

# EPA Application Form

## 9.1 - Environmental Management Techniques - Attachment

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Organisation Name: \*

MSK Silversands Ltd.

Application I.D.: \*

LA004320

*Authorisation Application Form*

**Amendments to this Application Form Attachment**

<b>Version No.</b>	<b>Date</b>	<b>Amendment since previous version</b>	<b>Reason</b>
V.1.0	July 2017	N/A	Online application form attachment
As above	Mar 2018	Identification of required fields	Assist correct completion of attachment

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## 9 Environmental Management Techniques <sup>1</sup>

### 9.1. Accident Prevention Measures

#### Measures to prevent accidental emissions and liabilities

Incidents and accidents are unplanned events. Emissions from incidents and (major) accidents usually occur within a relatively short time frame but with greater intensity than under normal operating conditions. Incidents such as fire or fuel spillages can result in liabilities such as contaminated soil and groundwater. Proactive risk management reduces the potential for an incident.

Abnormal operating conditions must be managed without endangering human health and harming the environment, and in particular without risk to water, air, soil, plants or animals, without causing a nuisance through noise or odours, and without adversely affecting the countryside or places of special interest.

The applicant must firstly undertake a risk assessment in accordance with EPA guidance on assessing and costing environmental liabilities. Having identified the key risks, the applicant should populate the following table with the measures to be taken to treat the key risks, e.g., bunding, integrity testing, fire prevention, etc.

The range of measures is dependent on the complexity of the site. Pollution prevention measures may, inter alia, include the following information:

- Conclusions on BAT set out in the EU Reference document on BAT on emissions from storage such as a safety management system; corrosion prevention measures on tanks, etc.
- Details of storage of all raw materials, products and wastes such as segregation, labelling, designation and impervious surface;
- Details of spill or emergency containment measures and structures such as bunds, high level alarms, absorbent materials;
- Details of fire detection and fire-water retention facilities in the event of emergencies or other measures to contain fire-water;
- Details of transport of material within the site, solid, liquid or sludge transported by pipe, vehicle or conveyor; etc.,
- The Agency has published a guidance document on Fire-Water Retention Facilities and on the Storage and transfer of materials.

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<sup>1</sup> This part of the form collects information on environmental management at the installation/ facility. It seeks to understand the maturity of the management system in terms of knowledge of abnormal operating conditions, prevention and early detection measures and emergency response procedures. The level of detail required in this part of form relates to the environmental risk posed.

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Describe in the table below existing and/or proposed measures, including emergency procedures, to minimise the impact on the environment of an accidental emission or spillage. (This table should include the measures to be taken under abnormal operating conditions, including start-up, shutdown, leaks, malfunctions, breakdowns and momentary stoppages that will demonstrate that any emission arising will not cause significant environmental pollution)<sup>2</sup>.

Measure *	Surveillance Measures		
	Description *	Frequency of Surveillance *	Method / Standard *
EMS	Under EMS details measures procedures and measures to be undertaken during normal and under abnormal operations at the facility The EMS will be incorporated into all aspects of the facility operations.	Continuous	Daily site checks, emissions abatement and monitoring are undertaken regularly and recorded. The EMS is audited annual and as required to ensure significant environmental pollution does not occur.
EMS- Routine Site Inspection Procedure	Under EMS this procedure details measures for routine site checks.	Daily	Daily site checks shall be completed which should identify any potential spillages/ accidental emissions prior to them happening or at an early so stage. This will initiate measures being undertaken to avoid significant environmental pollution.
EMS- Environmental Emergency & Incident Response Procedure and Accident Prevention Procedure	Under EMS these procedure details measures for handling emergency incidents including accidental spillages and emissions and measures to be undertaken under abnormal operating conditions. The accident prevention procedure also sets out measures to avoid accidents. The following shall be considered as incidents: <ul style="list-style-type: none"> <li>An emergency (any unexpected or potentially dangerous situation, requiring immediate action which may have caused, or might have caused if the action had not taken</li> </ul>	Daily	Spillages and incidents shall be recorded and managed in accordance with the Environmental Incident procedure ensuring appropriate corrective and preventative actions are undertaken in accordance with BAT.

<sup>2</sup> Information relating to the integrity, impermeability and recent testing or pipes, tanks and bund areas should be included.

