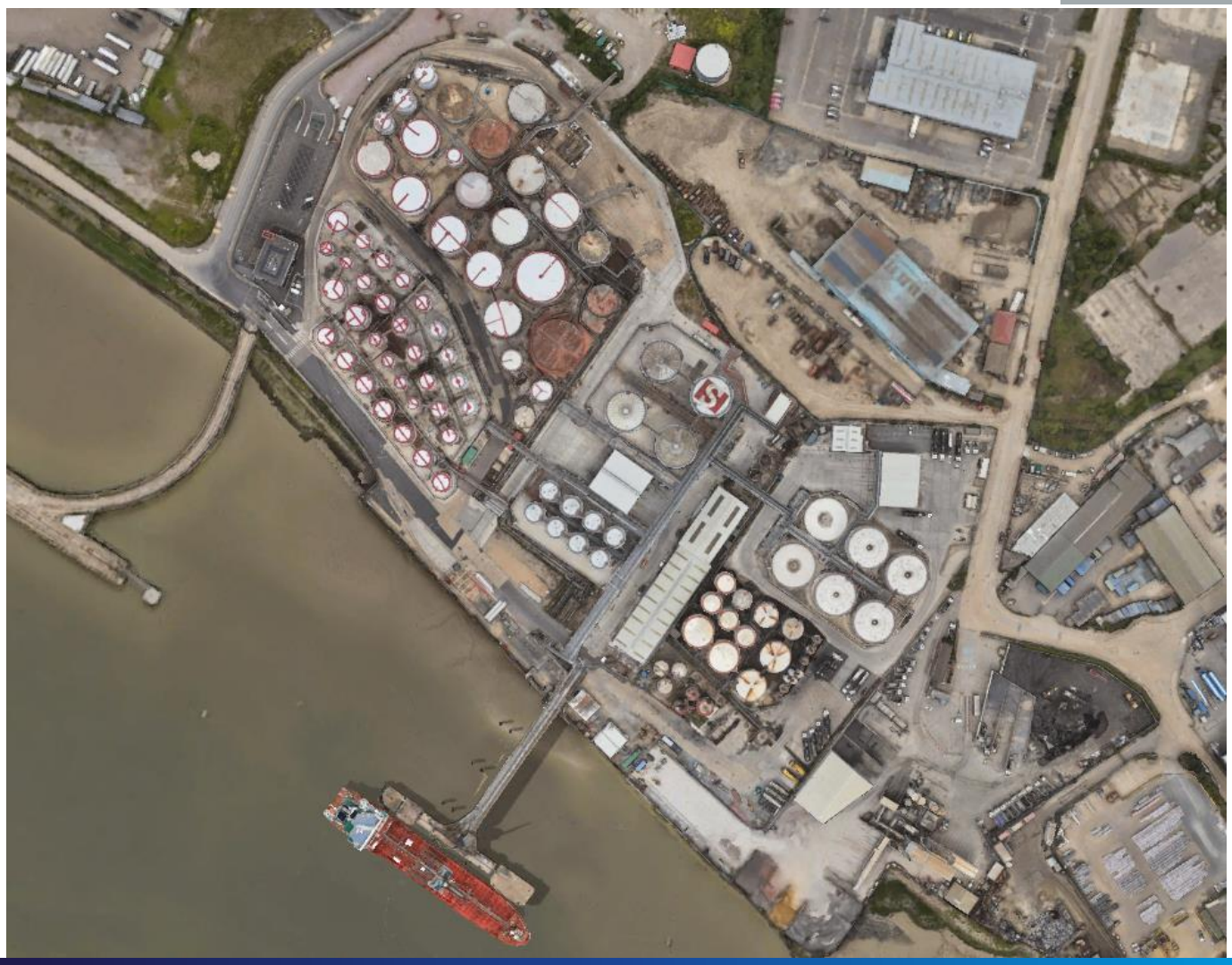

ENVIRONMENTAL RISK ASSESSMENT FOR WASTE PERMIT APPLICATION FOR STOLTHAVEN DAGENHAM LTD SITE

Report for: Stolthaven Dagenham Ltd

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Glossary

Abbreviation	Definition
BAT	Best Available Techniques
BAT-AEL	Best Available Techniques – Associated Emission Level
BATc	Best Available Techniques Conclusions
BREF	Best Available Techniques Reference document
COMAH	The Control of Major Accident Hazards Regulations 2015
CEMS	Continuous emissions monitoring system
CMMS	Computerised maintenance Management System
CIP	Clean in Place
DAA	Directly Associated Activity
EHSM	Environmental, Health and Safety Management System
ELV	Emission Limit Value
EMS	Environmental Management System
EA	Environment Agency
EPR	The Environmental Permitting (England and Wales) Regulations 2016
EWC	European Waste Catalogue
HGV	Heavy Goods Vehicle
IED	Industrial Emissions Directive
MAPP	Major Accident Prevention Policy
OMP	Odour Management Plan
SMS	Safety Management System
SHEQ	Safety, Health, Environmental and Quality
TCM	Technically competent manager
UCO	Used Cooking Oil

1. INTRODUCTION

1.1 BACKGROUND

Ricardo has been commissioned by Stolthaven Dagenham Ltd (SDL) to support on the permit application for the Stolthaven Dagenham Ltd Facility, Choats Road, Dagenham, RM9 6PU, hereafter referred to as "the Facility". This document forms part of the environmental permit application referenced EPR/MB3004LK/A001. This document has been prepared in partnership with SDL to develop and produce an Environmental Risk Assessment based on the proposed waste operations.

The aim of the assessment is to identify any significant risks to the environment and human health associated with the proposed changes to the regulated activities and to demonstrate that the risk of pollution or harm will be acceptable by taking the appropriate measures to manage these risks.

1.2 SUMMARY OF PROPOSED PERMIT APPLICATION

The proposed waste activities will consist of the storage and treatment of up to 300,000 tonnes per annum of used cooking oil (UCO), food waste and tallow. This will consist of the reception, handling, storage and treatment of non-hazardous waste. Wastes will be stored in engineered sealed above ground storage tanks. There are no below ground storage tanks utilised at the Facility. Tanks will also be heated using steam from a 980 kw/h gas-fired boiler.

2. IDENTIFICATION OF SENSITIVE RECEPTORS

