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Consulting Engineers Limited

Port of Tilbury IWMTS

Cory Environmental Holdings Limited

Site Condition Report

ENGINEERING CONSULTING

Document approval

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Contents

1 Introduction 4
1.1 The objective 4
1.2 Baseline conditions 4

2 Site details 5
2.1 Site address 5

3 Condition of the land at permit issue 6
3.1 Geology, hydrogeology and hydrology 6
3.1.1 Geology 6
3.1.2 Hydrogeology 6
3.1.3 Hydrology and surface waters 6
3.2 Pollution history 7
3.2.1 Historical land use 7
3.2.2 Historical incidents 10
3.2.3 Historical pollution potential 11
3.2.4 Current environmental setting 12
3.2.5 Environmental Permits 12
3.2.6 Discharge consents 13
3.2.7 Water abstractions 13
3.2.8 Landfill and waste management sites 15

4 Permitted activities 20
4.1 Activities 20
4.2 On-site waste and material storage facilities 20
4.3 Environmental Risk Assessment 21

5 Ongoing management 22

6 Conclusions 23

Appendices 24
A Groundsure report 25
B Site Surfacing 26

1 Introduction

Cory Environmental Holdings Limited (Cory) is applying to the Environment Agency (EA) for an Environmental Permit (EP) to construct and operate an Integrated Waste Management Transfer Station (IWMTS) (the 'Facility') at the Port of Tilbury. A detailed description of the Facility is presented within section 2 of the Supporting Information.

1.1 The objective

The objective of this report is to provide details on the existing ground conditions for the land within the Site Boundary. The report:

1. considers the proposed activities to be carried out at the Facility;
2. identifies any land contamination risk that may be linked to previous pollution events; and
3. provides a baseline for the existing ground conditions.

The report draws primarily on the 2021 Groundsure report for background information, presented within Appendix A. Utilising this information, the report will summarise the following conditions within the Site Boundary:

1. geology;
2. hydrogeology;
3. hydrology and flooding;
4. historical and present land use; and
5. existing ground conditions.

The following drawings can be found in Appendix A of the Supporting Information:

- site location plan;
- Site Boundary drawing; and
- emission points drawing.

1.2 Baseline conditions

At the time of submitting this application, no site investigations or baseline reference data was available for the assessment of any ground, groundwater and ground gas contamination at the site.

As stated within Article 22 (2) of the IED:

"*Where the activity involves the use, production or release of relevant hazardous substances and having regard to the possibility of soil and groundwater contamination at the site of the installation, the operator shall prepare and submit to the competent authority a baseline report before starting operation of an installation or before a permit for an installation is updated for the first time after 7 January 2013*."

The operation of the Facility will not involve the use, production or release of relevant hazardous substances. Furthermore, existing infrastructure installed at the site which the Facility will utilise, including hardstanding, site drainage and waste storage facilities, will continue to provide protection of the underlying ground and groundwater.

Taking the above into consideration, Cory does not consider that baseline data is required to support the EP application for the Facility.

2 Site details

The Site is located at Berth 36/38 at the Port of Tilbury (POT), on the North bank of the River Thames, approximately 26 miles east from the centre of London. The main building of the Facility is located at an approximate grid reference of TQ 63095 76004. Various industrial operations at the POT surround the site to the north and east. The Facility lies immediately adjacent to the east of the dock lies, with the River Thames further to the west and south.

Access to the Facility will be via an existing access road located to the northeast of the Facility and running adjacent to the eastern façade of the main building. The access roads link to the A1089 which runs approximately 500m to the northeast of the Facility.

Site Boundary and Site Location drawings for the Facility are presented within Appendix A of the Supporting Information. Furthermore, a drawing showing the areas of impermeable hardstanding and surfacing at the site is presented within Appendix B of this Site Condition Report.

2.1 Site address

Port of Tilbury IWMTS,

Port of Tilbury,

Tilbury Docks,

Tilbury,

RM18 7LA

3 Condition of the land at permit issue

3.1 Geology, hydrogeology and hydrology

3.1.1 Geology

The geology associated with the land within the Site Boundary has been sourced from the Groundsure report, is summarised within Table 1.

