



# **Environmental Permit**

**Pollution Prevention and Control Act 1999**

**Environmental Permitting (England and Wales) Regulations 2016**

***North Hertfordshire Memorial Park & Crematorium  
Bedford Road  
Holwell  
Hertfordshire  
SG5 3RT***

**Regulated activity:  
*Cremation of Human Remains***

**Permit Number:  
*EPA/00713/17***

**Permit Issued by:**

North Hertfordshire District Council  
Council Offices  
Gernon Road  
Letchworth Garden City  
Hertfordshire  
SG6 3JF

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***The address for all correspondence in relation to this permit***

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### Permit Status Log

Reference	Date	Comment
	10 <sup>th</sup> April 2017	Duly Made
EPA/00713/17	23 <sup>rd</sup> May 2017	Draft permit V0.1
EPA/00713/17	5 <sup>th</sup> June 2017	Permit V1.0

## **Introductory Note**

*These introductory notes are not Environmental Permit conditions; however they do provide useful information about the Environmental Permitting Regulations:*

### **Environmental permits**

The following Permit is issued under the Environmental Permitting (England and Wales) Regulations 2016 (S.I 2016 No.1154) as amended, ("the EPR") to operate a scheduled installation carrying out an activity, or activities covered by the description in sections 5.1 B (b) of Part 2 to Schedule 1 of the EPR, to the extent authorised by the Permit. Conditions within this Permit detail Best Available Techniques (BAT), for the management and operation of the installation, to prevent, or where that is not practicable, to reduce emissions. In determining BAT, the Operator should pay particular attention to relevant sections of the LAPPC Process Guidance note PG5/2(12), and any other relevant guidance. Techniques include both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned. Note that the Permit requires the submission of certain information to the Regulator, and in addition, the Regulator has the power to seek further information at any time under Regulation 60 of the EPR Regulations provided that the request is reasonable.

### **Public Registers**

Information relating to Permits, including the application, is available on public registers in accordance with the EPR. Certain information may be withheld from the public registers where it is commercially confidential, or if it is in the interest of national security to do so.

### **Variations to the Permit**

The Regulator may vary the Permit in the future, by serving a variation notice on the Operator. Should the Operator want any of the conditions of the Permit to be changed, a formal application must be submitted to the Regulator (the relevant forms are available from the Regulator). The Status Log that forms part of this introductory note will include summary details of this Permit, variations issued up to that point in time and state whether a consolidated version of the Permit has been issued.

### **Transfer of the Permit or part of the Permit**

Before the Permit can be wholly or partially transferred to another Operator, an application to transfer the Permit has to be made jointly by the existing and proposed Operators. A transfer will not be approved if the Regulator is not satisfied that the proposed Permit holder will be the person having control over the operation of the installation, or will not comply with the conditions of the transferred Permit. In addition, if the Permit authorises the Operator to carry out a specified waste management activity, the transfer will not be approved if the Regulator does not consider the proposed Permit holder to be a 'fit and proper person' as required by the EPR.

### **Talking to us**

Please quote the permit number if you contact the Regulator about this permit. To give a notification under conditions in this permit, the Operator should use the contact details on the cover of this permit.

## The installation and description of activities undertaken

*The following description of the activities authorised by this permit do not form permit conditions, however it does provide useful information about the activities undertaken:*

**North Herts Memorial Limited** operates a crematorium equipped with mercury abatement for the cremation of human remains. The Installation comprises:

1 No. ATI CR2000XXL cremator

The cremator is equipped with:

- Primary combustion chamber
- Secondary combustion chamber
- Control/ display panel and controller cabinet
- Oxygen monitors/controllers on the secondary combustion chamber exit

The cremator is connected to:

- Heat exchanger unit\*
  - Reagent dosing system\* (containing sodium bicarbonate and activated carbon)
  - Particulate filter\* and dust collection unit\*
  - Induced draught fan\*
  - Filtered gas flue (continuously monitored for carbon monoxide and particulate matter), terminating 10 metres above ground level.
  - By-pass flue
- \* key arrestment plant

1 No. set of continuous exhausts gas analysers, each set comprising:

- Siemens Ultramat 23 NDIR carbon monoxide analyser
- SEFRAM particulate monitor operating as a filter leak detector
- Computer display / logging system

Cremulator and particulate filter (internal collection and venting).

