

Caulmert Limited

Engineering, Environmental & Planning
Consultancy Services

Riverside Transfer Station

Williams Environmental Limited

Environmental Permit Application

Odour Management Plan

Prepared by:

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Odour Management Plan

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DRAWINGS

- 5570-CAU-XX-XX-DR-V-1801** Sensitive Receptors Plan
- 5570-CAU-XX-XX-DR-V-1800** Proposed Site Layout

APPENDICES

- Appendix 1** Odour Complaint Form

1.0 INTRODUCTION

1.1 Background

- 1.1.1 Williams Environmental Limited (hereafter referred to as ‘the operator’) have appointed Caulmert Limited to prepare a Bespoke Environmental Permit application for a new Hazardous Waste Transfer Station located on the Riverside Industrial Estate off Oliver Road, West Thurrock, Grays, postcode RM20 3EF.
- 1.1.2 The operator currently operates a facility identical that proposed at Unit 3 Charles Street Industrial Estate, in Silvertown, London under Environmental Permit ref. EPR/SP3336SA), however the land on which it is situated is subject to a compulsory land purchase order and so the operator has to relocate the facility before November 2023.
- 1.1.3 The current facility has operated for a number of years in Silvertown and the operator has reported that they have a very good permit compliance record with no history of complaints.
- 1.1.4 This report is an Odour Management Plan which forms part of the operating techniques for the proposed Hazardous Waste Transfer Station.

1.2 Objectives

- 1.2.1 This Odour Management Plan provides a means of assessing the effectiveness of control measures at the site. The proposed Odour Action Plan should be implemented in cases of failure of control measures and odour emission events. This document also reviews the current procedures for investigating odour emission events and includes reference information on the understanding of odour nuisance.
- 1.2.2 This Odour Management Plan has been prepared with reference to the Environment Agency’s technical guidance ‘H4 Odour Management – How to comply with your environmental permit’ published April 2011, and to the ‘Best available techniques for the assessment and control of odour’ published June 2005.
- 1.2.3 In addition, an ‘Amenity and Accidents Risk Assessment’ report has been produced which considers any potential risks (including odour) associated with the proposed operations, under document ref. 5195-CAU-XX-XX-RP-V-0302.
- 1.2.4 The operator intends to use this OMP during the facilities’ expected operational life. The Plan will be reviewed on a regular basis.

1.3 Site Location & Setting

- 1.3.1 The site is located approximately 32km to the east of the centre of London, in the town of Grays. It is centred on National Grid Reference TQ 5818 7673. The site is in a heavily industrial area, with other industrial units and warehouses surrounding the site to the north, east and west. The River Thames is located south of the site. The site location is shown below in Figure 1:



Figure 1 - Site Location Plan

1.4 Proposed Site Operations

- 1.4.1 The installation will involve the temporary storage of hazardous and non-hazardous waste, prior to bulking and repackaging for subsequent transfer off-site for further treatment or disposal. The majority of wastes pass through the transfer station requiring just a short inspection and without the need for any bulking or decanting. In addition, activities at the site will include the scraping and emptying out of residues from containers and a drum crushing operation. Emptied containers and crushed drums from hazardous waste will be sent off site for further treatment. Containers and drums that had non-hazardous waste in will be sent straight for recycling at the appropriate facility.
- 1.4.2 All hazardous waste reception, storage, segregation, and drum crushing operations will be undertaken in fully bunded areas with concrete surfacing. Repackaging and bulking of hazardous and non-hazardous wastes will be undertaken on-site and will consist of stacking, packing and palletising sealed containers or bulk items of wastes, ready for transfer off-site. This will be unlikely to release odours.

Where containerised wastes, that are likely to give rise to odours or VOCs emissions, are required to be opened and transferred to other larger containers, this will be undertaken inside the enclosed building, which will be fitted with air extraction and activated carbon filter to remove odour and VOCs from air leaving the building. The main hazardous wastes storage and repackaging area will be covered by a canopy roof, accessed via a sleeping policeman. Some wastes such as general waste, asbestos waste, scrap metal and pigeon guano, will be stored in skips/RORO containers in a separate area.

2.0 POTENTIAL SOURCES OF ODOUR

2.1 Waste Reception/Offloading

- 2.1.1 Vehicles containing wastes will be directed to the covered, southern area of the site and will undergo pre acceptance checking before being offloaded directly into a designated bay for the waste type or into the waste reception bay for further checks before going for direct storage or repackaging. All wastes (with exception of some non-hazardous non odorous wastes e.g. pallets) are delivered packaged, be it containerised or within sealed bags, therefore the potential for the release of odours is very low.
- 2.1.2 The majority of hazardous wastes delivered to site remain in their original packaging during storage before being transferred to another permitted facility for treatment or disposal.
- 2.1.3 Some non-hazardous wastes will be accepted and stored on Site such as scrap metals, tyres, cardboard, general waste, although this will comprise predominantly of materials that accompany consignments of hazardous wastes such as packaging waste or pallets.
- 2.1.4 The non-hazardous wastes are unlikely to be inherently odorous and will be handpicked from the delivery vehicle and placed directly into waste containers located in the southern area of the site. No wastes will be tipped directly onto the floor of the site. Containers for non-hazardous wastes will either be enclosed or sheeted.
- 2.1.5 Small quantities of pigeon guano will be accepted, however this waste arrives bagged or in containers and will be placed directly into an enclosed container before being removed off site.

2.2 Bulking/Repackaging of Waste

- 2.2.1 The installation will involve the temporary storage of hazardous and non-hazardous waste, prior to bulking and repackaging for subsequent transfer off-site for further treatment or disposal. The majority of wastes pass through the transfer station requiring just a short inspection and without the need for any bulking or decanting. In addition, activities at the site will include the scraping and emptying out of residues from containers and a drum crushing operation. Emptied containers and crushed drums from hazardous waste will be sent off site for further treatment. Containers and drums that had non-hazardous waste in will be sent straight for recycling at the appropriate facility.
- 2.2.2 Repackaging and bulking of hazardous and non-hazardous wastes will be undertaken on-site and will consist of stacking, packing and palletising sealed containers or bulk items of wastes, ready for transfer off-site. This will be unlikely to release odours. Where containerised wastes, that are likely to give rise to odours or VOCs emissions, are required to be opened and transferred to other larger containers, this will be undertaken inside the enclosed building, which will be fitted with air extraction and activated carbon filter to remove odour and VOCs from air leaving the building. The repackaging activity is only undertaken for short period (approx. 1 hr/day) and so the potential for odour release is low.

- 2.2.3 The main storage and treatment area will be covered by a steel-framed canopy, accessed via a sleeping policeman. Some wastes such as general waste, asbestos waste, scrap metal and pigeon guano, will be stored in skips/RORO containers.
- 2.2.4 Risk of odour from these activities is considered minor due to the containment of the waste and method of operation, ensuring potentially odorous emissions are contained at all times except for any repackaging that is undertaken for a very short period.

2.3 Drum Crushing

- 2.3.1 The drum crushing operation will be undertaken outside in Bay 18, under the cover of the roof canopy, by competent trained site operatives who have undergone site specific training in the drum crushing operation.
- 2.3.2 The drum crushing operation involves crushing oil, liquid or chemical drums up to 205 litre in size, using a hydraulic operated crusher, to reduce the volume of the drums for easier storage, handling and transport. Prior to crushing, the drums will be checked to ensure they are empty and so the potential for odour release is minimised during the crushing operation.
- 2.3.3 It should be noted, the drum crushing operation involves crushing nominally empty metal drums which previously contained liquid or solid materials. They would contain <1% residues. Drums which once contained inherently odorous materials such as strong acids or ammonia will not be crushed and be sent from site as whole and sealed containers for onward disposal. For example:

Case Study 1:

- A Laboratory waste bottle of hydrochloric acid at 33% would be likely to cause fumes when poured. The chemist will ensure that this waste is packaged into a suitable container and sent off-site for disposal to an incineration or treatment plant. Should the hydrochloric acid be just a 5% dilute solution, then the chemist may consider this to be suitable to be poured into a larger container such as an IBC of mixed acids of up to 10%.