Table 1: Site geology

Lithology	Description
Made ground	Artificial deposits
Superficial deposits	Alluvium – (silt, clay, sand and peat)
Bedrock	Lewes nodular chalk formation, Seaford chalk Formation and Newhaven chalk formation (very high permeability)

3.1.2 Hydrogeology

Information on the hydrogeology at the site was obtained from both the Groundsure report and online British Geological Survey (BGS) records. The hydrogeology associated with the land within the Site Boundary is summarised as follows:

- The bedrock underlying the site is classed as a principal aquifer, with low to medium vulnerability. The vulnerability of the bedrock aquifer has the potential to be increased due to limited cover by superficial deposits.
- The superficial deposits underlying the site are classed as a secondary undifferentiated aquifer, with high vulnerability.
- The site does not lie within a Groundwater Source Protection Zone.
- The underlying groundwater body to the site has an overall rating of 'good'.
- There are no groundwater abstraction wells within 1km of the site, however a number of groundwater abstraction licenses are recorded between 1 – 2km of the site – refer to section 3.2.7.
- As stated within section 3.1.3, the site is considered to be at high risk of groundwater flooding.
- There is one BGS borehole recorded on-site, a further 3 within 50m of the Site Boundary and 24 recorded between 50 – 250 m of the site.

3.1.3 Hydrology and surface waters

The hydrology associated with the land within the Site Boundary is summarised as follows:

- The site lies directly adjacent to the Tilbury Docks which link to the River Thames via a lock to the southwest of the site.
- The Groundsure report identifies that the section of the Thames adjacent to the site (the 'Thames Middle') has an overall rating of 'moderate'. The ecological rating of the river is 'moderate'; however, the chemical rating is 'fail'.

- The Groundsure report sets out the flood risk to the site as follows:
  - The site lies within Flood Zone 3. However, the area benefits from flood defences and is therefore considered to be at very low risk of flooding from rivers and the sea.
  - Small pockets of the site are considered to be susceptible to surface water flooding (1 in 30 year event, 0.3m – 1m) as a result of extreme rainfall events. However, the report states that modern drainage systems are typically built to cope with rainfall events between 1 in 20 and 1 in 30 years.
  - The site is considered to be at high risk of groundwater flooding, which is caused by unusually high groundwater levels which occur when the water table rises significantly.
  - Notwithstanding the above, there are no records of historical flood events within 250m of the site (including groundwater and surface water flooding).
- The site is covered in hardstanding and therefore there is very little risk of surface infiltration of rainwater to the underlying groundwater.
- There are no surface water discharge consents recorded within 500 m of the Site Boundary.
- There is one surface water abstraction license recorded approximately 1.3 km from the site – refer to section 3.2.7.

3.2 Pollution history

3.2.1 Historical land use

Details on the historical land use for the land within the Site Boundary have been determined from historical maps sourced from the Groundsure report. Additional detail is available within the Groundsure report. A summary of the historical land use is presented in Table 2 below.

Table 2: Historical land use

Year	Land use within the Site Boundary	Land use surrounding the Site Boundary
1863 – 1865	The site comprises predominantly agricultural fields.	A railway line lines approximately 500m to the northeast of the site. The River Thames runs approximately 500m to the west and south of the site. Thurrock Wharf lies approximately 500m to the west of the site.
1888	Map area not available.	Further railway sidings have split off from the main railway line to the northeast of the site. Additional buildings which appear to be residential and a school have been constructed adjacent to Tilbury Docks Station which lies to the northeast of the site. A sewage works is labelled around 1km to the northwest of the site.
1895 – 1910	An unnamed waterbody covers the western corner of the site.	Tilbury Docks have now been constructed immediately to the east of the site location. These are labelled as West Branch Dock, Centre Branch Dock and East Branch Dock, and connect, via a tidal

