

# FICHTNER

Consulting Engineers Limited





## Hillingdon Clinical Waste Incinerator



**Medisort Ltd**

Environmental Risk Assessment

## Document approval

|              | Name          | Signature   | Position                    | Date       |
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# 1 Introduction

Medisort Limited (Medisort) (the Applicant) is currently undergoing improvement work at the Facility which operates on Pields Heath Road, Uxbridge. The improvement works are an essential requirement to bring in line with current safety regulations and guidance as well as ensure the Facility meets the requirements of Best Available Techniques, associated emission levels (BAT AEL) guidance.

The aim of this report is to assess the environmental risks associated with the activities undertaken at the Facility as part of the environmental permit (EP) variation. Medisort is required to demonstrate that the necessary measures are in place to protect the environment and ensure that the Facility, throughout its life, will not pose an unacceptable risk to the environment.

The aim of this report is to:

- a. identify potential risks that the activity may present to the environment;
- b. screen out those that are insignificant and don't require detailed assessment;
- c. identify potentially significant risks, where appropriate;
- d. choose the right control measures, where appropriate; and
- e. report the findings of the assessment.

This document has been developed to consider the requirements of Environment Agency Guidance Notes H1 Annexes A, C, H and F. It is acknowledged that these guidance documents have been withdrawn; however, it is understood that the requirements of the guidance are still applicable.

## 1.1 Risk Assessment Process

This assessment has been developed in accordance with the Environment Agency Guidance Note H1. This guidance promotes four key steps:

1. identify risks from the activity;
2. assess the risks and check that they are acceptable;
3. justify appropriate measures to control the risks; and
4. present the assessment.

## 1.2 Step 1 – Identify Risks

The following report will identify the activities that present different types of risk to the environment associated with the operation of the Installation, including:

- a. odour;
- b. noise;
- c. fugitive emissions; and
- d. accidents.

## 1.3 Step 2 – Assess the Risk

The report will include an assessment of risks associated with the operation of the Installation, and will identify the:

- a. hazard;
- b. receptor; and

- c. pathway.

## 1.4 Step 3 – Justify Appropriate Measures

This report will demonstrate that the risks associated with the operation of the Installation have been considered and identify the control measures which will be in place to demonstrate that the risks are being appropriately managed.

## 1.5 Step 4 – Present the Assessment

The assessment will conclude by presenting the following:

- a. possibility of exposure;
- b. consequence; and
- c. the overall risk.

The report will present the overall risk applying the Environment Agency's H1 criteria, defined as:

- a. insignificant;
- b. not significant; and
- c. significant.

## 2 Table A1 – Odour Risk Assessment and Management Plan

| What Do You Do That Can Harm and What Could Be Harmed?  |   |  | Managing The Risk   | Assessing The Risk          |   |   |
|---|---|--|---|-----------------------------|---|---|
| Hazard  | Receptor  | Pathway  | Risk Management   | Possibility of Exposure     | Consequence   | What is the Overall Risk?   |
| What has the potential to cause harm?   | What is at risk?<br>What do I wish to protect?  | How can the hazard get to the receptor?                    | What measures will you take to reduce the risk? If it occurs who is responsible for what?   | How likely is this contact? | What is the harm that can be caused?  | What is the risk that still remains? The balance and probability and consequence. |
| Odorous emissions may occur during the delivery of waste, reception of waste and the storage and handling of waste prior to thermal treatment | Immediate area.<br>The Facility is located within a residential area with potential receptors located around the full perimeter of the EP boundary. | Air- Winds generally blow from a north-westerly direction. | Due to the nature of the waste being received, all waste will be delivered in sealed bins within enclosed vehicles. The bins will only be opened during waste inspection where applicable and unlocked when set onto the automatic feed system. Following processing of waste, each bin is sanitised both internally and externally covering all 360 degrees of each bin. | Minimal.                    | Odour annoyance will have more impact in the summer, when temperatures are higher and people are outdoors and more likely to be exposed to odour. | Not significant due to management systems in place.                               |
| Odorous emissions may occur during periods of shutdown  | Immediate area.   | Air- Winds generally blow from a north-westerly direction. | Waste bins will be fully enclosed and airtight, stored within the covered HTI building and within enclosed storage areas.   | Minimal                     | Odour annoyance, which will have greater impact in the summer, when temperatures are  | Not significant due to management systems in place.                               |

