Application to vary Environmental Permit No. EB3607KW

J W Waste Recycling Ltd

to include Advetec XO22 Aerobic Biodigestion Unit

[Second Application reflecting change to fully external siting of machine]

April 2024

ENVIRONMENTAL RISK ASSESSMENT

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1.0 INTRODUCTION

Following on from a very similar application made in 2023, J Witt Ltd (aka J W Waste Recycling Ltd.) made some equipment siting alterations meaning that application did not accurately reflect the current disposition of the site. It was withdrawn therefore.

For the first application SLR Consulting Limited (SLR) was instructed by Advetec Holdings Limited (Advetec) to prepare the application to vary JW Waste Recycling Limited's (JW Waste) existing environmental permit (EPR/EB3607KW). [An SR2015 No 6: 75kte; Standard Rules permit to operate a household, commercial and industrial waste transfer station with treatment.

The variation proposed was to include the operation of an Advetec XO22 Biodigestion Unit for the treatment of residual waste generated at JW Waste's Waste Treatment Transfer Station located at JW Waste Recycling Ltd, Newbury Works, Coleford, Radstock, BA3 5RX (hereafter referred to as 'the Site').

The second application for which this is the Environmental Risk Assessment (ERA) builds upon the work of SLR and remains largely unchanged except for the location of the Unit, which has since been delivered to site and placed in its desired position (but is not being currently operated). It 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 then to demonstrate that the risk of pollution or harm can be rendered acceptable by implementing appropriate measures to manage these risks.

The EA 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 digestor 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 Newbury Works industrial estate in which the Waste Transfer Station 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 several commercial properties within 500m of the Waste Transfer Station's environmental permit boundary. The closest, and largest, of these is Vobster Architectural, a cast stone company, located to the west of the Newbury Works site.

2.1.3 Local Transport Network

There are several small roads within a 500m radius of the site. The site is accessed via an unnamed road which leads past 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 ditch which is situated approximately 40m south of the site. This has no spring fed flow but what flow there is consists almost entirely of run-off from Newbury Works and the agricultural land which surrounds it.

This ditch then runs 150m south to a small brook which thereafter feeds into becomes the Mells River.

2.1.5 Agricultural/Open Ground

Except for Newbury Works industrial estate itself, the expanses of land within a 500m radius from the Site boundary predominantly consist of open ground and agricultural spaces on all points of the compass.

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

Within 500m of the Site there are a few residential properties situated both west and east of the site. Of these the most notable are the ten terraced houses known as Newbury Cottages (400m SWW).

Other residential properties are also located within the villages of Highbury located southwest of the site and Newbury located northwest 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) map[2].

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.

2.2.3 Hydrology

The Flood Map for Planning[3] 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 ditch 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.

[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

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

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 on the Newbury Works industrial estate, close to the Site boundary.
- Two Grade III buildings were also identified, the closest of which is unnamed building located approximately 715m north east of the site.

2.4.2 Registered Parks and Gardens

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, this, 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; or
- 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
Ditch	Surface water feature	South	40
Pond	Surface water feature	South	125
Newbury Cottages	Residential	South west	400
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 south west	300
Page House Farm	Residential	North East	500

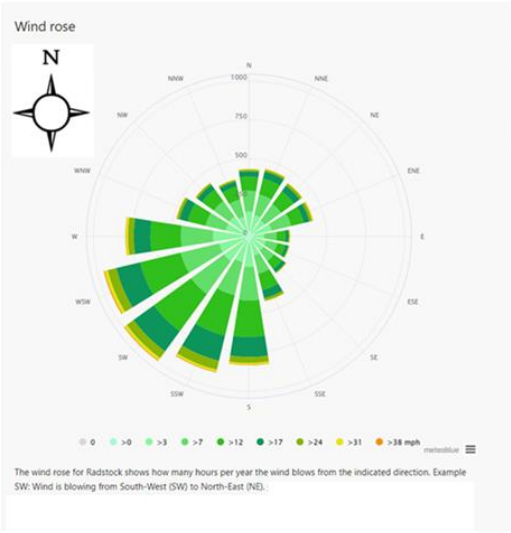
Upper Vobster Wood	Ancient woodland	West	850
Luckington Manor Farm	Residential	North West	500
Newbury	Village	North East	550
Ecological and Cultural Receptors within 2km			
Shipperidge Wood	Woodland	South East	340
Maggs Wood	Ancient woodland	South West	515
Unnamed building	Grade III Listed Building	North 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 generated by meteoblue.com from long term Meteorological Office and other observations taking into account local topography in the Radstock area.

