

ODOUR MANAGEMENT PLAN

St Michael's Close, Aylesford, ME20 7XE

Elliot Environmental Drainage Limited

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1 Introduction

1.1 General

1.1.1 Oaktree Environmental Ltd has been instructed by Elliot Environmental Drainage Limited to prepare an Odour Management Plan (“OMP”) for their Waste Treatment Facility and Packaging Plant at Unit 1, St Michael’s Close, Aylesford, ME20 7XE. The installation will be regulated under permit no. EPR/ZP3623LZ.

1.1.2 This OMP has been prepared in support of a planning and permit application being prepared for operations at the site. An OMP was approved as part of the previous planning application for operations at the site. This OMP is an update to the previously approved document to reflect the proposed reconfiguration to the site layout and is subject to agreement with the Environment Agency (EA).

1.1.3 The site address and contact details for Elliot Environmental Drainage Limited (i.e. the ‘site operator’) is:

Elliot Environmental Drainage Limited	Contact:	Terry Whitby
Unit 1, St Michael’s Close, Aylesford, ME20 7XE,	Position:	Director

1.1.4 The contact identified above will be responsible for overseeing the implementation of the OMP on site and site training requirements, as a director of Elliot Environmental Drainage Limited.

1.1.5 The site will be operated in accordance with an Environmental Management System (EMS) along with other documents targeted to specific environmental considerations including this OMP.

1.1.6 As is described throughout this OMP, the processes undertaken on-site will be predominantly enclosed with abatement plant used as necessary. As such, potential odour impacts are not expected to be significant. However, this OMP will allow Elliot Environmental Drainage Limited to implement an action plan should the site operatives

detect an odour presence, receive complaints from local businesses or residents and if the EA suspects odour emissions from the site during an inspection.

1.1.7 A copy of this OMP will be maintained in the site office and readily available for staff to view and staff will be made aware of its location and their responsibilities to ensure site compliance with the OMP.

1.2 Relevant Guidance

1.2.1 Reference has been made to the following relevant guidance and legislation during the drafting of this OMP:

- H4 Odour Management: How to Comply with your Environmental Permit, EA, March 2011;
- COMMISSION IMPLEMENTING DECISION (EU) 2018/1147 of 10 August 2018 establishing best available techniques (BAT) conclusions for waste treatment, under Directive 2010/75/EU of the European Parliament and of the Council;
- Chemical Waste: Appropriate Measures for Permitted Facilities, EA, 2020;
- Non-Hazardous and Inert Waste: Appropriate Measures for Permitted Facilities, EA, 2021, Updated 2023; and,
- Biological waste treatment: appropriate measures for permitted facilities, EA, 2022, Updated 2024

1.2.2 Appendix 4 of the EA H4 guidance outlines information considered to be essential for inclusion within an OMP. This OMP has covered the following aspects, in accordance with the H4 guidance:

- Details of potential odour sources, including descriptions and quantities;
- Details of relevant receptors sensitive to odour;
- Details of local meteorological conditions;

- Assessment of potential risks from odours at sensitive receptors, taking account of receptor sensitivity, location, prevailing meteorological conditions and odour potential from operations on site, using an established risk assessment approach;
- Outline of control measures to be used to control potential odour risks to an acceptable level;
- Outline of contingency measures for dealing with incidents or emergencies;
- Details of odour monitoring procedures to be used; and,
- Details of complaints response procedure.

1.2.3 Reference has also been made to the relevant BAT Conclusions within Directive 2018/1147 and appropriate measures for both chemical, inert and non-hazardous waste as well as the biological treatment.

1.3 Site Location

1.3.1 The site is located on land at St Michael's Close, Aylesford, ME20 7XE within an established industrial estate. The approximate National Grid Reference for the site is 574503, 159085.

1.3.2 The site is located at St Michael's Close, approximately 650m North-East of the centre of the village of Aylesford in Kent. The site consists of a warehouse type building which is surrounded by a concrete apron with a sealed drainage system. The site is surrounded to the North-East and South by the Cobtree Manor Park including the Cobtree Manor Park Golf Course to the East. The site is bounded to the west by the wider St Michael's Close Industrial Estate. The site is located within an industrial estate and therefore suitable for this type of development.

1.4 Installation Overview

1.4.1 The site layout is shown by drawing no 2499-002-03 within Appendix I.

1.4.2 The majority of wastes received on site will include liquids and sludges which will be subject to physico-chemical treatment as well as a small, biological treatment stage.

- 1.4.3 These wastes may include wastes such as interceptor wastes, jetting sludges, gulley wastes, contaminated soils, road sweepings and other sludges from industrial processes.
- 1.4.4 All drivers delivering wastes to site will be required to report to the site office on arrival, where they will be briefed on site rules and policy and the relevant reception point for the load. Waste acceptance checks will be undertaken for the load. Waste will be sampled in accordance with Waste Acceptance Procedures to ensure it is eligible for acceptance into the site, any unauthorised/negative results will result in wastes being rejected, whilst a positive result will ensure waste acceptance and the vehicle will be directed to the relevant reception area.
- 1.4.5 Liquid wastes, road sweepings, grits and sludges which are to be subject to treatment will be delivered to site in sealed tanker lorries. These will be unloaded to the waste reception building (building 2), offloaded in a controlled manner to the Hydro Tip within Building 2. This will act to screen any larger material such as stones, which will be conveyed to a stockpile. The remaining sludges and liquids will be transferred to the CDE G-Max which will provide further screening of the material, separating liquids, sand, grits and organic matter.
- 1.4.6 The resultant liquids will be pumped directly into the appropriate hazardous or non-hazardous waste storage tanks which are to be located externally to the main processing building. These tanks will temporarily store the liquids prior to them being processed further through the treatment plant within Building 1.
- 1.4.7 It is worth noting that the reception pit will only ever contain either hazardous or non-hazardous material at any one time to prevent cross contamination of loads. Between reception of the different types of loads, the pit will be emptied and cleared prior to the acceptance of a different waste stream. The external storage tanks will also be segregated between hazardous and non hazardous wastes.
- 1.4.8 Once the liquid waste has accumulated within the external tanks, it will be discharged into the treatment plant within Building 1 via enclosed HDPE pipework for water treatment and further screening. The following treatment measures will be used:

- Clarification and Settlement Treatment Unit;
- Chemical Neutralisation Unit;
- Flocculation Unit;
- Dissolved Air Floatation (DAF) Unit;
- Centrifuge;
- Drum Screen and Collection Unit;
- Aerobic biological treatment;
- Carbon Filter(s); and,
- Sand Filter(s).

- 1.4.9 The clarification and settlement unit will act to remove suspended solids from the water using gravity.
- 1.4.10 The chemical neutralisation unit will act to adjust the pH of the wastewater stream to a neutral pH range, through dosing using alkaline and acid reagents, depending on the nature of the wastewater being treated.
- 1.4.11 The flocculation unit will provide a further line of solids removal from the wastewater, designed to remove remaining fine solids. The flocculation process will aggregate smaller particles into larger particles, which are then removed from the wastewater. This is achieved by the addition of a flocculant.
- 1.4.12 The DAF Unit will be used to separate fats, oils and grease from the wastewater. This involves the introduction of air bubbles into the wastewater, which attach to contaminants, including oil, causing them to rise (float) to the surface, enabling them to be separated from the waste stream.
- 1.4.13 The centrifuge stage provides further separation of solids from liquids.
- 1.4.14 The drum screen provides further removal of particles, including organic and inorganic solids.

- 1.4.15 Aerobic Biological Treatment will include the addition of hydrocarbon degrading organisms to break down organic contaminants within the waste in the presence of oxygen.
- 1.4.16 Carbon filters are used as a final polishing step to remove remaining trace levels of organic compounds from the liquid wastes.
- 1.4.17 Sand filters are also used as part of a final polishing stage to remove remaining suspended solids from the liquid wastes.
- 1.4.18 The main treatment buildings (Buildings 1 and 2) will be operated under negative pressure, with air extracted via a series of activated carbon filters for emissions control, residual air from the control unit being exhausted via an external elevated flue for dilution and dispersion of residual emissions.
- 1.4.19 Additional wastes will be accepted which will not be subject to treatment and will simply be repackaged and sent on for further recovery or disposal. This will include either dry non-hazardous and hazardous wastes, non-hazardous and hazardous liquid wastes in containers or empty containers such as paint tins and bleach bottles which may contain residues of hazardous wastes. These wastes will be stored within a bunded storage area prior to being repackaged for export for further recovery or disposal at a suitably licenced facility.
- 1.4.20 A process flow diagram is included within Appendix I.
- 1.4.21 Waste will be imported to the site using generally tankers, road sweepers or delivery vans.
- 1.4.22 The site will operate 24-hours per day from Monday to Saturday. No works will take place on Sundays or on Bank and Public Holidays except for maintenance works, situations where waste is brought in for deposit in emergency situations and general office use.
- 1.4.23 During times where the site is closed or not in operation, the site will be locked and secured to prevent unauthorised vehicular or pedestrian access.

1.5 Site Infrastructure

1.5.1 Buildings 1 and 2 will both be operated under negative pressure with a dedicated abatement system used to control Volatile Organic Compound (VOC) emissions and associated odour. The storage tanks external to Building 1 will include carbon filters integrated into safety vents to abate potential diffuse odours arising from tank vents. There is potential for odour from release points via the other building entrances/access points, including Building 3. However, the site has alternative measures in place to ensure odours do not escape beyond the building or boundary as follows:

Alternative Measures:

- **Monitoring** – The operator will undertake routine Dynamic Olfactory monitoring assessments for residual odour emissions from the stack and regular boundary Olfactory/Sniff assessments, which have been outlined further in Section 5 of this OMP.
- **Stock rotation** – All potentially odorous waste will be stored in enclosed tanks that undergo continuous monitoring.
- **Housekeeping** – The site will carry out regular cleaning (minimum once daily) of all operational areas. The site has a housekeeping schedule, as shown in section 4.
- **Containment** – Liquid wastes stored within Building 3 will be within enclosed vessels/drums. All solid and liquid wastes with potential for odour within this area will also be stored within enclosed containers/vessels.

1.5.2 Site management will visually monitor the buildings and storage tanks on a daily basis and will carry out quarterly monitoring of their integrity. In the event that there are any issues the maintenance/repair works will be carried out within 48 hours.

1.6 Waste Types and Site Odour Potential

1.6.1 The waste types handled on site will consist of a wide range of hazardous and non-hazardous wastes. A description of the waste types, storage arrangements, quantities

stored, and duration of storage is included in the table below, together with a description of odour potential.

1.6.2 At this stage it is impossible to provide a definitive/precise list of wastes and sources, given the range of wastes which may be accepted and the nature of part of the operator's business, which includes emergency response to spillages. However, the list provided in the table below is based on current knowledge the site operator holds for the wastes intended to be treated/stored on-site. All wastes to be received on site will be subject to rigorous Site Acceptance/Pre-Acceptance procedures, including sampling, as applicable. The odour abatement system to be used on-site has been designed to handle the range of compounds expected to be present and odour emissions arising from the control unit will be subject to assessment against design benchmark criteria to ensure that odours are being adequately controlled. All processing areas on-site will be subject to odour abatement.

