissions or have consequences for the environment. The information shall be submitted at least 14 days before the changes take place.

Section 3 - Reporting Requirements.

3.1 The Operator shall send Sheffield City Council's Environmental Protection Service, by no later than 1st April each year, a certificate from the CAMEO organisation* or appropriate evidence from a comparable audited burden sharing arrangement or scheme which specifies:-

a) the total number of cremations in the past 12 months;

b) the number of cremations undertaken in cremators fitted with operational mercury abatement equipment in the previous 12 months;

or

c) the number of cremations undertaken in the previous 12 months and the proportion of those subject to burden sharing arrangements under which money is paid for the benefit of abated crematoria;

or

d) in cases where mercury abatement is fitted but fewer than 50%¹ of cremations at the installation were undertaken in cremators fitted with it in the previous 12 months, the relevant information in both b) and c).

* Crematoria Abatement of Mercury Emissions Organisation

Note1

¹ using as a baseline the number of cremations undertaken in 2003 based on the Federation of British Crematorium Authorities annual statistics for 2003, and taking account of AQ9(06) which specified that the number of cremations involving stillbirths, perinatal deaths, and deaths of infants under 5 years should be subtracted.

Additional Guidance from the Department for Environment, Food and Rural Affairs, and from the Welsh Assembly Government – Control of Mercury Emissions from Crematoria, AQ1 (05) – makes amendments to the principal statutory guidance that is produced as PG5/02(04). Paragraph (3d) AQ24 (05) identifies three burden sharing options: (1) a national burden sharing scheme, known as CAMEO; (2) internal burden sharing between crematoria operated by the same cremation authority or company; and (3) local sharing agreements reached with nearby crematoria. AQ1(05), 24(05) and 9(06) can be found at the following internet addresses:

d) AQ1(05)

[http://www.defra.gov.uk/environment/quality/pollution/ppc/localauth/pubs/guidance/notes/aqnotes/aq01\(05\).htm](http://www.defra.gov.uk/environment/quality/pollution/ppc/localauth/pubs/guidance/notes/aqnotes/aq01(05).htm) , as amended by AQ24(05) , as amended by

<http://www.defra.gov.uk/environment/quality/pollution/ppc/localauth/pubs/guidance/notes/aqnotes/documents/aq24-05.pdf> , and AQ9(06)

<http://www.defra.gov.uk/environment/quality/pollution/ppc/localauth/pubs/guidance/notes/aqnotes/documents/aq09-06.pdf> b) and c).

3.2 Residence time in the secondary combustion zone shall be demonstrated at commissioning or by calculation.

- 3.3 A summary of continuous emissions monitoring data for carbon monoxide and particulate matter for each cremator shall be forwarded to the Regulator at least once in every 6 month period. The information shall be submitted covering each period of either four weeks or a calendar month and shall include;
- values that exceed the 95% limit for carbon monoxide and particulate matter in that period for each cremation;
 - 60 minute mean emission values that exceed the 100% limit for carbon monoxide and particulate matter in that period for each cremation;
 - a list of the highest 60 minute mean emission value for each period
 - the 95th percentile value for each period.
- 3.4 For temperature and oxygen the Operator shall report the following continuous monitoring values to the Regulator at least once in every 6 month period;
- secondary chamber entrance temperature, 4 weekly/monthly maximum and minimum (of 5 minute averages);
 - secondary chamber exit temperature, 4 weekly/monthly maximum and minimum (of 5 minute averages);
 - oxygen concentration, 4 weekly/monthly maximum and minimum (of 5 minute averages).
- N.B. The Operator may report periods of 4 weeks or 1 month.
- 3.5 Where any values have been exceeded in any 4 weekly/monthly reporting period, records shall be kept that identify the number of times that the limit was exceeded during the reporting period, the levels of exceedance and the time, date and cremation reference. The records shall be made available to the Regulator on request.
- 3.6 Where the combustion provisions in condition 5.11 of this Permit are not met continuously, the dioxin emission limit and monitoring provision in Table 1 Row 5 of this Permit shall apply.
- 3.7 The monthly report results required by conditions 3.3 and 3.4 shall be presented in a format that enables the Regulator to check compliance for oxygen, temperature, carbon monoxide and particulate matter with Table 1 of this Permit.
- 3.8 The Operator shall keep records of quarterly gas consumption for inspection by the Regulator. Consumption shall be converted into CO₂ equivalent emissions using the following conversion equation:

$$\text{Gas usage (kWh)} \times \text{conversion factor} = \text{kgCO}_{2e}$$

4.0 Emission Limits, Monitoring and Other Provisions.

- 4.1 The reference conditions for limits in Table 1 are 273K, 101.3kPa, 11% oxygen v/v dry gas unless otherwise stated. All sampling and tests required shall be carried out when the cremators are operated at their usual operating capacities.
- 4.2 The Operator shall carry out emissions monitoring in accordance with the methods, frequency requirements and for the parameters set out in Table 1.
- 4.3 The mass emissions limits set out in Table 1 of this Permit shall not be exceeded.

TABLE 1 Emission Limits, Monitoring and Other Provisions.

Substance	Mass limits per cremator	Type of Monitoring	Monitoring frequency
1. Hydrogen chloride (excluding particulate matter)	300g an hour	Periodic monitoring	Annual
2. Total particulate matter from cremator	120g an hour for 95% of cremations and 240g an hour for all cremations	Qualitative monitoring - Provide visual alarms and record levels and alarms Plus – Instrument health check i.e. service in accordance with manufacturer's instructions Plus – Periodic monitoring – Set reference level for CEMS* (configure outputs & set levels at which alarms activate)	Continuous Plus Annual Plus Annual
3. Carbon Monoxide	150g in the first hour of cremations for 95% of cremations and - 300g in the first hour of cremation for all cremations	Qualitative monitoring Record data at less than 15 second intervals Provide visual alarms and record alarm events plus- Instrument health check i.e. service in accordance with manufacturer's instructions plus- Periodic monitoring – Validation of CEM output through comparison with periodic test results	Continuous plus- Annual plus- Annual
4. Organic compounds (excluding particulate matter) expressed as carbon	30g an hour	Periodic monitoring	Annual
5. PCDD/F (dioxins)	4.5 micrograms as ITEQ per 3 cremations (minimum sampling period 6 hours)	Periodic monitoring Continuous monitoring of any temperature, oxygen and flow parameters that apply during the dioxin test shall be required by the permit. Interlock to prevent cremator loading unless those parameters are met	Upon commissioning of new or replacement cremators

- 4.4 The Operator shall keep records of inspections, tests and monitoring, including all non-continuous monitoring, inspections and visual assessments. The records shall be:
- made available for the Regulator to examine and in the case of records kept off site within 1 working week of request; and
 - kept by the Operator for at least two years.
- 4.5 The Operator shall have a written procedure for dealing with the failure of the cremators, in order to minimise any adverse affects.
- 4.6 The Operator shall notify the Regulator at least 7 days before any monitoring exercise to determine compliance with emission limit values, including a re-test in connection with condition 4.8. The operator shall state the provisional time and date of monitoring, pollutants to be tested and the methods to be used.
- 4.7 The consultant's report containing the results of non-continuous emission testing shall be forwarded to the regulator within 8 weeks of the completion of the sampling.
- 4.8 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:
- notify the Regulator within 1 day of receipt of the adverse result;
 - identify the cause and take corrective action promptly;
 - record as much detail as possible regarding the cause and extent of the problem, and the action taken by the Operator to rectify the adverse result;
 - re-test to demonstrate compliance as soon as possible; and
 - provide the Regulator with the re-test results within 21 days of the date of testing.
- 4.9 Emissions from each cremator shall be free from visible smoke and no emission from a cremator shall exceed the equivalent of Ringelmann Shade 1. Notes on the Ringelmann and Miniature Smoke Charts are given in British Standard BS2742: 2009.
- 4.10 There shall be no offensive odour beyond the installation boundary, as perceived by the Regulator.
- 4.11 The Operator shall ensure that visual and olfactory assessments of emissions from each cremator are made at least once a day at a time when cremation is occurring. Remedial action shall be taken immediately in the case of abnormal emissions.