For the purposes of the Regulations and associated statutory guidance, the installation is classed as a 'new abated crematorium' for the cremation of human remains in approved coffins only. An approved coffin is one that is suitable for charging, and contains no article or artefact that may lead to abnormal emissions from or residues in the cremator.

Coffins for cremation are inserted into the cremator. Combustion conditions (including temperature and oxygen levels) are continuously monitored and automatically adjusted throughout the cremation cycle.

Exhaust gasses from the secondary combustion chamber pass through a water-cooled heat exchanger to reduce gas temperature. Excess heat is removed from the system via an external dry air cooler. The cooled gases are then dosed with abatement reagent for the control of acidic flue gasses and mercury.

The cleaned filtered gases are drawn through the system by induced draught fan for release to atmosphere through the chimney stack. The cleaned filtered emissions are continuously monitored for carbon monoxide and particulate matter to demonstrate compliance with emission limits. All data is automatically recorded. A steam plume may be noted in cooler weather and is perfectly normal. In case of a problem with the abatement plant filtration system or heat exchanger, the abatement plant is equipped with a by-pass or 'dump stack', to release to air through the crematorium chimney without treatment.

Cremated remains are collected, cooled and processed in a cremulator before storage in a poly-urn. The dust emissions from the cremulator are vented and collected internally, therefore emission limits do not apply to releases from this associated activity.



## Authorisation



Reference Number:  
EPA/00713/17

**North Herts District Council** ("the Regulator") in exercise of its powers under Regulation 13 of the Environmental Permitting (England and Wales) Regulations 2016 (SI 2016 No 1154), hereby authorises **North Herts Memorial Limited** ("the Operator").

Whose company registration number is: **09942123**

to operate an Installation at:

**North Hertfordshire Memorial Park & Crematorium  
Bedford Road  
Holwell  
Hertfordshire  
SG5 3RT**

The Operator is permitted to carry out the following activities as described in the permit application and in accordance with the conditions contained in this permit:

- The cremation of human remains, Section 5.1 Part B(b) of schedule 1 'Incineration and co-incineration of waste' activities.

and the following associated activities:

- The storage of bodies prior to cremation, and;
- The processing of cremated remains, and;
- The storage of cremated remains, and;
- The storage of collected filtration plant dusts and reagent.

To the extent authorised by and subject to the conditions of this Permit.

\* Nothing in this Permit grants or implies any consent under the Town and Country Planning Act.

This Permit shall be subject to replacement, variation or amendment as may be considered appropriate by North Herts District Council, at any time, according to the provisions of Regulation 20 of the EPR.

Signed

A handwritten signature in black ink, appearing to read 'David Carr', written over a horizontal line.

Dated this day

**5<sup>th</sup> June 2017**

**David Carr  
Environmental Protection Officer  
Authorised Officer for this purpose**

## **Conditions**

*The following Environmental Permit conditions are legal requirements.*

### **Best available techniques**

1. The Installation shall, subject to the conditions of this Permit, be operated using the techniques, and in the manner described in the documentation submitted in the Permit application, or as otherwise agreed in writing by the Regulator in accordance with the conditions of this Permit.
2. 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 activity which is not specifically regulated by any condition of this permit.

### **Extent of the installation**

3. The activities authorised by this Permit shall not extend beyond the Installation boundary, that being the land shown as edged in red on the site plan in schedule 1. The layout of the Installation is detailed in site plan in schedule 2.

### **Combustion conditions**

4. The combustion conditions for the cremator shall be monitored for the parameters and at the monitoring frequency set out in schedule 3 to this permit. The required combustion conditions shall be maintained for the duration of the cremation.

