

## Issue and Revision Record

Revision	Date	Originator	Checker	Approver	Description
A	19/11/21	A Khan	S Blackman	A Manns	First issue for client comment
B	15/02/22	A Khan	S Stone	A Manns	Second issue
C	23/03/22	A Khan	S Stone	A Manns	Final
D	25/01/24	SM Bukar	A Manns	A Manns	Update for client comment
E	27/02/24	A Luk	S Stone	A Manns	Final for EA submission
F	24/01/25	S Musa	S Blackman	A Manns	Update for duly making

**Document reference:** 790101\_MSD\_SCR\_FUL January 2025

### Information class: Standard

This document is issued for the party which commissioned it and for specific purposes connected with the above-captioned project only. It should not be relied upon by any other party or used for any other purpose.

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### 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)<sup>1</sup>. 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.

<sup>1</sup> <https://www.gov.uk/government/publications/environmental-permitting-h5-site-condition-report>

1.0 SITE DETAILS	
Name of the applicant	Southern Water
Activity address	Fullerton Wastewater Treatment Works and Sludge Treatment Centre, Romsey Road, Goodworth Clatford, Andover SP11 7HP
National grid reference	SU 36859 41401

Document reference and dates for Site Condition Report at permit application and surrender	Site Condition Report: 790101_MSD_SCR_FUL January 2025  Date of Permit Application: TBC  Date of Surrender: TBC
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Document references for site plans (including location and boundaries)	Location Plan: 790101_MSD_SiteLayoutPlan_FUL January 2025
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2.0 Condition of the land at permit issue	
Environmental setting including: <ul style="list-style-type: none"> <li>• geology</li> <li>• hydrogeology</li> <li>• surface waters</li> </ul>	<p><b><u>Land use</u></b></p> <p>The site (depicted in Figure 1.1) is located 500m to the southeast of the village of Goodworth Clatford, approximately 4km south of Andover. The site is currently occupied by the Fullerton Wastewater Treatment Works (WTW), within which the Fullerton Sludge Treatment Centre (STC) (herby referred to as 'the Site') is located, which has occupied the land since 1973. The area lies within former agricultural fields. The area surrounding the Site is predominantly agricultural with a few small developments. Immediately to the north is Fullerton Solar Farm and 216m north is an active oil well operated by Igas Energy Limited with agricultural fields separating the Site from the village of Goodworth Clatford 700m north of the Site. To the east, south, and west agricultural fields surround the Site with areas of residential buildings. To the northwest lies agricultural fields as well as Goodworth Clatford village, located 700m from the Site.</p>

**Figure 1.1 Fullerton Sludge Treatment Centre Site Plan**



Source: Extract from 790101\_MSD\_Site Layout Plan\_FUL

**Geology**

**Superficial Geology**

BGS mapping (British Geological Survey, 2025) indicates that the majority of the Site is underlain by an absence of superficial deposits. The south of the Site lies on an area of polymict head deposits comprising clay, silt, sand, and gravel. These superficial deposits formed up to 3 million years ago in the Quaternary Period. Local environment previously dominated by subaerial slopes. The extent of the site in the west lies upon an area of River Terrace Deposits (RTD) associated with the River Anton, comprising sand, silt and clay. These superficial deposits formed up to 3 million years ago in the quaternary period. Local environment previously dominated by rivers.

**Bedrock Geology**

The Site lies upon the Newhaven Chalk Formation – Chalk which comprises soft to medium hard, smooth white chalks with numerous marl seams and flint bands, including abundant Zoophycos flints (notably at levels near the base). The formation is known to contain distinct phosphatic chalks of limited lateral extent. Equivalent beds, the Margate Chalk of north Kent, are marl-free and contain little flint.

**BGS Boreholes**

There are no BGS boreholes present within 100m of the Site.

