

Environment Agency H1 Database

FILE HOME ADD-INS Kelly, Peter

Reference Information

Go To: Reference Information

Facility Reference Information

Please complete the following information:

Company Name: Lakeside E/W Ltd and Grondon Waste Management Limited

Location: Replacement Lakeside E/W Facility and HTI

Permit Number: N/A

If you have data already stored in a previous version of the H1 software you may import it by pressing the button to the right.

Please note that before the import can take place any data that already exists in this copy of the tool will be removed. Please also note that any 'Operating Mode' information you had entered in your Air and Water inventories will deter to the default of 100% on data import

Import Utility

NOTE ON MICROSOFT ACCESS SECURITY WARNING
 Depending on your security settings, you may get a security notice appearing each time the import routine connects to a table in your source database. You need to click 'Open' on this message for the import routine to be successful. There are 13 tables to connect to in total but if you place your cursor over the 'Open' button you will be able to repeatedly click your mouse to make this process execute quickly and without too much frustration. We apologise for this inconvenience but it is an aspect of Microsoft Security provisions that are beyond our control.

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Introduction, Step 1

Go To: Introduction, Step 1

Introduction to Step 1

Step 1: Describe the Scope and Options

The aim of this step is to:

- state the OBJECTIVES of the assessment
- in the case of ENVIRONMENTAL ASSESSMENT of the whole facility, describe the scope of the activities to be included in the assessment;
- in the case of OPTIONS APPRAISALS, identify candidate options for BAT by considering all relevant techniques to prevent and minimise pollution and the scope of activities covered by the techniques.

Depending on the reason for the assessment, you will need to complete different modules of the guidance. The software will automatically select the required modules according to the responses you enter.

NOTE: If you are going to complete more than one assessment or appraisal, make sure that you create a copy of the H1 file for each new assessment BEFORE you begin to input data. This is because Microsoft Access automatically saves changes to the current file you are using, rather than allowing you to save your changes at the end of your work.

TO CONTINUE WITH STEP 1, PRESS "NEXT".

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Describe the Objectives

<< Back Next >> Go To: Describe the Objectives

Describe the Objectives

Depending on the reason for the assessment you will need to complete different parts of the tool.

Select the type of assessment:

- a) to carry out an ENVIRONMENTAL ASSESSMENT of the releases resulting from the facility as a whole Do Steps 1, 2 and 3 only
- b) to conduct a costs/benefits OPTIONS APPRAISAL to determine BAT or support the case for derogation under the Industrial Emission Directive. Do Steps 1, 2, 3 and 4 and continue with 5 and 6 if necessary

1.1 Briefly summarise the objectives and reason for the assessment in terms of the main environmental impacts or emissions to be controlled:

An assessment of the impact of emissions from the installation

or "To appraise several candidate options for the prevention and minimisation of releases to air of NOx and SO2 for a new energy from waste plant, in order to select BAT"

or "To appraise the costs and benefits of applying indicative BAT to further control BOD discharged to water at an existing paper mill"

or "To assess the existing environmental impact of all emissions from all activities within an installation for the production of cement, prior to investigating further controls."

or "To assess the environmental impact of an existing discharge of treated sewage effluent on the receiving water"

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Scope of Environmental Assessment

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Scope of Environmental Assessment

List the activities included in the assessment

Number Activity

e.g. Standalone water discharge activity, raw materials handling, pre-treatment, charging, conversion, purification, waste treatment, effluent treatment, gas cleaning

Use the 'Add' button at the bottom left to create a new activity

1	Emissions from the operation of the Installation
---	--

Activities: Add Delete

Comments:

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Candidate Options

Go To: Candidate Options

Describe the Candidate Options

Identify all reasonably applicable options of techniques

You should include:

- a brief description of individual control measures or configurations of control measures selected for each option, and the activities with which they are associated (the existing base-case may conveniently be the first option).
- justification why any techniques generally applicable to the regulated facility have not been selected for assessment. (see relevant H1 annex) (This should be based on regulated facility-specific technical, not economic reasons).
- for new projects, whether any initial environmental assessment that was done at the project evaluation stage, or any screening of technology or process routes prior to this assessment, particularly where this has a bearing on environmental performance. (see H1)

In the case of b) or c) please enter your Comments here:

Option Number Title Description

e.g.

1	Base-Case	
---	-----------	--

Once a series of options have been generated for the proposed project, it is recommended that the Operator discuss these with the local Regulator to check both parties agree that the options are satisfactory. This may save the Operator from spending resources on assessment of options which are unlikely to meet the required environmental performance.

List the main activity or activities to which the release control option Number:1 (Base-Case) is/are applicable and any other activities that will be affected by the candidate control option on the main activity.

Options: Add Delete

Activity	Details
*	

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Step 2 - Emissions Inventory

Go To: Step 2 - Emissions Inventory

Step 2 Introduction to Step 2

Step 2: Emissions Inventory

The aim of this Step is to produce an inventory of sources and releases of polluting substances from each option. This is used as the basis for the subsequent evaluation of environmental impacts.

For this Step you will require information on:

- release points and sources of emissions to air, water (inc. sewer) or land
- concentration and mass rate of released substances
- frequency and duration of releases and how these relate to long term and short term effects

IMPORTANT NOTES

- you may need to consider a suitable method for assessment of groups of pollutants, such as VOCs, heavy metals, uncharacterised liquid effluents, etc (see "Grouping air emissions" in Annex F).

TO CONTINUE WITH STEP 2, PRESS "NEXT".