### **Emission limits & monitoring**

5. Emissions to air from the cremator shall be monitored for the parameters and at the monitoring frequency set out in schedule 4. The emission limits shall not be exceeded. Suitable monitoring techniques must be agreed with the Regulator in advance and in writing.
6. Emissions from cremations shall be free from visible smoke.
7. There shall be no offensive odour beyond the installation boundary as perceived by the Regulator.
8. All other releases to air, other than condensed water vapour, shall be free from persistent visible emissions.
9. All emissions to air shall be free from droplets.
10. In the case of abnormal emissions, malfunction or breakdown leading to abnormal emissions, the Operator shall:
  - (a). Investigate and undertake remedial action **immediately**, and;
  - (b). Adjust the process or activity to minimise those emissions, **and**;
  - (c). Promptly record the events and actions taken.
11. The introduction of dilution air to achieve emission limits is not permitted.
12. The Operator shall keep a record of quarterly gas consumption for inspection by the Regulator. Gas consumption shall be converted into CO<sub>2</sub> equivalent emissions using the following conversion equation:  
$$\text{Gas use (kWh)} \times \text{conversion factor} = \text{kgCO}_2\text{e}$$

### **Monitoring techniques**

13. All continuous monitoring readings shall be on display to appropriately trained operating staff.
14. Instruments shall be fitted with visual alarms situated appropriately to warn the Operator of arrestment plant failure or malfunction.
15. The activation of alarms shall be automatically recorded.
16. All continuous monitors shall be operated, maintained and calibrated (or referenced in the case of filter leak devices) 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.
17. Emissions concentrations must report as zero when the plant is off and there is no flow from the chimney stack. If required, a competent person shall confirm that zero is more appropriate than the measured stack concentration if there is no flow.
18. Any continuous monitor used shall provide reliable data for more than 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.
19. Sampling points on new plant shall be designed to comply with the British or equivalent standards.
20. The Operator shall ensure that relevant stacks or ducts are fitted with facilities for sampling which allow compliance with the sampling standards.
21. 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:
  - (a). Identify the cause and take corrective action, and;
  - (b). Clearly record as much detail as possible regarding the cause and extent of the problem, and the action taken, and;
  - (c). Re-test to demonstrate compliance as soon as possible; and inform the Regulator of the steps taken and the re-test results.

### **Control techniques**

22. All cremators shall be designed and operated in order to prevent the discharge of smoke, fumes or other substances during charging.
23. All cremators shall be designed and operated to ensure complete combustion and shall be fitted with a secondary combustion zone.
24. The manufacturer shall state the volume of the secondary combustion zone.
25. When re-bricking a cremator, the convolutions of the secondary combustion chamber shall be maintained and the volume of the chamber recalculated and restated. The Operator shall confirm that the gas residence time requirements can still be met.
26. The cremator charging system shall be interlocked to prevent the introduction of a coffin to the primary combustion zone unless the secondary combustion zone exceeds the temperature specified in condition 3.1 (row 1 of table 3.1) of this permit.
27. The cremators and all ductwork serving the cremators 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.

### **Coffin materials**

28. PVC or melamine shall not be used in coffin construction or furnishings.
29. Cardboard coffins shall not contain chlorine in the wet strength agent e.g. not using polyamidoamine-epichlorhydrin based resin (PAA-E).
30. Packaging for stillbirth, neonatal and foetal remains shall not include any chlorinated plastics.
31. Coffins containing lead or zinc shall not be cremated.

### **Abatement plant**

32. 100% of cremators shall be fitted and operated with gas cleaning systems for mercury abatement.
33. Where there is only one gas cleaning system, and that system fails, the cremator may continue to be used for up to 48 hours to provide opportunity for the necessary repairs to be completed. The Regulator shall be notified immediately (preferably by fax or email).
34. The Operator shall have a written procedure for dealing with the failure of key arrestment plant (key arrestment plant is detailed in Table A in this permit), in order to minimise any adverse effects.
35. Emergency relief vents or by-pass systems 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 be demonstrated with the carbon monoxide limit.
36. In the event of the use of an emergency relief vent or by-pass system during cremation:
  - (a). The failure, its cause and cure shall be recorded in the logbook, *and*;
  - (b). The Regulator shall be notified immediately (preferably by fax or email).

