SW IED Site Condition Report – Hastings and Bexhill

Issue and Revision Record

Revision	Date	Originator	Checker	Approver	Description
A	21/06/21	M Sweeney	S George	A Manns	First issue for client comment
B	20/09/21	M Sweeney	S Stone	A Manns	Final
C	18/01/24	E Jeffrey	A Manns	A Manns	Updated post EA feedback
D	08/08/24	S Blackman	A Manns	A Manns	Update for duly making

Document reference: | 790101_MSD_SCR_HAS August 2024 |

Information class: Standard

Document purpose:

A Site Condition Report (SCR) provides information regarding the condition of the land and groundwater at permitted sites at particular points in time throughout its permit history. It is an on-going record of the potential and known contamination risks before a permit is granted, whilst activities are carried out under a permit and at the time of surrounding the permit.

The SCR will be submitted as required for Form B2/C2, Question 5b and will be completed following the Environment Agency's Environmental permitting: H5 Site condition report guidance (2013)[1]. The template structure is directly from the Environment Agency's H5 Site Condition Report word template.

For all new permits **sections 1 to 3** will be completed.

For sites that are currently permitted **section 1 to 7** will be completed, updating sections from the previous Site Condition Report where available.

Section 8 to 10 are not to be edited; these address surrender of the permit at a later date.

[1] https://www.gov.uk/government/publications/environmental-permitting-h5-site-condition-report

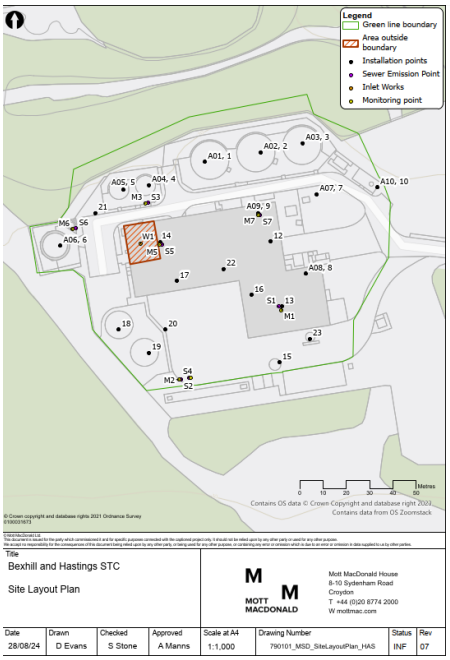
1.0 SITE DETAILS	
Name of the applicant	Southern Water
Activity address	Bexhill and Hastings Wastewater and Sludge Treatment Works Freshfields, Bexhill East Sussex, TN38 8AY
National grid reference	TQ 76590 09381

Document reference and dates for Site Condition Report at permit application and surrender	Site Condition Report: 790101_MSD_SCR_HAS January 2024 Date of Permit Application: TBC Date of Surrender: TBC

Document references for site plans (including location and boundaries)	Site walkover notes (Appendix A) Landmark Envirocheck Report for Bexhill and Hastings (document reference 790101_MSD_SCR_HAS_AppB Envirocheck Site Plans document references: 790101_MSD_SiteLayoutPlan_HAS August 2024 (Appendix C)

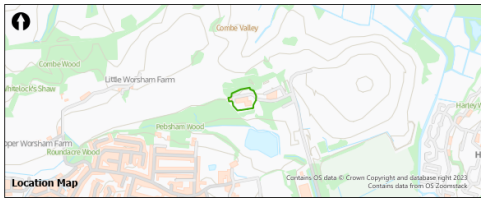
2.0 Condition of the land at permit issue	
Environmental setting including: • geology • hydrogeology • surface waters	**<u>Land use</u>** The site (Figure 1.1 taken from the Landmark Envirocheck Report) is located to the north east of the town of Bexhill. It currently hosts the Bexhill and Hastings Wastewater Treatment Works (WwTW), within which the Bexhill and Hastings Sludge Treatment Centre (STC) (hereby referred to as 'the Site') is located. The sewage treatment works was constructed between 1999 and 2001, with no discernible changes to the site area since that time. Recent mapping indicates that the site is surrounding by wooded areas to the west and the north. To the north, agricultural areas are present beyond to wooded area 75m north of the site. To the east, a large historic landfill is present, and to the south, sporadic wooded and grassy areas are present with a large pond 90m south of the site. The site layout with the STC permit boundary, as of 18th January 2024, can be found in Appendix C.

Figure 1.1: Bexhill and Hastings Sludge Treatment Centre (STC) Site Plan



Emissions Ref	Emissions Points	Assets Ref	Assets	X	Y
A01	Whessoe Valves 1	1	Anaerobic Digester 1	576567	109412
A02	Whessoe Valves 2	2	Anaerobic Digester 2	576591	109416
A03	Whessoe Valves 3	3	Anaerobic Digester 3	576609	109420
A04	Whessoe Valves 4	4	Post digestion storage tanks	576543	109402
A05	Whessoe Valves 5	5	Post digestion storage tanks	576532	109400
A06	Whessoe Valves 6	6	Gas Holder	576505	109376
A07	CHP Unit	7	CHP & Emission monitoring point	576615	109398
A08	Odour control unit	8	Odour scrubbers 1 and H2S Monitoring point	576610	109364
A09	Boiler	9	Boiler	576590	109390
A10	Flare stack	10	Flare stack	576641	109401
		12	Cake reception building	576595	109378
		13	Centrifuge	576600	109350
		14	Gravity Belt Thickeners	576548	109377
		15	Cake storage silo & cake collection area	576599	109326
		16	Polymer & chemical storage	576587	109355
		17	Screenings storage	576555	109361
		18	Combined sludge storage tank	576530	109340
		19	Combined sludge storage tank	576543	109330
		20	General waste skip	576550	109340
		21	Lime storage & lime dosing plant	576520	109390
		22	Thickened Sludge Storage Tank	576575	109366
		23	Cake silo	576612	109336
W1	Inlet works (context only)			576539	109377
S1	Centrifuge liquors			576599	109350
M1	Centrifuge liquors			576600	109348
S2	Surface water			576557	109319
M2	Surface water			576556	109318
S3	Northern bund drainage			576543	109394
M3	Northern bund drainage			576541	109394
S4	Southern bund drainage			576560	109319
M4	Southern bund drainage			576561	109319
M5	Gravity belt thickener liquors			576547	109376
S5	Gravity belt thickener liquors			576548	109376
S6	Gas condensate			576511	109383
M6	Gas condensate			576510	109383
S7	Boiler blowdown			576590	109389
M7	Boiler blowdown			576589	109389

AX: Air emissions SX: Sewer emission points MX: Monitoring Points



Geology

Superficial Geology

The site is not recorded to be underlain by superficial deposits.