- 4.12 In the event of a complaint, such as of visible emissions or odour, the source of the emissions shall be identified and corrective action taken. The Operator shall:
- Notify the Regulator within 1 day of receipt of the complaint;
 - 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;
 - Record the date, time, location, results of checks, weather conditions and wind direction.
- 4.13 In the case of an abnormal emission, malfunction or breakdown leading to abnormal emissions the Operator shall:
- investigate and undertake remedial action **immediately**;
 - adjust the process or activity to minimise those emissions; and
 - promptly record the events and actions taken;
 - notify the Regulator within 1 day of the abnormal emission.
- 4.14 The Regulator shall be informed without delay:
- upon receipt of a complaint regarding emissions; or
 - if there is an emission that is likely to have an effect on the local community; or
 - in the event of the failure of key arrestment plant, for example flue gas cleaning plant; or
 - where continuous monitoring results exceed the specified emission limit.
- 4.15 All releases to air, other than steam or condensed water vapour, shall be free from persistent visible emissions.
- 4.16 All emissions to air shall be free from droplets.
- 4.17 The introduction of dilution air to achieve emission concentration limits is not permitted.
- 4.18 Emissions from each individual cremator shall be continuously monitored for carbon monoxide using an infra red sensor linked to the Furnace Construction Company's computerised control system. Data shall be acquired at intervals of 10 seconds or less. Regular checks on the monitoring equipment shall be carried out by staff and any faults or failures shall be recorded in the log book or recording system kept in accordance with this Permit.

- 4.19 Emissions of total particulate matter from each individual cremator shall be continuously indicatively monitored using a PCME Dust Alert 110 particulate monitor. The monitor shall continuously monitor and record the emissions and activate an alarm when emissions exceed 100 g/hr. Emission events that lead to the alarm being activated shall be automatically recorded by the computer system. Regular checks on the monitoring equipment shall be carried out by staff and any faults or failures shall be recorded in compliance with this Permit.
- 4.20 A Paramagnetic Sensor linked to the Furnace Construction Company's computerised control system shall continuously monitor oxygen concentrations at the outlet of the secondary combustion zone of each cremator. It shall be connected to an alarm which activates when oxygen falls below 3%. Alarm activations shall be automatically recorded by the computer system. Regular checks on the monitoring equipment shall be carried out by staff and any faults or failures shall be recorded in compliance with this Permit.
- 4.21 All continuous monitoring readings shall be on display to appropriately trained operating staff.
- 4.22 Gas temperatures in the secondary combustion zone of each cremator shall be monitored. Temperatures at the entrance and after the exit from the secondary combustion zone shall be continuously monitored and recorded. The monitor shall trigger an alarm when the temperature drops below 850°C (1123K). Alarm activations shall be automatically recorded by the computer system.
- 4.23 All continuous monitoring instruments shall be fitted with audible and visual alarms that shall be situated appropriately to warn the Operator of arrestment plant failure or cremator malfunction. The activation of alarms shall be automatically recorded.
- 4.24 All continuous monitors shall be operated, maintained and calibrated (or referenced) in accordance with the manufacturers' instructions, which shall be made available for inspection by the Regulator. The relevant maintenance and calibration (or referencing) shall be recorded.
- 4.25 All continuous monitors shall provide reliable data >95% of the operating time.
- 4.26 A manual or automatic procedure shall be in place to detect continuous monitoring instrument malfunction and to monitor instrument availability.

4.27 Calibration of quantitative and qualitative particulate monitoring instruments shall be by use of a 3 point calibration according to the standard reference method EN-13284-1, or other standard as agreed in writing by the Regulator.

Table 2: Options for Continuous Monitoring of Particulate.

Type of monitoring	Information recorded by instrument	What the alarm levels can detect	Capability of instrument	Tests required on initial set up of instrument	Annual tests required	3 yearly tests required
Quantitative	mg/m3 over time	% of ELV	Capable of being calibrated for a specific application	Functionality test 3/5 point calibration	Functionality test 3/5 point calibration	Functionality test 3/5 point calibration
Qualitative	mg/m3 (approx) over time	Approx % of ELV	Capable of being calibrated for a specific application	Set up and 3 point calibration	Instrument health check	3 point calibration health check
Instrument response shall be correlated to the results of multiple isokinetic gravimetric samples according to the standard reference method typically EN 13284-1						

4.28 Non-continuous emissions monitoring of particulate matter shall be carried out according to the main procedural requirements of BS ISO 9096:2003, with averages taken over operating periods, excluding start-up and shutdown.

4.29 The frequency of testing shall be increased, for example, as part of the commissioning of new or substantially changed processes, or where emission levels are near to or approach the emission concentration limits.

4.30 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.

4.31 Monitoring shall be carried out in accordance with methods described in M1 "Sampling requirements for monitoring stack emissions to air from industrial installations"¹ and M2 "Monitoring of stack emissions to air"², published by the Environment Agency, or by another method agreed in writing by Sheffield City Council's Environmental Protection Service.

