SCHEDULE 5 RESPONSE - EPR/ZP3623LZ/A001

Unit 1, St Michaels Close, Aylesford, Kent, ME20 7BU

Elliott Environmental Drainage Ltd

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Oaktree Environmental Ltd, Lime House, 2 Road Two, Winsford, Cheshire, CW7 3QZ
Tel: 01606 558833 | E-Mail: sales@oaktree-environmental.co.uk | Web: www.oaktree-environmental.co.uk

Registered in the UK | Company Number: 4850754

Oaktree Environmental

Waste, Planning & Environmental Consultants

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Summary

This document provides responses to the Notice of Request for Further Information (Schedule 5 Notice) issued by the Environment Agency (EA), dated 14/08/2025, requesting additional information for the permit application submitted for the site at Unit 1, St Michaels Close, Aylesford, Kent, ME20 7XE (application ref: EPR/ZP3623LZ/A001).

1 Response to Question 1

1.1 Reference should be made to Appendix III for updated Best Available Techniques (BAT) Assessment (document ref: 2499-002-M).

2 Response to Question 2

2.1 Reference should be made to Appendix VII for process flow diagram which demonstrates the step by step operations, covering the following:

- All tanks and assets that are used for storage and/or treatment (with specification of max storage time and/or type of treatment undertaken);
- All waste and raw material input points;
- All waste output points (with specification of whether they are disposal and/or recovery outputs);
- All emission points for waste gases and wastewater/effluent (both air and water); and,
- Missing processes alluded to in other supporting documents.

2.2 Reference should made to document ref: 2499-002-L within Appendix VIII for an updated Non-Technical Summary, which includes the process flow diagram covering the above aspects.

3 Response to Question 3

3.1 Reference should be made to Drawing No. 2499-002-03 within Appendix I for updated Site Layout plan which shows the location of point of final discharge to sewer (Emission Point S1) and Sample Chamber location. It should be noted that the final connection to the wider foul sewer network is outside the site boundary, beneath St Michael's Close, as shown on the Site Layout Plan.

4 Response to Question 4

4.1 Reference should be made to Drawing No. 2499-002-02 within Appendix I for updated Permit Boundary Plan which shows the location of point of final discharge to sewer (Emission Point S1), Sample Chamber location and emission point to air (A1). It should be noted that the final connection to the wider foul sewer network is outside the site boundary, beneath St Michael's Close, as shown on the Site Layout Plan.

5 Response to Question 5

5.1 The Grid Reference for Emission Point A1 is TQ7453159104 (574531, 159104).

5.2 The Grid Reference for Emission Point S1 and Sampling Chamber is TQ7452059083 (574520, 159083).

6 Response to Question 6

6.1 Reference should be made to the updated BAT Assessment (document ref: 2499-002-M) within Appendix III. This contains reference to pertinent information relating to the waste water leaving the site via the emissions to sewer, through responses to BAT Conclusions 3, 6, 7 and 20.

7 Response to Question 7

7.1 Reference should be made to document ref: 2499-002-RMP within Appendix V for a Residues Management Plan prepared for the proposed operation.

8 Response to Question 8

8.1 Reference should be made to the updated BAT Assessment (document ref: 2499-002-M) within Appendix III for detailed Waste Pre-Acceptance procedures, demonstrating compliance with BAT 2.

9 Response to Question 9

9.1 Reference should be made to the updated BAT Assessment (document ref: 2499-002-M) within Appendix III for detailed Waste-Acceptance procedures, covering the following aspects:

- An explanation of specific parameters that will be checked for waste received;
- An explanation of criteria for non-conformance and/or rejection;
- Rejection procedure;
- Procedure for periodic auditing of waste received; and,
- Procedure for logging of audits results and wastes not audited.

This demonstrates compliance with BAT 2.

10 Response to Question 10

10.1 Reference should be made to the updated BAT Assessment (document ref: 2499-002-M) within Appendix III for an inventory of wastewater and gas streams, in line with BAT 3.

11 Response to Question 11

11.1 Reference should be made to the updated BAT Assessment (document ref: 2499-002-M) within Appendix III for details of proposed monitoring of water emissions, in line with BAT Conclusions 6 and 7.

11.2 A H1 Risk Assessment of the proposed sewer discharge has been completed as part of the application and updated as part of this response, based on parameters controlled by the Trade Effluent Consent, BAT based discharge limits for indirect discharge to surface water and maximum concentrations that the operator has confirmed will be achieved by abatement plant on-site. This means that the fate and impact of substances discharged to sewer has been assessed and will be controlled by relevant consents.

12 Response to Question 12

12.1 Reference should be made to Appendix IV for Materials Safety Data Sheets (MSDS) for raw materials to be used on-site.

13 Response to Question 13

13.1 The raw materials to be used in the treatment process will be stored within Building 1. The materials used for storage containers will be appropriate for the hazards presented by the materials.

13.2 The following table outlines the raw materials which may be used on-site, materials used for containers, location of storage on-site and maximum storage volumes.