Approximately 90m to the south of the site, the superficial deposits comprise Alluvium which formed up to 2 million years ago during the Holocene, consisting largely of soft to firm consolidated, compressible silty clay, but may also include layers of silt, sand, peat and gravel. The local environment would previously have been dominated by rivers.

Bedrock Geology

The site lies upon the Wadhurst Clay Formation from the Valanginian Age. The base of the Wadhurst Clay Formation is sharp and marked by the top of the Top Ashdown Pebble Bed (part of the Ashdown Formation) locally, but where this is absent the boundary is transitional, and placed in siltstones between the underlying fine-grained sandstones of the Ashdown Formation. The upper boundary is marked by a sharp change from siltstones of the Wadhurst Clay Formation up into fine-grained silty sandstones of the Tunbridge Wells Sand Formation.

The Wadhurst Clay Formation comprises soft, dark grey thinly-bedded mudstones ("shales") and mudstones with subordinate beds of pale grey siltstone, fine-grained sandstone, shelly limestone, clay ironstone and rare pebble beds. Indicated on geological mapping, outcrops of the Wadhurst Clay are mapped as mudstones and sandstones. The site is predominantly underlain by mudstones of the Wadhurst Clay Formation, with thin lenses of sandstone in local areas.

BGS Borehole TQ70NE7 is located approximately 90m south of the site and reaches depths of 15.9m below ground level (bgl). The borehole identified topsoil over clay to 2.60m bgl which overlies strata of firm brown clayey silt with

	occasional sandstone fragments to 2.60 – 6.70m bgl. This overlies strata of interbedded silt and sandstone to 6.70 – 10.3m bgl, further overlying beds of grey-brown silt and sand. These are interpreted to belong to the Wadhurst Clay Formation. Structural Geology A fault is found running through the centre of the site in the Wadhurst Clay Formation, running in a north east to south west orientation. This also intersects the STC permit boundary. **Hydrogeology** The Wadhurst Clay Formation underlying the site is predominantly classified at unproductive strata, indicating a low sensitivity receptor. Within the Wadhurst Clay Formation, the aforementioned sand lenses are classified as a Secondary A aquifer. The Ashdown beds underlying the Wadhurst Clay Formation is also classified as a Secondary A aquifer. **Hydrology and flooding** The nearest river to the site is Combe Haven, located approximately 630m north east of the site at its closest point. There are a further three OS Water Network lines within 250m of the site, each of which are identified as drains on historical mapping. On recent mapping, seven ponds are located within 250m of the site area, of which the closest is approximately 10m from the site. The majority of the ponds are similar in size and surrounded by a small patch of trees. One pond, located 90m south of the STC permit boundary, is larger and is approximately 17,000m^2 in size. The entire WwTW is located within Flood Zone 1 (less than 1 in 1,000 annual probability). There are eight discharge consents reported to have been issued to Southern Water Services Ltd for the WwTW site, all for sewage discharge, dating back to 2005. All previous and current discharges are to sea (controlled). **Sensitive land use** The site lies 230m south of the Combe Haven Site of Special Scientific Interest (SSSI).
Pollution history including: • pollution incidents that may have affected land • historical land-uses and associated contaminants	**Pollution incidents to controlled waters** There have been no recorded pollution incidents to controlled waters within 250m of the site boundary. **Nearby industrial land uses** There are no potentially contaminative contemporary trade directory entries within 250m of the site. There are six points of interest pertaining to public infrastructure within 250m of the site, four of which relate to the facilities located at the treatment works and two further records pertain to the refuse tip records detailed previously.

• any visual/olfactory evidence of existing contamination • evidence of damage to pollution prevention measures	**Recorded Landfill and Historic Landfill** There is one record of Registered Landfill Sites within 250m of the STC permit boundary are: • East Sussex County Council operated landfill located approximately 24m south east of the STC permit boundary. Dated 1977, with no revocation date - asbestos, clinical and non-hazardous wastes. One further BGS recorded landfill record is available on the Envirocheck report: • BGS Recorded Landfill Site located approximately 40m south east of the STC permit boundary, named Pebsham Tip. No indication as to the material accepted at this location is provided. There is one local authority recorded landfill site within 250m of the STC permit boundary: • Pebsham landfill (Ref. 2-015) located approximately 170m south-east of the STC permit boundary. **Registered Waste Treatment or Disposal Sites** There are two licensed waste management facilities situated within 250m of the STC permit boundary: • Pebsham North Quadrant Landfill located approximately 15m north east – License issued 2020. Site category: Waste Landfill; >10 T/D with Capacity >25,000T Excluding Inert Waste. • Pebsham Landfill Site located approximately 15m south-east – Licence issued 1993. Site category: Co-disposal landfill site. **Local Authority Pollution Prevention and Controls** There are no recorded local authority pollution prevention and controls within 250m of the STC permit boundary. **Mining and quarrying** Risk of coal mining in area is deemed highly unlikely. **Historical Land use** The review of historical mapping is based on the boundary detailed within Figure 1.1 (Landmark Envirocheck Report, 6th April 2021, 276120009_1_1). • The earliest available mapping from 1875 indicates that the site is covered by a wooded area in the western half of the site, and greenfield in the eastern half of the site. By 1909, two ponds are located in the north western extent of the site area. • Ponds noted on site were last recorded in 1973, and aerial mapping from 1999 indicates that these have been infilled. • A large refuse tip located approximately 180m south east of the site area is first recorded in 1974. In 1986, a road with embankments either side is recorded off site, approximately 10m east of the site area. • In 2000, the refuse tip to the south east of the site has extended northwards, and is bounded by the road 10m east of the site. The household recycling

	centre associated with the tip has also relocated from 250m south east to 350m south of the site and now shows a 'destructor unit'. • The site area has been developed into a sewage treatment works, first recorded on aerial mapping in 2004 with a very similar layout as the present day. The large pond 90m south of the site area is also first recorded in 2004. • In 2021 mapping, the refuse tip to the east of the site is listed as Combe Valley Countryside Park. **Contaminants of concern** The site is within a lower probability radon area (less than 1% of homes are estimated to be at or above the action level). Soil Chemistry The following soil concentrations are found within the site boundary, as detailed in the Envirocheck Report: • Arsenic: <15mg/kg to 15-25mg/kg; • Cadmium: <1.8mg/kg; • Chromium: 60-90mg/kg; • Lead: <100mg/kg; and • Nickel: 15-30mg/kg. Contaminants associated with current and historic land use The following contaminants are of concern regarding the industrial activities stated above, in addition to the current use of the WwTW site (and the STC permit boundary): • total petroleum hydrocarbons (TPH); • polycyclic aromatic hydrocarbons (PAH): • heavy metals and inorganics; • pathogens; • asbestos; • polychlorinated biphenyls (PCBs); • chlorinated solvents and phenols; and • volatile and semi-volatile organic compounds (VOC/SVOC). There may also be ground gases present at the site, especially due to the presence of the landfill, and would likely comprise CO_2 and CH_4.
Evidence of historic contamination, for example, historical site investigation, assessment, remediation and verification reports (where available)	**Site walkover** A site walkover was undertaken by waste and contaminated land specialists from Mott MacDonald on the 13th May 2021. The walkover identified the following key points: • site is located away from majority of receptors. Road to site also used for waste management operations; • all cake storage is enclosed and tipped directly from a hopper into trucks, leaving the ground clear of much cake debris; • on-site ferric chloride dosing system and drier systems both mothballed;