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Air Release Points Base Option

Go To: Air Release Points

Air Release Points

Please define your Release Points for Releases to Air

Are there any Air emissions? Yes Click the Add button below

Number	Description	Location or Grid Reference	Activity or Activities	Effective Height metres	Efflux Velocity m/s	Total Flow m3/hr
e.g. A1		North stack		150	25	5,000
1	A1	EW Line 1	EW	55	15.1	181800
2	A2	EW Line 2	EW	55	15.1	181800
3	A3	HTI Line	HTI	55	15	14750

Release Points: Add Delete Copy

Comments:

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Air Emissions Inventory Base Option, Release Point: 1 'A1'

Go To: Air Emissions Inventory Release Point 1

Air Emissions Inventory

Please list all Substances released to Air for each Release Point identified in the previous page.

Number	Substance	Measurement Method	Operating Mode (% of Year)	Data relating to Long Term effects			Data relating to Short Term effects			Annual Rate tonne/yr	ELV Conc. mg/m3
				Conc. mg/m3	Release Rate g/s	Measurement Basis	Conc. mg/m3	Release Rate g/s	Measurement Basis		
e.g.	Sulphur dioxide	Estimated*	70% load	1510	3000	annual avg	1510	3000	hourly avg	55,000	2000
1	Nitrogen Dioxide		100.0%	100.0	5.050000		200.0	#####		159,2568	
2	Sulphur Dioxide (15 Min Mean)		100.0%	30.0	1.515000		90.0	4.545000		47,7770	
3	Sulphur Dioxide (1 Hour Mean)		100.0%	30.0	1.515000		90.0	4.545000		47,7770	
4	Sulphur Dioxide (24 Hour Mean)		100.0%	30.0	1.515000		90.0	4.545000		47,7770	
5	Particulates (PM10) (24 hr Mean)		100.0%	5.0	0.252500		30.0	1.515000		7,9628	
6	Particulates (PM10) (Annual Mean)		100.0%	5.0	0.252500		30.0	1.515000		7,9628	
7	Carbon monoxide		100.0%	50.0	2.525000		150.0	7.575000		79,6284	
8	Hydrogen chloride		100.0%	6.0	0.303000		60.0	3.030000		9,5554	
9	Ammonia (human health receptor)		100.0%	10.0	0.505000		20.0	1.010000		15,9257	
10	Mercury and compounds, except n		100.0%	0.0	0.001010		0.0	0.001010		0,0319	
11	Cadmium and its compounds (as C)		100.0%	0.0	0.001010		0.0	0.001010		0,0319	
12	Antimony and compounds (as Sb)		100.0%	0.3	0.015150		0.3	0.015150		0,4778	
13	Arsenic and compounds (as As)		100.0%	0.3	0.015150		0.3	0.015150		0,4778	
14	Lead		100.0%	0.3	0.015150		0.3	0.015150		0,4778	
15	Chromium, chromium (III) compound		100.0%	0.3	0.015150		0.3	0.015150		0,4778	
16	Copper dusts and mists (as CU)		100.0%	0.3	0.015150		0.3	0.015150		0,4778	
17	Manganese and compounds (as M)		100.0%	0.3	0.015150		0.3	0.015150		0,4778	
18	Vanadium		100.0%	0.3	0.015150		0.3	0.015150		0,4778	
19	Hydrogen fluoride (as F) (Monthly M)		100.0%	1.0	0.050500		4.0	0.202000		1,5926	
20	Benzene		100.0%	10.0	0.505000		20.0	1.010000		15,9257	
21	1,3 Butadiene		100.0%	10.0	0.505000		20.0	1.010000		15,9257	

Measurement method: * provide detail in comments box

Substances: Add Delete Copy

Comments:

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Environment Agency H₂ Database

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Air Emissions Inventory Base Option, Release Point 2 'A2'

Go To: Air Emissions Inventory Release Point 2

Air Emissions Inventory

Please list all Substances released to Air for each Release Point identified in the previous page.

Number	Substance	Meas'tment Method	Operating Mode (% of Year)	Data relating to Long Term effects			Data relating to Short Term effects			Annual Rate tonne/yr	ELV Conc. mg/m3
				Conc. mg/m3	Release Rate g/s	Meas'tment Basis	Conc. mg/m3	Release Rate g/s	Meas'tment Basis		
e.g.	sulphur dioxide	Estimated*	70% load	1510	3000	annual avg	1510	3000	hourly avg	55,000	2000
1	Nitrogen Dioxide	▼	100.0%	100.0	5.050000		200.0	#####		159,2568	
2	Sulphur Dioxide (15 Min Mean)	▼	100.0%	30.0	1.515000		90.0	4.545000		47,7770	
3	Sulphur Dioxide (1 Hour Mean)	▼	100.0%	30.0	1.515000		90.0	4.545000		47,7770	
4	Sulphur Dioxide (24 Hour Mean)	▼	100.0%	30.0	1.515000		90.0	4.545000		47,7770	
5	Particulates (PM10) (24 hr Mean)	▼	100.0%	5.0	0.252500		30.0	1.515000		7,9628	
6	Particulates (PM10) (Annual Mean)	▼	100.0%	5.0	0.252500		30.0	1.515000		7,9628	
7	Carbon monoxide	▼	100.0%	50.0	2.525000		150.0	7.575000		79,6284	
8	Hydrogen chloride	▼	100.0%	6.0	0.303000		60.0	3.030000		9,5564	
9	Ammonia (human health receptor)	▼	100.0%	10.0	0.505000		20.0	1.010000		15,9257	
10	Mercury and compounds, except n	▼	100.0%	0.0	0.001010		0.0	0.001010		0,0319	
11	Cadmium and its compounds (as C)	▼	100.0%	0.0	0.001010		0.0	0.001010		0,0319	
12	Antimony and compounds (as Sb)	▼	100.0%	0.3	0.015150		0.3	0.015150		0,4778	
13	Arsenic and compounds (as As)	▼	100.0%	0.3	0.015150		0.3	0.015150		0,4778	
14	Lead	▼	100.0%	0.3	0.015150		0.3	0.015150		0,4778	
15	Chromium, chromium (III) compound	▼	100.0%	0.3	0.015150		0.3	0.015150		0,4778	
16	Copper dusts and mists (as CU)	▼	100.0%	0.3	0.015150		0.3	0.015150		0,4778	
17	Manganese and compounds (as M)	▼	100.0%	0.3	0.015150		0.3	0.015150		0,4778	
18	Vanadium	▼	100.0%	0.3	0.015150		0.3	0.015150		0,4778	
19	Hydrogen fluoride (as F) (Monthly M)	▼	100.0%	1.0	0.050500		4.0	0.202000		1,5926	
20	Benzene	▼	100.0%	10.0	0.505000		20.0	1.010000		15,9257	
21	1,3 Butadiene	▼	100.0%	10.0	0.505000		20.0	1.010000		15,9257	

