



Permit with introductory note

NORTH EAST LINCOLNSHIRE COUNCIL

**POLLUTION PREVENTION AND CONTROL ACT 1999
Environmental Permitting Regulations 2016 (as amended)**

Installation address

**North East Lincolnshire Council
Crematorium
Weelsby Avenue
Grimsby
North East Lincolnshire
DN32 0BA**

Permit Ref. no: EP/200200091/V4

Introductory note

This introductory 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 2016 (S.I.2016 No.1154) (“the EP Regulations”) to operate an installation carrying out one or more of the activities listed in Part 2 to Schedule 1 of those Regulations, to the extent authorised by the Permit.

The permit includes conditions that have to be complied with. It should be noted that aspects of the operation of the installation which are not regulated by those conditions shall be subject to best available techniques, 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 condition within the permit.

Techniques include both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned.

Confidentiality

The Permit requires the Operator to provide information to North East Lincolnshire Council. The Council will place the information onto the public registers in accordance with the requirements of the EP Regulations. If the operator considers that any information provided is commercially confidential, it may apply to North East Lincolnshire Council to have such information withheld from the register as provided in the EP Regulations. To enable North East Lincolnshire Council to determine whether the information is commercially confidential, the Operator should clearly identify the information in question and should specify clear and precise reasons.

Variations to the permit

Your Attention is drawn to the Variation Notification Procedure condition in the permit. This Permit may be varied in the future. If at any time the activity or any aspect of the activity regulated by the following conditions changes such that the conditions no longer reflect the activity and require alteration, the Regulator should be contacted.

Surrender of the permit

Where an Operator intends to cease the operation of an installation (in whole or in part) the regulator should be informed in writing, such notification must be made as specified in regulation 24(3) 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 the Authority 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.

Responsibility under workplace health and safety legislation

This Permit is given in relation to the requirements of the EP regulations. It must not be taken to replace any responsibilities you may have under Workplace Health and Safety legislation.

Appeal against permit conditions

Right to Appeal

You have the right of appeal against this permit within 6 months of the date of the decision. The Council can tell you how to appeal. You will normally be expected to pay your own expenses during an appeal.

You will be liable for prosecution if you fail to comply with the conditions of this permit. If found guilty, the maximum penalty for each offence if prosecuted in a Magistrates Court is £50,000 and/or 6 months imprisonment. In a Crown Court it is an unlimited fine and/or 5 years imprisonment.

Our enforcement of your permit will be in accordance with the Regulators "Compliance Code."

Anyone who is aggrieved by the conditions attached to a Permit can appeal to the Secretary of State for the Environment, Food and Rural Affairs. Appeals must be made in accordance with the requirements of Regulation 31 and Schedule 6 of the EP Regulations.

Appeals should be received by the Secretary of State for Environment, Food and Rural Affairs. The address is as follows:

The Planning Inspectorate
Environmental Team, Major & Specialist Casework
Room 4/04 – Kite Wing
Temple Quay House
2 The Square, Temple Quay
BRISTOL
BS1 6PN
Tel: 0117 372 8726
Fax: 0117 372 8139

Please Note

An appeal brought under Regulation 31 (1) (b) and Schedule 6, in relation to the conditions in a permit will not suspend the effect of the conditions appealed against; the conditions must still be complied with.

In determining an appeal against one or more conditions, the Act allows the Secretary of State in addition to quash any of the conditions not subject to the appeal and to direct the local authority either to vary any of these other conditions.

End of introductory note

Superseded Licences/Consents/Authorisations relating to this installation		
Holder	Reference Number	Date of Issue
North East Lincolnshire Council	200200091	12th Aug 1997

Permit issued under the Environmental Permitting Regulations (England and Wales) 2016 (as amended)

Permit

Permit Ref. No: EP/200200091/V4

North East Lincolnshire Council (the Regulator) in exercise of its powers under Regulation 13(1) of the Environmental Permitting Regulations 2016 (S.I.2016 No.1154) hereby permits.

North East Lincolnshire Council (“the operator”),

Whose registered office is:


**North East Lincolnshire Council
Municipal Offices
Town Hall Square
Grimsby
North East Lincolnshire
DN31 1HU**

To operate an installation at:

**Crematorium
Weelsby Avenue
Grimsby
North East Lincolnshire
DN32 0AB**

to the extent authorised by and subject to the conditions of this Permit and within the boundary identified in Appendix 1, installation boundary.

Signed



Adrian Moody
Licensing & Environmental Protection Manager

Authorised to sign on behalf of
North East Lincolnshire Council

Dated

16th October 2019.

Activity description

Process for the cremation of human remains as prescribed by Schedule 1, Part 2, Chapter 5.1, Part B of the Environmental Permitting (England and Wales) Regulations 2016 (as amended).