Table 13.1 – Raw Materials, Container Materials, Storage Locations and Volumes

Raw Material	Material Used for Containers	Storage Location	Max Storage Volumes
Diesel	High Density Polyethylene	Bunded storage within Building 1	500 litres
Aluminium sulphate	High Density Polyethylene	Bunded storage within Building 1	2,000 litres
Sodium aluminate	High Density Polyethylene	Bunded storage within Building 1	2,000 litres
Ferric sulphate	High Density Polyethylene	Bunded storage within Building 1	2,000 litres
Ferric chloride	High Density Polyethylene	Bunded storage within Building 1	2,000 litres
Sodium hydroxide	High Density Polyethylene	Bunded storage within Building 1	2,000 litres
Lime	High Density Polyethylene	Bunded storage within Building 1	2,000 litres
Magnesium hydroxide	High Density Polyethylene	Bunded storage within Building 1	2,000 litres
Calcium hydroxide	High Density Polyethylene	Bunded storage within Building 1	2,000 litres
Iron(II) sulphate heptahydrate	High Density Polyethylene	Bunded storage within Building 1	2,000 litres
Hydrated lime	High Density Polyethylene	Bunded storage within Building 1	2,000 litres

Raw Material	Material Used for Containers	Storage Location	Max Storage Volumes
CSP cationic polymer	High Density Polyethylene	Building 1	2,000 litres
Anionic polymer	High Density Polyethylene	Building 1	2.000 litres
Activated carbon	Steel containers	Stored within Building 1	10,000kg

14 Response to Question 14

14.1 All metal fixing mechanisms will be hot dipped galvanised to protect against corrosion. All external pipe work will be lagged and made from High Density Polyethylene.

15 Response to Question 15

15.1 The storage tanks external to Building 1 will be equipped with carbon filters within pressure safety vents, meaning that diffuse Volatile Organic compound (VOC) emissions and associated odour will be controlled. The filters will be changed at regular intervals, and in line with manufacturer recommendation.

16 Response to Question 16

16.1 The design of Building 2 has now been changed, such that Building 2 will now be fully enclosed and maintained under negative pressure, with ventilation directed to the Odour Control Unit (OCU). The roller shutter door on Building 2 will be opened to allow deliveries, but the extraction system will maintain negative pressure at all times.

16.2 Building 3 will remain open sided, but 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.

16.3 The BAT Assessment within Appendix III and Site Layout Plan within Appendix I have both been updated accordingly in line with the above.

17 Response to Question 17

17.1 Please see responses to Question 16 above which also address Question 17.

18 Response to Question 18

18.1 Please refer to Drawing No. 2499-002-06 within Appendix I which indicates areas which are impermeable, hardstanding and unmade ground within the site.

19 Response to Question 19

19.1 It is confirmed that the drainage system will be fully sealed to prevent uncontrolled emissions from being discharged. Reference should be made the Site Layout Plan within Appendix I and CIRIA 736 Assessment within Appendix II for more details of containment and measures for prevention of uncontrolled emissions.

20 Response to Question 20

20.1 Reference should be made to the CIRIA 736 Assessment within Appendix II which provides details of proposed containment, following the principles of CIRIA 736.

21 Response to Question 21

21.1 Reference should be made to the updated BAT Assessment (document ref: 2499-002-M) within Appendix III which contains a description of how the site will meet BAT 20.

22 Response to Question 22

22.1 Reference should be made to the Appropriate Measures Assessment (document ref: 2499-002-APM) within Appendix VI. This summarises how the site will comply with relevant Appropriate Measures within the following guidance:

- Chemical waste: appropriate measures for permitted facilities, EA, November 2020; and,
- Non-hazardous and inert waste: appropriate measures for permitted facilities, EA, August 2023.

23 Response to Question 23

23.1 A further review of the proposed 99 European Waste Catalogue (EWC) codes has been undertaken, the operator has provided descriptions for the potential wastes they have proposed under the 99 EWC Codes. Upon review of the descriptions, Oaktree Environmental Limited consider that these could be accepted under other 'non 99' waste codes in accordance with the WM3 guidance, depending on the source and nature of the waste.

23.2 Please see below for waste descriptions and alternative codes we consider to be applicable. We seek response from the EA as to whether they are in agreement on the codes identified in relation to the waste descriptions. Please note, the 99 codes have been retained in the table, subject to further discussion with the EA.

Table 23.1 – Anticipated Waste Types and Suggested Alternative EWC Codes

'99' EWC Codes	Operator Description of Wastes	Oaktree Environmental Ltd Assessment of 'Non' 99 Waste Codes that Could Apply
19 05 99	Stabilised organic fines from MBT (mechanical-biological treatment)	19 05 01 – for material that has been separated during the mechanical biological treatment process but has not yet been fully composted
	Residues left after municipal solid waste is biologically treated	19 08 05 - sludges from treatment of urban wastewater
	Often partially stabilised biodegradable matter unsuitable for composting	19 05 01 – for material that has been separated during the mechanical biological treatment process but has not yet been fully composted
	Screening rejects from composting plants	19 05 01 – non-composted fraction of municipal and similar wastes 19 08 01 19 12 12 – if the material has already been subject to mechanical treatment before being rejected

