


**SCOTTISH ENVIRONMENT PROTECTION AGENCY**

**Pollution Prevention and Control Act 1999  
Pollution Prevention and Control (Scotland) Regulations 2000  
("the Regulations")**

**Permit Number: PPC/E/20004 (Public Register Copy)**

In the public register copy of Permit number PPC/E/20004,  indicates where conditions, in whole or in part, have been removed on the grounds of Commercial Confidentiality in accordance with the requirements of Regulation 29 of the Regulations.

**Duncan Hogg  
Senior Registrar  
Scottish Environment Protection Agency  
South East Area**

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**Pollution Prevention and Control Act 1999**

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("the Regulations")**

**PERMIT TO OPERATE AN INSTALLATION**

**Permit Number: PPC/E/20004**

**Operator: Borders General Hospital NHS Trust**

The Scottish Environment Protection Agency ("SEPA"), in accordance with regulation 7 of the Regulations, hereby grants a permit to Borders General Hospital NHS Trust having its registered office at Melrose, TD6 9BS ("the Operator") to operate an installation, more particularly described in Schedule 1 of this permit, on a site at Borders General Hospital NHS Trust, Melrose, TD6 9BS, more particularly described in said Schedule 1, subject to the requirements of the Regulations and to the conditions contained in the Schedules to this permit.

Signed Andrew York  
Director of Operations  
(or a person authorised to sign on his behalf)

Date: 14 December 2001

Right of Appeal

Under Regulation 22 of the Regulations you are entitled to appeal to the Scottish Ministers against any condition or conditions of this permit within six months of the date of this Permit, except where SEPA has granted this permit in implementation of a direction to SEPA of the Scottish Ministers. The bringing of an appeal will not have the effect of suspending the operation of the said condition or conditions. The procedures for the making of an appeal are set out in Schedule 8 of the Regulations.

SEPA  
Clearwater House  
Heriot Watt Research Park  
Avenue North  
Riccarton  
Edinburgh, EH14 4AP

Tel: 0131 449 7296  
Fax: 0131 449 7277



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## INTERPRETATION OF TERMS

For the purposes of permit reference PPC/E/20001, and unless the context shall require otherwise:

'SEPA' means the Scottish Environment Protection Agency;

'authorised person' means a person who is authorised in writing under Section 108 of the Environment Act 1995 to carry out duties on behalf of SEPA;

'the 1990 Act' means the Environmental Protection Act 1990.

'installation' has the same meaning as given in Part 1 of the 2000 Regulations and for the purposes of this Permit, the Installation means the Installation described in Schedule 1 of this Permit

'the Regulations' means the Pollution Prevention and Control (Scotland) Regulations 2000.

Any reference to a numbered condition, table or paragraph is a reference to a condition, table or paragraph bearing that number in a Schedule of this Permit.

Except where specified within any Condition of any Schedule of this Permit:

'day' means any period of 24 consecutive hours

'week' means any period of 7 consecutive days

'month' means a calendar month,

'year' means any period of 12 consecutive months

and any derived words (e.g. monthly quarterly) shall be interpreted accordingly.

'controlled waters' has the same meaning as in Section 30A of the Control of Pollution Act 1974 as amended by Schedule 23 of the Water Act 1989.

"clinical waste" has the same meaning as in Section 5.1 of Schedule 1 of the Regulations.



"Borders General Hospital Site" means the site delineated in red on the plan at Annex 2

## 1. DESCRIPTION OF THE INSTALLATION

### 1.1. Definition of the Installation

1.1.1. The Installation is the incineration of clinical and other wastes in one incinerator operated by the Operator at its premises in Melrose. The incinerator is used to destroy, by incineration, clinical waste and Municipal Type wastes arising from the hospital premises, and clinical waste from other specified sources within the Borders Primary Care NHS Trust ("the local NHS Trust") (for example; pharmacies, health centres, dental practices etc.) or premises involved in animal health care and related research. XXXXX

1.1.2. The Installation also includes:

- (a) the receipt, storage, handling and pre-treatment of waste accepted onto the Installation for incineration;
- (b) the incineration of waste, including exhaust gas cleaning;
- (c) the reheat boiler associated with the incineration process; and
- (d) the handling, treatment and storage of all wastes arising from the above.

1.1.3. The activities carried out at the Installation constitute activities listed in Section 5.1 (a) of Part I of Schedule 1 of the Regulations.

1.1.4. The site of the Installation is shown on the plan annexed at Annex 1 ("the Site") and the location of the installation on the site is shown on the plan annexed at Annex 2.

### 1.2. Waste handling

1.2.1. Clinical waste, other than those clinical wastes listed in 1.2.2, namely:

- (a) Clinical waste arising from within Borders General Hospital, destined for destruction in the incinerator, is bagged at ward or department level and placed in sealed wheeled bins. The bins are transported to the incineration process by hospital portering staff.

- (b) The clinical wastes from the other establishments within the Trust's area are bagged at source and collected by a member of Borders General Hospital staff in a dedicated vehicle and brought to the incineration process. Here it is unloaded from the vehicle into sealed wheeled bins.

1.2.2. Other clinical wastes, namely prescription only medicines ("POMs") and sharps (being hazardous wastes), more particularly:

- (a) POMs and sharps arising from within Borders General Hospital are collected at source in the hospital in dedicated sharps bins. These are collected by staff and distributed into the various loads for disposal.
- (b) POMs and sharps from operations outwith Borders General Hospital are likewise handled in dedicated sharps bins and collected from the various sources by a member of Borders General Hospital staff in a dedicated vehicle and brought to the incineration process.

1.2.3. 

1.2.4. Municipal Type Wastes

- (a) Municipal type waste arising within the wards, offices, and canteens within Borders General Hospital site is bagged at source and placed in wheeled bins. The bins are transported to the incineration process by hospital portering staff.

1.2.5. Each bag arising from any source within the Trust has a uniquely numbered tie. The ties are given in batches to different departments, hospitals, health centres etc., making it possible to identify the source of each bag.

1.2.6. All waste awaiting incineration in the incinerator is stored in a secure area adjacent to the incinerator.

1.2.7. Once emptied, the bins are cleaned and disinfected in an automated washer located outside the building, within the secure area of the Installation Boundary.

### 1.3. Incineration

1.3.1. The incineration plant comprises a primary combustion chamber in the form of two stepped static hearths and a secondary combustion chamber. The design capacity of the incinerator is 125 kilograms of waste per hour.

## **1.5. Aqueous effluents**

- 1.5.1. No aqueous effluents should arise from the operation of the incinerator or the associated abatement equipment. The waste heat boiler blow down water is discharged to public sewer.
- 1.5.2. Aqueous effluent arising from the cleaning and wheeled bins, is collected and passes through a 3 stage interceptor. Liquor from the interceptor is discharged into the public sewer. The solids that settle are removed annually and disposed of at Galashiels Sewage Treatment Works. Storm water collected by building roof gutters drains into storm water drains.
- 1.5.3. All wastewater is discharged under consent from East of Scotland Water Authority.

## **1.6. Wastes arising**

- 1.6.1. The solids that settle out in the three-stage interceptor are removed annually and disposed of at Galashiels Sewage Treatment Works.
- 1.6.2. The dust separated from the flue gases by the bag filter is collected in a flexible intermediate bulk container (FIBC) for removal from the site to a landfill site without the need for further handling of loose dust.
- 1.6.3. Incineration ash, comprising fly ash and bottom ash, is disposed of to a licensed landfill site.
- 1.6.4. Each residue is kept separate from other residues at least until it has been characterised.
- 1.6.5. Each residue that is a dust, or has the potential for becoming a dust, is stored in enclosed containers at all times.

## **1.7. Other related substances**

- 1.7.1. Hydrated Lime is delivered to the plant in FIBCs specially designed for delivery and storage. An IBC frame is provided, allowing lime to be drawn directly from the container.
- 1.7.2. A volumetric screw conveyor transports the powder from the FIBC and delivers it to the reactor in an air stream.

## 2. LIMITS ON THE TYPES AND QUANTITIES OF WASTE

### 2.1. Permitted Types of Waste

2.1.1. No waste, other than that described in paragraph a), from the origins listed in Table 2.2, and paragraph b) shall be incinerated in the Installation.