| What Do You Do That Can Harm and What Could Be Harmed? |  |   | Managing The Risk   | Assessing The Risk          |  |   |
|--|--|---|---|-----------------------------|--|---|
| Hazard   | Receptor                                       | Pathway                                 | Risk Management   | Possibility of Exposure     | Consequence  | What is the Overall Risk?   |
| What has the potential to cause harm?                  | What is at risk?<br>What do I wish to protect? | How can the hazard get to the receptor? | What measures will you take to reduce the risk? If it occurs who is responsible for what? | How likely is this contact? | What is the harm that can be caused?                                   | What is the risk that still remains? The balance and probability and consequence. |
|  |  |   | Regular olfactory checks will be undertaken around the perimeter of the installation.     |                             | higher and people are outdoors and more likely to be exposed to odour. |   |

### 3 Table A2 – Noise and Vibration Risk Assessment and Management Plan

| What Do You Do That Can Harm and What Could Be Harmed?   |  |   | Managing The Risk  | Assessing The Risk          |                                      |   |
|--|--|---|--|-----------------------------|--------------------------------------|---|
| Hazard   | Receptor                                       | Pathway                                       | Risk Management  | Possibility of Exposure     | Consequence                          | What is the Overall Risk?   |
| What has the potential to cause harm?  | What is at risk?<br>What do I wish to protect? | How can the hazard get to the receptor?       | What measures will you take to reduce the risk? If it occurs who is responsible for what?  | How likely is this contact? | What is the harm that can be caused? | What is the risk that still remains? The balance and probability and consequence. |
| Noise from plant items such as the waste treatment processes, heat recovery boiler, exhaust air fans, stack exhaust, and noise radiation from the building envelope itself, etc. | Immediate area.                                | Sound propagation through air and the ground. | Noisy plant items, where practicable, will be installed inside buildings rather than outside and, where appropriate, they will be fitted with noise insulation. The installation will be designed to reduce noise and tonal components. Regular maintenance of plant items. Noise level checks will be carried out regularly in operational areas, with early warning of increasing noise levels resulting in reduction or mitigation. | Minimal.                    | Annoyance.                           | Not significant.  |



| What Do You Do That Can Harm and What Could Be Harmed? |  |   | Managing The Risk   | Assessing The Risk          |                                      |   |
|--|--|---|---|-----------------------------|--------------------------------------|---|
| Hazard   | Receptor                                       | Pathway                                       | Risk Management   | Possibility of Exposure     | Consequence                          | What is the Overall Risk?   |
| What has the potential to cause harm?                  | What is at risk?<br>What do I wish to protect? | How can the hazard get to the receptor?       | What measures will you take to reduce the risk? If it occurs who is responsible for what?   | How likely is this contact? | What is the harm that can be caused? | What is the risk that still remains? The balance and probability and consequence. |
| Noise from vehicle movements.                          | Immediate area.                                | Sound Propagation through air and the ground. | Waste deliveries will typically occur during day-time periods. Waste vehicle movements at night will be limited. Noise level checks will be carried out regularly in operational areas, with early warning of increasing noise levels resulting in reduction or mitigation. | Minimal.                    | Annoyance.                           | Not significant.  |

## 4 Table A3 – Fugitive Emissions Risk Assessment and Management Plan

| What Do You Do That Can Harm and What Could Be Harmed?                   |  |   | Managing The Risk  | Assessing The Risk          |                                      |   |
|--|--|---|--|-----------------------------|--------------------------------------|---|
| Hazard   | Receptor                                       | Pathway                                 | Risk Management  | Possibility of Exposure     | Consequence                          | What is the Overall Risk?   |
| What has the potential to cause harm?                                    | What is at risk?<br>What do I wish to protect? | How can the hazard get to the receptor? | What measures will you take to reduce the risk? If it occurs who is responsible for what?  | How likely is this contact? | What is the harm that can be caused? | What is the risk that still remains? The balance and probability and consequence. |
| Emission releases from the main building when opening and closing doors. | Immediate area – air.                          | Air, surface runoff, direct contact.    | All waste and residue handling activities will be undertaken within a covered building and within enclosed storage areas. There is minimal potential for dust arisings due to the nature of the waste.   | Low.                        | Nuisance, dust on clothing and cars. | Insignificant.  |
| Spillage of waste during delivery and offloading.                        | Immediate area – air, land, water.             | Air, surface runoff.                    | Waste will be delivered in sealed bins in enclosed vehicles. All waste unloading activities will be undertaken within a covered building and within enclosed storage areas. The nature of the waste will be that it is bagged inside the bins and the bags tipped directly onto the waste feed belt, hence | Minimal.                    | Nuisance and dust.                   | Insignificant.  |