BGS estimated soil chemistry indicates concentrations of:

- Arsenic: <15 mg/kg;
- Cadmium: <1.8 mg/kg;
- Chromium: 60-90 mg/kg;
- Lead: <100 mg/kg; and
- Nickel: 15-30 mg/kg (majority of Site) and <15 mg/kg (southeast corner of Site)

**Hydrogeology**

	<p>The Newhaven Chalk formation underlying the Site is designated by the Environment Agency as a Principal aquifer.</p> <p>The surrounding superficial alluvium and River Terrace Deposits to the south and west have both been designated as Secondary A aquifers. The head deposits to the southeast have both been designated as a Secondary (undifferentiated) aquifer.</p> <p>The Site lies within an area of groundwater flooding capability with potential flooding to property situated below ground level and at the surface</p> <p><b><u>Hydrology and flooding</u></b></p> <p>There is an on-site drain that does not leave the site boundary.</p> <p>The River Anton is located 40m west of the Site, flowing south and joining the River Test 3.5km downstream which in turn flows into the English Channel. A drain is present 10m west of the site and flows into the River Anton. Northeast of the Site (approximately 165m away), a drain associated with the disused oil well formerly operated by Star Energy Oil Uk Ltd is present exclusively within that site. There are no further drains located within 500m of the Site area. Immediately west of the Site, the course of the River Anton has been artificially altered through sluice gates and channels to facilitate irrigation. The River Anton is listed on the OS Water Network Map as an inland river.</p> <p><b><u>Sensitive land use</u></b></p> <p>The Site falls with two nitrate vulnerable zones; Hampshire Chalk (groundwater) and Hamble Estuary eutrophic NVZ (Trac) (eutrophic water). The decommissioned Test Valley environmentally sensitive area lies 131m southwest of the site.</p>																								
<p>Pollution history including:</p> <ul style="list-style-type: none"> <li>• pollution incidents that may have affected land</li> <li>• historical land-uses and associated contaminants</li> <li>• any visual/olfactory evidence of existing contamination</li> <li>• evidence of damage to pollution prevention measures</li> </ul>	<p><b><u>Pollution incidents to controlled waters</u></b></p> <p>There have been no pollution incidents to controlled waters on site or within 1km of the Site.</p> <p><b><u>Discharge consents</u></b></p> <p>There are no discharge consents indicated on site.</p> <p>Within 250m of the Site are four discharge consents. However, none are active.</p> <table border="1" data-bbox="470 1568 1396 2027"> <thead> <tr> <th>Distance from Site</th> <th>Operator</th> <th>Discharge Type</th> <th>Receiving Water</th> <th>Issue Date/Revocation Date</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>5m SW</td> <td>Southern Water Services Ltd</td> <td>Sewage discharges</td> <td>River Test</td> <td>31/03/2009 31/03/2009</td> <td>Currently under appeal</td> </tr> <tr> <td>161m N</td> <td>The Managing Director</td> <td>Trade effluent discharge – site drainage associated with oil extraction</td> <td>Into land</td> <td>17/11/1997 6/09/2012</td> <td>Surrendered under EPR 2010</td> </tr> <tr> <td>174m N</td> <td>Star Energy Oil Uk Ltd</td> <td>Trade effluent discharge – site drainage</td> <td>Into land</td> <td>20/01/2000 11/03/2007</td> <td>Authorisation revoked</td> </tr> </tbody> </table>	Distance from Site	Operator	Discharge Type	Receiving Water	Issue Date/Revocation Date	Status	5m SW	Southern Water Services Ltd	Sewage discharges	River Test	31/03/2009 31/03/2009	Currently under appeal	161m N	The Managing Director	Trade effluent discharge – site drainage associated with oil extraction	Into land	17/11/1997 6/09/2012	Surrendered under EPR 2010	174m N	Star Energy Oil Uk Ltd	Trade effluent discharge – site drainage	Into land	20/01/2000 11/03/2007	Authorisation revoked
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		associated with oil extraction			
173m N	Ultramar Plc	Discharge of other matter– surface water associated with the making of coke and refined petroleum products	Into land	19/12/1986 01/07/1991	Pre National Rivers Authority Legislation where issue date < 01/09/1989

**Nearby industrial land uses**

There are no active or inactive Contemporary Trade Directories within 250m of the Site.

There are three points of interest on the Site all for waste storage, processing, and disposal associated with sewage works, all registered for the Fullerton WTW and STC.

There are 15 further points of interest within 250m of the Site; the Fullerton Solar Farm immediately north of the Site, two oil wells 220 and 226m north of the Site, three tanks between 233 and 242m north of the Site, seven sluices between 49 and 212m southwest of the Site, and two sluices 197 and 208m west of the Site.

**Recorded Landfill and Historic Landfill**

There are no BGS recorded landfill site within 250m of the Site.

There is one landfill site 597m northeast of the Site, which has been recorded in both 2000 and 2006.