Case Study 2:

- Ammoniated oil is a type of oil used in the refrigeration industry, this type of oil which contains a small amount of ammonia would be considered to be too odorous to be decanted and would be sent to an incineration or treatment plant in a sealed container. Mineral oil and hydraulic oil would be considered suitable to be decanted without any concern for a nuisance odour.
- The chemist will make a judgement which chemicals can and can't be decanted with the possibility of a nuisance odour being one important factor to be considered.

2.4 Storage of Potentially Odorous Wastes

2.4.1 Potential sources of odour may arise from the storage of liquid and solid wastes on-site.

2.4.2 Risk of odour from the storage of wastes on-site is considered minor due to the all the wastes, particularly those inherently odorous being fully contained and substances not exposed to the air.

2.5 Odorous Materials Inventory

2.5.1 The following table provides an inventory of potentially odorous materials that will be stored and handled on site (see Table 1 below):

Table 1 – Odorous Materials Inventory Summary

| Material Type / Description | Quantity Limits | Waste Types (EWC) | Source of waste | Age of waste | Storage / treatment method & location | Storage time limits | Monitoring & Records |
|--|--------------------------------|--|--|--------------------------------|---|--|---|
| Pigeon Guano | Max. 10 tonnes (in skips) | 02 01 06 | Household industrial & commercial wastes | N/A | Arrives bagged or in containers and will be placed directly into an enclosed container in 'Skip Area' before being removed off site. | Maximum storage is no longer than 3 months before removal from site. Typically, turnover is quicker, with skips filling and being removed every 8 weeks. | Monitoring & monitoring records as per Section 7.0 of this OMP. Maximum storage time of all waste materials on site will be minimised. As per the site's Environmental Management system (EMS) and waste acceptance procedures: all loads deposited at the site shall have the following information recorded at the weighbridge: |
| Containerised Non-Hazardous Wastes (May include non-hazardous bitumen, paint, adhesives, edible grease oils and fats, inks and detergents) | Max. 40 tonnes (in containers) | 02 01 09 02 05 01 05 01 10 05 01 13 05 01 17 07 01 12 08 01 12 08 01 14 08 01 18 08 01 20 08 04 10 08 04 12 08 04 14 08 04 16 | Household industrial & commercial wastes | N/A – see storage time limits. | Stored in sealed containers such as drums and IBCs in covered area of site. These will only be opened briefly, if required, during waste acceptance checks. Any decanting and bulking | Usual turn-around time for non-hazardous waste stored in drums and IBCs on-site is 2 - 4 weeks. | - date & time of waste receipt - waste type & quantity - vehicle type & reg - name and address of customer - waste carrier no. |

| Material Type / Description | Quantity Limits | Waste Types (EWC) | Source of waste | Age of waste | Storage / treatment method & location | Storage time limits | Monitoring & Records |
|--|---------------------------|--|--|--|--|---|--|
| | | 17 05 06 17 03 02 19 08 01 19 08 09 20 01 25 20 01 28 20 01 30 | | | of wastes will be undertaken within the building fitted with carbon filter and will be for short durations. | | |
| Mixed packaging/ general wastes (May include paper, cardboard, plastics, broken pallets and other mixed non-hazardous wastes). | Max. 20 tonnes (in skips) | 15 01 01 15 01 02 15 01 03 15 01 04 15 01 05 15 01 06 15 01 07 15 01 09 17 02 01 17 02 02 17 02 03 19 12 01 19 12 04 19 12 05 19 12 07 19 12 08 20 01 01 20 01 02 20 01 10 20 01 11 20 01 39 20 03 01 | Household , industrial & commercial wastes | N/A – unlikely to contain putrescible waste. | Stored in enclosed skips or RORO containers or wheelie bins. See storage locations on Site Layout Plan ref. 5195-CAU-XX-XX-DR-V-1800. | Maximum storage is no longer than 3 months before removal from site. Typically, turnover is quicker, with skips filling and being removed every 4 to 6 weeks. | |
| Oxidising agents containing acids | Max. 1.5 tonnes | 06 01 05* 16 05 06* | Household , industrial & commercial wastes | N/A | Stored inside individual containers such as plastic containers, 1000litre IBCs, drums and kegs, within designated concrete storage bays. | N/A – wastes are within sealed containers , drums, kegs & cannisters (depending on the waste type) and therefore will not degrade or | Monitoring & monitoring records as per Section 7.0 of this OMP. |
| Oxidising agents | Max. 4 tonnes | 06 10 02* 16 05 06* 16 05 07* 16 08 02* 16 09 01* 16 09 02* 16 09 04* 20 01 29* | | | | | Maximum storage time of all waste materials on site will be minimised. As per the site's Environmental Management system (EMS) and waste acceptance |

| Material Type / Description | Quantity Limits | Waste Types (EWC) | Source of waste | Age of waste | Storage / treatment method & location | Storage time limits | Monitoring & Records |
|---|-----------------|--|-----------------|--------------|--|---|---|
| Organic peroxides | Max. 1 tonne | 08 04 09* 16 05 06* 16 05 08* 16 08 02* 16 09 03* | | | Storage bays covered by large canopy to protect containerised wastes from heat/sunlight, rain/snow etc. | be exposed to air to release odours when being stored. | procedures: all loads deposited at the site shall have the following information recorded at the weighbridge: |
| Water reactive wastes | Max. 1 tonne | 16 05 06* | | | | Bulking/pouring of liquid wastes will only be undertaken within the building with air extraction and carbon filter, to prevent odour release. | - date & time of waste receipt |
| Solvents | Max. 3 tonnes | 16 03 05* 16 05 06* 16 05 08* 20 01 13* | | | Containerised wastes will only be opened briefly, if required, during waste acceptance checks. Any decanting and bulking of wastes will be undertaken within the building fitted with carbon filter and will be for short durations. | | - waste type & quantity |
| Oily rags | Max. 60 tonnes | 15 02 02* | | | | | - vehicle type & reg |
| Flammable solids, adhesives and resins | Max. 60 tonnes | 07 01 09* 07 01 10* 07 02 10* 07 02 11* 07 02 04* 07 02 08* 07 02 09* 07 02 11* 07 03 08* 07 04 08* 07 05 08* 07 05 11* 07 05 13* 07 06 07* 07 06 08* 07 07 08* 08 03 14* 14 06 04* 14 06 05* 15 02 02* 16 03 05* 16 05 06* 16 05 08* 17 04 09* 17 04 10* 17 05 03* | | | See storage locations on Site Layout Plan ref. 5195-CAU-XX-XX-DR-V-1800. | | - name and address of customer |
| | | | | | | | - waste carrier no. |

| Material Type / Description | Quantity Limits | Waste Types (EWC) | Source of waste | Age of waste | Storage / treatment method & location | Storage time limits | Monitoring & Records |
|---------------------------------------|----------------------|-------------------|-----------------|--------------|---------------------------------------|---------------------|----------------------|
| Flammable solvents, paints and resins | Max. 60 tonnes | 03 02 01* | | | | | |
| | | 03 02 02* | | | | | |
| | | 03 02 03* | | | | | |
| | | 03 02 04* | | | | | |
| | | 03 02 05* | | | | | |
| | | 04 02 14* | | | | | |
| | | 04 02 16* | | | | | |
| | | 04 02 19* | | | | | |
| | | 05 01 08* | | | | | |
| | | 05 01 11* | | | | | |
| | | 07 01 01* | | | | | |
| | | 07 01 03* | | | | | |
| | | 07 01 04* | | | | | |
| | | 07 01 07* | | | | | |
| | | 07 02 03* | | | | | |
| | | 07 02 04* | | | | | |
| | | 07 02 07* | | | | | |
| | | 07 02 11* | | | | | |
| | | 07 01 14* | | | | | |
| | | 07 02 16* | | | | | |
| | | 07 03 01* | | | | | |
| | | 07 03 03* | | | | | |
| | | 07 03 04* | | | | | |
| | | 07 03 08* | | | | | |
| | | 07 04 01* | | | | | |
| | | 07 04 03* | | | | | |
| | | 07 04 04* | | | | | |
| | | 07 04 08* | | | | | |
| | | 07 05 01* | | | | | |
| | | 07 05 04* | | | | | |
| | | 07 06 04* | | | | | |
| | | 07 07 04* | | | | | |
| | | 08 01 11* | | | | | |
| | | 08 01 13* | | | | | |
| | | 08 01 15* | | | | | |
| | | 08 01 17* | | | | | |
| | | 08 01 19* | | | | | |
| | | 08 01 21* | | | | | |
| | | 08 03 12* | | | | | |
| | | 08 04 09* | | | | | |
| 08 04 11* | | | | | | | |
| 08 04 13* | | | | | | | |
| 08 04 15* | | | | | | | |
| 08 04 17* | | | | | | | |
| 09 01 03* | | | | | | | |