1.6.3 If the maximum storage capacity is reached, then no further waste will be accepted until waste can be removed from the site and taken to a suitably permitted or exempt site.

1.6.4 The table below includes the following information:

- Waste/Raw Material description (wastes, liquids and gases);
- Potential EWC Codes;
- Potentially odourous compounds;
- Nature of raw material/waste
- Maximum quantity stored;
- Type of storage;
- Maximum duration of storage;
- Location of storage on site; and,
- Odour potential of waste/raw material.

1.6.5 It should be noted that wastes to be accepted for treatment will comprise predominantly water based wastes with relatively minor levels of contaminants, eg not highly concentrated effluents. Therefore, the assessment of odour potential for wastes to be treated within the table below is considered to be a precautionary assessment.

Table 1.1 –Wastes and Raw Materials, Storage Arrangements and Odour Potential

Waste/Raw Material Description	Potential EWC Code(s)	Potentially Odorous Compounds	Nature of Waste/Raw Material	Max Quantity Stored	Type of Storage	Max Duration of storage	Location of Storage	Odour Potential of Waste/Raw Material (see Table 2.1 for descriptors)
Jetting Wastes, to be treated within Building 1 and 2	02 02 01, 05 01 05*, 08 02 02, 08 02 03, 13 05 01*, 13 05 02*, 13 05 03*, 13 05 06*, 13 05 07*, 13 05 08*, 17 05 04, 17 05 05*, 17 05 06, 17 05 07*, 17 05 08, 19 08 01, 19 08 02, 19 08 11*, 19 08 12, 19 08 13*, 19 08 14, 19 08 99, 19 09 02, 19 09 03, 19 09 04, 19 09 99, 19 13 03*, 19 13 04, 19 13 05*, 19 13 06, 19 13 07*, 19 13 08, 20 03 03, 20 03 04, 20 03 06	Moisture: Organic matter (proteins, fats): Hydrocarbons Volatile Organic Compounds Ammonium Organic solvents Sulphur/sulphate Other contaminants Chlorides Phosphates Nitrates	Liquid wastes and sludges	372m ³ in total within external storage tanks	Stored in external enclosed tanks, vents to be fitted with carbon filters	5 days prior to introduction to treatment process within Building 1	External to Building 1, as shown on layout plan	High

Waste/Raw Material Description	Potential EWC Code(s)	Potentially Odorous Compounds	Nature of Waste/Raw Material	Max Quantity Stored	Type of Storage	Max Duration of storage	Location of Storage	Odour Potential of Waste/Raw Material (see Table 2.1 for descriptors)
Tanker Wastes, to be treated within Building 1 and 2	01 05 04, 01 05 05*, 01 05 06*, 01 05 07, 01 05 08, 02 02 04, 02 03 05, 02 04 03, 02 05 02, 02 06 03, 02 07 01, 02 07 02, 02 07 03, 02 07 05, 03 03 09, 03 03 11, 05 01 05*, 05 01 09*, 05 01 10, 05 01 13, 05 01 14, 07 06 11*, 07 06 12, 08 02 02, 08 02 03, 10 12 13, 13 01 11*, 13 01 12*, 13 01 13*, 13 04 01*, 13 04 02*, 13 04 03*, 13 05 01*, 13 05 02*, 13 05 03*, 13 05 06*, 13 05 07*, 13 05 08*, 13 07 01*, 13 07 03*, 16 10 01*, 16 10 02, 16 10 03*, 16 07 08, 16 10 04, 17 05 04, 17 05 05*, 17 05 06, 17 05 07*, 17 05 08, 19 05 01, 19 05 99, 19 06 03, 19 06 04, 19 07 02*, 19 07 03, 19 08 01, 19 08 02,	Moisture: Organic matter (proteins, fats): Hydrocarbons Volatile Organic Compounds Ammonium Organic solvents Sulphur/sulphate Ethanol Acids Phenols Barite Other contaminants Chlorides Phosphates and nitrates	Liquid wastes and sludges	372m ³ in total within external storage tanks	Stored in external enclosed tanks, vents to be fitted with carbon filters	5 days prior to introduction to treatment process within Building 1	External to Building 1, as shown on layout plan	High

Waste/Raw Material Description	Potential EWC Code(s)	Potentially Odorous Compounds	Nature of Waste/Raw Material	Max Quantity Stored	Type of Storage	Max Duration of storage	Location of Storage	Odour Potential of Waste/Raw Material (see Table 2.1 for descriptors)
	19 08 05, 19 08 09, 19 08 10*, 19 08 11*, 19 08 12, 19 08 13*, 19 08 14, 19 08 99, 19 09 02, 19 09 03, 19 09 04, 19 09 99, 19 13 03*, 19 13 04, 19 13 05*, 19 13 06, 19 13 07*, 19 13 08, 20 01 08, 20 03 03, 20 03 04, 20 03 06							
Wastes for Repackaging, no treatment proposed. Wastes to be sent on for further recovery	05 01 05*, 13 07 01*, 13 07 02*, 13 07 02*, 13 07 03*, 15 01 01, 15 01 02, 15 01 03, 15 01 04, 15 01 05, 15 01 06, 15 01 07, 15 01 09, 15 01 10*, 15 01 11*, 16 01 14*, 16 10 01*, 16 10 03*, 16 07 08, 16 10 04, 17 08 01*, 17 08 02, 19 07 02*, 19 13 05*, 19 13 07*	Hydrocarbons Volatile Organic Compounds Sulphates Nitrates Chlorides Organics	Liquids Solids	10m ³	Liquid wastes/sludges stored within enclosed vessels Dry, solid wastes stored within containers/skips	7 days	Building 3	High

Waste/Raw Material Description	Potential EWC Code(s)	Potentially Odorous Compounds	Nature of Waste/Raw Material	Max Quantity Stored	Type of Storage	Max Duration of storage	Location of Storage	Odour Potential of Waste/Raw Material (see Table 2.1 for descriptors)
Diesel	N/A – raw material	Hydrocarbons	Liquid	500 litres	Bunded storage on site	Ongoing – required as fuel for on-site plant and machinery	Building 1	Moderate
Aluminium sulphate	N/A – raw material	Sulphur	Liquid	2,000 litres	Bunded storage on site in corrosive resistant container	Ongoing – required for treatment process	Building 1	Low
Sodium aluminate	N/A – raw material	N/A - odourless	Liquid	2,000 litres	Bunded storage on site in corrosive resistant container	Ongoing – required for treatment process	Building 1	Negligible
Ferric sulphate	N/A – raw material	Sulphur	Liquid	2,000 litres	Bunded storage on site in corrosive resistant container	Ongoing – required for treatment process	Building 1	Low
Ferric chloride	N/A – raw material	Chloride	Liquid	2,000 litres	Bunded storage on site in corrosive resistant container	Ongoing – required for treatment process	Building 1	Moderate to high
Sodium hydroxide	N/A – raw material	N/A - odourless	Liquid	2,000 litres	Bunded storage on site in corrosive resistant container	Ongoing – required for treatment process	Building 1	Negligible

Waste/Raw Material Description	Potential EWC Code(s)	Potentially Odorous Compounds	Nature of Waste/Raw Material	Max Quantity Stored	Type of Storage	Max Duration of storage	Location of Storage	Odour Potential of Waste/Raw Material (see Table 2.1 for descriptors)
Lime/Calcium hydroxide	N/A – raw material	N/A - odourless	Liquid	2,000 litres	Bunded storage on site in corrosive resistant container	Ongoing – required for treatment process	Building 1	Negligible
Magnesium hydroxide	N/A – raw material	N/A - odourless	Liquid	2,000 litres	Bunded storage on site in corrosive resistant container	Ongoing – required for treatment process	Building 1	Negligible
Iron(II) sulfate heptahydrate	N/A – raw material	N/A – very low odour potential/odourless	Liquid	2,000 litres	Bunded storage on site in corrosive resistant container	Ongoing – required for treatment process	Building 1	Negligible
CSP cationic polymer	N/A – raw material	N/A – very low odour potential/odourless	Liquid	2,000 litres	Bunded storage on site in corrosive resistant container	Ongoing – required for treatment process	Building 1	Negligible
Anionic polymer	N/A – raw material	N/A – very low odour potential/odourless	Liquid	2,000 litres	Bunded storage on site in corrosive resistant container	Ongoing – required for treatment process	Building 1	Negligible

Waste/Raw Material Description	Potential EWC Code(s)	Potentially Odorous Compounds	Nature of Waste/Raw Material	Max Quantity Stored	Type of Storage	Max Duration of storage	Location of Storage	Odour Potential of Waste/Raw Material (see Table 2.1 for descriptors)
Odorous gases arising from wastes stored/processes undertaken in Buildings 1 and 2	N/A	Hydrogen Sulphide Ammonia Volatile Organic Compounds Mercaptans/Thiols Aldehydes/ketones Sulphur dioxide Dust (bearing odorous compounds)	Gas	N/A	N/A	N/A	N/A	High to severe
Resulting solid waste from treatment process	To be determined	Minimal, waste is the residue arising after treatment to remove contaminants	Solid	90m3	Stored in bays within Building 1	7 days	Building 1	Low

1.7 Site Management

- 1.7.1 The site will have a Technically Competent Manager (TCM) who will be responsible for the general management of the site, including the acceptance and handling of any potentially odorous wastes.
- 1.7.2 The company, through the TCM, will ensure that nominated deputies are sufficiently trained and familiar with all site management documentation (which includes this OMP) in addition to all relevant company procedures.

2 POTENTIAL SOURCES OF ODOUR

2.1 Delivery of Liquid Wastes, Grits and Sludges

2.1.1 Liquid wastes, road sweepings, grits and sludges which are to be subject to treatment will be delivered to site in sealed tanker lorries. These will be unloaded to the waste reception building (building 2), offloaded in a controlled manner to the CDE Hydro Tip within Building 2. This will act to screen any larger material such as stones, which will be conveyed to a stockpile. The remaining sludges and liquids will be transferred to the CDE G-Max which will provide further screening of the material, separating liquids, sand, grits and organic matter. The resultant liquids will be pumped to dedicated non-hazardous and hazardous storage tanks, located externally to the building, which will store liquids prior to being processed further within Building 1.

2.1.2 Liquid wastes will not be exposed for extended periods of time, being delivered to site in sealed tankers and exposed only for short periods time during the initial dewatering and screening processes, prior to transfer to sealed tanks. However, it should be noted that exhaust air from Building 2 will be extracted and directed to the Odour Control System on-site. Therefore, potential odours arising during initial reception and screening will be fully controlled.

2.2 Treatment of Liquid Wastes

2.2.1 After initial screening, liquid wastes will be transferred from the external storage tanks to the main process building (Building 1), where they will be subject to further screening and treatment. The building will be operated under negative pressure with fast acting roller shutter doors with exhaust air directed to a dedicated odour abatement plant, with residual air exhausted via an elevated flue. Odour from the external storage tanks will be controlled by the use of carbon filters integrated into safety vents.

2.3 Waste Water from Treatment Facility

2.3.1 The cleaned water arising from treatment facility will be disposed to sewer via enclosed drain. Therefore, this does not present a significant source of odour. However, it should be noted that disposal to sewer will be a last resort and the intention is to treat the liquid based wastes to the extent that the resulting water can be used in the process. Testing will be undertaken throughout the process to verify the effectiveness of treatment and to ensure that the residual water is suitable for discharge to sewer or use on-site.