- the condition of the site was reasonably good with the exception of some vegetation growth in the base of the digester bund (potential reduced bund integrity), and patching on some of the tanks, especially the combined sludge buffer tank. The majority of infrastructure/pipework is above ground;
- only cake is imported to the site – no sludge;
- operations are currently at near maximum capacity;
- gas membrane reported to be present under all of site due to the adjacent landfill.

Site data

The Contaminated Land Technical Appendix (report number 80349/TR/98/133) of the Environmental Statement, submitted in support of the planning application for the site in 1998, has been reviewed. The report, by Southern Water, provides a summary of environmental constraints in the area around the proposed development, as well as a summary of ground investigation results from the site, including gas monitoring. Key findings of the report include:

- boreholes on-site (and within the STC permit boundary) proved up to 17m of Alluvium with an underlying peat layer approximately 3m thick. The Wadhurst Clay Formation was proven to 20.5m thickness, and the Ashdown Beds to at least 15m thickness
- groundwater strikes were recorded during the investigation, however levels in the mudstone units of the Wadhurst Clay Formation were variable (11.29m to 18.25m above Ordnance Datum [AOD]) which was considered a result of perched layers. The siltstone and sandy limestone units of the Wadhurst Clay Formation indicated water was confined in these layers at around 13mAOD with a flow to the east or north east. Groundwater in the Ashdown Beds was reported between 4.5m and 6.6mAOD, although artesian pressures were encountered to the south of the site where it was thought that the Ashdown Beds are confined by the Alluvium.
- groundwater quality sampling results from 1997 were considered to suggest some influence on groundwater quality from the adjacent landfill.
- surface water quality sampling results collected in 1997 from a pond and drainage ditch on the site of the (then proposed) treatment works generally showed lower concentrations of contaminants than the groundwater, but did record greater concentrations of diesel range organics.
- ground gas monitoring on-site recorded methane up to 70%v/v and carbon dioxide up to 40%v/v, with oxygen concentrations below detection in some instances. The adjacent landfill was considered to be the reason for the elevated concentrations, with migration through the siltstone and sandy limestone units within the Wadhurst Clay Formation. Trace organic testing confirmed that the results were consistent with the fingerprint of typical landfill gas. The report considered it necessary for gas protection measures to be implemented on the development and that these should comprise an in-ground venting layer for all buildings and structures as well as an active gas extraction system, electrical zoning, gas detection and alarm systems.

No analysis of soil samples was undertaken during the investigation.

Planning applications

A search of the East Sussex County Council and Rother District Council planning portals was conducted on the 8th August 2024. Applications include the

	development of the wastewater treatment works, installation of a combined heat and power plant, the erection of steel frame building to enclose four existing blower units, and updates to the welfare/office building. No relevant supporting documents are available on the website associated with these applications. There are a further four enforcement actions pertaining to the breach of conditions between 2006 – 2018, pertaining to excessive odours.
Baseline soil and groundwater reference data	Surface water and groundwater samples were collected in 1997, prior to the construction of the treatment works and a summary reported in the contaminated land technical chapter of the environmental statement. The sample results are provided below for reference, however due to their age, their relationship to current conditions is unknown.

Parameter	**Unit**	**Groundwater**				**Surface water**	
		BH TW12	**BH TW19**	**BH TW26**	**BH TW28**	**SW2 (pond)**	**SW1 (ditch)**
pH	pH	7.5	6.5	6.5	7.4	6.5	7.5
Ammoniacal N as N	mg/l	0.17	8	0.05	0.35	<0.03	0.04
Chloride	mg/l	110	93	72	510	69	120
Alkalinity as $CaCO_3$	mg/l	305	540	62	150	86	190
Conductivity at 20°C	µsie/cm	880	1190	385	1710	590	910
Sodium	mg/l	63.6	57.5	48.3	209	41.4	75.5
Potassium	mg/l	2.8	10	<0.7	19.7	6.5	6.2
Magnesium	mg/l	20.1	21.2	5.63	18.7	18.4	19.4
Iron	mg/l	0.43	76.8	0.04	0.11	2.25	0.75
Manganese	mg/l	0.22	3.6	3.26	1.44	7.11	1.89
Cadmium	µg/l	0.3	0.3	0.8	0.4	<0.1	<0.1
Chromium	µg/l	<0.4	<0.4	0.9	<0.4	1.2	1
Copper	µg/l	<10	<10	<10	30	30	30
Lead	µg/l	<1	<1	<1	<1	<1	<1
Nickel	µg/l	<20	<20	<20	<20	<20	<20
Zinc	µg/l	27	62	33	63	15	28
Total organic carbon	mg/l	1.4	6.4	0.97	2.7	7.2	6.9
Sulphate	mg/l	110	21	34	70	-	-
Diesel range organics	µg/l	63	60	67	204	135	145
Petrol range organics	µg/l	<10	<10	<10	<10	3	3

No soils reference data is known to be available for the site.

Supporting information	Sources used in the production of this SCR: • Landmark (2021), Envirocheck Report – Hastings and Bexhill SCR, ref: 276120009_1_1. • British Geological Survey, GeoIndex www.bgs.ac.uk consulted April 2021; • British Geological Survey, Borehole Scans www.bgs.ac.uk consulted April 2021;

	• British Geological Survey, Solid and Drift Edition 1:50000 Series; Hastings and Dungeness Sheet 320/321; consulted April 2021; • Magic Map http://magic.gov.uk/ consulted April 2021; • East Sussex Planning Portal (2021). Planning application search. Available at: https://apps.eastsussex.gov.uk/environment/planning/applications/register/ (Accessed August 2024); • Rother District Council Planning Portal. Available at: https://planweb01.rother.gov.uk/OcellaWeb/planningSearch (accessed August 2024).