'99' EWC Codes	Operator Description of Wastes	Oaktree Environmental Ltd Assessment of 'Non' 99 Waste Codes that Could Apply
	Stones, plastics, glass, or inert fractions removed after compost maturation and screening.	As above, 19 12 12 applicable if the material is outputs from compost maturation or screening.
	Oversize or non-compostable fractions contaminated with residual organics	As above, 19 12 12 applicable if as a result of mechanical treatment. 19 05 01 – non-composted fraction of municipal and similar wastes If it doesn't fall under any of the above, then it is considered that it would fall under the 19 05 99 code.
	Biologically treated street sweepings or gully emptying's	20 03 03 - Street cleaning residues (non-hazardous)
	Stabilised sewage grit or organic sludges (from co-composting or aerobic stabilisation, if not classifiable under sewage codes)	19 05 01 – non-composted fraction of municipal and similar wastes 19 08 02 - washed sewage grit from desanding. 19 08 05 - sludges from treatment of urban wastewater.
	Off-spec compost batches that don't meet PAS 100 or agricultural standards but are treated and non-hazardous.	19 05 01
	Mixed residues from aerobic digestion of food or green waste e.g., fibrous rejects, woody fractions, non-compostable packaging residues.	19 05 01 for mixed residues from the aerobic digestion of food or green waste, such as fibrous rejects and woody fractions 15 01 05 for non-compostable/biodegradable packaging
19 08 99	Mixed residues from industrial effluent treatment plants	19 08 14 – sludges from other treatment of industrial wastewater
	Non-hazardous by-products from on-site treatment of process water, where specific composition varies	By-products from water treatment could fall under 19 08 05 i.e. treated sludges from urban waste water or 19 08 02 for washed sewage grit.
	Off-spec sludges not covered by 19 08 05 (sludges from treatment of urban wastewater) or 19 08 12 (sludges from industrial effluent treatment)	19 08 14 – sludges from other treatment of industrial wastewater If sludges are from mechanical treatment 19 12 12 is applicable. If it doesn't fall under any of the above, then it is considered that it would fall under the 19 08 99 code.

'99' EWC Codes	Operator Description of Wastes	Oaktree Environmental Ltd Assessment of 'Non' 99 Waste Codes that Could Apply
	Filter media and spent absorbents	19 09 02 or 19 09 03 applicable if from water treatment plants
	Spent sand, activated carbon, or ion-exchange resins used in wastewater polishing, once exhausted.	19 09 04 if from water treatment. 19 09 05 for spent-ion exchange resins. 19 13 04 for spent sand i.e. sludges from soil remediation, which can include spent sand from remediation processes.
	Biological treatment residues	19 08 11* - for hazardous sludges from biological treatment of industrial wastewater 19 08 05 for non-hazardous biological sludge from wastewater
	Surplus biomass or scum that is not classifiable under 19 08 05/12	Surplus material from mechanical treatment - 19 12 12.
	Wastewater treatment by-products from small private plants e.g., septic tank plant residues, package treatment plant outputs, or leachate treatment sludges that don't fit under another sub-code	Wastewater treatment by-products may vary but 19 08 05 applicable for general sludges from urban wastewater treatment, 19 08 02 applicable for grit and 19 08 01 for screens and filters.
	Combined residual wastes	19 08 05 for sludges from treatment of urban wastewater.
	Miscellaneous fines, screenings, or process rejects that arise from maintenance/clean-outs of treatment facilities	19 08 01 for wastewater treatment facility clean outs.
19 09 99	Spent filter media	19 09 02 or 19 09 03 applicable if from water treatment plants
	Sand, gravel, anthracite, or granular filter beds removed during filter replacement	Sand & screening- 19 08 01 or 19 09 01 Granular filter bed - 17 05 06
	Mixed mineral fines	19 12 12 for mineral fines from wastewater treatment. If not from wastewater treatment and from the treatment of other non-hazardous waste, 19 12 09 applicable.
	Exhausted ion-exchange resins	19 09 05 for spent-ion exchange resins

'99' EWC Codes	Operator Description of Wastes	Oaktree Environmental Ltd Assessment of 'Non' 99 Waste Codes that Could Apply
	Softening or demineralisation processes, when they no longer regenerate effectively	19 09 05 applicable if waste comprises saturated or spent ion exchange resins or 19 08 05 if it comprises sludges from on-site effluent treatment. 19 09 05 applicable if waste comprises saturated or spent ion exchange resins or the 19 09 chapter if it includes wastes from preparation of water i.e. 19 09 02, may all fall under the 16 10 01* or 16 10 03 if it comprises aqueous liquid.
	Spent activated carbon	19 09 04
	Carbon filters used to remove taste/odour compounds, pesticides, organics, or chlorine by-products	19 09 04
	Reverse osmosis (RO) and membrane residues	19 13 08
	Fouled or damaged membranes and associated residues from pre-treatment backwash	19 08 08* applicable.
	Chemical sludge residues not otherwise classified	19 08 05
	Low-volume precipitates or slurries from chemical dosing (e.g. residual lime, iron or aluminium compounds)	19 02 06 for chemical sludge residues. If chemical dosing results in a treated sludge, 19 08 05 is applicable. Residuals could also fall under 19 12 12.
	Miscellaneous maintenance residues	Residuals could fall under 19 12 12.
	Screenings or inert material removed during clean-outs that don't fit under a more specific code	19 08 01 if screenings come from wastewater treatment plants. Inert removed during mechanical treatment - 19 12 12 applicable.

