

JW WASTE RECYCLING

AEROBIC DIGESTER

Environmental Permit Variation Application

Environmental Risk Assessment

Prepared for: Advetec Holdings Limited on behalf of

JW Waste Recycling Limited

Client Ref: 416.064394.00001

SLR Ref: 416.064394.00001
Version No: 1
December 2022

SLR 

BASIS OF REPORT

This document has been prepared by SLR with reasonable skill, care and diligence, and taking account of the manpower, timescales and resources devoted to it by agreement with Advetec Holdings Limited (the Client) as part or all of the services it has been appointed by the Client to carry out. It is subject to the terms and conditions of that appointment.

SLR shall not be liable for the use of or reliance on any information, advice, recommendations and opinions in this document for any purpose by any person other than the Client. Reliance may be granted to a third party only in the event that SLR and the third party have executed a reliance agreement or collateral warranty.

Information reported herein may be based on the interpretation of public domain data collected by SLR, and/or information supplied by the Client and/or its other advisors and associates. These data have been accepted in good faith as being accurate and valid.

The copyright and intellectual property in all drawings, reports, specifications, bills of quantities, calculations and other information set out in this report remain vested in SLR unless the terms of appointment state otherwise.

This document may contain information of a specialised and/or highly technical nature and the Client is advised to seek clarification on any elements which may be unclear to it.

Information, advice, recommendations and opinions in this document should only be relied upon in the context of the whole document and any documents referenced explicitly herein and should then only be used within the context of the appointment.

CONTENTS

1.0	INTRODUCTION	1
1.1	Overview and Approach	1
2.0	SITE SETTING.....	2
2.1	Site Setting	2
2.1.1	Agricultural	2
2.1.2	Commercial and Industrial	2
2.1.3	Local Transport Network.....	2
2.1.4	Surface Water Features	3
2.1.5	Agricultural/Open Ground	3
2.1.6	Woodland	3
2.1.7	Residential	3
2.2	Geology, Hydrogeology and Hydrology.....	3
2.2.1	Geology.....	3
2.2.2	Hydrogeology	3
2.2.3	Hydrology	3
2.3	Designated Habitat Sites.....	4
2.3.1	Ancient woodland	4
2.3.2	Sites of Special Scientific Interest (SSSI)	4
2.4	Cultural Heritage.....	4
2.4.1	Listed Buildings.....	4
2.4.2	Registered Park and Garden	4
2.4.3	Scheduled Monuments	5
2.5	Receptors	5
2.6	Wind Rose	6
3.0	ENVIRONMENTAL RISK ASSESSMENT	8
4.0	CONCLUSION	16

DOCUMENT REFERENCES

TABLES

Table 1 Surrounding Land Use.....	2
Table 2 Receptors	5

Table 3 Odour Risk Assessment and Management Plan	9
Table 4 Noise Risk Assessment and Management Plan.....	10
Table 5 Fugitive Emissions Risk Assessment and Management Plan	11
Table 6 Accidents Risk Assessment and Management Plan	14

FIGURES

Figure 1 Wind Rose from Bristol Airport Station (2018).....	7
---	---

DRAWINGS

- Drawing EP1 Site Location Plan
- Drawing EP2 Environmental Permit Boundary
- Drawing EP3 Environmental Site Setting
- J WITTS V6- Site Plan Drawing

1.0 INTRODUCTION

SLR Consulting Limited (SLR) has been instructed by Advetec Holdings Limited (Advetec) to prepare an application to vary JW Waste Recycling Limited's (JW Waste) existing environmental permit (EPR/EB3607KW) to include the operation of Advetec units for the treatment of residual waste generated at JW Waste's Waste Treatment Transfer Station. The application involves an aerobic digestion system, to be operated by JW Waste and will be located at JW Waste Recycling, Newbury Works, Coleford, Radstock, BA3 5RX (hereafter referred to as 'the site').