3.0 Permitted activities

Overview of site processes	The site serves as a sludge treatment centre. Indigenous primary sludge is pumped to 2 No. combined sludge storage tanks. Sludge cake is imported into Bexhill & Hastings STC in sealed containers. The cake is discharged into 1 No. feed hopper / blending tank where it is blending with SAS. Liquid sludge is imported from road tankers, into 2 No. liquor sludge reception tanks. Imported liquor sludge and indigenous sludge are pumped via 2 No. sludge screen to 2 No. combined sludge storage tanks which are operated in fill and draw mode. Combined sludge is fed by duty, standby feed pumps to 3 No. gravity belt thickeners (GBT), operating as duty/duty/standby units. Thickened sludge is stored in 2 No. thickened sludge storage tanks. Thickened sludge is fed into 3 No. primary anaerobic digesters. Digested sludge is stormed in 2 No. post digestion storage tanks. Biogas is utilised to generate electricity and heat in 1 No. CHP plant. Digested sludge dewatered by 2 No. centrifuges. Lime solution is dosed into the feed line of the centrifuges by 1 No. lime dosing rig consists of 1 No. lime storage tank, 2 No. peristaltic dosing pumps (duty and standby). The limed cake drops into 1 of 2 ro-ro bins and is recycled to farm land. Dewatered digested sludge cake is storm in 1 No. 100 m^3 sludge silo and transported offsite for recycling to agriculture.
Permitted activities	Urban Waste Water Treatment Regulations (UWWTR) (Upper Tier) regulations and Water Resources Act (WRA) limits are followed for final effluent discharge permit conditions. Operator Self-Management (OSM) permit conditions also apply. The site operates under a Water Discharge Activity Environmental Permit. The site also operates under a permit (EPR/KP3630KV) for 'Gas engine for burning of landfill or other bio-gas' (A29 activity). The activities operating under this permit are to be surrendered as part of the V003 surrender, these include: - Burning of biogas in the sludge dryer. From receipt of fuel to emission of exhaust gas to air; - Back up flare, the burning of excess bio-gas from the gas holders; - Storage of bio-gas, from receipt of gas from AD plant to dispatch for use;

	- Discharge to foul sewer of liquid from general site drainage, condensate knock out pots and cooling water system to inlet of sewage treatment works.
Non-permitted activities undertaken	Anaerobic digestion is to be permitted under the Industrial Emissions Directive under a Bespoke Installation Permit as Anaerobic Digestion of sludge as wastewater treatment works is no longer excluded under the Urban Waste Water Treatment Directive and associated regulations. Permitted Directly Associated Activities under IED will include waste import, physio-chemical treatment of sludges and storage of indigenous and imported sludges.
Document references for: • plan showing activity layout; and • environmental risk assessment.	• Mott MacDonald, Bexhill and Hastings STC Permit Application – Main Supporting Document, Ref 790101_MSD_Main_HAS (2024). • Mott MacDonald, Bexhill and Hastings, Southern Water IED Permitting Environmental Risk Assessment, Ref 790101_ERA_HAS (2024)

Note:

In Part B of the application form you must tell us about the activities that you will undertake at the site. You must also give us an environmental risk assessment. This risk assessment must be based on our guidance (*Environmental Risk Assessment - EPR H1*) or use an equivalent approach.

It is essential that you identify in your environmental risk assessment all the substances used and produced that could pollute the soil or groundwater if there were an accident, or if measures to protect land fail.

These include substances that would be classified as 'dangerous' under the Control of Major Accident Hazards (COMAH) regulations and also raw materials, fuels, intermediates, products, wastes and effluents.

If your submitted environmental risk assessment does not adequately address the risks to soil and groundwater we may need to request further information from you or even refuse your permit application

4.0 Changes to the activity	
Have there been any changes to the activity boundary?	No
Have there been any changes to the permitted activities?	Due to impending changes in the way the Waste Management industry is regulated by the Environment Agency and Natural Resources Wales, STCs are obliged to apply for Fixed Installation Permits under the Industrial Emissions Directive (IED) and comply with new permit conditions by August 2022. Fixed Installation Permits will amalgamate and supersede all current permits and exemptions under which waste is treated on the STC sites (including Environmental Permitting Regime (EPR), Medium Combustion Plant Directive (MCPD), old style Waste Management Licenses, and T21 exemptions). Activities at Hastings and Bexhill WTW and STC will continue, as prior to the introduction of the updated and amalgamated permit, although under any new requirements imposed by the permit.
Have any 'dangerous substances' not identified in the Application Site Condition Report been used or produced as a result of the permitted activities?	No prior site condition report (SCR) is known to exist for the site, due to the length of time that the site has been in operation. This SCR presents the condition of the site at the point of the amalgamation of the existing permits on site and the introduction of additional requirements relating to sludge processing, as required under the IED. 'Dangerous substances' that are used or produced at the site include: • Gas oil (generators) • Lime (sludge treatment before centrifuge) • Ferric sulphate (in ferric dosing units (primary treatment and tertiary treatment (near sand filters – for phosphorous control)) • Sodium hydroxide, sodium hypochloride (used in scrubbers) • Polymer – Highmark C498HMW (for dewatering) • Antifoams – Flowfoam 681F (digester) and 139F (centrifuge) • Antiscale – Flowsperse PX60N • Odour suppressant (dry = Oximax neutraliser, wet = atom neutraliser) • Methane (produced from the digestors and stored in the on-site double membrane gas holder); • Effluent screenings (rag and grit from screening process at inlet works).
Checklist of supporting information	• Plan showing any changes to the boundary (where relevant) • Description of the changes to the permitted activities (where relevant)

	• List of 'dangerous substances' used/produced by the permitted activities that were not identified in the Application Site Condition Report (where relevant)

• **5.0 Measures taken to protect land**
• Use records that you collected during the life of the permit to summarise whether pollution prevention measures worked. If you can't, you need to collect land and/or groundwater data to assess whether the land has deteriorated.

• **Checklist of supporting information**	• **Inspection records and summary of findings of inspections for all pollution prevention measures** • **Records of maintenance, repair and replacement of pollution prevention measures**

• **6.0 Pollution incidents that may have had an impact on land, and their remediation**
• Summarise any pollution incidents that may have damaged the land. Describe how you investigated and remedied each one. If you can't, you need to collect land and /or groundwater reference data to assess whether the land has deteriorated while you've been there.

• **Checklist of supporting information**	• **Records of pollution incidents that may have impacted on land** • **Records of their investigation and remediation**

• **7.0 Soil gas and water quality monitoring (where undertaken)**
• Provide details of any soil gas and/or water monitoring you did. Include a summary of the findings. Say whether it shows that the land deteriorated as a result of the permitted activities. If it did, outline how you investigated and remedied this.

• **Checklist of supporting information**	• **Description of soil gas and/or water monitoring undertaken** • **Monitoring results (including graphs)**

8.0 Decommissioning and removal of pollution risk
Describe how the site was decommissioned. Demonstrate that all sources of pollution risk have been removed. Describe whether the decommissioning had any impact on the land. Outline how you investigated and remedied this.