- (a) The categories of clinical wastes specified in Table 2.1 (being categories from the European Waste Catalogue, reference number 18 00 00).

Table 2.1	
Table of Permitted Wastes	
Index Number	Description
<b>18 01 00</b>	<b>Waste from natal care, diagnosis, treatment or prevention of disease in humans</b>
18 01 01	Sharps.
18 01 02	Body parts and organs including blood bags and blood preserves.
18 01 03	Other wastes whose collection and disposal is subject to special requirements in view of the prevention of infection.
18 01 04	Wastes whose collection and disposal is not subject to special requirements in view of the prevention of infection (e.g. dressings, plaster casts, linen, disposable clothing, diapers).
18 01 05	Discarded chemicals and medicines
<b>18 02 00</b>	<b>Waste from research, diagnosis, treatment or prevention of disease involving animals.</b>
18 02 01	Sharps.
18 02 02	Other wastes whose collection and disposal is subject to special requirements in view of the prevention of infection.
18 02 03	Wastes whose collection and disposal is not subject to special requirements in view of the prevention of infection.
18 02 04	Discarded chemicals

- (b) Waste that is not clinical waste which meets the following criteria:

- i. it is municipal type waste as defined in paragraph c) below, arising within the wards, offices and canteens within Borders General Hospital site boundary; **or**
- ii. **XXXX**
- iii. **XXXX**

Table 2.2	
Table of Waste Origins	
The Operator	
The Local NHS Trust	
Premises involved in animal health care and related research	
	XXXX
	XXXX

- (c) For the purposes of this Permit, the medicines referred to in Table 2.1 are described as Prescription Only Medicines ("POMS").
- (d) For the purposes of this permit Municipal Type Waste is defined as "Mixed Municipal Waste", from the European Waste Catalogue, EWC number 20 03 01, excluding the following substances:
- i) glass;
  - ii) small metals (cans etc.);
  - iii) other metals;
  - iv) paint, inks adhesives and resins;
  - v) solvents;
  - vi) acids;
  - vii) alkalines;
  - viii) detergents;
  - ix) photochemicals;
  - x) medicines;
  - xi) pesticides;
  - xii) batteries;
  - xiii) fluorescent tubes and other mercury containing waste;
  - xiv) aerosols;
  - xv) equipment containing chlorofluorocarbons; and
  - xvi) electronic equipment (e.g. printed circuit boards)
  - xvii) anything falling within the generic EWC 20 02 00.

## 2.2. Permitted Quantities of Waste

- 2.2.1. The total amount of wastes specified in condition 2.1.2 destroyed by incinerating in the Installation, and shall not exceed 125 kilograms in any one hour.
- 2.2.2. The Operator shall record separately the quantity of: clinical waste (excluding POMS and sharps); Municipal Type waste; POMS and sharps, XXXX that is incinerated during each day. These records shall be kept and made available to an authorised person on request.
- 2.2.3. The Operator shall record the amount of: Clinical Waste (excluding POMS and sharps); Municipal Type Waste; POMS and sharps, XXXX incinerated every 1 hour. These records

shall be kept and made available to an authorised person on request.

2.2.4. The Operator shall notify SEPA in writing of the total amount of: clinical waste (excluding POMs and sharps); Municipal Type waste; POMs and sharps; ~~XXXX~~ incinerated in the calendar year, within one month of the end of the year to which it is pertaining.

2.2.5. The Operator shall not incinerate any more than the following quantities of wastes in any 1 hour.

(a) POMs and sharps:- no more than 4.3 kg.

~~XXXX~~

2.2.6. ~~XXXX~~

2.2.7. ~~XXXX~~

2.2.8. ~~XXXX~~

**3. CONDITIONS RELATING TO THE RECEIPT, HANDLING, CHARACTERISATION AND STORAGE OF WASTE**

**3.1. Waste Characterisation**

- 3.1.1. The Operator shall prepare, record, implement and maintain procedures for characterising waste in terms of its likely impact on incinerator performance and throughput.
- 3.1.2. The characterisation procedures required by Condition 3.1.1 shall refer to each waste classification using an unambiguous and concise name that is defined in writing as part of the said procedures' documentation.

**3.2. Record Keeping**

- 3.2.1. A systematic record shall be kept of each delivery of waste made to the Installation. The said records shall include in respect of each delivery:
- (a) the origin(s) of the waste comprising the delivery, including the name(s) and address(es) of the waste generator(s);
  - (b) the date and time any delivery arrived at the premises;
  - (c) the type of waste delivered, as per the descriptions in Schedule 2.1; and
  - (d) the identity of the person(s) who transported the delivery to the premises, and the registration number of the vehicle used to make the delivery.
- 3.2.2. A copy of the delivery note accompanying a waste delivery shall be included as part of the record required to be kept by Condition 3.2.1 in respect of that delivery. For the purposes of this Permit a delivery note means either a consignment note (as defined by the Special Waste Regulations 1996); or a notification required under Section 34 of the 1990 Act (a controlled waste transfer note), as appropriate.

**3.3. Designation and unloading of waste**

- 3.3.1. On receipt of any delivery of waste, the waste shall be transferred to the wheeled bins in quantities which shall ensure that the limitations set on the incinerating of the waste in Condition 2.2, in Schedule 2 of this Permit, and its subsequent conditions, are met.

- 3.3.2. The unloading of vehicles delivering waste shall take place only within a designated area which is provided with hard standing, and which is served by a drainage system which allows the isolation of any spillage from the waste, or rainwater contaminated by the waste. Such contained effluent shall be discharged only into the building's internal waste-water collection system.
- 3.3.3. Where any wastes are received by the Operator without the correct consignment note (as defined by the Special Waste Regulations 1996) or a controlled waste transfer note (as appropriate), or the Operator suspects that the waste delivered does not meet the descriptions of the wastes on either the consignment note or the controlled waste transfer note (as appropriate), the Operator shall segregate this waste away from all other waste, and shall record the following information:
- (a) the unique, and sequentially and chronologically allocated, identification number for the load as issued under condition 3.2.1;
  - (b) the origin(s) of the waste comprising the delivery, including the name(s) and address(es) of the waste generator(s);
  - (c) the date and time any delivery arrived at the premises;
  - (d) the classification of waste delivered, as per the descriptions in Condition 2.1;
  - (e) the identity of the person(s) who transported the delivery to the premises, and the registration number of the vehicle used to make the delivery; and
  - (f) the current storage location of the waste.
- 3.3.4. In the event that waste is received by the Operator as described in condition 3.3.3, the Operator shall notify SEPA by telephone at the number given in the attached explanatory notes, immediately, and shall notify SEPA in writing at the address given in the attached explanatory notes as soon as is practicable, but no later than 48 hours after the receipt of the said waste.

## 4. OPERATION OF INSTALLATION

### 4.1. Incinerator Operation

4.1.1. The Installation shall be operated such that:

- (a) the temperature of the combustion gases leaving the secondary chamber of the incinerator is maintained at no less than 1,000 °C;
- (b) an Oxygen concentration of not less than 6% v/v (expressed in terms of wet gas) is maintained in the secondary chamber of the incinerator;
- (c) the gas residence time in the secondary chamber of the incinerator is not less than 2 seconds;
- (d) wastes for incineration, may only be fed to the incinerator, if they meet the description of wastes in Condition 2.1.1 of Schedule 2;
- (e) the maximum feed rate of the wastes to the incinerator does not exceed 125 kg per hour;
- (f) auxiliary burners automatically fire support fuel at the appropriate rate if the temperature of the combustion gases leaving the secondary chamber of the Incinerator drops below 1,000 °C;
- (g) the feed of wastes, is stopped, when the temperature of the combustion gases leaving the secondary chamber drops below 1,000 °C;
- (h) a secondary air feed system, which controls the addition of adequate air, based on the measured Oxygen concentration exiting the secondary chamber of the Incinerator, is provided; and
- (i) the combustion and dilution air fans are switched on and operating, and the air valves are correctly set.