This Environmental Risk Assessment (ERA) has been undertaken in accordance with the Environment Agency's (EA) guidance 'Risk assessments for your environmental permit' (August 2022).

It is a simple assessment of the risks to the environment and human health from accidents, noise and fugitive emissions that may be associated with the proposed operations at the site. The aim of the assessment is to identify any significant risks and demonstrate that the risk of pollution or harm will be acceptable by implementing appropriate measures to manage these risks.

The risk assessments for your EP guidance requires that all receptors that are near to the site and could reasonably be affected by the activities are identified and considered as part of the ERA. Therefore, for the purpose of this report:

- A 2km radius has been adopted in reviewing potentially sensitive receptors of cultural and ecological importance; and
- A radius of 500m from the proposed permit boundary has been adopted for all other potentially sensitive receptors (for example, residential, commercial, industrial, agricultural and surface water receptors).

1.1 Overview and Approach

The assessment is based on the risk assessment for a bespoke EP.

This section outlines the procedure that has been followed in the undertaking of the ERA for the site:

- | | |
|-------------------|--|
| Step One | Identify risks and their sources for the site |
| Step Two | Identify receptors at risk from the site |
| Step Three | Identify pathways between sources and receptors |
| Step Four | Assess risks relevant to the site activities and determine if they can be screened out |
| Step Five | State measures proposed to control unacceptably high risks |
| Step Six | Present your assessment |

Step One is a screening step to identify the potential risks to the environment from the proposed development. The EA Guidance identifies areas that the EA considers would likely require assessment for most sites as follows:

- Odour;
- Noise & Vibrations;
- Visible Emissions;
- Discharges such as to surface or groundwater;
- Release of bioaerosols;
- Fugitive Emissions (including dust, mud, litter and pests); and
- Accidents.

2.0 SITE SETTING

Step Two identifies people or parts of the environment that could be harmed (at potentially significant risk) by the activity. This section details the site setting and potentially sensitive receptors near the site.

2.1 Site Setting

The site is located at JW Waste Recycling, Newbury Works, Coleford, Radstock, BA3 5RX, centred on National Grid Reference (NGR) ST 69630 49829. The aerobic digester will be situated within JW Waste's waste transfer station. The village of Highbury is located 1km southwest and the City of Bath lies 15km to the northeast.

Immediately to the north and east lies woodland. Immediately to the south and west lies industrial and commercial properties. The landscape surrounding the site is primarily comprised of agricultural land, interspersed woodland.

There are seven areas of Ancient Woodland and a site of Special Scientific Interest (SSSI) located within 2km of the site boundary. In addition, there a number of listed buildings, as well as two registered parks and gardens situated within 2km radius of the site. Further information on the site's setting can be found in the Environmental Risk Assessment in Section 4 of the application.

The site Location is illustrated on Drawing EP1 and the site Layout is illustrated in J WITTS V5- site Plan Drawing, both can be found in Section 3 of this application.

A summary of the immediate surrounding land use is provided in Table 1.

Table 1 Surrounding Land Use

Direction	Land Use
North	Woodland with agricultural fields beyond
East	Woodland with agricultural fields beyond
South	An area of woodland as part of Edmund Shipping wood, beyond this is a lake.
West	Commercial and industrial properties situated within the industrial park in which the site is located. Beyond this is woodland and agricultural land.

2.1.1 Agricultural

There are several areas of agricultural land within 500m of the site's environmental permit boundary, in all directions. The closest agricultural land is situated along the north and east site boundary.

2.1.2 Commercial and Industrial

There are a couple of commercial properties within 500m of the site's environmental permit boundary. The closest of these is Architectural Mould Services located adjacent to the west of the site.

2.1.3 Local Transport Network

There are numerous roads within a 500m radius of the site. The site is accessed via an unnamed road which leads off Newbury Cottages.

The B3139 is situated approximately 2.2km to the north of the site at the closest point.