2.1 ENVIRONMENTAL SETTING

SDL is proposing to develop and construct the waste storage Facility on an existing site operating a COMAH liquid fuel and chemical storage Facility. This is located on a large industrial estate approximately 2km south of Dagenham and the A38 road.

The site is surrounded by a mixture of large industrial and smaller commercial units, including waste transfer facilities, manufacturing, a café, warehousing, vehicle hiring and road stone storage. The surrounding areas have been used for industrial usage including bulk liquid storage, a works with gasometer, oil depot, bus depot, cable works and a power station.

The River Thames is 100m to the south of the site. Directly beyond the river is the Crossness Pumping Station and Sewage Treatment Works.

The site geology underlying the site consists of superficial deposits of Tidal River or Creek Deposits – Clay and Silt and Alluvium – Clay, Silt, Sand and Peat and bedrock comprising Thanet Formation - Sand. Thanet formation is typically composed of homogeneous, bioturbated, glauconitic silty fine-grained sand, with sandy silt. The site is located on a Secondary A aquifer, which is classified as moderately productive and described as "poorly cemented sands yielding moderate supplies where saturated".

The site is not located on a ground water protection zone (GPZ). The site lies within Flood Zone 3, which means it has a high probability of flooding from rivers and sea. Due to the proximity of the River Thames, there is a risk of flooding to the site. The site is downstream of the Thames Barrier and is hence not protected by it.

2.2 RELEVANT SENSITIVE RECEPTORS

The Environment Agency's (EA's) "Risk Assessments for your Environmental Permit"[1] states that receptors need to be identified which are potentially at risk from the site's activities with a focus on the main receptors at risk, but that other receptors nearby must also be identified. For the purpose of this ERA and in line with EA guidance for air emissions activities, a 10km radius from the site's permit boundary has been adopted for the following sites:

- Special protection areas (SPAs)
- Special areas of conservation (SACs)
- Ramsar sites

[1] https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit

There are no SPAs, SACs or Ramsar sites within 10km of the proposed site boundary. The closest site is Epping Forest SAC, which is approximately 10.5km to the northwest of the site.