| Material Type / Description | Quantity Limits | Waste Types (EWC) | Source of waste | Age of waste | Storage / treatment method & location | Storage time limits | Monitoring & Records |
|---|-----------------|---|-----------------|--------------|---------------------------------------|---------------------|----------------------|
| | | 13 07 01* 13 07 02* 13 07 03* 14 06 03* 16 03 05* 16 05 06* 16 05 08* 17 03 01* 17 03 02* 17 03 03* 18 01 06* 19 02 08* 19 11 04* 20 01 13* 20 01 27* | | | | | |
| Oil/water wastes | Max. 60 tonnes | 01 05 05* 01 05 06* 13 03 07* 13 03 08* 13 03 09* 13 03 10* 13 04 01* 13 04 03* 16 05 06* 19 08 10* 19 08 13* 20 01 26* | | | | | |
| Toxic solids/liquids, lab wastes and agrochemicals | Max. 40 tonnes | 02 01 08* 03 02 01* 03 02 02* 03 02 03* 03 02 04* 03 02 05* 04 01 03* 04 02 14* 04 02 16* 04 02 19* | | | | | |

| Material Type / Description | Quantity Limits | Waste Types (EWC) | Source of waste | Age of waste | Storage / treatment method & location | Storage time limits | Monitoring & Records |
|-----------------------------|-----------------|-------------------|-----------------|--------------|---------------------------------------|---------------------|----------------------|
| | | 07 01 01* | | | | | |
| | | 07 01 03* | | | | | |
| | | 07 01 04* | | | | | |
| | | 07 01 07* | | | | | |
| | | 07 01 08* | | | | | |
| | | 07 01 09* | | | | | |
| | | 07 01 10* | | | | | |
| | | 07 01 14* | | | | | |
| | | 07 02 03* | | | | | |
| | | 07 02 04* | | | | | |
| | | 07 02 07* | | | | | |
| | | 07 02 08* | | | | | |
| | | 07 02 09* | | | | | |
| | | 07 02 10* | | | | | |
| | | 07 02 11* | | | | | |
| | | 07 02 16* | | | | | |
| | | 07 03 01* | | | | | |
| | | 07 03 03* | | | | | |
| | | 07 03 04* | | | | | |
| | | 07 03 07* | | | | | |
| | | 07 03 08* | | | | | |
| | | 07 04 01* | | | | | |
| | | 07 04 03* | | | | | |
| | | 07 04 04* | | | | | |
| | | 07 04 07* | | | | | |
| | | 07 04 08* | | | | | |
| | | 07 05 01* | | | | | |
| | | 07 05 03* | | | | | |
| | | 07 05 07* | | | | | |
| | | 07 05 13* | | | | | |
| | | 07 06 01* | | | | | |
| | | 07 06 03* | | | | | |
| | | 07 06 04* | | | | | |
| | | 07 06 07* | | | | | |
| | | 07 06 08* | | | | | |
| | | 07 07 01* | | | | | |
| | | 07 07 03* | | | | | |
| | | 07 07 07* | | | | | |
| | | 07 07 08* | | | | | |
| | | 08 05 01* | | | | | |
| | | 11 01 03* | | | | | |
| | | 12 01 08* | | | | | |
| | | 13 03 06* | | | | | |
| | | 14 06 02* | | | | | |

| Material Type / Description | Quantity Limits | Waste Types (EWC) | Source of waste | Age of waste | Storage / treatment method & location | Storage time limits | Monitoring & Records |
|---|----------------------|--|-----------------|--------------|---------------------------------------|---------------------|----------------------|
| | | 16 03 03* 16 05 06* 16 05 07* 16 05 08* 18 01 08* 19 02 07* 20 01 19* | | | | | |
| Acids | Max. 40 tonnes | 05 01 07* 05 01 12* 06 01 01* 06 01 02* 06 01 03* 06 01 04* 06 01 05* 06 01 06* 10 01 04* 11 01 05* 11 01 06* 11 01 07* 11 01 08* 11 01 11* 16 03 03* 16 05 06* 16 08 02* 16 05 07* 16 06 01* 16 08 02* 16 08 05* 16 08 06* 16 08 07* 19 11 02* 20 01 14* 20 01 29* | | | | | |
| Alkali waste, caustic waste, ammonia, cyanides | Max. 40 tonnes | 06 02 03* 06 02 05* 11 01 13* 16 03 03* 16 05 06* | | | | | |

| Material Type / Description | Quantity Limits | Waste Types (EWC) | Source of waste | Age of waste | Storage / treatment method & location | Storage time limits | Monitoring & Records |
|--|---|---|---|--------------|---|--|--|
| | | 16 05 07* 20 01 15* 20 01 29* | | | | | |
| Bleach and oxidising liquids | Max. 40 tonnes | 09 01 05* 16 05 06* 16 05 07* 20 01 17* 20 01 29* | | | | | |
| Misc. gas cannisters for aerosols, butane, propane and other gases inc. flammable gases | Max. 20 tonnes | N/A | Household , industrial & commercial wastes | N/A | Stored in designated area within waste safes, drums and lockable metal cages. | N/A – Gases inside sealed & pressurised cannisters – do not require a storage limit. | |
| Acetylene gas cannisters | Max. 2 tonnes | N/A | | | | | |
| Fuels | Max. 1 fuel tank | N/A – not wastes | Not waste – sourced from fuel & oils supplier | N/A | Within containers that have secondary containment – stored within Fuel Store, in containers within a lockable shed. | N/A – fuels, oils and lubricants do not require storage limits. | Records will be kept in the Site Office of the fuels, oils and lubricants stored on site in the Fuel Store. Inspections of the integrity of storage containers and secondary containment will be made regularly. |
| Oils | Small containers for mobile plant maintenance only. | | | | | | |
| Lubricants | | | | | | | |

Summary

2.5.2 Based on the sections above, the potential odour sources on-site are therefore as follows:

- Odour from reception of hazardous and non-hazardous waste;
- Odour from repackaging activities; and,
- Odour from storage of potentially odorous liquids/substances.