2.4 Oils and Solid Waste Residues from Wet Waste Treatment Facility

2.4.1 Oils arising from the wet waste treatment facility will be collected in sealed containers and packaged prior to export for further recovery/disposal at a suitably permitted off-site facility. As such, this does not present a significant source of odour.

2.4.2 Solid wastes arising from the treatment processes within Buildings 1 and 2 will be stored within dedicated bays within Building 1.

2.5 Delivery of Wastes to Repackaging Area

2.5.1 The repackaging area (building 3) will generally accept waste which is non-odorous wastes or potentially odorous wastes which are contained within sealed vessels. This will include dry hazardous and non-hazardous wastes or liquid wastes in sealed containers. These wastes will be packaged prior to export from site for further treatment/recovery. Wastes delivered to this area of the site will either be contained in sealed drums, Intermediate Bulk Containers (IBCs) or skips.

2.6 Waste Handling/processing

2.6.1 All potentially odorous wastes will be delivered and removed from the site in sealed containers/tankers.

2.7 Foul Surface Water

2.7.1 The drainage system shown on Drawing No. 2499-002-03 will be monitored regularly to ensure it is functioning correctly.

2.8 Background Odour Sources in the Area

2.8.1 Consideration has been given to other potential local off-site sources of odour. A search on the EA public register has been undertaken to identify any other waste sites or Part A1 installations in the vicinity of the proposed site. A 1km search radius was used from the postcode of the site location. Identified sites are summarised in the table below.

Table 2.1 – Part A1 Permitted Processes and Waste Operations Within 1km of the Site

Company	Address	Permit Ref	Type	Approximate distance & Direction from site boundary (m)
Enterprise (AOL) Limited	Double Day House, St Michaels Close, Aylesford, Kent, ME20 7BU	KB3130RT	Waste Management – Physical Treatment	225m, West-South-West

2.8.2 In addition, there are a number of industrial and commercial premises situated to the North, West and South of the site, which could have potential to generate some odour.

2.8.3 In order to determine whether complaints are the result of activities from the site or from other nearby sites, an odour complaints form will need to be completed in line with the company’s complaints procedure which is attached in Appendix II.

3 Odour Risk Assessment

3.1 Methodology

3.1.1 This OMP has been completed to identify where the likely risks are in relation to surrounding land uses. This assessment has been used to inform Section 4 and 5 of this OMP with regard to specific odour control and monitoring procedures.

3.2 Odour Intensity

3.2.1 Table 3.1 below the contains the criteria used to measure/evaluate odour intensity. A judgement is made of odour intensity at each receptor location.

Table 3.1 - Odour Intensity Scale & Description

Odour Intensity Scale & Description	
Negligible	No detectable odour
Low	Faint odour (barely detectable)
Moderate	Moderate odour, easily detected while walking (possible interference)
High	Strong odour (bearable, but offensive)
Severe	Very strong odour (this is when you really wish you were somewhere else)

3.3 Receptor Sensitivity

3.3.1 Table 3.2 below outlines the criteria used for assessing receptor sensitivity to odour which has been used when determining nearby odour sensitive receptors for the purpose of the risk assessment. Sensitivity to odour is subjective. An odour that may be tolerable to one person, may not be acceptable to others. However, in general, some types of receptors will be more sensitive to odour than others. For example, domestic residences are more likely to be sensitive to odour than receptors within an industrial complex or other receptors with short term transient exposure, including passers-by. Furthermore, direction and distance from the potential source of odour will have a bearing on potential for impact, along with prevailing meteorological conditions, including wind speed and direction. The broad criteria

below for assessing receptor sensitivity has been developed to take into account of such criteria, but is also precautionary in order to ensure the risk assessment and subsequent control measures are suitably robust.

Table 3.2 - Receptor Sensitivity Criteria for Odour

Sensitivity of Receptor	Criteria
Low	Industrial workplaces, areas of short term, transient exposure (eg public footpaths and areas where shorter periods of recreational use are undertaken)
Medium	Commercial/retail premises, places of work, residential use, areas used for extended periods of recreation, schools and hospitals >200 m from site boundary
High	Commercial/retail premises, places of work, residential use, areas used for extended periods of recreation, schools and hospitals <200m from site boundary

3.4 Sensitive Receptor Locations

3.4.1 A Receptor Plan (RP) has been produced to accompany this OMP and is shown in Appendix I. The receptors highlighted are those which are considered to be at risk from odour generated by the site. The table below outlines relevant sensitive receptors together with details of direction and distance from the site and sensitivity of receptor. The receptors identified are representative of worst case exposure in each direction for each type of receptor.

Table 3.3 - Odour Sensitive Receptors Within 400m of the Site

Receptor name	Type	Distance and Direction from Nearest Part of Site Boundary	Receptor Sensitivity to Odour
Industrial units within Aylesford Industrial Estate	Industrial	10m East, 20m West, 25m North	Low
Residential properties	Residential	325m, North-West	Medium
Cobtree Manor Park	Long term recreational	40m, South	High
Cobtree Manor Park Golf Course	Short term recreational	160m North-East, 220m, East	High

3.4.2 Total distances are measured from the boundary of the waste facility closest to the nearest receptor point. In reality distances to the waste storage/treatment areas may be greater.

3.5 Prevailing Meteorological Conditions

3.5.1 The wind rose below shows wind speed and direction frequency between 2019 and 2023 based on Numerical Weather Prediction (NWP) data for the grid squares containing the site. This is considered to provide the most representative data for prevailing meteorological conditions, in lieu of any suitable nearby observing stations. As is shown, wind direction is predominantly between South and West. There is also a significant occurrence of wind direction frequency from the North-East. As a general rule, any odours will be transported by prevailing winds to locations downwind of a source with little or no odour detectable upwind of a source. The exception to this is during calm conditions when odours may travel/be dispersed against wind direction. Consideration should be given to these factors when assessing risk and mitigation.

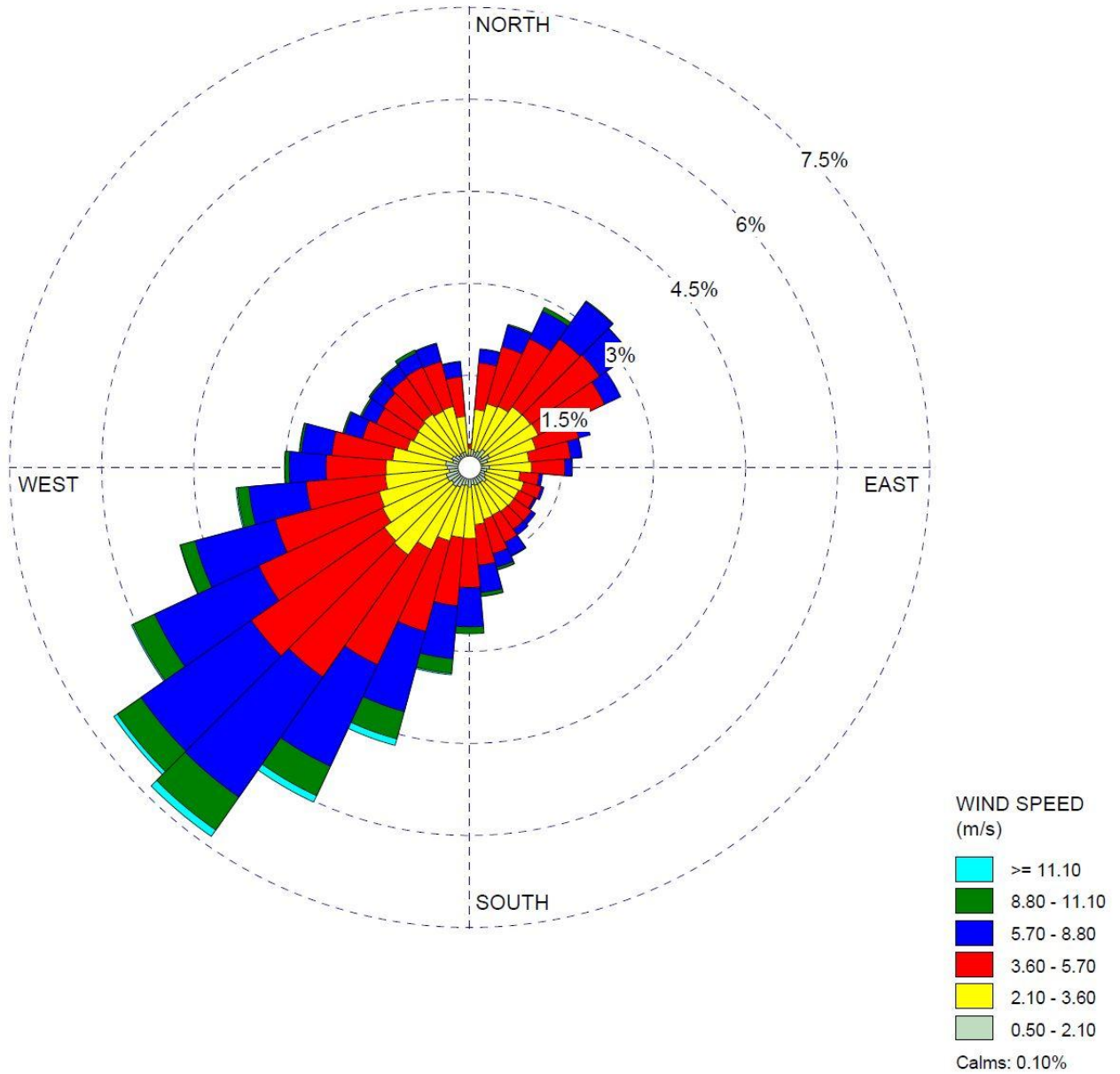


Figure 1 - Wind Speed and Direction Frequency Between 2019 and 2023, Based on Numerical Weather Prediction Data for the Grid Squares Containing Site

3.6 Risk Matrix

3.6.1 The odour risk in any particular event can be established using the risk assessment matrix given in Table 4 below, which is derived based on receptor sensitivity and odour intensity.

Table 3.4 - Resultant Risk Matrix (Colour-Coded)

		Sensitivity		
		Low	Medium	High
ODOUR INTENSITY	Negligible	NEGLIGIBLE	LOW	LOW
	Low	LOW	LOW	MEDIUM
	Moderate	LOW	MEDIUM	MEDIUM
	High	MEDIUM	MEDIUM	HIGH
	Severe	MEDIUM	HIGH	VERY HIGH

3.6.2 Reference should be made to the table overleaf for an assessment of potential odour impacts at sensitive receptors in the vicinity of the site, using the Source, Pathway, Receptor model, based on the criteria within the table above.

