



**POLLUTION PREVENTION AND CONTROL ACT 1999
ENVIRONMENTAL PERMITTING (ENGLAND & WALES)
REGULATIONS 2016 (As Amended)**

**Permit Number: 5.1/040862/JT6
Installation Address: Dignity Crematoria Limited
Grenoside Crematoria
Skew Hill Lane
Sheffield
S35 8RZ**

In accordance with the Environmental Permitting (England and Wales) Regulations 2016 as amended, Dignity Crematoria Limited is hereby permitted to operate a scheduled activity at the address detailed above, namely the cremation of human remains as described in Schedule 1, Part 2, Chapter 5, Section 5.1, Part B, subsection (b) and subject to the following Permit conditions.

A handwritten signature in black ink, appearing to be 'A. O'H.' or similar, written over a light grey rectangular background.

Signed

Dated this day: 21st May 2024

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

The Secretary of State Guidance PG 5/2 (12) Statutory Guidance for Crematoria has provided the framework for the conditions in this Permit.

Name & Address of Operator:

Dignity Crematoria Limited
Grenoside Crematoria
Skew Hill Lane
Sheffield
S35 8RZ

Contact: Amy Groves Tel: 0114 2453999 amy.groves@thecmg.co.uk

Registered Office:

Dignity Crematoria Limited
4 King Edwards Court
Sutton Coldfield
B73 6AP

Address of Permitted Installation:

Dignity Crematoria Limited
Grenoside Crematoria
Skew Hill Lane
Sheffield
S35 8RZ
Company registration number: 05029403

Talking to Us

Any communication with Sheffield City Council should be made to the following address quoting the Permit Number:

Environmental Protection Service

Sheffield City Council
4th Floor (South)
Howden House
1 Union Street
Sheffield
S1 2SH

Alternatively Email: epsadmin@sheffield.gov.uk or ippc@sheffield.gov.uk
Telephone: (0114) 273 4651

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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 (1) of the Environmental Permitting (England and Wales) Regulations 2016 (S.I. 2016 No.1154), as amended, (“the EP Regulations”) to operate an installation carrying out activities covered by the description in Part 2, Chapter 5, section 5.1, Part B, subsection (b) of Schedule 1 of those Regulations, to the extent authorised by the Permit;

CHAPTER 5 Waste management

SECTION 5.1 *Incineration and co-incineration of waste*

Part B

(b) The cremation of human remains.

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 EP 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 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) at the following address:

Environmental Protection Service
Sheffield City Council
Floor 4 Howden House
Union Street
Sheffield
S1 2SH

Tel: 0114 273 4651 or email epsadmin@sheffield.gov.uk or ippc@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 2016 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 forms available to lodge an appeal here:

[Environmental permit: appeal form - GOV.UK \(www.gov.uk\)](http://www.gov.uk)

There is no fee to appeal.

Where to Send Your Appeal Documents

Appeals should be addressed to:

The Planning Inspectorate

Environment Appeals Team

3A Eagle Wing

Temple Quay House

2 The Square

Temple Quay

Bristol BS1 6PN

Phone: 0303 444 5584

Email: etc@planninginspectorate.gov.uk

You must also send a copy of your appeal to the relevant regulator.

In the course of an Appeal process, the main parties will be informed of the 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.

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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.

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 2016 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.2016 No. 1154 (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 2 gas fired Facultatieve Technologies 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 cremation process is based on the rapid and efficient combustion in dual chamber forced draught cremators. The combustion of the coffin and cadaver occurs in the primary chamber, with products of incomplete combustion and particulates then further combusted in the secondary chamber.

Emissions from Cremator 1 Make: Facultatieve Technologies, Model FT11 machine number 3008 and Cremator 2 Make: Facultatieve Technologies, Model FT111 (for larger coffins), machine number 3009, vent to a bank of bag filters Make: Nederman type or equivalent FD 513/1,1/100 with 100 bags before emitting to atmosphere via a 14 metre high stack.

Prior to filtration the hot flue gases must be cooled to 100°C which is the ideal operating temperature of the filters. The hot flue gases pass from the 2 cremators to the gas cooler via a flue duct. The heat removed from the flue gas is transferred in the water/glycol circulation system to a dedicated air blast cooler.

Between the flue gas cooler and the filter, fresh activated carbon reagent additive Factivate is added to the flue gases. The flue gases and Factivate are mixed prior to entering the filter. A cake of additive and dust builds up on the bags. The pressure differential across the bags is detected by a pressure transmitter which triggers the bag cleaning process when the pressure differential goes above the optimum range.

