

Project details	Environmental Permit Application EPR/GP3245QY/A001 North Dean Waste Recovery Facility
Applicant details	Calder Remediation Ltd North Dean Business Park Stainland Halifax HX4 8LR
Report details	Installation EP Application Appendix G: Environmental Risk Assessment Document reference: CRL_2022.01/001-6_v2
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1 Introduction

Calder Remediation Ltd (the ‘applicant’) has requested that Reva Environmental Ltd (the ‘agent’) prepares an Environmental Permit (EP) application, for a new installation at North Dean Business Park, Halifax, HX4 8LR.

At the time of writing this ERA, there is a permitted facility currently in operation at this location; the EP holder is MJB Plant Hire and Excavations Ltd. A partial surrender application has been submitted in parallel with this ASC application, to surrender the area of land that will be leased to the applicant. The reference for that partial surrender is EPR/HP3296EW/A002.

This ERA has been written in support of the application for a new bespoke installation EP at the site.

The new application seeks to allow the following activities:

- Section 5.3 A(1)(a)(ii) – Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving physico-chemical treatment of hazardous waste. This is the asbestos-containing soils treatment process that will be carried out in the warehouse building. The proposed throughput is up to 400 tonnes per day and 114,000 tonnes per year. Activity Ref. AR1.
- Section 5.3 A(1)(a)(i) – Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving biological treatment of waste. This is the bioremediation (bio-piles) activity which will be out in the yard area. There will be four (covered) treatment bays each able to hold up to 700 tonnes. These are processed on a two-to-four-week cycle depending on treatment; up to 100,000 tonnes per year. Activity Ref. AR2.
- Section 5.6 A(1)(a) – Temporary storage of hazardous waste with a total capacity exceeding 50 tonnes pending the recovery activity (R13). The maximum storage capacity is proposed to be 2000 tonnes at any one time, across 6 bays within the building. An additional two covered output bays for screened materials will provide storage of a further 600 tonnes. The latter are emptied daily as the materials are produced and tested prior to transfer off site. A covered asbestos skip is also kept within the building and provides 30 m³ capacity. Activity Ref. AR3.
- Waste Operation – waste transfer station. Storage of asbestos waste pending transfer off site for disposal or recovery. This would be limited to specified waste codes, received from third party waste contractors, and storage within the building in the covered skip referred to above. The waste codes are as proposed in Table SS4 of this document and relate to both fibrous bagged asbestos and asbestos-containing material including hardcore and concrete, asbestos cement roof sheeting and other bonded products. Activity Ref. AR4.

Five directly associated activities (DAAs) are also proposed as follows:

- Bulking/handling and storage of the segregated asbestos waste;
- On site storage, and use, of raw materials;
- Storage of treated waste pending transfer off-site for disposal (D15) or recovery (R13) activities;
- Management of process effluent from listed activities AR1 and AR2 using drainage channels and collection sumps and transfer off site for testing and disposal or recovery depending on the quality; and
- Management of uncontaminated surface (roof and clean yard) water.

Question 6 of EA application form Part B2 requires the provision of an environmental risk assessment (ERA). A qualitative risk assessment has been generated for the facility and the risk assessment methodology follows a source-pathway-receptor model. It also includes consideration of the habitat

sites that have been identified in the EA's pre-application screening advice (a copy of which is provided in Appendix A of the new application).

The qualitative risk assessment is presented in Table ERA1.

1.1 Site Layout and Setting

The site is in a commercial/industrial area, at National Grid Reference SE 09529 22095. It is approximately 3 km to the south of Halifax town centre. It sits in a commercial area and occupies land that was a water treatment works. It is bounded to the south by a WasteCare (battery treatment) facility, to the north and east by the River Calder, and to the west by a railway line and an oil storage depot.

The site comprises an area of land with a warehouse in the western portion and an open yard area immediately adjacent in the eastern portion. Access to the site is shared with the landowner but the EP site boundary is limited to the warehouse and the yard area. The warehouse is a steel framed portal building with a concrete base and walls to approximately 2 m and a clad metal roof and upper walls. It is separate from the adjacent building which lies outside of the EP boundary and has lockable doors for security. Vehicular access is from Station Road which runs along the western boundary; the access door is on the eastern side of the building which opens onto the yard.