Table 3.5 – Odour Risk Assessment

Potential Odour Source	Pathway	Receptors	Receptor Sensitivity (worst case)	Odour Intensity	Unmitigated Odour Risk (based on worst case receptors)	Mitigation	Residual Odour Risk
Odour from storage of waste in Buildings 1 and 2	Air	Residential, commercial, industrial and recreational receptors within 400m	High	High	High	Odour Control Unit Comprising carbon filter to treat exhaust air from buildings prior to discharge via elevated flue Control and monitoring procedures outlined within Section 4 and 5	Negligible

Potential Odour Source	Pathway	Receptors	Receptor Sensitivity (worst case)	Odour Intensity	Unmitigated Odour Risk (based on worst case receptors)	Mitigation	Residual Odour Risk
Odour from processing of waste in Buildings 1 and 2	Air	Residential, commercial, industrial and recreational receptors within 400m	High	High	High	Odour Control Unit Comprising carbon filter to treat exhaust air from buildings prior to discharge via elevated flue Control and monitoring procedures outlined within Section 4 and 5	Negligible
Odour from storage of waste in Building 3	Air	Residential, commercial, industrial and recreational receptors within 400m	High	High	High	No odorous wastes to be stored within open vessels/containers Control and monitoring procedures outlined within Section 4 and 5	Negligible

Potential Odour Source	Pathway	Receptors	Receptor Sensitivity (worst case)	Odour Intensity	Unmitigated Odour Risk (based on worst case receptors)	Mitigation	Residual Odour Risk
Odour from storage of raw materials in Building 1	Air	Residential, commercial, industrial and recreational receptors within 400m	High	Negligible to high	High	Raw materials to be stored within enclosed containers Odour Control Unit Comprising carbon filter to treat exhaust air from buildings prior to discharge via elevated flue Control and monitoring procedures outlined within Section 4 and 5	Negligible

Potential Odour Source	Pathway	Receptors	Receptor Sensitivity (worst case)	Odour Intensity	Unmitigated Odour Risk (based on worst case receptors)	Mitigation	Residual Odour Risk
Odour from wastes stored in external tanks, prior to introduction to treatment process	Air	Residential, commercial, industrial and recreational receptors within 400m	High	High	High	<p>Wastes to be stored within enclosed tanks. Carbon filters to be integrated into safety vents, ensuring control of potential diffuse odour emissions</p> <p>Control and monitoring procedures outlined within Section 4 and 5</p>	Negligible

Potential Odour Source	Pathway	Receptors	Receptor Sensitivity (worst case)	Odour Intensity	Unmitigated Odour Risk (based on worst case receptors)	Mitigation	Residual Odour Risk
Odour from storage of solid waste stockpiles/bays within Building 1	Air	Residential, commercial, industrial and recreational receptors within 400m	High	Low	Medium	Odour Control Unit Comprising carbon filter to treat exhaust air from buildings prior to discharge via elevated flue Control and monitoring procedures outlined within Section 4 and 5	Negligible

4 ODOUR CONTROL

4.1 Site Operations

4.1.1 Following site procedures will prevent odour release from the site under normal operating conditions. The only conceivable release of significant odour would be if there is an accidental spillage either on its own or associated with some wider incident.

4.1.2 Limiting odour from the waste recycling facility can best be achieved through employing effective site management and good general practice. It is much easier minimising odours in the first instance than dealing with problems once they occur.

4.2 Waste Acceptance Procedure

4.2.1 Strict waste acceptance procedures will be in place at the site as shown below and the following details will be recorded for every load deposited at the site:

- a) The date and time of delivery.
- b) The name and address of the waste producer.
- c) The detailed and accurate description of the waste including type, quantity (in tonnes and/or cubic metres) and EWC codes.
- d) How the waste is contained e.g. loose, container type.
- e) The carrier's name and address.
- f) Driver's name, signature and vehicle registration No.
- g) Signature or initials of person(s) producing/ accepting/ inspecting/ carrying the waste.
- h) Additional handling details/notes made by the driver after inspection of the load.
- i) SIC code of the premises which produced the waste (where relevant).
- j) Waste hierarchy declaration.
- k) Information on any previous treatment of the waste e.g. manual or mechanical.

4.2.2 Any wastes identified during the incoming waste inspections which do not conform to site acceptance criteria will not be accepted. If the non-conforming waste is discovered

following deposit, the waste will be loaded back onto the vehicle and removed off site or quarantined immediately in a sealed/covered skip or container to await safe removal.

4.2.3 If the site reaches capacity and/or operational difficulties occur, incoming wastes will be diverted to another authorised treatment facility.

4.2.4 Prior to receipt of waste at the site, the source of the waste will be required to provided, including the following:

- the waste producer (i.e. site name address and contact details);
- the source and nature of the waste, at the point of production;
- a description of the waste including its physical form;
- the full characteristics of the waste including the variability and reactivity (if relevant);
- a description of any odour potential;
- the type of packaging and risks of contamination;
- an estimate of the quantity; and,
- the age of the waste.

4.2.5 Pre-acceptance documentation will be retained for a period of 3 years following receipt of a load. The potential odours and emission risks will be reviewed and considered prior to acceptance to ensure that suitable handling and storage procedures are implemented at the site.

4.2.6 A waste may be non-conforming and rejected from the site for a number of reasons. One of these reasons could include an overly odourous load of waste that does not conform with the odour potential established as part of the Pre-Acceptance Odour Risk Assessment. In such circumstances, the Site Waste Rejection Procedure will be followed.

4.2.7 If waste is identified as being unacceptable upon collection, at the site entrance or at the point of offloading, the site manager will be contacted and a Waste Rejection Form issued. The driver of the load will be informed of the load's rejection, reason for the rejection and requested to leave the site.

- 4.2.8 Clearly labelled enclosed skips/containers will be provided for the deposit of rejected waste which cannot be removed from the site immediately. The location may be varied as operating conditions permit (i.e. to permit the loading of rejected wastes) but clear labelling and management control will ensure its use as specified.
- 4.2.9 If arrangements for the customer to remove the waste cannot be made, the Operator will make these arrangements. Waste materials in the quarantine area will be exported off site by a suitably licenced waste carrier to an appropriately permitted facility.

4.3 Receiving Wastes

- 4.3.1 Liquid wastes, road sweepings, grits and sludges which are to be subject to treatment will be delivered to site in sealed tanker lorries. These will be unloaded to the waste reception building (building 2), offloaded in a controlled manner to the CDE Hydro Tip within Building 2. This will act to screen any larger material such as stones, which will be conveyed to a stockpile. The remaining sludges and liquids will be transferred to the CDE G-Max which will provide further screening of the material, separating liquids, sand, grits and organic matter. The resultant liquids will be pumped to dedicated non-hazardous and hazardous storage tanks, located externally to the building, which will store liquids prior to being processed further within Building 1.
- 4.3.2 Liquid wastes will not be exposed for extended periods of time, being delivered to site in sealed tankers and exposed only for short periods time during the initial dewatering and screening processes, prior to transfer to sealed tanks. However, it should be noted that exhaust air from Building 2 will be extracted and directed to the Odour Control System on-site. Therefore, potential odours arising during initial reception and screening will be fully controlled.

4.4 Solid Waste Storage within Building 2

- 4.4.1 Material such as grit and stones which is screened from the incoming wastes will be stored within a stockpile prior to export from site. This will be kept damp to prevent fugitive release

of odour. Building 2 will be fully enclosed and operated under negative pressure with fast acting roller shutter doors with air extracted via the site Odour Control Unit (OCU).

4.5 Liquid Waste Storage Prior to Treatment

4.5.1 Liquid wastes will be stored within external tanks prior to transfer to the main processing building. These tanks will be equipped with carbon filters within safety vents for control of diffuse odour emissions.

4.6 Main Waste Processing Building (Building 1)

4.6.1 The main waste processing building will be maintained under negative pressure and will include an extraction system which will extract air via the OCU.

4.7 Odour Control Unit

4.7.1 The OCU has been designed to extract from a negative pressure environment. The operator proposes to install the Nodour Hi-Flo 'twin bed' activated carbon system, including CX65 activated carbon, which is utilised in combination with an extraction fan and integral particulate pre-filter bed to protect carbon media. The extracted air from Building 1 and 2 will be collected via a duct system and pass through a carbon adsorption unit prior to being discharged via a stack. The above is detailed on the site layout plan (Drawing No. 2499-002-03).

4.7.2 The OCU has been designed to be of suitable capacity to manage the volume of air that will be extracted from Building 1 and 2 and the flow rate will be maintained at the required level to accommodate the number of air changes per hour required.

4.7.3 Optimum flow through the system will be maintained using a 5 way position switch, which can select various fan speeds offering different air rate changes depending on the nature of waste that is being treated. This may be up to 5 air changes per hour. The design flow capacity of the OCU is approximately 25,000m³.hour⁻¹.

- 4.7.4 The expected range in physical properties of the air stream at the point of odour control are as follows:
- Temperature = 10 to 35 degrees Celsius;
 - Humidity = 40 to 80%; and,
 - pH (moisture in air) = 6 to 11.
- 4.7.5 The system has been designed based on the above ranges of physical parameters for the incoming exhaust air. These parameters will not be continuously monitored, so will not act as trigger levels as such, but the system will alert the operator to required changes to filters via audio/visual alarms, as outlined within the following sections. The regular boundary odour monitoring and periodic testing of the stack exhaust will also act as triggers and an ongoing check to indicate if remedial actions are necessary or if process variables may be out of operational range.
- 4.7.6 The monitored control panel will have alarms/ indicator to alert the operator to when filters are blocked and require replacement.
- 4.7.7 There is also a mechanical indicator gauge that provides pre-filter condition information.
- 4.7.8 The filters will be changed on a regular basis (dependent on usage) and regularity will have to be determined once the system is in use – the manufacturer recommends a minimum weekly check of pressure loss indicators/gauge and a visual inspection initially, to ascertain the speed of dirt build-up and actual required replacement frequency - the frequency can then be adjusted according to the specific site conditions.
- 4.7.9 The control panel contains an orange 'Filter change' lamp that will light up when the filters require changing. Also, when the needle on the indicator gauge enters the red zone, the pre-filters should be changed. The gauge gives a more gradual indication of filter condition daily.
- 4.7.10 The site operator will visually check the filters weekly.

- 4.7.11 The absorption medium will include loose-fill activated carbon and will undergo regular inspection and testing for condition. The filter will require replacing at regular intervals.
- 4.7.12 Removable hatches on the top of the unit allow access for sampling and replacement of the carbon filter.
- 4.7.13 Annual checks of the fan are required to check for build-up of dust and dirt, fixing tightness and motor lubrication, and cleaning will be carried out as required to prevent excessive build-up of dirt. If this is not completed, then the fan risks going out of balance and potentially causing serious damage. Lubrication intervals will be in line with manufacturer specification. The flexible connections will be checked monthly for any damage or wear.
- 4.7.14 The system will be maintained by the installation company who will inspect the unit periodically. If odour monitoring indicates the system is the source of an odour, the plant will be checked by an engineer forthwith and the filters replaced if they are considered to be malfunctioning. In routine operation, the filters will be changed at intervals recommended by the manufacturer.
- 4.7.15 As outlined above, the fan speed and number of air changes can be adjusted based on the control requirements.
- 4.7.16 Given the range of wastes to be received, it is difficult to ascertain with certainty the exact composition and concentrations of odorous compounds. However, the system has been designed to handle the range of expected odorous compounds. The table below provides the expected range of odorous compounds.

Table 4.1 – Potential Odorous Compounds

Component/Compound	Expected Concentration Range (Approximate)
Hydrogen Sulphide	5-500ppm (may be higher in more concentrated sludges)
Ammonia	5-100ppm
Volatile Organic Compounds	10-500mg.m ⁻³
Mercaptans/Thiols	0.1-50ppm
Aldehydes/ketones	0.5-50ppm

Component/Compound	Expected Concentration Range (Approximate)
Sulphur dioxide	1-50ppm
Dust (bearing odourous compounds)	Variable

4.7.17 The above measures ensure that odours associated with the operations within the main processing buildings will be adequately controlled.