At the start of each working day, a pre-determined quantity of Factivate, or equivalent, is loaded into the system. This coats the bags prior to cremation. A fixed amount of reagent is then added during each cremation cycle.

Emissions of particulate matter are continuously monitored by a PCME DA60 monitor or equivalent which triggers an alarm if the levels reach a reference level the equivalent of 15mg/m³.

Reverse jet air cleans the bags periodically and the released dust cake falls into the filter hopper. A mechanical screw transports the dust and spent reagent to a container for disposal.

An induced draught fan draws the cleaned gas through the fabric filter and passes it to atmosphere via the 14 metre high stack.

Conditions of Permit

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

1 Upgrading

1.1 There are no Upgrading requirements.

2 Plant and Equipment

- 2.1 The activities at the installation shall be carried out within the installation boundary outlined in red on the installation location 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 Layouts reproduced in Schedules 2 and 3 of this Permit.
- 2.3 The Operator shall notify the Regulator, Sheffield City Council 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.

3 Emission Limits

- 3.1 Emissions from the cremators shall in normal operation, which includes start up and shut down, be free from visible smoke and no emission from the cremators shall exceed the equivalent of Ringelmann Shade 1 as described in British Standard BS2742:2009.
- 3.2 Emissions from cremators in normal operation shall be free from droplets, other than steam and condensed water vapour.
- 3.3 Emissions from cremators in normal operation shall be free from persistent visible emissions.
- 3.4 There shall be no offensive odour arising from the activity detectable beyond the installation boundary as shown in Schedule 1, as perceived by the Regulator.
- 3.5 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.

- 3.6 Emissions from the cremators shall discharge via the stack at a minimum height of 14 metres, with a minimum efflux velocity of 15m/s. The stacks shall not be fitted with any final restriction such as a plate, cap or cowl.
- 3.7 Emissions shall be expressed at reference conditions 273K, 101.3kPa, 11% oxygen v/v dry gas.
- 3.8 Emissions of cremation pollutants, as detailed in Schedule 4, shall be monitored at the frequency described in the table in Schedule 4.
- 3.9 The introduction of dilution air to achieve the emission limits is not permitted.
- 3.10 Sampling points shall be designed to comply with the relevant British Standard to allow compliance with sampling standards.

4 Control Techniques

- 4.1 The temperature in the secondary combustion chamber of each cremator shall not be less than 800°C (1073K) as measured at the last measuring thermocouple after the exit of the secondary combustion zone.
- 4.2 When the cremators are operating without abatement, such as under emergency conditions and by-pass, the minimum temperature of the secondary combustion chamber shall be 850°C.
- 4.3 Temperatures shall be monitored continuously, recorded automatically and shall have a visual alarm when the temperature drops below 800°C. Each alarm event shall be automatically recorded.
- 4.4 The residence time in the secondary combustion chamber of the 2 cremators shall be a minimum of 2 seconds.
- 4.5 The cremator charging system shall be interlocked to prevent the introduction of a coffin when the temperature in the secondary combustion zone is below 800°C, or 850°C when running on bypass.
- 4.6 There shall be no discharge of smoke, fumes, or other substances during the charging of each coffin.
- 4.7 All cremators shall be designed to ensure complete combustion and fitted with a secondary combustion zone. The manufacturer shall state the volume of the secondary combustion zone. When re-bricking a cremator, the convolutions of the secondary combustion chamber shall be maintained and the volume of the chamber recalculated and restated.

- 4.8 Each cremator and all the ductwork shall be maintained as gas tight if under positive pressure to prevent the escape of gases from the ductwork or cremator to the air.
- 4.9 Cremated remains shall be moved and stored in lidded containers; cremated remains shall not be stored in open bags or containers.
- 4.10 Dusty materials, dusty wastes and wastes containing mercury shall be kept tightly contained.
- 4.11 The remains in the cremator shall only be removed when calcination is complete.
- 4.12 Ash and non-combustible residues shall be removed from the cremator in such a way as to prevent dust emissions via the flue.
- 4.13 Only coffins and caskets conforming to the following construction and lining materials shall be cremated. Specifically;
- No varnish or paint to outer surfaces apart from a thin layer of water based lacquer;
 - PVC and melamine shall not be used in coffin construction or furnishings;
 - Cardboard coffins shall not contain chlorine in the wet strength agent eg not using polyamidoamine-epichlorhydrin based resin (PAA-E);
 - Packaging for stillbirth, neonatal or foetal remains shall not include any chlorinated plastics;
 - Coffins containing lead or zinc shall not be cremated.