There are two cremators at North East Lincolnshire Council Crematorium, both fired by natural gas. The cremators are manufactured by Facultatieve Technologies.

The coffin enters the primary chamber within which primary combustion takes place. The waste gases produced by this incineration process enter into the secondary chamber. The gases entering the secondary combustion chamber are heated to the required temperature of 800°C for a minimum of two seconds. The charging system is electrically interlocked to prevent the introduction of a coffin to the primary combustion zone unless the temperature in the secondary combustion chamber is above the required 800°C for two seconds. The residence time is determined by direct measurements of the volume rate of the flow of gases throughout the cremation cycle. The flue gases are cooled down and pass through the mercury abatement plant prior to release. The abatement plant includes treatment and capture of particulate matter, hydrogen chloride, nitrogen oxides, carbon monoxide and mercury compounds.

Cremated remains are removed in an enclosed container and treated in the cremulator to produce ashes to be placed in urns or scattered as requested.

The installation boundary mentioned in permit conditions are shown in the plan attached to this permit. The boundary of the site is delineated in red on the Site Plan (“the Installation Boundary”), as detailed in Appendix 1.

Conditions

Emission limits, monitoring and other provisions

1. Cremators shall comply with the emission limits and provisions in **Table 1** below.

Table 1. Emission limits, monitoring and other provisions			
Substance / Parameter	Emission limits / provisions	Type of monitoring	Monitoring frequency
Mercury	50 micrograms/m ³	Periodic monitoring	Annual
Hydrogen chloride (excluding particulate matter)	30 mg/m ³ hourly average	Periodic monitoring	Annual
Total particulate matter	20 mg/m ³ hourly average	Filter leak monitor Provide visual alarms and record levels and alarms Set reference levels on commissioning (i.e. set levels at which alarms will activate)	Continuous
		Plus Instrument health check - i.e. service according to manufacturer’s instructions	Annual
		Plus Periodic Monitoring Set reference levels for continuous emission monitor (set levels at which alarms will activate)	Every 3 years

Carbon monoxide	100 mg/m ³ reported as 2 x 30-minute averages	Qualitative monitoring Record data at 15 second intervals or less Provide visual alarms and record alarm events Plus Periodic test: Validation of continuous emissions monitor (CEM) output through comparison with periodic test results	Continuous Annual
Organic compounds (excluding particulate matter) expressed as carbon	20 mg/m ³ averaged over an hour of cremation.	Periodic monitoring	Annual
Temperature	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	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
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
Oxygen	At the end of the secondary combustion chamber: measured wet or dry, minimum average 6% and minimum 3%	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

2. The reference conditions for limits in Table 1 are: 273.1K, 101.3kPa, 11% oxygen v/v, dry gas unless otherwise stated.
3. Emissions from stacks shall in normal operation be free from visible smoke.
4. All emissions to air, other than condensed water vapour, shall be free from persistent visible emissions. All emissions to air shall be free from droplets.

5. There shall be no offensive odour beyond the installation boundary as indicated in red in Appendix 1 of this Permit, as perceived by the Regulator.
6. Visual and olfactory assessments (Operator observation) shall be made once per day when the installation is being operated to check compliance with conditions 3 and 5 of this Permit. The time, location and result of these checks, along with weather conditions such as indicative wind direction and strength, shall be recorded.

Monitoring records

7. The operator shall keep records of inspections, tests and monitoring, including all non-continuous monitoring, inspection and visual assessments. The records shall be:
 - kept on site
 - kept by the operator for at least two years; and
 - made available for the regulator to examine
8. If any records are kept off-site they shall be made available for inspection within one working week of any request by the regulator.

Continuous monitoring

9. All continuous monitoring readings shall be on display to appropriately trained operating staff.
10. Instruments shall be fitted with a visual alarm to warn the operator of arrestment plant failure. The activation of alarms shall be automatically recorded.
11. All continuous monitors shall be operated, maintained and calibrated (or referenced, in the case of filter leak devices) in accordance with the manufacturer's instructions, that shall be made available for inspection by the regulator. The relevant maintenance and calibration (or referencing) shall be recorded.
12. Emission concentrations may be reported as zero when the plant is off and there is no flow from the stack. If required a competent person shall confirm that zero is more appropriate than the measured stack concentration if there is no flow.
13. Any CEM used 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.
14. The introduction of dilution air to achieve emission concentration limits shall not be permitted.

Sampling provisions

15. Sampling points on new plant shall be designed to comply with the British or equivalent standards.
16. The operator shall ensure that relevant stacks or ducts are fitted with facilities for sampling which allow compliance with the sampling standards.