| What Do You Do That Can Harm and What Could Be Harmed? |  |   | Managing The Risk  | Assessing The Risk          |                                      |   |
|--|--|---|--|-----------------------------|--------------------------------------|---|
| Hazard   | Receptor                                       | Pathway                                 | Risk Management  | Possibility of Exposure     | Consequence                          | What is the Overall Risk?   |
| What has the potential to cause harm?                  | What is at risk?<br>What do I wish to protect? | How can the hazard get to the receptor? | What measures will you take to reduce the risk? If it occurs who is responsible for what?  | How likely is this contact? | What is the harm that can be caused? | What is the risk that still remains? The balance and probability and consequence. |
|  |  |   | the risk of direct waste spillage is minimal.  |                             |                                      |   |
| Dust from waste deliveries being blown off-site.       | Immediate area – air, land.                    | Air, surface runoff.                    | Incoming waste will be delivered in enclosed locked bins, with the waste bagged inside the bins, inside covered waste delivery vehicles. All waste unloading activities will be undertaken within a covered building and within enclosed storage areas. The nature of the waste is such that there is minimal potential for dust arisings. | Minimal.                    | Nuisance and dust.                   | Insignificant.  |
| Bottom ash discharge from the Facility.                | Immediate area – air.                          | Air, surface runoff, direct contact.    | Dust from bottom ash will be contained within an enclosed system. The ash will fall into a skip under a sealed system and quenched with a water spray. Once the ash skip is full, the ash will be transferred to a container   | Low.                        | Nuisance.                            | Insignificant.  |

| What Do You Do That Can Harm and What Could Be Harmed?                |  |   | Managing The Risk   | Assessing The Risk          |                                      |   |
|---|--|---|---|-----------------------------|--------------------------------------|---|
| Hazard  | Receptor                                       | Pathway                                 | Risk Management   | Possibility of Exposure     | Consequence                          | What is the Overall Risk?   |
| What has the potential to cause harm?                                 | What is at risk?<br>What do I wish to protect? | How can the hazard get to the receptor? | What measures will you take to reduce the risk? If it occurs who is responsible for what?   | How likely is this contact? | What is the harm that can be caused? | What is the risk that still remains? The balance and probability and consequence. |
|   |  |   | under an enclosed system for storage in a dedicated storage area with contained drainage and hardstanding.  |                             |                                      |   |
| Discharge of Air Pollution Control residues (APCr) from the Facility. | Immediate area – air, land.                    | Air, surface runoff, direct contact.    | APCr will be collected in sealed 'Big Bags'. The Big Bags will be stored in secure transport containers prior to removal off-site.  | Low.                        | Nuisance, release of hazardous dust. | Insignificant.  |
| Reagent and chemical discharges when filling silos.                   | Immediate area – air.                          | Air, surface runoff, direct contact.    | Reagents such as sodium bicarbonate will be delivered in sealed tankers and off-loaded via a standard hose connection.<br>Unloading activities will only be undertaken in areas of hard standing with contained drainage. | Low.                        | Nuisance.                            | Insignificant.  |
| Sodium Bicarbonate leak during injection into APCr system.            | Immediate area – air.                          | Air, surface runoff, direct contact.    | Systems are enclosed, and regular inspections & maintenance will be carried out. Reagent will be injected   | Low.                        | Nuisance.                            | Insignificant.  |