5 Monitoring, Investigation and Reporting

- 5.1 The results of all checks and assessments carried out in accordance with Permit conditions shall be recorded in a logbook or recording system. The record shall state:
- the time, date and result of the assessment;
 - the name of the person making the assessment;
 - the observation position;
 - the status of the activity at the time of observation; and
 - the prevailing weather conditions including the wind strength and direction.

The logbook or recording system shall be kept on site for at least two years and shall be made available for inspection by an authorised officer of Sheffield City Council's Environmental Protection Service.

- 5.2 In the case of abnormal emissions, malfunction or breakdown leading to abnormal emissions, the Operator shall:
- investigate the cause and undertake remedial action immediately;
 - adjust the process or activity to minimise those emissions; and
 - promptly record the events and actions taken.

- 5.3 The Regulator shall be informed within 1 day, whether or not there is related monitoring showing an adverse result:
- 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; or
 - in the event of the use of the bypass or emergency relief vent; or
 - if continuous monitoring results exceed twice the specified emission limit
- 5.4 The oxygen concentration at the outlet of the secondary combustion zone shall be continuously monitored and recorded automatically.
- 5.5 Emissions of total particulate matter at the outlet of the Flue Gas Treatment System shall be continuously indicatively monitored using a PCME Dust Alert DA60 particulate monitor or equivalent. The monitor shall act as a filter leak detector as specified in PG5/2 (12) in order to detect malfunction of the abatement plant. All readings shall be continuously logged and recorded by the computer control system along with any alarm events. The monitor shall trigger an alarm when emissions reach a reference level of 15mg/m³. Each alarm event shall be recorded.
- 5.6 The continuous monitoring equipment shall be serviced annually in accordance with the manufacturer's instructions.
- 5.7 Carbon monoxide emissions from the stack shall be continuously qualitatively monitored to check compliance with the emissions limit in Schedule 4. Data shall be recorded at 15 second intervals or less. The monitor shall trigger a visual alarm when emissions reach a reference level of 75mg/m³. Each alarm event shall be recorded.
- 5.8 The carbon monoxide continuous monitoring equipment shall be calibrated and serviced at least annually, in accordance with the manufacturer's instructions.
- 5.9 All continuous monitoring readings shall be on display to appropriately trained operating staff and fitted with an audible and visual alarm fitted with the ability to warn the operator of arrestment plant failure or malfunction. Activation of the alarms shall be automatically recorded.
- 5.10 Emission concentrations may be reported as zero when the plant is off and there is no flow from the stack.
- 5.11 Each continuous emissions monitor (CEM) shall provide reliable data >95% of the operating time (i.e. availability >95%). A manual or automatic procedure shall be in place to detect instrument malfunction and to monitor instrument availability.
- 5.12 The continuous monitoring equipment shall be operated, maintained, and calibrated in accordance with the manufacturer's instructions. The

maintenance and calibration shall be recorded in the logbook referred to in condition 5.1.

- 5.13 Every 6 months the Operator shall submit a report containing continuous monitoring data for carbon monoxide. The data shall be submitted covering each period of either four weeks or a calendar month:
- a. Values that exceed the 95% limit for carbon monoxide in that period;
 - b. 60-minute mean emission values that exceed the 100% limit for carbon monoxide in that period;
 - c. A list of the highest 60-minute mean emission value for each period;
 - d. The 95th percentile value for each period.
- 5.14 For temperature and oxygen, the Operator shall report the following continuous monitoring value to the Regulator every 6 months:
- a. Secondary chamber entrance temperature, 4-weekly/monthly maximum and minimum (of 5-minute averages);
 - b. Secondary chamber exit temperature, 4-weekly/monthly maximum and minimum (of 5-minute averages);
 - c. Oxygen concentration, 4-weekly/monthly minimum (of 5-minute averages).
- 5.15 Where any values given in condition 5.13 and 5.14 are exceeded in any 4-weekly/monthly or 6-monthly reporting period, the records shall be kept to identify the number of times that the limit was exceeded during the reporting period, the levels of the exceedance, and the time, date and cremation reference. This data shall be kept on site and made available to the Regulator on request.
- 5.16 Particulate emissions from the process shall be monitored annually to check compliance with the emission limit specified in Schedule 4. Test method BS EN: 13284-1, with averages taken over operating periods, excluding start-up and shutdown, shall be used unless agreed in writing with the Regulator.
- 5.17 Hydrogen chloride emissions from the process shall be monitored annually to check compliance with the emission limit specified in Schedule 4. Test method BS EN: 1911 parts 1 to 3 shall be used unless agreed in writing with the Regulator.
- 5.18 Carbon monoxide emissions from the process shall be monitored annually to check compliance with the emission limit specified in Schedule 4. Test method BS ISO 15058 shall be used unless agreed in writing with the Regulator.
- 5.19 Organic compounds (excluding particulate matter) expressed as carbon shall be monitored annually to check compliance with the emission limit

specified in Schedule 4. Test method BS EN 12619 shall be used unless agreed in writing with the Regulator.