### **Disposal of residues**

37. Dusty filter wastes and wastes containing mercury shall be kept tightly contained for off-site disposal.
38. The remains in the cremator shall only be moved when calcination is complete.
39. The removal of ash and non-combustible residues from the cremator shall be undertaken carefully so as to prevent dust emissions via the flue.
40. Cremated remains shall be stored and moved (before processing in a cremulator) in a manner than minimises dusty emissions to air. Processed remains shall be stored in covered containers.
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.



## Reporting & notifying

42. The Operator shall, no later than the 1<sup>st</sup> of April each year, send the Regulator 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 completed in the past calendar year;
  - (b). The number of cremations completed in cremators fitted with operational mercury abatement equipment in the previous calendar year; **and**;
  - (c). The number of cremations completed in the previous calendar year and the proportion of those subject to burden sharing arrangements whether or not money has or has not been paid for the benefit of abated cremations; **and**;
  - (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 calendar year, the relevant information in both (b) and (c).
43. The Regulator shall be informed without delay, whether or not there is related monitoring showing an adverse result;
- (a). If there is an emission that is likely to have an effect on the local community, **or**;
  - (b). In the event of the failure of key arrestment plant (key arrestment plant is detailed in Table A), **or**;
  - (c). In the event of the use of the bypass or emergency relief vent.
44. Every six months a report shall be submitted to the Regulator containing the following continuous monitoring data for carbon monoxide and, in respect of unabated emissions, particulate matter. The following data shall be submitted covering the period of a calendar month:
- (a). Values that exceed the 95% limit for carbon monoxide (and particulate matter if appropriate) in that period, and;
  - (b). 60-minute mean emission values that exceed the 100% emission limit carbon monoxide (and particulate matter if appropriate) in that period, and;
  - (c). A list of the highest 60-minute mean emission values for each period, and;
  - (d). The 95-percentile value for each period.
45. Every six months a report shall be submitted to the Regulator containing the following continuous monitoring data for temperature and oxygen:
- (a). Secondary chamber entrance temperature monthly maximum and minimum (of 5-minute averages), and;
  - (b). Secondary chamber exit temperature monthly maximum and minimum (of 5-minute averages), and;
  - (c). Oxygen concentration, monthly minimum (of 5-minute averages).
46. Where any values have been exceeded in any monthly or six 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 exceedence, and the time, date and cremation reference. This data shall be kept available.
47. The Operator shall notify the Regulator at least **7 days** before any periodic or non-continuous 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.
48. A report of the results of non-continuous emission testing shall be forwarded to the Regulator within **8 weeks** of completion of the sampling. Adverse monitoring results shall be reported **without delay**, and investigated in accordance with condition 5.10.

49. The Operator shall seek the written agreement of the Regulator for any operational changes to this Permit, by way of variation, and in requesting a change shall include:
- (a) A description of the nature of the proposed change;
  - (b) The nature and quantity of any emission;
  - (c) Details of the technology being applied to reduce such emissions, and associated emissions monitoring;
  - (d) Any other relevant information.
- Minor plant modifications are permissible as long as they do not contravene the operational requirements of the application or the Permit, do not affect releases to air, and are notified to the Regulator 14 days prior to making that change.
50. No operational change shall be made until agreed in writing by the Regulator. From the implementation date, the Operator shall operate the Permitted Installation in accordance with that change, and the relevant provisions of the application shall be deemed to have been amended.
51. The Operator shall, within 6 months of receipt of written notice from the Regulator, submit to the Regulator a report assessing whether all appropriate preventative measures continue to be taken against pollution, in particular through the application of best available techniques at the Installation. The report shall consider any relevant published technical guidance current at the time of the notice which is either supplied with or referred to in the notice, and shall assess the costs and benefits of applying techniques described in that guidance, or otherwise identified by the Operator, that may provide environmental improvement.
52. The Operator shall give written notification as soon as practicable (and at least 30 days) prior to any of the following:
- (a) Permanent cessation of the operation of part or all of the Permitted Installation;
  - (b) Cessation of operation of all or part of the Permitted Installation for a period likely to exceed 1 year; and
  - (c) Resumption of the operation of part or all of the Permitted Installation after a temporary cessation of activities as above.
53. The Operator shall notify the following matters to the Regulator in writing within 14 days of their occurrence:
- (a) Any change in the Operator's trading name, registered name or registered office address;
  - (b) Any change to the particulars of the Operator's ultimate holding company (including details of an ultimate holding company where an Operator has become a subsidiary);
  - (c) Any steps taken by the Operator going into administration, entering into a company voluntary arrangement, being wound up or bankruptcy.