3.0 RECEPTORS & PATHWAYS

3.1 Local Sensitive Receptors

- 3.1.1 A sensitive receptor search was conducted of the surrounding area within a 1km radius of the site boundary using Defra's Magic Maps website¹ and the sensitive receptors identified are listed below in Table 2. The distance to each receptor is measured from the site boundary.
- 3.1.2 In addition, as part of the Pre-Application Advice stage, the Environment Agency (EA) conducted a Nature and Heritage Conservation Screening Report and identified one Site of Special Scientific Interest (SSSI), one Marine Conservation Zone (MCZ), five Local Wildlife Sites (LWSs) within 2km of the site, of which 3 are within 1km. One RAMSAR site was identified within 10km of the site. Three protected species and one protected habitat were identified within 500m of the site boundary. The relevant sites within 1km are listed in Table 2 below. Habitats are less sensitive to emissions of odour, unless used by human visitors.
- 3.1.3 The closest human receptors to the site are workers and customers of the surrounding industrial units located 80m west (Viridor Collections Unit) and 100m north. There are a large number of industrial buildings surrounding the site to the north, east and west. These are, however, industrial and commercial receptors and less sensitive to emissions such as noise, vibration and odour.
- 3.1.4 West Thurrock Primary School is located 805m northeast of the site. There are no other schools and no hospitals within 1km of the site.
- 3.1.5 The nearest residential receptors to the site are houses off Schofield Road 760m north of the site boundary. Other residential areas are houses located within residential areas north of the site. Houses located off London street (900m north) and houses located off Flint Street (925m north east). A number of public parks or gardens are located within the residential areas, located 765m north-north east, 815m north and 935m north-north east.
- 3.1.6 There are no Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Local Nature Reserves (LNR), National Nature Reserves (NNRs), Ramsar sites or Areas of Outstanding Natural Beauty (AONBs) within 2km of the site. The closest Ramsar site, Thames Estuary and Marshes, is located 9.4km east of the site (as shown in the EA screening report).
- 3.1.7 The sensitive receptors identified within 1000m of the site boundary are presented in Table 2 below:

¹ DEFRA Magic Maps 2022: <https://magic.defra.gov.uk/MagicMap.aspx>

Table 2 – Summary of Sensitive Receptors within 1km of the site boundary

| Receptor | Type | Distance/Direction |
|---------------------------------------|-----------------------|--------------------|
| West Thurrock Brownfields LWS | Local Wildlife Site | <10m S & W |
| Users of Oliver Road/Oliver Close | Public Road | 60m N |
| Car Park (Viridor collections unit) | Industrial | 80m W |
| West Thurrock Lagoon & Marshes | SSSI | 80m E |
| Industrial Units | Industrial/Commercial | 100m N |
| Industrial buildings (Polybitumens) | Industrial/Commercial | 115m WSW |
| West Thurrock Lagoon LWS | Local Wildlife Site | 150m NE |
| West Thurrock Reedbed LWS | Local Wildlife Site | 275m N |
| Oil Storage Depot | Industrial | 295m W |
| Amazon Warehouse | Industrial/Commercial | 365m N |
| Industrial Chemicals Group Warehouses | Industrial | 400m E |
| Industrial Units | Industrial | 450m NW |
| Daily Mail Printing Factory | Industrial/Commercial | 430m NE |
| A1090 Oliver Road | Public Road | 510m N |
| Thurrock Trade Park | Industrial/Commercial | 515m N |
| Royal Mail/Parcel Force Warehouse | Industrial/Commercial | 575m NNE |
| Industrial Units off Oliver Close | Industrial/Commercial | 630m NW |
| Users of River Thames | Surface Water | 640m S |
| Railway Line | Commercial | 700m N |
| Industrial Units off London Road | Industrial/Commercial | 720m N |
| Houses off Schofield Road | Residential | 760m N |
| Public Park/Garden | Recreational | 765m NNE |
| Co-op Warehouse | Industrial | 770m NE |
| West Thurrock Primary School | Educational | 805m NE |
| Public Park/garden | Recreational | 815m N |
| Seabrook Warehousing (SWL) | Industrial | 850m NNW |
| Queen Elizabeth II Bridge | Public Road | 875m W |
| Residential Houses off London Road | Residential | 900m N |
| Residential houses off Flint Street | Residential | 925m NE |
| Public Park or Garden | Recreational | 935m NNE |

- 3.1.8 The main receptors sensitive to odour are humans living or working near to the site, particularly if downwind of the site. Receptors surrounding the permitted boundary are shown in drawing ref. 5195-CAU-XX-XX-DR-V-1801 'Sensitive Receptors Plan'. The majority of receptors surrounding the site are industrial Sites or habitats such as scrub woodland and therefore not particularly sensitive to odour.

3.2 Meteorological Setting

- 3.2.1 The main pathway for fugitive emissions of odour from the site is by air and this is likely to be affected by local weather conditions, in particular by wind direction. Wind statistics observed from Erith Kent weather station, the closest weather station actively recording wind statistics, are considered to be representative of the typical conditions at the site (Figure 2 below). Erith Kent weather station is located over 8.8km to the west of the site.
- 3.2.2 A review of the data recorded daily between February 2012 and June 2022 on the Windfinder.com² website indicates that the most dominant wind direction is from the west-northwest to the east-southeast.

Monthly wind direction and strength distribution

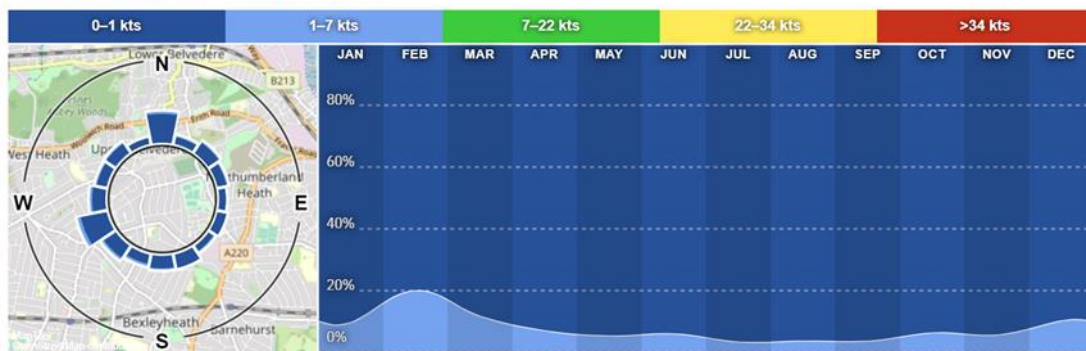


Figure 2 – Erith Kent wind statistics – average wind direction & strength 2012-2022

3.3 Odour Complaints

- 3.3.1 Whilst this is a new proposed facility, it has been reported by the Operator that there have been no history of previous complaints relating to odour at Williams Environmental's current facility at Silvertown that this facility will replace.

² https://www.windfinder.com/windstatistics/erith_kent

4.0 WASTE OPERATIONAL ODOUR CONTROL MEASURES

4.1 Waste Reception/Offloading

4.1.1 All wastes will be characterised at reception on site and so the chemical compositions of wastes will be known and documented prior to either storage or repackaging/bulking.

4.1.2 The contents of all containers over 25 litres or kg capacity are compared against the expected properties of the stated material by reference to either/or some of the following:

- Physical state (solid, liquid or gas).
- pH obtained from universal indicator paper or calibrated pH meter.
- Flammability.
- Appearance – colour, viscosity.
- Odour.
- Drum markings/labelling.
- Information supplied with or on incoming waste form.
- Personal experience.

4.1.3 It is the responsibility of the inspecting chemist to safely store chemicals within the designated storage area once classification of the waste has been completed, paying particular attention to:

- Current contents of the storage area/bay.
- Contents of adjacent storage area/bays.
- Any special storage instructions detailed on the incoming waste form.
- Available storage capacity of storage area/bay.

4.1.4 Waste will be stored in appropriate containers within impervious, bunded, segregated areas and handled in accordance with HSE guidance (i.e. in accordance with HSG51 and HSG140 for flammable liquids, and CS21 for organic peroxides). Storage areas will be clearly marked with the type and hazard properties of the waste stored therein. The location of the waste will be recorded on the storage data base.

4.2 Bulking/Repackaging of Waste

4.2.1 Repackaging and bulking of hazardous wastes of inherently odorous nature or those likely to emit vapours (VOCs) is undertaken in the building in Bay 18 prior to sending to the temporary storage bays (see Drawing 5195-CAU-XX-XX-DR-V-1800). These wastes may give rise to odour

or vapour emissions (VOCs) (i.e. hazardous liquids such as solvents, paints, oils etc.) and so are repackaged and bulked within a 3-sided bunded building with the fourth side fitted with external PVC strip door curtain. The building will be installed with air extraction maintaining a negative pressure, and an activated carbon filter. The carbon filter will ensure volatile organic compounds (VOCs) and odours are removed from the air prior to leaving the building. It is anticipated that bulking and repackaging operations within the building will typically be undertaken for around 1 hour per day, so potential emissions from wastes will not be continuous and will be mitigated by the carbon filter.