### 4.2. Auxiliary Fuels

- 4.2.1. Natural gas shall be used to maintain the pilot flame during start-up of the incinerator, until combustion of the gas as specified in Condition 4.2.2, is established.
- 4.2.2. No support fuel other than natural gas shall be used for the start-up, or the maintenance of any minimum operating temperatures stipulated within this Permit.
- 4.2.3. The supply of auxiliary fuels, as specified in Condition 4.2.2, to the incinerator, shall be automatically linked to the temperature of the secondary chamber of the incinerator and the wastes

such that if the temperature of the secondary chamber of the incinerator drops below 1,000°C, the supply of wastes to the incinerator is ceased, and the supply of support fuel is increased, until such time as the temperature within the secondary chamber of the incinerator reaches a minimum of 1,000°C, and is maintained for a minimum of 10 minutes.

#### **4.3. Demonstration of compliance**

- 4.3.1. Compliance with Condition 4.1.1 a) shall be assessed by the continuous measuring and recording of the temperature of the off-gases exiting the secondary chamber of the incinerator, whenever the incinerator is in operation.
- 4.3.2. Compliance with Condition 4.1.1 b) shall be assessed by the continuous measuring and recording the concentration of Oxygen at the exit from the secondary chamber of the incinerator.
- 4.3.3. The measured values of each concentration or parameter required to be continuously monitored by Conditions 4.4.1 and 4.4.2, shall be electronically recorded at least once during each period of 60 seconds, and the time and date of each recorded value shall also be recorded.
- 4.3.4. The electronic monitoring and recording systems required by Conditions 4.3.1, 4.3.2 and 4.3.3 shall incorporate a method for alerting the Operator of any non-compliance with Condition 4.1.1.

#### **4.4. Record Keeping**

- 4.4.1. Whenever any waste is placed into the incinerator's feed elevator and from there fed into the incinerator, the following records shall be kept:
  - (a) the category of the waste as identified in Condition 2.1.1;
  - (b) the weight of each category of waste incinerated;
  - (c) the unique identification numbers given to any wastes under Condition 3.3.3 (a) for all of the wastes incinerated at that time;
  - (d) the time and date when the waste was fed into the incinerator;
  - (e) the effective rate at which the waste is fed into the incinerator; and the status of any process control parameters required by Condition 4.1.1 at the time that that waste is charged;

- (f) the average half hourly temperature and the minimum half hourly temperature of the combustion gases in the exit from the secondary chamber of the incinerator;
- (g) details of measurements from the incinerator stacks as specified in Condition 5.3;
- (h) the half hourly average excess oxygen content of the combustion gases;
- (i) the minimum half-hourly average excess oxygen content of the combustion gases; and

#### 4.5. Interlocks

4.5.1. A system of interlocks shall be provided and maintained so as to ensure that the introduction of waste into the incinerator is immediately stopped in the event of any of the following circumstances:

- (a) the combustion fan ceases to run for any reason;
- (b) the temperature of the combustion gases leaving the secondary chamber falls below 1,000 °C;
- (c) loss of power to the lime and activated carbon dosing systems;
- (d) failure of the supply of auxiliary fuels, as described in Condition 4.2.2, to the incinerator;
- (e) loss of electrical power to the process, or to any of its safety systems;
- (f) the monitoring required by Condition 4.3.1, either is not taking place, or indicates that Condition 4.1.1 a) is not being complied with; and
- (g) the monitoring required by Condition 4.3.2 either is not taking place, or indicates that Condition 4.1.1 b) is not being complied with.

4.5.2. Each interlock required by Condition 4.5.1 shall be logged on a critical instruments list. Risk assessment shall be carried out to determine the correct maintenance and test frequency of each interlock; and a procedure shall be devised, documented, implemented and maintained to ensure testing and maintenance of the interlocks is undertaken. As a minimum the interlocks shall be maintained and tested at the frequency indicated by the manufacturers, to ensure that they operate to the design specifications.

- 4.5.3. Any risk assessment required by Condition 4.5.2 shall be recorded and available for inspection by an authorised person.
- 4.5.4. All maintenance and tests carried out by virtue of condition 4.5.2 shall be recorded and available for inspection by an authorised person.
- 4.5.5. If any tests required by Condition 4.5.2 identify any interlock which does not operate as per design specification, the incinerator shall be taken off line until such time as the interlock has been restored to correct function. The date, time and remedial action taken to reinstate such faulty interlocks, and a description of the fault shall be recorded and available for inspection by an authorised person.

#### **4.6. Aqueous Wastes**

- 4.6.1. Discharges of aqueous wastes from the process, through the site effluent discharge system, shall only be discharged to the public sewer.

#### **4.7. Operation of gas handling and treatment plant**

- 4.7.1. The gases leaving the secondary chamber shall be cooled to within 10°C of 220°C in the attemperating ring and the waste heat boiler, and the temperature of the gases entering the bag filter plant from the economiser shall be less than 135 ° C.
- 4.7.2. Compliance with Condition 4.7.1 shall be assessed by:
  - (a) continuously measuring and recording the temperature of the gases exiting the secondary chamber;
  - (b) continuously measuring and recording the temperature exiting from the waste heat boiler;
  - (c) continuously measuring and recording the temperature of the gases at the economiser; and
  - (d) continuously measuring and recording the temperature of the gases at the bag filter.
- 4.7.3. The measured value of each temperature required to be continuously monitored by Condition 4.7.2 shall be electronically recorded at least once during each period of 30 seconds, and the time and date of each recorded measured value shall also be recorded.
- 4.7.4. The electronic recording system required by Condition 4.7.3 shall incorporate an appropriate means of alerting the Operator of any non-compliance with Condition 4.7.1.
- 4.7.5. The Operator shall record the weekly use of lime and activated carbon in the bag filtration system.

## 5. LIMITS ON RELEASES TO AIR

### 5.1. Sampling and Analysis

- 5.1.1. Any extractive test carried out to assess compliance with the limits on discharge specified in any Condition of this permit shall be undertaken when the Installation described in Schedule 1 is operating at a waste feed rate of not less than 110 kg per hour and the process conditions are steady.
- 5.1.2. The date and time of, and the process condition during the period of any extractive testing undertaken, shall be recorded.
- 5.1.3. In addition to the requirements of Condition 5.1.1, extractive monitoring to assess the compliance with any limits set for the discharge of Dioxins and Furans, as specified in Condition 5.4.1, shall only be undertaken when halogenated wastes are being incinerated.
- 5.1.4. The type and location of sample points on vents and stacks shall conform to the requirements set out in the relevant test methods stipulated in Schedules 6 and 7.

### 5.2. Interpretation of Concentration Limits

- 5.2.1. Any reference in this Permit to the concentration of any substance in releases to air shall mean the concentration of that substance in dry air at a temperature of 273 K, at a pressure of 101.3 kPa and at the relevant Oxygen concentration defined by Condition 5.2.2.
- 5.2.2. For the purposes of Condition 5.2.1, the relevant Oxygen concentration shall be which ever is the lower of the measured Oxygen Concentration, expressed as v/v in dry gas, or 11% v/v.
- 5.2.3. Any reference in this Permit to the toxic equivalent (TEQ) concentration of either Polychlorinated Dibenzo-p-dioxin (hereinafter referred to as "Dioxin"), or a Polychlorinated Dibenzofuran (hereinafter referred to as a "Dibenzofuran") in releases to air, shall mean the concentration of that Dioxin or Dibenzofuran, multiplied by the equivalence factor for that Dioxin or Dibenzofuran listed in Column 2 of Table 5.1, and any references to the TEQ concentration of all Dioxins and Dibenzofurans shall mean the sum of the toxic equivalent concentrations of all the Dioxins and Dibenzofurans listed in Column 1 of Table 5.1.

- 5.2.4. Whenever the TEQ concentration of all Dioxins and Dibenzofurans is calculated, as specified in Condition 5.2.3, the minimum concentration for any Dioxin or Dibenzofuran shall be the level of detection for that Dioxin or Dibenzofuran, relevant to the measurement technique used.