| What Do You Do That Can Harm and What Could Be Harmed?         |  |   | Managing The Risk  | Assessing The Risk          |                                      |   |
|--|--|---|--|-----------------------------|--------------------------------------|---|
| Hazard   | Receptor                                       | Pathway                                 | Risk Management  | Possibility of Exposure     | Consequence                          | What is the Overall Risk?   |
| What has the potential to cause harm?                          | What is at risk?<br>What do I wish to protect? | How can the hazard get to the receptor? | What measures will you take to reduce the risk? If it occurs who is responsible for what?  | How likely is this contact? | What is the harm that can be caused? | What is the risk that still remains? The balance and probability and consequence. |
|  |  |   | via an enclosed dosing and conveying system.   |                             |                                      |   |
| Spillage of APC reagents when capping or changing filter bags. | Immediate area – air, land.                    | Air, surface runoff, direct contact.    | Enclosed system. Kept under suction by the ID fan. The ceramic filter will have a number of cells. When capping or changing bags, the relevant cell will be shut down for a sufficient time to enable the dust to settle.                                      | Low.                        | Nuisance, release of hazardous dust. | Insignificant.  |
| Spillage/leak of liquid chemicals when tanker off-loading.     | Immediate area – air, land.                    | Air, direct contact.                    | Deliveries will be from sealed tankers and off-loaded via a hose. Spillage will be prevented by good operating procedures, high tank level alarm/trips etc. Tanks will be located within suitably designed secondary containment with sealed drainage systems. | Low.                        | Liquid or vapour release.            | Insignificant.  |
| Spillage/leak when unloading from                              | Immediate area – air, land.                    | Air, direct contact.                    | Deliveries will be from road vehicles and off-loaded via   | Low.                        | Hazardous liquid or vapour release.  | Insignificant.  |

| What Do You Do That Can Harm and What Could Be Harmed?                |  |   | Managing The Risk  | Assessing The Risk          |                                      |   |
|---|--|---|--|-----------------------------|--------------------------------------|---|
| Hazard  | Receptor                                       | Pathway                                 | Risk Management  | Possibility of Exposure     | Consequence                          | What is the Overall Risk?   |
| What has the potential to cause harm?                                 | What is at risk?<br>What do I wish to protect? | How can the hazard get to the receptor? | What measures will you take to reduce the risk? If it occurs who is responsible for what?  | How likely is this contact? | What is the harm that can be caused? | What is the risk that still remains? The balance and probability and consequence. |
| delivery vehicles<br>chemical containers (IBC's, FIBC's, drums, etc). |  |   | mobile plant. Potential leaks/spills will be prevented by experienced mobile equipment operators undertaking unloading activities. Unloading activities will only be undertaken in areas of hard standing with contained drainage. Chemical containers will be stored within suitably designed secondary containment with sealed drainage systems. |                             |                                      |   |
| Release off-site of litter.   | Immediate area – air, land.                    | Air, direct contact.                    | Waste will be delivered in enclosed vehicles and contained in airtight bins. Unloading of all waste bins will be within a covered building and within enclosed storage areas, with the building. The waste will be contained inside bags within  | Low.                        | Nuisance, dust on cars and road.     | Insignificant.  |

| What Do You Do That Can Harm and What Could Be Harmed?     |  |   | Managing The Risk  | Assessing The Risk          |                                      |   |
|--|--|---|--|-----------------------------|--------------------------------------|---|
| Hazard   | Receptor                                       | Pathway                                 | Risk Management  | Possibility of Exposure     | Consequence                          | What is the Overall Risk?   |
| What has the potential to cause harm?                      | What is at risk?<br>What do I wish to protect? | How can the hazard get to the receptor? | What measures will you take to reduce the risk? If it occurs who is responsible for what?  | How likely is this contact? | What is the harm that can be caused? | What is the risk that still remains? The balance and probability and consequence. |
|  |  |   | the bins, with bags only tipped directly onto the waste feed belt. The nature of the waste will ensure that the risk of dust emissions is low.   |                             |                                      |   |
| Release of dusts from the transfer off-site of bottom ash. | Immediate area – air, land.                    | Air, direct contact.                    | Bottom ash will be quenched prior to transfer into suitable containment, hence minimising dust release.<br>Loading of enclosed bottom ash containers into vehicles will be undertaken within areas of hardstanding with enclosed drainage.<br>The bottom ash containers will be transferred off-site in covered road vehicles. | Low.                        | Nuisance, dust on cars and road.     | Insignificant.  |
| Re-suspension of dust from road                            | Immediate area – air, land, water.             | Air, surface runoff.                    | Control speeds, maintain the condition of the road, and take due care and attention  | Low.                        | Nuisance, dust on cars and road.     | Insignificant.  |