Year	Land use within the Site Boundary	Land use surrounding the Site Boundary
		basin, to the River Thames. Numerous warehouses are present at the docks including 4 warehouses directly to the east of the site. Additional railway sidings have been constructed to link the docks to the main railway line. Significant industrial and residential development has occurred around 500m – 1km to the east of the site.
1916 – 1932	Railway sidings now cross the site, linking the main railway line to the River Thames and the tidal basin southeast of the site.	The main dock to the southeast of the site has been extended to the west. Additional warehouses have been constructed to the south and east of the main dock. Two small buildings have been constructed directly to the southeast of the site. A Deep Water Jetty is shown around 500m to the south of the site. Jetties and an engine shed are shown on the riverbank to the west of the site. Further residential development has occurred to the northeast of the site, adjacent to the main railway line.
1938	-	More residential development has occurred to the northeast of the site, adjacent to the main railway line.
1946 – 1947	-	An additional railway siding has been constructed to the north and east of the site. The railway siding appears to link to the Deep Water Jetty to the south of the site. The main dock has been extended further and now links to the River Thames via a lock located to the southwest of the site. A dry dock has been constructed to the eastern side of the main dock. A refuse pit has been constructed above the pier which lies to the northwest of the site. Another area labelled as 'refuse' is located to the north of the site. Further development and buildings have been constructed around 750m north of the site. The sewage works to the northwest of the site has been expanded.
1955	The railway sidings which previously crossed the site are no longer shown. Some access roads cross the site from north to south.	Various unlabelled bodies of either water or settlement pits surround the site immediately to the north and the west. The wharf and jetties to the northwest of the site are now labelled as disused.

Year	Land use within the Site Boundary	Land use surrounding the Site Boundary
		Additional jetties have been constructed off the main dock to the south of the site. The dry docks to the southeast of the site are no longer labelled. The main doc is simply labelled as 'dock'.
1966	Hardstanding now underlies the site with additional access roads crossing the site.	A warehouse now lies immediately to the south of the site, with two smaller buildings present to the southeast of the site. The jetties previously present to the south of the site have been removed with the shape of the dock changed to accommodate this.
1971 – 1973	Buildings and warehouses have now been constructed within the Site Boundary. The extent of the dock has been increased significantly to the west of the site.	Significant industrial development of warehouses to the north of the site has occurred, with the existing railway sidings to the west of the site removed to accommodate the new expanse of the dock. The warehouses present to the south side of the dock have been removed, but smaller industrial buildings have been constructed to the west of the tidal basin. Further residential development has occurred to the northeast of the site, with the A126 road and main roundabout now constructed to the northeast of the site. Significant industrial development of the riverbank to the west of the site has also occurred.
1977 – 1992	A small access road has been constructed within the northern boundary of the site.	More industrial warehouses have been constructed or expanded to the north of the site. A large warehouse has been constructed around 500m to the south of the site on the opposite side of the dock, with two additional large warehouses constructed to the east of this. The hardstanding to the west of the site, on the opposite side of the dock, has been extended outwards into the Thames and this is labelled as "Trav C". Some buildings/warehouses from this section have been removed. Additional warehouses have been constructed to the southwest of the site. The dry dock arrangement to the southeast of the site has changed, with one of the dry docks removed.
1993	Numerous smaller buildings within the site have been removed and	Numerous warehouses previously shown on the docks to the east of the site have

Year	Land use within the Site Boundary	Land use surrounding the Site Boundary
	the access routes are no longer shown.	been removed. Two warehouses to the southwest of the site are no longer shown.
2001	A large warehouse has now been constructed in the northern part of the site, with a smaller warehouse present in the southern part of the site. A smaller building previously shown in the centre of the site has now been removed.	A large warehouse has been constructed at the docks to the east of the site with another large warehouse previously shown further east of this now removed. More industrial development of warehouses has occurred to the south and north of the site. The arrangement of warehouses to the west of the site has altered slightly.
2010	A large building has been constructed at the centre of the site.	A large warehouse has been removed directly adjacent to the south of the site. A few additional industrial buildings have been constructed to the north of the site. A large distribution centre is shown around 750m to the southeast of the site. The tidal basin to the southeast of the site is no longer shown.
2021	The large warehouse covering the northern part of the site has reduced in size, with another large warehouse in the southeastern part of the site no longer shown.	A large warehouse directly adjacent to the southeast of the site is no longer shown, however a number of smaller buildings are now present. Many small buildings are also shown further to the east of the site. A few smaller industrial buildings have been constructed around 750m - 1km to the southeast of the site. Two piers previously labelled around 800m to the southeast of the site are no longer shown. Moveable flood barriers previously labelled to the southwest of the site are no longer labelled.

Numerous historical surface ground workings are shown to underly the site which involved ground excavation at the surface. These areas are likely to have been backfilled with made ground. The land use for these workings include docks, refuse heaps, ponds, water bodies, wharfs, unspecified pits and heaps.

No historical underground workings are shown within 1km of the Site Boundary, however one record of potential non-coal mining is shown 670m to the south of the site – this states that small scale underground mining of chalk may have occurred.