2.1.4 Surface Water Features

There are a number of surface water features within a 500m radius of the site boundary. The closest of these is a brook which is situated approximately 40m south of the site.

2.1.5 Agricultural/Open Ground

The site is largely surrounded by agricultural fields and open ground, surrounding the site to the north, south, east and west. The expanses of land within a 500m radius from the site boundary predominantly consist of open ground and agricultural spaces.

2.1.6 Woodland

An area of deciduous woodland is situated adjacent to the north, south and east of the site boundary. Please see section 2.3 regarding designated habitats for further information.

2.1.7 Residential

There are of a couple of residential properties situated both west and east of the site. Residential properties are also located within the villages of Highbury located southwest of the site and Newbury located northwest of the site. The nearest residential properties are located approximately 155m to the southwest of the site.

2.2 Geology, Hydrogeology and Hydrology

2.2.1 Geology

A review of the British Geological Survey (BGS)¹ mapping reveals that the site is underlain by a bedrock of Mudstone, Siltstone and Sandstone which is interbedded from the South Wales Middle Coal Measures Formation.

The site is not underlain with superficial deposits.

2.2.2 Hydrogeology

The mudstone bedrock underlying the site is designated as a Secondary A aquifer according to the Multi-Agency Geographical Information for the Countryside (MAGIC) map².

Groundwater Vulnerability

MAGIC map shows that the site lies in an area classified as 'medium' with a soluble rock risk in terms of groundwater vulnerability.

Source Protection Zones

The site is not located within a Source Protection Zone for drinking water.

¹ British Geological Survey (BGS) Available at www.bgs.ac.uk, accessed in October 2022

² Multi-Agency Geographical Information for the Countryside Map, available at www.magic.gov.uk, accessed in October 2022

2.2.3 Hydrology

The Flood Map for Planning³ identifies the site as lying within a Flood Zone 1, defined as “Land having a less than 1 in 1,000 annual probability of river or sea flooding”.

The nearest surface water receptor to the site is a brook is situated 40m to the south of the site.

2.3 Designated Habitat Sites

A 2km radius was used for identifying nearby designated habitat sites. A review of MAGIC confirmed that the following receptors are present in a 2km radius of the site:

2.3.1 Ancient woodland

There are seven areas of ancient woodland located within a 2km radius of the site. The nearest area of ancient woodland, known as Upper Vobster Wood is located approximately 350m to the west of the site.

2.3.2 Sites of Special Scientific Interest (SSSI)

One SSSI was identified within a 2km radius of the site. Edford Woods and Meadows (SSSI) is located approximately 1.6km southwest of the site boundary.

A review of MAGIC confirmed none of the following receptors are present in a 2km radius of the site:

- Local Nature Reserves;
- National Parks;
- National Nature Reserve;
- Ramsar;
- Special Area of Conservation;
- Special Protection Area;
- Area of Outstanding Natural Beauty; and
- Marine Conservation Zone.

2.4 Cultural Heritage

A review of MAGIC confirmed that the following receptors were present within a 2km radius of the site:

2.4.1 Listed Buildings

A review of MAGIC identified multiple listed buildings within 2km of the site to the north, east, west and south:

- One Grade I listed building was identified, the Church of St Margaret, which is located approximately 1.4km north east of the site.
- Multiple Grade II buildings were identified within the review, the nearest Grade II listed building is an unnamed building located within the industrial estate in which the site is located, adjacent to the site boundary.

³ Gov.uk Flood Map for Planning, available at <https://flood-map-for-planning.service.gov.uk/>, accessed in October 2022

- Two Grade III building were also identified, the closest of which is unnamed building located approximately 715 north east of the site.

2.4.2 Registered Park and Garden

There are two registered parks and gardens identified within a 2km radius of the site:

- Babington House is located approximately 826m northeast of the site; and
- Mells Park which is located approximately 1km southeast of the site.