Once vehicles have accessed the site via Station Lane, they will bring waste material and unload either into a designated bay in the warehouse, or into a (fixed covered) bio-remediation bay in the yard area. Exit from the EP area is via the same route.

Roof drainage and uncontaminated yard area surface water run-off is captured in a surface water drainage system which discharges to the River Calder.

The surrounding area is shown on **Drawing CRL-ND22-EP03 Site Setting** and summarised in Table ERA1.

Table ERA1: Site Setting

Direction	Local Setting
Northern Boundary	<ul style="list-style-type: none"> • MJB Excavations and Plant Hire lies immediately to the north and fills the northern extend of North Dean Business Park • The River Calder runs parallel with the site to the north at approximately 150 m • A sewage works lies to the north, immediately beyond the River Calder, at approximately 200 m at its closest point • The Calder and Hebble Navigation (canal – a Local Wildlife Site)) runs parallel with the River Calder to the north, the other side of the sewage works. Beyond this is Wakefield Road (A6026) • The town of Exley is to the northeast, beyond the river, the canal, and the A629 Halifax Road. The closest part of the residential area is at 250 m • Park Lane High School is in Exley and is approximately 500 m to the northeast • A large residential area (Skircoat) lies beyond Wakefield Road, and includes two schools, the closest of which is 500 m to the north of the site • The Calderdale Royal Hospital is also located in this area, at 900 m to the north • To the northwest, beyond the sewage works there is a recreation ground which lies in the intersection between the River Calder and the

	<p>railway line. To the north of the same run of railway line, beyond the sewage works and the canal there are allotment gardens, at 750 m from the site</p>
Eastern Boundary	<ul style="list-style-type: none"> • The River Calder runs parallel with the site, immediately to the east • Wakefield Road crosses Stainland road to the northeast, then Stainland road runs north to south at approximately 100 m to the east • The Calder and Hebble Navigation (canal) runs parallel with the River Calder to the east, the other side of Stainland Road, at approximately 200 m • There are several small areas of residential properties (including a farmhouse) beyond the A629 Halifax Road, the closest of which is The Henhouse at 500. • There is a cemetery (Elland Cemetery) beyond Halifax Road, to the southeast at 700 m • The majority of the land to the east of the site is open fields and some areas of woodland, with a network of public footpaths • The closest ecological site is Elland Park Wood (an Ancient Woodland and Local Wildlife Site) which lies at 175 m at its closest point
Southern Boundary	<ul style="list-style-type: none"> • Other commercial and industrial units lie immediately to the south, within the same business park. This extends approximately 250 m to the south where it is curtailed by the railway line that runs west to east • The southern border of the business park is an area of grassland with trees beyond which is Station Lane, the access road to the business park • There is a large area of grassland and woodland (the eastern extent of North Dean Wood) which borders the other side of the railway line, as far as Lindwell which is a mixed residential and commercial area lying at approximately 500 m at its closest point • Beyond Lindwell is another residential area, Cross Hill which borders the town of Elland. Elland lies at 1 km to the south of the site, beyond Saddleworth Road (B6114) • The River Calder bends to the east at just outside of 1 km to the south of the site
Western Boundary	<ul style="list-style-type: none"> • Other commercial and industrial units lie to the west, the other side of station lane • The western edge of the park is bordered by the railway line (and viaduct portion at approximately 180 m from the site) • Beyond the railway line to the west, extending for more than 1 km is North Dean Wood. This is a public open area with a network of footpaths and areas of woodland and is designated as Ancient Woodland.

The site is underlain by the Millstone Grit Group, as shown on the BGS 1:625,000 Solid Geology mapping. The site is situated on a combined secondary superficial aquifer, identified as being high vulnerability. It is on a productive bedrock aquifer (secondary aquifer – A) and a productive superficial aquifer (secondary aquifer – A) with well-connected fractures (a ‘high’ pollutant speed). The thickness of the superficial aquifer is less than 3 m and the pollutant speed is high.