Information required by the regulator

17. The operator shall notify the regulator at least 7 days before any periodic monitoring exercise to determine compliance with emission limit values. The operator shall state the provisional time and date of monitoring, pollutants to be tested and the methods to be used.
18. The results of non-continuous emission testing shall be forwarded to the regulator within 8 weeks of completion of the sampling.
19. 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. The operator shall:
 - identify the cause and take corrective action;
 - clearly record as much detail as possible regarding the cause and extent of the problem, and the remedial action taken;
 - re-test to demonstrate compliance as soon as possible; and inform the regulator of the steps taken and the re-test results.
20. Every 6 months a report shall be submitted to the regulator containing the following continuous monitoring data for carbon monoxide. The data shall be submitted covering each period of either four weeks or a calendar month:
 - Values that exceed the 95% limit for carbon monoxide in that period;
 - 60-minute mean emission values that exceed the 100% limit for carbon monoxide in that period;
 - A list of the highest 60-minute mean emission value for each period;
 - The 95th-percentile value for each period.

21. For temperature and oxygen, the operator shall report the following continuous monitoring values to the regulator every 6 months:
- 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 minimum (of 5- minute averages).
22. Where any values have been exceeded in any 4- weekly/monthly or 6-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 the exceedance, and the time, date and cremation reference. This data shall be kept available.
23. The operator shall send the regulator, by no later than 1 June 2010 and 1 April in each year thereafter, 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/calendar year;
 - 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).
24. The operator shall keep a record of quarterly gas consumption for inspection by the regulator. Consumption shall be converted into CO₂ equivalent emissions using the following conversion equation:

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

Abnormal events

25. In the case of abnormal emissions, 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

26. The regulator shall be informed without delay, 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, for example, bag filtration plant or scrubber units; or
- in the event of the use of the bypass or emergency relief vent.

27. The operator shall provide a list of key arrestment plant and shall have a written procedure for dealing with its failure, in order to minimise any adverse effects.

General operations

28. All cremators shall be fitted with mercury abatement to ensure that 50% of all cremations are carried out, excluding those for stillbirths, perinatal deaths and deaths of infants under 5 years are subject to abatement.

29. In the event of failure of the gas cleaning system cremations can continue up to 48 hours to provide an opportunity for the necessary repairs to be completed.

30. Emergency relief vents (ERV) or bypass systems shall only be used:

- when the heat removal plant has failed and the abatement plant would be damaged; or
- during warm-up and shutdown, provided that compliance be demonstrated with the carbon monoxide limit.

31. In the event of the use of a ERV/bypass during cremation:

- the failure, its cause and cure shall be entered in the log; **and**
- the regulator shall be notified immediately by a method agreed in writing with the regulator.
- Use of the ERV/bypass during cremation more than once a year shall be investigated and remedial action taken.

32. Dusty materials, dusty wastes and wastes containing mercury shall be kept tightly contained.
33. PVC and melamine shall not be used in coffin construction or furnishings.
34. Cardboard coffins shall not contain chlorine in the wetstrength agent. (e.g. not using polyamidoamine-epichlorhydrin based resin (PAA-E)).
35. Packaging for stillbirth, neonatal and foetal remains shall not include any chlorinated plastics.
36. Coffins containing lead or zinc shall not be cremated.
37. The cremator shall be designed and operated in order to prevent the discharge of smoke or fumes during charging.
38. 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 that specified for good combustion in the permit.
39. 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.
40. The removal of ash and non-combustible residues from the cremator shall be undertaken carefully so as to prevent dust emissions via the flue. Cremated remains shall be moved and stored in a covered container.
41. A simple plan shall be drawn up for dealing with emergencies which give rise to mass fatalities, which should mainly address the holding of additional spares and consumables and the training of suitable numbers of staff.
42. Flues and ductwork shall be cleaned to prevent accumulation of materials, as part of the routine maintenance programme.

Environmental management system

43. The Operators shall use an effective Environmental Management System with policies and procedures for environmental compliance and improvements. Audits shall be carried out against those procedures at regular intervals.

Training

44. All staff whose functions could impact on air emissions from the activity shall receive appropriate training on those functions. This shall include:
- awareness of their responsibilities under the permit;
 - steps that are necessary to minimise emissions during start up and shut down;
 - actions to take when there are abnormal conditions, or accidents or spillages that could, if not controlled, result in emissions.
45. The operator shall maintain a statement of training requirements for each post with the above-mentioned functions and keep a record of the training received by each person. These documents shall be made available to the regulator on request.

Maintenance

46. The operator shall have a written maintenance and cleaning programme available to the regulator with respect to pollution control equipment, including control instrumentation and the cremator secondary chamber and ducts and flues and abatement plant.
47. The operator shall have the following available for inspection by the regulator:
- a written maintenance programme for all pollution control equipment; **and**
 - a record of maintenance that has been undertaken.