Checklist of supporting information	• **Site closure plan** • **List of potential sources of pollution risk** • **Investigation and remediation reports (where relevant)**

9.0 Reference data and remediation (where relevant)
Say whether you had to collect land and/or groundwater data. Or say that you didn't need to because the information from sections 3, 4, 5 and 6 of the Surrender Site Condition Report shows that the land has not deteriorated. If you did collect land and/or groundwater reference data, summarise what this entailed, and what your data found. Say whether the data shows that the condition of the land has deteriorated, or whether the land at the site is in a "satisfactory state". If it isn't, summarise what you did to remedy this. Confirm that the land is now in a "satisfactory state" at surrender.

Checklist of supporting information	• **Land and/or groundwater data collected at application (if collected)** • **Land and/or groundwater data collected at surrender (where needed)** • **Assessment of satisfactory state** • **Remediation and verification reports (where undertaken)**

10.0 Statement of site condition
Using the information from sections 3 to 7, give a statement about the condition of the land at the site. This should confirm that: • **the permitted activities have stopped** • **decommissioning is complete, and the pollution risk has been removed** • **the land is in a satisfactory condition.**

A. Site Walkover Record

Site Name	Hastings and Bexhill WTW and STW
Date	13/05/21
Attendees	
Permit and exemption references	EA EPR/KP3630KV/A001 – mothballed dryer
Covid secure measures for accessing site	

Follow the process through the site – Start with sludge import area and walk the site going through the process. Make notes on condition of site infrastructure and assets such as bunds, tanks, impermeable surface, storage areas etc.

Please remember to take photos as documentary evidence of useful information, e.g. CHP generator name plates. Note on the survey form when a photo has been taken and reference in numerical order (photo 1, 2, 3 etc…)

Make notes of the general site housekeeping, is it kept clean and tidy.

Notes relating to surrounding area.

Record general site observations (as noted above) here:

- Hardstanding in reasonable condition
- Site surrounded by metal palisade fencing (estimated to be 2.4m) with spiked blades at top.
- Ferric chloride dosing system and drier systems both mothballed
- Combined sludge buffer tanks seen to be patched – approx. 300, mainly in top 1/3.
- Gas membrane reported to be present under all of site
- Digesters in bunds but seen to be gravel to rear and plant growth at concrete joins suggesting may not be fully sealed or fully bunded
- All activities carried out inside a building.

RFI Ref	Site operations	
	Operational contact details for the application forms	
	No of site staff (day and shift operators etc)	Total - 5 (shift) and 3 (day) On-site – 4 during day and 1 at night
I15	During what hours is the site staffed Monday – Friday and at weekends?	Day cover 7.30am-4pm Monday to Wednesday 7.30am-3.30pm Thursday and Friday and Sat Night – 24 hours
	What hours can waste enter the site (planning)	6am-4pm Monday to Saturday Emergency only on Sundays
I16	What hazardous waste treatment capacity (tonnes per day) is available on site?	None
I17	What non- hazardous waste treatment capacity (tonnes per day) is available on site? This should also include Commercial Waste where appropriate.	
I18	What is the total waste storage capacity (tonnes) at the site? Note: Cake, digestors, other tanks relating to STC)	100T silo for cake (no cake bays) Combined sludge tanks x 2 @ 552m3 Blending tank (cake and RAS) Digested sludge storage tanks x 2 Digesters x 3 @ 2513m3
I19	What is the annual waste throughput (tonnes each year) at the site? (TDS volume for the STC)	
I20	For the waste types authorised to be accepted at the site (EWC codes) – List the types of waste required to be listed on each permit.	No grit/screenings accepted
121	How many years is each permit expected to be required for? List details of each permit separately	Permanently

GEN07	Please describe the aspects of the site that generate litter, mud and debris within and outside the site boundary.	None Wheel wash not being used
GEN08	Describe the site cleaning procedures on site. Including any infrastructure cleaning, wheel wash etc	Ad-hoc spill response but no specific cleaning as no sources. MTS for larger spills, housekeeping by ops Offices cleaned by contractor twice/week
GEN09	Please describe the site security measures in place at site. Can you elaborate on the type of fencing e.g. palisade, chain link, barbed wire, and mix of? How high, do they go all around the perimeter? Do they have barbed wire on top? Type of gate, what are the gates made of, height etc? Gate control, CCTV, how many cameras etc	Automatic front gate CCTV camera (SEEM) number not known Palisade fencing fully encloses site with spiked blades at top. Additional rotary blades on top at some corners
	Site Plans	
GEN13	Please provide a copy of the Site Plan showing the proposed permitting boundary in green. This can be overlaid the Site Layout Plan. The Site Plan will be placed in the permit and needs to show a north arrow, identifiable location indicators (such as roads).	
	Visual impacts	
GEN10	Please describe the visual impacts of each site.	None in particular. Site is set back away from residential properties, landfill to east, waste transfer station to south, bounded by trees which provide some protection
	Site condition report	
SCR02	Please provide a list of permitted activities per site.	Drying although now mothballed
SCR03	Please provide a list of non-permitted activities per site. Including exemptions	CHP (750kw) - not big enough Sludge treatment Anaerobic digestion

SCR05	Please provide any environmental risk assessments for site.	Environmental statement from planning application c.1998. Copy of Noise and vibration, contaminated land, archaeology, air quality and marine ecology chapters provided to SG
SCR06	Site overview	
	Emergency procedures	
GEN17	Provide a description of the emergency procedures for each site	Standard procedures: Exit site via main gate, roll call, phone emergency services
	Sludge import	
SV01	Does the site accept trade waste (commercial tankers)?	No sludge, just cake.
SV01/02	How many tankers arrive at the site per day? Where are the tankers unloaded? Is an odour control hose used during unloading?	Under standard conditions = 4-5 ro-ro containers per day (Mon-Sat) Currently = 7 ro-ro (Mon-Sat), 4 ro-ro (Sun) Unloaded inside main building (see plan) Unloading controlled by scrubbers (caustic and sodium hypochlorate) 2 wet chemical scrubbers
SV03	Where is sludge imported from? Sludge imported from other satellite sites? How many?	Cake - Hailsham and Eastbourne main sites but others in an emergency
I22	**Air Emissions**	
	Please provide the following information for all point source emissions (CHP, boilers, flare, pressure valves/vents, odour abatement, emission points) to air from each site:	
	Source 1	*Indicate individual sources on site layout plan*
	National Grid Reference	**See walkover plan. All emission points marked by number with key in the top corner**
	Source type	
	Parameter (e.g. oxides of nitrogen)	