It is not within a nitrate vulnerable zone (NVZ), nor is it within a Groundwater Source Protection Zone (SPZ), in fact there are none designated within 1 km of the site.

According to the groundwater flooding map (in Annex SCR2), there is the potential for groundwater flooding to occur at the surface. Whilst the datasheet suggests that the site is surrounded by areas designated as being at risk of extreme flooding from Rivers or sea without defences, the surface water flooding map identifies the site as being not at risk of flooding; the closest designation is the River Calder to the east which is designed as being high risk.

The site is within the area regulated by Calderdale Metropolitan Borough Council. This local authority has a number of Air Quality Management Areas (AQMAs), all of which have been declared for NOx.

1.2 Sensitive Receptors

1.2.1 General

Key sensitive receptors are considered to be those within 1 km of the site; the potential impact to these from certain sources will depend on the weather conditions. Figure ERA1 presents the wind rose for the area, for 2021, sourced from Bingley No.2 weather station.

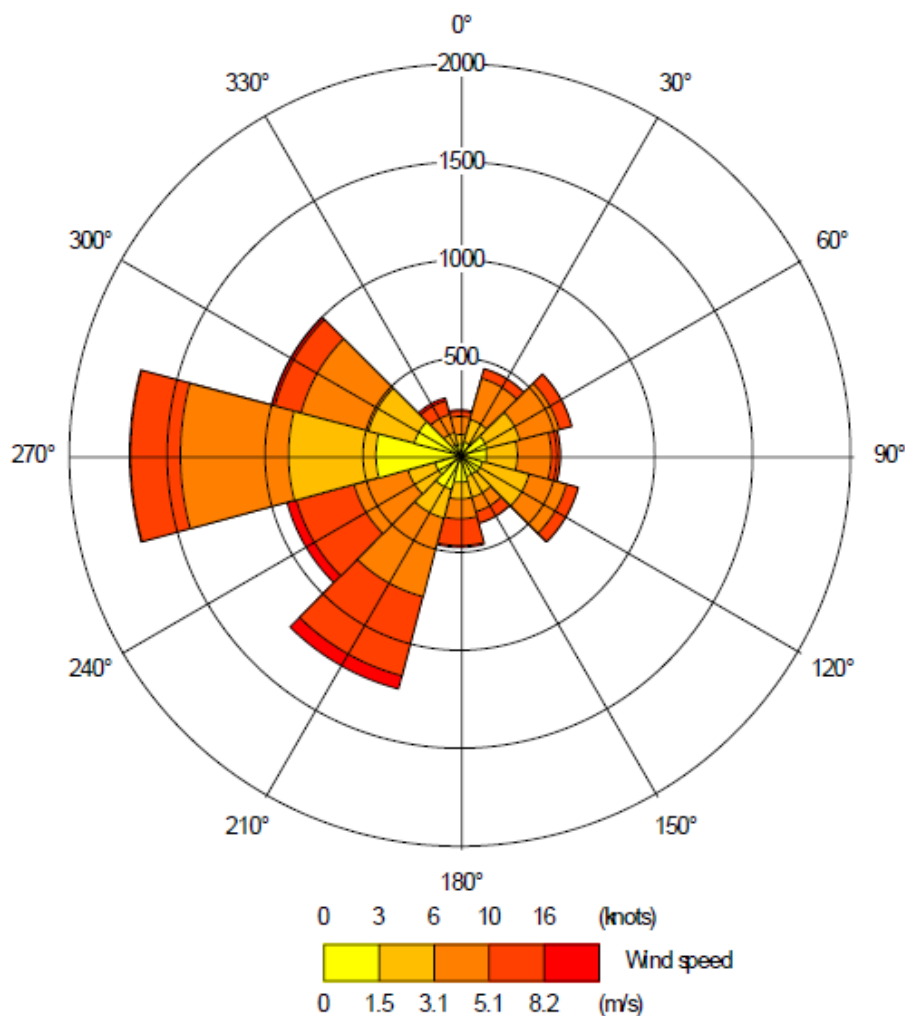


Figure ERA1: Wind Rose

This station is located 13.7 km to the north of the EP site and best represents the weather at the EP site. The other site considered was Emley Moor No.2, 16.2 km to the south-east of the site; both stations are similar in altitude, however, the data capture was highest for the Bingley site.