4.8 Wastes to be Repackaged

4.8.1 Wastes to be repackaged (within building 3) will include dry non-hazardous and hazardous wastes, liquid wastes within sealed containers or empty containers containing residues of wastes. Building 3 will remain open sided and not subject to control via the OCU. However, wastes with potential for odour and dust will be contained within sealed vessels/containers within this area and storage volumes will be low. Therefore, it is not considered that full enclosure of this building will be necessary as potential diffuse emissions, such as odour and dust, will not be significant.

4.9 Loading of Wastes for Export from Site

4.9.1 All potentially odorous wastes will be removed from site in sealed containers/tankers. Under normal operating conditions there is no risk of odour release. It is only in accident scenarios where a release is possible. The level of such a risk is very low.

4.10 Housekeeping

4.10.1 Good housekeeping and site practices are vital to discourage odour generation and ensure that the impacts from potential odour are controlled. The site will also undertake routine dynamic olfactory monitoring and sniff monitoring at the site boundary on a daily frequency.

4.10.2 Monitoring and testing of odour will be carried out by the site supervisor or designated, trained staff member to keep the levels of odour to a minimum including prevention and mitigation. Site management is responsible for ensuring that the housekeeping schedule detailed in the Table below is implemented.

- 4.10.3 Odour from the treatment operations will be controlled by an OCU as detailed above. The plant and machinery used at the site are subject to rigorous cleaning methods i.e. wash out of tankers, hosing down of reception pit, changing of filters where required.
- 4.10.4 The operator will avoid odour generation by committing to the housekeeping outlined in the table below (inclusive of frequency). The Site Manager will be responsible for ensuring these checks are implemented. Records will be maintained in the Site Office and made available for inspection by the EA.

Table 4.2 – Housekeeping schedule

Odour sources subject to housekeeping	Housekeeping and monitoring frequencies
Maintain a clean, well-organised site.	Cleaning and organisation of the site is undertaken continuously as part of day-to-day operations. Monitored by trained site staff.
All equipment forming part of the wet waste treatment process and associated use of the Odour Control Unit to extract from a negative pressure environment.	Treatment plant and OCU system inspected and maintained by installation company. Filters will be checked weekly. Fans and vents forming part of the extraction system will be checked annually.
Clean equipment that has been in contact with odorous materials.	Equipment that has been in contact with odours waste will be subject to weekly cleaning via hosepipes, brushes etc.
Plant will be inspected and serviced in accordance with manufacturer recommendations.	Variable, dependent on the preventative maintenance requirements.
Carry out a deep clean of the reception pit and other waste storage areas, results to be recorded in the site diary	Reception pit and pipework will ALWAYS be washed through between each campaign and between each hazardous and non-hazardous load. The area will also be subject to a deeper cleaning on a quarterly basis.
Vessels will be washed out and recorded in the site diary	Vessels ALWAYS washed through between each campaign and between each hazardous and non-hazardous load.
The site has been designed with impermeable concrete floors and suitable drainage system, concrete floors engineered with a slope towards drainage system and designed in a way that allows easy cleaning	Daily checks for the build-up of material that may result in odour generation. The concrete pad integrity is inspected monthly.
Floors sealed (if applicable) to prevent absorption and adsorption of dust producing residues	The integrity of floors and seals will be inspected as part of daily site inspections. A more rigorous inspection will be carried out on a monthly basis.

Odour sources subject to housekeeping	Housekeeping and monitoring frequencies
Monitoring of tank integrity and tank levels	<p>Tanks are fitted with level sensors and alarms.</p> <p>The integrity of tanks will be inspected daily as part of the daily site inspections for signs of any leaks, spillages or staining.</p> <p>Tanks will also be inspected on annual basis by a suitable contractor to ensure that they are maintained in accordance with manufacturer recommendations.</p> <p>Vents, seals, flanges, fittings and couplings will be monitored and inspected as part of preventative maintenance in accordance with manufacturer's recommendations.</p>

4.11 Liaison with Neighbours

- 4.11.1 In the extreme event of significant but temporary odour releases outside normal operations, neighbours will be contacted to advise them of what is occurring and the action being taken. The EA will also be notified.
- 4.11.2 An open-door policy will be encouraged by the operator to enable any complaints from neighbouring premises (if received) to be dealt with immediately. The complainant will then be supplied with remedial actions taken and any procedures or measures put in place by the operator to reduce or ideally eradicate the likelihood of a subsequent complaint.
- 4.11.3 If any odour complaints are received, the complaint will be assigned to an operative familiar with the site operations who will complete a 'complaints and events log' which will be detailed individually on the complaints form (in Appendix II), both of which will be kept for inspection on request by the EA. Information to be completed includes dates, nature of complaint, weather conditions at the time of the complaint, investigation details, action taken and a signature (as a minimum). Odour complaints will be investigated and responded to within 24 hours and suitably reviewed by the site manager who is ultimately responsible.
- 4.11.4 The operator would also be required to make a note of any unavoidable events plant/equipment malfunctions in the site diary, rather than just actual complaints received. This will ensure that if complaints are received retrospectively from either the Council/EA or directly, any circumstances which led to that complaint as a result of elements outside of

the operator's control would be able to be attributed to the cause of the complaint. If there are significant odour releases outside normal operations, the operator will cease operation, investigate and resolve the issue before continuing.

4.12 Training

- 4.12.1 All employees and sub-contractors of Elliot Environmental Drainage Limited involved with potentially odorous materials and their handling will receive training in Sniff testing and odour detection.
- 4.12.2 Training will be given to all relevant persons to make sure they are competent in completing olfactory assessment survey forms, odour complaint report forms and the odour diary to ensure sufficient monitoring of odours can be carried out.
- 4.12.3 Operational staff will receive spill clean-up training including containment of odorous wastes.

5 MONITORING

5.1 Monitoring Odorous Releases

5.1.1 Elliot Environmental Drainage Limited will use the following techniques to monitor odorous releases:

- a) Routine dynamic olfactory stack monitoring
- b) Olfactory Monitoring (boundary Sniff Testing)
- c) Complaints Monitoring
- d) Odour Diaries (when necessary)

5.2 Routine Dynamic Olfactory Monitoring

5.2.1 The OCU has been designed to efficiently destruct potential odourous compounds. There are no BAT based odour emission limits for the treatment of water based liquid wastes. However, the EU BAT Conclusions Document for Waste Treatment contains a BAT based odour limit for treatment of biological waste, of between 200 and 1,000 OU.m⁻³. It is anticipated that the upper end of this range will be achieved as a worst case residual odour concentration from the OCU.

5.2.2 Sampling using dynamic olfactometry according to EN 13725 will be undertaken every 3 months to establish residual odour concentrations arising from the stack serving the OCU and include assessment against the above criteria. Should all monitored odour concentrations be below 1,000OU.m⁻³ during the first 12 months of operations, monitoring would then be reduced to a period frequency of every 6 months.

5.2.3 Stack sampling will be undertaken to collect an air sample, in accordance with the EA Stack Emissions Monitoring Method Implementation Document for EN 13725. The stack has a sample port which has been designed in accordance with EA M1 Guidance. During each periodic test, bag samples of air will be collected from the stack and this subsequently exported from site for assessment of odour concentration in accordance with EN 13725 and

associated EA guidance. Stack sampling and post sampling assessment will be undertaken by a suitably accredited contractor.

5.2.4 In the event that the residual Odour Concentration exceeds 1,000 OU.m⁻³ from a routine periodic test, the operator will undertake immediate investigative action to identify the fault, take remedial action as necessary and then commission a further test to verify that the fault has been rectified.

5.2.5 Records of all sampling and any remedial action taken will be logged in the Site Diary and be available for inspection by the EA.

5.3 Sniff Testing

5.3.1 In addition to the routine dynamic olfactory monitoring, odour will be routinely monitored using sniff testing on a daily frequency at the site boundary and if there is a spillage of potentially odorous material, if an odour is detected on-site or in the event of odour complaint arising. During routine daily monitoring, the site supervisor, or designated, trained staff member, will monitor odour around the entire site perimeter and an Odour Diary will be completed (Appendix II).

5.3.2 The results of monitoring exercises and any remedial action taken will be entered into the site diary which will be available for the EA to inspect upon request. The name of the site supervisor/odour assessor will be stated in the site diary along with notes on weather including precipitation, temperature, wind speed and direction (from Met Office information).

5.3.3 Should the monitoring conclude that a certain activity/waste is giving rise to odour which is migrating offsite, steps will be taken to reduce the impact of this activity, which may include, but is not limited to removal of waste offsite to a suitably licensed facility, faster processing/lower storage rates, pumping and removal of standing surface water etc.

5.3.4 The site supervisor/odour assessor will be suitably trained to carry out these duties.

- 5.3.5 Prior to carrying out a routine odour check, the relevant member of staff will vacate the site for a period of 30 minutes and then carry out the assessment on their return to ensure they are not desensitised to the odour.
- 5.3.6 Olfactory (Sniff) testing will be carried out by trained, competent staff .
- 5.3.7 The Assessor should not:
- a) Smoke or consume strongly flavoured food or drink for at least 30 minutes before the assessment.
 - b) Consume confectionary or soft drinks immediately before the assessment.
 - c) Apply scented toiletries, such as perfumes or aftershave immediately before an assessment.
- 5.3.8 Indicative locations for daily boundary sniff testing are included on the Site Layout Plan.
- 5.3.9 For monitoring in response to a complaints, or in the event odour is detected off-site, starting points of assessments will be outside the site boundary as a far as access and safety factors in the surrounding area allow, progressing towards the site boundary. The assessment should first be upwind of the site. The next starting point should be downwind of the site as far as access and safety factors in the surrounding area allows, progressing towards the site boundary and then moving away from the site in an upwind direction. The person carrying out the assessment should walk slowly and breathe as normal. Results will be recorded on the record keeping form within Appendix II. The points have not been provided on the site plan due to the regular variations in wind speed and direction.

5.4 Complaints Monitoring Procedure

- 5.4.1 All odour complaints will be investigated promptly, using the monitoring procedure outlined above and appropriate remedial action will be taken if the complaint is validated. Complaints will be recorded on the form found in Appendix II.

5.4.2 Complaints to the EA will also be recorded and taken into account. An olfactory assessment survey will be carried out from where the complaint was made and from any convenient locations between the complainant/receptor and the site so that the complaint can be validated or rejected.

5.5 Odour Diaries

5.5.1 If members of the local community are frequently reporting odour issues in the vicinity, then they will be asked (if agreeable) to keep an odour diary. This will help to build up an account of when the odour occurs, their location and the site operations that were being carried out at the time, as well as the duration of the activities taking place. Any obvious problems can then be addressed.

5.6 Rectification of Issues and Timescales

5.6.1 The Site Manager or suitably trained employee will be responsible for investigating and initiating response, in the event that monitoring identifies an odour issue. The same staff member(s) will also be responsible for assessing and responding to alarms raised by the OCU. Faults will be investigated as soon as they become apparent and remedial action taken as soon as practicably possible. In the event that an issue with the OCU is identified, no further wastes will be charged to the treatment processes until the issue is rectified.

