RESIDUE MANAGEMENT PLAN

St Michaels Close, Aylesford, Kent, M20 7XE

Elliot Environmental Drainage Limited

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1 Introduction

1.1 Site history & background

1.1.1 Oaktree Environmental Ltd have been instructed by Elliot Environmental Drainage Limited to prepare a Residue Management Plan (RMP) for their site situated at St Michaels Close, Aylesford, Kent, M20 7XE.

1.1.2 The following principal operations will be undertaken on-site, to be regulated under the provisions of an Environmental Permit (EP):

- Importation of liquid wastes, including interceptor wastes and jetting sludges;
- Importation of solid wastes, including contaminated soils, gulley wastes and road sweepings;
- Importation of containers which may contain residues of hazardous wastes, such as bleach bottles and cans;
- Treatment of liquid wastes in wet waste treatment facility to recover oils/hydrocarbons
- Treatment solid wastes in treatment plant to recover oils/hydrocarbons, silt and fines; and,
- Packaging of containers which may contain residues of hazardous wastes and export for further recovery.

1.2 Site location

1.2.1 The site is located on land at St Michaels Close, Aylesford, Kent, M20 7XE within an established industrial estate. The approximate National Grid Reference for the site is 574503, 159085. The site is, approximately 650m North-East of the centre of the village of Aylesford in Kent. The site is located within an industrial estate and therefore suitable for this type of development.

1.3 Facility overview

1.3.1 The site will provide a specialist facility of the recovery of hazardous and non-hazardous wastes, including liquid wastes from interceptors, jetting sludges and solid wastes including

road sweepings and gulley wastes, contaminated soils and containers which may contain residues of hazardous wastes.

1.4 Scope

1.4.1 This RMP will form part of Elliot Environmental Drainage Limited's Environmental Management System (EMS) and is applicable to all permitted activities undertaken at the site.

1.4.2 The objectives of this plan are to:

a) Determine and assess the waste produced at the site
b) Review actions undertaken to minimise waste.

1.5 Responsibility

1.5.1 The Operator will be responsible for ensuring compliance with the Environmental Permit (EP) and that all measures detailed within this Plan are implemented to minimise the amount of waste produced.

2 Residues generated

2.1 Secondary Raw Materials

2.1.1 There are several secondary raw materials utilised as part of the treatment process. The consumption of secondary raw materials will be monitored.

2.1.2 Chemicals and polymers will be utilised as part of the water treatment process and will be stored in designated storage areas in suitable cabinets as detailed on the Site Layout Plan in Appendix I.

2.1.3 Where relevant, all substances are assessed for COSHH (Control of Substances Hazardous to Health) compliance, the site will retain Material Safety Data Sheets (MSDS) for all materials handled and stored on site.

2.1.4 Whilst the release of any substances is considered negligible, it is important to note that the facility will benefit from containment in line with CIRIA C736 which controls and prevents the release of any substances.

2.1.5 To ensure the appropriate use of raw materials and prevent release of any substances, Elliot Environmental Drainage Limited will follows quality assurance procedures when procuring materials and use specialist suppliers. When selecting raw materials priority will always be given to those with the least environmental impacts compared to any alternatives (where practical)

2.1.6 A full list of the raw materials required to operate the permitted activities are detailed in the following table shown overleaf.