\* indicates required field

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Measure *	Surveillance Measures		
	Description *	Frequency of Surveillance *	Method / Standard *
	<p>place, an unauthorised environmental release or breach of licence conditions, including fire);</p> <ul style="list-style-type: none"> <li>Any emission which does not comply with the requirements of the licence;</li> <li>Any exceedance of the daily duty capacity of the waste handling equipment;</li> <li>Any trigger level specified in the waste facility permit which is attained or exceeded; and,</li> <li>Any indication that environmental pollution has or may have taken place.</li> </ul>		
EMS – Pollution Prevention & Emissions Abatement Procedure	<p>Under EMS procedure details procedure for pollution prevention including:</p> <ul style="list-style-type: none"> <li>Spill kits will be adequately stocked with pads, booms and other essential equipment.</li> <li>No fuels or chemicals are stored onsite.</li> <li>Limited refuelling will occur onsite via mobile fuel bower which is certified and for which drip trays and other controls shall be used/ implement.</li> </ul>	Daily	<p>Spill Kits checked regular.</p> <p>Training will be provided to all staff in this respect of pollution prevention and spill management.</p>
Noise reduction	<p>Pollution Prevention &amp; Emissions Abatement Procedure of the EMS details noise reduction measures including:</p> <ul style="list-style-type: none"> <li>The quarry faces and strategic placement of stockpiles between sources and receivers shall reduce noise levels being directed towards sensitive receptors;</li> <li>Noise damping to minimise resonant noise associated with plant, equipment, body panels, cover plates etc. shall be used, as requires. Damping techniques consist of the application of a special resonance damping material</li> </ul>	Daily	<p>Noise monitoring will be undertaken.</p> <p>Regular maintenance of vehicles &amp; plant undertaken including visual inspections and maintenance of plant components shall reduce noise levels associated with loose, defective or damaged plant or equipment.</p>

\* indicates required field

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Measure *	Surveillance Measures		
	Description *	Frequency of Surveillance *	Method / Standard *
	<p>to plant surfaces to dissipate vibrational energy before it can build up and radiate as sound;</p> <ul style="list-style-type: none"> <li>Noise caused by vibrating plant components shall be reduced by proper balancing, through the use of rubber pads, springs or bellows in mounting plant or equipment. (i.e. vibration isolation) or through the mechanical fixing of plant parts (i.e. tightening of loose components, fixing of resilient support/material between surfaces in contact);</li> <li>Noise caused by friction in conveyor rollers shall be reduced through the timely application of lubrication;</li> <li>Works shall be limited to normal site operating hours.</li> </ul>		<p>Complaints procedure in place and complaints register maintained including procedures for corrective and preventative actions.</p> <p>Noise monitoring shall also be undertaken.</p>
Noise monitoring	<p>There shall be four dust monitoring locations at noise sensitive locations.</p>	Monthly	<p>British Standard BS 5228 – 1: 2009 &amp; A1:2014: <i>Code of Practice for Noise and Vibration Control on Construction and Open Sites: Noise</i>.</p> <p>EPA <i>Guidance Note for Noise in Relation to Scheduled Activities</i>, 2nd Edition, 2006.</p>
Dust suppression	<p>Pollution Prevention &amp; Emissions Abatement Procedure of the EMS details dust suppression measures including:</p> <ul style="list-style-type: none"> <li>A speed limit of 15 km/h shall be enforced on-site to minimise dust generation associated with traffic movement;</li> <li>Visual inspections of the site, the site boundary, the site entrance/exit and haul routes shall take place on a daily basis to ensure that there is no build-up of dusty material;</li> </ul>	Daily	<p>Daily site checks on monitoring of site conditions shall be completed to determine the requirement for dust suppression.</p> <p>Dust monitoring shall also be undertaken.</p>

\* indicates required field

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Measure *	Surveillance Measures		
	Description *	Frequency of Surveillance *	Method / Standard *
	<ul style="list-style-type: none"> <li>• A pumped water wheel and underbody washing facility shall be installed at the entrance to the quarry to minimize the deposition of material at the site exit or local access roads;</li> <li>• Material which leaves the site in bulk in HGV's shall be covered in tarpaulin to prevent dust emissions from the back of HGV's;</li> <li>• It is proposed to situate stockpiles in such a manner to ensure minimum exposure to the wind and away from sensitive receptor;</li> <li>• The spraying of haul routes, stockpiles and equipment with water during periods of dry and windy conditions shall take place to minimise dust generation. This will be achieved by spraying the ground using a dedicated clean water bowser and spray bar pulled by a tractor. The bowser can be filled on an "as need" basis when conditions demand it;</li> <li>• A fixed sprinkler system shall be installed at the exit gate to dampen down dry loads leaving the site, where required;</li> <li>• Road sweeping shall take place as appropriate to minimise the build-up of dust on haul routes and the potential for airborne dust generation;</li> <li>• Dust suppression can also be achieved as required at the north face of the quarry via a sprinkler system, which shall consist of a water tank to be connected directly to an existing pipe currently used to provide water for the cattle.</li> </ul>		
Dust monitoring	There shall be four dust monitoring locations on site	Monthly	Bergerhoff method