3.2.2 Historical incidents

As reported in the Groundsure Report, there are 3 recorded pollution incidents within 500 m of the Site Boundary, refer to Table 3.

Table 3: Pollution incidents

Distance from the Site (m)	Direction from the Site	Grid Reference	Details
143	NW	N/A	Reference: 201717 Pollutant: Contaminated Water Description: Firefighting Run-Off Category: Water Category 3 (Minor) and Land Category 3 (Minor) Date: 14/11/2003
193	NW	N/A	Reference: 49216 Pollutant: Oils and Fuel Description: Gas and Fuel Oils Category: Water Category 3 (Minor) Date: 21/12/2001
436	N	N/A	Reference: 105752 Pollutant: Other Pollutant Description: Other Category: 4 – No impact Date: 05/09/2002

3.2.3 Historical pollution potential

As reported in the Groundsure report, there are no sites determined as contaminated land within 500m of the Site Boundary. However, there are 2 Control of Major Accident Hazards (COMAH) registrations on-site, 1 hazardous substance storage/usage and 1 radioactive substance authorisations recorded within 500m of the Site Boundary, refer to Table 4.

Table 4: Hazardous substance storage/usage

Distance from the Site (m)	Direction from the Site	Address	Details
COMAH sites			
On-site	On-site	Laing National Ltd, Tilbury Starch Works, Tilbury Docks	Company: Laing National Ltd Status: Historical NIHHS Site
On-site	On-site	Port Of Tilbury London Ltd, Tilbury Freeport, Tilbury, RM18 7EH	Company: Port Of Tilbury London Ltd Status: Historical NIHHS Site
Hazardous substance storage/usage			
73	E	Port of Tilbury London Ltd, Leslie Ford House, Tilbury	Reference: 97/00732/HSC Operator: Port of Tilbury London Ltd

Distance from the Site (m)	Direction from the Site	Address	Details
		Freeport, Tilbury, Essex, England, RM18 7JB	Details: Hazardous Substances consent for the handling of ammonium nitrate products Status: Approved
Radioactive substance authorisation			
286	NE	Leslie Ford House, Tilbury Freeport, Tilbury, RM18 7EH	Reference: CE4775 Operator: Secretary of State for Home Affairs Details: N/A Status: Surrendered

3.2.4 Current environmental setting

The Groundsure Report records 32 'recent industrial land uses' as introducing a potential for contamination within 250m of the site.

These include the following industrial uses:

- travelling cranes and gantries;
- electrical features;
- container and storage;
- distribution and haulage;
- concrete products;
- moorings and unloading facilities;
- special purpose machinery and equipment; and
- telecommunications features.

Furthermore, a non-retail petrol station lies 253 m to the northeast of the site.

3.2.5 Environmental Permits

As reported in the Groundsure report, there are 6 licensed industrial activities (Part A(1) under the Environmental Permitting Regulations) within 500 m of the Site Boundary. However, these licenses only relate to 2 sites. A summary of the licenses is presented within Table 5 below.

Table 5: Environmental Permits

Distance from the Site (m)	Direction from the Site	Site name	Details
15 – 25	SW	Tilbury IBA Facility	References: TP3906BG, CP3732WS Operator: Blue Phoenix Ltd (formerly Ballast Phoenix Ltd) Process type: Recovery or mix of recovery and disposal of >50 t/d non-hazardous waste involving treatment of slags and ashes Status: Effective

Distance from the Site (m)	Direction from the Site	Site name	Details
415	S	Tilbury Dock Alternative Fuel Facility	References: TP3136WE, ZP3434EU, YP3135QC, KP3436RG Operator: Suez Recycling and Recovery UK Ltd (formerly SITA UK Ltd) Process type: Recovery or mix of recovery and disposal of >50 t/d non-hazardous waste involving pre-treatment of waste for incineration or co-incineration Status: Determination

3.2.6 Discharge consents

As reported in the Groundsure report, there are no licensed discharge consents within 500 m of the Site Boundary.

3.2.7 Water abstractions

As stated in section 3.1.2, the land within the Site Boundary is not within an SPZ.

As reported in the Groundsure report, there are 9 groundwater abstractions and 1 surface water abstraction recorded between 500m – 2km from the Site Boundary, refer to Table 6.