The perceived impact at receptors located down-wind are likely to be more than at those located cross or up-wind for certain sources like dust, litter, odour, noise. Some receptors are more sensitive than others, for example a residential area is likely to be more sensitive than an industrial estate.

Table ERA2: Sensitive Receptors within 1 km

Receptor	Distance at closest point	Direction	Receptor Type	Relative Risk of Impact
Residential Properties on the edge of Exley	250 m	Northeast	Residential properties – potential all-day presence	Moderate
Residential properties beyond A629 – The Henhouse	500 m	East	Residential properties – potential all-day presence	Moderate
Allotment gardens	750 m	North	Open space, transient use all day	Low
Park Lane Highschool, Exley	500 m	Northeast	Education properties –All-day presence during term time	Moderate
River Calder	150 m	North	River	Low
North Dean Wood (a LWS and Ancient Woodland	175 m	South	Public open space, transient use all day	Moderate
Workers in other premises in the Industrial Estate	Immediately adjacent	North and South	Commercial/industrial workplace, all day presence	Moderate
Calder and Hubble Navigation	200 m	East	Active canal public way with adjacent footpath	Moderate

The operator retains a list of the key sensitive receptors and contact details for each (where applicable) so that they can be alerted to an incident.

1.2.2 Nature Conservation Sites

The pre-application screening advice from the EA identifies the following sites within the specified distance criteria from the facility.

- Special Area of Conservation (SAC) – South Pennine Moors. This is an area spanning approximately 65,000 hectares and 10 unitary authorities. The primary reason for the designation is as a habitat for upland dry heath which occupies the lower slopes of the moors on mineral soils or where peat is thin. It occurs in transitions to acid grassland, wet heath and blanket bogs. The moors support a rich invertebrate fauna, especially moths, and important bird assemblages (source: jncc.gov.uk).

It is considered that the moorland would be sensitive to dust, litter, odour, pests, noise and fire, given its designation for dry heath and fauna.

- Special Protection Area (SPA) – South Pennine Moors Phase II. The site includes the major moorland blocks of the South Pennines from Ilkley in the North to Leek and Matlock in the South. It covers extensive tracts of semi-natural moorland habitats including upland heath and blanket mire. The diver mosaic of habitats contributes greatly to the ornithological interest, which comprises birds of prey and waders, breeding moorland and moorland fringe birds. Of national importance are the breeding populations of Merlin and Golden Plover for which the moors serve an important role in maintaining these (source: Natural England).

It is considered that this part of the moorland would also be sensitive to dust, litter, odour, pests, noise and fire, given its designation for dry heath and fauna.

- Local Nature Reserve (LNR) – Scarr and Long Woods. These are two areas of publicly owned woodland, measuring 12 hectares and located within the urban fringe of Halifax, between Copley and Skircoat. They form part of the typical escarpment oak woodland and support a rich diversity reminiscent of ancient woodland. Public footpaths run through each woodland, and Scarr wood offers a number of bouldering and climbing routes (source: Calderdale Council).

Whilst these woods are not understood to support designated habitats for wildlife, they do support woodland and are used transiently by the public. They are therefore considered to be sensitive to dust, litter, odour and fire.

- Local Wildlife Sites (LWS) – Elland Park Wood, Calder and Hubble Navigation, North Dean Wood, Scarr and Long Woods, and Rochdale Canal. LWSs are areas of land that are deemed especially important for their wildlife. Elland Park Wood is a large area of semi-natural acid and neutral ancient woodland; Scarr and Long Woods are described above; the Calder and Hubble Navigation is a broad inland waterway (canal); North Dean Wood is an area of oak and birch wood on the hillside outside Greetland, housing an extensive network of footpath and a variety of plant and birdlife; Rochdale Canal is an inland waterway and hosts a variety of plants and wildlife habitats. Whilst outside of the SAC and SSSI screening distance for the CRL application, it is noted that parts of the Rochdale Canal are designated as both (in 2000).