\* indicates required field

### Authorisation Application Form

Measure *	Surveillance Measures		
	Description *	Frequency of Surveillance *	Method / Standard *
Waste acceptance procedures	The Waste Acceptance Procedure of the EMS require pre-acceptance, and onsite assessments of waste accepted at the facility. This shall minimise the potential of contaminated imported soil being placed within the quarry during restoration material and associated impact on the underlying soils/subsoils and groundwater from contamination as a result of.		Pre-acceptance classification/ verification. Visual verification assessment prior to and post unloading waste at site. Waste monitoring. Groundwater monitoring Surface water monitoring.
Waste monitoring	Compliance testing of representative samples shall be undertaken.	1 in every 500 imported loads	Laboratory analysis of soil samples for parameters of concern
Surface water monitoring	Surface water monitoring shall be undertaken at the down topographical gradient Glenbough Stream which is believed to be groundwater fed. Surface water monitoring shall enable assessment of water quality and detect possible contamination	annually	Laboratory analysis of Surface water samples will be undertaken for a range of physical and chemical parameters
Groundwater monitoring	Groundwater monitoring shall be undertaken to assess water quality and detect possible contamination.	annually	Laboratory analysis of groundwater samples will be undertaken for a range of physical and chemical parameters. Groundwater levels will also be monitored monthly to ensure extraction level remains >5m above the groundwater table
Water management	Pollution Prevention & Emissions Abatement Procedure of the EMS details measures to be implemented to minimise impacts from wash water storage and storm water drainage on site and ensuring that no accidentally discharges occur. Measures include:	Weekly	Visual assessment of Water levels within the holding tanks shall be regularly monitored to ensure the capacities of the tank are not exceeded and determine when emptying via contractor is required.

\* indicates required field



### Authorisation Application Form

Measure *	Surveillance Measures		
	Description *	Frequency of Surveillance *	Method / Standard *
	<ul style="list-style-type: none"> <li>Spent wash water from the wheel wash shall be diverted to a holding tank for subsequent offsite disposal by a suitable waste contractor;</li> <li>Where required, a holding tank shall be installed at the quarantine area to manage storm water runoff from the area. Water from the holding tank shall be collected for subsequent offsite disposal by a suitable waste contractor; and,</li> </ul>		
Soil erosion/ surface water runoff minimisation	<p>Pollution Prevention &amp; Emissions Abatement Procedure of the EMS details measures to be implemented to minimise soil erosion and silt-laden-runoff from the facility associated with soil stripping and extraction exposing subsoils and sands, and storage/ stockpiling of materials on site:</p> <ul style="list-style-type: none"> <li>All bare/disturbed surfaces shall be reinstated, and soil mounds shall be re-vegetated as rapidly as possible in order to reduce erosion and restrict silt generation in water. The slope of the soil storage mounds shall be minimised, and their general shape should be in a manner as to avoid any potential for water ponding;</li> <li>As the pit is being worked, land shall be restored in order to reduce any potential for surface runoff;</li> <li>Replacement of topsoil and restoration of the site will reduce the vulnerability of groundwater beneath the site on closure; and,</li> <li>Any ponding water that is generated within the quarry void and/or the haulage road shall be mitigated by the scrapping off the silts that create the ponding</li> </ul>	Daily	Daily site checks on monitoring of site conditions shall be completed to determine the requirement for erosion/ runoff prevention measures.

\* indicates required field

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Measure *	Surveillance Measures		
	Description *	Frequency of Surveillance *	Method / Standard *
	conditions in the first place. These silts can be stockpiled and reused as part of the restoration plan.		

\*add rows to the table as necessary

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Outline what provisions have been made to ensure an adequate response to emergency situations outside of normal working hours, i.e., during night-time, weekends and holiday periods (attach additional pages to this document if required): \*

Due to the nature of the proposed facility and the absence of any operations out of hours the emergency situations outside of normal working hours is considered unlikely. If an incident occurs outside of normal working hours, the person discovering the incident (e.g. security firm or passer-by) would call the emergency telephone number on the Site Entrance Notice Board. The Environmental Emergency & Incident Response procedure is in place under the EMS for the facility would then be initiated.

### Soil Monitoring Points

Periodic monitoring of soil and groundwater is required having regard to the possibility of soil and groundwater contamination of the site<sup>3</sup>.

Complete the table below with details of soil monitoring locations and in particular where a baseline report has been/is required in accordance with Section 86B of the EPA Act 1992 as amended.

Is periodic soil monitoring proposed at the installation/facility? (Yes/No): \*

Yes

Soil Monitoring Point Code	Monitoring Point Grid Ref.	
	Easting <sup>4</sup>	Northing <sup>5</sup>
Verification testing of 1 in every 500 loads of waste accepted at the facility	Not applicable	Not applicable

\*add rows to the table as necessary

3 Inherent in the monitoring of soil and groundwater is accepting the possible necessity for remediation of the soil / groundwater. Regular monitoring of soil and groundwater provides an early detection of any contaminations.

4 Six Digit GPS Irish National Grid Reference

5 Six Digit GPS Irish National Grid Reference

\* indicates required field



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### Soil Parameters

Complete the table below with details of soil monitoring parameters (where a baseline report is required in accordance with Section 86B of the EPA Act 1992 as amended). (If different parameters are associated with different monitoring points this should also be identified in the table below.)