### Maintenance

54. The operator shall have the following available for inspection by the Regulator:
- (a). A written maintenance programme for all pollution control equipment; **and**;
  - (b). A record of maintenance that has been undertaken.
55. Written maintenance and cleaning programmes shall be made 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.
56. Flues and ductwork shall be cleaned to prevent accumulation of materials, as part of the routine maintenance programme.

### Training

57. All staff whose functions could impact on air emissions from the activity shall receive appropriate training on those functions. This shall include:
- (a). Awareness of their responsibilities under the permit, and;
  - (b). Steps that are necessary to minimise emissions during start up and shut down, and;
  - (c). Actions to take when there are abnormal conditions, or accidents or spillages that could, if not controlled, result in emissions.
58. 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.

### Logbook

59. The Operator shall keep records of inspections, tests and monitoring, including all non-continuous monitoring, inspections and visual assessments, collectively referred to as the logbook. The records forming the logbook may be written or electronic records, and shall be kept in accordance with condition 10.2.
60. 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 Installation shall:-
- (a) Be kept on site
  - (b) be made available for inspection by the Regulator at any reasonable time;
  - (c) be supplied to the Regulator on demand and without charge;
  - (d) be legible;
  - (e) be made as soon as reasonably practicable;
  - (f) indicate any amendments which have been made and shall include the original 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.
61. Any record not held on site shall be made available for inspection within one working week of any request by the Regulator.

## Explanatory notes

The following explanatory notes do not form permit conditions, however they do provide useful information about the environmental permitting regulations.

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

<i>"Activity"</i>	An activity listed in Part 2 of Schedule 1 to the EP Regulations which will form part of an EP installation or be a mobile plant
<i>"Best Available Techniques (BAT)"</i>	<p>Best available techniques means the most effective and advanced stage in the development of activities and their methods of operation which indicates the practical suitability of particular techniques for providing in principle the basis for emission limit values designed to prevent, and where that is not practical, generally to reduce emissions and the impact on the environment as a whole.</p> <p>For those purposes:</p> <p>"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;</p> <p>"Best" means, in relation to techniques, the most effective in achieving a high general level of protection of the environment as a whole;</p> <p>"Techniques" includes 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.</p>
<i>"The EPR / EP Regulation"</i>	Means the Environmental Permitting (England and Wales) Regulations 2016 S.I. 2016 No.1154 and words and expressions defined in the EPR shall have the same meanings when used in this Permit save to the extent they are explicitly defined in this Permit.
<i>"Change in Operation"</i>	In relation to an installation or mobile plant, a change in its nature or functioning or an extension which may have consequences for the environment.
<i>"Enforcement notice"</i>	A notice served by a local authority to enforce compliance with the permit conditions or require remediation of any harm following a breach of any condition.
<i>"Installation"</i>	A stationary technical unit where one or more activities listed in Part 2 of Schedule 1 to the EP Regulations are carried out and any other location on the same site where any other directly-associated activities are carried out. and any activities that are technically linked. The terms 'regulated facility' and 'installation' are, in effect, interchangeable for A(2) and B activities.
<i>"Operator"</i>	The person who has control over the operation of the installation/regulated facility (EP Regulation 7).
<i>"Permit"</i>	A permit granted under EP Regulation 13 by a local authority allowing the operation of an installation subject to certain conditions.
<i>"Pollution"</i>	Any emission as a result of human activity which may be harmful to human health or the quality of the environment, cause offence to any human senses, result in damage to material property, or impair or interfere with amenities and other legitimate uses of the environment (EP Regulation 2(1)).
<i>"Revocation notice"</i>	A notice served by the Regulator under EP regulation 22 revoking all or part of a permit.
<i>"Permitted Installation"</i>	Means the activities and the limits to those activities described in this Permit.