| What Do You Do That Can Harm and What Could Be Harmed? |  |   | Managing The Risk   | Assessing The Risk          |                                      |   |
|--|--|---|---|-----------------------------|--------------------------------------|---|
| Hazard   | Receptor                                       | Pathway                                 | Risk Management   | Possibility of Exposure     | Consequence                          | What is the Overall Risk?   |
| What has the potential to cause harm?                  | What is at risk?<br>What do I wish to protect? | How can the hazard get to the receptor? | What measures will you take to reduce the risk? If it occurs who is responsible for what? | How likely is this contact? | What is the harm that can be caused? | What is the risk that still remains? The balance and probability and consequence. |
| surface, when site vehicles arrive/leave.              |  |   | of trafficking conditions. Regular cleaning of road surfaces.                             |                             |                                      |   |



## 5 Table A4 – Accidents Risk Assessment and Management Plan

| What Do You Do That Can Harm and What Could Be Harmed? |  |   | Managing The Risk  | Assessing The Risk          |                                      |   |
|--|--|---|--|-----------------------------|--------------------------------------|---|
| Hazard   | Receptor                                       | Pathway                                 | Risk Management  | Possibility of Exposure     | Consequence                          | What is the Overall Risk?   |
| What has the potential to cause harm?                  | What is at risk?<br>What do I wish to protect? | How can the hazard get to the receptor? | What measures will you take to reduce the risk? If it occurs who is responsible for what?  | How likely is this contact? | What is the harm that can be caused? | What is the risk that still remains? The balance and probability and consequence. |
| Spill during unloading of chemicals.                   | Immediate area – air, land, water.             | Direct contact.                         | Training in unloading practices including accident/spill procedures. Under manual control, continual observation. Impervious surfaces outdoors (hardstanding). Contained and sealed drainage for chemical handling areas. Spill kits easily available. | Unlikely.                   | Low.                                 | Not significant.  |
| Overfilling of vessels.                                | Local environment air, land, water.            | Surface runoff, wind.                   | Training in unloading practices. Under manual control, continual observation. Impervious surfaces outdoors. Contained drainage. High level alarms. Secondary containment for storage vessels.  | Unlikely.                   | Low.                                 | Not significant.  |

| What Do You Do That Can Harm and What Could Be Harmed? |  |  | Managing The Risk  | Assessing The Risk          |   |   |
|--|--|--|--|-----------------------------|---|---|
| Hazard   | Receptor                                       | Pathway  | Risk Management  | Possibility of Exposure     | Consequence   | What is the Overall Risk?   |
| What has the potential to cause harm?                  | What is at risk?<br>What do I wish to protect? | How can the hazard get to the receptor?                    | What measures will you take to reduce the risk? If it occurs who is responsible for what?  | How likely is this contact? | What is the harm that can be caused?                        | What is the risk that still remains? The balance and probability and consequence. |
| leak of boiler water treatment chemicals.              | Immediate area – water.                        | Surface runoff   | Secondary containment for storage vessels. Routine inspection and maintenance. Impervious surface indoors, separate drains for process water.    | Unlikely.                   | Pollution of surface water.                                 | Not significant.  |
| Flue gas leak.   | Local environment – air.                       | Air.   | Design standards. Inspection and maintenance programme. Controls and alarms for pressure. Most of the systems are retained at negative pressure. | Very unlikely.              | Pollution of atmosphere, health impacts.                    | Not significant.  |
| Control failure leading to combustion control upset.   | Local environment – air.                       | Air- Winds generally blow from a north-westerly direction. | Fuel inspection. Design of control system. Monitoring of combustion conditions. Maintenance of combustion air systems.                           | Unlikely.                   | Pollution of atmosphere (short term), human health impacts. | Not significant.  |
| Failure of emission abatement equipment.               | Local environment – air.                       | Air- Winds generally blow from a north-westerly direction. | Regular maintenance, inspections. Redundancy of critical equipment or spares held at the Facility.   | Unlikely.                   | Pollution of atmosphere, human health impacts.              | Not significant.  |