Table 6: Water abstractions

Distance from the Site (m)	Direction from the Site	Grid Reference	Details
Groundwater abstractions			
1126	S	562759, 174599	Name: Kimberly-Clark Ltd Reference: 9/40/01/0092/A/GR/R1 Details: Boiler feed Point: Point A, Borehole at Kimberly Clark, Northfleet Status: Active
1131	S	562860, 174560	Name: Kimberly-Clark Ltd Reference: 9/40/01/0092/A/GR Details: Boiler feed Point: Point 1, Greensand Borehole, Northfleet Status: Historical
1134	S	562760, 174590	Name: Kimberly-Clark Ltd Reference: 9/40/01/0092/A/GR Details: Boiler feed Point: Point A, Borehole at Kimberly Clark, Northfleet Status: Historical

Distance from the Site (m)	Direction from the Site	Grid Reference	Details
1401	S	562980, 174260	Name: Kimberly-Clark Limited Reference: 9/40/01/0092/B/GR Details: Process water Point: Borehole 4, Crete Hall Road, Northfleet Status: Active
1565	S	562830, 174120	Name: Kimberly-Clark Ltd Reference: 9/40/01/0092/A/GR Details: Boiler feed Point: Point 2, Greensand Borehole, Northfleet Status: Historical
1579	S	562770, 174120	Name: Kimberly-Clark Ltd Reference: 9/40/01/0092/A/GR Details: Boiler feed Point: Point B, Borehole at Kimberly Clark, Northfleet Status: Historical
1584	S	562772, 174114	Name: Kimberly-Clark Ltd Reference: 9/40/01/0092/A/GR/R1 Details: Boiler feed Point: Point B, Borehole at Kimberly Clark, Northfleet Status: Active
1911	W	560976, 175941	Name: Cemex UK Materials Ltd Reference: 01/158/R01 Details: Mineral washing Point: Borehole at Swanscombe Marshes Status: Active
1917	W	560970, 175920	Name: Cemex UK Materials Ltd Reference: 01/158 Details: Mineral washing Point: Borehole at Swanscombe Marshes Status: Historical
Surface water abstractions			
1290	SW	561870, 175100	Name: Robert Brett & Sons Ltd Reference: 9/40/01/0522/S Details: Mineral washing Point: Point A, Tidal River Thames at Swanscombe Status: Active

3.2.8 Landfill and waste management sites

As reported in the Groundsure report, there are no historical landfill sites within 500 m of the Site Boundary. However, there are 4 historical waste sites, 13 licensed waste registrations (19 including variations etc) and 15 waste exemptions within 500 m of the Site Boundary, refer to Table 7.

Table 7: Waste sites

Distance from the Site (m)	Direction from the Site	Address	Details
Historical waste sites			
217	NW	N/A	License number: N/A Site category: Refuse License status: N/A Date: 1864 Data source: Historic mapping
239	N	N/A	License number: N/A Site category: Refuse License status: N/A Date: 1864 Data source: Historic mapping
424	NW	N/A	License number: N/A Site category: Refuse License status: N/A Date: 1864 Data source: Historic mapping
470	NE	Thames House, St Andrews Road, Tilbury, Essex, RM18 7EH	License number: 18/01430/FUL Site category: Waste transfer station License status: N/A Date: 01/10/2018 Data source: Historic planning application
Licensed waste sites			
On-site	On-site	Tilbury IBA Facility, Port of Tilbury, Berth 36-38, Tilbury, Essex, RM18 7EH	License number: EA/EPR/BB3239RD Operator: Ballast Phoenix Ltd Site category: Material Recycling Treatment Facility License status: To PPC Annual tonnage limit: 275,000 tpa
38	NE	Port of Tilbury London Ltd, Leslie Ford House, Tilbury Freeport, Tilbury, Essex, RM18 7EH	License number: EA/EPR/FB3805KA Operator: Port of Tilbury London Ltd Site category: Transfer Station taking Non-Biodegradable Wastes License status: Issued Annual tonnage limit: 250,000 tpa

