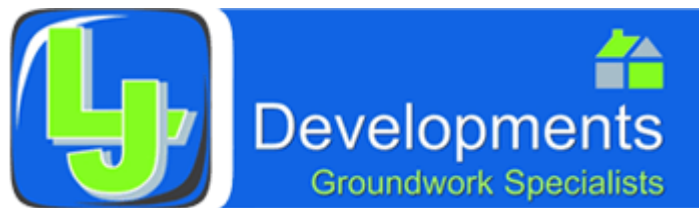




# CRESTWOOD ENVIRONMENTAL LTD

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## H1 Accidents and Amenities Risk Assessment

**Bespoke Environmental Permit Application for the Deposit of Inert Waste for Recovery**

**Beam Quarry, Torrington, Devon, EX38 8JF**

**Report Reference: CE-BQ-1936-RP06-H1-Final**

**Report Date: 7 December 2021**

**Produced by Crestwood Environmental Ltd.**

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ENVIRONMENT

LANDSCAPE

NOISE

LIGHTING

ECOLOGY

HERITAGE

WATER

TREES

MINERALS / WASTE

AIR QUALITY

LAND QUALITY

VISUALISATION





**Crestwood Report Reference:** CE-BQ-1936-RP06-H1-Final:

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Final	07/12/2021	Louise Parsons BSc (Hons), MSc	Andrew Abbott BSc (Hons), MSc

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## Crestwood Environmental Limited

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HAZARD	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the Overall Risk
<b>Odour</b>						
Odour from waste delivery, off-loading, and deposit for waste recovery	<p>The nearby properties of Beam House to the north-east of the Site located beyond the River Torridge, Wood Cottage to the north, Beam Weir Barn and Rakeham Cottages to the south-east, Barton Park and Bearhaine to the west and, The Downes House to the north.</p> <p>Visitors using the Tarka Trail to the east of the Site.</p> <p>Any agricultural workers on the neighbouring farmland to the north, east, south-east, south, south-west and north-west of the Site.</p>	Air	<p>Recovery materials accepted at the Site are strictly inert and subject to the waste acceptance criteria requirements of the Landfill Directive.</p> <p>Although the recovery materials are not odorous, in the unlikely event that any malodorous loads are delivered to the Site, they will be directed to a suitably authorised facility.</p> <p>Any complaints received at the Site about odour will be monitored and logged in accordance with the EMS. Mitigation measures will be implemented, as appropriate, to ensure a high level of control.</p> <p>As the recovery materials comprise inert materials and soils that are non-odorous, there is low risk of odorous emissions.</p>	Unlikely	Odour annoyance to anyone living or working close to the Site.	Low
<b>Noise and Vibration</b>						
Engine noise during recovery materials deposit, loading and	As above and the nearby villages of Frithelstock at c.	Noise via the atmosphere and vibration	Noise from mobile plant and machinery will be attenuated by the existing quarry faces during	Unlikely	Noise nuisance to anyone living or	Not significant as long as management



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<p>unloading including reversing beepers etc.</p> <p>Vehicle movements to and from the Site delivering recovery materials.</p> <p>Vibration from deposit of recovery materials.</p>	<p>800 m to the south-west, Monkleigh c. 1.1 km to the north-west, Weare Giffard c. 1.3 km to the north-east, Saltrens 2.1 km to the north-west and Frithelstock Stone at c. 2.1 km to the south-west of the Site.</p> <p>Road networks in the vicinity including the A386 to the immediate east of the Site, Rakeham Hill to the South to south-west and Loxdown Road to the north of the Site.</p>	<p>through the ground.</p>	<p>the major part of the restoration works.</p> <p>To minimise noise emissions, all vehicles, plant and machinery operated at the Site will be maintained in accordance with the manufacturer's specification and fitted with effective silencers. Any breakdown or malfunction of silencing equipment will be treated as an emergency and dealt with immediately. Where a repair cannot be affected immediately the equipment will be taken out of service until the repair is made. Routine maintenance of plant and equipment will be carried out in accordance with the manufacturer's recommendations and the Company's EMS to minimise noise emissions.</p> <p>The Site will only be operated during the hours specified in the planning permission i.e. 0700 – 1800 hours Monday to Friday and 0700 – 1300 hours on Saturday with no operations carried out on Sundays or Bank Holidays. No unsociable or night-time working will be carried out.</p>		<p>working close to the Site.</p>	<p>procedures adhered to.</p>