Measurement method: * provide detail in comments box

Substances: Add Delete Copy

Environment Agency H₂ Database

FILE HOME ADD-INS

Air Emissions Inventory Base Option, Release Point 3 'A3'

Go To: Air Emissions Inventory Release Point 3

Air Emissions Inventory

Please list all Substances released to Air for each Release Point identified in the previous page.

Number	Substance	Meas'tment Method	Operating Mode (% of Year)	Data relating to Long Term effects			Data relating to Short Term effects			Annual Rate tonne/yr	ELV Conc. mg/m3
				Conc. mg/m3	Release Rate g/s	Meas'tment Basis	Conc. mg/m3	Release Rate g/s	Meas'tment Basis		
e.g.	sulphur dioxide	Estimated*	70% load	1510	3000	annual avg	1510	3000	hourly avg	55,000	2000
1	Nitrogen Dioxide	▼	100.0%	120.0	0.452000		200.0	0.820000		15,5157	
2	Sulphur Dioxide (15 Min Mean)	▼	100.0%	30.0	0.123000		90.0	0.369000		3,8789	
3	Sulphur Dioxide (1 Hour Mean)	▼	100.0%	30.0	0.123000		90.0	0.369000		3,8789	
4	Sulphur Dioxide (24 Hour Mean)	▼	100.0%	30.0	0.123000		90.0	0.369000		3,8789	
5	Particulates (PM10) (24 hr Mean)	▼	100.0%	5.0	0.020900		30.0	0.123000		0,6465	
6	Particulates (PM10) (Annual Mean)	▼	100.0%	5.0	0.020900		30.0	0.123000		0,6465	
7	Carbon monoxide	▼	100.0%	50.0	0.205000		150.0	0.615000		6,4649	
8	Hydrogen chloride	▼	100.0%	6.0	0.024600		60.0	0.246000		0,7759	
9	Ammonia (human health receptor)	▼	100.0%	10.0	0.041000		20.0	0.082000		1,2930	
10	Mercury and compounds, except n	▼	100.0%	0.0	0.000082		0.0	0.000082		0,0026	
11	Cadmium and its compounds (as C)	▼	100.0%	0.0	0.000082		0.0	0.000082		0,0026	
12	Antimony and compounds (as Sb)	▼	100.0%	0.3	0.001230		0.3	0.001230		0,0388	
13	Arsenic and compounds (as As)	▼	100.0%	0.3	0.001230		0.3	0.001230		0,0388	
14	Lead	▼	100.0%	0.3	0.001230		0.3	0.001230		0,0388	
15	Chromium, chromium (III) compound	▼	100.0%	0.3	0.001230		0.3	0.001230		0,0388	
16	Copper dusts and mists (as CU)	▼	100.0%	0.3	0.001230		0.3	0.001230		0,0388	
17	Manganese and compounds (as M)	▼	100.0%	0.3	0.001230		0.3	0.001230		0,0388	
18	Vanadium	▼	100.0%	0.3	0.001230		0.3	0.001230		0,0388	
19	Hydrogen fluoride (as F) (Monthly M)	▼	100.0%	1.0	0.041000		4.0	0.164000		0,1293	
20	Benzene	▼	100.0%	10.0	0.041000		20.0	0.082000		1,2930	
21	1,3 Butadiene	▼	100.0%	10.0	0.041000		20.0	0.082000		1,2930	

Measurement method: * provide detail in comments box

Substances: Add Delete Copy

Environment Agency H2 Database

FILE HOME ADD-INS

Odour Inventory Base Option, Release Point: 1 'A1'

<< Back Next >> Go To: Odour Inventory Release Point 1

Odour Inventory

List all emissions of odorous substances below:

Are there any Odour emissions?

Number	Source	Process - Odour Type	Release Type	Conc. (OUe/m3)	Flow (OUe/s)	Dispersion OUe/m3
e.g.	effluent lagoon	Less Offensive	Routine			

Release Points: Add Delete Copy

Comments:

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Environment Agency RL Database

FILE HOME ADD-INS

Odour Inventory Base Option, Release Point: 2 'A2'

Go To: Odour Inventory Release Point 2

Odour Inventory


List all emissions of odorous substances below:

Are there any Odour emissions? No

Number	Source	Process - Odour Type	Release Type	Conc. (DUe/m3)	Flow (DUe/s)	Dispersion DUe/m3
e.g.	effluent lagoon	Less Offensive	Routine			

Release Points: Add Delete Copy

Comments:



Environment Agency RL Database

FILE HOME ADD-INS

Odour Inventory Base Option, Release Point: 3 'A3'

Go To: Odour Inventory Release Point

Odour Inventory

List all emissions of odorous substances below:

Are there any Odour emissions?

Number	Source	Process - Odour Type	Release Type	Conc. (DUe/m3)	Flow (DUe/s)	Dispersion DUe/m3
e.g.	effluent lagoon	Less Offensive	Routine			

Release Points:

Comments:

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Environment Agency RL Database

FILE HOME ADD-INS

Water Discharge Locations

Go To: Water Discharge Locations

Receiving Water Body(s)

Please define the Final Discharge Locations for Releases to Water

Are there any discharges to surface waters?