24 Response to Question 24

24.1 Please refer to the Question 23 response, we consider that the 99 codes previously proposed could be accepted under other waste codes in accordance with WM3, but await response from the EA on this matter.

25 Response to Question 25

25.1 Reference should be made to document ref: 2499-002-O within Appendix IX for an outline of waste codes and descriptions split by activity type and anticipated annual throughput.

26 Response to Question 26

26.1 Reference should be made to document ref: 2499-002-O within Appendix IX for confirmation of annual throughput expected for each activity which has been applied for.

27 Response to Question 27

27.1 The following table provides a list of hazardous waste codes that may contain dangerous and/or hazardous substances, the expected dangerous/hazardous substances and proposed treatment measures.

Table 27.1 – Hazardous Waste Codes Containing Hazardous/Dangerous Substances

Waste Code	Potential Dangerous Substances	Proposed Treatment Method(s) on-Site
01 05 06*	Oils, heavy metals, barite, bentonite	Oil water separation, filtration, chemical neutralization
05 01 09*	Oils, heavy metals, sulphur compounds	Oil water separation, filtration, chemical neutralization
07 06 11*	Solvents, acids, bases, heavy metals	chemical neutralization, stablilisation
15 01 11*	Asbestos	No treatment proposed. Waste stream to be sent on for further recovery or disposal
16 01 14*	Ethylene	No treatment proposed. Waste stream to be sent on for further recovery or disposal
16 10 01*	Heavy metals, brominated flame retardants	Dismantling, metal recovery, chemical neutralisation

Waste Code	Potential Dangerous Substances	Proposed Treatment Method(s) on-Site
16 10 03*	Heavy metals	Chemical neutralisation
17 05 05*	Hydrocarbons, metals, pesticides	Soil washing, stabilisation
17 05 07*	Hydrocarbons, metals	Sediment treatment, stablilisation
17 08 01*	Sulphates, heavy metals	Stablilisation
19 07 02*	Heavy metals, acids	Dewatering, chemical neutrilisation
19 08 11*	Organic toxins, pathogens	Dewatering, stablisation
19 13 03*	Heavy metals, acids	Neutralisation, stablilisation, filtration
19 13 05*	Heavy metals, acids	Neutralisation, stablilisation, filtration
19 13 07*	Heavy metals, acids	Neutralisation, stablilisation, filtration

28 Response to Question 28

28.1 For the hazardous waste codes featuring the description 'oils, fuels, petrols and interceptor', such wastes will be subject to initial treatment within an initial clarification/settlement unit, to remove suspended solids via gravity, also involving flocculation processes. The resulting liquid will then be directed to DAF unit, which will be used to separate oils and hydrocarbons, these collected within a separate tank. It will be ensured that non-compatible wastes will not be stored/treated together as the system will be flushed through between treatment campaigns and the storage vessel for oils and hydrocarbons can be changed, as it is not a fixed vessel.

29 Response to Question 29

29.1 It is confirmed that repackaging of wastes containing POPs, will not be mixed with non-POPs containing waste to knowingly dilute those wastes for onward transfer.

30 Response to Question 30

30.1 The residence time of wastes within external tanks will typically be 2-3 days. However, should a waste stream be delivered in smaller quantities, across smaller Heavy Goods Vehicle (HGV) units, the waste will be bulked and the residence time may reach 5 days. Smaller loads may be used for logistically hard cleaning tasks for a project.

30.2 Biological activity will be inhibited by temperature and storage duration management. All external tanks will be subject to temperature and pH monitoring. Chemical dosing will be used as required, tanks will be designed to be closed with vents. Biodegradable wastes will be segregated.

31 Response to Question 31

31.1 Wastes containing gypsum will be stored within enclosed vessels within Building 3, protected from the elements, self contained and segregated from other wastes.

32 Response to Question 32

32.1 The site surface water drainage system will be equipped with a holding chamber with penstock valve, such that during routine operation, clean surface water drainage will discharge via interceptor to surface water sewer. In the event of emergency, spillage or use of the quarantine area, the penstock valve will be remotely deployable, preventing discharge to the surface water sewer system during such instances.

32.2 Reference should be made to Appendix I for Site Layout Plan which illustrates the drainage setup and the CIRIA 736 Assessment within Appendix II for containment details.

33 Response to Question 33

33.1 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 Hydro Tip within Building 2. This will act to screen any larger material such as stones, which will be conveyed to a stockpile.

33.2 The Hydro Tip uses a vibrating screen to shake material onto the conveyor. This is a solids material, not liquid or sludge. The Hydro Tip caters for oversized materials. Smaller elements such as sands and organics fall through the screen into the sump of the Hydro Tip and get pumped into the CDE G-Max to screen smaller solids, separating sand and organics. Water from the EvoWash is then gravity fed into tank as required e.g Non Hazardous/Hazardous Waste reception tanks within the External Containment Area, as shown by the Site Layout Plan within Appendix I, and from there are transferred into the treatment process within Building 1.