Parameter	Unit	Trigger Level	How was the trigger value determined?	Proposed Monitoring Frequency	Sample Method	Analysis Method / Technique
Arsenic	mg/kg	16	EPA, Waste Acceptance Criteria and Development of soil Trigger Values for EPA Licensed Soil recovery Facilities	Every 1 in 500 loads	Composite sample from 1 load of waste. All soil samples shall be collected in appropriate laboratory provided containers and transported under chain of custody within relevant holding times to and suitably accredited laboratory for analysis.	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground. Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7, 6010B and BS EN ISO 11885 2009.
Cadmium	mg/kg	1.3		Every 1 in 500 loads		
Total Chromium	mg/kg	75		Every 1 in 500 loads		
Copper	mg/kg	35		Every 1 in 500 loads		
Mercury	mg/kg	0.2		Every 1 in 500 loads		
Nickel	mg/kg	42		Every 1 in 500 loads		
Lead	mg/kg	48		Every 1 in 500 loads		
Zinc	mg/kg	126		Every 1 in 500 loads		
Total Organic Carbon (TOC)	mg/kg	3%		Every 1 in 2000 loads		Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis. Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO <sub>2</sub> generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per

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Parameter	Unit	Trigger Level	How was the trigger value determined?	Proposed Monitoring Frequency	Sample Method	Analysis Method / Technique
			<i>For inspection purposes only. Consent of copyright owner required for any other use.</i>			EA MCERTS Chemical Testing of Soil, March 2012 v4.
Total Petroleum Hydrocarbons (TPH)	mg/kg	50		Every 1 in 500 loads		Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results can be confirmed using GCMS. Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.
Polycyclic Aromatic Hydrocarbons (PAH)	mg/kg	1.0		Every 1 in 2000 loads		End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required. Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.
Polychlorinated Biphenyls (PCBs)	mg/kg	0.05		Every 1 in 2000 loads		End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required. Modified US EPA method 8270. Determination of specific

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Parameter	Unit	Trigger Level	How was the trigger value determined?	Proposed Monitoring Frequency	Sample Method	Analysis Method / Technique
						Polychlorinated Biphenyl congeners by GC-MS.
Asbestos	fibres	No asbestos detected		Every 1 in 2000 loads		Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065. Asbestos Bulk Identification method based on HSG 248.

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### Groundwater Monitoring Points

Based on the assessment(s) carried out previously or as part of this licence application, complete the table below with summary details of the groundwater monitoring points.

Is groundwater monitoring proposed at the installation/facility? (Yes/No): \*

Yes

Monitoring Point Code	Monitoring Point Grid Ref.	
	Easting <sup>6</sup>	Northing <sup>7</sup>
MW-1	309485	129918
MW-2	309686	129940
MW-4	309442	130179
MW-5	309133	129712

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\*add rows to the table as necessary

<sup>6</sup> Six Digit GPS Irish National Grid Reference  
<sup>7</sup> Six Digit GPS Irish National Grid Reference

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### Groundwater Parameters

Complete the table below with summary details of the groundwater parameters. (If different parameters are associated with different monitoring points this should be identified in the table below.)

Parameter	Unit	Trigger Level	How was the trigger level determined?	Proposed Monitoring Frequency	Sample Method	Analysis Method / Technique
Visual inspection /odour	n/a	n/a	n/a	Monthly	In-situ measurement	Sniff and visual inspection
Groundwater levels (wells)	m OD	32	Planning Conditions state a quarry floor max. depth of 38m OD and that the quarry floor must remain 5m above groundwater table	Monthly	In-situ measurement	Groundwater level is measured using a Water Level Meter.
Temperature	°C	>1.5°C increase	EU Surface Water Regulations 2009, as amended	Annually	In-situ measurement	Temperature, Dissolved Oxygen, Conductivity and pH are measured in the field using a multiparameter probe.
Dissolved Oxygen	No abnormal change	No abnormal change	IGV (Guideline Values) EPA 2003	Annually		
Conductivity	µS/cm	800-1875	EU Groundwater (Amendment) Regulations 2016	Annually		
pH	ph units	6.0<ph <9.0	Value depending on hardness-Annual Average-EU Surface Water Regulations 2009	Annually		
Chloride	mg/l	24-187.5	EU Groundwater (Amendment) Regulations 2016	Annually	All samples for laboratory analysis will be collected via bailer or low flow	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1
Orthophosphates	mg/l	0.025	Conservatively using value set for molybdate reactive phosphorus in EU (Groundwater (Amendment) Regulations 2016	Annually		

\* indicates required field



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Parameter	Unit	Trigger Level	How was the trigger level determined?	Proposed Monitoring Frequency	Sample Method	Analysis Method / Technique
Sulphates	mg/l	187.5	EU (Groundwater (Amendment) Regulations 2016	Annually	pump following purging of monitoring well of 3 times the well volume. All water samples shall be collected in appropriate laboratory provided containers and transported under chain of custody within relevant holding times to and suitably accredited laboratory for analysis.	
Ammonium	mg/l	0.065-0.175	EU Groundwater (Amendment) Regulations 2016	Annually		
Nitrates	mg/l	TBC	EU Groundwater (Amendment) Regulations 2016 specify a trigger level of 37.5mg/l however background level background level upgradient (MW4) during baseline assessment were noted to exceed this. Further groundwater monitoring data is required to determine a site-specific trigger value.	Annually		
Total Suspended Solids	-	-	Further groundwater monitoring data is required to determine a site-specific trigger value.	Annually		Gravimetric determination of Total Suspended Solids. Sample is filtered through a 1.5um pore size glass fibre filter and the resulting residue is dried and weighed.
Total Dissolved Solids	mg/l	1000	EPA Interim Guideline Limits	Annually		Gravimetric determination of Total Dissolved Solids.
Total Nitrogen	-	-	Further groundwater monitoring data is required to determine a site-specific trigger value.	Annually		No preparation is required. Total Nitrogen by calculation from soluble ion analysis results.