Use the 'Add' button below to list all final discharge points.
For discharges to sewer, this should be the point where the sewage works discharges to a surface water
N.B. For Riverine discharges (River, Upper Estuary) you only need enter the River description and flow once. Further details of individual releases can be entered on the next page. For discharges to TRaC waters, separate Discharge Locations must be added for each release point that has a different mixing zone

Number	Description	Final Discharge Category	Freshwater Q95 flow rate
e.g.	River Trent at Derby	R	1.5
1			0

Discharge Locations:

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Environment Agency RL Database

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Energy Consumption Base Option

Go To: Energy Consumption

Energy Consumption

Please list all Energy Sources and Annual Consumption

Select energy sources by Clicking on 'Add' and using the pull-down list.

Number	Energy Sources	Delivered MWh/yr	Conversion Factor	Primary MWh/yr	CO2 Factor	CO2 tonne/yr
1	Direct emissions	19500	1.00	19,500	0.25	4,875

Energy Sources: Add Delete Copy

Comments: For proposed Lakeside EFW only.

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Environment Agency RL Database

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Raw Materials Base Option

Go To: Raw Materials

Raw Materials

Please list all Raw Materials Consumed:

Number	Material	Annual Consumption	Units
1	Water	78840	cubic m/year
2	Lime	4700	tonnes/year
3	Activated Carbon	110	tonnes/year
4	Low Sulphur Fuel Oil	1560	tonnes/year
5	Boiler Treatment Chemicals	70	tonnes/year
6	Ammonia	1270	tonnes/year

Raw Materials: Add Delete Copy

Comments: For proposed Lakeside EFW only.

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Environment Agency H2 Database

Waste Inventory Base Option

Waste Inventory

Please list all Waste Streams emitted:

Are there any Waste emissions? Yes Click the Add button below

Number	Waste Stream	Mass tonne/yr	Category of Waste	Disposal/Recovery Option
e.g.	ETP sludge		non-hazardous	
2	SPE	18,000	hazardous	Landfill (D5)
1	Bottom ash	100,000	inert	Other Recycling (R3;R4;R5;R11 and F)

Waste Streams: Add Delete Copy

Comments: For proposed Lakeside EFW only.

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Step 3 - Quantify Impacts

<< Back Next >> Go To: Step 3 - Quantify Impacts

Step 3

Introduction to Step 3

Step 3: Quantify Impacts

The aim of this Step is to quantify the effects on the environment of the releases listed in the inventory in Step 2. The guidance provides methods for assessing the eight main environmental considerations of most relevance to the EPR regime. Your releases may not result in effects to all eight of these considerations, and this tool allows you to screen out any that are not relevant.

The emissions you entered in Step 2 are automatically brought forward for assessment into each environmental consideration that is relevant for that type of release (e.g. a release may have more than one type of effect).

This part of the tool allows you to screen out any releases that are insignificant, and to identify those releases where further, detailed assessment of the potential environmental impact may be required.

IMPORTANT NOTE

This software tool only completes part of the requirements for Step 3, as described above. Depending upon the degree of risk to the environment presented by the releases, the operator may need to do further, detailed assessment of the potential effects using methodologies that are not provided here. This information should be submitted separately, as indicated within this part of the tool.

TO CONTINUE WITH STEP 3, PRESS "NEXT".

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Identify relevant Impacts

Go To: Identify relevant Impacts

Identify Relevant Impacts

Identify any environmental impacts that are not relevant to this assessment by deselecting from the list below.

Releases in Part 2?		Justification for omission
Yes	<input checked="" type="checkbox"/> Air	
Yes	<input type="checkbox"/> Deposition from Air to Land	Refer to Appendix E - Air Quality Assessment
No	<input type="checkbox"/> Water	No emissions of process effluent to water under normal operation
No	<input type="checkbox"/> Odour	Refer to Section 2.4.7 of the Supporting Information
Yes	<input checked="" type="checkbox"/> Waste	
Yes	<input type="checkbox"/> Visual	Refer to Planning Application
Yes	<input checked="" type="checkbox"/> Ozone Creation	
Yes	<input type="checkbox"/> Global Warming	Refer to Appendix E - Air Quality Assessment

If you have deselected an environmental impact as not relevant to this assessment, no further assessment of this impact will be carried out and associated assessment pages will be hidden.

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Local Environmental Quality

Go To: Local Environmental Quality

Local Environmental Quality

Describe the Quality of the Environment:

Provide a brief description of the main local factors that may influence the importance of the impact of emissions in the surrounding environment

Air Quality

Are there any Environmental Quality Standards relating to substances released from the activities, which may be at risk due to additional contribution from the activity? (Environmental Quality Standards for air and water are described in EPR Technical Guidance Notes)

Refer to Appendix E of the Application

Are there any Local Air Quality Management Plans applicable to releases from the activity?

Refer to Appendix E of the Application

Water Quality & Resources

Are there any Environmental Quality Standards relating to substances released from the activities, which may be at risk due to additional contribution from the activity?

Not applicable

Are proposals to abstract water satisfactory in order to obtain an abstraction licence?

Not applicable

Is the activity located in a groundwater vulnerable zone (for activities with direct releases to land only)?

Not applicable

Proximity to Sensitive Receptors

Is public annoyance likely to be an issue for noise, odour or plume visibility?

Refer to Appendix E of the Application for Sensitive Receptors. Refer to Appendix C of the Application - Noise Assessment. Refer to Section 2.4.7 of the Supporting Information regarding Odour.