It is considered that these sites would be sensitive to dust, litter, odour, pests, noise and fire, given their designation for their importance for wildlife.

- Ancient Woodland – Elland Park Wood, Long Wood, and North Dean Wood. Ancient Woodland takes hundreds of years to establish and is defined as an irreplaceable habitat. It can be a valuable natural asset, supporting wildlife (including rare and threatened species), but also in terms of soils and carbon capture and storage. Wood pasture is land that has been managed through grazing. It is often made up of a mixture of habitats that support wildlife and is home to veteran and ancient trees (source: Woodland Trust)

It is considered that the woodland would be sensitive to dust, litter, odour, pests, noise and fire.

These, and other sensitive receptors as listed in Table ERA2, are identified on **Drawing CRL-ND22-EP03 Site Setting**.

Table ERA3: Risk Assessment

Hazard	Receptor	Harm	Pathway	Likelihood of Exposure; Consequence; Magnitude of Risk			Justification of Magnitude	Control Measures	Residual Risk
Releases of particulate matter (dusts)	Local human population/presence- the closest residential receptors are at 250 m to the northeast of the site (Exley); the closest commercial receptors are the other units on the estate; ecological sites – the closest is North Dean Wood (a LWS and Ancient Woodland) at approximately 175 m to the south	Nuisance - dust on cars, clothing etc.	Transportation through air then inhalation or deposition	Med	Med	Med	Permitted wastes are dusty; although they arrive in articulated vehicles, waste is stored at the site and receptors are sensitive to dust deposition and inhalation; proximity of closest residential receptors and transiently used paths/routes	Wastes are delivered in enclosed vehicles. No raw materials used are dusty. Wastes are stored in the building (closed on all sides) under tarpaulin, or in the yard area (also under cover). Both processes are inherently damp, and this is maintained with misting systems. Air extraction is in place over the asbestos treatment process (picking cabins) and the bio-remediation bays and is filtered for particulates. Filters subject to regular maintenance and service and replaced regularly. Doors to the building remain closed outside of loading/offloading times. A bowser is available for dampening of waste and of material (product) stockpiles and yard/road if required. Road sweepers are also available. Daily visual monitoring of dust levels is carried out by the site team.	L
		Harm to human health - respiratory irritation and illness; harm to ecological features through toxic contamination or smothering		M	M	M			L

Hazard	Receptor	Harm	Pathway	Likelihood of Exposure; Consequence; Magnitude of Risk			Justification of Magnitude	Control Measures	Residual Risk
Releases of asbestos-containing materials/dusts from waste storage and processing	Workers/contractors at the site; local human population/presence- the closest residential receptors are at 250 m to the northeast of the site (Exley); the closest commercial receptors are the other units on the estate; ecological sites – the closest is North Dean Wood (a LWS and Ancient Woodland) at approximately 175 m to the south	Harm to human health - respiratory irritation and illness; harm to ecological receptors	Transportation through air then inhalation	M	H	M	Waste is asbestos containing however not fibrous asbestos (this is not permitted); arrive in articulated vehicles, waste is stored at the site and receptors are sensitive to dust deposition and inhalation; proximity of closest residential receptors and transiently used paths/routes	Wastes are delivered in enclosed vehicles. Treatment is within the building and the picking cabin benefits from a pre and post-dust suppression spray. The picking cabin is under LEV which is filtered for dusts prior to release. A bowser is available for dampening of waste and of material (product) stockpiles and yard/road if required. Road sweepers are also available. Daily visual monitoring of dust levels is carried out by the site team.	L
Fire from storage and/or processing of waste	Local human population/presence- the closest residential receptors are at 250 m to the northeast of the site (Exley); the closest commercial receptors are the other units on the estate; ecological sites – the closest is	Respiratory irritation, illness, and nuisance to local population. Injury to staff, fire fighters or arsonists / vandals.	Air transport of smoke. Spillages and contaminated firewater by direct run-off from site and via surface water drains and ditches	L	H	M	The impact of a fire on the immediate local area can be significant, and the pollution requiring short to medium term remediation. The wastes are not combustible	The waste is not hugely combustible. Waste turnaround is high (<2 weeks), storage of untreated waste is all within the building. Regular inspections and maintenance of key process plant and equipment (following planned preventative maintenance programme). Thermal cut outs on applicable	L