Distance from the Site (m)	Direction from the Site	Address	Details
85	E	Tilbury New Site, Tilbury Docks, Tilbury, Essex, RM18 7HB	License number: EA/EPR/BB3332AE Operator: Hadfield Wood Recyclers Ltd Site category: Treatment of waste wood License status: Issued Annual tonnage limit: 75,000 tpa
158	NE	Berth 5, Port of Tilbury London, Leslie Ford House, Tilbury Freeport, Tilbury, Essex, RM18 7EH	License number: EA/EPR/PB3933DJ Operator: S Walsh And Sons Limited Site category: Inert & Excavation WTS License status: Issued Annual tonnage limit: 25,000 tpa
203	E	Bulks Terminal, Leslie Ford House, Tilbury Freeport, Tilbury, Essex, RM18 7EH	License number: EA/EPR/EP3501UC Operator: Port Of Tilbury London Limited Site category: Household, Commercial & Industrial Waste Transfer Station License status: Issued Annual tonnage limit: 250,000 tpa
277	SW	Tilbury Point, Dock Road, Tilbury Point, Tilbury, Essex, RM17 6UR	License number: EA/EPR/DB3809KP Operator: Bournewood Sand & Gravel Limited Site category: Deposit of waste to land as a recovery operation License status: Issued Annual tonnage limit: 25,000 tpa
378	NE	European Metal Recycling, 13 20 Berth, Tilbury Dock, Tilbury, Essex, RM18 7EH	License number: EA/EPR/VP3094NK Operator: European Metal Recycling Ltd Site category: Metal Recycling Site (mixed MRS's) License status: Modified Annual tonnage limit: 300,000 tpa
416	S	Tilbury Dock Alternative Fuel Storage Facility, 32 And 33, Port of Tilbury, Tilbury, Essex, RM18 7NS	License number: EA/EPR/ZP3434EU Operator: SUEZ Recycling and Recovery UK Ltd Site category: Household, Commercial & Industrial Waste Transfer Station License status: Surrendered Annual tonnage limit: 180,000 tpa
416	S	Tilbury Dock Alternative Fuel Storage	License number: EA/EPR/CB3503MG Operator: SUEZ Recycling and Recovery UK Ltd

Distance from the Site (m)	Direction from the Site	Address	Details
		Facility, 32 And 33, Port of Tilbury, Tilbury, Essex, RM18 7NS	Site category: Household, Commercial & Industrial Waste Transfer Station License status: Surrendered Annual tonnage limit: N/A
456	SW	Tilbury Docks Waste Transfer Station, Tilbury Freeport, Tilbury, Essex, RM18 7DP	License number: EA/EPR/DB3803LZ Operator: Riverside Resource Recovery Limited Site category: 75kte HCI Waste Transfer Station and treatment License status: Surrendered Annual tonnage limit: 25,000 tpa
464	SW	Nordic Recycling Limited, 34/34 A, Tilbury Docks, Tilbury Freeport, Tilbury, Essex, RM18 7EH	License number: EA/EPR/TP3995EW Operator: Nordic Recycling Ltd Site category: Physical Treatment Facility/Material Recycling Treatment Facility License status: Surrendered Annual tonnage limit: 200,000 tpa
486	SE	Tilbury Dock Shed 32a, Port Of Tilbury, Tilbury, Essex, RM18 7NS	License number: EA/EPR/FB3108LF Operator: Suez Recycling And Recovery UK Ltd Site category: Household, Commercial & Industrial Waste Transfer Station License status: Surrendered Annual tonnage limit: N/A
492	NE	21, Berth, Tilbury Docks, Tilbury, Essex, RM18 7JT	License number: EA/EPR/GP3699NE Operator: Powell Duffryn Shipping Ltd Site category: Transfer Station taking Non-Biodegradable Wastes License status: Surrendered Annual tonnage limit: 30,000 tpa
Waste exemptions			
47	NE	Leslie Ford House, Tilbury Freeport, Tilbury, Essex, RM18 7EH	Reference: EPR/NF0405XC Category: Storing waste exemption Sub-category: Non-agricultural waste only Description: Storage of waste in a secure place
96	SE	Tilbury Dock, Tilbury, Essex, RM18 7EH	Reference: EPR/XH0470SA Category: Treating waste exemption Sub-category: Non-agricultural waste only