The predominant wind direction is from the south west quadrant, with winds from other directions relatively less frequent.

Figure 1 Meteoblue Wind Rose



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 guidance[4] 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
Odour from loading and unloading operations involving waste on-site From loading waste into the aerobic digester Odour from treatment of waste through the aerobic digester. Odour from waste storage in the compound.	Sensitive receptors listed in Table 2 including residential, commercial, agricultural recreational and ecological receptors.	Air	Waste throughputs are speedy, the possibility of putrefaction in storage areas is therefore reduced considerably. Storage bays have been designed so that waste and debris do not build up in inaccessible areas such as corners. All such areas are cleaned regularly. 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. Referring to the aerobic digester; both this and its shredder are located externally. Vehicles will be used to transfer waste received onto Site in the Main Building from there into the hopper to be first shredded and then processed by the digester. The drop height of the waste into the hopper will be minimised to minimise “scattering” of waste which would otherwise increase potential for odour. Due to the small scale of the aerobic digester (less than 26 tonnes per day), the risk of odour from its operation is low. As the digestion process is aerobic odour generation is low compared to e.g. an anaerobic digestion process. Automatic control of the operation ensures that anaerobic conditions will not develop within the vessel. Further, as the vessel is sealed any venting thereof is via a carbon filter, which abates any odours which may be produced during the process. The postprocess floc generated by the XO22 Unit will be augered into an adjacent, covered, concrete “Lego” block, holding bay where it will be dry stored until collection from Site. There will be no opportunity for putrefaction. Under the auspices of the Site Manager odour levels on the Site are monitored daily, and were they detectable at the Site Boundary then remedial measures would be taken.	Low	Odour Nuisance and loss of amenity.	Very Low

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 Site Operations and from the aerobic digester.	Sensitive receptors listed in Table 2 including residential, commercial, agricultural recreational and ecological receptors.	Air	To date, since occupying the Site, the Company has received no complaints of noise. It is considered unlikely that there will be any significant incremental increase in noise or vibration generated by the aerobic digester due both to the relatively small scale of its activities (less than 26 tonnes per day) and to the enclosed nature of the process. Noise pollution will be reduced compared to activities without the digester, as transport required to transfer the waste residuals generated on Site will be less frequent. To ensure that noise and vibrations are limited, the following management techniques will be implemented: • 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 are kept in good repair which minimises potential for noise associated with uneven roads. 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. The Site Manager will be responsible for managing emissions of noise on Site.	Low	Noise disturbance and loss of amenity.	Very 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 ?	What is the risk that still remains? The balance of probability and consequence
To Air:						
Dust from vehicle movements bring waste onto Site, moving it around and transferring residual waste off the Site.	Sensitive receptors listed in Table 2 including residential, commercial, agricultural recreational and ecological receptors.	Air	The waste transfer station has concrete surfacing and vehicles approach Site over tarmacked roadways, so will not be tracking over dusty roads. Use of the digester will result in a reduction in vehicle movements thereby reducing the potential for any dust generation from, in particular, departing traffic. Referring to operation of the aerobic digester, following shredding, waste will be transferred to it via a fully enclosed auger. The digester is also fully enclosed. Storage of the postprocess floc generated by the machine will be in an adjacent covered holding bay. Waste awaiting processing is always dry stored in accordance with the currently permitted arrangements, but is seldom so dry as to cause dust problems. The aerobic digesters will accept approximately 26 tonnes of waste each day. It is therefore a small-scale activity. Daily visual inspections are conducted by the Yard Manager and if dust is deemed a nuisance mitigation measures are taken. Clearly this is more likely to be a problem in the summer and in the past dust suppression has been required. This has been successful and no complaints have been received about the Company's operations. Overall the Site Manager has responsibility for dust levels on Site.	Negligible.	Nuisance and harm to health	Low
Bioaerosols released during aerobic digestion.	Sensitive receptors listed in Table 2 including residential, commercial, agricultural recreational and ecological receptors.	Air	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. 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	Low	Nuisance and harm to human health	Low