34 Response to Question 34

34.1 Once a load designated for treatment has been checked in on site, the tanker will manoeuvre and reverse up to the roller shutter door on Building 2, under supervision and instruction of site staff. Once the roller shutter door is opened, the tanker will reverse towards the pit, in readiness for the contents of then load to be unloaded to the pit. All manoeuvring on-site will be under the supervision of site staff.

34.2 The wash cycle to clear the pit out will take approximately 10 minutes to complete a full cycle, the hydro tip is equipment with a wash cycle including a hose at the top of plant which will use reclaimed treated water if needed from treated water tanks. This wash cycle will ensure that the CDE Hydro Tip has been washed top to bottom including sump using installed spray bars. This will wash through to the EvoWash and continue to wash this plant.

34.3 There is no alternative storage on site for incoming loads prior to the introduction to the Hydro Max pit. All loads are pre-booked and therefore the operator will be able to schedule loads efficiently. In the event that the reception pit is not ready to receive an incoming load, the tanker driver will be instructed to wait until such time the load can be unloaded.

34.4 There is no alternative storage proposed, prior to introduction of wastes to the pit. Loads will offloaded direct from HGVs to the pit.

34.5 It is confirmed that the Hydro Max pit is the only reception point for water based liquid wastes which will be subject to treatment. The only other reception point for wastes on-site is within Building 3, which will receive waste to be repackaged and sent on for further recovery/disposal and not for treatment. Solid wastes arising from the processing plant within Building 2 will be transferred to bays within Building 1 for temporary storage.

34.6 Drivers will reverse and be seen back by banksman, prior to offloading wastes to the tip within Building 2. The drivers will be required to vacate the cab of the HGV during offloading of waste to the pit and will only be permitted to re-enter the vehicle when tipping is completed, and all valves are closed.

34.7 The pit is located within a sealed area and wastes will not be released until the tanker is in position next to the pit, within Building 2. Should waste be spilled outside the area of the pit, this will drain to a large Aco drain in front of the hydro tip (Highest risk area). This will capture liquid, which will run into a pump chamber (alarmed) which will also pump liquids back into hydro tip. A spill procedure will be implemented and followed by the operator.

34.8 Wash out will be completed by staff trained by Elliot Environmental Drainage Limited and will be confirmed once driver/third party has accepted tank is clean to the appropriate standard. A wash out certificate will be issued to the driver.

35 Response to Question 35

35.1 All wastes accepted on-site for treatment will be unloaded to Building 2, with liquid wastes arising from the initial screening processes then transferred to the external storage tanks and then into Building 1 for treatment. No wastes will be loaded directly to the treatment operations within Building 1 from HGVs.

36 Response to Question 36

36.1 Reference should be made to the process flow diagram (Drawing No. 2499-002-06 within Appendix VII) and Site Layout Plan (Drawing No. 2499-002-03 within Appendix I). As these illustrate, external storage tanks are separated between non-hazardous and hazardous wastes. The vessels and pipework on-site will be subject to a flush through with water between different treatment campaigns, ensuring that hazardous and non-hazardous wastes and incompatible wastes are never mixed within the storage and treatment plant.

37 Response to Question 37

37.1 The vessels and pipework will be flushed through between treatment campaigns ensuring that hazardous and non-hazardous wastes and non-compatible wastes are not mixed.

38 Response to Question 38

38.1 The following provides details of the source of input data used for the H1 Sewer Risk Assessment which was submitted with the original application:

- **National Grid Reference for Emission Point S1** – obtained from Site Layout Plan. This has since been revised, as per the layout plan in Appendix I and amended in the H1 tool accordingly;
- **Final Discharge Point of Effluent** – Discharge from Aylesford Wastewater Treatment Works (WwTW) to tidal section of the River Medway;
- **Mean and Max Effluent Flow Rates for Emission Point S1** – information provided by applicant, based on discharge rates proposed in Trade Effluent Consent application, submitted to Southern Water. However, it should be noted that Southern Water has since restricted the maximum quantity of effluent to be discharged to 300m^3 within any 24-hour period. The H1 assessment/tool has been adjusted accordingly.

- **Q95 Flowrate of Receiving River –** The Q95 flowrate for the receiving water (River Medway) was obtained from the National River Flow Archive website ($1.58m^3.s^{-1}$). This was obtained for the station at Teston/East Farleigh. Given that this data was obtained from a non-tidal section further upstream than the discharge, it is likely that the Q95 flowrate has been underestimated compared to the point of discharge from the Aylesford WwTW within the tidal section of the River Medway, meaning that the assessment is conservative, since a higher Q95 flowrate would result in a lower process contribution to resulting compound concentrations within the receiving water;
- **Effluent Composition** – Effluent composition and compounds assessed within the H1 Sewer Risk Assessment were initially based upon BAT based limits within Tables 6.1 and 6.2 of the BAT Conclusions Document for Waste Treatment, proposed limits included within the Trade Effluent Consent (TEC) application submitted to Southern Water (for chloride and sulphate) and in the case of mercury and cadmium, lower limits that the applicant confirmed could be met by the plant. The TEC has subsequently been issued by Southern Water and a copy of this is enclosed with this response within Appendix XII. The limits applied by Southern Water differ for some compounds assessed. However, the applicant has confirmed that the compound concentrations assumed in the assessment will be met by the plant and will also be bound by the limits within the TEC. In the case where TEC limits are lower than used in the assessment, this means that the H1 assessment is suitably precautionary. The assessment has now been updated to give consideration to the additional compounds identified by the operator and a revised H1 Sewer Risk Assessment is therefore submitted with this submission;
- **Sewage Reduction Factors** – Sewage Treatment Reduction Factors were applied using reduction factors obtained from the government website; and,
- **Operating Mode** – The applicant advised that the discharge would occur for a maximum of 10 hours each day. Therefore the operating mode was set at 41.7% in the H1 screening tool.