HAZARD	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the Overall Risk
			Any complaints received at the Site about noise will be monitored and logged in accordance with the EMS. Mitigation measures will be implemented, as appropriate, to ensure a high level of control.			
<b>Fugitive Emissions – Release to Air</b>						
Dust from vehicles entering and leaving the Site, offloading of recovery materials and plant and machinery working on the Site including recovery materials deposit (includes mud and debris being liberated out with the Site boundary).	Receptors identified above and Monkleigh Wood, contiguous with the western and north-eastern boundary of the Site, which is defined as Ancient Woodland (Ancient Replanted Woodland and Ancient & Semi-Natural Woodland) and, under the Priority Habitat Inventory it is classified as Deciduous Woodland.  Additionally, the areas of Designated Ancient Woodland in proximity to the Site.	Transportation of mud and debris from the Site on the under carriage and wheels of vehicles exiting the Site or escape of recovery materials from the vehicle body. Windblown dust.	To minimise the generation and subsequent dispersal of dust, mud and debris around the Site, a number of control measures will be implemented including the following: All vehicles transferring inert soils and subsoils to the Site and all on-Site mobile plant are limited to speed restrictions. Failure to comply with Site instructions regarding the above will result in the driver being warned and they may risk exclusion from the Site until further notice. The Site operator has a road sweeper that will be used as necessary to clean the Site access road to remove dust and mud. Additionally, a water bowser will be made available for dust suppression on the Site access road and operational areas, during dry and dusty conditions, as required. The importance of dust suppression during periods of dry and dusty weather is recognised,	Fugitive dusts, mud and debris emissions – probable unless adequate control and mitigation measures are in place.	Fugitive dusts. Dust on window ledges, cars, etc. Mud and debris presence on public highway could cause skidding and loss of control. Dust settlement on woodland and habitats could cause harm to flora and fauna.	Fugitive dusts - not significant when managed by necessary mitigating measures and documented management systems.



HAZARD	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the Overall Risk
			<p>particularly due to the proximity of the neighbouring farms and businesses.</p> <p>As part of its daily inspection regime, the Site will be visually inspected for the presence of fugitive emissions and mud and debris.</p> <p>Any complaints received at the Site about dust, mud or debris will be monitored and logged in accordance with the EMS.</p> <p>Mitigation measures will be implemented, as appropriate, to ensure a high level of control.</p>			
<b>Fugitive Emissions – to Water</b>						
Contamination of surrounding surface waters and groundwater	<p>The nearest surface water body is the Mill Leat, a tributary of the River Torridge which is aligned with the southern perimeter of the Site. The River Torridge is towards the east of the Site with the closest point being at 40 m to the north-east.</p> <p>Excess surface runoff from the Site is currently discharged into Mill Leat via buried pipes only when the central sump is full.</p>	Surface water run-off and discharge to watercourse	<p>The Site will only accept strictly inert recovery materials, soils and sub-soils in accordance with the requirements of the Environmental Permit and European Council Decision (2003/33/EC) of 19 December 2002 'establishing criteria and procedures for the acceptance of waste at landfills'.</p> <p>The prominent river in the vicinity is the River Torridge which is hydrologically connected to the Site by the tributary Mill Leat which flows eastwards through a culvert under the A386.</p>	Unlikely due to the on-site management measures.	Contamination to surface water bodies.	Not considered significant.



HAZARD	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the Overall Risk
	<p>Additionally, there is a small gap in the tributaries bank on the western edge of the Site whereby water held within the quarry void can enter. By year seven of the project, infilling ground profiles will close the gap and direct all surface runoff to the attenuation lagoon.</p>		<p>Currently, only minor discharges are directed to the Mill Leat and, as infilling work progresses, all surface water runoff from the Site will be directed to the on-Site attenuation lagoon. Discharges from the attenuation lagoon into the Mill Leat will be restricted to greenfield rates by a weir or an overflow pipe.</p>			
<b>Pests</b>						
<p>Due to the nature of the recovery materials accepted at the Site, i.e. strictly inert waste, the risk from pests as a result of the operation of the proposed Site is considered insignificant and therefore this section has not been addressed further.</p>						
<b>Litter</b>						
<p>The risk of litter arising from the Site and polluting the surrounding environment is unlikely due to the nature of the proposed activities and the permitted recovery material types being strictly inert, however Site inspections for the presence of material will be carried out on a regular basis and in the unlikely event of litter being found, litter pickers will be employed on Site to remove the material. The presence of litter within the deposited waste will be screened as part of the acceptance criteria.</p>						
<b>Mud</b>						
<p>See section relating to 'emissions' above.</p>						



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<b>Leakage of potentially polluting liquids</b>						
Leak from any waste oil / diesel storage tank escaping the confinement bund.	Soils and groundwater.  The nearest surface water course is the Mill Leat tributary that juxtaposes the southern boundary of the Site and the River Torridge at c. 40 m north-east of the Site at the closest point.	Ground contamination to soils and underlying groundwater	Diesel, oil and other potentially polluting liquids will not be stored on Site.  Currently, only minor discharges are directed to the Mill Leat and, as infilling work progresses, all surface water runoff from the Site will be directed to the on-Site attenuation lagoon.  Emergency spillage procedures at the Site form part of the EMS.	Unlikely due to the on-site management measures.	Contamination of local watercourse.	Not considered significant.
<b>Fires</b>						
Fire within the on-site plant and equipment and / or delivery vehicles	The neighbouring properties of Beam House to the north-east of the Site located beyond the River Torridge, Wood Cottage to the north, Beam Weir Barn and Rakeham Cottages to the south-east, Barton Park and Bearhaine and to the	Air transport of smoke. Spillages and contaminated firewater by direct run-off from site and via surface water drains and ditches.	Inert soils and subsoils are non-combustible.  On Site plant and equipment will be maintained on a regular basis to ensure it is working effectively to minimise the risk of fire.  In the event of a fire within the on-Site plant and equipment, the Site staff will ensure the machine is switched off and if possible, without risk to personal safety,	Unlikely	Smoke, local nuisance, risk of fire spreading	Not significant as long as management procedures adhered to.