			very low in all samples. The bioaerosol risk assessment* concluded that, the Total Mesophilic Bacteria (Total Viable Count - TVC) and Aspergillus fumigatus concentrations that might be expected at the nearest receptor are 9 CFU/m3 and 1.5 CFU/m3. Comparing these with a relevant Defra publication (see *) and the limit set by M9 of 1,000 CFU/m3 for Total mesophilic bacteria, and the limit of 500 CFU/m3 for Aspergillus fumigatus led to the conclusion that the risk anticipated at the nearest receptor will be in the low to negligible range. However, should levels not be acceptable in practice when operation commences then Advetec engineers will design, build and fit suitable abatement technology to the XO22 Unit(s). 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 site diary. 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.			
To Water:						
Contaminated runoff from external storage areas on Site or from the aerobic digester.	Sensitive receptors listed in Table 2 including residential, commercial, agricultural, and ecological receptors. Groundwater.	Land	Waste received onto Site and stored awaiting processing is located in the Main Building in accordance the current permitted arrangements. Once sorted and processed ready for dispatch from site e.g. graded wood this is stored in external holding bays created with interlocking precast concrete “Lego” blocks. These have a concrete base but are open to atmosphere. There is therefore the potential for rainwater runoff to be contaminated. To date this has been managed by careful segregation of waste so that only clean material is stored in this way. Further, storage times are minimised. To date it has passed inspection but strict adherence to Standard Rules now requires such runoff to be discharged to a sealed drainage system or the relevant holding bays be covered. This is now under the Company’s active review with the Local EA Site Inspector. Recycled aggregate produced from sorting and crushing of clean demolition materials meets the WRAP Quality Protocol for such material becoming a non-waste material. This is stored in the open and as uncontaminated material it is considered safe to do so. Once operational, waste loaded into the XO22 aerobic digester is contained while undergoing treatment. The postprocess floc generated by the XO22 Unit will be augered into an adjacent, covered, concrete “Lego” block, holding bay where it will be dry stored until collection from Site. In addition, the treatment process is exothermic so the associated gentle heating of the waste during the treatment process causes it to dry out with the moisture extracted and treated via the carbon filter. Any condensate generated will be vented into the atmosphere. {N.B. The aerobic digestion process does not use water.] All wastes received onto Site are solid, and of low risk non-hazardous in nature. Acceptance of liquid waste is prohibited by the Company.	Medium	Contamination	Low

			The Site Manager is responsible for implementing risk management measures in accordance with operational and management procedures.			
Pests						
Birds, pests and insects attracted to waste stored around the compound and the residual floc produced from the aerobic digester.	Sensitive receptors listed in Table 2 including residential, commercial, agricultural recreational and ecological receptors.	Land, Water and Air	Waste received onto Site and stored awaiting processing is located in the Main Building in accordance the current permitted arrangements. Waste that has been treated will be stored in external concrete "Lego" block holding bays. Some waste material will be contained within the digester while undergoing treatment. The postprocess floc generated by the XO22 Unit will be augered into an adjacent, covered, similar holding bay where it will be dry stored until collection from Site. It is not possible to avoid the attention of pests but their presence can be minimised so Site personnel conduct daily inspections of waste storage areas for signs of scavenging animals. If scavenging animals are spotted a licenced contractor will be contacted to deal with them and the offending waste type will be investigated and removed if necessary. The Site Manager is responsible for management of scavenging animals.	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	The Site is 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 affected area. Loading of waste into the Biodigestion process will be from a machine shovel filled from a pile temporarily stored in the enclosed Main Building. Care will be taken in scooping up the infeed material so that loose pice4s of litter are not close to the shovel's edges increasing the chance of them becoming	Low	Nuisance from litter. Dangerous conditions on roads.	Very Low