39 Response to Question 39

39.1 See response above to Question 39 in relation to contextual information for the H1 assessment.

40 Response to Question 40

40.1 Reference should be made to the response to Question 10 for an outline of potential compounds that the operator anticipates may be present within the waste streams to be treated, and in turn, the potential for compounds within the discharge to sewer.

40.2 The Sewer Risk Assessment submitted with the permit application was initially precautionary, based on maximum emission levels proposed within the Trade Effluent Consent application and BAT based limit values, but in the case where compounds did not screen out using Tests 1 and/or 2 of the H1 screening tool, design criteria was then utilised, to provide the maximum level of emission which will ensure resulting impacts are acceptable, and which the operator and their advisor(s) confirmed could be met by the system.

40.3 Given that the operator will be testing at multiple points within the process, including prior to the final point of discharge, no treated water will be discharged unless the operator can demonstrate that emission levels included within the H1 assessment are being met and also that TEC limits are being met, in turn ensuring that ultimate impacts on the receiving water course will be acceptable.

40.4 The ultimate aim is to clean the water to such an extent that it can be re-used within the process, with discharge (disposal) to sewer being a last resort, but is a necessary flexibility for the operation.

40.5 Following further information provided by the operator, the H1 Sewer Risk Assessment has been further updated to include the following additional compounds, for which there are Water Environmental Quality Standards:

- Benzene;
- Toluene;
- Naphthalene;
- Benzo-a-pyrene;
- Dichloromethane;
- Trichloroethylene; and
- Benzo-a-pyrene.

40.6 The following are the relevant points and justification in relation to the additional compounds that have been assessed:

- Benzene is representative of volatile organic compounds which may pose a risk to Transitional and Coastal (TRAC) waters. It has been assumed that benzene would be discharged at the BAT ELV for Hydrocarbon Oil Index (500µg.L^{-1});
- Benzo(a)pyrene is representative of semi-volatile organic compounds which may pose a risk to TRAC waters. The operator has confirmed that a maximum emission concentration of 0.68µg.L^{-1} will be achievable in the discharge;
- Naphthalene is representative of a range of petroleum hydrocarbon compounds and in the context of this assessment, has been used as a marker for PAHs. The operator has confirmed that a maximum emission concentration of 37µg.L^{-1} will be achievable in the discharge; and,
- Trichloroethylene is a common solvent and representative generally of chlorinated organic compounds. It has been assumed that trichloroethylene would be discharged at the BAT ELV for Adsorbable Organically Bound Hydrocarbons (AOX), which is 200µg.L^{-1}.

40.7 A copy of the updated H1 Tool for sewer discharge is submitted alongside this Schedule 5 Response. All compounds assessed screen out from the need for further assessment.

41 Response to Question 41

41.1 Reference should be made to Appendix X for an updated Odour Management Plan (OMP).

41.2 Section 1.1 of the OMP has been updated to include the full site name and permit number.

42 Response to Question 42

42.1 Section 1.1 of the OMP has been updated to include confirmation of the person responsible for the OMP and staff training.

43 Response to Question 43

43.1 Section 1.1 of the updated OMP includes details of where the OMP will be kept on site.

44 Response to Question 44

44.1 Section 1.2 of the updated OMP includes reference to relevant BAT and appropriate measures consulted during completion of the OMP.

45 Response to Question 45

45.1 Response to Question 45a

45.1.1 The OMP has been amended to confirm that Building 2 is the reception point for waste to be treated.

45.2 Response to Question 45b

45.2.1 Section 2 of the updated OMP includes details of containers and vessels used to deliver wastes to the repackaging area.

45.3 Response to Question 45c

45.3.1 Section 1.4 of the OMP has been updated to include details of procedures outlined to drivers upon arrival on-site.

45.4 Response to Question 45d

45.4.1 Section 4 of the OMP includes waste rejection criteria and policy for overly odourous wastes arriving on site.

45.5 Response to Question 45e

45.5.1 Section 1.6 of the OMP has been revised to remove reference to putrescible wastes not being received.

45.6 Response to Question 45f

45.6.1 Section 2 of the OMP includes a statement to clarify on non odourous vs odorous wastes to be received for repackaging.

46 Response to Question 46

46.1 Section 4 of the updated OMP includes detailed information on the proposed Odour Control Unit, including :

- Details of optimum flow rate through the system to allow for effective treatment;
- Absorption material type and frequency/triggers for replacement;
- Expected odourous compounds within gas stream and anticipated concentrations;
- Physical properties of air stream at point of control; and,
- Triggers for action if monitored parameters are out of range.

47 Response to Question 47

47.1 Section 4 of the updated OMP includes detailed information on the proposed Odour Control Unit, including details on system capacity and how it is designed to treat the odourous air streams.