Hazard	Receptor	Harm	Pathway	Likelihood of Exposure; Consequence; Magnitude of Risk			Justification of Magnitude	Control Measures	Residual Risk
	North Dean Wood (a LWS and Ancient Woodland) at approximately 175 m to the south	Pollution of water or land from run-off of contaminated fire water. Harm to ecological features through toxic contamination or smothering						equipment (e.g. electrical drives and inverters). All reasonable precautions will be taken to prevent the outbreak of fire. In the first instance site staff will extinguish the fire where possible, if required the fire brigade will be contacted. Pollution control measures including impermeable hardstanding and sealed drainage system which further provide protection in terms of storage capacity for fire water. Water would be tested prior to discharge following fire to identify if it can be discharged. Raw materials may be flammable but are stored in proprietary containers, in small quantities and held in a dedicated store within the warehouse building.	
Litter	Local human population/presence - the closest residential receptors are at 250 m	Nuisance, loss of amenity and harm to	Air transport then deposition	L	M	M	It is acknowledged that local residents and habitat receptors are often	Doors to the building remain closed outside of loading/offloading times; waste bays within the building benefit	L

Hazard	Receptor	Harm	Pathway	Likelihood of Exposure; Consequence; Magnitude of Risk			Justification of Magnitude	Control Measures	Residual Risk
	to the northeast of the site (Exley); the closest commercial receptors are the other units on the estate; ecological sites – the closest is North Dean Wood (a LWS and Ancient Woodland) at approximately 175 m to the south	wildlife (disturbance)					sensitive to litter emissions however permitted wastes are not litter-generating. Waste that could generate litter will be limited to office and welfare facilities so small scale and managed in standard bins.	from retractable tarpaulin covers which remain over all but the bay being processed; bio piles are under a fixed roof, also with a tarpaulin frontage and under negative pressure	
Waste and mud on local roads	Local human population/presence- the closest residential receptors are at 250 m to the northeast of the site (Exley); the closest commercial receptors are the other units on the estate. Access to the site is off Station Lane to the south and which runs along the western boundary; this joins Stainland Road (B6112)	Nuisance, loss of amenity, road traffic accidents	Vehicles entering and leaving the site	L	M	M	Road safety, local residents often sensitive to mud on roads.	During wet weather, daily inspection will identify if there are any areas of build-up of mud on internal and local roads and any issues will be cleared as soon as practicable; the facility and site roads are constructed of concrete; jet wash facilities are available on site to remove mud from tyres within the site boundary; road sweepers are also available; any complaints will be recorded and an	L

Hazard	Receptor	Harm	Pathway	Likelihood of Exposure; Consequence; Magnitude of Risk			Justification of Magnitude	Control Measures	Residual Risk
	at approximately 250 m from the site entrance							investigation will be undertaken and findings acted upon.	
Odour	Local human population/presence - the closest residential receptors are at 250 m to the northeast of the site (Exley); the closest commercial receptors are the other units on the estate; ecological sites – the closest is North Dean Wood (a LWS and Ancient Woodland) at approximately 175 m to the south	Nuisance, loss of amenity	Air transport then inhalation	M	M	M	Residents and public area users are often sensitive to odour, permitted waste types have low potential for odour	Doors to the building remain closed outside of loading/offloading times; waste bays within the building benefit from retractable tarpaulin covers which remain over all but the bay being processed; bio piles are under a fixed roof, also with a tarpaulin frontage and under negative pressure; air extraction at the bio-piles operates at all times and the extract filtered for VOCs; daily qualitative monitoring of odour is carried out by the site team. Raw materials may be odorous but are stored in proprietary containers, in small quantities and held in a dedicated store within the warehouse building. Where they are used in the bio-remediation process, this is an area that is subject to negative	L