2.4.3 Scheduled Monuments

One scheduled monument was identified within a 2km radius of the site, Vobster Breach Colliery is situated approximately 700m south of the site.

The review of MAGIC confirmed that there are none of the following receptors within a 2km radius of the site:

- World Heritage Sites; and
- Registered Battlefields.

2.5 Receptors

Local receptors within 500m of the site are recorded in Table 2, along with natural and cultural receptors within 2km.

Table 2 Receptors

Receptor Name	Receptor Type	Direction	Approximate Distance from Permit Boundary (m)
Local Receptors within 500m			
Industrial Estate	Industrial Premises	N/A	Adjacent
Agricultural land	Agricultural land	All directions	Adjacent
Listed Building	Listed Building (Grade II)	N/A	Adjacent
Woodland	Deciduous Wood	All directions	Adjacent
Brook	Surface water feature	South	40
Pond	Surface water feature	South	125
Newbury Cottages	Residential	South west	155
Dark Lane	Local transport network	West	200
Pond	Surface water feature	East	248

Receptor Name	Receptor Type	Direction	Approximate Distance from Permit Boundary (m)
Residential properties within Highbury	Residential	South	257
Page House Farm	Residential	East	350
Upper Vobster Wood	Ancient woodland	West	350
Luckington Manor Farm	Residential	North west	365
Newbury	Village	North east	372
Ecological and Cultural Receptors within 2km			
Shipperidge Wood	Woodland	South east	175
Maggs Wood	Ancient woodland	South	515
Unnamed building	Grade III Listed Building	North east	715
Vobster Breach Colliery	Scheduled Monument	South	700
Babington House	Registered Park and Garden	North east	826
Melcombe Wood	Ancient Woodland	South	1.1km
Church of St Margaret	Grade I Listed Building	North east	1.4km
Mells Park	Registered Park and Garden	South east	1km
Edford Woods and Meadows	Sites of Special Scientific Interest (SSSI)	South west	1.6km
Leigh Wood	Ancient Woodland	South west	1.6km
Unnamed woodland	Ancient Woodland	North west	1.6km
Babington Wood	Ancient Woodland	North	1.6km

2.6 Wind Rose

The wind direction and frequency should be considered when looking at the impact of emissions on receptors. Figure 1 shows the wind patterns in 2018 as identified at Bristol Airport Station located approximately 24.8km to

the west of the site. The predominant wind direction is from the west, with winds from the east, south and north relatively infrequent.

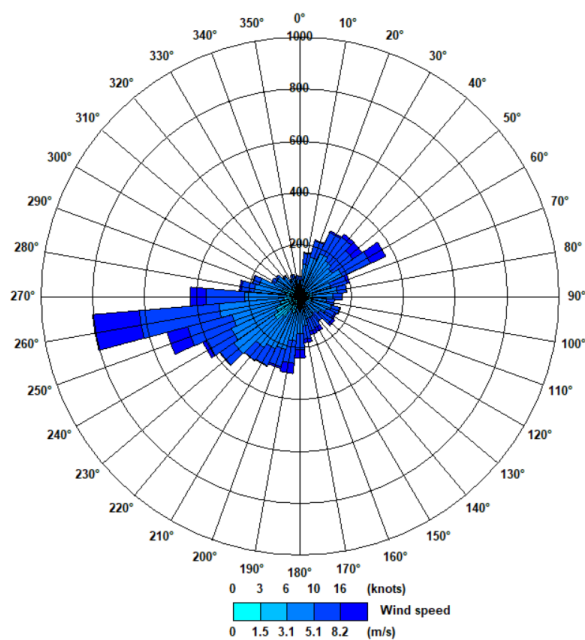


Figure 1 Wind Rose from Bristol Airport Station (2018)

3.0 ENVIRONMENTAL RISK ASSESSMENT

Step Three identifies the potential pathways between source and receptor and where appropriate, the assessment demonstrates how the risk of pollution or harm can be mitigated by measures to manage these risks and/or block the pathways (Steps Four and Five). The following tables in accordance with EA guidance⁴ present the assessment in terms of hazards posed, receptors and pathways, along with management and residual risks for the following hazards:

- Odour;
- Noise & Vibrations;
- Visible Emissions;
- Bioaerosols;
- Discharge to surface or groundwater;
- Fugitive Emissions (including dust, mud, litter and pests); and
- Accidents.