47.2 The process flow diagram within Appendix VII illustrates the parts of the process which are served by the OCU.

47.3 Section 4 of the updated OMP outlines how odour is contained/controlled by processes/activities not subject to control via the OCU, which includes:

- External tanks storing liquid wastes for treatment – carbon filters to be integrated into safety vents to control diffuse odour emissions;
- Building 3 – low quantity of waste to be stored for repacking. Any wastes with potential for odours within this part of the site will be in sealed containers/vessels; and,
- Vehicles delivering liquid wastes for treatment – wastes delivered to site within sealed tankers.

48 Response to Question 48

48.1 A revised waste and raw materials inventory has been included within Section 1.6 of the OMP. This includes:

- 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.

49 Response to Question 49

49.1 The proposals have been changed, such that Building 2 will now be enclosed, operated under negative pressure with air directed to the OCU.

49.2 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. Therefore, such measures provide control of odours.

49.3 The external storage tanks adjacent to Building 1 will have carbon filters integrated into safety vents, providing control of diffuse odour emissions.

49.4 The OMP has been updated accordingly in line with the above.

50 Response to Question 50

50.1 Reference should be made to Section 5 of the OMP, which has been updated to include a procedure for Dynamic Olfactory monitoring of stack emission points for emission point A1.

51 Response to Question 51

51.1 Section 4 of the updated OMP includes detailed information on the proposed Odour Control Unit, including :

- Details of optimum flow rate through the system to allow for effective treatment;
- Absorption material type and frequency/triggers for replacement;
- Expected odourous compounds within gas stream and anticipated concentrations;
- Physical properties of air stream at point of control; and,
- Triggers for action if monitored parameters are out of range.

51.2 Section 5 of the updated OMP confirms the staff member(s) responsible for investigating and responding to odour issues and the timescales for responses.

52 Response to Question 52

52.1 Reference should be made to the OMP, which includes an updated sniff testing procedure within Section 5, according with the principles set out within the H4 Odour Guidance. This will include a minimum frequency of daily tests at the boundary, with additional sniff testing in the event of complaint or excessive odours detected. This accords with the EA H4 guidance.

52.2 Indicative monitoring locations for the boundary sniff testing are shown on the Site Layout Plan within Appendix I.

53 Response to Question 53

53.1 Reference should be made to the OMP, which now includes a Source Pathway Receptor Risk Assessment within Section 3, evaluating worst case odour risk, before and after mitigation. A detailed description of control measures is included within Section 4 of the OMP.

54 Response to Question 54

54.1 Reference should be made to Section 4 of the OMP, which includes a housekeeping schedule, frequency of checks and confirmation of who is responsible for ensuring the implementation of checks.

55 Response to Question 55

55.1 Reference should be made to Section 4 of the OMP, which includes a housekeeping schedule, outlining frequency of checks.

56 Response to Question 56

56.1 Reference should be made to Section 4 of the OMP, which includes a housekeeping schedule, providing confirmation on who is responsible for ensuring the implementation of checks.

57 Response to Question 57

57.1 The repeated section has been removed from the OMP.

58 Response to Question 58

58.1 Please see Appendix XI for an updated Fire Prevention Plan (FPP).

58.2 See Section 4.5 of the FPP which has been updated in response to this question.

59 Response to Question 59

59.1 See Section 6.2 of the FPP which has been updated in response to this question.

60 Response to Question 60

60.1 See revised Layout Plan in Appendix I of the FPP which has been updated in response to this question.

61 Response to Question 61

61.1 See Section 2.7 of the FPP which has been updated in response to this question. The site perimeter comprises approx. 1.8m high palisade fencing and steel access gates. The southern and eastern boundaries comprise 1.2m high concrete walls with a heavily vegetated area beyond.

61.2 Closed Circuit Television (CCTV) locations and directional view is detailed on the attached layout plan. We request that this information remain confidential for security reasons.

62 Response to Question 62

62.1 See Section 2.6.2 (B) of the FPP which has been updated in response to this question.

63 Response to Question 63

63.1 See Section 2.4 of the FPP which has been updated in response to this question.

64 Response to Question 64

64.1 See Section 3 of the FPP which has been updated in response to this question.

65 Response to Question 65

65.1 See Section 4.6 of the FPP which has been updated in response to this question.

66 Response to Question 66

66.1 See Table 4.1 and Section 4.4.1 of the FPP which has been updated in response to this question.

66.2 The storage areas relating to the Repackaging activity have been split into two storage areas with a fire wall between them. Whilst the areas listed in table 4.1 are $10m^3$ (10 tonnes) each, it is worth noting that the total combined volume in the building will only every equate to 10 tonnes in total. It is worth noting that whilst the areas in Table 4.1 are labelled as hazardous or non-hazardous storage areas, each area will only ever consist of non-hazardous or hazardous waste only and the areas are therefore interchangeable. It is not possible to split the areas further as the area could comprise different waste streams. It is important to note that all material stored in each area will

be kept in containers, IBCs, drums or bins to ensure that each load is suitably segregated to avoid the mixing of materials.

66.3 The quantity of waste stored will be very low, it is worth noting that the total combined volume in the building will only every equate to 10 tonnes in total which is a significant reduction to the previous 50m^3.