- 4.2.2 Repackaging and bulking of wastes that are unlikely to give rise to odour or VOC emissions will be undertaken outside, where appropriate.
- 4.2.3 Bulking and repackaging will consist of transferring the contents of numerous smaller containers of one type of waste (for example paint) into larger containers of the same or similar type of waste before being sent off site for further treatment or disposal. Wastes repackaged in this way will be checked and supervised by the chemist and site operatives on site to ensure that potentially odorous wastes are identified, handled appropriately, and only repackaged within the building. All wastes will be characterised at reception on site and so the chemical compositions of wastes will be known and documented prior to repackaging/bulking. Pouring or transferring the contents of one container of waste to another will be done manually by gravity by trained site operatives for smaller containers i.e. up to 25 litres, but for larger containers such as 205 litre drums and IBCs, a forklift will be used.
- 4.2.4 Risk of odour from bulking & repackaging is considered minor due to the containment of the waste and method of operation, ensuring potentially odorous liquids or substances are contained.

4.3 Drum Crushing

- 4.3.1 The drum crushing operation will be undertaken outside in Bay 18, under the cover of the roof canopy, by competent trained site operatives who have undergone site specific training in the drum crushing operation.
- 4.3.2 The drum crushing operation involves crushing empty metal drums, previously used to store wastes such as oil, liquid or chemicals. The drums will be up to 205 litres in size, and will be crushed using a hydraulic operated crusher, to reduce the volume of the drums for easier storage, handling and transport. The drum crusher will be powered by electricity and will operate with up to a 15-tonne crushing force. The drum crusher will compact the drum into an approximately 75mm high disc in less than a minute.
- 4.3.3 It is anticipated that drum crushing will be undertaken typically for no more than 1 hour per day, depending on volumes of empty drums to be crushed on site.
- 4.3.4 Based on experience at the Operators current facility the risk of odour release is considered low and therefore no additional specific odour control measures are proposed in addition to the general control measures described above.

4.4 Storage of Potentially Odorous Substances

- 4.4.1 The majority of wastes pass through the transfer station requiring just a short inspection and without the need for any bulking or decanting. Wastes awaiting repackaging/bulking or awaiting transfer off-site will be stored in designated storage bays within individual containers, bulked up in larger IBC type containers or drums or within designated skips or RORO containers/skips.
- 4.4.2 Risk of odour from the storage of substances on-site is considered minor due to them all being fully contained, and substances not exposed to the air.
- 4.4.3 Daily site inspections of the site by trained staff will include checking the site for odour emissions and the source of any odours detected. Inspections will include checking substances and liquids on site are stored correctly in the correct containers. In the event that odour is detected at the site boundary, additional monitoring will be undertaken at the sensitive receptors downwind of the site.

5.0 ACCIDENT MANAGEMENT PLAN

5.1 Accident Scenarios

5.1.1 In accordance with Environment Agency (EA) guidance, the following abnormal situations have been considered:

5.2 Spillages or leaks of odorous wastes

Situation

5.2.1 Spillages of odorous liquids such as during delivery or collection. Leaks of odorous liquids from containers.

Control Measure

5.2.2 Any spills or leaks will be reported immediately to site management and cleaned up quickly. Spilt liquids that are pumped out of bunded areas will be stored temporarily in suitable containment prior to being sent off-site for disposal.

5.2.3 If the spillage is from a vehicle during transport across the site, the actions detailed in operational procedure 'P24 – Spillage of chemical waste during transport' will be followed.

5.2.4 If the spillage is from another source, trained staff wearing appropriate PPE will attend to the spillage and contain the spillage using spill kits including spill pads, booms and granules (available around site), to prevent any hazardous liquids leaving site or entering surface water drains. The source of the hazardous liquid will be identified and once absorbed, the used spill pads and booms will be disposed of appropriately as hazardous waste. If the spillage is larger, specialist vacuum equipment will remove the remaining spillage to a suitable disposal facility. The 'Environmental Incident, Accident and Near-Miss Form' will be filled out by site management and recorded in the site diary. A Spillage Procedure is included within the Accident Management Plan in the EMS.

5.3 Plant failure or malfunction

Situation

5.3.1 Breakdown or malfunction of the air extraction system/carbon filter resulting in unmitigated odour emissions from the site.

Control Measure

5.3.2 Whilst it is unlikely this would cause a significant odour issue, the repackaging of waste materials would be instructed to cease until such time that the extraction and filtration equipment is operational again.

5.3.3 In the event of a plant failure or malfunction, alternative equipment will be sourced as soon as possible until the equipment can be repaired or hired in as necessary. Planned deliveries of waste will be stored on site during this period and postponed if necessary.

5.3.4 All plant and equipment will be maintained and regularly serviced in accordance with the manufacturer's recommendations and planned maintenance procedures to minimise breakdowns. Replacement parts (e.g. carbon filter) will be stored on site or available within 24-48 hours.

5.4 Adverse meteorological conditions

Situation

5.4.1 Periods of adverse weather conditions including high rainfall leading to flooding, low / high temperatures, temperature inversions and high winds towards the direction of the sensitive receptor.

Control Measure

5.4.2 It is unlikely adverse weather such as heavy rainfall or high winds would affect the infrastructure. Bunded areas will be checked daily to ensure they are not filled with rain in extreme conditions. The canopy roof and covers on skips/containers will provide protection from the rain and wind.

5.4.3 Following adverse weather conditions, if sensitive receptors have complained of odour issues from the site, liaison and dealing with complaints from neighbours will be undertaken.

5.5 Site staff

Situation

5.5.1 Shortage of trained operational staff resulting in waste material being stored for longer periods without repackaging.

Control Measure

5.5.2 This is unlikely to cause an odour issue as the waste arrives to site and is stored in sealed containers preventing release of odorous emissions, even if stored for long periods of time. In the event there is a shortage of operational staff at the site, alternative staff will be hired in as necessary.

5.6 Force Majeure and Odour

5.6.1 Finally, unexpected circumstances such as a fire or explosion on site or an act of vandalism could trigger the release of discernible odours. Under these circumstances odour related contingency measures will be covered under the Odour Action Plan and will be dealt with as

promptly as possible. Remediation and reporting procedures for the above are as required within the Permit.

6.0 ENGAGING WITH THE NEIGHBOURS

6.1 Complaints Procedure

6.1.1 As part of this Odour Management Plan, engagement with the neighbours will be undertaken.

6.1.2 Any complaints received at the site are likely to be direct to the operator, who is willing to deal directly with the complainants, however complaints could also be received through the Environment Agency or Local Authority. Where necessary the following can be implemented:

- If required, information can be provided to the local neighbours (via the Environment Agency) regarding the point and method of contact for the site in the event an odour has been detected or they want to discuss any activities etc at the site.
- Complainants can be advised that any complaints/concerns will be addressed immediately during operational hours following identification/notification and contingency actions implemented.
- Complainants can be advised of any corrective action and a follow up call carried out by the Site Manager to the complainant if required.

6.1.3 The primary point of contact at the site for complaints and liaison with the neighbours is the Site Manager, who will ensure that the recording, investigation and close-out of any complaints is undertaken as described as below and in accordance with company management procedures.

6.1.4 In the event of an odour complaint being received by the Local Authority or Environment Agency, the complaint is passed to the Operator for investigation.

6.1.5 Every complaint is recorded Williams Environmental's incident reporting system, as detailed below:

- All complaints are recorded by the site manager or site staff, describing the complaint and severity, on the Odour Complaint Form in Appendix 1.
- The complaint is forwarded to the Manager to undertake further investigation.
- Depending on the severity, the complaint can be escalated to senior management for investigation if necessary.
- The system is a digital process and records a wide range of reporting.