⁴ EA Guidance Risk Assessments for your environmental permit August 2022

Table 3 Odour Risk Assessment and Management Plan

What do you do that can harm and what could be harmed			Managing the Risk	Assessing the Risk		
Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequences	What is the overall risk
What has the potential to cause harm?	What is at risk/What do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? Who is responsible for what?	How likely is the contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
<p>Odour from loading of waste into the aerobic digester</p> <p>Odour from treatment of waste through the aerobic digester.</p> <p>Odour from waste storage in the compound.</p>	<p>Sensitive receptors listed in Table 2 including residential, commercial, agricultural recreational and ecological receptors.</p>	<p>Air</p>	<p>Waste will be loaded into a hopper which will be located external to the building. Vehicles will be used to transfer waste from the external holding bay and into the hopper to be processed by the digester.</p> <p>The holding bay has been designed so that waste and debris does not build up in inaccessible areas such as corners. The holding bay will be cleaned regularly.</p> <p>The storage areas have been designed to ensure there is no cross-contamination between the input and outputs of the aerobic digestion process.</p> <p>The holding bays where the waste is to be stored is located in close proximity to the hopper therefore minimising handling of waste. Only competent staff will handle waste using appropriate equipment.</p> <p>Drop heights of the waste into the hopper will be minimised to prevent minimise handling of waste and therefore increased potential for odour.</p> <p>Due to the small scale of the aerobic digester (less than 26 tonnes per day), the risk of odour is low.</p> <p>The digestion process is undertaken aerobically which limits odour generation compared to an anaerobic digestion process for example. The automatically controlled process ensures that anaerobic conditions will not develop within the vessel.</p> <p>The aerobic digester is a sealed process benefitting from a carbon filter, which abates any odours which may be produced during the process.</p> <p>Storage areas and the perimeter of the site is monitored daily for any unacceptable levels of odour. Any odour identified on site is recorded in the site diary, investigated by the site manager and remediated as soon as possible.</p> <p>Storage of waste generated by the machine will be collected internally into a holding bay and dry stored until collection / haulage off site. Storage prior to treatment is undertaken externally with the site's existing permitted arrangements.</p> <p>The Site Manager is responsible for managing emissions of odour on site.</p>	<p>Low</p>	<p>Odour Nuisance and loss of amenity.</p>	<p>Very Low</p>

Table 4 Noise Risk Assessment and Management Plan

What do you do that can harm and what could be harmed			Managing the Risk	Assessing the Risk		
Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequences	What is the overall risk
What has the potential to cause harm?	What is at risk/What do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? Who is responsible for what?	How likely is the contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
Noise from the aerobic digester.	Sensitive receptors listed in Table 2 including residential, commercial, agricultural recreational and ecological receptors.	Air	<p>It is considered unlikely that significant noise or vibrations will be generated by the aerobic digester due to its small scale (less than 26 tonnes per day) and the enclosed nature of the process.</p> <p>Noise pollution will be reduced compared to operation without the digester, as transport movements required to transfer the waste generated on site will be less frequent.</p> <p>To ensure that noise and vibrations are limited, the following management techniques will be implemented:</p> <ul style="list-style-type: none"> • All plant and machinery will be operated and maintained in accordance with manufacturer's specifications; • Machinery will be operated so as to minimise noise; • Vehicles adhere to a speed limit on site; and • Site surfaces will be kept in good repair to minimise noise associated with uneven roads <p>Daily auditory monitoring will be carried out by site personnel to identify any unacceptable levels of noise. A record of the inspection findings will be made in the site diary. Remedial action will be taken in the event that noise from the site is detected at nearby sensitive receptor locations.</p> <p>The Site Manager will be responsible for managing emissions of noise on site.</p>	Low	Noise disturbance and loss of amenity.	Low