| What Do You Do That Can Harm and What Could Be Harmed?       |  |  | Managing The Risk  | Assessing The Risk          |   |   |
|--|--|--|--|-----------------------------|---|---|
| Hazard   | Receptor                                       | Pathway  | Risk Management  | Possibility of Exposure     | Consequence                                       | What is the Overall Risk?   |
| What has the potential to cause harm?                        | What is at risk?<br>What do I wish to protect? | How can the hazard get to the receptor?                    | What measures will you take to reduce the risk? If it occurs who is responsible for what?  | How likely is this contact? | What is the harm that can be caused?              | What is the risk that still remains? The balance and probability and consequence. |
| Failure of emission monitoring systems.                      | Immediate area – air.                          | Air- Winds generally blow from a north-westerly direction. | Regular maintenance, inspections.  | Unlikely.                   | Lack of data, public concern.                     | Not significant.  |
| Failure of containment (e.g. bund).                          | Immediate area – water, land.                  | Surface runoff, wind, leaching.                            | Regular inspections of bunds. Contained drainage. Hardstanding.  | Unlikely.                   | Pollution of surface water.                       | Not significant.  |
| Making the wrong connections to drains.                      | Local environment – water.                     | Direct contact, leaching.                                  | Detailed site drainage plan, which will be available to all staff. Drain covers and isolation of the effluent pumps where appropriate to prevent release of contaminated water off-site. | Low.                        | Pollution of surface water.                       | Not significant.  |
| Preventing incompatible substances from coming into contact. | Immediate area.                                | Surface runoff, wind, direct contact.                      | Due care and attention. MSDS easily available for chemicals on site.   | Low.                        | Pollution of surface water, human health impacts. | Not significant.  |
| Unwanted reactions.  | Immediate area.                                | Surface runoff, wind, direct contact.                      | Due care and attention. Site specific procedures in place to prevent unwanted reactions.   | Unlikely.                   | Low.  | Not significant.  |

| What Do You Do That Can Harm and What Could Be Harmed? |  |   | Managing The Risk   | Assessing The Risk          |  |   |
|--|--|---|---|-----------------------------|--|---|
| Hazard   | Receptor                                       | Pathway   | Risk Management   | Possibility of Exposure     | Consequence                            | What is the Overall Risk?   |
| What has the potential to cause harm?                  | What is at risk?<br>What do I wish to protect? | How can the hazard get to the receptor?                     | What measures will you take to reduce the risk? If it occurs who is responsible for what?   | How likely is this contact? | What is the harm that can be caused?   | What is the risk that still remains? The balance and probability and consequence. |
| Loss of power.   | None.  | N/A   | Back-up generation for combustion control systems.  | Low.                        | None.                                  | Not significant.  |
| Loss of compressed air.                                | None.  | N/A   | Multiple compressors, backup power supplies.  | Low.                        | None.                                  | Not significant.  |
| Loss of boiler water.                                  | None.  | N/A   | Failsafe shutdown.  | Low.                        | None.                                  | Not significant.  |
| Steam leak to plant building/atmosphere.               | Noise, visual impact.                          | Air   | Statutory design, fabrication and inspection standards for steam systems. Controls and alarms for pressure. Routine operator checks.  | Low.                        | Nuisance from noise and visual impact. | Not significant.  |
| Residues handling failure.                             | Immediate area – air, land, water.             | Direct contact.   | Training in residue handling practices. Contained transfer systems. Impervious surfaces in residue handling areas with designated sealed drainage systems in areas where residues are stored. | Unlikely.                   | Pollution of surface waters.           | Not significant.  |
| Fires in FGT bag filter.                               | Local environment.                             | Air - Winds generally blow from a south westerly direction. | Temperature measurement in filter, fire-fighting systems and detection systems.   | Low.                        | Dust, pollution of air.                | Not significant.  |