6.1.6 The Odour Complaint Form (in Appendix 1) will be completed for a complaint received at the site and includes the following information:

- Date and time of complaint;

- Extent of complaint;
- Meteorological conditions at time of complaint;
- The complainant's contact details including name and contact telephone;
- Name of person filling out form;
- Actions taken to resolve complaint or investigate complaint further;

6.1.7 Depending on the severity, the complaint can be escalated to senior management for even further investigation if necessary.

6.1.8 A Complaints Procedure is already in place as part of the company's accredited environmental management system and includes reporting the findings of the odour investigation.

6.1.9 The odour investigation procedure will also include the following elements:

- Site walk-over coupled with olfactory monitoring along the site boundary, an assessment of the site operations which took place prior to and at the time of the complaint in relation to their odour potential, and other on-site sources of odour.
- Assessment of the weather conditions prior to and at the time of the complaint.
- A suitably trained person who is familiar with the site conditions and the 'sniff-testing' monitoring technique will carry out odour investigations at the site. In the event of a substantiated complaint being received, then mitigation measures will be used for the areas/activities which were cause of the particular odour event.

6.1.10 A follow up report on the investigation will be issued to the EA if the complaint is found to be substantiated and, if requested, to the Local Authority. The report will identify improvements proposed to reduce the potential for future complaints. Any new recommendations will then be incorporated in the Odour Management Plan and the operating procedures for the site.

7.0 MONITORING

7.1 Schedule

- 7.1.1 Odour monitoring will be undertaken in order to assess how successful the operational management and mitigating control measures are at the site and to identify if necessary whether odour is causing a potential nuisance to ensure that appropriate remediation measures are adopted early.
- 7.1.2 Monitoring will be undertaken by designated staff who will be fully trained by Site Management. All site personnel will be responsible for reporting any problem odours identified during their day-to-day operations.
- 7.1.3 Monitoring at the site will consist of the following:

| Parameter | Monitoring Technique | Frequency |
|---------------------------|---|---|
| Meteorological Monitoring | Local weather information | Manually checked at start of each working day and logged (inc. wind direction). |
| Olfactory Monitoring | Site perimeter, included as part of daily site inspections. In the event odours are detected on-site/at boundary, or an odour complaint is received, then off-site checks will be undertaken (towards the identified sensitive receptors). | Daily on-site olfactory monitoring as part of routine site inspections (or more frequently following odour complaints). |
| Complaints Monitoring | Logged in accordance with Complaints procedure. | Ad-Hoc. |

7.2 Meteorological Monitoring

- 7.2.1 The nearest weather station will be utilised for meteorological monitoring at the site and will include monitoring for wind speed and direction.
- 7.2.2 If an odour survey is undertaken following a site inspection where odour was detected leaving the site boundary, or following an odour complaint, then weather conditions will be noted at the time of the survey and assessed in terms of any odour effects beyond the site boundary. This would indicate which local receptors lie downwind of the site. The following weather conditions are considered to be unfavourable with regard to the effects of the potential odour emissions and should be considered when assessing odour events:

- Weather conditions, especially wind speed and direction, are important factors which influence odour dispersion. Stronger winds (>6 m/s) reduce the impact of odours due to greater dilution and dispersion than lighter winds, whereas wind direction determines the direction of odour dispersion.
- The greatest risk of poor odour dispersion tends to occur on cool nights, with low wind speed, during anti-cyclonal conditions and in the presence of a temperature inversion. These conditions often happen during the cold part of the year and can result in odours being transported over long distances from the source.
- Calm weather spells (wind speed <0.1m/s) results in omni-directional dispersion of odours from the site as it is regulated largely by diffusion in the air. Under such conditions, all locations directly adjacent to the source would be expected to be impacted by fugitive emissions.
- The mean wind direction recorded at the nearest station at, Erith Kent weather station is recorded as from the west-northwest to the east-southeast.

7.2.3 In the event of odour complaints, the data enables complaints to be assessed against the meteorological conditions for the relevant period. Meteorological information will be recorded and sent to the EA.

7.3 Olfactory Monitoring

7.3.1 As part of the daily inspections, appropriately trained and experienced site personnel will carry out olfactory monitoring on-site. Only if odour is detected as being a potential issue, it will be checked off-site at selected locations.

7.3.2 Additional locations for monitoring may also be included if complaints are received, depending on the frequency and location of any complaints received at the site.

7.3.3 The monitoring results, in particular wind direction, will be recorded on the Site Daily Inspection Sheet, which forms part of the Site's Management System.

7.3.4 Olfactory monitoring will be carried out in accordance with the recommendations detailed in the EA H4 guidance, including avoid strong foods or drinks and strongly scented deodorisers or toiletries etc for at least half an hour prior to the monitoring. In addition, individuals suffering from a cold, sore throat, or sinus problems that may impair their ability to detect odours will not undertake the olfactory monitoring.

7.3.5 The designated person will exit their vehicle and remain in the locality for a minimum of 1 minute whilst breathing normally. Any external activities that may contribute to odour generation in the surrounding area will also be noted on the form and an assessment of the intensity of the odour will be made using the key provided. The routine monitoring points have already been assessed for sensitivity, but should any additional locations be used, the sensitivity will be entered using the key provided.

7.3.6 In the event odour is detected above intensity ranking 3 (moderate odour), the site management will be informed immediately, and the approximate location and extent of the odour plume assessed, and site operations reviewed and remediated.

7.4 Complaints Monitoring

7.4.1 Any complaints received directly by the Site or via the Regulatory Bodies, including the EA and Local Authority, will be recorded in accordance with the Complaints Procedure. Investigation will then be undertaken via olfactory monitoring at the location of the complaint and on-site to substantiate the extent and location of the plume and to identify the source of the odour.

7.4.2 If necessary, odour monitoring will also be carried out at the nearest sensitive receptors to the site and the monitoring results recorded.

8.0 REMEDIAL ACTION PLAN

8.1 Action Plan

8.1.1 Following receipt of a complaint or identification of an odour at the site, the following action plan will be undertaken, including:

- Additional olfactory monitoring as detailed above to identify the extent of the odour plume and potential cause for the odour i.e. waste material and/or process activity.
- Examination of the operational activities at the site at the time of the odour complaint or odour identification.
- Examination of the meteorological conditions at the time of the complaint or odour identification
- Examination of the process conditions i.e. waste types, length of storage etc.
- Carry out a review of the operational procedure and process controls and instigate any control measures immediately following identification of the problem.

8.1.2 Further olfactory monitoring will be carried out to ensure the issue has been addressed and to monitor the effectiveness of any control measures undertaken.

8.2 Record Keeping and Reporting

8.2.1 The procedure for recording via the Complaints Procedure will be undertaken as detailed above. All information is recorded digitally and maintained within a digital database. All information can be accessed via computer within the Site Office and will be made available to the Environment Agency on request. This record keeping already forms part of the Site's Management System.

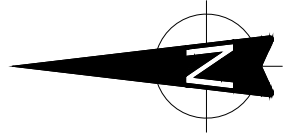
8.3 Odour Management Plan Review

8.3.1 This Odour Management Plan (OMP) will be reviewed on a regular basis or following receipt of a significant and substantiated complaint that requires a change in management procedures for the site.