<b>Table 5.1</b>	
<b>Table of Toxic Equivalence Factors for Dioxins and Dibenzofurans</b>	
<b>Substance</b>	<b>Equivalence Factor</b>
2,3,7,8 Tetrachlordibenzodioxin	1
1,2,3,7,8 Pentachlordibenzodioxin	0.5
1,2,3,4,7,8 Hexachlordibenzodioxin	0.1
1,2,3,7,8,9 Hexachlordibenzodioxin	0.1
1,2,3,6,7,8 Hexachlordibenzodioxin	0.1
1,2,3,4,6,7,8 Heptachlordibenzodioxin	0.01
Octachlordibenzodioxin	0.001
2,3,7,8 Tetrachlordibenzofuran	0.1
2,3,4,7,8 Pentachlordibenzofuran	0.5
1,2,3,7,8 Pentachlordibenzofuran	0.05
1,2,3,4,7,8 Hexachlordibenzofuran	0.1
1,2,3,7,8,9 Hexachlordibenzofuran	0.1
1,2,3,6,7,8 Hexachlordibenzofuran	0.1
2,3,4,6,7,8 Hexachlordibenzofuran	0.1
1,2,3,4,6,7,8 Heptachlordibenzofuran	0.01
1,2,3,4,7,8,9 Heptachlordibenzofuran	0.01
Octachlordibenzofuran	0.001

### 5.3. Emission Concentration Limits for Carbon Monoxide

- 5.3.1. 100% of all Reported Daily Average values for the concentration of Carbon Monoxide in the combustion gases leaving the secondary chamber of the incinerator, recorded as required by Condition 6.3.6 shall not exceed 50 mg/m<sup>3</sup>.
- 5.3.2. The concentration of Carbon Monoxide in the combustion gases leaving the secondary chamber of the incinerator shall comply with at least one of the criteria stipulated below:
- (a) 95% of all Reported 10-minute Average values, recorded as required by Condition 6.3.7, shall not exceed 150 mg/m<sup>3</sup> in any 24-hour period; or
  - (b) 100% of the Reported 30-minute Average values, recorded as required by Condition 6.3.8, shall not exceed 100 mg/m<sup>3</sup> in any 24-hour period.
- 5.3.3. Compliance with the limits specified in Condition 5.3.1 and Condition 5.3.2 shall be assessed as described in Schedule 6.

- 1.3.2. Solid waste is introduced to the primary combustion chamber via a bin elevator come tipper, and automatic loading box. Only one bin can be loaded at a time and the cycle time is twenty minutes between loads.
- 1.3.3. Waste in the primary chamber is initially incinerated in substoichiometric conditions to drive off combustible gases and vapours for secondary combustion. Waste is moved over the length of the first hearth by ram action and the final decarbonisation takes place in excess air conditions in the last and lowest zone of the primary chamber.
- 1.3.4. Gases and vapours from the primary chamber pass to the secondary chamber where their temperature is raised to 1000°C in the presence of excess oxygen for a minimum residence time of two seconds.
- 1.3.5. Temperatures within the incinerator are maintained when necessary by auxiliary gas fired burners.

#### **1.4. Gas cleaning and conditioning**

- 1.4.1. Gases leaving the secondary combustion zone are fed through an attemperating ring where air is injected to lower the gas temperature to achieve a controlled level before entering a waste heat boiler. Steam is raised within the boiler for use within the hospital. The gases then pass to the economiser and a scrubbing system which comprises:
  - (a) an air dilution come temperature control device to control the flue gas temperature;
  - (b) a reactor tower, where hydrated lime and activated carbon is added to the gas stream and acid gas adsorption occurs;
  - (c) a bag filter to remove particulates, carbon and neutralisation reaction solid products from the gas stream (the bag filter also allows for additional reaction time to complete the adsorption reaction); and
  - (d) an induced draught fan to draw the gases through the plant.
- 1.4.2. The dust separated from the flue gases by the bag filter is collected in a flexible intermediate bulk container (FIBC) for removal from the site to a landfill site without the need for further handling of loose dust. Incineration ash is disposed of to a licensed landfill site.
- 1.4.3. The scrubbed gases are discharged to atmosphere through a 30 metre high stack, marked as S1 on the installation plan.

recorded as required by condition 7.3.2, shall not exceed the relevant concentration limit stipulated in Column 2 of Table 5.4.

<b>Table 5.4</b>	
<b>Emission Concentration Limits Gaseous and Vaporous Organic Compounds and Sulphur Dioxide.</b>	
<b>Substance</b>	<b>Concentration Limit</b>
Gaseous and vaporous organic compounds	19.73 mg/m <sup>3</sup>
Sulphur Dioxide	293.32 mg/m <sup>3</sup>

5.6.2. Compliance with the limits specified in Condition 5.6.1 shall be assessed as described in Schedule 7.

### 5.7. Emission Concentration Limits for Particulate Matter

5.7.1. Subject to Condition 5.7.3, all Reported Daily Average values for the concentration of those substances listed in Column 1 of Table 5.5 in gaseous releases from the incinerator stack, recorded as required by Condition 6.3.5, shall not exceed the relevant limit specified in Column 2 of that Table.

5.7.2. Subject to Condition 5.7.3, the concentration of those substances listed in Column 1 of Table 5.5, in gaseous releases from the incinerator stack, shall comply with at least one of the criteria stipulated below:

- (a) all Reported 30-minute Average values, over a year, recorded as required by Condition 6.3.5, shall not exceed the relevant concentration limit stipulated in Column 3 of Table 5.5; or
- (b) 97% of the Reported 30-minute Average values, over a year, recorded as required by Condition 6.3.5, shall not exceed the relevant concentration limit stipulated in Column 4 of Table 5.5,

where for the purposes of this condition a year is defined as a calendar year.

<b>Table 5.5</b>			
<b>Emission Concentration Limits for Particulate Matter</b>			
<b>Substance</b>	<b>Daily Average Concentration Limit</b>	<b>30-minute Average Concentration Limit (100% compliance)</b>	<b>30-minute Average Concentration Limit (97% Compliance)</b>
Particulate matter	29.47 mg/m <sup>3</sup>	29.47 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>

5.7.3. Compliance with the limits specified in Condition 5.7.1 and Condition 5.7.2 shall be assessed as described in Schedule 6.

**5.8. Abnormal Conditions, Failures and Notification**

5.8.1. In accordance with Condition 5.8.2, and subject to Condition 5.8.3, if the average Reported Value recorded as required by Condition 6.3.5 or Condition 6.3.6, exceeds any relevant limit imposed by Condition 5.3.1, Condition 5.3.2, Condition 5.4.1, Condition 5.5.1, Condition 5.6.1 or Condition 5.7.1, the Operator shall.

- (a) cease charging Sharps and POMs [REDACTED] to the incinerator as soon as the exceedance is identified;
- (b) notify SEPA, at the address given in the attached explanatory notes, in accordance with Condition 15.3.3; and
- (c) refrain from recommencing the charging of Sharps and POMs [REDACTED] until it has received SEPA's written (including faxed or e-mailed) permission so to do.

5.8.2. The notification required by Condition 5.8.1 b) shall indicate;

- (a) which limit, as specified in Condition 5.3.1, Condition 5.3.2, Condition 5.4.1, Condition 5.5.1, Condition 5.6.1 or Condition 5.7.1, was exceeded, and by how much;
- (b) the date and time the exceedance began and its duration;
- (c) what measures were taken to comply with any limits of this permit;
- (d) what measures are being taken to investigate the cause of the exceedance; and
- (e) what measures are being taken to ensure that the limit shall not be exceeded on the start up of the incinerator after receipt of permission so to do from SEPA.

5.8.3. If any average Reported Value, recorded as required by Condition 6.3.5 or Condition 6.3.6, exceeds any relevant limit imposed by Condition 5.3.1, Condition 5.3.2, Condition 5.4.1, Condition 5.5.1, Condition 5.6.1 or Condition 5.7.1, because of a technically unavoidable stoppage, disturbance or failure of either a gas cleaning device or a measurement device, the Operator shall cease to feed Sharps and POMs [REDACTED] to the incinerator, and shall not restart incineration of Sharps and POMs [REDACTED] until such time as the cause for the non-compliance has been rectified and the continuation of incineration of such wastes has been agreed in writing (including faxed or e-mailed) by SEPA. SEPA shall be notified

of all such failures at the address given in the attached explanatory notes, in accordance with Condition 15.3.3.