A radius of 2km has been used for the following sites:

- Sites of special scientific interest (SSSIs)
- Local nature reserves (LNRs)

Figure 1. SSSIs and LNRs within 5km. Source: Defra MAGIC map

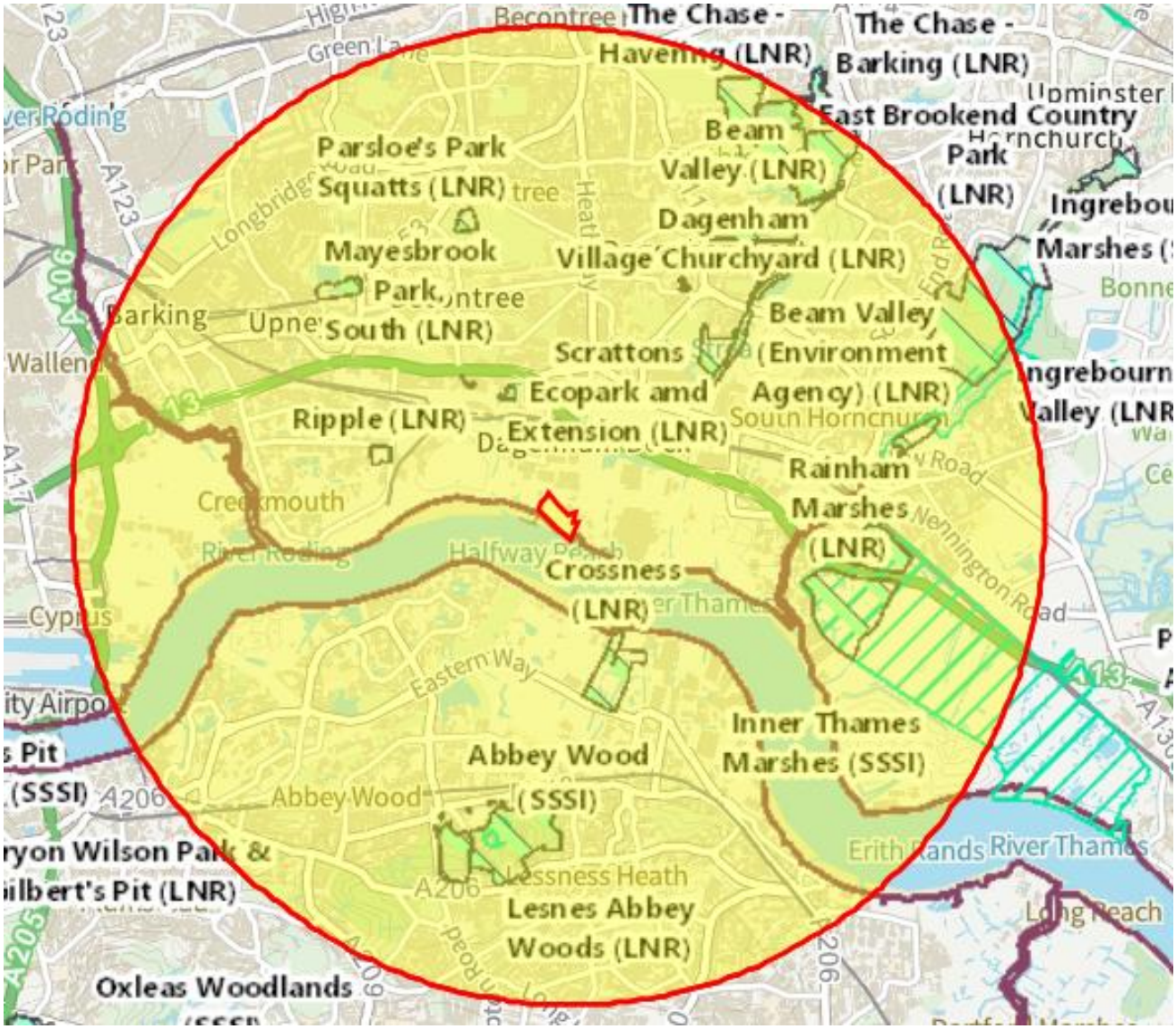

Table 1. SSSIs and LNRs within 5km

Receptor name	Receptor type	Approximate distance from permit boundary (km)	Direction from Facility
Abbey Wood SSSI	SSSI	3.1	South
Ingrebourne Marshes SSSI	SSSI	3.2	East
Inner Thames Marshes SSSI	SSSI	2.4	East
Beam Valley	LNR	1.9	Northeast