\* indicates required field

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Parameter	Unit	Trigger Level	How was the trigger level determined?	Proposed Monitoring Frequency	Sample Method	Analysis Method / Technique
Total Petroleum Hydrocarbons	mg/l	0.0075	EU Groundwater (Amendment) Regulations 2016	Annually	All samples for laboratory analysis will be collected via bailer or low flow pump following purging of monitoring well of 3 times the well volume. All water samples shall be collected in appropriate laboratory provided containers and transported under chain of custody within relevant holding times to and	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. Positive MTBE results can be confirmed using GCMS.
Phosphorous (Total)	mg/l	-	EU Groundwater (Amendment) Regulations 2016 specify a trigger level of 0.035mg/l for orthophosphate however background level upgradient (MW4) during baseline assessment were noted to exceed this. Further groundwater monitoring data is required to determine a site-specific trigger value.	Annually		Analysis of waters and leachates for metals by ICP OES/ICP MS. Samples are filtered for dissolved metals and acidified if required. Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7, 6010B and BS EN ISO 11885 2009.
Potassium	mg/l	5	EPA Interim Guideline Limits	Annually		
Sodium	mg/l	150	EU Groundwater Regulations 2010	Annually		
arsenic	mg/l	0.075	EU Groundwater (Amendment) Regulations 2016	Annually		
aluminium	mg/l	0.15	EU Groundwater (Amendment) Regulations 2016	Annually		

\* indicates required field

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Parameter	Unit	Trigger Level	How was the trigger level determined?	Proposed Monitoring Frequency	Sample Method	Analysis Method / Technique
boron	mg/l	0.075	EU Groundwater Regulations 2010, as amended	Annually	suitably accredited laboratory for analysis.	
Chromium	mg/l	0.375	EU Groundwater Regulations 2010, as amended	Annually		
zinc	mg/l	0.075	EU Groundwater (Amendment) Regulations 2016	Annually		
lead	mg/l	0.0075	EU Groundwater (Amendment) Regulations 2016	Annually		
copper	mg/l	1.5	EU Groundwater Regulations 2010	Annually		
nickel	mg/l	0.015	EU Groundwater Regulations 2010	Annually		
Cadmium	mg/l	0.00375	EU Groundwater Regulations 2010	Annually		
Manganese	mg/l	0.05	EU Drinking Water Regulations 2014	Annually		
Iron	mg/l	0.2	EU Drinking Water Regulations 2014	Annually		
Magnesium	mg/l	50	IGV (Guideline Values) EPA 2003	Annually		
Mercury	mg/l	0.00075	EU Groundwater (Amendment) Regulations 2016	Annually		

\*add rows to the table as necessary

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### Costed Environmental Liabilities Risk Assessment (ELRA)

Indicate if the activity, through pre-application meeting with the Agency or other means, is required to submit a costed ELRA<sup>8</sup> as part of the licence, or licence review application.

Costed Environmental Liabilities Risk Assessment (ELRA) required to be submitted? (Yes/No): \*

If 'Yes', upload a costed Environmental Liabilities Risk Assessment (ELRA), prepared in accordance with the *Environmental Protection Agency's Guidance on Assessing and Costing Environmental Liabilities* (2014) (select Document Type: 'ELRA' in the application form).

Costed **ELRA** document filename:

No applicable- An ELRA was not identified as being required during pre-application meeting with the Agency.

Indicate your preferred form of financial provision instrument to meet ELRA costings have regard to the Environmental Protection Agency's Guidance on Financial Provision (2015), e.g., Environmental Liability Insurance:

No applicable- A bond of €60,000 has been lodged with Wexford County Council to ensure funds are available for restoration of the quarry. In addition, the applicant proposed to avail of Environmental Liability Insurance.

Upload a financial provision proposal have regard to the Environmental Protection Agency's Guidance on Financial Provision (2015) (where required at application /review application stage) (select Document Type: 'Financial Provision Proposal' in the application form)

<sup>8</sup> There is an explicit requirement in EU and Irish law for financial provision for certain activities. The following categories of activities have an ELRA/CRAMP/FP requirement:

1. Landfills (excl. closed L.A. Landfills closed before 16<sup>th</sup> July 2009)
2. CAT A Extractive Waste Facilities
3. High Risk Contaminated Land Facilities
4. All Haz-Waste Transfer Stations
5. Non-Haz WTS (Accepting >50,000 tons/annum)
6. Incineration (incl. co-incineration of hazardous waste)
7. Upper & Lower Tier Seveso Sites
8. Exceptional circumstances associated with the site, e.g., significant ground/groundwater contamination.

Regard should be had by applicants to relevant Agency guidance on these matters.