5.8.4. In accordance with Condition 5.8.3, the Operator may continue to incinerate Sharps and POMs ~~XXXX~~ currently within the incinerator at the time the exceedance was discovered until the end of that incineration cycle, or 4 continuous hours, whichever is the shorter period of time so long as:

- (a) the Operator has reasonable grounds for believing that the stoppage, disturbance or failure giving rise to the exceedance of one of the said average Reported Values can be corrected within a period of less than 4 hours;
- (b) no 30-minute average Reported Value for particulate matter exceeds  $150 \text{ mg/m}^3$ ;
- (c) the concentration of gaseous and vaporous organic compounds does not exceed  $19.73 \text{ mg/m}^3$ ;
- (d) the reported average values for Carbon Monoxide, as required by Condition 5.3 are not exceeded;
- (e) the period of exceedance does not exceed 4 continuous hours;
- (f) the total time that one or more reported limit values has been exceeded does not exceed 60 hours in any one year; and
- (g) the Operator records in writing the information pertaining to the period of exceedance which is specified in Condition 5.8.4 as soon as is reasonably practicable.

5.8.5. The notification required by Condition 5.8.3 shall indicate;

- (a) the date and time the period of exceedance began and its duration;
- (b) the cause of the period of exceedance;
- (c) the technically unavoidable stoppage, disturbance or failure of either a gas cleaning device or a measurement device which caused the failure;
- (d) which limit, as specified in Condition 5.3.1, Condition 5.3.2, Condition 5.4.1, Condition 5.5.1, Condition 5.6.1 or Condition 5.7.1, was exceeded, and by how much;
- (e) what measures were taken to comply with any limits of this permit;

- (f) what measures are being taken to investigate the cause of the exceedance; and
- (g) what measures are being taken to ensure that the limit shall not be exceeded on the re-commencement of the feed of special wastes to the incinerator after receipt of permission so to do from SEPA.

5.8.6. Where the Operator has not met any one or more of the 100% concentration limits on releases to air, set by any condition of this Permit, and, by calculation, predictions indicate that the Operator will be unable to meet any one or more of the 95% or 97% concentration limits on releases to air, as set by any condition of this Permit, when calculated over the calendar year, then the Operator shall follow the requirements of Conditions 5.8.1, 5.8.2, 5.8.3, and 5.8.4, with the exception of limits placed on releases to air for particulate matter.

5.8.7. In the event of breakdown of any part of the incinerator or the associated abatement plant, the Operator shall:

- (a) cease to feed any Sharps and POMs ~~XXXX~~ to the incinerator;
- (b) notify SEPA at the address given in the attached explanatory notes, in accordance with Condition 15.3.3: and
- (c) not recommence the feed of Sharps and POMs ~~XXXX~~ to the incinerator without the written permission of SEPA.

5.8.8. Mass emissions from the Installation shall be estimated every year for those substances listed in column 1 of Table 5.6.

<b>Table 5.6</b>
<b>Substances To Be Estimated as Mass Emissions</b>
<b>Column 1</b>
Carbon Dioxide
Carbon Monoxide
Gaseous & vaporous organic substances
Oxides of Nitrogen (as NO <sub>2</sub> )
Oxides of Sulphur (as SO <sub>2</sub> )

## 6. CONTINUOUS MONITORING OF RELEASES TO AIR

### 6.1. Continuous Monitoring Frequencies and Locations

6.1.1. Whenever the Installation is in operation, the Operator shall:

- (a) continuously monitor the concentrations in emissions to air, of each substance listed in Column 1 of Table 6.1, at the location given in Column 2 of that Table; and
- (b) continuously measure each of the parameters listed in Column 1 of Table 6.2, at the location given in Column 2 of that Table.

Table 6.1	
Continuous concentration monitoring Requirements	
Substance	Sampling Location
Carbon Monoxide	In the incinerator stack
Particulate matter	In the incinerator stack
Oxygen	In the incinerator stack

Table 6.2	
Process Parameters Measuring Requirements	
Parameter	Location
Duct temperature	In the incinerator stack
Duct pressure	In the incinerator stack

6.1.2. If any of the continuous monitoring, required by Condition 6.1.1, cannot be carried out, the incineration of waste shall cease until full compliance with Condition 6.1.1 is possible. If the incineration of waste is terminated because of an inability to comply with Condition 6.1.1, the Operator shall record:

- (a) the date, time and duration of the downtime caused by any failure or malfunction of a continuous monitor;
- (b) the time and date of the restart of the Incinerator;
- (c) the cause of any such failure or malfunction and any actions taken to rectify the failure or malfunction; and
- (d) any actions proposed in order to prevent a similar failure mode or malfunction recurring,

and report this information to SEPA within 48 hours of the shut down of the Incinerator

## 6.2. Monitoring, Measurement and Sampling Techniques

6.2.1. The device, or devices, employed for the continuous monitoring of any substance listed in Column 1 of Table 6.3 shall;

- (a) have a 95% confidence interval determined at the appropriate emission concentration limit, as specified in Schedule 5, that does not exceed the relevant percentage specified in Table 6.3; and
- (b) be calibrated using the appropriate CEN standard technique as a reference; or
- (c) be calibrated using the relevant default calibration method, given in Column 3 of Table 6.3, where no CEN standard technique has been elaborated (and only under that circumstance).

6.2.2. Prior to the first use of any new continuous monitoring technique, the Operator shall provide to SEPA:

- (a) a written description of the technique;
- (b) proof that the technique meets with the measurement accuracy required by Condition 6.2.1 a);
- (c) the manufacturer's recommended calibration and maintenance regime, the regime the Operator proposes to implement, and the reasons why, if the proposed frequency is less frequent than the manufacturer's recommendations; and
- (d) an explanation of the features which will ensure that any extractive sample taken will be representative of the total gas flow, if the continuous technique used involves extractive sampling, and the subsequent analysis of the sample so taken.

<b>Continuous Monitoring Requirements</b>		
<b>Substance</b>	<b>Confidence Interval (95%)</b>	<b>Default Calibration Method</b>
Carbon Monoxide	10%	ISO 12039
Particulate matter	30%	Draft BS EN 13284 or BS 6069

6.2.3. The Operator shall record all maintenance and calibration work carried out on any continuous monitor required by Condition 6.1.1. If any calibration work identifies that there has been an underestimation of any emission concentration of greater than 10%, this fact shall be reported to SEPA at the address given in the explanatory notes, within 48 hrs of the identification of the said underestimation.

### **6.3. Data Handling**

6.3.1. The measured value of each concentration or parameter required to be continuously recorded by Condition 6.1.1, shall be electronically recorded at least once during each period of 60 seconds, and the date and time of each recorded measured value shall also be recorded. The collection of recorded measured values of any concentration or parameter shall be referred to as the "Measured Value Data Set" for that concentration or parameter.

6.3.2. The Measured Value Data Sets for concentrations of all substances listed in column 1 of Table 6.1, other than Oxygen, shall be electronically filtered and corrected on a real time basis, as specified in Condition 6.3.3 and Condition 6.3.4 respectively, in order to produce "Reported Value Data Sets".

6.3.3. Each Reported Value Data Set shall:

- (a) exclude measured values recorded during any zero, span and calibration checks on the instrument which give rise to the values;
- (b) exclude measured values recorded during the start up and shut down periods, during which no waste was being incinerated; and
- (c) exclude measured values recorded during the failure of monitoring or other equipment that could effect the accuracy of the measurement of the concentration of those substances listed in column 1 of Table 6.1 in releases to air from the incinerator stack.

6.3.4. Each measured value that is included within a Reported Value Data Set shall:

- (a) have the relevant confidence interval, specified in Column 2 of Table 6.3, subtracted on a real time basis; and
- (b) be corrected on a real time basis to the reference conditions set out in Condition 5.2.1.