Receptor name	Receptor type	Approximate distance from permit boundary (km)	Direction from Facility
Crossness	LNR	1.1	South
Dagenham Village Churchyard	LNR	2.6	Northeast
East Brookend Country Park	LNR	4	Northeast
Ingrebourne Valley	LNR	3.4	East
Lesnes Abbey Woods	LNR	2.9	South
The Chase – Havering	LNR	4.1	Northeast
Beam Valley (Environment Agency)	LNR	1.9	Northeast
The Chase – Barking	LNR	4.1	Northeast
Mayesbrook Park South	LNR	2.9	Northwest
Rainham Marshes	LNR	2.4	East
Parsloe's Park Squatts	LNR	2.9	North
Scrattons Ecopark and Extension	LNR	1.1	North
Ripple	LNR	1.7	West

The EA's pre-application nature and heritage conservation screening identified the following sensitive receptors within the relevant screening distances:

Table 2. Nature and heritage conservation screening results

Receptor name	Receptor type	Screening distance used (m)	Direction from Facility
River Thames and tidal tributaries	Local wildlife site	200	South
Mudflats	Protected habitats	50	South
European Eel migratory route	Protected species	500	South
Atlantic Salmon migratory route	Protected species	500	South
Twaite Shad migratory route	Protected species	500	South
Allis Shad migratory route	Protected species	500	South
River Lamprey migratory route	Protected species	500	South
Sea Lamprey migratory route	Protected species	500	South
Smelt migratory route	Protected species	500	South
Smelt	Protected species	500	South

A radius of 1km from the site's permit boundary has been adopted for all other potentially sensitive receptors.

Table 3. Other Sensitive Receptors within 1km

Receptor name	Receptor type	Approximate distance from permit boundary (km)	Direction from Facility
Unnamed Footpath	Public Footpath	0.6	West
Thames Footpath	Public Footpath	0.9	South

Receptor name	Receptor type	Approximate distance from permit boundary (km)	Direction from Facility
River Thames	Water	0	South
Lytham Close, St Andrews Close and beyond	Residential area	0.8	South
Lytham Close play area	Playground	0.8	South
Basketball court	Playground	1	South

The nearest receptors such as commercial business units are:

- Immediately to the east is waste transfer station (White Skip Hire), Enjoy Café, MMS Supplies (skip company) and an Ocado distribution warehouse.
- Immediately to the southeast is Eurovia Roadstone, HKS The Metal Company and Linen Sale (textile merchant)
- Immediately to the west is a Riverside Autos (vehicle rental and repair).

A search on the Historic England website has identified listed buildings within 1km of the proposed permit boundary. These are as follows:

- Grade II listed building - Jetty Number 4 and approach, formerly at Samuel Williams and Company. Dagenham Dock.
- Grade I listed building – Crossness Pumping Station
- Grade II listed building - Workshop range to Southwest of Main Engine House Crossness Pumping Station.
- Grade II listed building - Workshop range to Southeast of Main Engine House Crossness Pumping Station.

There are no schools, hospitals or agricultural areas within 1km of the site boundary.

3. ENVIRONMENTAL RISK ASSESSMENT

This section provides an assessment of risks to sensitive receptors from foreseeable incidents and accidents that could arise from operation of SDL's proposed Facility. The assessment has been completed in accordance with the EA's "Risk assessments for your environmental permit"[1].

The assessment identifies whether any of the following risks could occur and what the environmental impact could be:

- any discharge, for example sewage or trade effluent to surface or groundwater
- accidents
- odour (not for standalone water discharge and groundwater activities)
- noise and vibration (not for standalone water discharge and groundwater activities)
- uncontrolled or unintended ('fugitive') emissions, for which risks include dust, litter, pests and pollutants that should not be in the discharge
- visible emissions, for example smoke or visible plumes
- release of bioaerosols, for example from shredding, screening and turning, or from stack or open point source release such as a biofilter

For each risk that applies, Table 5 identifies each actual or possible hazard and states the following:

- the hazard – for example dust, bioaerosols, litter, type of visible emission
- the process that causes the hazard, for example shredding and turning green waste
- the receptors – people, animals, property and anything else that could be affected by the hazard
- the pathways – how the hazard can get to a receptor
- what measures you will take to reduce risks

- probability of exposure, for example whether a risk is unlikely or highly likely
- consequences – what harm could be caused
- what the overall risk is, based on what you've already stated in the table – for example 'low if we apply the management techniques'

The risk assessment has used a scoring mechanism, shown in Table 4 below, whereby scores of low, moderate or high are assigned to the probability of the hazard occurring, the consequence of the hazard to the environment or human health and to the overall risk rating.