- 5.20 Mercury emissions from the process shall be monitored annually to check compliance with the emission limit specified in Schedule 4. Test method BS EN 13211 shall be used unless agreed in writing with the Regulator.
- 5.21 Monitoring shall be carried out in accordance with methods described in M1 "Sampling requirements for monitoring stack emissions to air from industrial installations" and Monitoring Stack Emissions: Environmental Permits (formerly part of M2), Monitoring stack emissions: environmental permits - GOV.UK (www.gov.uk) or by another method agreed in writing by the Regulator.
- 5.22 The Operator shall investigate adverse results from either the non-continuous or continuous monitoring as soon as the monitoring data is obtained. The Operator shall:
- Identify the cause of the adverse result and take corrective action;
 - Record as much detail as possible regarding the cause and extent of the problem, and the action taken to rectify the situation;
 - Retest to demonstrate compliance as soon as possible; and
 - Notify the Regulator within 1 day of receiving the re-test results.
- 5.23 The Operator shall send to the Regulator annually, and within 2 weeks of the Operator receiving them, a certificate from the Crematoria Abatement of Mercury Emissions Organisation (CAMEO) 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% 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).
- 5.24 A visual and olfactory assessment of emissions shall be made at least once per day whilst cremation is occurring to check compliance with conditions 3.1, 3.2, 3.3 and 3.4. The results of these assessments and the location at which they were carried out shall be recorded in the log book or recording system kept in accordance with condition 5.1.

- 5.25 Records of gas consumption shall be kept and recorded on a quarterly basis. Gas consumption shall be converted to CO₂ emissions using the following equation:

$$\text{Gas usage (kWh)} \times \text{conversion factor} = \text{kgCO}_2\text{e}$$

[Environmental reporting guidelines: including Streamlined Energy and Carbon Reporting requirements - GOV.UK \(www.gov.uk\)](https://www.gov.uk/guidance/environmental-reporting-guidelines-including-streamlined-energy-and-carbon-reporting-requirements)

Records shall be made available to the Regulator on request.

- 5.26 Records in the logbook or recording system shall be kept on site for at least two years and shall be made available for inspection by the Regulator upon request.
- 5.27 All reports and notifications required by this Permit, or under any Regulation under the Environmental Permitting Regulations 2016, as amended, shall be sent to the Regulator. Unless notified in writing, all reports, notifications and communications in respect of this Permit shall be sent to:

Sheffield City Council,
Environmental Protection Service,
Floor 4 Howden House
1 Union Street
Sheffield
S1 2SH

epsadmin@sheffield.gov.uk or ippc@sheffield.gov.uk

- 5.28 The Operator shall inform the regulator at least 7 days in advance of the intention to sample emissions. The Operator shall submit the Site Specific Monitoring Protocols produced by the monitoring consultants, including the date of sampling, pollutants to be sampled and the methods to be used.
- 5.29 The Operator shall submit the results of the annual non-continuous emissions monitoring within 8 weeks of completion of sampling.

6 Records and Training

- 6.1 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 including dust suppression.
- 6.2 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 the Regulator upon request.

- 6.3 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 record wherever possible, and;
 - f. 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.

7 Complaints

- 7.1 The Operator shall implement a written complaints procedure to be followed by the Operator in the event of any complaint from the general public. Records of complaints relating to emissions shall be kept for a minimum of two years and made available for the Regulator upon request.

8 General Conditions

- 8.1 The Operator shall notify the following to the Regulator, in writing, within 14 days of their occurrence: -
- Any change in the name of Dignity Crematoria Limited registered name or registered office address;
 - A change to any particulars of any ultimate holding company (including details of an ultimate holding company where Dignity Crematoria Limited has become a subsidiary);
 - Any steps taken with a view to Dignity Crematoria Limited going into administration, entering into a company voluntary arrangement or being wound up.
- 8.2 The Operator shall notify the Regulator **without delay and within 1 day** 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.
- 8.3 The Operator shall give written notification to the Regulator 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 or 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.
- 8.4 Effective preventative maintenance shall be employed on all plant and equipment concerned with the control of emissions to air. Essential spares and consumables such as thermocouples shall be stored on site or be readily available in 24 hours from guaranteed suppliers, in order to rectify break downs rapidly.
- 8.5 The Operator shall implement and maintain a written planned preventative maintenance programme in relation to permitted pollution control equipment. The programme shall be made available to the Regulator.