Table 2.1 – Raw Materials

Raw Material	Nature	Approximate Annual Throughput	Storage Details	Potential Hazards/Environmental Impact	Alternatives	Justification for Raw Material Used
Water	Liquid	15,000 litres	Mains supply	N/A – non-hazardous	No suitable alternative	Used for cleaning
Diesel	Liquid	2,000 litres	Bunded storage on site	Combustible liquid, harmful if swallowed, causes skin irritation, suspected of causing cancer, may be fatal if swallowed and enters airways, may cause damage to airways through prolonged or repeated exposure	Petroleum	Diesel is easier to store more safely on site as less flammable than petrol and is also more reliable during colder temperatures
Aluminium sulphate	Liquid	5,000 litres	Bunded storage of site in corrosive resistant container	May be corrosive to metals, causes serious eye damage. Very toxic to aquatic life.	No suitable alternative	Coagulant/flocculant required for water treatment process
Sodium aluminate	Liquid	5,000 litres	Bunded storage of site in corrosive resistant container	Corrosive, causes severe skin burns and eye damage	No suitable alternative	Coagulant/flocculant required for water treatment process
Ferric sulphate	Liquid	5,000 litres	Bunded storage of site in corrosive resistant container	Corrosive, may be corrosive to metals, harmful if swallowed, caused serious eye irritation, may cause respiratory irritation	No suitable alternative	Coagulant/flocculant required for water treatment process
Ferric chloride	Liquid	5,000 litres	Bunded storage of site in corrosive resistant container	Corrosive, may be corrosive to metals, harmful if swallowed, caused serious eye irritation, may cause respiratory irritation	No suitable alternative	Coagulant/flocculant required for water treatment process
Sodium hydroxide	Liquid	5,000 litres	Bunded storage of site in corrosive resistant container	Corrosive. Causes eye and skin burns. May cause severe respiratory tract irritation with possible burns. May cause severe digestive tract irritation with possible burns. Eye contact may result in permanent eye damage.	No suitable alternative	Required for water treatment process – pH balancing
Lime	Liquid	5,000 litres	Bunded storage	Irritating to respiratory system. Irritating to skin. Risk of serious damage to eyes.	No suitable alternative	Required for water treatment process – pH balancing
Magnesium hydroxide	Liquid	5,000 litres	Bunded storage of site in corrosive resistant container	Irritant	No suitable alternative	Required for water treatment process – pH balancing
Calcium hydroxide	Liquid	5,000 litres	Bunded storage of site in corrosive resistant container	Corrosive. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation	No suitable alternative	Required for water treatment process – pH balancing
Activated carbon	Solid/filter medium	4,000 kg	Not stored on site	Flammable solid. Irritant to eyes. May cause respiratory irritation.	No suitable alternative	Required for abatement of VOCs from main process building

2.2 Waste

2.2.1 Waste streams generated at the site are listed in the Table 2.2 overleaf. All wastes streams accepted and generated at the site will be managed in accordance with the relevant appropriate measures and the sites Environmental Management System (EMS).

2.2.2 Strict pre-acceptance checks, and waste acceptance procedures are implemented at the site to significantly reduce the likelihood of non-conforming materials entering the site which need to be managed and disposed of.

2.2.3 All wates will be handled and stored to ensure that there is no release of emissions.

2.2.4 Final disposal of any waste off site will be undertaken by licensed contractors and in accordance with the relevant Duty of Care.

Table 2.2 – List of waste produced on site and associated controls

Description of waste & residues	Produced by	Prevention and control	Re-use	Recycling	Recovery	Disposal
Filters i.e. carbon, bag house etc..	Use of engines & generators.	Filters are replaced periodically. The quality of filters is monitored to minimise use.	Carbon filters can be regenerated and reused for a number of cycles			Once operation life of filer has expired, filter will be disposed at a suitably licenced facility
Spent maintenance oils	General repairs and maintenance of onsite plant & equipment.	Oils are subject to periodic replacement.			Waste oils removed through a licensed contractor and sent for further reprocessing	
Spent chemicals	Produced during flocculation phase of wet waste treatment operation	Chemicals are subject to periodic replacement.	If practicably possible, polymers will be recycled and re-used	If practicably possible, polymers will be recycled and re-used		Containers used for chemical storage will be disposed at a suitably licenced facility
Polymers	Used during operation of wet waste treatment operation	Polymers are subject to periodic replacement.				Material to be disposed at a suitably licenced facility
Filter cake	Produced during operation of wet waste treatment operation during dewatering stage.			Recycled and removed from site following checks and sampling to determine quality is suitable for recycling.		
Packaging from waste and used chemicals, reagents etc..	Utilisation of chemicals and reagents within treatment process			Removed from site to a suitable permitted facility for further treatment.		Non-recyclable material is removed from site for disposal.
Grits & solids from CDE Hydrotip	Material removed during the initial acceptance and tipping into the reception pit.	Material forms part of incoming loads and can't be controlled or prevented.			Material removed from site to a suitable permitted facility for further recovery.	
General waste generated from non-waste treatment activities	Waste is generated from other onsite activities i.e. offices.			Waste removed from site to a suitable permitted facility for further treatment.		Non-recyclable waste is removed from site for disposal.
Water unsuitable for reuse	Produced as a result of the wet waste treatment operation	Where practical, water will be recirculated through treatment plant.	Water will be recirculated through treatment plant.			Whilst highly unlikely, any water unsuitable for reuse will either be discharged to sewer in accordance with the approved Trade Effluent Consent or tankered off site for disposal at suitably licensed facility