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**Financial Provision Proposal filename:**

No applicable
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### Closure, Restoration and Aftercare Management Plan (CRAMP)

A restoration/aftercare period will be required where there are on-going environmental liabilities following closure. Applicants are required to describe the existing or proposed measures to avoid any risk of environmental pollution and to return the site to a satisfactory state or the state established in the baseline report where applicable, after the activity or part of the activity ceases operation.

A key measure is the preparation of a Closure, Restoration and Aftercare Management Plan (CRAMP) by the operator, for certain activities<sup>9</sup>. Notwithstanding the requirements of the EC Environmental Objectives (Groundwater) Regulations 2010, S.I. No. 9 of 2010, the closure and restoration/ aftercare target is the site condition at the time of the original application or the baseline report. The applicant shall have regard to the Environmental Protection Agency's Guidance on Assessing and Costing Environmental Liabilities (2014) in the preparation of the CRAMP.

Upload a CRAMP, where applicable (select Document Type: 'Site Closure' in the application form).

CRAMP filename:

A CRAMP was not identified as being required during pre-application meeting with the Agency.

### Costed CRAMP

Indicate if the activity, through pre-application meeting with the Agency or other means, is required to have a CRAMP<sup>9</sup> submitted as part of the licence, or licence review application.

CRAMP required to be submitted at application/licence review application stage? (Yes/No): \*

No

<sup>9</sup> There is an explicit requirement in EU and Irish law for financial provision for certain activities. The applicant shall have regard to the Environmental Protection Agency's Guidance in determining CRAMP requirements and on Financial Provision (2015) in making financial provision to cover any liabilities.

The following categories of activities have an ELRA/CRAMP/FP requirement:

1. Landfills (excl. closed L.A. Landfills closed before 16<sup>th</sup> July 2009)
2. CAT A Extractive Waste Facilities
3. High Risk Contaminated Land Facilities
4. All Haz-Waste Transfer Stations
5. Non-Haz WTS (Accepting >50,000 tons/annum)
6. Incineration (incl. co-incineration of hazardous waste)
7. Upper & Lower Tier Seveso Sites
8. Exceptional circumstances associated with the site e.g. significant ground/groundwater contamination.

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Indicate your preferred form of financial provision instrument to meet CRAMP costings (where appropriate), e.g., Secured fund, On-demand performance Bond, Parent Company Guarantee, Charge on Property (have regard to the Environmental Protection Agency's Guidance on Financial Provision (2015) on the Agency's website):

State preferred form of financial provision instrument?

Upload a financial provision proposal (where required) having regard to the Environmental Protection Agency's Guidance on Financial Provision (2015) in making financial provision to cover any liabilities (select Document Type: **Financial Provision Proposal** in the application form)

**Financial Provision Proposal** filename:

No applicable- A bond of €60,000 has been lodged with Wexford County Council to ensure funds are available for restoration of the quarry. In addition, the applicant proposed to avail of Environmental Liability Insurance.

### **Cessation of Activity**

Where a CRAMP is not required, describe the measures to be taken on and following the permanent cessation of the activity or part of the activity to avoid any risk of environmental pollution and to return the site of the activity to a satisfactory state. (Input your response in the text box below or attach the information in to this attachment).

The waste licence application relates to the restoration of the quarry and therefore the application itself provides significant detail of restoration of the site. The backfill of the quarry using inert soil poses a low risk of environmental pollution. The inert soil and stone shall not contain putrescible material and therefore is unlikely to generate leachate containing any contaminants of concern or landfill gases.

A bond of €60,000 has also been lodged with Wexford County Council to ensure funds are available for restoration of the quarry and aftercare. It is proposed that an aftercare management plan shall be developed in accordance with Agency requirements and BAT at the time of closure (estimated 20 years lifespan prior to closure). The aftercare management shall include for groundwater monitoring groundwater following closure.

### **Emergency Response Procedure**

Do you have an emergency response procedure (ERP)? (Yes/No) \*

Yes

\* indicates required field

## Authorisation Application Form

Is the ERP compliant with the EPA guidance? (Yes/No) \*

Yes

### 9.2. Nuisance

Complete the table below in relation to each potential nuisance. Identify if the activity may cause or contribute to the type of nuisance in the area of the installation/facility and, where applicable, identify the techniques used to prevent/minimise the nuisance.