6 CONTINGENCY PLANS

6.1 Contingencies and Emergency Plans

6.1.1 In accordance with the EA's guidance on OMPs, contingency plans have been prepared to react to situations 'where monitoring indicates that a potential odour source is not completely under control, meteorological conditions are unfavourable or that adverse impact has occurred'.

6.1.2 If excessive odours are detected at the site boundary, other monitoring point or a complaint is received, the following remedial procedures will be taken:

- a) Firstly, identify the odour source; is it from:
 - i) Site operations; or,
 - ii) An off-site source (e.g agricultural spreading operation, other industrial sources)

- b) If on site:
 - i) Report incidence to the site or technically competent manager;
 - ii) Identify the point of release of the odour;
 - iii) Identify the cause if the release i.e. machine breakdown, leakage, etc.;
 - iv) Identify a solution;
 - v) Implement a solution;
 - vi) Carry out olfactory tests to check if fix is working;
 - vii) Record actions taken on relevant forms and site diary as required by this plan

6.1.3 Then, reference should be made to the next section for actions taken if odour is being produced on site, to identify an appropriate solution.

6.2 Corrective Actions for Various Situations

6.2.1 Table 6.1 below summarises the various problems that could potentially arise at the site and the standard responses available, which will assist in reducing odour potential.

Table 6.1 - Corrective Actions

Process/Event	Problem	Corrective Action
Normal operation	Excess odour	See section 6.3 for corrective actions required
Abnormal operation, eg adverse weather conditions	Adverse weather conditions resulting in increased odour risk at sensitive receptors	See section 6.4 for corrective actions required
Staff shortages/human error	Staff shortage due to absence/no-shows	See section 6.5 for corrective actions required
Operational failure	Operational failure such as machine/plant malfunction/failure leading to odour issues	See section 6.6 for corrective actions required
Waste Loading/unloading	Accidental Spillage	Follow identified spillage procedure to contain odour release.
Stored wastes	Odorous emissions detected	Olfactory/SNIFF test required to pinpoint source. Ensure procedures outlined in Section 5 are adhered to in full. Implement liaison programme if risk deemed HIGH or VERY HIGH i.e. strong or severe as shown in Table 2.4.
Waste processing plant and machinery	Malfunction of plant/equipment leading to excess odour	Process to cease until issue is rectified
LEV system	Failure of abatement unit leading to odorous emissions	No further waste to be accepted into the building until issue is rectified. LEV system fully inspected to identify and rectify problem.

6.3 Normal Operation

6.3.1 In the event that excess odour is detected during normal/routine operation, the offending odour will be traced and the reason for the cause of the problem will be investigated. Once solutions are in place, olfactory monitoring will be carried out to ensure the solutions put in place are having the desired effect.

6.4 Abnormal Events

6.4.1 Adverse weather conditions can promote generation of odour and inhibit its effective dispersion e.g. hot weather with little wind, resulting in increased risk of odour to receptor locations. If this happens odour causing operations will cease until more favourable meteorological conditions return.

6.5 Staff Shortages/Human Error

6.5.1 In the event of unforeseen staff shortages arising from illness, suspension or no shows, the operator will make a judgement whether to reduce the number of incoming loads, thus reducing processing frequency and storage of potentially odourous wastes. The operator will then seek to increase staffing levels within a timely manner to ensure the site can continue to operate at its required capacity.

6.5.2 All staff will be trained and undergo toolbox talks every 6 months (or sooner if operations change) to reduce the impact of human error. In instances where a human error has caused an odour issue, the site may suspend operations until the issue has been rectified and the member of staff will be warned and re-trained accordingly.

6.6 Operational Failure

6.6.1 The manager will be contacted by staff in the event of any operational failure such as the breakdown of plant, systems or equipment and will decide whether operations are to continue or be suspended prior to corrective action being taken. Serious operational failures, which result in the closure of the site, will be recorded in the site diary.

6.6.2 All repairs to site security will be made within 24 hours of discovery of the damage if possible and the site will be made secure until the repair has been carried out.

6.6.3 Any major defects found during the daily site inspection which are likely to lead to a breach of permit conditions will be repaired by the end of the working day in which they are found, where possible. If a repair is not possible by the end of the working day and a potential

breach of permit conditions may occur, the EA will be contacted to agree a suitable timescale for repair.

6.6.4 All defects and problems likely to give rise to odour will be recorded on the form EEDL/RF/7 or the operators own recording procedures with repairs/solutions being carried out immediately. Neighbours will be alerted if the problem cannot be rectified immediately and provided a timescale for when the problem will cease.

6.6.5 Essential spares for plant maintenance will be kept on site.

6.7 OMP Review

6.7.1 This OMP will be reviewed at least annually unless it becomes apparent that the activities are giving rise to pollution outside the site due to odour, in which case it will be revised sooner within a timescale agreed with the EA and a copy forwarded to the EA for approval before implementation.

Appendix I

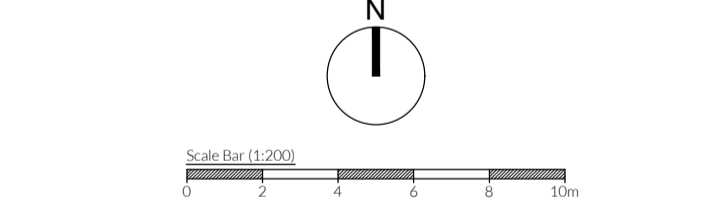
Drawings

NOTES
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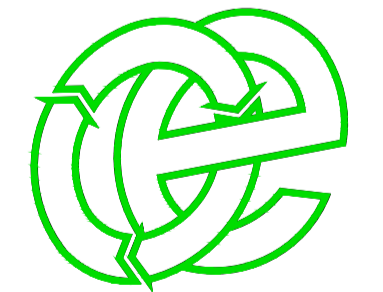
Rev:	Date:	Init:	Description:
-	08.11.23	RS/IA	Initial drawing
A	07.03.24	JH	Amendment
B	08.03.24	JH	Parking added
C	11.06.24	JH	Working amendment
D	19.06.24	RS	Application submission
E	26.06.24	RS	Quarantine area added
F	01.10.24	IA	Emission point added
G	24.10.25	RS	Schedule 5 response update
H	05.11.25	RS	Crash barriers added
J	06.11.25	RS	Minor amendment
K	10.03.26	JH	Amendment
L	10.03.26	JH	Amendment
M	12.03.26	JH	Amendment

- KEY:**
- Permit boundary
 - Chemicals and raw materials storage area
 - Out-of-hours plant storage area
 - Extent of concrete surfacing within the permit boundary
 - Unsurfaced areas (freely-draining to ground)
 - Bund wall around external containment area
 - Perimeter bunding around main facility (including access ramp)
 - Fire wall
 - Bunding around the thresholds of Building 1
 - Vehicle crash barrier (Armo, or similar)
 - INT Full retention oil interceptor (fitted with penstock valve)
 - Piped surface drainage (surface, foul, building)
 - Linear slot drains (aco or similar) - (surface, building)
 - MH Manhole (foul, surface, building)
 - ic Inspection cover (other services)
 - G Gully
 - Quarantine area (only used in the event of a fire and kept clear at all other times)
 - 6 metre separation distance around the quarantine area where no other combustible wastes will be stored
 - Penstock valve remotely deployable in the event of an emergency or spill to shut-off yard drainage preventing site discharge to surface water system
 - Bunded fuel tank (1,340 litre or similar)
 - H On-site fire hydrant
 - Numbered boundary odour monitoring points (indicative)
 - Dosing points
 - Venting points
 - Odour control lines
 - Firefighting equipment/extinguishers (indicative locations)
 - Spill kits (indicative locations)

Additional point references	
Item	Description
1	Polymer make-up system
2	Solid sludge hopper
3	Waste oils/grease (BOCs)
4	5-way manifold
5	Flush point



Oaktree Environmental Ltd
Waste, Planning and Environmental Consultants



DRAWING TITLE
PERMIT LAYOUT PLAN

CLIENT
Elliott Environmental Drainage Ltd

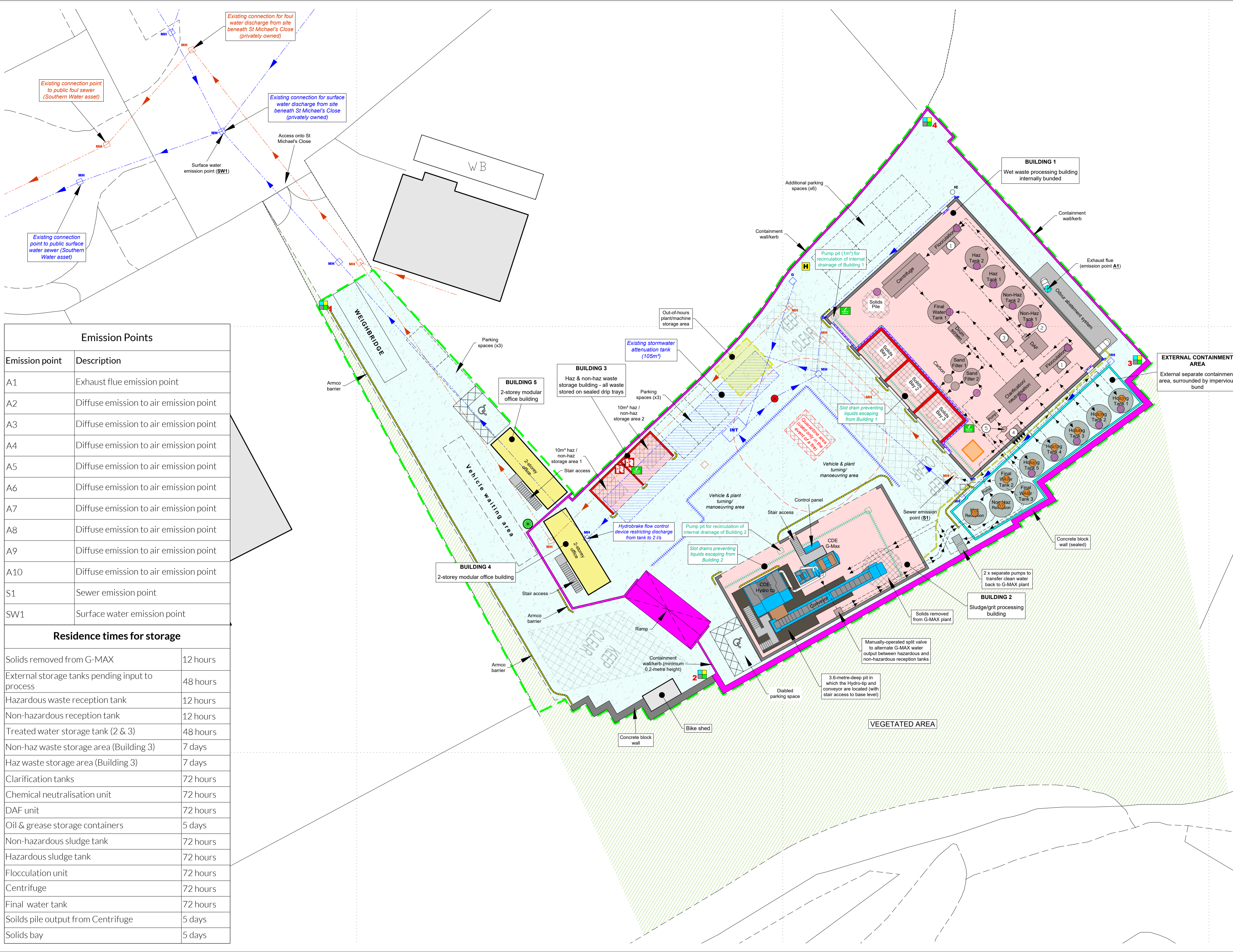
PROJECT/SITE
St Michael's Close, Aylesford, Kent