SDL has already carried out an environmental assessment as part of its COMAH Safety Report (Appendix A of this ERA). To avoid duplication of effort, this ERA aims to cover only environmental risks associated with the handling, storage and transfer of waste oils.

Table 4. Risk Scoring Matrix

		Probability			
		Very low	Low	Moderate	High
Consequence	Not significant	Very low	Very low	Very low	Low
	Low	Very low	Low	Low	Low
	Moderate	Very low	Low	Moderate	Moderate
	High	Low	Low	Moderate	High

Table 5. Environmental Risk Assessment table

Hazard	Process	Receptor(s)	Pathway	Management/Control Measure(s)	Probability of Exposure	Consequences	Overall Risk Rating
Fire incident, damage from burning and offsite emissions of smoke and odour.	Ignition of and burning of waste oils being stored or transferred	Staff on site local residents (nearest receptors are 800 m from the site) Industrial units (nearest receptors are 10 m from the site) Air quality	Air / Land	The plant has been designed such that the waste oil storage is physically separate from ignition sources. Ignition sources and smoking is not allowed on site. Fire detection system include 24-hour manned operations and CCTV coverage of the site. Fire protection systems are in place which include fixed fire points and fire hose reels which provide extinguishing capability across the entire Facility. Water is provided via permanently fixed pumps and pipe work from the River Thames, A newly installed automatic heat detecting firefighting system provides cooling water and foam blanketing in Area 1. The site has a backup generator in case of a power cut which provides power to the fire water pumps. Three pumps are available for cooling water a duty and two standby diesel pumps. Also two pumps for foam. The system is tested weekly.	Low	Low	Low
Oil contamination to ground, groundwater or surface water	Damage to plant or containment as a result of vandalism	Various	Air/Water/Land	The site is fenced and manned 24/7. CCTV cameras are in operation and constantly monitored.	Very low	Very low	Very low
Oil contamination to river Thames	Flooding resulting in release of oils/pollutants to River Thames	River Thames	Water	The site is situated on the northern floodplain of the river Thames. The floodplain is passive at this point due to the presence of flood defenses along the front of the site. A flood risk assessment was undertaken in 2013 a copy of this has been highlighted in Appendix B. The assessment concluded that the site is a high risk of flooding as it lies within a flood zone 3. The existing flood defense wall provides protection to the site for at least a 1 in 1000 year flood event from the River Thames with a minimum freeboard of 0.58m (1-in-1000 year water level of 6.52m AOD versus a minimum flood defense crest level of 7.1m AOD). This is believed to be true up to the year 2107, including all	High	Low	Low

Hazard	Process	Receptor(s)	Pathway	Management/Control Measure(s)	Probability of Exposure	Consequences	Overall Risk Rating
				events up to and including the 1-in-200-year event, with a minimum freeboard of 0.22. In considering climate change, there is believed to be a minimum freeboard of 0.06m above the 1-in-1000-year (plus climate change) flood level throughout the lifetime of the development (taken to be 60 years). Section 6 of the Environmental Assessment see Appendix A, provides a more detailed assessment of the site's flood risk control measures and flood defenses. During a flood the risk of an uncontrolled release of waste oil from a storage tank is low, as they are specially engineered, sealed, fixed down and heavy. All other transfer piping system is contained within a sealed system. Therefore, no uncontrolled release would occur.			
Oil contamination to ground, groundwater or surface water	Overfilling of tanks during transfers and deliveries	River Thames / groundwater / land	Ground / water	A procedure will be implemented to ensure that any damaged or leaking tanks/containers or defects in secondary containment are dealt with. Routine inspections will be carried out to inspect for any signs of deterioration of containment measures. All filling operations will be supervised by a competent member of staff and tanks will be fitted with level alarms which will alert of a high level to allow filling to stop before the tank is full. Operators will check the tank level prior to commencing filling to ensure there is capacity to accept the delivery. Filling will take place on a hard, impermeable surface to prevent fugitive emissions to groundwater should spills / leaks occur. The oil storage areas will be appropriately bunded. Spill kits will be available to contain and clean up any spills.	Low	Low	Low
Oil contamination to ground, groundwater or surface water	Loss of containment during storage or transfer of oils	River Thames / groundwater / land	Air / ground / water	All bunds will be visually checked each day to ensure that they are empty. All process storage tanks will be built of suitable materials which are resistant to the vessel content. A maintenance program will be established for the inspection of all storage tanks.	Low	Low	Low