¹ Environment Agency, January 2013, or any re-issue or update

² Environment Agency, January 2010

4.32 All reasonably practicable steps shall be taken to minimise the duration and visibility of emissions during start up and shut down.

4.33 The best available techniques shall be used to prevent or, where that is not practicable, reduce emissions from the installation in relation to any aspect of the operation of the installation which is not regulated by any other condition of this Permit.

5.0 Control Techniques.

5.1 PVC and melamine shall not be used in coffin construction or furnishings.

5.2 Cardboard coffins shall not contain chlorine in the wet-strength agent. (e.g. not using polyamidoamine-epichloroglydrin based resin (PAA-E))

5.3 Packaging for stillbirth, neonatal and foetal remains shall not include any chlorinated plastics.

5.4 Coffins containing lead or zinc shall not be cremated.

5.5 The cremator shall be designed and operated in order to prevent the discharge of smoke, fumes, or other substances during charging.

5.6 The charging system shall be interlocked to prevent the introduction of a coffin to the primary combustion zone unless the secondary combustion zone temperature exceeds 850°C.

5.7 The cremator and all ductwork shall be made and maintained gas tight if under positive pressure to prevent the escape of gases from the ductwork or cremator to the air.

5.8 All cremators shall be designed to ensure complete combustion and shall be fitted with a secondary combustion zone.

5.9 The Operator shall provide the volume of the secondary combustion zone, when required by the Regulator.

5.10 When re-bricking a cremator, the convolutions of the secondary combustion chamber shall be maintained and the volume of the chamber recalculated and restated.

5.11 Each cremator shall be designed, constructed and operated to ensure that gases are held at 850°C for a minimum of 2 seconds residence time, at all times, in the secondary combustion zone.

5.12 The remains in the cremator shall only be removed when calcination is completed.

- 5.13 The removal of ash and non-combustible residues from the cremators shall be undertaken carefully so as to prevent dust emissions via the flue.
- 5.14 Cremated remains shall be moved and stored in a covered container.
- 5.15 Dusty materials shall be kept tightly contained.

6.0 Stacks.

- 6.1 Flues and ductwork shall be cleaned regularly to prevent accumulation of materials, as part of a routine maintenance programme. A record of cleaning shall be recorded in the log book or recording system kept in accordance with this Permit.
- 6.2 Exhaust gases discharged through a stack or vent shall be designed to achieve an exit velocity of 15 m/sec in order to achieve adequate dispersion.
- 6.3 Chimneys or process vents shall not be fitted with any restriction at the final opening, for example, a plate, cap or cowl, with the exception of a cone which may be necessary to increase the exit velocity of the emissions.
- 6.4 The flue for each cremator shall be grouped in a multiflue arrangement that terminates at a height of 14m.

7.0 Management and Maintenance.

- 7.1 A plan shall be maintained for dealing with emergencies which give rise to mass fatalities. This shall mainly address the holding of additional spares and consumables and the training of suitable numbers of staff.
- 7.2 Spares and consumables, in particular, those subject to continual wear, shall be held on site, or shall be available at short notice from guaranteed local suppliers, so that plant breakdowns can be rectified rapidly.
- 7.3 A written maintenance programme shall be provided to the Regulator on request, with respect to pollution control equipment, including monitoring instrumentation, the cremator secondary chamber, ducts and flues.
- 7.4 Maintenance records shall be maintained and made available for inspection by the Operator to the Regulator on demand.
- 7.5 Flue cleaning schedules and records shall be maintained and made available by the Operator to the Regulator on demand.

- 7.6 The Operator shall adopt a structured Environmental Management System suitable for managing the risks under normal operating conditions and in accidents and emergencies.
- 7.7 All malfunctions or breakdowns leading to visible emissions shall be investigated and rectified immediately. Process operations shall be adjusted until normal operations are restored. Details of the malfunction shall be recorded in the log book or recording system. If an affect on the local community is likely, the Operator shall inform Sheffield City Council's Environmental Protection Service within 1 working day.