	Quantity (with its unit)	
	Stack height	
	Source 2	*Indicate individual sources on site layout plan*
	National Grid Reference	
	Source type	
	Parameter (e.g. oxides of nitrogen)	
	Quantity (with its unit)	
	Stack height	
	Source 3	*Indicate individual sources on site layout plan*
	National Grid Reference	
	Source Type	
	Parameter (e.g. oxides of nitrogen)	
	Quantity (with its unit)	
	Source 4	*Indicate individual sources on site layout plan*
	National Grid Reference	
	Source Type	
	Parameter (e.g. oxides of nitrogen)	
	Quantity (with its unit)	
	Source 5	*Indicate individual sources on site layout plan*
	National Grid Reference	
	Source Type	
	Parameter (e.g. oxides of nitrogen)	
	Quantity (with its unit)	
	Please provide the emission/maintenance report(s) for the flare(s). Are there any maintenance reports?	DSL reports available
	Please clarify whether safety zoning of areas is undertaken under DSEAR/PEXA at site.	Yes - identified on site safety board

	Air Emissions from plant		
		Plant 1, 2 etc	**Plant 1,2 etc**
I27	What date did the combustion plant become operational?	Generator and other equipment built when plant constructed (1999-2001) upgraded in 2009	CHP built later
I28	What type of SG/MCP is at each plant? E.g. diesel engine, gas turbine, other engine or MCP Take photos of all relevant tanks/equipment and processes	Generator (diesel) – doesn't need to be done until 2029 due to size	
I29	What is the MWth input of each plant? Take photos of any plates		
I30	What are the guaranteed emission limits for the plant?		
I31	What are the total operating hours for the year?	Generator (average 3-9 times per triad season. Data off SCADA	
I32	What is the stack height for each stack?		
I33	What fuel is used? Natural gas, biogas, diesel) Dual or co- fired? What total volume of fuel is used? What total volume is stored at any one time?	Generator (diesel) Boiler (duel fuel) Dryer (duel fuel but now mothballed)	CHP (biogas)
	Provide manufacturer's specifications for all combustion plant where possible.		

	Additional space for information on plant (if required) Flare 750kw – running approx. 12x /day (CHP needs upgrading) CHP electrical output is 18496, Thermal output is 10,000?	
	Emissions	
GEN13	Please explain how and where discharges solely of sanitary determinands are undertaken, including details of any treatment prior to discharging. Include reference to any permissions held for the discharge (permits/exemptions etc).	Outfall to sea (1200 longfall) Storm overflow pump for when high tide
	Emissions to land	
GEN20	Please describe where all condensate pipes discharges (typically CHP exhaust , gas bag and digester), including the exact location of the emission and the quantity/rate of discharge. Include NGR is discharges to ground. Include location of inlet works if condensate goes to site drainage. If container used to collect condensate, where and how often, does it get emptied?	None
	Exemptions	
	What exemptions are used on site? Typically SW have T21, D5 and S1.	Potential T21.
	Cake storage	
SV04	Is any cake imported? If so, how is it unloaded from trucks and where is it unloaded?	Yes – cake reception in main building
SV05	Where is cake stored? How is cake stored? E.g. Cake bays, silos, directly into skips etc	1 x 100t Silo to south of main building. Dropped directly into trucks

	How many cake bays/silos/other are there on site? How long does it take to fill a bay e.g. 4-6weeks?	One silo – fills in approx. 12 hours at the moment although higher flow/imports than normal
	What is the total surface area of the cake bays? Or total volume that can be stored if known? E.g. L x H x W. What is the total capacity (if in a silo)?	100T silo but only ever fill to 80%
SV06	How is cake moved to the cake bays (enclosed truck etc)? How frequently is cake moved around the site?	Pipes and conveyors to silo (all enclosed)
SV07	Is the cake treated further after the centrifuge e.g. liming of cake within cake bays?	Lime dosed (THP potential in the future but new technology so not known when it may come in)
SV08	When cake is within the bay, is the cake turned/disturbed at all? How often? Why?	N/A
SV09	How is cake removed from the site? How often? Over what timeframe? e.g. 2weeks constantly	Tipper trucks. Dropped directly from silo into trucks. Emptied daily
SV10	What is the condition of the cake bays? Eg condition of base, height of walls? Does this sufficiently contain the cake?	N/A

	Are there any known issues?	
	Water usage	
SV11	What sources of water does the site use? E.g. potable, secondary washwater, other process water etc What proportion/% of the site's water usage is from this source?? E.g. 2% potable water for polymer make-up and drinking, 98% primary or secondary wash water for other i.e. cleaning etc? What is it used for e.g. poly make-up, washing down etc? Is specifically potable water required for any of the site processes? (e.g. poly make-up)	Potable: offices, internal hoses, polymer make-up, scrubbers Approx. 90m3/day = 980m3/month Final effluent: external hoses Poly currently potable, but is moving to FE
SV12	Does the site get water from other sources? Abstraction from river etc? How much is permitted to be abstracted/day/hr etc? What is it used for e.g. poly make-up, washing down etc?	No
	Generators	
SV13 - 19	Are there any generators on site? How many and what size (MW)? What are they used for e.g. primary/secondary. Site running, exporting power to grid? Do they export to grid or import from grid to run the site? Is operation of the CHPs temperature sensitive? If yes, what is their optimum	1 x 1000kva – import only Primary use – triads or power cuts CHP runs site operations

	temperature range? Is there a temperature above/below which they will not operate? What are their fuel sources? E.g. diesel, biogas, other source How many hours per year do they operate? Any monitoring undertaken? If so, what for and what are the standards used?	Monitoring of emissions, servicing
	CHP engines/boilers	
	How many CHPs/boilers on site?	*Take photos of any plates*
SV18 SV17	What size (MW)? What are they used for e.g. primary/secondary. Site running, exporting power to grid? Are there any flares? If so how often is the flare used? E.g. during emergency or maintenance of the engines or all the time? Are the CHP's/boilers/ generators adequate for the amount of gas produced by the site? Any monitoring undertaken? If so, what for and what are the standards used? Is operation of the CHPs temperature sensitive? If yes, what is their optimum temperature range? Is there a temperature above/below which they will not operate? What is the annual load of CHP (given as %) for sites in Tranche 3? What is the annual load of CHP (given as %) for sites in Tranche 5?	One CHP boiler – 750kv output, used for running the site Flare used almost constantly, CHP not adequate for site SCADA monitoring, including of whessoe valves and Veolia monitor remotely Annual load of CHP approx. 95%