3 Management of Residues

3.1 Waste & residue management

3.1.1 This section details the measures undertaken to:

a) Minimise the generation of residues arising from the treatment of waste
b) Optimise the handling of wastes in accordance with the waste hierarchy
c) Enable the treatment, recycling or disposal of residues.

3.1.2 Residues are wastes generated as a result of the permitted activities undertaken at the site. General wastes from offices are not produced as result of permitted activities, however these have been considered for completeness.

3.1.3 There are insignificant quantities of residues that require off-site disposal or further treatment as the intention of the operation is to recycle, recover and reuse as much waste as possible.

3.1.4 Any associated filters, chemicals or hazardous outputs not suitable for reuse or recovery at the site which are generated from the operations will be segregated and stored separately from non-hazardous wastes prior to off site disposal.

3.1.5 Any removal of residues will be to a suitably licensed facility and be accompanied by the relevant Waste Transfer Note (WTN) and/or Hazardous Waste Consignment Note (HWCN). All waste documentation is retained for the appropriate amount of time in accordance with procedures detailed in the Environmental Management System (EMS).

4 Reducing waste produced

4.1 General

4.1.1 The Environmental Management System will detail the types of waste produced along with details of waste segregation, handling, storage, treatment and removal off site. The waste hierarchy will always be considered during the decision-making process.

4.1.2 The purpose of the plant is to treat all waste that is accepted into the site to minimise the generation of wastes and offsite disposal. Where possible, wastes will be recovered and recycled.

4.1.3 The site will implement procedures detailed with the Environmental Management System and other relevant technical assessments to ensure the best disposal route for any waste produced. Any removal of waste will be accompanied by the relevant Waste Transfer Note (WTN) and/or Hazardous Waste Consignment Note (HWCN).

5 Conclusion

5.1 General

5.1.1 Currently, there are no additional raw material alternatives known which could be implemented at the site to improve efficiency. There are no additional techniques which could be undertaken to reduce the waste produced and any associated environmental impacts.

5.1.2 Due to the quantities and types of residues, there is little scope for further reduction of residues generated on site.

Appendix I

Drawings

NOTES

Drawing for indication only. Reproduced with the permission of the controller of H.M.S.O.

REVISION HISTORY

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

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 (Armco, 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)
- 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)

Additional point references

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

Existing connection for foul water discharge from site beneath St Michael's Close (privately owned)

Existing connection point to public foul sewer (Southern Water asset)

Existing connection for surface water discharge from site beneath St Michael's Close (privately owned)

Existing connection point to public surface water sewer (Southern Water asset)

Access onto St Michael's Close

WB

WEIGHBRIDGE

Armco barrier

Parking spaces (x3)

BUILDING 5
2-storey modular office building

2-storey office

Vehicle waiting area

BUILDING 3
Haz & non-haz waste storage building - all waste stored on sealed drip trays

Out-of-hours plant/machine storage area

Existing stormwater attenuation tank (105m³)

Parking spaces (x3)

10m³ haz / non-haz storage area 2

10m³ haz / non-haz storage area 1

Stair access

Hydrobrake flow control device restricting discharge from tank to 2 l/s

Pump pit for recirculation of internal drainage of Building 2

Slot drains preventing liquids escaping from Building 2

BUILDING 4
2-storey modular office building

Stair access

Armco barrier

Ramp

Containment wall/kerb (minimum 0.2-metre height)