9 Environmental Management Systems

- 9.1 A list of key arrestment plant shall be maintained on site, each item on the list shall have a written procedure for dealing with its failure, in order to minimise any adverse effects.
- 9.2 Cleaning schedules covering all aspects of the installation including the cleaning of cremator ducts and flue shall be held on site and made available to the Regulator. Flues and ductwork shall be cleaned to prevent accumulation of materials, as part of the routine maintenance programme.
- 9.3 In the event of the use of an emergency relief vent (ERV)/bypass during cremation:-
- a) The failure, its cause and cure shall be entered in the logbook or recording system; and
 - b) The Regulator shall be notified immediately (preferably by email).

The ERV/bypass shall only be used:

- a. When the heat removal plant has failed and the abatement plant would be damaged; or
 - b. During warm-up and shutdown, provided that compliance is demonstrated with the carbon monoxide limit.
- 9.4 Cremators shall not be operated in bypass for more than 48 hours. The Operator shall contact the Regulator in the event of intending to operate in bypass beyond 48 hours.
- 9.5 A plan shall be maintained for dealing with emergencies which give rise to mass fatalities. This shall address the holding of additional spares and consumables and the training of suitable numbers of staff.

End of permit conditions.

Please Note

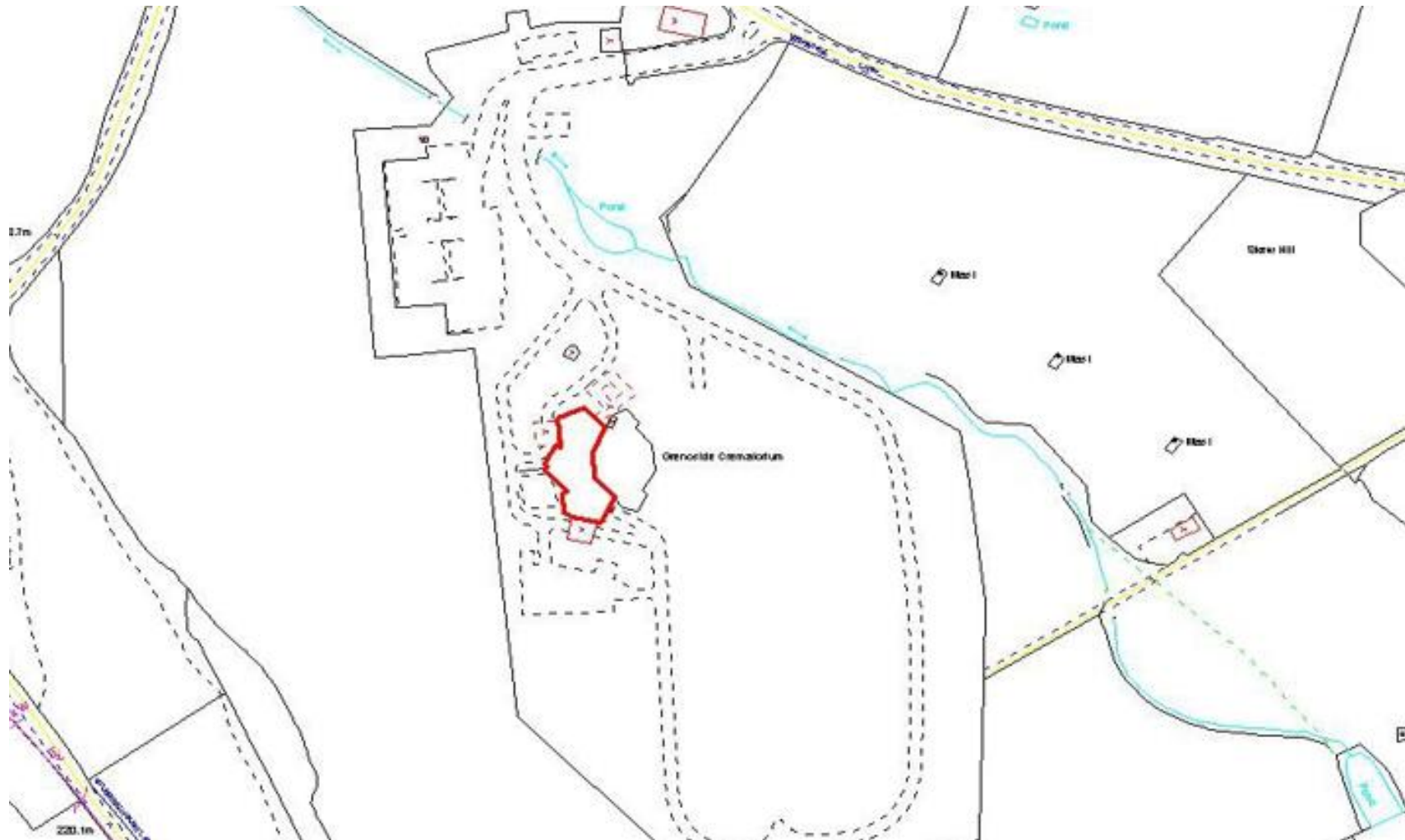
Where complaint is attributable to the operation of the installation and is, in the opinion of the Regulator, justified, or if new knowledge develops on the potential for harmful effects from emissions, an immediate review of the Permit shall be undertaken. The Regulator shall subsequently specify any 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 the Regulator within 2 weeks of the 1st April of each year.