| What Do You Do That Can Harm and What Could Be Harmed?   |  |   | Managing The Risk   | Assessing The Risk          |                                      |   |
|--|--|---|---|-----------------------------|--------------------------------------|---|
| Hazard   | Receptor                                       | Pathway                                 | Risk Management   | Possibility of Exposure     | Consequence                          | What is the Overall Risk?   |
| What has the potential to cause harm?                    | What is at risk?<br>What do I wish to protect? | How can the hazard get to the receptor? | What measures will you take to reduce the risk? If it occurs who is responsible for what?   | How likely is this contact? | What is the harm that can be caused? | What is the risk that still remains? The balance and probability and consequence. |
| Fire in furnace / waste feed system.                     | Immediate area – air.                          | Air.                                    | Furnace charging procedures / training. Level indicator in chute. Fire detection and fire-fighting systems. The backward flow of combustion gases and the premature ignition of waste will be prevented by keeping the furnace under negative pressure. | Low.                        | Pollution of air.                    | Not significant.  |
| Over pressurisation of the boiler.                       | Immediate area – air.                          | Direct contact.                         | The boiler will be fitted with a pressure release valve. Regular inspection to ensure fit for purpose.  | Low.                        | Pollution of air.                    | Not significant.  |
| Fires in all waste reception storage and handling areas. | Immediate area – air.                          | Direct contact.                         | Fire detection systems, water sprinklers and fire hoses. Fire marshals. Site specific accident management plan in place.  | Low.                        | Visual impact, pollution of air.     | Not significant.  |
| Fire from ignition of lube oil leak.                     | Immediate area – air.                          | Wind, direct contact.                   | Use of fire-proof lube oil. Fire detection and protection systems.  | Low.                        | Visual.                              | Not significant.  |

| What Do You Do That Can Harm and What Could Be Harmed? |  |   | Managing The Risk   | Assessing The Risk          |   |   |
|--|--|---|---|-----------------------------|---|---|
| Hazard   | Receptor                                       | Pathway                                 | Risk Management   | Possibility of Exposure     | Consequence                               | What is the Overall Risk?   |
| What has the potential to cause harm?                  | What is at risk?<br>What do I wish to protect? | How can the hazard get to the receptor? | What measures will you take to reduce the risk? If it occurs who is responsible for what?   | How likely is this contact? | What is the harm that can be caused?      | What is the risk that still remains? The balance and probability and consequence. |
| Contaminated fire water.                               | Immediate area – water, land.                  | Surface runoff, leaching.               | In the event of a fire, the responsible person will isolate the drains using drain covers along with isolation of the effluent pumps to ensure fire water is contained. | Low.                        | Pollution of surface water.               | Not significant.  |
| Failure to contain firewater.                          | Land.  | Land, water, groundwater.               | Inspection and maintenance of roadways and areas of hardstanding.   | Unlikely.                   | Release of chemicals to water.            | Not significant.  |
| Vandalism.   | Immediate area.                                | Land, air, water.                       | Security fences, controlled entrance to the site, CCTV.   | Low.                        | Release of substances to any environment. | Not significant.  |

## 6 Detailed Assessment

### 6.1 Emissions to Air

The implementation of the revised designs, and compliance with the requirements of the Waste Incineration BREF will not result any increase in emissions to air. Therefore, the implementation of the revised designs will not result in any increase in environmental impact of the Facility.

### 6.2 Emissions to Water

Facility is discharged to the sewer in accordance with the requirements of a Trade Effluent Consent. granted by Thames Water. The implementation of the revised designs will not result in any changes to the effluent composition or the quantity of effluent generated at the Facility.

### 6.3 Noise

The impact of noise from the Facility will not change following implementation of the revised designs.

### 6.4 Visual Impact

The visual impact of the Facility has not been considered within the EP variation.

### 6.5 Odour

The impact of odour from the Facility will not change following implementation of the revised designs.

### 6.6 Global Warming

The assessment of the contribution of the Facility to Global Warming will not change following implementation of the revised designs.

### 6.7 Disposal of Waste

Methods for reducing the impact from waste disposal will not change following implementation of the revised designs.

## 7 Conclusions

As presented in this report, the Facility is considered to contain appropriate control measures and management systems to ensure that the Facility does not have any significant impacts upon the local environment.



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