

Facility Reference Information

Please complete the following information:

Company Name:

Jones Bros Ruthin (Civil Engineering) Company Ltd

Location:

Seiont Quarry, Caernarfon

Permit Number:

PN-00007

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 defer to the default of 100% on data import

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 18 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.

Import Utility

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".

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
 - ☐ 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 and 3 only
- 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:

To assess the impact of discharge from surface water drainage from former quarry, which is to be restored using inert waste.

Scope of Environmental Assessment	
List the activities included in the assessment	
Number	Activity
1	collecting of water in existing quarry void for silt separation, overpumping into a final settling tank for discharge to the river
Use the 'Add' button at the bottom left to create a new activity	
Comments	

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:

There is only one option for discharge of surface water.

Option Number	Title	Description
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1	Base-Case	Dewatering of inert waste will occur in the former quarry bowl so that all water will drain by gravity to the quarry sump. All existing active gravity fed discharge points from the quarry sump will be closed. There are three existing settling lagoons from when the quarry was active. These will be brought back into use to receive all surface water within the quarry, including water from the dewatering of the inert waste. Water will be retained in the lagoons until sufficiently desilted to be pumped out of the sump via a floating head pump to ensure the cleanest water is taken. If necessary coagulants/floculants will be used to accelerate settling. The water will be pumped into a final polishing lagoon. Monitoring of water in settling lagoons will be by visual means. Water in the polishing lagoon will be by visual means or using a portable turbidity meter. The polishing lagoon will discharge by gravity into the river.
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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 options are applicable and any other activities that will be affected by the candidate control option on the main activity:

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".

Receiving Water Body(s)

Please define the Final Discharge Locations for Releases to Water

Are there any discharges to surface waters?

Yes

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
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1

River Seiont at Caernarfon

R

River Flow (m3/s):

0.668

Water Discharge/Release Details and Flow Data

Please define your Release Points for Releases to Water

Number	Description	Location or Grid Reference	Activity or Activities	Final Discharge Point	Discharge via Sewer?	Mean Effluent Flow Rate* m3/s	Max Effluent Flow Rate* m3/s
1	discharge point	SH48886137		1 River Seiont at Caernarfon	No	0.0500	0.1000

Comments Flow rates dependant on rainfall.

* When operating

Water Temperature

Where relevant, please enter temperature of effluent for each release point.

This table is to check that the effluent is acceptable, i.e. within the required temperature range. It is not used to make relative judgement between options.

Discharge Location	Release Point	Measurement Method	High Normal Rate	High Peak Rate	Max Temp. Difference	Benchmarks		
						Max Summer	Max Winter	Max Temp
1 River Seiont at Caernarf	1 discharge point	Estimated*	9	18	1.3	21.5	10	2
Water will be entering the river at ambient temperature so no monitoring required								

Water pH

Where relevant, please enter pH of effluent for each release point.

This table is to check that the effluent is acceptable, i.e. within the required pH range. It is not used to make relative judgement between options.

Discharge Location	Release Point	Measurement Method	High		Low		pH of Receiving Water		Do artificial variations caused by effluent exceed 0.5pH units?
			Normal Rate	Peak Rate	Normal Rate	Peak Rate	Water		
1 River Seiont at Caernarf	1 discharge point	Estimated*	7	7	7	7	7.1		No
Comments N/A No artificial variations will occur in surface water or water draining from inert waste									

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	Electricity from public supply	0.00001	2.40	0	0.17	0
Comments						

Raw Materials

Please list all Raw Materials Consumed:

Number	Material	Annual Consumption	Units
1	Non-potable Water	0	tonnes/year
2	Potable water	0	tonnes/year
Comments No raw materials will be consumed in the pumping process			

Performance Indicators

Enter consumption data to determine your performance indicators

Which of the following parameters do you use for calculating your performance **Raw Material**

Please describe and justify your choice:

There is and will be no consumption except for electricity to power the pump

Basic Consumption Data:

Name	Annual Quantity	Units
Amount of Product:		
Main Raw Material: Electricity	0.00	MW/yr
Potable Water:	0.00	m3
Non Potable Water:	0.00	m3
Energy:	0.00	MWh
Waste: Inert:		tonne
Hazardous:		tonne
Stable Non-reactive Hazardous:		tonne
Biodegradable Non-hazardous:		tonne
Other Non-hazardous:		tonne

Specific Consumption per MW/yr of Electricity:

Production Efficiency:		/MW/yr
Potable Water:	0.00	m3
Non Potable Water:	0.00	m3
Energy:	1.00	MWh
Waste: Inert:		tonne
Hazardous:		tonne
Stable Non-reactive Hazardous:		tonne
Biodegradable Non-hazardous:		tonne
Other Non-hazardous:		tonne

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".

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
No	<input type="checkbox"/> Air	
No	<input checked="" type="checkbox"/> Deposition from Air to Land	
Yes	<input checked="" type="checkbox"/> Water	
No	<input checked="" type="checkbox"/> Waste	
No	<input checked="" type="checkbox"/> Visual	
No	<input type="checkbox"/> Ozone Creation	Process will not generate ozone
No	<input checked="" type="checkbox"/> Global Warming	

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

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)

No air quality standards are at risk

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

No local air quality plans applicable in the area

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?

No

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

No abstraction of water required

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

N/A

Proximity to Sensitive Receptors

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

EIA published as an Environmental Statement has shown that there will be no public nuisance from noise. There will be no odour or plume

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)

The River Seiont is a Special Area of Conservation at the point of discharge

Water Impact Modelling Assessment

See guidelines in H1 Annex D and respond to the following

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 D.

Describe source of background information:

Describe location of detailed modelling work:

Impact of discharge considered to be negligible

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

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

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

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.

Compare the Options

Review the graphs and summary data to rank the options according to environmental impact

Is the best Option self-evident?

i.e. results in the lowest impact in all environmental considerations

Are you going to implement the option that is self-evidently the best?

If yes, no further assessment is necessary and you may end here.

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Review the graphs and summary data to rank the options according to environmental impact

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If yes, no further assessment is necessary and you may end here.

Resolve Cross Media Conflicts

Environmental Consideration		Importance	Comments / Justification
Releases to Air	Long Term:	low	Releases to air will be negligible risk once the quarry is restored
	Short Term:	low	Releases to air during the works will be limited to a negligible risk of dust in very dry conditions.
Deposition to Land:		low	Inert waste in the form of excavated soils will be placed in the quarry
Releases to Water	Long Term:	low	Releases to water will be negligible once the quarry is filled and surfaces restored
	Short Term:	medium	Releases to water during the work of quarry filling will be low risk with mitigation to contain silts in a sequence of three lagoons and a polishing lagoon before discharge
Visual:		low	No plume required. Visual impacts of quarry restoration set out in the ES
POCP:		low	No ozone will be formed through the processes on site
GWP:		low	Negligible effect on global warming
Disposal of Waste:		low	Negligible risk of waste being taken off site.

Provide a description of how cross media conflicts have been resolved:

This will require reasoned judgement, with reference to any decisions or assumptions made over the relative importance of different environmental impacts. See H1 for requirements, guidelines and examples to assist in the process. You may submit this information

Location or reference to information on resolution of cross media conflicts:

Present a summary of the final ranking of options in the table below:

Number	Title	Ranking
1	Base-Case	1