<i>"Monitoring"</i>	Includes the taking and analysis of samples, instrumental measurements (periodic and continual), calibrations, examinations, tests and surveys.
<i>"MCERTS"</i>	Means the Environment Agency's Monitoring Certification Scheme.
<i>"Fugitive Emission"</i>	Means an emission to air or water (including sewer) from the Permitted installation that is not controlled by an emission limit imposed by a condition of this Permit.
<i>"Regulator"</i>	Means any officer of North Herts District 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.

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.

Any person who is aggrieved by the conditions attached to a Permit can appeal to the Secretary of State for Environment, Food & Rural Affairs. Appeals must be received by the Secretary of State no later than 6 months from the date of the decision (the date of the Permit).

Appeals relating to installations in England should be received by the Secretary of State for Environment, Food & Rural Affairs. The address is as follows;

The Planning Inspectorate  
 Environment Team, Major and Specialist Casework  
 Room, 4/04 – Kite Wing  
 Temple Quay House  
 2 The Square  
 Temple Quay  
 Bristol  
 BS1 6PN

The appeal must be in the form of a written notice or letter stating that the person wishes to appeal and listing the condition(s) which is/are being appealed against. The following five items must be included;

- a) A statement of the ground of appeal;
- b) A copy of any relevant application;
- c) A copy of any relevant Permit;
- d) A copy of any relevant correspondence between the person making the appeal ("the appellant") and the Council;
- e) A statement indicating whether the appellant wishes the appeal to be dealt with.
  - By a hearing attended by both parties and conducted by an inspector appointed by the Secretary of State; or
  - By both parties sending the Secretary of State written statements of their case (and having the opportunity to comment upon one another's statements).

At the same time, the notice of appeal and documents (a) and (e) must be sent to the Council, and the person making the appeal should inform the appropriate Secretary of State that this has been done.

- An appeal 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 other conditions not subject to the appeal and to direct the local authority to either vary any of these conditions or to add new conditions.



Based on Ordnance Survey mapping with permission of the Ministry of Defence  
 © North Herts Memorial Park  
 The National Institute for Research in Design, London, UK  
 Landscape Architecture  
 Masterplanning  
 Ecology  
**hda**

CLIENT: Memorial  
 PROJECT: North Herts Memorial Park  
 TITLE: General arrangement drawing  
 SCALE: A3  
 DATE: May 2015  
 508.37 / 05A  
**HDA 5**

**KEY**

- Site boundary
- Proposed development area
- Public rights of way

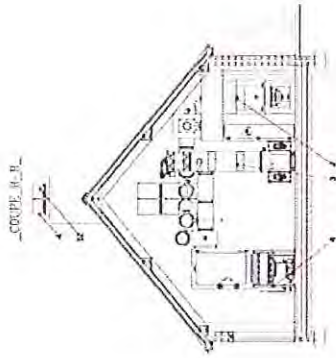
NOTE: See HDA 6 508.37/05 Illustrative masterplan for internal landscape detail