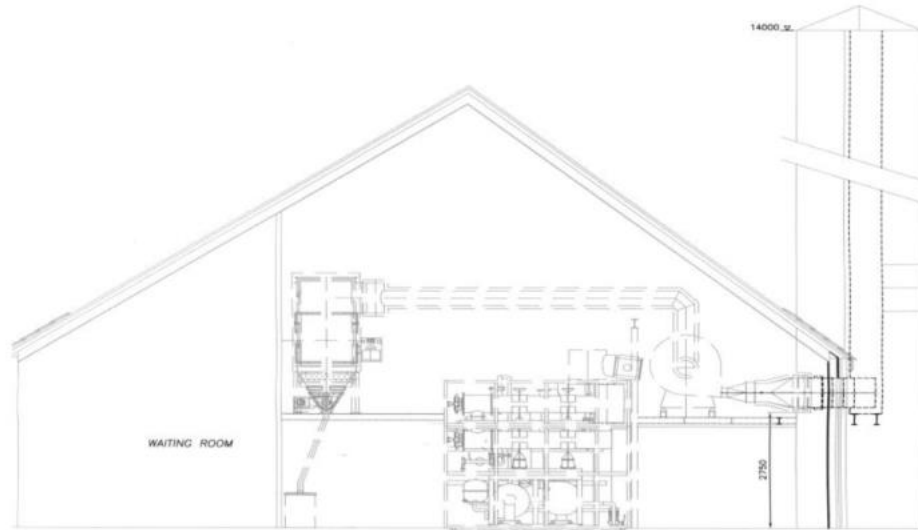
If the relevant payment is not received by the Regulator, Permit revocation procedures shall be initiated in accordance with Regulation 22 of the Environmental Permitting (England & Wales) Regulations 2016 or any statutory re-enactment of the same.

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.

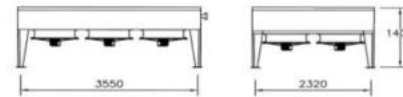
Schedule 1: Installation Location and Boundary



Schedule 2: Installation Layout



SECTION CC




AIR BLAST COOLER.

PREFERRED LOCATION IS ON THE ROOF ABOVE THE GAS CLEANING PLANT. IF IN THIS CASE IT IS IMPRACTICAL, A SUITABLE DISCREET LOCAL POSITION IS REQUIRED.
TWO INSULATED WATER PIPES AND AN ELECTRICAL CABLE WILL RUN FROM THE PLANT ROOM TO THE COOLER.
AND SMALLER ITEMS OF EQUIPMENT