Type of Nuisance	Applicable to the activity? * (Yes/No/Not Applicable)	Techniques to prevent nuisances *	Where nuisances cannot be prevented, techniques to be used to minimise and reduce nuisances
Odour	No	<ul style="list-style-type: none"> <li>Waste soils and stones accepted shall be inert and shall not include putrescible waste. Therefore, the acceptance and storage of this waste at the facility shall not give rise to odour nuisance.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
Fire Control	Yes	<ul style="list-style-type: none"> <li>There shall be no permanent built structures onsite. A container portacabin shall be used as an office. The potential for a fire at the facility is considered to be very low as facility activities only involve the excavation of sand and gravel (no blasting) and the handling of inert soil and stone. Imported waste (soil and stone) shall not contain any flammable or biodegradable material. Therefore, there is minimal sources for fire and flammable material at the facility.</li> </ul>	<ul style="list-style-type: none"> <li>An Environmental Emergency &amp; Incident Response procedure is in place under the EMS for the facility which includes the following measures in the event of a fire:</li> <li>All dust/fire abatement sprinklers should be switched on.</li> <li>All incoming traffic shall be diverted from the facility by a Facility Operative.</li> <li>In the event of a fire, firewater will be collected from ponds in lands surrounding the facility under the same ownership or from the nearby family farm, depending on the area in which the fire arises.</li> <li>Fire extinguishers are placed at several points around the facility and are maintained by an external contractor.</li> <li>No waste shall be burnt within the boundaries of the facility.</li> </ul>

\* indicates required field



### Authorisation Application Form

Type of Nuisance	Applicable to the activity? * (Yes/No/ Not Applicable)	Techniques to prevent nuisances *	Where nuisances cannot be prevented, techniques to be used to minimise and reduce nuisances
Dust	Yes	<ul style="list-style-type: none"> <li>• A speed limit of 15 km/h shall be enforced on-site to minimise dust generation associated with traffic movement;</li> <li>• Visual inspections of the site, the site boundary, the site entrance/exit and haul routes shall take place on a daily basis to ensure that there is no build-up of dusty material;</li> <li>• A pumped water wheel and underbody washing facility shall be installed at the entrance to the quarry to minimize the deposition of material at the site exit or local access roads;</li> <li>• Material which leaves the site in bulk in HGV's shall be covered in tarpaulin to prevent dust emissions from the back of HGV's;</li> <li>• It is proposed to situate stockpiles in such a manner to ensure minimum exposure to the wind and away from sensitive receptor.</li> </ul>	<ul style="list-style-type: none"> <li>• The spraying of haul routes, stockpiles and equipment with water during periods of dry and windy conditions shall take place to minimise dust generation. This will be achieved by spraying the ground using a dedicated clean water bowser and spray bar pulled by a tractor. The bowser can be filled on an "as need" basis when conditions demand it;</li> <li>• A fixed sprinkler system shall be installed at the exit gate to dampen down dry loads leaving the site, where required;</li> <li>• Road sweeping shall take place as appropriate to minimise the build-up of dust on haul routes and the potential for airborne dust generation;</li> <li>• Dust suppression can also be achieved as required at the north face of the quarry via a sprinkler system, which shall consist of a water tank to be connected directly to an existing pipe currently used to provide water for the cattle.</li> </ul>
Litter	No	<ul style="list-style-type: none"> <li>• Waste recovered to site shall be inert soil only and as such should not include litter.</li> </ul>	<ul style="list-style-type: none"> <li>• Quarantined waste identified with the potential to give rise to wind-blown litter will be contained within skips and covered.</li> <li>• Waste generated from site office and weighbridge shall be store in onsite bins with covers/ lids prior to offsite disposal to prevent litter generation.</li> </ul>
Birds	No	<ul style="list-style-type: none"> <li>• Waste soils and stones accepted shall be inert and shall not include putrescible waste. Therefore, the acceptance and storage of this waste at the facility shall not give rise to nuisance from birds.</li> </ul>	<ul style="list-style-type: none"> <li>• Soils and stones accepted at the Site will be free of putrescible waste In the unlikely event that any biodegradable waste is identified among imported materials, it shall be immediately removed to the waste</li> </ul>

\* indicates required field

### Authorisation Application Form

Type of Nuisance	Applicable to the activity? * (Yes/No/ Not Applicable)	Techniques to prevent nuisances *	Where nuisances cannot be prevented, techniques to be used to minimise and reduce nuisances
			quarantine area pending removal off-site to a licenced waste disposal or recovery facility.
Mud	Yes	<ul style="list-style-type: none"> <li>• Visual inspections of the site, the site boundary, the site entrance/exit and haul routes shall take place on a daily basis to ensure that there is no build-up of mud;</li> <li>• A pumped water wheel and underbody washing facility shall be installed at the entrance to the quarry to minimize the deposition of material at the site exit or local access roads;</li> <li>• Land shall only be stripped as required in order to limit the length of time soil is exposed thereby restricting the generation of mud;</li> <li>• Where possible, the land shall be stripped in dry weather to reduce nutrient loss, sustain soil condition and reduce the generation of silt-laden runoff and mud;</li> <li>• All bare/disturbed surfaces shall be reinstated, and soil mounds shall be re-vegetated as rapidly as possible in order to reduce erosion and restrict silt generation in water/ mud generation. The slope of the soil storage mounds shall be minimised, and their general shape should be in a manner as to avoid any potential for water ponding;</li> <li>• As the pit is being worked, land shall be restored in order to reduce any potential for surface runoff;</li> <li>• Replacement of topsoil and restoration of the site will reduce the vulnerability of groundwater beneath the site on closure; and,</li> </ul>	<ul style="list-style-type: none"> <li>• Any ponding water that is be generated within the excavation and/or the haulage road shall be mitigated by the scrapping off the silts that create the ponding conditions in the first place. These silts can be stockpiled and reused as part of the restoration plan.</li> </ul>