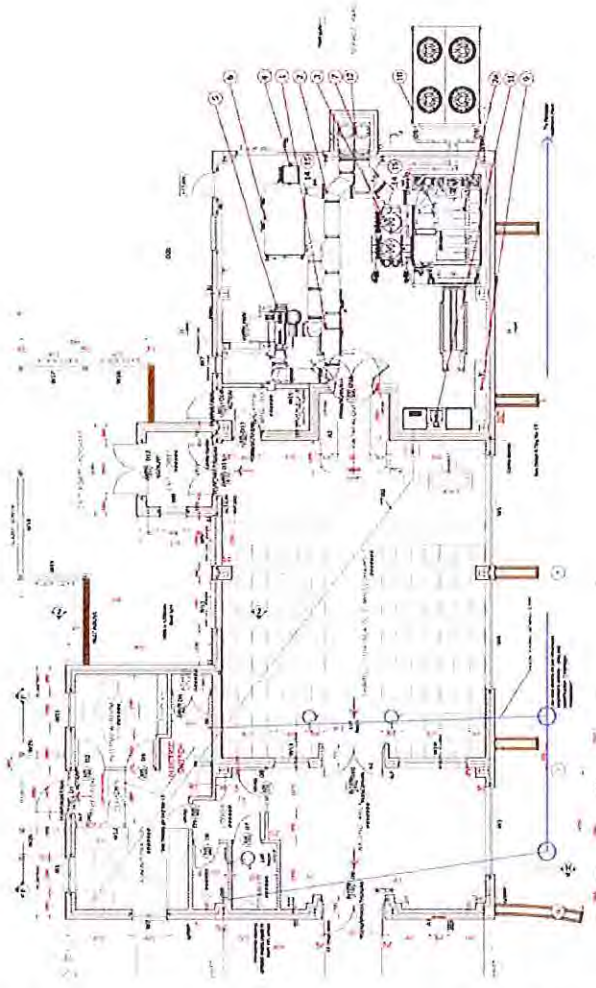
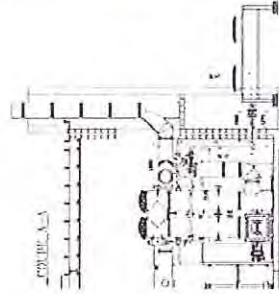
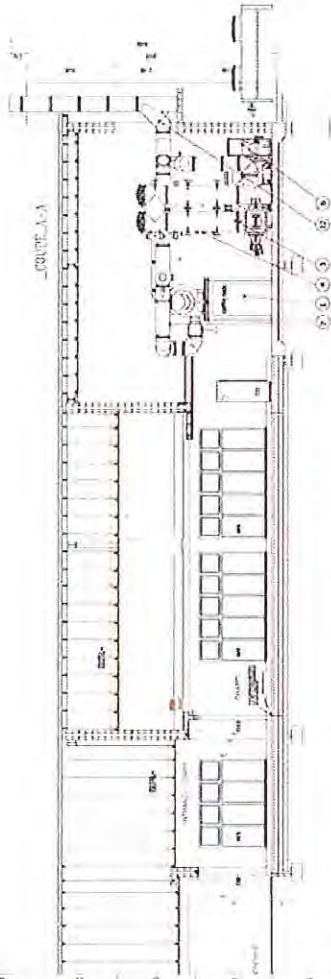
Site	North Herts Memorial Park		
Project	Location Plan		
Drawing	Schedule 1	No.	EPA/00713/17
Date	17 <sup>th</sup> May 2017	Scale	Not to scale



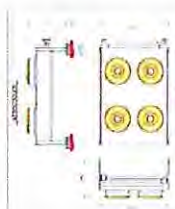
COUPE B-B



COUPE A-A



PROPOSED FLOOR PLAN



- Equipment**
- 1. Air conditioning
  - 2. Heating
  - 3. Hot water
  - 4. Cold water
  - 5. Lift
  - 6. Stairs
- Note:** In all cases, identify areas and building level (e.g. B1).
- \* Please refer to the relevant drawings for details.
  - \*\* Please refer to the relevant drawings for details.
  - \*\*\* Please refer to the relevant drawings for details.
  - \*\*\*\* Please refer to the relevant drawings for details.
  - \*\*\*\*\* Please refer to the relevant drawings for details.