Distance from the Site (m)	Direction from the Site	Address	Details
			Description: Screening and blending of waste
166	NE	npa – Tenants Row, Tilbury, Thurrock, RM18 7JJ	Reference: EPR/FF0708CR Category: Storing waste exemption Sub-category: Non-agricultural waste only Description: Storage of waste in secure containers
166	NE	npa – Tenants Row, Tilbury, Thurrock, RM18 7JJ	Reference: EPR/FF0708CR Category: Storing waste exemption Sub-category: Non-agricultural waste only Description: Storage of waste in a secure place
294	NE	Leslie Ford House, Tilbury, RM18 7EH	Reference: WEX124012 Category: Storing waste exemption Sub-category: Not on a farm Description: Storage of waste in a secure place
301	NE	Leslie Ford House, Tilbury Freeport, Tilbury, Essex, RM18 7EH	Reference: EPR/SF0107ZW Category: Storing waste exemption Sub-category: Non-agricultural waste only Description: Storage of waste in a secure place
395	NE	Shed 46, Tilbury Docks, Tilbury, RM18 7EH	Reference: WEX083128 Category: Treating waste exemption Sub-category: Not on a farm Description: Preparatory treatments (baling, sorting, shredding etc)
395	NE	External Land Adjacent to Shed 46, Tilbury Docks, Tilbury, RM18 7EH	Reference: WEX061924 Category: Storing waste exemption Sub-category: Not on a farm Description: Storage of waste in a secure place
423	W	Site 41, Northfleet Hope House, Tilbury Docks, Tilbury, RM18 7HX	Reference: WEX148319 Category: Using waste exemption Sub-category: Not on a farm Description: Use of waste in construction
425	N	Tilbury Docks c/o 26 Berth Workshop, Enterprise	Reference: WEX130263 Category: Storing waste exemption Sub-category: Not on a farm

Distance from the Site (m)	Direction from the Site	Address	Details
		Distribution Centre, Tilbury Dock, Tilbury, RM18 7EH	Description: Storage of waste in secure containers
425	N	Tilbury Docks c/o 42 Berth Workshop, Convential Operations, Tilbury Dock, Tilbury, RM18 7EH	Reference: WEX130267 Category: Storing waste exemption Sub-category: Not on a farm Description: Storage of waste in secure containers
426	N	Port of Tilbury London Port Engineering, Tilbury, RM18 7EH	Reference: EPR/ZF0334VY Category: Treating waste exemption Sub-category: Non-agricultural waste only Description: Crushing waste fluorescent tubes
426	N	Port Of Tilbury 47 Berth, Tilbury Dock, RM18 7EH	Reference: EPR/CF0604MV Category: Storing waste exemption Sub-category: Non-agricultural waste only Description: Storage of waste in secure containers
426	N	Convential Operations Berth 42, Tilbury Dock, Essex, RM18 7EH	Reference: EPR/CF0804MD Category: Storing waste exemption Sub-category: Non-agricultural waste only Description: Storage of waste in secure containers
426	N	Enterprise Distribution Centre, Berth 26, Tilbury Dock, Essex, RM18 7EH	Reference: EPR/CF0904MJ Category: Storing waste exemption Sub-category: Non-agricultural waste only Description: Storage of waste in secure containers

4 Permitted activities

4.1 Activities

Three specified waste management activities, as defined in the Waste Framework Directive, will be undertaken at the Facility. These are listed in Table 8:

Table 8: Proposed specified waste management activities

Reference	Description
D15	Storage pending any of the operations numbered D1 to D14 (excluding temporary storage, pending collection, on the site where it is produced)
D14	Repackaging prior to submission to any of the operations numbered D1 to 13
R13	Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced
D13	Blending or mixing prior to submission to any of the operations numbered D1 to D12

The main activities to be undertaken at the Facility are the bulking/compaction and storage of up to 450,000 tonnes of non-hazardous waste each year prior to transfer off-site. All specified waste management activities will take place within the Site Boundary for the Facility, with all bulking and compaction activities undertaken within the main building.

4.2 On-site waste and material storage facilities

As identified within the supporting information, the main material to be used at the Facility is non-hazardous waste, which would be delivered to the Facility via road. Maintenance materials such as oils and greases will be used in small amounts and stored in appropriately bunded areas. Water will be used for washdown purposes and welfare facilities.

Table 9: Material storage and containment facilities

Material	Estimated storage capacity	Estimated annual consumption	Primary containment	Secondary containment	Tertiary containment
Non-hazardous waste	1,950 tonnes in containers at quayside	450,000 tonnes per annum	Sealed metal containers	Bunding (contained drainage)	Hardstanding
	<450 m^3 loose within main building		Hardstanding	Contained drainage	N/A
Mains water	N/A	14,400 m^3			N/A
Maintenance oils and greases	N/A	<100 tonnes per annum	Bunding	Hardstanding	Contained drainage inside buildings
Diesel	5,000 litres	63,000 L	Bunding	Hardstanding	N/A
Hydraulic fluid	5,000 litres	5,000 L	Bunding	Hardstanding	N/A

Waste processing areas (e.g. the compaction system) will also be located in an area with contained drainage with falls to the process drainage system. Therefore, all potential leachate from waste stored and processed within the main building will be contained.