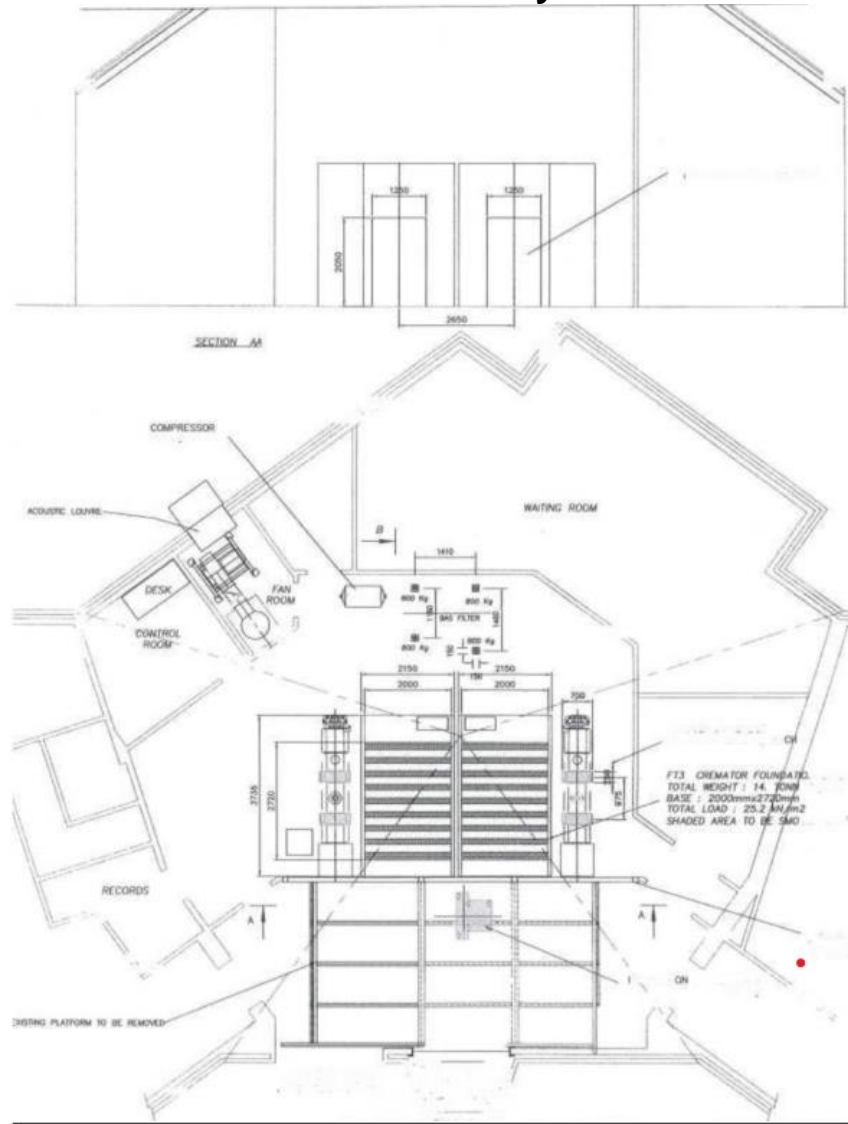
UL
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GENERAL NOTE
VERTURES AND LOADS INDICATED ARE FOR MAIN PLANT ITEMS.
ADDITIONAL HOLES WILL BE REQUIRED FOR PIPES, CABLES

APPROX LOADS/POSITIONS OF PLANT AND CREMATORS
PROVISIONAL SUBJECT TO FINAL CONTRACT BY F.T.L.)

| | | | | | |
|-----------------------------|---|--------------------|---------------------|--|-------------|
| RIGHT om ing hice. |  Facultative Technologies Cremation & Incineration Equipment Moor Road Leeds LS10 3DD Phone : +44 (0) 113 276 8888 FAX : +44 (0) 113 271 8188 | Drawn : DTuckwood | Date : 11/01/12 | Title : BUILDERS WORK & LOADINGS TWO FT CREMATORS WITH GAS CLEANING PLANT | Issue P1 |
| | | Chk'd : | Date : | | |
| | | Appv'd : | Date : | | |
| | | Scale : 1:50 @ A1 | Dir : TSALES | | |
| | | Project : GRENSIDE | Drg No : 7031TS0002 | | |

Schedule 3: Installation Layout Continued



Schedule 4: Emission Limits

From Process Guidance Note 5/2 (12), Statutory Guidance for Crematoria

Table 4 – Abated Cremators – emission limits, monitoring and other provisions

| Row | Substance | Mass emission limits per cremator | Concentration limits | Type of Monitoring | Monitoring frequency |
|--|--|-----------------------------------|-------------------------------------|---|---|
| 1 | Mercury | n/a | 50 micrograms/m ³ | Periodic monitoring (Note 1) | Annual |
| 2 | Hydrogen chloride (excluding particulate matter) | n/a | 30 mg/m ³ hourly average | Periodic monitoring | Annual |
| 3 | Total particulate matter | n/a | 20 mg/m ³ hourly average | Filter leak monitor <ul style="list-style-type: none"> • Provide visual alarms and record levels and alarms • Set reference levels on commissioning (i.e. set levels at which alarms will activate) Plus Instrument health check - i.e. service according to manufacturer's instructions Plus Periodic monitoring <ul style="list-style-type: none"> • Set reference levels for continuous emission monitor (CEM) (i.e. set levels at which alarms will activate) | Continuous Plus Annual Plus Every 3 years |
| For abated crematoria with a "multiple cremators/single abatement plant" configuration, the provisions of Row 4a apply. For abated crematoria with a "single cremator/single abatement plant" configuration, the provisions of either Row 4a OR Row 4b can apply but should be specified to the regulator at the earliest opportunity | | | | | |