Table 5 Fugitive Emissions Risk Assessment and Management Plan

What do you do that can harm and what could be harmed			Managing the Risk	Assessing the Risk		
Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequences	What is the overall risk
What has the potential to cause harm?	What is at risk/What do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? Who is responsible for what?	How likely is the contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
To Air:						
Dust from vehicle movements transferring residual waste off the site.	Sensitive receptors listed in Table 2 including residential, commercial, agricultural recreational and ecological receptors.	Air	<p>The digester is located within a building with concrete surfacing leading to tarmacked roadways. As such, vehicles will not be tracking over dusty roads. Use of the digester will result in a reduction in vehicle movements thereby reducing the potential for dust generation from this source.</p> <p>Daily visual inspections will be conducted in response to any complaints. If dust is deemed a nuisance from any of these inspections, mitigation measures will be enforced to reduce any dust emissions.</p> <p>The result of any inspections or investigations as a result of complaints will be recorded in the site diary.</p> <p>The Site Manager will be responsible for implementing risk management measures in accordance with operational and management procedures including the site's Dust Management Plan.</p>	Negligible.	Nuisance and harm to human health	Low
Dust from storage and transfer of waste	Sensitive receptors listed in Table 2 including residential, commercial, agricultural recreational and ecological receptors.	Air	<p>Waste will be loaded into a hopper which will be located external to the building. Following shredding, waste will be transferred to the digester via a fully enclosed auger. The digester will be located internally. After completion the post-process floc will be collected internally into a holding bay and dry stored until collection/ haulage off site.</p> <p>Waste awaiting processing will be dry stored within a holding bay in accordance with the current permitted arrangements.</p> <p>The aerobic digester accepts approximately 26 tonnes of waste each day. It is therefore a small scale activity.</p> <p>Daily visual inspections will be conducted in response to any complaints. If dust is deemed a nuisance from any of these inspections, mitigation measures will be enforced to reduce any dust emissions.</p> <p>The result of any inspections or investigations as a result of complaints will be recorded in the site diary.</p> <p>The Site Manager will be responsible for implementing risk management measures in accordance with operational and management procedures.</p>	Low	Nuisance and harm to human health.	Low
Bioaerosols released during aerobic digestion.	Sensitive receptors listed in Table 2 including residential, commercial, agricultural recreational and ecological receptors.	Air	<p>It is considered unlikely that the aerobic digester will emit significant levels of bioaerosols due to the small scale of the activity involving treatment of up to 26 tonnes of waste per day.</p> <p>Ambient monitoring of bioaerosols at the site of Advetec's at Cribbs Causeway Shopping Centre installation found bio-aerosols to be below levels of detection or</p>	Low	Nuisance and harm to human health	Low