SCALE @ A1 1:200	CLIENT NO 2499	JOB NO 002
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DRAWING NUMBER 2499-002-03	REV M	STATUS Issued
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DRAWN BY RS/JH	CHECKED RS	DATE 12.03.26
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Lime House, Road Two, Winsford, Cheshire, CW7 3QZ
t: 01606 558833 | e: sales@oaktree-environmental.co.uk

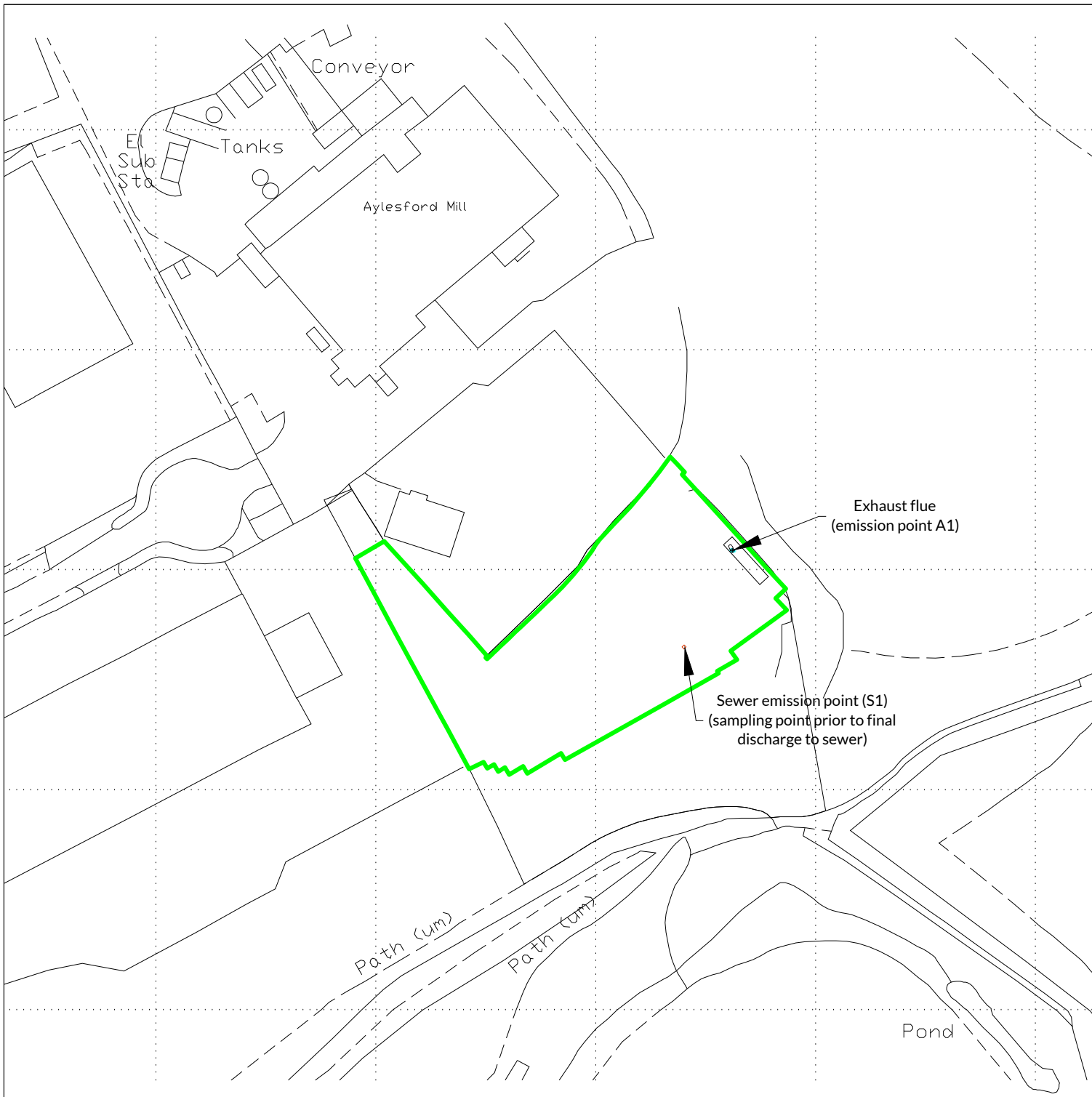


Emission Points

Emission point	Description
A1	Exhaust flue emission point
A2	Diffuse emission to air emission point
A3	Diffuse emission to air emission point
A4	Diffuse emission to air emission point
A5	Diffuse emission to air emission point
A6	Diffuse emission to air emission point
A7	Diffuse emission to air emission point
A8	Diffuse emission to air emission point
A9	Diffuse emission to air emission point
A10	Diffuse emission to air emission point
S1	Sewer emission point
SW1	Surface water emission point

Residence times for storage

Solids removed from G-MAX	12 hours
External storage tanks pending input to process	48 hours
Hazardous waste reception tank	12 hours
Non-hazardous reception tank	12 hours
Treated water storage tank (2 & 3)	48 hours
Non-haz waste storage area (Building 3)	7 days
Haz waste storage area (Building 3)	7 days
Clarification tanks	72 hours
Chemical neutralisation unit	72 hours
DAF unit	72 hours
Oil & grease storage containers	5 days
Non-hazardous sludge tank	72 hours
Hazardous sludge tank	72 hours
Flocculation unit	72 hours
Centrifuge	72 hours
Final water tank	72 hours
Solids pile output from Centrifuge	5 days
Solids bay	5 days



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REVISION HISTORY			
Rev:	Date:	Init:	Description:
-	19.06.24	RS	Initial drawing
A	24.10.25	JH	Emission points added

N

Scale Bar (1:1,250)

TITLE:
PERMIT BOUNDARY PLAN

CLIENT:
 Elliott Environmental Drainage Ltd

PROJECT/SITE:
 St Michael's Close, Aylesford, Kent

SCALE @ A4: 1:1,250	CLIENT NO: 2499	JOB NO: 002
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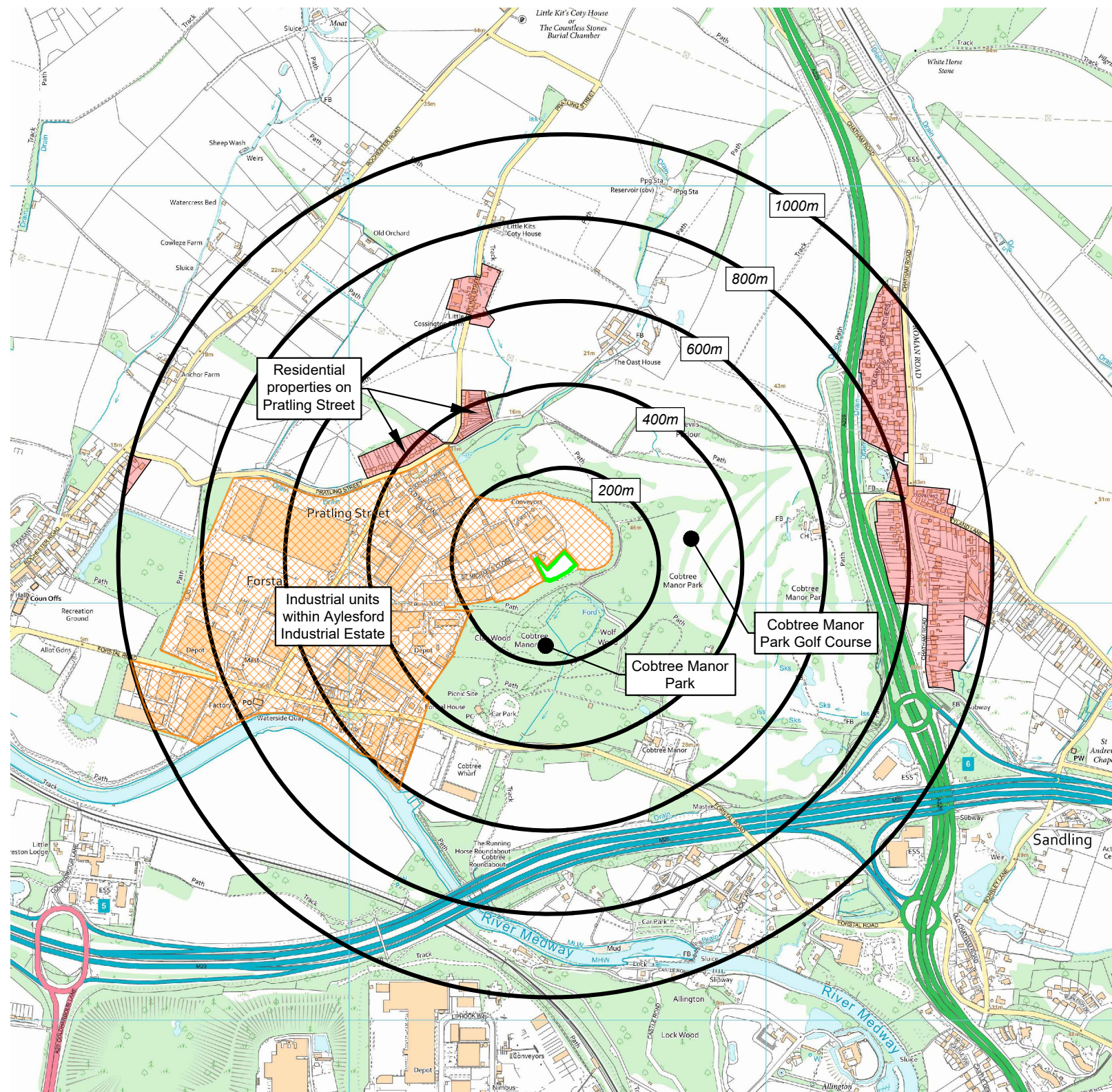
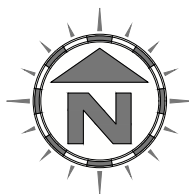
DRAWING NO: 2499-002-02	REV: A	STATUS: Issued
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DATE: 24.10.25	DRAWN: JH/RS	CHECKED: RS
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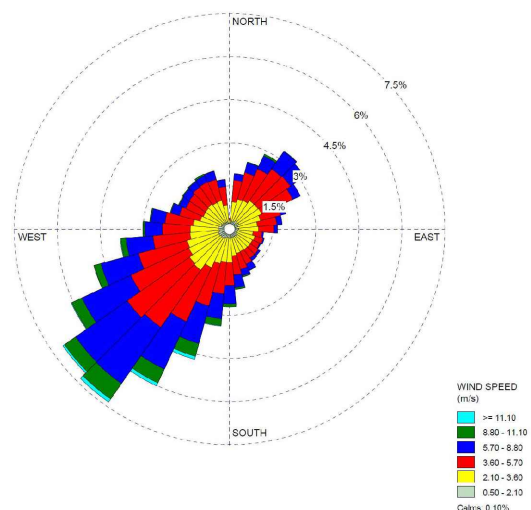
Oaktree Environmental
 Waste, Planning & Environmental Consultants

KEY:

- Permit boundary
- Plymyard Dale (Main River)
- Surface water body (river / stream / pond / pool / lake)
- Workplaces (includes agriculture industry, commerce and retail)
- Areas with mix of residential, retail and commercial properties
- Residential blocks
- Class A roads
- Class B roads
- Class C roads
- H Nearest fire hydrant
- Railway line
- SCH School
- Woodland areas
- Protected sites (Ramsar, SSSI, SPA, SAC)
- Nature reserves



Compass Wind Rose for grid squares pertaining to the site (period 2019 - 2023)



NOTES

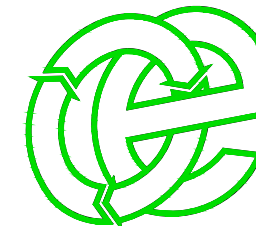
1. Boundaries are shown indicatively.
2. Wind rose data shows the prevailing wind direction to be Southerly.