Hazard	Receptor	Harm	Pathway	Likelihood of Exposure; Consequence; Magnitude of Risk			Justification of Magnitude	Control Measures	Residual Risk
								pressure under an LEV system which is filtered for VOCs.	
Noise and vibration	Local human population/presence - the closest residential receptors are at 250 m to the northeast of the site (Exley); the closest commercial receptors are the other units on the estate; ecological sites – the closest is North Dean Wood (a LWS and Ancient Woodland) at approximately 175 m to the south	Nuisance, loss of amenity; harm to ecological features through disturbance	Noise through the air and vibration through the ground	M	M	M	Residents often sensitive to noise and vibration, closest residents are 250 m from the site; the site is within an existing operational industrial area.	Screening operations are within a fully enclosed building. Any complaints will be recorded, and an investigation will be undertaken and finding acted upon. Audible high-level alarms on process plant are within the confines of the building.	L
Scavenging animals (e.g., rats) and scavenging birds	Local human population/presence - the closest residential receptors are at 250 m to the northeast of the site (Exley); the closest commercial receptors are the other units on the estate; ecological sites – the closest is North Dean	Harm to human health - from waste carried off site and faeces. Nuisance and loss of amenity. Harm to ecological features	Air and over land	L	M	M	Location of site relative to canal and river; permitted wastes and raw materials are unlikely to attract scavenging animals and birds; waste received is	Doors to the building remain closed outside of loading/offloading times; waste bays within the building benefit from retractable tarpaulin covers which remain over all but the bay being processed; bio piles are under a fixed roof, also with a tarpaulin frontage and under negative pressure.	L

Hazard	Receptor	Harm	Pathway	Likelihood of Exposure; Consequence; Magnitude of Risk			Justification of Magnitude	Control Measures	Residual Risk
	Wood (a LWS and Ancient Woodland) at approximately 175 m to the south	through predation					all non-biodegradable	Pest control measures are in place.	
Pests (e.g., flies)	Local human population/presence - the closest residential receptors are at 250 m to the northeast of the site (Exley); the closest commercial receptors are the other units on the estate; ecological sites – the closest is North Dean Wood (a LWS and Ancient Woodland) at approximately 175 m to the south	Harm to human health, nuisance and loss of amenity; Harm to ecological features through predation	Air and over land	L	M	M	Location of site relative to canal and river; permitted wastes and raw materials are unlikely to attract pests; waste received is all non-biodegradable	Doors to the building remain closed outside of loading/offloading times; waste bays within the building benefit from retractable tarpaulin covers which remain over all but the bay being processed; bio piles are under a fixed roof, also with a tarpaulin frontage and under negative pressure. Pest control measures are in place.	L
Spillage of liquids	Local human population/presence - the closest residential receptors are at 250 m to the northeast of the site (Exley); the closest commercial receptors	Harm to human health and animal health	Via drains, surface water run-off	L	M	M	Permitted wastes do not include liquids	Incoming waste stored within the building on impermeable hardstanding with sealed drainage to sump; bio-piles also have impermeable base with drainage channel and sump (sealed drainage system); raw	L

Hazard	Receptor	Harm	Pathway	Likelihood of Exposure; Consequence; Magnitude of Risk			Justification of Magnitude	Control Measures	Residual Risk
	<p>are the other units on the estate; ecological sites – the closest is North Dean Wood (a LWS and Ancient Woodland) at approximately 175 m to the south</p>							<p>materials stored in locked cage area within the building, in small quantities and in proprietary containers; diluted mix held in bowser for bio-remediation process will be stored within the building when not in use; visual inspection of sump and drainage integrity, accessed only by trained personnel.</p>	
<p>Flooding of site</p>	<p>Local human population/presence - the closest residential receptors are at 250 m to the northeast of the site (Exley); the closest commercial receptors are the other units on the estate; ecological sites – the closest is North Dean Wood (a LWS and Ancient Woodland) at approximately 175 m to the south</p>	<p>Waste and/or raw materials washed off site may contaminate downstream receptors</p>	<p>Flood waters flowing over land and soaking into the ground</p>	<p>M</p>	<p>M</p>	<p>M</p>	<p>Permitted waste types include hazardous; site is not within a surface water flood plain but is at risk of groundwater flooding</p>	<p>Incoming waste is stored above ground either within the covered bio-piles or within the fully enclosed building; both areas, and the yard between benefit from impermeable hardstanding; protection is therefore afforded from groundwater flooding; raw materials are stored within the building in proprietary containers.</p>	<p>L</p>