66.4 Water supply and containment will be calculated accordingly on this basis.

67 Response to Question 67

67.1 See Table in Section 4.4 of the FPP which has been updated in response to this question. Any containers stored at the site will be accessible from the top to ensure that any potential fire can be tackled. This also enables to quick transportation of materials not on fire to the quarantine area to prevent the spread of a fire.

67.2 As material is stored in containers, it can be easily dragged to the quarantine area during a fire event to ensure it is accessible and also reduce the overall spread of the fire, it will also reduce the total volume of the storage area.

68 Response to Question 68

68.1 See Section 4.4 of the FPP which has been updated in response to this question.

68.2 As previously discussed in response to Question 66, the storage areas relating to the Repackaging activity have been split into two storage areas with a fire wall between them. Whilst the areas listed in table 4.1 are 10m^3 (10 tonnes) each, it is worth noting that the total combined volume in the building will only every equate to 10 tonnes in total. It is worth noting that whilst the areas in Table 4.1 are labelled as hazardous or non-hazardous storage areas, each area will only ever consist of non-hazardous or hazardous waste only and the areas are therefore interchangeable. Water supply and containment will be calculated accordingly on this basis.

68.3 As previously mentioned, materials are stored in containers, IBCs, drums, skips etc. and can therefore be easily dragged away from this area to the quarantine area in a fire event which would reduce the overall volume and reduce the potential spread of the fire.

69 Response to Question 69

69.1 See Section 5.1 of the FPP which has been updated in response to this question. The walls are minimum of 0.15m thick and therefore able to withstand a fire for >120 minutes.

70 Response to Question 70

70.1 See Section 7.1 of the FPP which has been updated in response to this question. The quarantine area has been revised accordingly.

71 Response to Question 71

71.1 See Section 2.7 of the FPP which has been updated in response to this question. The CCTV is monitored outside of hours by an external monitoring company who can alert the nominated staff of any incidents who can act accordingly. The level is set lower so that any alerts can be handled before a fire is able to start.

72 Response to Question 72

72.1 See Section 10.4 of the FPP which has been updated in response to this question.

72.2 Due to the scale of the facility and low quantities of combustible/flammable wastes stored at the site and the low volume of the largest storage area, measures such as continuous monitoring 24 hours a day 6 days a week along with CCTV monitoring by an external company, it is not considered that an automated suppression system would be required, as stated previously this should be proportionate to the nature and scale of the activities, we do not consider an automated suppression system to be

proportionate based on the activities undertaken and the storage quantities proposed. The storage quantities are one fifth of the previously detailed storage area which is a significant reduction.

72.3 It is also important to note that due to the material held within Building 3, a water suppression system would not be suitable as water would likely exacerbate a fire, it considered more appropriate to use foam extinguishers or the FRS to use suitable foaming agents with water to tackle any potential fire. However, it is worth noting that a hydrant will be available on site should water be required to aid in firefighting.

73 Response to Question 73

73.1 See Section 10.2 of the FPP which has been updated in response to this question.

74 Response to Question 74

74.1 See Section 11.3 of the FPP which has been updated in response to this question.

75 Response to Question 75

75.1 Leak detection within bunded areas will be raised by an alarm built into the sump. Tanks will also be equipped with level sensors. Sump pumps will be monitored with telematics and will have audio alarms to alert of spillage. All sump pumps will pump materials back into the system. A Control Panel will also send email alerts should alarms sound once armed out of hours.

75.2 Measures to ensure that biological and chemical reactions are monitored in tanks include:

- Fixed thermocouples installed in storage tanks (Tank farm);
- High-temperature alarms;
- Inline pH sensors;

- Control of residence times to those required for successful operation of the process;
- Level sensors with alarms; and,
- Tanks are open vented to odour abatement system.

75.3 Inspection and maintenance carried out on tanks to ensure their integrity includes:

- Routine visual inspections;
- Weekly checks by operators:
- Checking tank bunds and ground for leaks or staining;
- Inspection of vents, seals, flanges, and fittings for drips or corrosion;
- Verify tank labels and signage are intact;
- Looking for external signs of damage (dents, cracks, bulging); and,
- Formal annual tank structure inspections.

76 Response to Question 76

76.1 The full site address is as follows:

Elliot Environmental Drainage Limited, Unit 1, Unit 1, St Michaels Close, Aylesford, Kent, ME20 7BU.

77 Response to Question 77

77.1 Given that the proposals are now to enclose Building 2, the pit is effectively enclosed within the building. Furthermore, it should be noted that this is not simply a pit, it is the integral initial stage of solids screening used in the overall process, the pit will contain a screening grid over the top.

Appendix I

Updated Site Plans

Appendix II

CIRIA 736 Assessment

Appendix III

Updated BAT Assessment

Appendix IV

Materials Safety Data Sheets

Appendix V

Residues Management Plan

Appendix VI

Appropriate Measures Assessment

Appendix VII

Process Flow Diagram

Appendix VIII

Updated Non-Technical Summary

Appendix IX

Waste Codes Split by Activity

Appendix X

Updated Odour Management Plan

Appendix XI

Updated Fire Prevention Plan

Appendix XII

Trade Effluent Consent