Are there any wildlife habitats, eg Special Areas of Conservation or Special Protection Areas, likely to be affected by releases from the activity? (Description of requirements of Habitats Directive is provided in EPR Technical Guidance Notes)

Refer to Appendix E of the Application

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Environment Agency H₂ Database

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Air Impacts Base Option

Go To: Air Impacts

Air Impacts

Calculate Process Contributions of Emissions to Air

This table estimates the Process Contribution (PC), calculated as the maximum ground level concentration for each emission listed in the inventory, according to the release point parameters input earlier. If you have more accurate data obtained through dispersion modelling, this may be entered as indicated and will be used instead of the estimated PC.

Number	Substance	Long Term			Short Term		
		EAL µg/m ³	PC µg/m ³	Modelled PC µg/m ³	EAL µg/m ³	PC µg/m ³	Modelled PC µg/m ³
2	Sulphur Dioxide (15 Min Mean)		1.42		266	258	52.8
3	Sulphur Dioxide (1 Hour Mean)		1.42		350	258	43.48
4	Sulphur Dioxide (24 Hour Mean)		1.42		125	258	11.42
5	Particulates (PM10) (24 hr Mean)		0.237		50	86.0	0.88
6	Particulates (PM10) (Annual Mean)	40	0.237	0.26		86.0	
7	Carbon monoxide		2.37		10000	430	27.31
8	Hydrogen chloride		0.284		750	172	42.06
9	Ammonia (human health receptor)	180	0.473	0.53	2500	57.3	7.01
10	Mercury and compounds, except mercury alkyls, (as	0.25	0.000946	0.00105	7.5	0.0573	0.01402
11	Cadmium and its compounds (as Cd)	0.005	0.000946	0.00105		0.0573	0.01402
12	Antimony and compounds (as Sb) except antimony tri	5	0.0142	0.0006	150	0.860	0.00806
13	Arsenic and compounds (as As)	0.003	0.0142	0.00131		0.860	
14	Lead	0.5	0.0142	0.00264		0.860	
15	Chromium, chromium (II) compounds and chromium (III) compo	5	0.0142	0.00484	150	0.860	0.0645
16	Copper dusts and mists (as CU)	10	0.0142	0.00152	200	0.860	0.02033
17	Manganese and compounds (as Mn)	0.15	0.0142	0.00315	1500	0.860	0.04206
18	Vanadium	5	0.0142	0.00032	1	0.860	0.00421
19	Hydrogen fluoride (as F) (Monthly Mean)	16	0.0618		160	11.5	2.8
20	Benzene	5	0.473	0.53	57.3		7.01

Note that the Process Contribution shown for each substance is the sum of the individual process contributions of each point from which the substance is emitted. Process Contributions obtained from modelling data should incorporate all relevant release points and flow conditions.

* State the location of any detailed air dispersion modelling and also the main assumptions. Comments: Combined impact of the Installation.

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Environment Agency H₂ Database

FILE HOME ADD-INS

Air Impact Screening Base Option

Go To: Air Impact Screening

Air Impact Screening

Screen out Insignificant Emissions to Air

This page displays the Process Contribution as a proportion of the EAL or EQS. Emissions with PCs that are less than the criteria indicated may be screened from further assessment as they are likely to have an insignificant impact.

Number	Substance	Long Term	Short Term	Long Term		Short Term			
		EAL µg/m ³	EAL µg/m ³	PC µg/m ³	% of EAL	PC µg/m ³	% of EAL	> 10% of EAL?	
1	Nitrogen Dioxide	40.0	200	3.75	9.36	Yes	39.0	19.5	Yes
2	Sulphur Dioxide (15	-	266	1.42	-		52.9	19.9	Yes
3	Sulphur Dioxide (1 H	-	350	1.42	-		49.5	14.2	Yes
4	Sulphur Dioxide (24)	-	125	1.42	-		11.5	9.14	No
5	Particulates (PM10) (-	50.0	0.237	-		0.881	1.77	No
6	Particulates (PM10) (40.0	-	0.261	0.651	No	86.0	-	
7	Carbon monoxide	-	10,000	2.37	-		27.4	0.274	No
8	Hydrogen chloride	-	750	0.284	-		42.1	5.61	No
9	Ammonia (human he	180	2,500	0.531	0.295	No	7.02	0.281	No
10	Mercury and compos	0.251	7.51	0.00106	0.421	No	0.0141	0.187	No
11	Cadmium and its com	0.00500	-	0.00106	21.0	Yes	0.0141	-	
12	Antimony and compo	5.00	150	0.00601	0.0121	No	0.00806	0.00538	No
13	Arsenic and compou	0.00301	-	0.00132	43.7	Yes	0.860	-	
14	Lead	0.501	-	0.00265	0.529	No	0.860	-	
15	Chromium, chromium	5.00	150	0.00484	0.0969	No	0.0646	0.0431	No
16	Copper dusts and mi	10.00	200	0.00153	0.0153	No	0.0204	0.0102	No
17	Manganese and com	0.151	1,500	0.00316	2.11	Yes	0.0421	0.00281	No
18	Vanadium	5.00	1,000	0.000321	0.00641	No	0.00422	0.422	No
19	Hydrogen fluoride (a	16.0	160	0.0618	0.386	No	2.80	1.76	No
20	Benzene	5.00	-	0.531	10.7	Yes	7.02	-	

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Environment Agency H2 Database

Kelly, Peter

Air Impact Modelling Base Option

Air Impact Modelling

Air Impact Modelling

Identify need for Detailed Modelling of Emissions to Air

This page displays the Process Contributions in relation to the background pollutant levels and the EAL or EQS. You should use this information to decide whether to conduct detailed modelling. Note that releases that are insignificant are not shown as they are screened from further assessment. Also complete this page if you have already done detailed modelling.