- 6.3.5. The Reported Value Data Sets for concentrations of those substances listed in Column 1 of Table 6.1, other than Oxygen and Carbon Monoxide, shall be divided into discrete and consecutive 30-minute subsets (commencing each hour and half hour) and similar 24-hour subsets (commencing at 00:00 hrs) each day, and the average concentration of the respective substances for each subset shall be calculated and recorded within 1 minute of the subset becoming complete.
- 6.3.6. The Reported Value Data Sets for concentrations of Carbon Monoxide shall be divided into discrete 24-hour subsets (commencing at 00:00 hrs) each day, and the average concentration of the respective substances for each subset shall be calculated and recorded within 1 minute of the subset becoming complete.
- 6.3.7. The Reported Value Data Set for the 95 percentile concentration of Carbon Monoxide shall also be divided into discrete and consecutive 10-minute subsets (commencing at 0, 10, 20, 30, 40, and 50 minutes past each hour), and the average concentration of Carbon Monoxide for each subset shall be calculated and recorded within 1 minute of the subset becoming complete, with compliance with the 95 percentile limit based on a rolling 24-hour period.
- 6.3.8. The Reported Value Data Sets for 100 percentile concentrations of Carbon Monoxide shall be divided into discrete and consecutive 30-minute subsets (commencing each hour and half hour) and the average concentration of Carbon Monoxide shall be calculated and recorded within 1 minute of the subset becoming complete, with compliance with the 100 percentile limit based on a rolling 24-hour period.

#### **6.4. Reporting**

- 6.4.1. The Operator shall submit a written, quarterly report to SEPA, not more than one month following the quarter in question, that:
- (a) declares the number of hours the Incinerator has operated during each week falling within the period covered by the report;
  - (b) declares the total mass of waste incinerated in the Incinerator during each week falling within the period covered by the report;
  - (c) declares the mass of each type of waste incinerated in the Incinerator during each week falling within the period covered by the report; and

- (d) provides in graphical form the compliance record of all continuous monitoring requirements for the current year, including compliance with any 24-hour, 30-minute or 10-minute average limits.

## 7. PERIODIC MONITORING OF RELEASES TO AIR

### 7.1. Monitoring Frequencies and Locations

7.1.1. Periodic monitoring of the concentration of each substance in gaseous releases to air from the incinerator stack, listed in Column 1 of Table 7.1, shall:

- (a) be undertaken once every 2 months during the first 6 months of operation, twice in the next 6 months of operation, and then at least twice per year thereafter; and
- (b) be performed at the location given in Column 2 of Table 7.1.

Table 7.1	
Periodic Monitoring Requirements	
Substance	Location of Sampling Point
Water vapour (if required for standardisation purposes)	In the incinerator stack
Cadmium and Thallium, and their compounds.	In the incinerator stack
Mercury and its compounds	In the incinerator stack
Antimony, Arsenic, Lead, Chromium, Cobalt, Copper, Manganese, Nickel, Vanadium and Tin and their compounds	In the incinerator stack
Dioxins and Dibenzofurans	In the incinerator stack
Gaseous and Vaporous organic Compounds (expressed as carbon)	In the incinerator stack
Sulphur Dioxide	In the incinerator stack
Hydrogen Chloride	In the incinerator stack
Hydrogen Fluoride	In the incinerator stack

7.1.2. Periodic monitoring, required by Condition 7.1.1, shall only be undertaken when the incinerator is incinerating wastes as defined in Condition 2.1.1, and at a rate not exceeding that stipulated in Condition 4.1.1 e).

### 7.2. Monitoring, Measurement and Sampling Techniques

7.2.1. The technique employed for the periodic monitoring of any substance listed in Column 1 of Table 7.2 shall be:

- (a) the appropriate CEN standard; or

- (b) the default method for that substance, given in Column 3 of Table 7.2, where no CEN standard has been elaborated (and only under that circumstance).

<b>TABLE 7.2</b>		
<b>Periodic Monitoring Default Methods</b>		
<b>Substance</b>	<b>Sample Duration</b>	<b>Default Method</b>
Mercury and its compounds	Between 30 minutes and 8 hours	United States' Environmental Protection Agency's Method No. 29
Cadmium, Thallium and their compounds	Between 30 minutes and 8 hours	United States' Environmental Protection Agency's Method No. 29
Antimony, Arsenic, Lead, Chromium, Cobalt, Copper, Manganese, Nickel, Vanadium and Tin and their compounds	Between 30 minutes and 8 hours	United States' Environmental Protection Agency's Method No. 29
Dioxins and Dibenzofurans	Between 6 hours and 8 hours	BS EN 1948 Part 3 (CEN Method)
Gaseous and Vaporous organic Compounds (expressed as carbon)	Between 6 and 8 hours	United States' Environmental Protection Agency's Method No. 25A
Sulphur Dioxide	Between 30 minutes and 8 hours	Direct Method either Electrochemical or Spectroscopic (I.V. or UV Fluorescence)
Hydrogen Chloride	Between 30 minutes and 8 hours	BS EN 1911 Parts 1 - 3
Hydrogen Fluoride	between 30 minutes and 8 hrs	To be agreed in writing with SEPA.

7.2.2. The monitoring of the concentration of any substance listed in Column 1 of Table 7.2 shall involve:

- (a) the extraction of a sample over a continuous period for that substance, the duration of which is given in Column 2 of Table 7.2; and
- (b) the quantification of the mass of that substance collected and the volume of gas extracted during the said sampling period.

### 7.3. Data Handling and Reporting

7.3.1. Whenever periodic monitoring of any substance listed in Column 1 of Table 7.1 is being performed, the Operator shall record, or cause or require to be recorded:

- (a) the date and time that the sampling period commenced and terminated;
- (b) the identity of each person involved in performing the monitoring exercise, and their respective roles;
- (c) the mass of that substance extracted during the said sampling period;
- (d) the volume of gas extracted during the said sampling period;
- (e) information necessary to permit the standardisation of the volume of the extracted gas to the conditions specified in Condition 5.2.1;
- (f) the classification(s) of waste charged to the incinerator during the said sampling period, and the average feed rate; and
- (g) any abnormal or unusual operating condition that occurred during the said sampling period.

7.3.2. The Operator shall calculate and record the Reported Values for any monitoring exercise, by dividing the mass referred to in Condition 7.3.1 c) by the gas volume referred to in Condition 7.3.1 d), after the latter has been corrected using the information referred to in Condition 7.3.1 e). All such calculations shall also be recorded.

7.3.3. The report generated by Condition 7.3.2 shall be forwarded to SEPA within 28 days of the receipt of the report.

**8. CONDITIONS APPLYING TO DISCHARGES TO CONTROLLED WATERS**

8.1.1. There shall be no discharges to Controlled Waters, other than uncontaminated roof drainage.

**9. CONDITIONS APPLYING TO DISCHARGES TO PUBLIC SEWER**

- 9.1.1. The terms of this Permit allow the discharge of washing water from the cleaning and disinfection of the wheeled bins only to enter only the public sewer.

**10. CONDITIONS APPLYING TO MANAGEMENT OF WASTE**

10.1.1. The Operator shall prepare, record and implement procedures which demonstrate how it intends to ensure that all wastes generated within the Installation other than wastes subject to control elsewhere within this permit are stored, handled, processed and disposed of in a manner which avoids or reduces any impact on the environment and in compliance with any requirements of the Regulations, or any other relevant act or regulations, by 31 December 2002.

10.1.2. The procedures referred to in condition 10.1 shall set out how amongst other things the Operator intends to;

- (a) characterise the relevant wastes such that accurate information on the nature, quantity and type of waste may be given to any operator carrying, keeping, treating or disposing of the waste, such that the waste may be handled, carried, kept or treated in a safe manner and in such a way that it can be disposed of in a manner which avoids or reduces any impact on the environment; and
- (b) operate any plant or facility for the processing or conditioning of wastes having regard to the duty to prevent, as far as is reasonably practicable, pollution of the environment as defined in Part I, paragraph 2 of the Regulations.

**11. ENVIRONMENTAL MONITORING**

11.1.1. The Operator shall co-operate in any environmental monitoring programme carried on or required by SEPA in the exercise of its pollution control functions in relation to the activities undertaken at the Installation.