8.0 Records and Training

- 8.1 Staff at all levels shall receive training and instructions necessary for their duties and shall include the following:
- Responsibilities under the Permit;
 - Minimisation of emissions;
 - Actions during abnormal emissions.
- 8.2 The Operator shall keep and maintain a statement of training requirements for each operational post and keep a record of the training received by each employee whose actions may have an impact on emissions. These documents shall be made available to Sheffield City Council's Environmental Protection Service upon request.
- 8.3 The Operator shall ensure that all records required to be made by this Permit and any other records made by it in relation to the operation of the permitted process shall:-
- a) be made available for inspection by the Regulator at any reasonable time;
 - b) be supplied to the Regulator on demand and without charge;
 - c) be legible
 - d) be made as soon as reasonably practicable;
 - e) indicate any amendments which have been made and shall include the original
 - f) record wherever possible, and;
 - g) be retained at the Permitted installation, or other location agreed by the Regulator in writing, for a minimum period of 2 years from the date when the records were made, unless otherwise agreed in writing.

9.0 Complaints

- 9.1 Within 2 weeks of the date of issue of this Permit, the Operator shall submit a written complaints procedure to Sheffield City Council's Environmental Protection Service to be followed by the Operator in the event of any complaint from the general public, for approval in writing.

10.0 General Conditions

- 10.1 The Operator shall notify the following to Sheffield City Council's Environmental Protection Service, in writing, within 14 days of their occurrence:-
- Any change in the departmental name, trading name, registered name or registered office address;
 - Any steps taken with a view to going into administration, entering into a company voluntary arrangement or being wound up.
- 10.2 The Operator shall notify the Regulator **without delay** of:-
- a) The detection of an emission of any substance, which exceeds any limit or criterion in this Permit, specified in relation to the substance;
 - b) The detection of any fugitive emission that has caused, is causing or may cause significant pollution, unless the quantity emitted is so trivial that it would be incapable of causing significant pollution.
 - c) The detection of any malfunction, breakdown or failure of plant or techniques which has caused, is causing or has the potential to cause significant pollution
 - d) Any accident, which has caused, is causing or has the potential to cause significant air pollution.
- 10.3 The Operator shall give written notification to Sheffield City Council's Environmental Protection Service in the following instances;
- a) Permanent cessation of the operation of any part of, or all of the Permitted Installation;
 - b) Cessation of the operation of any part of, or all of the Permitted Installation for a period, likely to exceed 1 year;
 - c) Resumption of the operation of any part of, or all of the permitted installation after a cessation notified under (b) above.

- 10.4 All reports and notifications required by this Permit, or under any Regulation under the Environmental Permitting Regulations 2010, as amended, shall be sent to Sheffield City Council's Environmental Protection Service. Unless notified in writing, all reports, notifications and communications in respect of this Permit shall be sent to:

ippc@sheffield.gov.uk or

**Sheffield City Council,
Environmental Protection Service
5th Floor (North)
Howden House
1 Union Street
S1 2SH**

Or any other address as given by the Regulator.

END OF CONDITIONS

EXPLANATORY NOTE

Definition of Best Available Techniques

*Local Authorities are obliged by EP regulation 64(2) to have regard to any guidance issued to them by the Secretary of State when determining BAT. BAT for each installation should be assessed by reference to the appropriate technical guidance note. All notes are published on the Defra website:
<http://www.defra.gov.uk/environment/ppc>*

Article 2(11) of Council Directive 96/61/EC defines "best available techniques" as:

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 that is not practicable, generally to reduce emissions and the impact on the environment as a whole; and for the purpose of this definition –

"available techniques" means those techniques which have been developed on a scale which allows implementation in the relevant industrial sector, under 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;

"best" means, in relation to techniques, the most effective in achieving a high general level of protection of the environment as a whole;

(a) "techniques" includes both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned.

In determining the best available techniques, special consideration should be given to the items in Annex IV.

Health & Safety

The permit does not affect responsibilities under Health & Safety legislation or any other Statutory requirements.

Please Note

Where complaint is attributable to the operation of the installation and is, in the opinion of the Local Authority, justified, or if new knowledge develops on the potential for harmful effects from emissions, an immediate review of the Permit shall be undertaken. The Local Authority shall subsequently specify any new requirements and compliance time scales.