Number	Substance	Air Bkgrnd Conc. µg/m3	PC µg/m3	Long Term		Short Term		
				% PC of headroom (EAL - Bkgrnd)	PEC mg/m3	% PEC of EAL	PC µg/m3	% PC of headroom (EAL - Bkgrnd)
1	Nitrogen Dioxide	27.8	3.75	30.0	31.3	78.1	39.0	26.9
2	Sulphur Dioxide (15 Min Mean)	33	1.42	-	0	-	52.9	26.5
3	Sulphur Dioxide (1 Hour Mean)	33	1.42	-	0	-	49.5	17.5
11	Cadmium and its compounds (as Cd)	33	0.00106	-0.00318	33.0	660.021	0.0141	-
13	Arsenic and compounds (as As)	0.00079	0.00132	59.3	0.00211	70.0	0.860	-
17	Manganese and compounds (as Mn)	0.0109	0.00316	2.27	0.0141	9.37	0.0421	0.00281
20	Benzene	1	0.531	13.3	1.54	30.7	7.02	-
21	1,3 Butadiene	0.6	0.531	32.2	1.13	50.3	57.3	-
24	Nickel (total Ni compounds in the PM10 fraction)	0.00661	0.0116	86.5	0.0182	91.0	0.860	-
25	Chromium (VI) compounds (as Cr)	0.00263	0.00000600	-0.246	0.00264	1.318	0.860	-

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Environment Agency RL Database

FILE HOME ADD-INS

Kelly, Peter

Air Impact Modelling Assessment

<< Back Next >> Go To: Air Impact Modelling Assessment

Air Impact Modelling Assessment

See guidelines in H1 Annex F section entitled "Decide if you need detailed air modelling."

Describe here the justification for whether detailed modelling is, or is not required for any of the releases. Refer to the guidelines in H1 Annex F

Describe source of background information:

Document Reference of detailed modelling work:

A detailed air quality assessment has been undertaken. The results of the assessment are presented in Appendix E.

Refer to Appendix E of the Application.

Refer to Appendix E of the Application.

100%

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Environment Agency RL Database

FILE HOME ADD-INS

Odour Impacts Base Option

Go To: Odour Impacts

Odour Impacts: Quantify

This section need only be completed for OPTIONS APPRAISAL

Number	Source	Odour Concentration (OUe/M3)	Release Type	Dispersal (OUe/m3)	Dispersal		Insignificant	Justification for Screening
					PC	PC > 10%		
e.g. Yes <input type="text"/>								

Total dispersal (OUe/m3):

Comments:

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Environment Agency RL Database

FILE HOME ADD-INS

Ozone Creation Potential Base Option

Go To: Ozone Creation Potential

Photochemical Ozone Creation Impacts

Number	Substance	Annual Rate tonne/yr	POCP Value per tonne	POCP
e.g.				
21	1,3 Butadiene	15.93	85.1	1,355.28
20	Benzene	15.93	21.8	347.18
23	Benzo-a-pyrene	0.00	323	0.02
7	Carbon monoxide	79.63	2.7	215.00
1	Nitrogen Dioxide	159.26	2.8	445.92
2	Sulphur Dioxide (15 Min Mean)	47.78	4.8	229.33
3	Sulphur Dioxide (1 Hour Mean)	47.78	4.8	229.33
4	Sulphur Dioxide (24 Hour Mean)	47.78	4.8	229.33
21	1,3 Butadiene	15.93	85.1	1,355.28
20	Benzene	15.93	21.8	347.18
23	Benzo-a-pyrene	0.00	323	0.02
7	Carbon monoxide	79.63	2.7	215.00
1	Nitrogen Dioxide	159.26	2.8	445.92
2	Sulphur Dioxide (15 Min Mean)	47.78	4.8	229.33
3	Sulphur Dioxide (1 Hour Mean)	47.78	4.8	229.33
4	Sulphur Dioxide (24 Hour Mean)	47.78	4.8	229.33
21	1,3 Butadiene	1.29	85.1	110.03
20	Benzene	1.29	21.8	28.19
23	Benzo-a-pyrene	0.00	323	0.00
7	Carbon monoxide	6.46	2.7	17.46
Total:				6,357.74

Comments:

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Environment Agency PL Database

Waste Impacts Base Option

Waste Impacts

Waste Impact Score Calculation

Number	Waste Stream	Mass	Final treatment or disposal method	(Score)	Waste Type	(Score)	Impact Score
2	APCr	18,000	Landfill (D5)	30	hazardous	10	5400000
1	Bottom ash	100,000	Other Recycling (R3,R4,R5,R11 and R12)	3	inert	1	300000

Comments:

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Environment Agency PL Database

Summary Tables

Summary Tables

Print or Preview summary tables:

Choose which summary tables:

- Air
- Waste
- Ozone Creation

Export to Excel

Export Releases to OPRA Profile

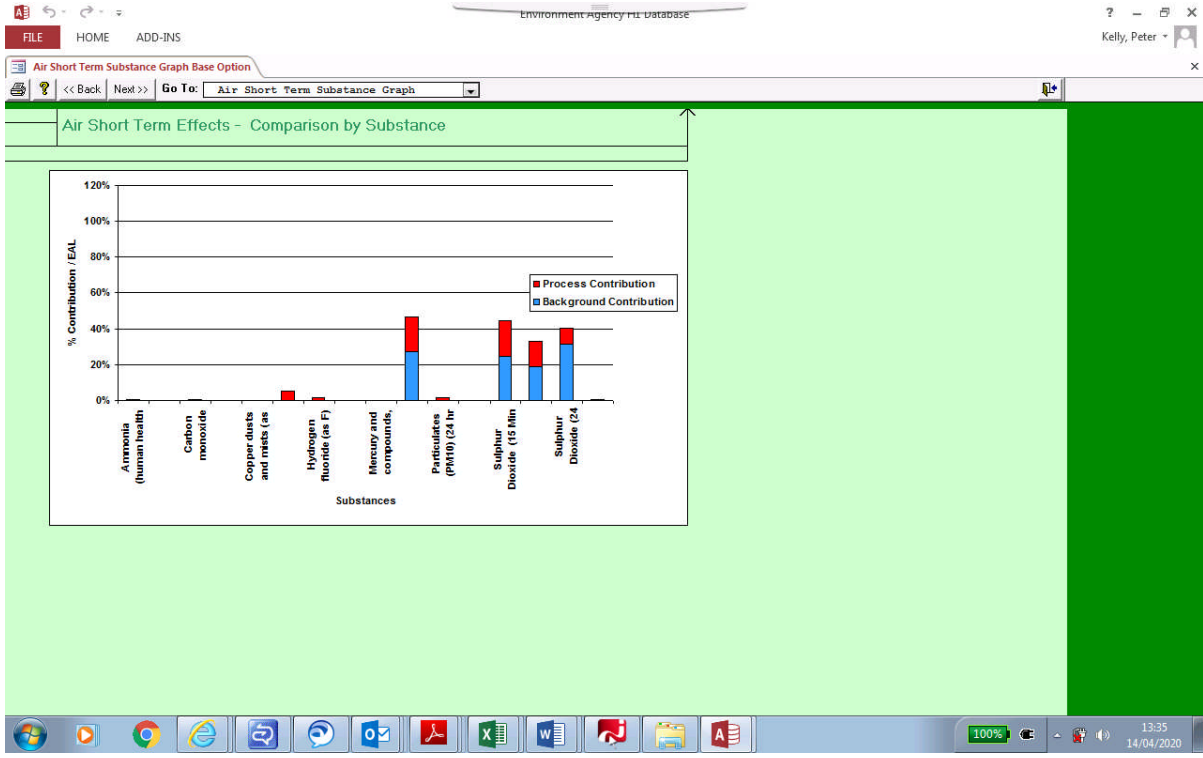
Preview

Print

Include

- All Air and Water Substances
- Air and Water Release Not Screened Out

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Environment Agency RL Database

Kelly, Peter

Air Long Term Substance Graph Base Option

Go To: Air Long Term Substance Graph

Air Long Term Effects - Comparison by Substance

Substance	Background Contribution (%)	Release Point 1 (%)	Release Point 2 (%)	Release Point 3 (%)
1,3 Butadiene	25	25	25	25
Antimony and compounds	25	25	25	25
Benzene	25	25	25	25
Cadmium and its compounds	100	0	0	0
Chromium, chromium (II)	100	0	0	0
Hydrogen fluoride (as F)	100	0	0	0
Manganese and	10	5	5	5
Nickel (total Ni compounds in	35	35	35	15
Particulates (PM10) (annual	35	35	35	15
Vanadium	100	0	0	0

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Environment Agency RL Database

FILE HOME ADD-INS

Kelly, Peter

Odour Short Term Comparison Graph

Go To: Odour Short Term Comparison Graph

Short Term (Incident) Odour - Option Comparison

No Data Available

The screenshot shows a web browser window with a red ribbon menu at the top containing 'FILE', 'HOME', and 'ADD-INS'. The browser's address bar shows the URL 'Odour Short Term Comparison Graph'. The main content area has a light green background and a dark green vertical bar on the right. The text 'Short Term (Incident) Odour - Option Comparison' is at the top, and 'No Data Available' is centered in the middle. The Windows taskbar at the bottom shows various application icons and the system tray with the date '14/04/2020' and time '13:36'.