HAZARD	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the Overall Risk
<p>(cont.) Fire within the on-site plant and equipment and / or delivery vehicles</p>	<p>west and, The Downes House to the north.</p> <p>Visitors using the Tarka Trail to the east of the Site.</p> <p>Agricultural workers on the neighbouring farmland to the north, east, south-east, south, south-west and north-west of the Site.</p> <p>Monkleigh Wood contiguous with the western and north-eastern boundary of the Site which is defined as Ancient Woodland (Ancient Replanted Woodland and Ancient &amp; Semi-Natural Woodland) and, under the Priority Habitat Inventory it is classified as Deciduous Woodland.</p> <p>Additionally, the areas of Designated Ancient Woodland in proximity to the Site.</p>		<p>fight the fire using the firefighting equipment available. In the event the fire is too big or out of control the fire brigade will be informed and the local area evacuated.</p> <p>Site staff are trained in the event of a fire and made aware of the location of all firefighting equipment and procedures.</p>			
<p><b>Other Accidents</b></p>						



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Waste material loss from delivery vehicle	<p>As above and the nearby villages of Frithelstock at c. 800 m to the south-west, Monkleigh c. 1.1 km to the north-west, Weare Giffard c. 1.3 km to the north-east, Saltrens 2.1 km to the north-west and Frithelstock Stone at c. 2.1 km to the south-west of the Site.</p> <p>Road networks in the vicinity including the A386 to the immediate east of the Site, Rakeham Hill to the South to south-west and Loxdown Road to the north of the Site.</p>	Air, land	<p>Waste delivery vehicles should be netted, sheeted or enclosed, as appropriate, to prevent any inadvertent waste escape.</p> <p>Permitted recovery materials are strictly inert and do not contain materials that are likely to become windborne such as litter and light plastics.</p>	Unlikely	Unightly and potential nuisance	Waste material loss from delivery vehicle
Inadequate waste acceptance procedures	Receptors identified above	Air, land	<p>All recovery materials will be subject to strict waste acceptance procedures to ensure that only compliant waste types are accepted.</p> <p>All necessary information / documentation to satisfy the requirements of the Waste (England and Wales) Regulations 2011 and the Duty of Care will be provided to the Operator in</p>	Low	Potentially harmful if incompatible or unacceptance wastes are received	Low



HAZARD	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the Overall Risk
			<p>advance of delivery of waste material. Information required includes the type and quantity of waste, the form the waste takes (e.g. solid) and any special handling requirements needed. Only recovery materials that are authorised for deposit at the Site are accepted.</p> <p>Waste loads will be inspected on deposit to ensure that only authorised materials are used in the deposit of waste for recovery.</p>			
Breach in site security	Site personnel, plant and intruders	Land	The Site is bounded by fencing, hedgerows and woodland. CCTV cameras are installed near the Site entrance which detect vehicles and people entering the premises. In the event of unauthorised public access to the Site, security measures will be reviewed and increased in the event of unlawful entry.	Quite low	Some harm	Not significant.
<b>Gas</b>						



HAZARD	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the Overall Risk
<p>The emission of methane, carbon dioxide and oxygen from the decomposition of recovery materials</p>	<p>The neighbouring properties of Beam House to the north-east of the Site located beyond the River Torridge, Wood Cottage to the north, Beam Weir Barn and Rakeham Cottages to the south-east, Barton Park and Bearhaine and to the west and, The Downes House to the north.</p> <p>Visitors using the Tarka Trail to the east of the Site.</p> <p>Agricultural workers on the neighbouring farmland to the north, east, south-east, south, south-west and north-west of the Site.</p> <p>Monkleigh Wood contiguous with the western and north-eastern boundary of the Site which is defined as Ancient Woodland (Ancient Replanted Woodland and Ancient &amp; Semi-</p>	<p>Air</p>	<p>If required by the Environment Agency, the installation of a minimum of five boreholes will be installed once waste levels have reached the restoration contours.</p> <p>The boreholes will be monitored monthly for methane, carbon dioxide, oxygen and atmospheric pressure.</p>	<p>Low</p>	<p>Inhalation by nearby residents, workers and visitors to the area.</p>	<p>It is unlikely that there will be elevated concentrations of gas due to the inert nature of the recovery materials deposited.</p> <p>Additionally, the Site is remote from receptors.</p>



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	<p>Natural Woodland) and, under the Priority Habitat Inventory it is classified as Deciduous Woodland.</p> <p>Additionally, the areas of Designated Ancient Woodland in proximity to the Site.</p>					



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