| Row | Substance | Mass emission limits per cremator | Concentration limits | Type of Monitoring | Monitoring frequency |
|---|--|--|--|---|--|
| 4a | Carbon monoxide | n/a | 100 mg/m ³ reported as 2 x 30-minute averages | Qualitative monitoring <ul style="list-style-type: none"> Record data at 15 second intervals or less Provide visual alarms and record alarm events Plus Periodic test: <ul style="list-style-type: none"> Validation of continuous emissions monitor (CEM) output through comparison with periodic test results | Continuous Plus Annual |
| 4b | Carbon monoxide | <ul style="list-style-type: none"> 150g in the first hour of cremation for 95% of cremations and 300g in the first hour of cremation for all cremations | n/a | Qualitative monitoring <ul style="list-style-type: none"> Record data at 15 second intervals or less Provide visual alarms and record alarm events Plus Instrument health check – i.e. service according to manufacturer’s instructions Plus Periodic monitoring <ul style="list-style-type: none"> Validation of continuous emissions monitor (CEM) output through comparison with periodic test results | Continuous Plus Annual Plus Annual |
| 5 | Organic compounds (excluding particulate matter) expressed as carbon | n/a | 20 mg/m ³ averaged over an hour of cremation | Periodic monitoring | Annual |
| If combustion provisions in Rows 8 – 10 are not met, then the dioxin emission limit and monitoring provision in Row 6 should be applied | | | | | |

| Row | Substance | Mass emission limits per cremator | Concentration limits | Type of Monitoring | Monitoring frequency |
|---|---|-----------------------------------|--|---|--|
| 6 | PCDD/F (on abated processes, for cremators that don't meet the combustion provisions below) | n/a | 0.1 nanogram/m ³ as ITEQ | Periodic monitoring <ul style="list-style-type: none"> Continuous monitoring of any temperature, oxygen and flow parameters that apply during the dioxin tests should be required by the permit Interlock to prevent cremator loading unless those parameters are met | Upon commissioning of new or replacement cremators |
| Concentration limits from cremated remains reduction plant that vents externally are given in Row 7 | | | | | |
| 7 | Particulate matter | n/a | 50 mg/m ³ with no correction for oxygen concentration or water vapour | Gross filter failure detection (see paragraph 4.6) | Testing at commissioning |
| If combustion provisions in Rows 8 – 10 are not met, then the dioxin emission limit and monitoring provision in Row 6 should be applied | | | | | |

| Row | Parameter | Combustion Provision | Type of Monitoring | Monitoring Frequency |
|-----|-------------|---|--|----------------------|
| 8 | Temperature | <ul style="list-style-type: none"> Minimum of 800°C (1073K) in the secondary combustion chamber Minimum of 850°C (1123K) in the secondary combustion chamber when operating under emergency conditions without abatement - measuring point should be at the last measuring thermocouple | <ul style="list-style-type: none"> Measure at the exit of the secondary combustion zone; measuring point should be at the last measuring thermocouple Automatically record temperatures; Visual alarm when temperature falls below 1073K (800°C); Record alarm activations Interlock to prevent cremator loading below 800°C. | Continuous |

| Row | Parameter | Combustion Provision | Type of Monitoring | Monitoring Frequency |
|--|----------------|--|---|--|
| 9 | Residence time | 2 seconds residence time (minimum) in the secondary combustion chamber without correction for temperature, oxygen or water vapour | Measurement and calculation of the volume rate of the flue gases throughout the cremation cycle at the cremator exit. | Upon commissioning of new or replacement cremators |
| 10 | Oxygen | At the end of the secondary combustion chamber: <ul style="list-style-type: none"> measured wet or dry, minimum average 6% and minimum 3% | <ul style="list-style-type: none"> Record of concentration at outlet of secondary combustion zone; Visual alarm and record alarm activations; During discontinuous tests, continuous reference oxygen measurements should be at the same sampling location as the parameters tested. | Continuous |
| <p>Note 1 – the Environment Agency monitoring guidance, M2, advises that “the choice of a suitable averaging period is strongly influenced by the expected short-term variability in emission levels and whether peaks are important”. Also “the averaging time for manual techniques is often constrained by the need for a sampling run of appropriate duration ... because manual techniques have an associated analytical end-method stage (e.g. weighing of particulate samples) for which a sufficient mass of pollutant must be sampled to achieve an adequate limit of detection (LOD)... “. For these reasons, regulators are advised to ensure that those undertaking monitoring liaise with the relevant analytical laboratory to determine the detection limit of the analytical method in order to obtain an estimate of the expected concentration of the monitored substance in the stack gas and calculate the sampling time required to ensure that the LOD of the sampling method is met. In any case it is not expected that the duration of sampling runs will be less than 30 minutes or longer than 8 hours.</p> | | | | |