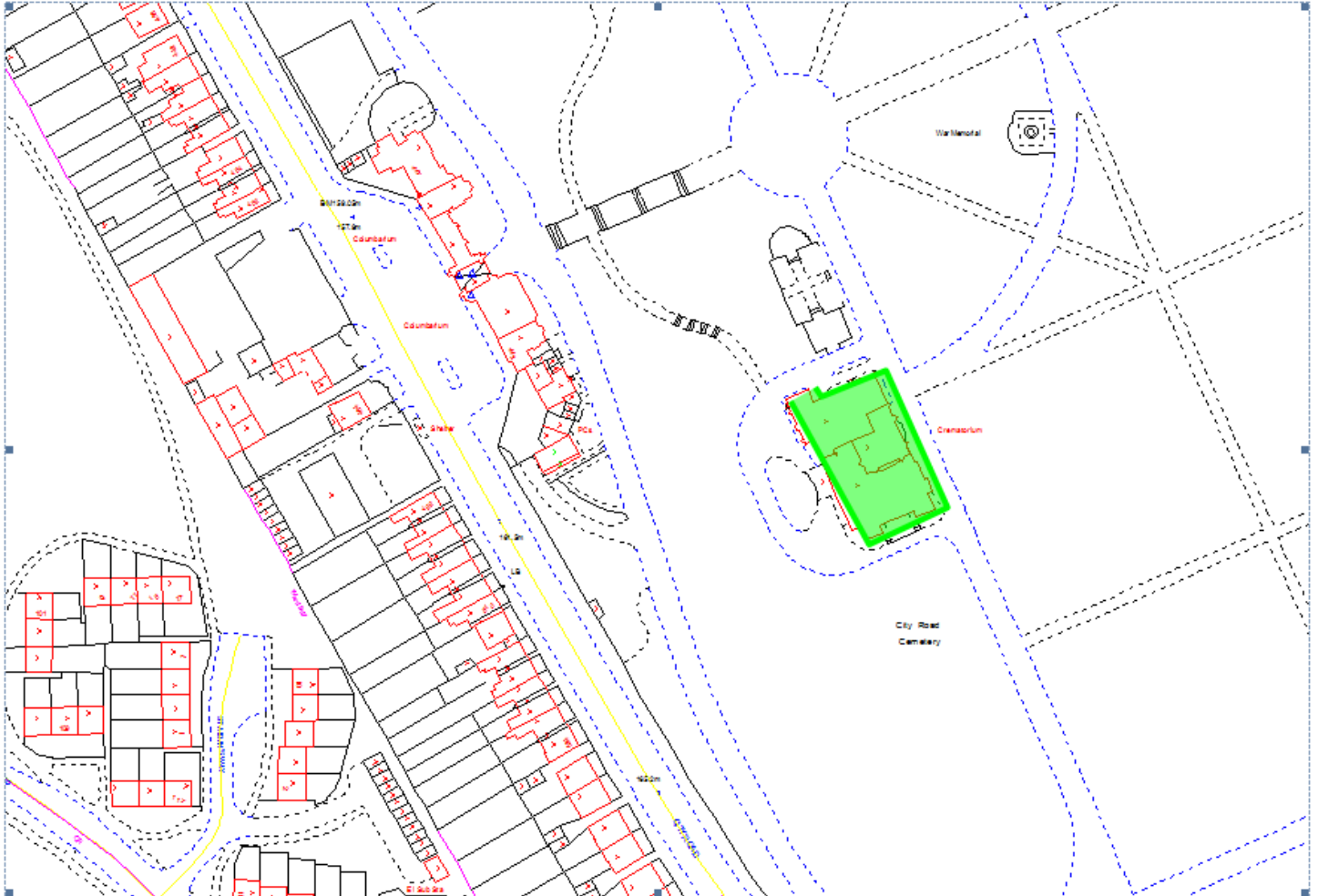
An annual subsistence fee as prescribed by the Secretary of State for the Environment shall be payable, for this Permit, by the process Operator, to this Authority within 2 weeks of the 1st April of each year.

In the event that the Permit has been issued after the 1st April in the initial year then the subsistence fee shall be pro rata for the complete months remaining and shall be due within 2 weeks of the Permit issue date.

If the relevant payment is not received by Sheffield City Council's Environmental Protection Service then Permit revocation procedures shall be initiated in accordance with Regulation 22 of the Environmental Permitting (England & Wales) Regulations 2010 or any statutory re-enactment of the same.

The requirements of this Permit are not to be taken as planning permission. Where any structural alterations are necessary to ensure compliance with this Permit then the normal planning channels should be followed.

Schedule 1 – Installation Location.



Schedule 2 – Installation Layout.