Change in operation

48. If the operator proposes to make a change in operation of the installation, the operator must, at least 28 days before making the change, notify the regulator in writing. The notification must contain a description of the proposed change in operation. In this condition “change in operation” means a change in the nature or functioning, or an extension, of the installation, which may have consequences for the environment.

Interpretation of Terms

For the purposes of this Permit, and unless the context requires otherwise, the following definitions shall apply:

Any term or expression already defined in the Regulations shall be taken to have the same meaning as provided in the Regulations;

“Operator” shall be taken to mean the installation operator, unless otherwise specified.

“incident” means any of the following situations:

- Where an accident occurs which has caused or may have the potential to cause pollution;
- Where any malfunction, breakdown or failure of plant or techniques is detected which has caused or may have the potential to cause pollution;
- A breach of any condition of this Permit;
- Where any substance, vibration, heat or noise specified in any Condition of this Permit is detected in an emission from a source not authorised by a Condition of this Permit and in a quantity which may cause pollution;
- Where an emission of any pollutant not authorised to be released under any Condition of this Permit is detected;
- Where an emission of any substance is detected that has exceeded, or is likely to exceed, or has caused, or is likely to cause to be exceeded any limit on emissions specified in a Condition of this Permit.

“the Permitted Activities” are defined in Activity Description of this Permit;

“the Regulations” means The Environmental Permitting (England and Wales) Regulations 2016 as amended;

“Regulator” means North East Lincolnshire Council;

“the Installation Boundary” is defined in Appendix 1 of this Permit;

“writing” includes electronic communication within the meaning of section 15 (general interpretation) of the Electronic Communications Act 2000;

Any reference to a numbered Condition, group of Conditions, Schedule, Table, Appendix, Figure or Paragraph is a reference to the condition, group of conditions, schedule, table, appendix, figure or paragraph bearing that number in this Permit;

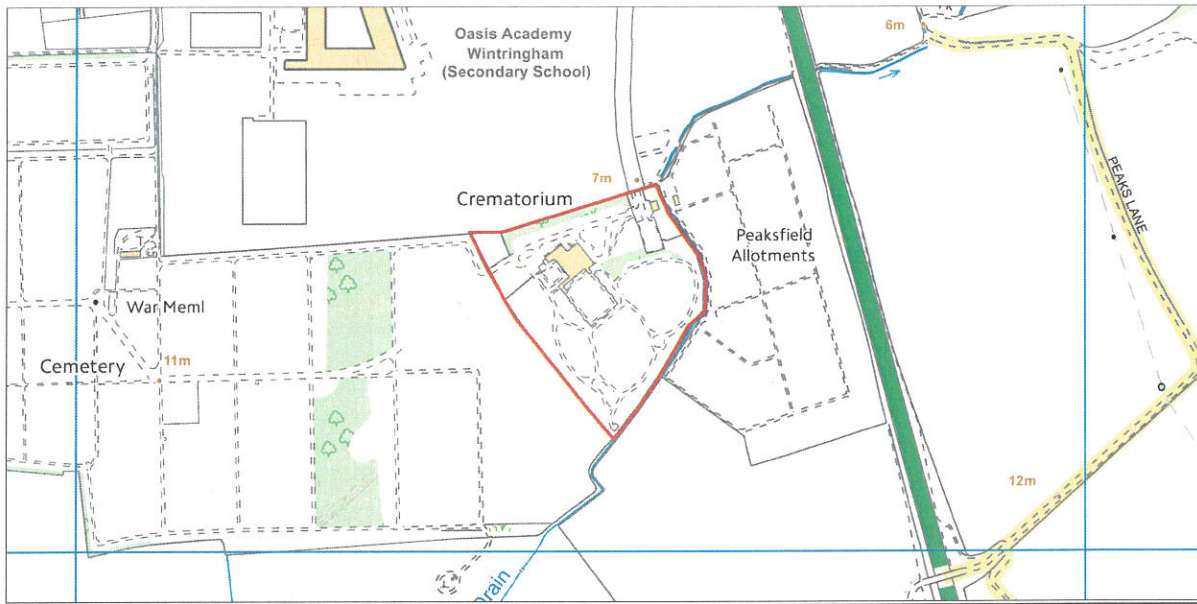
Except where specified otherwise in this Permit:

- “day” means any period of 24 consecutive hours,
- “week” means any period of 7 consecutive days,
- “month” means a calendar month,
- “quarter” means a calendar quarter
- “year” means any period of 12 consecutive months;
- “calendar year” means a period of 12 consecutive months ending on 31 December.

and any derived words (e.g. “monthly”, “quarterly”) shall be interpreted accordingly;

.....End of Permit.....

Appendix 1 – Installation Boundary



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