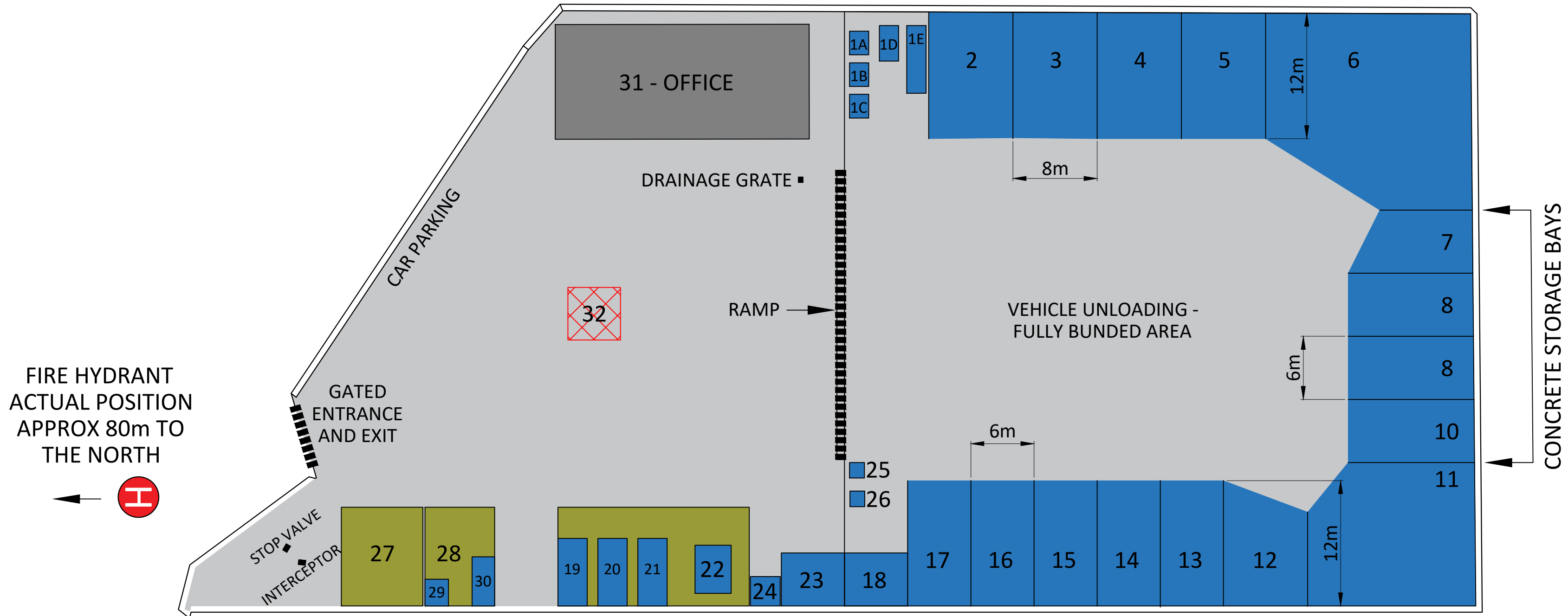
DRAWINGS

5195-CAU-XX-XX-DR-V-1801 Sensitive Receptor Plan

5195-CAU-XX-XX-DR-V-1800 Proposed Site Layout



PERIMETER KERBING & FENCING



NOTES

- DO NOT SCALE FROM THIS DRAWING, WORK FROM FIGURED DIMENSIONS ONLY. ALL DIMENSIONS ARE IN METRES AND ALL LEVELS ARE IN METRES ABOVE ORDNANCE DATUM UNLESS NOTED OTHERWISE.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, ENGINEERS AND SPECIALIST DRAWINGS AND SPECIFICATIONS.

LEGEND

- FIRE HYDRANT - APPROX 80m TO THE NORTH
- SLEEPING POLICEMAN

FIRE HYDRANT
ACTUAL POSITION
APPROX 80m TO
THE NORTH



| Bay | Waste Stream | Capacity pallets | Max Tonnage | Hazard codes | ADR Class |
|-----|---|------------------|-------------|-------------------------------------|-----------------------------------|
| 1A | Oxidising Agents containing Acids | 1 | 1.5 | HP2,HP4,HP5,HP8, HP14 | 5, 8 |
| 1B | Oxidising Agents | 4 | 4 | HP2,HP4,HP5,HP8, HP14 | 5 |
| 1C | Organic Peroxides | 1 | 1 | HP2,HP4,HP5,HP8, HP14 | 5.2 |
| 1D | Water Reactives | 1 | 1 | HP3,HP4,HP5,HP8 | 4.3 |
| 1E | Solvent Vials | 6 | 3 | HP3,HP6,HP10,HP11 | 3, 6.1 |
| 2 | Waste Reception Area | 60 | 60 | All HP Codes | 3,4.1,4.2,4.3,5.1, 5.2,6.1, 8, 9 |
| 3 | Low Hazard Waste | 60 | 60 | HP4,HP5,HP6, HP14 | 9 |
| 4 | Oily Rags | 60 | 60 | HP3, HP4,HP5,HP7,HP10,HP14 | 3, 9 |
| 5 | Flammable Solids, Adhesives and Resins | 60 | 60 | HP3,HP4,HP5,HP6,HP8 | 3, 4, 8 |
| 6 | Flammable Solvents, Paints and Resins | 60 | 60 | HP3,HP4,HP5,HP6, | 3, 4, 6.1 |
| 7 | Oil/Water | 60 | 60 | HP3,HP4,HP5,HP7,HP10,HP11,HP14 | 9 |
| 8 | Toxic Solids/Liquids, Lab Wastes, Agrochemicals | 40 | 40 | HP4,HP5,HP6,HP7,HP8, HP10,HP11,HP14 | 6.1, 8, 9 |
| 9 | IT Communication and Household WEEE | 40 | 40 | HP5,HP6,HP7,HP14 | 9 |
| 10 | Waste Batteries | 40 | 40 | HP3,HP4, HP5,HP6,HP14 | 4.3, 6.1, 9 |
| 11 | Fridges and Fluorescent tubes, and Lamps | 60 | 30 | HP14 | 9 |
| 12 | Acids | 40 | 40 | HP2,HP4,HP5,HP6,HP8 | 3, 5.1, 8, 6.1, 8, 9 |
| 13 | Empty Packaging and Environmental Hazards | 40 | 20 | HP3,HP6,HP8,HP14 | 9 |
| 14 | Alkali Waste, Caustic, Ammonia and Cyanides | 40 | 40 | HP4,HP5,HP6,HP8,HP14 | 5.1, 6.1, 8, 9 |
| 15 | Bleach and Oxidising Liquids | 40 | 40 | HP2,HP8,HP14 | 5.1, 8, 9 |
| 16 | Reception, Inspection, and Sorting | 40 | 40 | All HP Codes | 3, 4.1, 4.2, 5.1, 5.2, 6.1, 8, 9, |
| 17 | Quarantine Bay, Spare Reception | 40 | 20 | All HP Codes | 3, 4.1, 4.2, 5.1, 5.2, 6.1, 8, 9, |
| 18 | Emissions filtered bulking area | 8 | 4 | HP2,HP3,HP6,HP7,HP10,HP8,HP11,HP9 | 3, 5.1, 6.1, 8, 9 |

| Skip area | | | | | | |
|-----------|---------------------------------|----|----|----------|-----|--|
| 19 | General Waste - Roll on Bin | 35 | 20 | Non Haz | N/A | |
| 20 | Asbestos - enclosed Roll-on bin | 35 | 20 | HP7,HP14 | 9 | |
| 21 | Scrap Metal - Roll on Bin | 40 | 20 | Non Haz | N/A | |
| 22 | Pigeon Guano - covered skip | 20 | 10 | Non Haz | N/A | |