## 12. WASTE MINIMISATION

- 12.1.1. The Operator shall review the written policy commitment to the minimisation of wastes, and shall update the requirements of the policy as required taking account the principles of BAT and the principles set out in Regulation 8 of the Regulations. The review shall be carried out by 30 June 2002, and a copy sent to SEPA, at the address given in the explanatory notes.
- 12.1.2. The Operator shall continue to undertake a systematic review of waste generation and handling processes, energy and water usage which as a minimum should address the following areas:
- (a) the quantity and classification of each waste generated;
  - (b) the current disposal route for each waste generated;
  - (c) the potential for process modification to eliminate or minimise each waste generated, or energy and water consumed, or, as a minimum, hold any gains previously achieved; and
  - (d) the potential for re-use or recycling each waste generated.
- 12.1.3. Each review shall be reassessed at a frequency of not less than once every 2 years, and shall be recorded and forwarded to SEPA within one month of the completion of the review.
- 12.1.4. The Operator shall implement a programme of waste minimisation opportunities, as identified from the systematic review required by condition 12.2 above, setting out targeted reductions in waste generation and the timescale over which the reductions are to be met.
- 12.1.5. The programme of waste minimisation shall be reviewed at a frequency of not less than once every two years, achievements identified and new targets set. A report on achievements shall be submitted to SEPA within one month of the completion of each review

### 13. NOISE

- 13.1.1. The Operator shall ensure that if any new plant or equipment is to be purchased or obtained with the intention of installing and using the plant or equipment as part of or in association with the permitted installation the noise specification information relating to that plant shall be obtained from the supplier or manufacturer of the said plant or equipment.
- 13.1.2. The Operator shall ensure that if any new plant or equipment which may affect noise levels is brought into use, a new noise survey shall be undertaken to ensure that the noise levels do not exceed the current levels, as shown by the noise survey undertaken in August 2001, at the receptors identified during the said survey.
- 13.1.3. Any such noise survey as referred to in Condition 13.2 shall be carried out using equipment capable of providing information in the form of the following noise indices: LAeq ; LA90 ; LA10 ; LAmin ; Lamax . Any such noise survey shall also include a frequency spectrum analysis on a 1/3<sup>rd</sup> octave or narrow band basis.
- 13.1.4. The noise equipment used for the purpose of carrying out a survey as required by Condition 13.2, shall be calibrated in accordance with the manufacturer's instructions as well as in accordance with the current British Standard Specification relating to noise measurement.

**14. CONDITIONS RELATING TO ACCIDENTAL RELEASE**

**14.1. Risk Assessment**

14.1.1. The Operator shall carry out a detailed risk assessment of all activities permitted in terms of this Permit with the aim of identifying all foreseeable events that could result in an unplanned release or discharge to the environment. The risk assessment shall consider the potential impact of all such events and either justify the prevention measures that are employed at the Installation or make proposals for improvements.

14.1.2. The risk assessment required by Condition 14.1.1 shall be by 30 June 2002, and a copy shall be forward to SEPA at the address given in the Explanatory Notes, within one month of its completion.

14.1.3. The risk assessment required by Condition 14.1.1 shall be made available for review by all persons who have involvement with the activities permitted in terms of this Permit

**15. ENERGY EFFICIENCY**

15.1.1. The Operator shall maintain a written policy commitment to the minimisation of energy use taking account of the principles of BAT.

15.1.2. The Operator shall ensure the Installation is operated to minimise energy loss.

15.1.3. The Operator shall maintain an Energy Efficiency Plan which:

- (a) identifies all techniques relevant to the Installation
- (b) identifies the extent to which these techniques have been employed;
- (c) prioritises the applicable techniques according to their costs in relation to the environmental benefit delivered;
- (d) identifies any techniques which would lead to adverse environmental impacts.

15.1.4. The Operator shall implement a programme of energy use minimisation opportunities as identified in the Energy Efficiency Plan, setting out targeted reductions in energy use and the timescale over which the reductions are to be met.

15.1.5. The Energy Efficiency plan and the programme referred to in Condition 14.4 shall be reviewed whenever there are any changes to the Installation or at least once every 2 years, with achievements identified and targets set.

15.1.6. Each review of the Energy Efficiency Plan and the programme referred to in Condition 14.5 shall be recorded and reported to SEPA.

15.1.7. The Operator shall record energy and fuel usage each month in kWh.

15.1.8. The Operator shall estimate annually the Installation energy usage per tonne of waste incinerated. The method of estimation and the result shall be recorded.

## 16. GENERAL CONDITIONS

### 16.1. Records

16.1.1. The Operator shall retain all paper records referring to the operation of the Installation including operators' log sheets for at least 6 months after the completion of the relevant record or data set.

16.1.2. The Operator shall retain all records referring to the operation of the Installation that are kept electronically for at least 6 months after completion of the relevant record.

16.1.3. Other methods of retaining the records referred to in conditions 16.1.1 and 16.1.2, and other periods for their retention may be agreed in writing with SEPA

16.1.4. The Operator shall ensure that the information required to be kept by virtue of any condition of this permit shall be;

- (a) comprehensible and legible;
- (b) recorded as soon as reasonably practicable after each relevant operation;
- (c) if amended, amended in such a way as to leave the original entry clear and legible, and the reason for any amendment shall be recorded;
- (d) preserved for 5 years from the date when the record was made other than those required by virtue of conditions 16.1.1, 16.1.2 and 16.1.3; and
- (e) kept in a systematic manner at the location of the Installation, or at any other location agreed in writing with SEPA.

### 16.2. Reports

16.2.1. The Operator shall provide to SEPA a copy of any part of the information defined in any Schedule of this Permit within 15 days of it being requested.

16.2.2. All reports made under condition 16.2.1 shall be provided in letter form in duplicate, or in any other such format, as may be agreed with SEPA.

16.2.3. All reports required by any condition of this Permit shall be forwarded to the address given in the explanatory notes.

### 16.3. Incidents

16.3.1. The Operator shall notify SEPA when;

- (a) any release 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 discharge specified in a relevant condition of this permit;
- (b) any substance named in any relevant condition of this permit is detected in a discharge by a pathway not authorised by any condition of this permit and is in a quantity which might cause pollution of the environment as defined in Part I, paragraph 2 of the Regulations; and
- (c) any release of any substance, not authorised to be released by virtue of any condition of this permit, is detected and which is in a quantity which may cause pollution of the environment as defined in Part I, paragraph 2 of the Regulations;

in accordance with Condition 16.3.3.

16.3.2. Where an incident leads to, or could lead to, an unauthorised release of liquid effluent in a manner and quantity likely to result in a breach of any condition of this permit, whether or not that release is to controlled waters, the Operator shall advise SEPA in accordance with Condition 16.3.3.

16.3.3. The Operator shall notify SEPA at the address given in the attached explanatory notes, without delay and in writing by first class post on the next working day after the identification of any incident as defined in Condition 16.3.1 or 16.3.2.

- (a) In the event of an incident occurring between 1700 hours and 0900 hours on any weekday, or 1700 hours on a Friday and 0900 hours on the following Monday, or during any bank holiday, initial notification of an incident shall be by telephone to the SEPA Emergency Number in the attached explanatory note, and should be confirmed by first class post to the address in the explanatory note on the first following working day.

16.3.4. Any notification made as a result of Condition 16.3.1 or Condition 16.3.2 shall contain the time and duration of the incident, the receiving environmental medium or media, an initial estimate of the quantity and composition of the release, the measures taken to stop the release and a preliminary assessment of the cause of the incident.

16.3.5. Any incident notified to SEPA shall be investigated by the Operator and a report of the investigation sent to SEPA at the

address in the Explanatory Notes. The report shall be submitted within 4 weeks of the date of the incident unless otherwise agreed in writing with SEPA. It shall contain proposals for preventing a repetition of the incident.

#### **16.4. Administration**

16.4.1. The Operator shall appoint an appropriate person to have responsibility for ensuring that it complies with the limits and conditions of this permit and shall advise SEPA in writing of the appointed person.

16.4.2. All persons having responsibilities specified in any procedures established by virtue of any duty imposed by a condition of this permit shall be advised of their individual roles and responsibilities with respect to ensuring compliance with the conditions of this Permit.

16.4.3. All persons having responsibilities specified in any procedures established by virtue of any duty imposed by a condition of this Permit shall have ready access to written operating and maintenance instructions for the Installation.

16.4.4. All relevant staff shall receive theoretical and practical training in their duties in respect of operation and maintenance of the Installation. Such training shall ensure that staff are able to recognise the need for specialist advice or assistance where necessary.