**ATI ENVIRONMENT UK**

ATMILL TREATMENT PLANT, LN.  
 AT 100-102, NORTH HERTS MEMORIAL PARK,  
 WATLING, HERTS, SG12 0JG

**ATI**

01753 606000



Site	North Herts Memorial Park		
Project	Site Plan		
Drawing	Schedule 2	No.	EPA/00713/17
Date	17 <sup>th</sup> May 2017	Scale	Not to scale

### Schedule 3: Combustion provisions

Row	Parameter	Combustion provision	Type of Monitoring	Monitoring frequency
1	Temperature	<p>Minimum of 800°C in the secondary combustion chamber</p> <p>Minimum of 850°C in the secondary combustion chamber when operating under emergency conditions without abatement</p>	<p>Measure at the exit of the secondary combustion zone; measuring point shall beat the last measuring thermocouple</p> <p>Automatically record temperatures</p> <p>Visual alarm when temperature falls below 800°C</p> <p>Record alarm activations</p> <p>Interlock to prevent cremator loading below 800°C</p>	Continuous
2	Oxygen	<p>At the end of the secondary combustion chamber:</p> <p>If measured wet, 6% minimum <b>or</b></p> <p>If measured dry, 6% average and 3% minimum</p>	<p>Record of concentration at outlet of secondary combustion zone</p> <p>Visual alarm and record alarm activations</p> <p>During discontinuous tests, continuous reference oxygen measurements shall be taken at the same location as the parameters tested</p>	Continuous
3	Residence Time	<p>2 seconds residence time (minimum) in the secondary combustion chamber without correction for temperature, oxygen or water vapour</p>	<p>Measurement and calculation of the volume rate of the flue gases throughout the cremation cycle at the cremator exit</p>	<p>On commissioning of new and replacement cremators (see note below in relation to re-bricking and re-builds)</p>

*Note: The re-lining or re-bricking a cremator is unlikely to constitute a substantial change, particularly where the work improves emission control. Residence time will need to be demonstrated in the event of a full cremator re-build.*

All emissions shall be determined at the standard reference conditions of:  
 Temperature 273K (0°C), pressure 101.3 kPa, 11% Oxygen v/v dry gas unless otherwise stated.



## Schedule 4: Emission limits

Row	Parameter	Emission limit	Monitoring method	Monitoring frequency
1	Mercury	50 µg/m <sup>3</sup>	Extractive testing	Annual
2	Hydrogen chloride (excluding particulate matter)	30 mg/m <sup>3</sup> hourly average	Extractive testing	Annual
3	Total particulate matter	20 mg/m <sup>3</sup> hourly average	<p>Filter leak monitor</p> <ul style="list-style-type: none"> <li>➢ Provide visual alarms and record levels and alarms, and</li> <li>➢ set reference levels on commissioning (i.e. set levels at which alarms will activate)</li> </ul> <p><b>Plus</b></p> <p>Instrument health check - i.e. service according to manufacturer's instructions</p> <p><b>Plus</b></p> <p>Periodic monitoring</p> <ul style="list-style-type: none"> <li>➢ Set reference levels for continuous emission monitor (CEM) (i.e. set levels at which alarms will activate)</li> </ul>	Continuous
4a	Carbon monoxide	100 mg/m <sup>3</sup> reported as 2 x 30-minute averages	<p>Qualitative monitoring</p> <ul style="list-style-type: none"> <li>➢ Record data at 15 second intervals or less</li> <li>➢ Provide visual alarms and record alarm events</li> </ul> <p><b>Plus</b></p> <p>Periodic test:</p> <ul style="list-style-type: none"> <li>➢ Validation of continuous emissions monitor (CEM) output through comparison with periodic test results</li> </ul>	Continuous
5	Organic compounds (excluding particulate matter) expressed as carbon	20 mg/m <sup>3</sup> averaged over an hour of cremation	Extractive testing	Annual
6	Dioxin and furans (PCDD/F) on abated processes for cremators that do not meet the combustion provisions of rows 1, 2 & 3 of schedule 3.	0.1 nanograms/m <sup>3</sup> as ITEQ	<p>Extractive testing</p> <ul style="list-style-type: none"> <li>➢ Continuous monitoring of any temperature, oxygen and flow parameters that apply during the dioxin tests should be required by the permit</li> <li>➢ Interlock to prevent cremator loading unless those parameters are met</li> </ul>	On commissioning of new and replacement cremators

All emissions shall be determined at the standard reference conditions of: Temperature 273K (0°C), pressure 101.3 kPa, 11% Oxygen v/v dry gas unless otherwise stated.