			<p>very low in all samples.</p> <p>The digestion process is undertaken within a sealed vessel, benefiting from a carbon filter. This limits the release of bioaerosols from the treatment process.</p> <p>Daily visual inspections shall be undertaken at all areas of the site to check for conditions potentially affecting bioaerosol release. Records of the findings will be recorded in the sit diary.</p> <p>Operational areas and site surfaces shall be maintained in a clean condition; and processes shall take place in designated and controlled areas of the site.</p>			
To Water:						
Contaminated run off from aerobic digester.	Sensitive receptors listed in Table 2 including residential, commercial, agricultural recreational and ecological receptors. Groundwater.	Land	<p>Waste awaiting processing will be dry stored within a holding bay located externally in accordance the current permitted arrangements. Waste is stored within the digester while undergoing treatment. Floc generated by the digester will be collected into an internal holding bay and dry stored until collection / haulage off site.</p> <p>All wastes to be treated will be solid. No liquid wastes will be accepted.</p> <p>The treatment process is exothermic. The heating of the waste during the treatment process causes it to dry out with the moisture extracted and treated via the carbon filter.</p> <p>Condensate will be vented into the atmosphere.</p> <p>Waste received will be low risk non-hazardous in nature.</p> <p>The aerobic digestion process does not use water.</p> <p>The Site Manager will be responsible for implementing risk management measures in accordance with operational and management procedures.</p>	Low	Contamination	Very Low
Pests						
Birds, pests and insects attracted to waste stored around the compound and the residual flock produced from the aerobic digester.	Sensitive receptors listed in Table 2 including residential, commercial, agricultural recreational and ecological receptors.	Land, Water and Air	<p>Waste awaiting processing will be dry stored within a holding bay located externally in accordance the current permitted arrangements. Waste is stored within the digester while undergoing treatment. Floc generated by the digester will be collected into an internal holding bay and dry stored until collection / haulage off site. Site personnel will conduct daily inspections of waste storage areas for signs of scavenging animals.</p> <p>If scavenging animals are spotted a licenced contractor is contacted to remove them and the offending waste type will be investigated and removed if necessary.</p> <p>The Site Manager is responsible for management of scavenging animals.</p>	Low	Nuisance, potential risk to health	Very Low
Mud/Litter						
Litter from waste	Sensitive receptors listed in Table 2 including residential, commercial, agricultural recreational and ecological receptors.	Air	<p>Loading of waste into the process will be undertaken externally using a vehicle which will collect the waste from the holding bay and drop it into the hopper. Following shredding, waste will be transferred to the digester via a fully enclosed auger. The digester is located internally and will be fully enclosed. After completion the post-process floc will be collected into an internal holding bay and dry stored until collection/ haulage off site.</p> <p>The site will be inspected daily for signs of litter. The site benefits from good housekeeping. In the event that any litter is identified on site, it is cleared from the</p>	Low	Nuisance from litter. Dangerous conditions on roads.	Very Low

			<p>affected area.</p> <p>The Site Manager is responsible for managing emissions of litter on and off site.</p>			
Mud from vehicle movements	Local Road Network	Transferral of mud on vehicles wheels	<p>The access roads to the site are all tarmacked and therefore present low risk in terms of transferring mud.</p> <p>All site vehicles will be checked to ensure that they are clear of loose waste prior to leaving the site.</p> <p>Due to the small scale of residual waste produced from the aerobic digester, transport of the waste off site will be infrequent and therefore reduce the risk of mud being transferred.</p> <p>Good housekeeping will be put in place by the site manager, which involves daily cleaning and inspections.</p> <p>The site will be inspected daily for signs of litter, mud or waste. Any identified instances of mud, litter or waste are cleared immediately.</p> <p>The Site Manager is responsible for managing emissions of litter and mud on site.</p>	Low	Nuisance from mud. Dangerous conditions on roads.	Low