Hazard	Process	Receptor(s)	Pathway	Management/Control Measure(s)	Probability of Exposure	Consequences	Overall Risk Rating
				Potential release to ground or surface/groundwater would require simultaneous failure of the storage tank and containment. Bulk deliveries will be overseen by a trained member of staff who will be responsible for checking that there is sufficient capacity in the storage vessel to receive the delivery. A site spill procedure will be developed and followed in the event of a spillage. Spill kits will be available to contain and clean up the spill. Incidents will be recorded and investigated appropriately according to the site incident procedure.			
Injury resulting from hot steam emission	Failure of boiler containment	Staff on site Local residents (nearest receptors are 800 m from the site) Industrial units (nearest receptors are 100 m from the site) Air quality River Thames	Air / Ground	There is CCTV monitoring of the pressure valve. Any drop in pressure would alert operatives of a loss of pressure and allow corrective action to be taken. The system is designed to automatically shut down feed to the plant in the event of a critical breach of the plant containment. Routine inspections and maintenance will be carried out to ensure the integrity of the plant and that any issues detected are rectified as soon as is practicable. Spares of critical pieces of equipment will be kept on site for quick replacement in the event of failure.	Very low	Low	Low
Fire water discharge and pollution to river Thames	Failure to contain firewater	River Thames	Ground / water	Firewater will be contained within the secondary containment bunds and sealed drainage system. Any escaping fire water to the tertiary drainage system can be contained by a number of isolation valves preventing contaminated water entering the surface water system There are pumps on site which can be used to pump water out of the bunds and into tanks if more capacity is needed.	Low	Low	Low
Oil contamination to ground, groundwater or surface water	Spillage of waste oils	Ground, River Thames	Ground / Surface Drains	Deliveries will be overseen by a trained member of staff, who will ensure that there is sufficient capacity within the storage vessel for the delivery prior to filling. The storage tank will be within a bund to contain any spillage and a drip tray will be provided to contain any minor spillage during connection / disconnection of the delivery hose.	Low	Low	Low

Hazard	Process	Receptor(s)	Pathway	Management/Control Measure(s)	Probability of Exposure	Consequences	Overall Risk Rating
				The oil storage areas will be appropriately bunded in accordance with oil storage regulations. A hard, impermeable surface will underlie all oil storage areas to prevent fugitive emissions to groundwater should spills / leaks occur and drainage will be contained with interceptors. Spill kits will be available to contain and clean up any spills.			
Odour emission to offsite receptors	Storage and handling of waste	Staff on site Local residents (nearest receptors are 800 m from the site) Industrial units (nearest receptors are 10 m from the site)	Air	SDL has produced an Odour Management Plan (Appendix C), which details the following odour control measures: The waste will be transferred in sealed pipe work and systems to prevent odour emissions to air. Routine inspections will be carried out to check for signs of malodour each day. In the event of a complaint, the complaints procedure will be followed to record and act on the complaint and instigate appropriate action. There have been no complaints for the existing COMAH activities at the site.	Low	Low (minor odour annoyance at worst)	Low
Noise emission to offsite receptors	Noise and vibration from the boiler, pumps and on-site vehicle movements	Staff on site Local residents (nearest receptors are 800 m from the site) Industrial units (nearest receptors are 10 m from the site)	Air	The noise assessment detailed the following noise and vibration control measures: The operator has a low noise purchasing policy for buying new equipment. The operator has a policy to carry out regular noise risk assessments and take action to reduce the risks. The noise assessment concluded that site staff are unlikely to have noise exposures above the lower and upper exposure action values. Therefore, it is also concluded that there would be no significant adverse impact to sensitive receptors. In the event of a complaint, the complaints procedure will be followed to record and act on the complaint and instigate appropriate action.	Low	Low	Low
Offsite litter emission	Litter	Staff on site Local residents (nearest receptors are 800 m from the site)	Ground / Air	The only wastes accepted at the site are waste oils, which do not create litter.	Very low	Very low	Very low