GRA01 MIL01		
	Noise	
I64	Please describe any noise mitigation measures on site.	Silencers on GAC system noted on walkover. No other measures – most equipment enclosed and not many receptors around
	Other abatement?	No
	Have any noise assessments been undertaken on the site?	No
	Have there been any noise complaints?	No
SV19	Any monitoring undertaken? If so, what standards are used?	No
	Odour	
SV20	Please describe any odour mitigation measures on site e.g. processing of imported sludge immediately, odour control hoses for tankers, water suppression sprays, enclosed processes, doors to buildings kept closed, buildings under negative pressure?	2 wet chemical Scrubbers – caustic and sodium hypo Granular activated carbon filters Mobile spray (reactive only) Processing of imported cake immediately Processes indoors and very little exposed to air Shutters down on buildings unless something moving through them No negative pressure used in buildings
SV21	What is the odour control system used – specific to locations on site? Bio-scrubbers/carbon filter etc? What is the media used? Which processes are odour controlled?	*Obtain as much information as possible on system used and take photos.* Cake silo – scrubbers Venturi scrubber – fresh air ERG contractor services regularly Carbon filters – wet side

	How and when is the odour control maintained/inspected to ensure they remain effective? Please provide full maintenance schedules for each site	2 x chemical scrubbers – dry side
SV24	Is odour monitored? If so how?	H2S monitoring across site (by Honeywell) Sniff tests if odour complaint
	Is there a site specific odour management plan?	Yes
	Any odour complaints?	Yes – usually ~3/summer
	Other abatement?	Weather station on site but not sure if still active/needed as don't see reports from it
GEN16	Describe the maintenance programmes that are undertaken to ensure odour and bioaerosol control measures are maintained, prioritising Tranche 2 sites.	ERG maintenance + reports Annual services
OMP02	Please identify the most common sources of odour complaints (i.e. during movement of cake, etc)	Typically reporting sewage smell, but possibly from drains in summer but not fully understood reason (eg one complaint about chlorine when not used on site so validity of complaints is questionable)
OMP01	Dry solids range (%), sludge type, sludge pH, and storage time at average throughput for different tanks / processes.	25-28% dry solids for cake (GBT thickeners) pH above 9 7.5% dry solids into digesters Centrifuge off 10am-6pm typically but running 24/7 due to qty cake received
OMP04	For each asset on-site, please provide: • Potential odour source • Odour controls in place (see SV21) • Potential for odour emissions • Action to be taken in case of failure • Person responsible	Aeration lanes and final settling tanks (WTW) open but all sludge/cake import processes covered. Haccap
	Bioaerosols	
GEN15	Describe the processes and bioaerosol control measures (e.g. odour abatement	

	systems, enclosed tanks, filters) associated with:	
	• Sludge reception/transfer of sludge between the vehicles and the facility (including: frequency of deliveries and collections, and types of vehicles used to transport waste; proportion of water within the sludge cake delivered to site etc)	Enclosed building with scrubbers in operation Lorries all covered Centrifuged cake imported Potential bioaerosols from aeration lanes Exports – 6 x 20t tipper loads max/day Imports 7 loads/day
	• Handling and storage of sludge/digestate throughout AD process	Pumps and conveyors all covered
	• Disposal of biogas (combustion)	Flare - not adequate
	• Any other relevant procedures onsite which could generate bioaerosols	Aeration and FE, Whessoe valves
	If using odour suppression sprays are they used to just mask the smell or to catch and drop the odour?	Water vapour so both – bubblegum mask
	Is sludge arriving on site processed immediately? If not how long is it until it is fed into the system?	Straight into hopper, no waiting
	Pests	
SV25 & GEN12	Does the site experience pests and if so what are they (birds, vermin etc)? What measures are in place to prevent/control pests? What measures are in place to remove pest issues? What's the frequency of visits by a pest control contractor?	Resident peregrine falcon pair. Waste sites adjacent used birds of prey to help scare birds so some pigeons and gulls but not many. Contractor and netting for pigeons where needed eg boiler house Regular pest control contractor

	Raw materials – Write here or refer to table at the bottom	
135	Will operations require raw materials? What raw materials are used on site? List all including diesel, poly, lime etc Try to get the proper chemical name as well as what it is referred to.	See table at end of notes
I36	How much is stored on site of each at any one time (maximum tonnage)?	
	What is each material used for?	
SV26	How and where are they stored? Bunded, stored undercover etc? Are they in IBC's, bags, tanks etc?	*Take photos of any plates*
SV27	What is the storage capacity of tanks, IBC's etc, how many on site?	*Take photos of any plates*
	How often are they replaced?	
I38	Describe the basic measures for improving energy efficiency of the activities carried out on site	
	Resource efficiency	
I41	Explain and justify the raw and other materials, other substances and water that SW use at site	Timers on mixers (summer/winter running) - reduction in electrical use
SV28	Describe waste avoidance and waste recovery measures (for the whole site operations, including staff generated waste). Describe how waste is disposed, by whom. This relates to all wastes generated by SWS operations on site – e.g. wash water, screenings etc	Recycling, WEEE cage, contractors for pallets and oils, general waste Electricity efficiency – timers on mixers, blowers on winter/summer settings
	Any water saving measures?	FE reuse
	Combustion	

I43	Does the site have an aggregated net thermal input of combustion plant/s more than 20MW?	No
	Site Plans and Processes	
I50	Please obtain a site layout plan for the site to show the location of all equipment, key aspects of the site infrastructure and operations and emission points	Has the plan been provided and marked up as necessary? (Y/N)
I52	Please explain the waste treatment processes carried out on site, the associated environmental risks and how these are managed/mitigated for each site	
	Risk Assessment	
I55	Please provide any existing environmental risk assessments relating to the operations of the site	
I57	Please confirm whether the site sources all water or a proportion of water through surface water or ground water abstraction.	
I61	Please provide details of the tanks on each site, their contents, how they are maintained, capacity and specification (e.g bunding features) What are the age/condition of tanks?	Holes in some of the tanks been patched
I62	Please provide details of all environmental incidents that have occurred within, or near the site, including any fires and spills. Please explain how these were handled and any environmental impacts identified following the incident.	Hazmat spill at landfill
I63	Please describe any noise mitigation measures on site	None
GEN03	Please provide historical flood records for all sites Are these events recorded anywhere e.g. site diary/log How often are flooding occurrences – e.g. monthly, during heavy rainfall?	None

GEN04	Please provide copies of any additional assessments undertaken at the site e.g. air dispersion modelling, habitats regulations, protected species surveys, preliminary ecological, MCZ screening, noise impact, flood risk, heritage, bioaerosols risk assessments etc	Environmental statement from when plant built 1998
	Health and Safety	
GEN05	Please provide a description of the health and safety procedures that are in place to deal with accidents/incidents on site. Please confirm any accreditation achieved for H&S.	Standard H&S manual
	Is SCADA used on site? What processes are covered by SCADA?	Yes – everything covered by system
	Digesters	
	How many digesters on the site?	3 digesters, 2 post-dig tanks
	Digester capacity	3 x 2513m3 (digesters) 2 x 552m3 (post-dig tanks)
SV29	Any Wesso valves? How many? Any temperature sensitivity observed in the Whesso valves? (previously we have heard of Whesso valves freezing below -5^{o}C)	*Mark up a site plan with information during site visit* 12 wesso: 2x each dig and post-dig and 2x gas bag
SV30	Any monitoring of tanks/gas? Is there an alarm system attached to the Wesso valves (inform SCADA when operational)?	Yes
	What is the ground like surrounding the tanks? E.g. permeable gravel, concrete etc	Digesters in bund – although integrity questionable due to plant growth
SV31	Underground pipework? Known condition?	All above ground except for small section under road near digesters (centrifuge feed), however has covers for access.