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REVISION HISTORY

Rev	Date	Init:	Description:
-	09.06.23	RS/IA	Initial Drawing
A	08.11.23	RS/IA	Boundary amendment
B	06.08.24	IA	Boundary amendment

Oaktree Environmental Ltd
Waste, Planning and Environmental Consultants



DRAWING TITLE
RECEPTOR PLAN

CLIENT
Elliot Environmental Drainage Limited

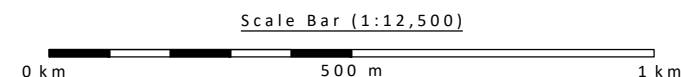
PROJECT/SITE
St Michael's Close, Aylesford, Kent, ME20 7XE

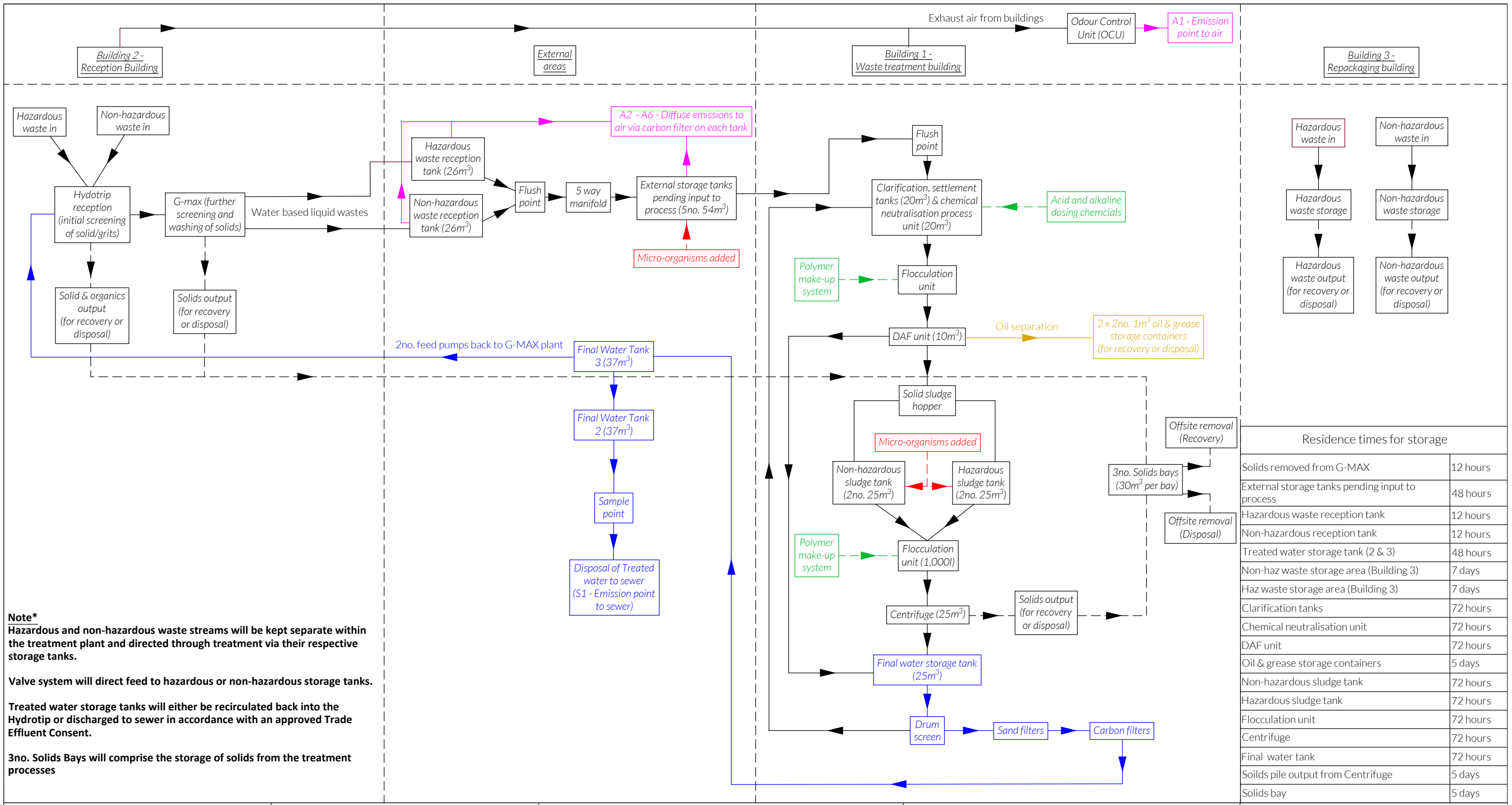
SCALE @ A3 1:12,500 **JOB NO** 002 **CLIENT NO** 2499

DRAWING NUMBER 2499-002-04 **REV** B **STATUS** Issued

DRAWN RS/IA **CHECKED** RS **DATE** 06.08.24

Lime House, Road Two, Winsford, Cheshire, CW7 3QZ
t: 01606 558833 | e: sales@oaktree-environmental.co.uk





Note*
 Hazardous and non-hazardous waste streams will be kept separate within the treatment plant and directed through treatment via their respective storage tanks.

Valve system will direct feed to hazardous or non-hazardous storage tanks.

Treated water storage tanks will either be recirculated back into the Hydrotip or discharged to sewer in accordance with an approved Trade Effluent Consent.

3no. Solids Bays will comprise the storage of solids from the treatment processes

Residence times for storage	
Solids removed from G-MAX	12 hours
External storage tanks pending input to process	48 hours
Hazardous waste reception tank	12 hours
Non-hazardous reception tank	12 hours
Treated water storage tank (2 & 3)	48 hours
Non-haz waste storage area (Building 3)	7 days
Haz waste storage area (Building 3)	7 days
Clarification tanks	72 hours
Chemical neutralisation unit	72 hours
DAF unit	72 hours
Oil & grease storage containers	5 days
Non-hazardous sludge tank	72 hours
Hazardous sludge tank	72 hours
Flocculation unit	72 hours
Centrifuge	72 hours
Final water tank	72 hours
Solids pile output from Centrifuge	5 days
Solids bay	5 days

TITLE: PROCESS FLOW

CLIENT: Elliot Environmental Drainage Ltd

Waste, Planning & Environmental Consultants

PROJECT/SITE: St Michael's Close, Aylesford, Kent		
SCALE @ A3: Not to scale	CLIENT NO: 2499	JOB NO: 002
DRAWING NO: 2499-002-06	REV: D	STATUS: Issued
DATE: 24.02.2026	DRAWN: IA	CHECKED: DY
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KEY:

- Process line
- Water treatment flow & emission point to sewer
- Air emission points
- Oil separation treatment flow
- Raw material input
- Biological process

REVISION HISTORY			
Rev:	Date:	Init:	Description:
-	29.08.25	IA	Initial drawing
A	23.10.25	IA	Treatment process amendments
B	23.10.25	IA	Process flow amendments
C	24.10.25	IA	Client comments
D	24.02.26	IA	Process flow amendments

Appendix II

Record Forms

Odour Diary			Sheet No	
Name:		Address:		
Telephone Number:				
Date of odour:				
Time of odour:				
Location of odour, if not at above address:				
Weather conditions (dry, rain, fog, snow etc):				
Temperature (very warm, warm, mild, cold or degrees if known):				
Wind strength (none, light, steady, strong, gusting):				
Wind direction (e.g. from NE):				
What does it smell like? How unpleasant is it? Do you consider this smell offensive?				
Intensity – How strong was it? (see below 1-5):				
How long did go on for? (time):				
Was it constant or intermittent in this period:				
What do believe the source/cause to be?				
Any actions taken or other comments:				

Intensity (Detectability)

- 1 No detectable odour
- 2 Faint odour (barely detectable, need to stand still and inhale facing into the wind)
- 3 Moderate odour (odour easily detected while walking & breathing normally)
- 4 Strong odour
- 5 Very strong odour (possibly causing nausea depending on the type of odour)

**ELLIOT ENVIRONMENTAL DRAINAGE LIMITED
COMPLAINTS REPORT FORM (EEDL/RF/7)**

Date Recorded:	Reference Number:
Name and address of caller	
Telephone number of caller	
Time and Date of call	
Nature of complaint (noise, odour, dust, other) (date, time, duration)	
Weather at the time of complaint (rain, snow, fog, etc.)	
Wind (strength, direction)	
Any other complaints relating to this report	
Any other relevant information	
Potential reasons for complaint	
The operations being carried out on site at the time of the complaint	
Follow Up	
Actions taken	
Date of call back to complainant	
Summary of call back conversation	
Recommendations	
Change in procedures	
Changes to Environmental Management System (EMS)	
Date changes implemented	
Form completed by	
Signed	
Date completed	

COMPLAINT RECORDING PROCEDURE:

Any complaints received will be recorded on form EEDL/RF/7. This form will normally be completed, signed and dated by the Site Manager; if they are not available the Office Manager will complete the form.

- 1) The name, address and telephone number of the caller will be requested.
- 2) Each complaint will be given a reference number.
- 3) The caller will be asked to give details of:
 - a) the nature of the complaint;
 - b) the time;
 - c) how long it lasted;
 - d) how often it occurs;
 - e) Is this the first time the problem has been noticed; and
 - f) what prompted them to complain.
- 4) The person completing the form will then, if possible, make a note of:
 - a) the weather conditions at the time of the problem (rain, snow, fog etc.);
 - b) strength and direction of the wind; and
 - c) the activity or activities taken place on the site at the time the noise was detected, particularly anything unusual.
- 5) The reason for the complaint will be investigated and a note of the findings added to the report.
- 6) The caller will then be contacted with an explanation of the source of the complaint if identified and the action taken to prevent a recurrence of the problem in future.
- 7) If the caller is unhappy about the outcome or unwilling to identify themselves the caller will be invited to contact Environment Agency and/or the Local Authority.

Note: Following any complaint the relevant management plan(s) will be reviewed to ensure appropriate actions are in place to counter any problems.