Liquid maintenance chemicals/oils/lubricants will be stored within bunded areas, with the secondary containment having a volume of 110% of the stored capacity. Should any gas bottles be required to be used on-site, these will be kept secure in dedicated area(s).

The greatest risks of contamination at the site will be spillages of fuel/oils or fires in waste storage areas. Any spillages will be cleaned up in accordance with documented procedures on-site – spill kits will be readily available to deal with incidents. Furthermore, a number of procedures are in place to reduce the risk of fires and mitigate against any subsequent contamination following a fire event. Further details on contamination risks and associated mitigation are provided within both the Environmental Risk Assessment (Appendix C) and the Fire Prevention Plan (Appendix D) of the supporting information.

4.3 Environmental Risk Assessment

An Environmental Risk Assessment for the Facility has been developed in accordance with the requirements of Environment Agency (EA) guidance '*Risk assessments for your environmental permit*' and Horizontal Guidance Note H1, refer to Appendix C of the Supporting Information.

The assessment considers all potential sources of ground and surface water pollution that could occur due to fugitive emissions or incidents/accidents occurring at the Facility. The assessment details any mitigation measures that would be employed to reduce the frequency and/or impact of these events and prevent pollution occurring. The assessment also identifies that the development will require the storage of various materials, which could potentially pose a risk to the ground and groundwater during normal operation. The main process building, where loose waste is unloaded, will be covered in concrete hardstanding with dedicated process drainage systems. Other external areas (including roadways) will be covered in concrete and/or tarmac hardstanding. Therefore, it is not considered that there will be any risk of ground/groundwater contamination during normal operation of the Facility.

The assessment has concluded that for land, groundwater and surface water, the residual impacts from the operation of the Facility would be insignificant provided the recommended mitigation measures are appropriately implemented. Therefore, it is concluded that the operation of the Facility would pose little risk of pollution.

5 Ongoing management

During the lifetime of the permit, the site condition report will be updated to take into account the following:

- any changes to the permitted activities or the site boundary;
- any measures taken to protect the underlying land and groundwater;
- any pollution incidents that may have had an impact on land and associated remediation; and
- any soil, gas or groundwater monitoring (where undertaken).

At the end of the operational life of the Facility, the site condition report will be updated to include for decommissioning and site closure. It will be demonstrated that all sources of pollution risk have been removed and whether decommissioning has had any impact on the land. Any required remedial works will be documented and incorporated into the report. A statement of site condition will be made to confirm that:

- the permitted activities have stopped;
- decommissioning is complete, and the pollution risk has been removed; and
- the land is in a satisfactory condition.

6 Conclusions

The level of risk of contamination is determined by the presence of a link or pathway between the source and potential receptors. The greatest contamination risks can often occur during the construction phase of a project. Mitigation measures suggested for construction workers include Personal Protective Equipment (PPE), no smoking, eating or drinking on site, and good site hygiene. As the layout of the Facility has been designed to utilise the existing shed at the site, this reduces the scope of construction works required at the site.

A number of containment measures and environmental management measures are in place to reduce the risk of contamination during the operational phase of the project – refer to section 4.2. Furthermore, the detailed Environmental Risk Assessment undertaken for the operational phase of the project (refer to section 4.3) has concluded that for land, groundwater and surface water, the residual impacts from the operation of the Facility would be insignificant and that the operation of the Facility would pose little risk of pollution.

Extensive hardstanding currently present at the site reduces the risk for contamination of the underlying groundwater, with the greatest risk for contamination considered to be surface water, due to the location of the site at the Tilbury Docks and the connection between the docks and the River Thames.

There are a number of potential off-site sources of contamination from the surrounding industrial land use – refer to section 3.2.4. However, these are considered unlikely to impact the site as it is expected that the substantial hardstanding and containment measures present will mean that migration of oil and other pollutants would be highly unlikely.

For the reasons stated in this report (and summarised above), it is anticipated that there will be little risk of pollution associated with the Facility and its directly associated activities, and that the impact of contamination from the site will be ‘negligible’.

Appendices

A Groundsure report

B Site Surfacing

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