Hazard	Process	Receptor(s)	Pathway	Management/Control Measure(s)	Probability of Exposure	Consequences	Overall Risk Rating
		Industrial units (nearest receptors are 10 m from the site)					
Offsite dust emission	Dust	Staff on site Local residents (nearest receptors are 800 m from the site) Industrial units (nearest receptors are 10 m from the site)	Air	The only wastes accepted at the site are waste oils, which are not dusty.	Very low	Very low	Very low
Oil contamination to ground, groundwater or surface water	Runoff from waste storage areas	River Thames	Ground / surface drains	The oil storage areas will be appropriately bunded in accordance with oil storage regulations. A hard, impermeable surface will underlie all oil storage areas to prevent fugitive emissions to groundwater should spills / leaks occur and drainage will be contained with interceptors. Spill kits will be available to contain and clean up any spills. A procedure will be designed to ensure that any damaged or leaking containers are dealt with and to allow regular inspections for any signs of deterioration.	Low	Low	Low
Oil contamination to ground, groundwater or surface water	Leaks (transfer and storage)	Staff on site Local residents (nearest receptors are 800 m from the site) Industrial units (nearest receptors are 10 m from the site) Air quality River Thames	Ground / Air	Deliveries will be overseen by a trained member of staff, who will ensure that there is sufficient capacity within the storage vessel for the delivery prior to filling. The storage tanks will be within a bund to contain any spillage and a drip tray will be provided to contain any minor spillage during connection / disconnection of the delivery hose. The oil storage areas will be appropriately bunded in accordance with oil storage regulations. A hard, impermeable surface will underlie all oil storage areas to prevent fugitive emissions to groundwater should spills / leaks occur and drainage will be contained with interceptors. Spill kits will be available to contain and clean up any spills. A procedure will be designed to ensure that any damaged or leaking containers are dealt with and to allow regular inspections for any signs of deterioration.	Very low	Low	Low

Hazard	Process	Receptor(s)	Pathway	Management/Control Measure(s)	Probability of Exposure	Consequences	Overall Risk Rating
Gas emission to air	Gas leaks (boiler fuel)	Staff on site Local residents (nearest receptors are 800 m from the site) Industrial units (nearest receptors are 100 m from the site) Air quality	Air	The monitoring system would alert operatives of a loss of pressure in the pipes and allow corrective action to be taken. The system is designed to automatically shut down feed to the plant in the event of a critical breach of the plant containment. Routine inspections and maintenance will be carried out to ensure the integrity of the plant and that any issues detected are rectified as soon as is practicable. Spares of critical pieces of equipment will be kept on site for quick replacement in the event of failure.	Very low	Low	Low
Odour and gas emission to air	VOCs (from oil storage)	Staff on site Local residents (nearest receptors are 800 m from the site) Industrial units (nearest receptors are 10 m from the site)	Air	Delivery vehicles will offload using a sealed connection. The storage vessels will have a vent to permit tank breathing. Emissions from this source are not considered to be significant since the materials being stored will be relatively non-volatile. The integrity of all liquid storage containers will be subject to routine checks as part of daily site inspections.	Low	Low	Low
Infestation of birds, mice or rats.	Pests	Staff on site Local residents (nearest receptors are 800 m from the site) Industrial units (nearest receptors are 10 m from the site)	Various	Oils are stored in sealed containers to prevent release of odours that might attract vermin. All minor spillages will be cleaned up immediately, preventing pests being attracted.	Very low	Very low	Very low
Visible emissions to air - Smoke	Plume from boiler stack	Staff on site Local residents (nearest receptors are 800 m from the site) Industrial units (nearest receptors are 100 m from the site)	Air	Visible plumes are not anticipated to occur for the majority of operational time due to the temperature at which the treated flue gas exits the stack. Emissions from the boiler stack will be regularly monitored to ensure no black smoke or off site emissions.	Very low	Low	Low

4. POINT SOURCE EMISSIONS TO AIR, LAND AND WATER

For waste activities, the following additional risk assessments are required, depending on the substances discharged and where they are discharged to:

- assess the risks of your air emissions
- calculate the global warming impact of your air emissions
- assess risks to groundwater
- assess risk to groundwater from landfill leachate
- assess risks to surface water from hazardous pollutants
- assess risks to surface water from sanitary and other pollutants

There will be no point source emissions to land, surface water or groundwater from the proposed activity. Surface water runoff from process areas will be collected in the site's sealed drainage system, it will pass through an oil interceptor and will then be treated at the onsite effluent treatment plant prior to discharge to the foul sewer and then to the Thames Water sewage treatment works. The site holds a Trade Effluent Consent for this discharge, issued by Thames Water. The site operates a 980 kw/h gas fired boiler to provide steam to heat the waste oil, this is under the 1 kw/h Medium combustion plant limit, therefore an air quality or global warming assessment will be required.