Armco barrier

Concrete block wall

Bike shed

Diabled parking space

Additional parking spaces (x6)

Containment wall/kerb

Pump pit (1m³) for recirculation of internal drainage of Building 1

BUILDING 1
Wet waste processing building internally bunded

Containment wall/kerb

Exhaust flue (emission point A1)

Flocculation

Centrifuge

Haz Tank 2

Haz Tank 1

Non-Haz Tank 2

Non-Haz Tank 1

Solids Pile

Final Water Tank 1

Drum Crusher

Solids Bay 1

Solids Bay 2

Solids Bay 3

Carbon

Sand Filter 1

Sand Filter 2

DAF

Flocculator

Clarification/ neutralisation

Pump

Odour abatement system

EXTERNAL CONTAINMENT AREA
External separate containment area, surrounded by impervious bund

Holding Tank 1

Holding Tank 2

Holding Tank 3

Holding Tank 4

Holding Tank 5

Final Water Tank 2

Final Water Tank 3

Haz Reception

Non-Haz Reception

Slot drain preventing liquids escaping from Building 1

Quarantine area (used only in the event of a fire)

Vehicle & plant turning/ manoeuvring area

Vehicle & plant turning/ manoeuvring area

Control panel

Stair access

CDE G-Max

CDE Hydro-tip

Conveyor

Sewer emission point (S1)

Concrete block wall (sealed)

2 x separate pumps to transfer clean water back to G-MAX plant

BUILDING 2
Sludge/grit processing building

Solids removed from G-MAX plant

Manually-operated split valve to alternate G-MAX water output between hazardous and non-hazardous reception tanks

3.6-metre-deep pit in which the Hydro-tip and conveyor are located (with stair access to base level)

VEGETATED AREA

KEEP CLEAR

Scale Bar (1:200)
0 m 2 4 6 8 10 m

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	CLIENT NO	JOB NO
1:200	2499	002

DRAWING NUMBER	REV	STATUS
2499-002-03	J	Issued

DRAWN BY	CHECKED	DATE
RS	RS	06.11.25

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Appendix II

Complaints recording form

Complaints Report Form	
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 Written Management System	
Date changes implemented	
Form completed by	
Signed	
Date completed	

ELLIOT ENVIRONMENTAL DRAINAGE LIMITED
DUST MONITORING FORM

WEEK BEGINNING				
DAY/DATE/TIME OF INSPECTION				
SHEET 1 OF	**COMMENTS BELOW (AS MUCH DETAIL AS POSSIBLE); IF COMMENT IS NO – ADD FURTHER COMMENTS**			
DAILY RECORDING INFORMATION	**DUST MONITORING POINT 1**	**DUST MONITORING POINT 2**	**DUST MONITORING POINT 3**	**OTHER AREA OF SITE - SPECIFY**
WEATHER CONDITIONS				
WEATHER TEMPERATURE				
WIND SPEED				
WIND DIRECTION				
PERIMETER INFRASTRUCTURE SUITABLE				
FOAM INJECTION SYTEM FUNCTIONING				
WATER JET SYSTEM FUNCTIONING				
IS WASTE STORAGE BELOW HEIGHT OF BAY				
DUSTY MATERIAL STORAGE VISIBLE FROM LOCATION				
ANY NOTICEABLE DUST / PARTICULATES ON THE GROUND NEAR THE LOCATION				
ANY DUST APPARENT OFF SITE				
EMISSIONS FROM PLANT/EQUIPMENT VISIBLE				
SMOKE FROM PLANT APPEAR TO BE SUITABLE				
HAS SITE MANAGEMENT BEEN INFORED OF THE INSPECTION				
DOES ACTION NEED TO BE TAKEN				
INSPECTION CARRIED OUT BY				
OTHER				
NOTES/ACTION (CONTINUE ON A SEPARATE SHEET IF NECESSARY):				
CHECKED BY		**SIGNATURE**		
POSITION		**DATE**		