		Major gas main through site – hence why site is split
	Is biogas generation managed by reducing the digester feed in the event that the flare stack and/or CHP engine failed and caused the Whessoe valves to release biogas?.	
	Drainage	
	Where do the drains go? E.g. Head of the works	Head of the works
	Is site adjacent to a river or stream?	No
	Is the whole site bunded	Where hardstanding - goes to drains Some grassed areas adjacent to hardstanding which will enter ground, including at low point of site in south
	Are there any cracks in the pavement	None noted - generally good condition on key areas of the site
SV31	In the condition of the underground pipework known?	No underground pipework other than centrifuge feed under road but with removable covers to maintain. No known issues
GEN21	Please describe whether all drainage (surface or foul water) will be captured by the onsite drainage systems.	Yes, all captured by drains where hardstanding and returns to head of works
GEN21	Please describe the drainage surrounding the cake storage bays and whether run off from there is also captured by the drainage system.	N/A – no cake bays
SV34	Has any flooding on site lead to untreated wastewater being discharged to the watercourses due to high volume of water exceeding the storm storage capacity?	No
SV32	Are there any isolation valves, penstock etc operational that can isolate flows? If so where and in what circumstances are these used?	No physical valves but SCADA can control the flows (high level inhibits) if there are areas that need to be shut off
	Abnormal conditions – extreme high temperature, flooding (Climate Change RA)	
SV36	How large is the site's stormwater storage capacity?	Done in catchment (multiple pumping stations in area eg Coombe Valley,

	OR how much retention time do the storm storage tanks allow? Have there been any issues in the past with direct discharge to the watercourse when stormwater storage capacity has been exceeded, occurring repeatedly?	Gravel Hill and Alexandra Park) rather than at this site
CC01	Has the site previously experienced any flooding incidents? If yes, is there information on these? When, how frequent, how severe has flooding been. Has the flooding led to untreated wastewater being discharged to the watercourses due to high volume of water exceeding the storm storage capacity?	No
CC07	Is the access route to the site (main road access) at risk of flooding? Has it flooded previously? Are there alternative access routes?"	No
CC03	What wastewater flow is the site rated at? What is the pass-forward' flow?	922l/s consented but can do up to 1050l/s (originally permitted for higher amount but reduced)
CC04	How large is the site's stormwater storage capacity, OR how much retention time do the storm storage tanks allow?	N/A
CC06	Does the site require potable water for any of its processes?	Yes – offices, poly make-up, internal hoses
CC05	Does the site operate any temperature-sensitive processes? E.g. do any of the biological treatment processes have optimal operating temperature ranges? What are they?	Digesters – 38oC optimum

	Does the AD plant or anything else have optimum temperature range for operation"	
SV38 & CC02	Has the site experienced any issues related to high temperatures in the past – e.g. any odour control issues? Or Potable water availability issues during drought?	Potential for odour issues but little open infrastructure and few receptors nearby. No potable water issues
CC08	Does the site already have a generator installed / provision for a plug-in generator at the site?	Generator present but can also get UKPN to supply plug in one if needed
	Waste generation	
	What wastes are generated by the site?	Office waste, recyclates Grit and rag Pallets, oil drums
	How is it stored?	Empty roro containers around site waiting for collection, some with contents eg rag Main storage area to south of main building: Pallets waiting for collection Chemical drum at angle on portable bund tray which could present issue. Small skip with rag on area of gravel near settling lanes in WTW
	If possible, can you take photos of the rag skips – for Rowan and his plastics work?	
	Other	
SV39	Has any ground investigation/monitoring been undertaken on the site eg for planning permissions? Are there any available monitoring boreholes?	See Environmental Statement from when built – nothing since
	Planned AMP7 schemes for the site that may impact the permit application?	Nothing confirmed however potential for THP instead of cake liming in future and potential digester clean. CHP an issue requiring possible upgrade but is not in the current planned upgrades.

	What is the general site infrastructure like? Any areas of concern?	Generally good although some patching on combined cake mixing tanks.
	Any positive interventions witnessed on site?	Small skip on gravel – asked to move to hardstanding adjacent Cleaning of polymer station as lots on floor around – could be slippery Chemical drum leaning on bund tray – asked to make upright until larger tray sourced
	Age of site? What infrastructure is enclosed?	Built 1999-2001 Majority. STW infrastructure all enclosed. WTW lanes and settlement tanks open.
	Additional notes and questions Gas burned inlet – 2,106Nm3/day Biogas to boiler – 977Nm3/day CHP electricity generated – 18,496 / day Thermal output of CHP – 10,000 /day Flare went off 32x on 12/05/21 with 190m3 from digester feed	

Site name

Notes to FPM/APCS:

Mott MacDonald

Please provide annual throughput and maximum amount stored on-site for each raw material (in either tonnes or m3)

RFI ref	Raw materials mainly associated with chemicals	What raw materials are used on site? Proper chemical name as well as what it is referred to.	How much is stored on site of each at any one time (maximum tonnage)?	What is each material used for?
I39	ferric	Not used	-	-
	poly	C498 and C496	750kg bags. Total ordered as needed: 15 per year for GBT (1GBT poly/3wks) 80 per year for centrifuge (1cent/4-5 days)	
	anti foam	Not really used at the site – not bought for very long time		
	other? Sodium Hypochlorate, sodium hydroxide etc	Caustic Sodium hypochlorate	12000L tank – approx. 2 deliveries/year 25000L tank – approx. 16x deliveries of 12,000L /year	Odour control
	Diesel/ gas oil	Diesel	25000L tank – 1 delivery per year Red diesel 2 x 205l	
	Lime		25T – restocked about 10T /week (18-20t/fortnight) at the moment but higher production than under standard conditions	
	Odour control (mobile)		25L of bubblegum mask – 1 delivery per year	
	Salt pebbles on scrubbers		25kg bags, use 1 bag/week. Order 2xpallets/year (50bags/pallet)	Water conditioner

B. Landmark Envirocheck Report

Please refer to document reference 790101_MSD_SCR_HAS_AppB_Envirocheck

C. Permit Boundary

Please refer to document reference 790101_MSD_SiteLayoutPlan_HAS August 2024