5. WASTE RECOVERY OR DISPOSAL METHOD

EA guidance[2] states that operators of installations and waste sites must carry out a risk assessment predicting the environmental impact that different methods of disposing waste will have. As the site will only be storing and heating waste oils prior to disposal or recovery off site by a third party and no new wastes will be produced from the permitted activities, only recovery/disposal scenarios for the waste oils have been assessed.

The tables 6 – 10 shown below, provide an impact assessment of the recovery and disposal activities at the Facility. This is calculated by multiplying a hazard rating score by a method impact score, to provide a total hazard rating impact score.

Table 6. Scenario 1 – Recovery – Re-refining/reuse of oil

Waste stream number	Type of waste	Nature of waste	Hazard rating	Recovery or disposal method	D or R code	Recovery or disposal method impact score	Hazard rating * impact score
1	Acid oil	Non-hazardous	4	Recovery (re-refining/reuse of oil)	R9	4	16
2	Food waste	Non-hazardous	4	Recovery (re-refining/reuse of oil)	R9	4	16

[2] https://www.gov.uk/guidance/select-a-waste-recovery-or-disposal-method-for-your-environmental-permit

3	Used cooking oil and tallow	Non-hazardous	4	Recovery (re-refining/reuse of oil)	R9	4	16
						Total	48
						For 300,000 tonnes of waste	**14,400,000**

Table 7. Scenario 2 – Recovery/Disposal – Using waste as fuel / biological treatment with energy recovery

Waste stream number	Type of waste	Nature of waste	Hazard rating	Recovery or disposal method	D or R code	Recovery or disposal method impact score	Hazard rating * impact score
1	Acid oil	Non-hazardous	4	Recovery (using waste as fuel)	R1	6	12
2	Food waste	Non-hazardous	4	Recovery (biological treatment with energy recovery)	D8	6	12
3	Used cooking oil and tallow	Non-hazardous	4	Recovery (biological treatment with energy recovery)	D8	6	12
						Total	36
						For 300,000 tonnes of waste	**10,800,000**

Table 8. Scenario 3 – Disposal – Incineration with energy recovery

Waste stream number	Type of waste	Nature of waste	Hazard rating	Recovery or disposal method	D or R code	Recovery or disposal method impact score	Hazard rating * impact score
1	Acid oil	Non-hazardous	4	Incineration with energy recovery	D10	10	40
2	Food waste	Non-hazardous	4	Incineration with energy recovery	D10	10	40
3	Used cooking oil and tallow	Non-hazardous	4	Incineration with energy recovery	D10	10	40
						Total	120
						For 300,000 tonnes of waste	**36,000,000**

Table 9. Scenario 4 – Disposal – Incineration without energy recovery

Waste stream number	Type of waste	Nature of waste	Hazard rating	Recovery or disposal method	D or R code	Recovery or disposal method impact score	Hazard rating * impact score
1	Acid oil	Non-hazardous	4	Incineration without energy recovery	D10	20	80
2	Food waste	Non-hazardous	4	Incineration without energy recovery	D10	20	80
3	Used cooking oil and tallow	Non-hazardous	4	Incineration without energy recovery	D10	20	80
						Total	200
						For 300,000 tonnes of waste	**72,000,000**

Table 10. Scenario 5 – Disposal - Landfill

Waste stream number	Type of waste	Nature of waste	Hazard rating	Recovery or disposal method	D or R code	Recovery or disposal method impact score	Hazard rating * impact score
1	Acid oil	Non-hazardous	4	Landfill	D1 or D5	30	120
2	Food waste	Non-hazardous	4	Landfill	D1 or D5	30	120
3	Used cooking oil and tallow	Non-hazardous	4	Landfill	D1 or D5	30	120
						Total	360
						For 300,000 tonnes of waste	**108,000,000**

6. CONCLUSIONS

The results of the ERA have shown that the risk of odour, noise and vibration, fugitive emissions, visible plumes and accidents range from very low to low.

The site has been identified a high risk of flooding, a flood risk assessment conducted in 2013 identified that the flood wall and infrastructure provide adequate mitigation measures. Reducing the overall potential impact risk to low.

There are no point source emissions to air, land, surface water or groundwater as a result of this activity. The emissions to sewer are covered by the Trade Effluent Consent with Thames Water.

7. APPENDICES

Appendix A – COMAH Section 6 – Environmental Assessment

Appendix B – Flood risk assessment

Appendix C – Odour Management Plan

Appendix D - Noise Assessment

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