Hazard	Receptor	Harm	Pathway	Likelihood of Exposure; Consequence; Magnitude of Risk			Justification of Magnitude	Control Measures	Residual Risk
Arson and / or vandalism causing the release of polluting materials to air (smoke or fumes), water or land	Local human population/presence - the closest residential receptors are at 250 m to the northeast of the site (Exley); the closest commercial receptors are the other units on the estate; ecological sites – the closest is North Dean Wood (a LWS and Ancient Woodland) at approximately 175 m to the south	Respiratory irritation, illness and nuisance to local population. Injury to staff, fire fighters or arsonists/vandals. Pollution of water or land. Harm to ecological features through toxic contamination or smothering	Air transport of smoke. Spillages and contaminated firewater by direct run-off from site and via surface water drains and ditches.	M	H	H	The impact of a fire on the immediate local area can be significant, and the pollution requiring short to medium term remediation; The wastes are not combustible	Site is secure by palisade fencing and lockable gates; there is a fire alarm and CCTV. During operational hours access is only granted to authorised vehicles and visitors; pollution control measures including impermeable hardstanding and surface water / effluent management infrastructure provides protection in terms of providing storage capacity for fire water. Water will be tested prior to discharge following fire to identify if it can be discharged.	L
Storage of hazardous raw materials	Local human population/presence - the closest residential receptors are at 250 m to the northeast of the site (Exley); the closest commercial receptors are the other units on the estate; ecological	Respiratory irritation, illness, and nuisance to local population. Harm to human health and animal	Spillages by direct run-off from site and via drains, surface water run-off. Direct contact with skin (absorption),	L	H	M	Raw materials in their concentrated form can be toxic to human and animal health. Raw materials include diesel, dust/odour suppressant spray, bio-treatment	SDSs are kept for all raw materials (see Annex BAT1 of the EP application) and materials are stored and handled in accordance with the COSHH Assessments. Raw materials are stored in proprietary containers, in small quantities and held in a	L

Hazard	Receptor	Harm	Pathway	Likelihood of Exposure; Consequence; Magnitude of Risk			Justification of Magnitude	Control Measures	Residual Risk
	sites – the closest is North Dean Wood (a LWS and Ancient Woodland) at approximately 175 m to the south	health. Injury to staff, fire fighters or arsonists/vandals. Pollution of water or land. Harm to ecological features through toxic contamination or smothering	inhalation of gases				agents (including hydrogen peroxide), activated carbon and HEPA filters	<p>dedicated caged store within the warehouse building which is locked when not in use. The diluted mix held in a bowser for bio-remediation process will be stored within the building when not in use.</p> <p>Raw material reviews are carried out regularly. Inspection programme covers the storage cage and bowser. Spillage procedures apply, spillage kits are available, and staff are trained to manage spillages</p>	

2 Conclusion

Further details on the control measures are provided in the BAT Assessment completed for the variation application (Appendix H of the variation application, ref. CRL_2022.01/001-7). These include details on:

- Waste pre-acceptance
- Waste acceptance
- Waste storage, handling and dispatch
- Use of raw materials (chemicals, water)
- Treatment validation
- Emissions monitoring

On the basis of this and the assessment above, which follows the H1 approach for risk assessment, it is considered that the control measures that are either already in place at the site for the current permitted activities or are proposed to be implemented for the new activities are appropriate.

The ERA is a live document and will be subject to regular review throughout the life of the permitted operations. It will also be amended, if required, following any significant change to operations, an incident resulting in an environmental impact, and/or any substantiated complaints.