\* indicates required field

### Authorisation Application Form

Type of Nuisance	Applicable to the activity? * (Yes/No/Not Applicable)	Techniques to prevent nuisances *	Where nuisances cannot be prevented, techniques to be used to minimise and reduce nuisances
Flies	No	<ul style="list-style-type: none"> <li>Waste soils and stones accepted shall be inert and shall not include putrescible waste. Therefore, the acceptance and storage of this waste at the facility shall not give rise to nuisance from flies.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
Vermin	No	<ul style="list-style-type: none"> <li>Waste soils and stones accepted shall be inert and shall not include putrescible waste. Therefore, the acceptance and storage of this waste at the facility shall not give rise to nuisance from vermin</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
Other	No	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>

If 'Other' is selected define the other nuisance(s):

**Note:** Odour must also be addressed in the fugitive emissions section of the '7.4 Emissions to Atmosphere – Main and Fugitive' template, where applicable.

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## Authorisation Application Form

### 9.3. Environmental Management System (EMS)

Do you have an environmental management system? (Yes/No) \*

Yes

If 'Yes', is the environmental management system accredited? (Yes/No) \*

No

State the date accreditation was achieved or is expected to be achieved, where applicable:

Not applicable

State the standard of accreditation achieved:

Not applicable

### Energy Efficiency

Outline the measures taken to ensure that energy is used efficiently having regard to the relevant decision on BAT conclusions and/or BAT guidance and where appropriate, an energy audit with reference to the EPA Guidance document on Energy Audit should be carried out. \*

The proposed waste recovery facility has been designed with consideration to energy efficiency in accordance with BAT. The waste recovery facility shall be operated in conjunction with quarry activities (extraction) which shall reduce the overall amount of vehicle movements onsite and haulage trips associated with the facility. The amount of vehicle movements onsite and haulage trips would be significantly more if the quarrying and waste recovery activities were undertaken separately e.g. HGVs hauling extracted material from the site will collect waste for recovery on their return to the facility which will reduce the number of trips and empty vehicle return journeys to/from the site. This will also reduce the water demands at the facility for wheel washing and electric requirements for operation of the weighbridge and wheel wash. Overall water demand for dust suppression will be reduced as the overall timeframe of facility operations will be shorter than if quarrying and filling were to be undertaken separately.

Solar panels shall be used to provide power to the site office and weighbridge. The EMS for the facility sets out procedures for regular vehicle maintenance and good practices such as ensuring on-site vehicle movements are minimised and engines are switched off when not in use in conformance with BAT.

In accordance with BAT the Environmental Management Plan (EMP) forming part of the EMS for the facility includes for an annual review of the energy efficiency of the facility and sets out targets for improvement.

In the design of the facility, inert waste soil was selected as the "raw material" under waste recovery for use as backfill material to restore the quarry. It was determined

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\* indicates required field



### Authorisation Application Form

that inert soil is the most suitable material for us as fill material this material is it is unlikely to cause any unacceptable environmental impact.

Has an energy audit been carried out? (Yes/No) \*

No

Do you have an energy efficiency management system? (Yes/No) \*

Yes- energy efficiency will be monitored under the EMS as detailed above

If 'Yes', is the energy efficiency management system accredited? (Yes/No)

No

State the date accreditation was achieved or is expected to be achieved, where applicable:

Not applicable

State the standard of accreditation achieved:

Not applicable

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\* indicates required field

## Authorisation Application Form

### 9.4. Hours of Operation

Provide details of the hours of operation for the installation/facility \* (hours and days per week, etc.), including:

- (a) Proposed hours of operation.
- (b) Proposed hours of construction and development works and timeframes.
- (c) For waste activities, the proposed hours of waste acceptance.
- (d) Any other relevant hours of operation expected (e.g., waste handling, etc.).

**Hours of operation at the facility shall be in compliance with those permitted under planning decision (ABP-301615-18) for the proposed quarry extension. Permitted operation hours are from 08.00 hours and 18.00 hours Monday to Friday and 09.00 hours and 13.00 hours on Saturday. No operations are permitted on Sunday or public holidays.**

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## Authorisation Application Form

### 9.5. Review of a Licence

Where the Office of Environmental Enforcement (OEE) has agreed any variations or adjustments to the conditions or schedules of the existing licence, the licensee must provide details of these agreed variations and adjustments to the existing licence conditions in the table that follows.

An updated, scaled drawing of the site layout (no larger than A3) providing visual information on such adjustments or variations where appropriate should be uploaded in the **site tab** – 'site plan(s)' upload.

In the case of once-off assessments/reports required under conditions/schedules of the existing licence the licensee must provide details of those assessments/reports that have been completed and agreed with the OEE or as otherwise agreed, in the table below.

Condition/ Schedule No.	Existing Condition	OEE Agreement Reference	Description

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\*add rows to the table as necessary

### 9.6 Environmental Management Techniques – Upload Files

State the number of 'upload files' referred to and named in this attachment document? \*

\* indicates required field