Environment Agency RL Database

FILE HOME ADD-INS

Kelly, Peter

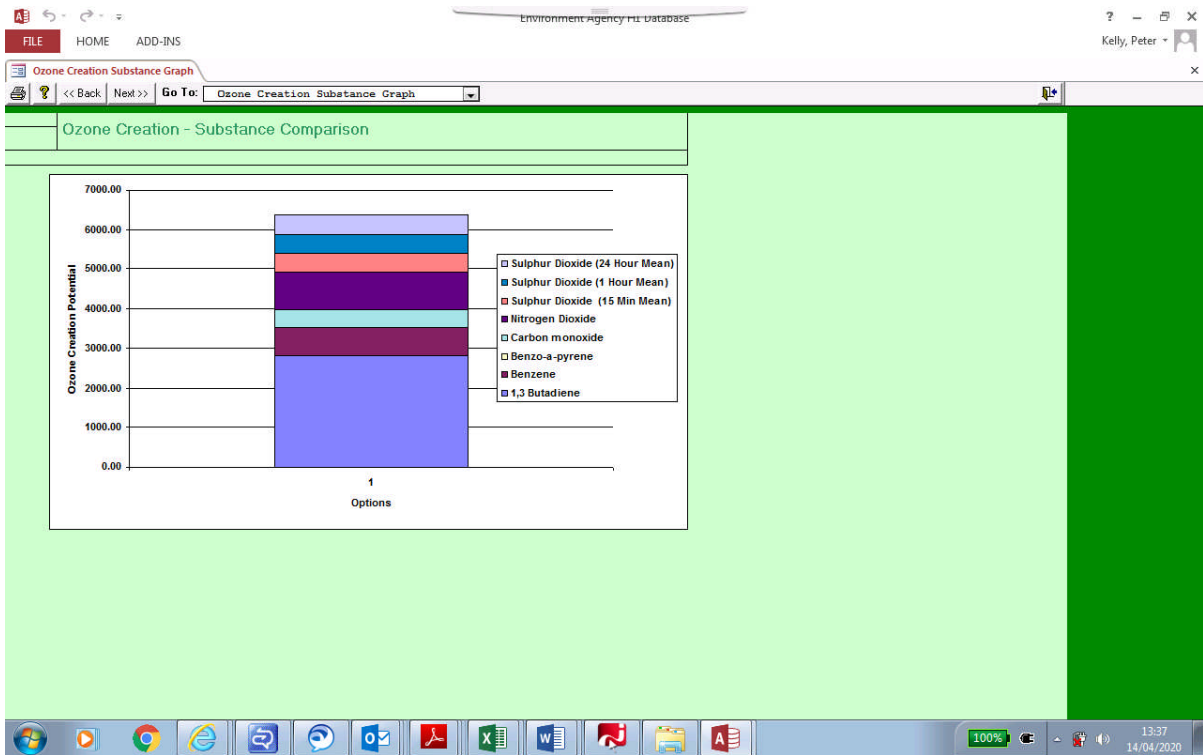
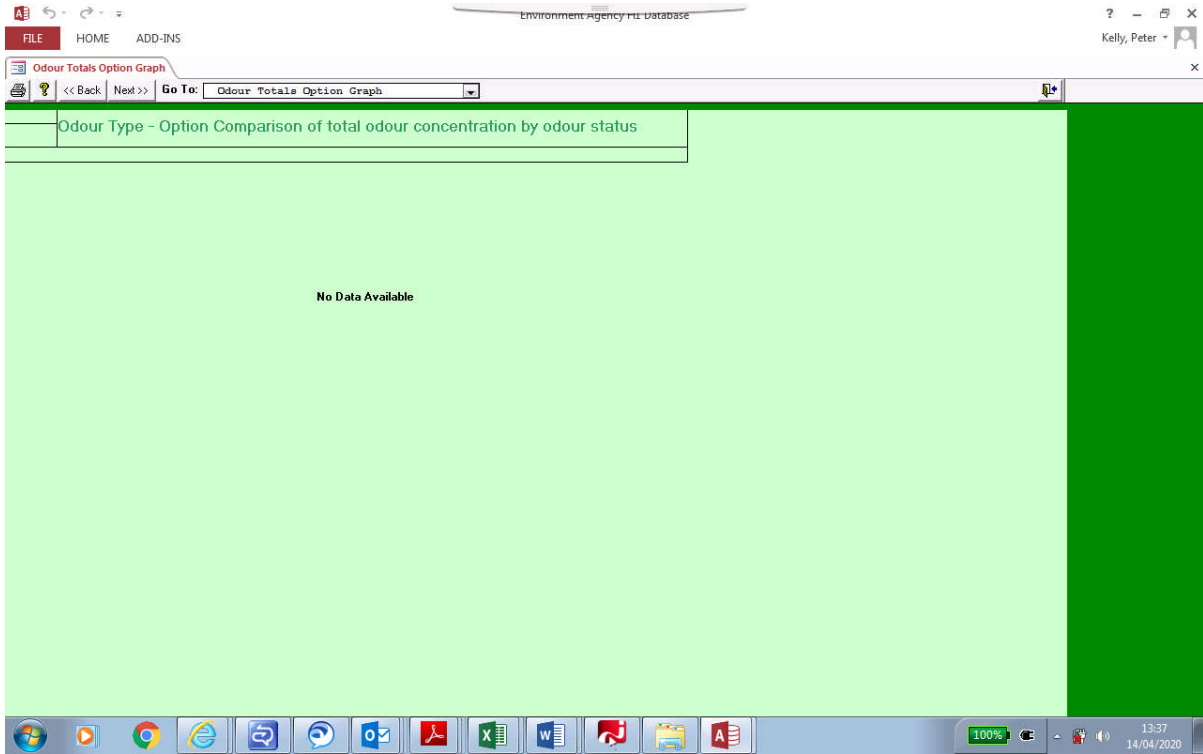
Odour Long Term Comparison Graph

Go To: Odour Long Term Comparison Graph

Long Term (Routine) Odour - Option Comparison

No Data Available

This screenshot is similar to the one above, but the browser tab is titled 'Odour Long Term Comparison Graph' and the main heading is 'Long Term (Routine) Odour - Option Comparison'. The rest of the interface, including the 'No Data Available' message and the Windows taskbar, is identical.



Environment Agency RI Database

FILE HOME ADD-INS

Global Warming Substance Graph

Global Warming Substance Graph

Global Warming - Substance Comparison

The chart displays a single blue bar representing the Global Warming Potential (GWP) for 'C02 Energy: direct' under 'Options 1'. The y-axis is labeled 'Global Warming Potential' and ranges from 0.00 to 6000.00 in increments of 1000.00. The x-axis is labeled 'Options' and has a single category '1'. The bar reaches a value of approximately 4900.00.

Options	Global Warming Potential
1	~4900.00

100% 13:37 14/04/2020

Environment Agency IT Database

FILE HOME ADD-INS

Waste Impact Graph

<< Back Next >> Go To: Waste Impact Graph

Waste - Option Comparison

Options	Normalised Impact (Score)
1	1.00

Score

Options

Normalised Impact

100%

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14/04/2020

Environment Agency RL Database

FILE HOME ADD-INS

Summary of Environmental Assessment

<< Back Next >> Go To: Summary of Environmental Assessment

Summary of Environmental Assessment

You have now completed all of the steps in this software for the environmental assessment. This will provide you with:

- an inventory of all emissions sources and substances emitted from your activities
- an information trail of how the impacts of these emissions have been assessed
- a summary of the impacts

You now need to use this information to confirm whether the emissions are acceptable, i.e. that they do not cause significant pollution to occur, by responding below.

Do any of the emissions exceed any of the following:

Statutory Emission limit values: No Yes If yes, identify the substances concerned and improvements that are needed to at least meet the statutory requirement

Environmental Quality Standards (air and water): No Yes If yes, identify the substances concerned, the contribution from the activities and investigate whether further detailed fate and effect modelling and/or pollution controls are needed. Ensure that the relevant EQS reference conditions are applied.

Environmental Assessment Levels: No Yes If yes, identify the substances concerned, the contribution from the activities and investigate whether further detailed fate and effect modelling and/or pollution controls are needed.

Use the box below to provide further information on any of the above to which you have responded 'Yes':

Finally, print all of the information and submit with your application. Remember to include any supplementary information and reports that you have had made reference to during the assessment procedure.

100% 13:36 14/04/2020