			windblown. The drop height of the waste into the hopper will be kept as low as possible to minimise the potential for "scattering" of litter. Following shredding, waste will be transferred to the digester via a fully enclosed auger. Storage of the postprocess floc generated by the machine will be in an adjacent covered holding bay. It is not expected that floc will be blown out of this but if, in practice, this should happen then steps will be taken to prevent it. Good housekeeping is established by the Site Manager, and involves daily cleaning and inspections looking for litter amongst other things.			
Mud from vehicle movements	Local Road Network	Transferral of mud on vehicles wheels	Regarding mud, there is little possibility of transferring it around site. Ground surfaces are concreted in the main and approach roads are tarmacked. In addition, all Site vehicles are checked to ensure that they are clean before leaving the Site. Nothing about the aerobic digester operation will cause mud to be created; transport of the postprocess floc off Site will be infrequent and therefore any risk of mud being transferred as a result of XO22 operation will be minimal. Good housekeeping is established by the Site Manager, and involves daily cleaning and inspections. Regarding mud (as with dust) daily visual inspections are conducted by the Yard Manager and if mud (or litter) were to be deemed a nuisance then mitigation measures would be taken.	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., kept secure in the Main Building thus minimising the chance of arson attack. Extracting fuel from the tank can only take place when operated using a key fob. There is always the potential for fuel spillage from the vehicles moving around the Site, and should this occur then spill kits are available for immediate clean-up. The Site is routinely monitored for any spillages of any sort. Any incidents identified incidents will be cleaned up, and a record made 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	On a waste site fire is an ever-present hazard. Operations are therefore conducted with this in mind. Storage of waste is largely in holding bays created with interlocking precast concrete “Lego” blocks. These are themselves fireproof. Bays are arranged so that one containing combustible material is separated from another by a bay containing non-combustible materials. Burning of waste never takes place on site: it is forbidden by the Company. Fire extinguishers are located at strategic points around the site, and are carried on vehicles. Full details of prevention measures and alarms are set out in the Fire Prevention Plan. Regarding the XO22, an internal temperature monitor continually assesses the temperature of the aerobic digester. The temperature measurements are relayed to Advetec telemetrically. The system is programmed with alerts and alarms to notify Site and Advetec staff of any temperature related risks. In the event of events such as arson or vandalism the incident is recorded in the Site log and reported to the relevant authority. Site security measures are reviewed and improved where necessary. The Site benefits from fencing with gated access which restricts entry. This area is covered with CCTV as are other strategic areas around Site.	Low	Harm to human health, harm to operations, resultant 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”. Not only this but the topography around the site is such that there is little likelihood of 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 is monitored 24/7 with CTTV provided by a specialist 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 waste compound area. In the event that damage is sustained repairs would be made by the end of the working day. If, for any reason, this were not to be possible, then suitable steps would be taken to prevent any unauthorised access to the Site and permanent repairs are affected as soon as practicable. The Site Manager will be responsible for managing security on Site. This includes inspecting the Site at the commencement of each day. Any repairs of defects or damage observed are recorded in the Site Diary.	Low	Nuisance, Contamination and harm to human health.	Low

4.0 CONCLUSION

To conclude, this Environmental Risk Assessment is provided as part of the permit variation application for the JW Waste Recycling Ltd's Site and includes provision of aerobic digestion facilities. It has been undertaken in accordance with published EA guidance.

The qualitative risk assessment has considered that the result of implementing 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 good managerial controls, and, in the case of the aerobic digestor, its small scale.

It is concluded 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.