Table 6 Accidents Risk Assessment and Management Plan

What do you do that can harm and what could be harmed			Managing the Risk	Assessing the Risk		
Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequences	What is the overall risk
What has the potential to cause harm?	What is at risk/What do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? Who is responsible for what?	How likely is the contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
Leakage of fuel and oils	Local surface water features including rivers, streams and drains. Groundwater.	Land	There only fuel to be stored on site is within a 5,500 litre bunded secure tank. There is the potential for fuel spillage from the vehicles transferring residual waste from the site. The site will be monitored for any spillages associated with vehicle movements and any identified incidents are cleaned up as soon as they are identified. The result of any inspections or investigations as a result of complaints will be recorded in the site diary. The Site Manager will be responsible for implementing risk management measures in accordance with appropriate procedures outlined in the Operating Techniques.	Low	Contamination of surroundings	Very Low
Fire	Sensitive receptors listed in Table 2 including residential, commercial, recreational, ecological and agricultural receptors. Site personnel.	Air and Land	Floc generated by the digester will be collected into an internal holding bay and dry stored until collection / haulage off site. Permitted activities do not include the burning of waste. An internal temperature monitor continually assesses the temperature of the aerobic digester. The temperature measurements can be accessed via cloud-based portal. The system is programmed with alerts and alarms to notify the user of any temperature related risks. In the event of events such as arson and vandalism the incident is recorded in the site log and reported to the relevant authority. Site security measures are reviewed and improved where necessary. JW Waste benefits from restricted access areas and CCTV.	Low	Harm to human health, harm to operations, pollution of surroundings.	Low
Flooding	Sensitive receptors listed in Table 2 including residential, commercial, agricultural recreational and ecological receptors. Site personnel.	Land	The site lies in a Flood Zone 1, which is classified as "Land having a less than 1 in 1,000 annual probability of river or sea flooding". The Site Manager is responsible for the management of the site in the event of flooding.	Low	Harm to human health, contamination of groundwater and surface water.	Very low
Security and Vandalism	Sensitive receptors listed in Table 2 including residential, commercial, agricultural recreational and ecological receptors.	Air, Land and Water	In order to prevent unauthorised access, the Site has 24 hour monitored CCTV provision from an external company with links directly to the police and fire services. The site also benefits from a full-length gate which is CCTV covered. Only authorised personnel will have access to the site. The site is inspected at the commencement of each working day. Any defects or damage which compromise the integrity of the fencing and gates are made secure by temporary repair by the end of the working day. Permanent repairs are affected as soon as practicable. In the event that damage is sustained, repairs are made by the end of the working day.	Low	Nuisance, Contamination and harm to human health.	Low

			<p>If this is not possible, suitable measures will be taken to prevent any unauthorised access to the site and permanent repairs are affected as soon as practicable.</p> <p>The Site Manager will be responsible for managing security on site. This includes inspecting the site at the commencement of each day.</p> <p>All inspections, any defects, damage or repairs is recorded in the site diary.</p>			
--	--	--	---	--	--	--

4.0 CONCLUSION

To conclude, this ERA has been undertaken in accordance with EA guidance. The assessment is provided as part of the permit variation application for the JW Waste Aerobic Digester.

The qualitative risk assessment has considered that the proposed environmental permit for the site will not pose a significant risk of harm to sensitive receptors in the vicinity of the site predominantly due to both the small scale of the aerobic digestion activity and the location of the site within an underground compound.

The assessment concludes that with the implementation of the risk management measures described above, potential hazards from the proposed development are not likely to be significant and no further assessment is required.

EUROPEAN OFFICES

United Kingdom

AYLESBURY

T: +44 (0)1844 337380

BELFAST

belfast@slrconsulting.com

BRADFORD-ON-AVON

T: +44 (0)1225 309400

BRISTOL

T: +44 (0)117 906 4280

CARDIFF

T: +44 (0)29 2049 1010

CHELMSFORD

T: +44 (0)1245 392170

EDINBURGH

T: +44 (0)131 335 6830

EXETER

T: + 44 (0)1392 490152

GLASGOW

T: +44 (0)141 353 5037

GUILDFORD

T: +44 (0)1483 889800

LONDON

T: +44 (0)203 805 6418

MAIDSTONE

T: +44 (0)1622 609242

MANCHESTER

T: +44 (0)161 872 7564

NEWCASTLE UPON TYNE

T: +44 (0)191 261 1966

NOTTINGHAM

T: +44 (0)115 964 7280

SHEFFIELD

T: +44 (0)114 245 5153

SHREWSBURY

T: +44 (0)1743 23 9250

STIRLING

T: +44 (0)1786 239900

WORCESTER

T: +44 (0)1905 751310

France

GRENOBLE

T: +33 (0)6 23 37 14 14

Ireland

DUBLIN

T: + 353 (0)1 296 4667