16.4.5. All training of persons carrying on the Installation shall be recorded.

16.4.6. A copy of this Permit shall be kept at the process site and be readily accessible for examination by process personnel and authorised persons.

#### **16.5. Operation and Maintenance**

16.5.1. The Operator shall review and where necessary define, prepare record and implement such operational, management and maintenance systems as are necessary for compliance with the Conditions of this Permit. The systems shall be subject to documented review at intervals of not more than 4 years. Any systems put in place as a result of this Condition or Condition 16.5.2 below shall be recorded in writing.

16.5.2. Where any system required by Condition 16.5.1 is not immediately available, the Operator shall prepare such a system which shall be available for use by the Operator no later than 31 December 2002.

- 16.5.3. The procedures required by Condition 16.5.1 and Condition 16.5.2 shall include methods to be used in assessing any new process or process modification to be incorporated within the existing Installation, in respect to its emissions both under normal operating conditions and as a result of process upset.
- 16.5.4. The Operator shall review, and where necessary, define, prepare, record and implement procedures for identifying and responding to any occurrence which may occur within the Installation which may require notification to SEPA under Condition 16.3.1 or Condition 16.3.2, and for assessing the environmental impact of such an occurrence, should one be identified.
- 16.5.5. Where any system required by Condition 16.5.4 is not immediately available, the Operator shall prepare such a system which shall be available for use by the Operator no later than 30 June 2002.
- 16.5.6. No person shall be permitted to operate the Installation unless the Operator has formally notified that person that he is so permitted.
- 16.5.7. The Installation shall be operated and maintained in accordance with the procedures required by virtue of Condition 16.5.1, Condition 16.5.2, Condition 16.5.4 and Condition 16.5.5.

## **17. FUTURE PLANS**

### **17.1. General Plans**

17.1.1. The Operator shall verify;

- (a) the residence time;
- (b) the minimum temperature of 1,000°C, and
- (c) the oxygen content of the exhaust gases of at least 6%,

for the incinerator by 31 December 2002, with any verification of these factors being when the incinerator is operating under the most unfavourable operating conditions anticipated. This verification shall be forwarded to SEPA in writing at the address in the attached Explanatory Note, by 28 February 2002.

17.1.2. The Operator shall undertake a survey to ensure that all pipe work and hot surfaces are adequately insulated, without detriment to the pipework or plant, to minimise heat loss from the Installation. This survey shall be completed, and any findings implemented, by 30 September 2002.

17.1.3. The Operator shall undertake a survey to ensure that the maximum heat recovery of waste heat from the incineration process is achieved. This survey shall be undertaken and any findings implemented, by 31 December 2002.

17.1.4. The Operator shall submit to SEPA plans which detail the timescale and the methods by which the incinerator shall be brought to the standards required by the Incineration of Waste Directive (2000/76/EC) by the due date specified in that Direction. This plan shall be submitted to SEPA no later than 31 December 2002.

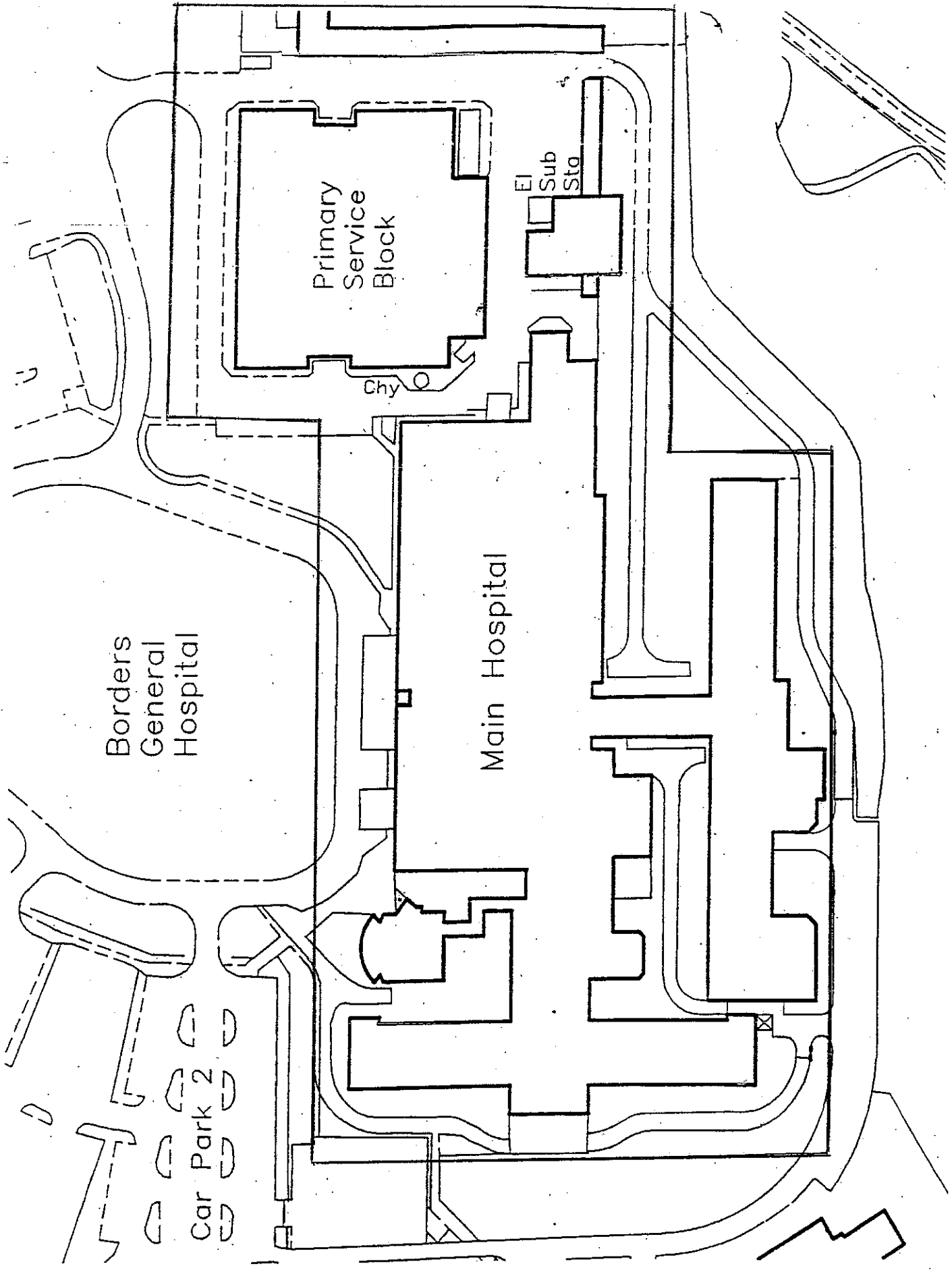
17.1.5. The Operator shall undertake modelling of the emissions to air from the Installation to assess the impact on the air quality of those emissions which are indicated in the Air Quality Strategy for England, Scotland, Wales and Northern Ireland, using a computer modelling system agreed in writing with SEPA. The Operator shall submit the report generated by the modelling to SEPA. The modelling shall be undertaken by 30 June 2003 and the report shall be submitted to SEPA by 31 August 2003.

### **17.2. Decommissioning Plan**

17.2.1. Within six months of the date of this permit, the Operator shall prepare and send to SEPA, at the address given in the Explanatory Notes, a Decommissioning Plan which will establish the actions required to be taken by the Operator following the decision to terminate all activities at the Installation.

- 17.2.2. The plan referred to above shall be developed in accordance with IPPC General Sector Guidance and shall, among other things, identify the means of confirming that there has been no deterioration of the environmental quality of the Site of the Installation when compared to its state prior to the granting of this permit.

**18. ANNEX 1: SITE PLAN**



Borders  
General  
Hospital

Primary  
Service  
Block

Main Hospital

El  
Sub  
Sta

Chy

Car Park 2

**19. ANNEX 2: PLAN OF LOCATION OF INSTALLATION ON SITE**

Borders  
General  
Hospital

Primary  
Service  
Block

El  
Sub  
Sta

Main Hospital

Car Park 2