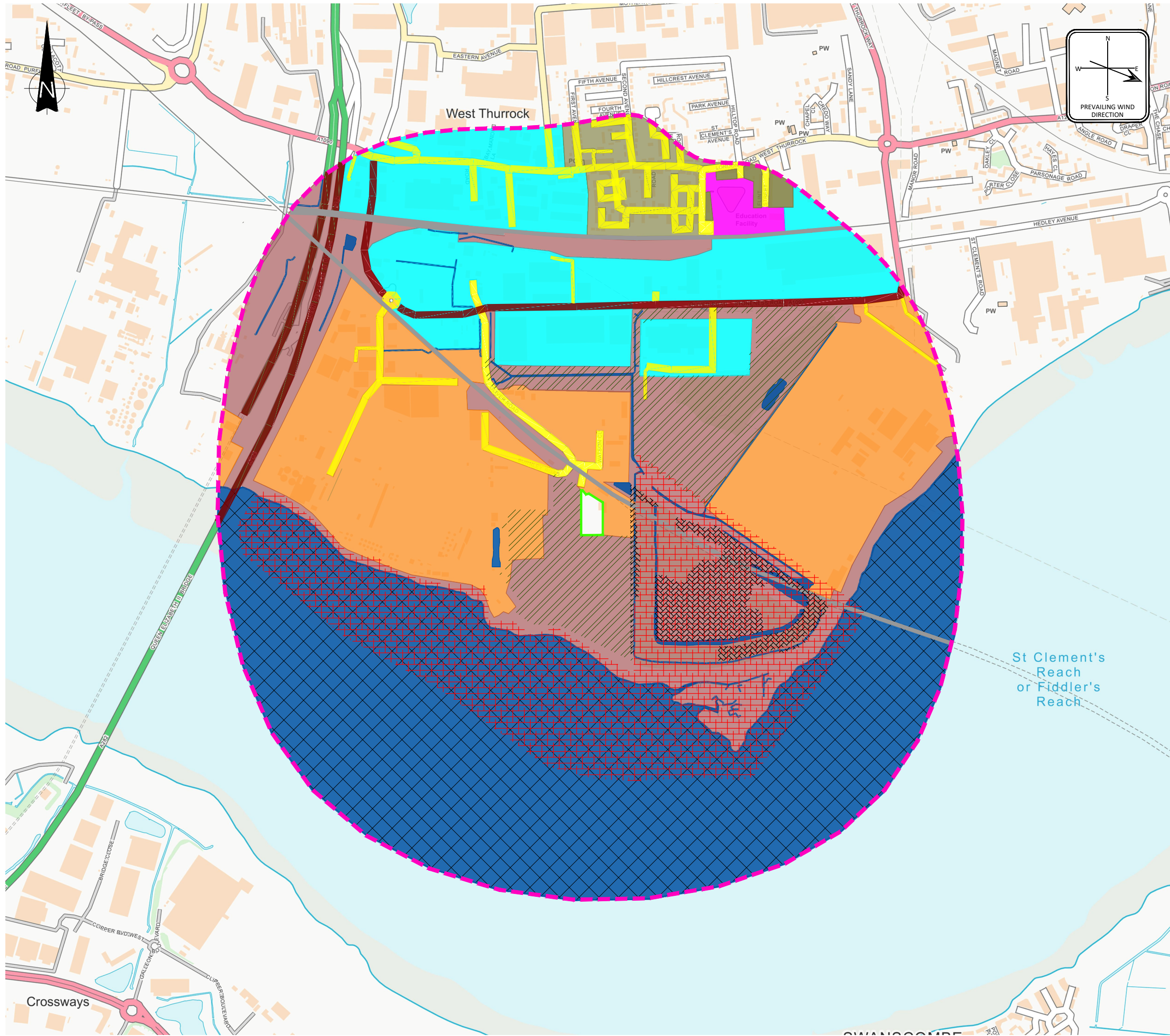
| Gas Cylinders - Metal cages, Drums and Wastesafes | | | | | | |
|---|--|----|----|----------------------|--------------------------|--|
| 23 | Misc Gases including Aerosols, Butane, Propane and other Hazardous and Non Hazardous Gases | 20 | 20 | HP2,HP3,HP6,HP8,HP14 | 2.1, 2.2, 2.3, 3, 6.1, 9 | |
| 24 | Acetylene Gas | 4 | 2 | HP3 | 2.3 | |

| Inside Bay 18 | |
|---------------|------------------|
| 25 | Emergency Shower |
| 26 | Drum Crusher |

| Non Waste Areas | |
|-----------------|--|
| 27 | Consumable storage, empty drums and IBC's |
| 28 | Fork lift truck parking and charging/refuelling area |
| 29 | Fuel storage - on a bunded IBC |
| 30 | Laboratory |
| 31 | Office and toilet |
| 32 | Quarantine area in event of fire |

| | | | | | |
|--|---------------------------|-------------|---------------|----|----------|
| P02 | UPDATED DRAINAGE ELEMENTS | EJD | SH | AS | 15.12.22 |
| P01 | ISSUED FOR INFORMATION | EJD | AS | AS | 02.12.22 |
| REV | MODIFICATIONS | BY | RE | AP | DATE |
| PURPOSE OF ISSUE | | | | | STATUS |
| FOR INFORMATION | | | | | S2 |
| CLIENT: | | | | | |
| | | | | | |
| PROJECT: | | | | | |
| RIVERSIDE HAZARDOUS WASTE TRANSFER STATION | | | | | |
| TITLE: | | | | | |
| NEW SITE LAYOUT | | | | | |
| DESIGNED BY | DRAWN BY | REVIEWED BY | AUTHORISED BY | | |
| OTHERS | EJD | AS | AS | | |
| DATE | SCALE @ A2 | JOB REF: | REVISION | | |
| 28-11-2022 | NTS | 5195 | P02 | | |
| DRAWING NUMBER | | | | | |
| 5195-CAU-XX-XX-DR-V-1800 | | | | | |
| | | | | | |

Registered Office: InTec, Parc Menair, Bangor, Gwynedd, LL57 4FG Company Registered No: 06716319



LEGEND

- PROPOSED PERMIT BOUNDARY
- 100m OFFSET
- SURFACE WATER
- WOODLAND / SCRUBLAND
- COMMERCIAL
- EDUCATIONAL FACILITY
- INDUSTRIAL
- RESIDENTIAL
- MAJOR ROAD
- MINOR ROAD
- RAIL
- PROTECTED FISH MIGRATORY ROUTE
- PROTECTED HABITATS
- SSSI
- LOCAL WILDLIFE SITES

| | | | | | |
|------------------|------------------------|-----|----|--------|----------|
| | | | | | |
| P02 | LWS AREAS UPDATED | EJD | SH | SH | 10.07.23 |
| P01 | ISSUED FOR INFORMATION | EJD | SH | SH | 01.12.22 |
| REV | MODIFICATIONS | BY | RE | AP | DATE |
| PURPOSE OF ISSUE | | | | STATUS | |
| FOR INFORMATION | | | | S2 | |

CLIENT:
Williams Environmental
Waste Management that doesn't cost the Earth

PROJECT:
RIVERSIDE WASTE TRANSFER STATION

TITLE:
SENSITIVE RECEPTORS PLAN

| | | | |
|-------------|------------|-------------|---------------|
| DESIGNED BY | DRAWN BY | REVIEWED BY | AUTHORISED BY |
| EJD | EJD | AD | SH |
| DATE | SCALE @ A3 | JOB REF: | REVISION |
| 29-11-2022 | 1:10,000 | 5195 | P02 |

DRAWING NUMBER
5195-CAU-XX-XX-DR-V-1801



Registered Office: Intec, Parc Menai, Bangor, Gwynedd, LL57 4FG Company Registered No: 06716319

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APPENDIX 1

Odour Complaint Form

Riverside Transfer Station

| Odour Complaint Report Form | |
|------------------------------------|----------------------------------|
| Time and date of complaint: | Name and address of complainant: |
| Telephone number of complainant: | |
| EA Ref Number & Contact: | |

| | |
|---|------------------|
| Date of odour: | |
| Time of odour: | |
| Location of odour, if not at above address: | |
| Weather conditions (i.e., dry, rain, fog, snow): | |
| Temperature (collect from weather station) | |
| Wind strength (collect from weather station) | |
| Wind direction (collect from weather station) | |
| Complainant's description of odour: | |
| <ul style="list-style-type: none"> <input type="radio"/> What does it smell like? <input type="radio"/> | |
| <ul style="list-style-type: none"> <input type="radio"/> Intensity (see below): <input type="radio"/> | |
| <ul style="list-style-type: none"> <input type="radio"/> Duration (time): | |
| <ul style="list-style-type: none"> <input type="radio"/> Constant or intermittent in this period: | |
| <ul style="list-style-type: none"> <input type="radio"/> Does the complainant have any other comments about the odour? | |
| Are there any other complaints relating to the installation, or to that location? (either previously or relating to the same exposure): | |
| Any other relevant information: | |
| What was happening on site at the time the odour occurred? | |
| Actions taken: | |
| Form completed by: | Date Signed |

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