**Registered Waste Treatment or Disposal Sites**

There are two registered waste management facilities on site. The first licence, issued in 1991, for all waste sources was superseded in 1995. Poisonous, noxious, polluting, and special wastes as well as waste N.O.S are prohibited. The second licence, issued in 1995, also has no known restriction on source of waste. Special wastes and waste N.O.S are prohibited.

**Licensed Waste Management Facilities**

There is one licenced waste management facility on site, and one further facility within 250m of the Site. On site, the waste management facility is registered to Southern Water Ltd. The further licenced waste management facility is 219m north of the Site and was issued a license in 2018 for mining waste operations.

**Local Authority Pollution Prevention and Controls**

There is one integrated pollution prevention and control record for the Site, and nine further recorded within 250m of the Site. The on-site record was licenced to Southern Water Services Ltd, in 2019, for a new medium combustion plant. This authorisation is still effective.

Located 228m north of the Site, an integrated pollution control authorisation was provided to Pentex Oil Uk Ltd, issued in 2000, for petroleum processes within the Fuel and Power Industry. This authorisation was revoked (now IPPC) Located 210m north of the Site, an integrated pollution prevention and control authorisation was provided to Island Gas Limited, issued in 2021, for loading/storage/treatment etc. of crude oil. This authorisation is still effective.

Located 215m north of the Site, an integrated pollution prevention and control authorisation was provided to Star Energy Oil Uk Limited, issued in 2007, for loading/storage/treatment etc. of crude oil. This authorisation was superseded by a variation.

There are six recorded integrated pollution prevention and control records associated with a development 158m north of the Site. These were awarded for loading/storage/treatment etc. of crude oil as follows (date in bold is still effective, the remaining five are superseded by variation):

- Star Energy Oil Uk Limited: 2007;
- Star Energy Weal Basin Limited: 2011, 2012; and
- Island Gas Limited: 2012, 2018.

**Mining and quarrying**

The Site is located in a former mining area and current oil extraction zone. One active oil well is located 216m north of the site operated by Igas Energy Limited. Within 500m of the Site, there are two opencast chalk pits that have ceased operations, 386m and 473m east.

**Historical Land use**

Date	Land Use
<b>1872 – 1874</b> (1:2,500)	<p><b>On site:</b> The earliest available historic maps from 1872 indicate that the site area is comprised of agricultural land.</p> <p><b>Off site:</b> The River Anton is present 40m west of the site, running northwest to southeast with sluices along its course. A drain is present alongside the River towards the western boundary of the site. A public footpath is present between the site and the drain. A small copse of trees is present directly south of the site.</p>
<b>1897</b> (1:10,560)	<p><b>On site:</b> No changes</p> <p><b>Off site:</b> Goodworth Clatford is present 400m northwest of the site. Several Old chalk pits are present between 250 and 1,000m from the site, predominantly to the east.</p>
<b>1973</b> (1:2,500)	<p><b>On site:</b> The sewage works is first present including the on-site drain. The layout is similar to that seen presently.</p> <p><b>Off site:</b> A footbridge is present across the River Anton 40m west of the site. An electricity transmission line constructed running southwest to north east 150m southeast of the site. A pylon is present along this line also 150m southeast of the site.</p>
<b>1992</b> (1:2,500)	<p><b>On site:</b> Two circular tanks constructed directly south of the electrical substation.</p> <p><b>Off site:</b> No changes.</p>
<b>1999</b> (Aerial)	<p><b>On site:</b> A small rectangular pond is present alongside the southern site boundary southwest of the two 1992 circular tanks. A small circular storage tank has been constructed directly west of the new pond.</p> <p><b>Off site:</b> No changes.</p>
<b>2000</b> (1:10,560)	<p><b>On site:</b> Four storage bays are present in the southwest corner of the site south of the conveyor.</p> <p><b>Off site:</b> An oil well is present 216m north of the site as well as the associated drain. A landfill site is present 597m northeast of the site, this landfill is associated with a car park 400m northeast of the site. The Hampshire Golf Club course is present 450m northwest of the site.</p>

	<table border="1"> <tr> <td data-bbox="470 280 646 369"> <b>2006</b>  <b>(1:10,560)</b> </td> <td data-bbox="646 280 1412 369"> <b>On site:</b> An additional storage bay is present in the southwest corner of the site in between the conveyor and four storage bays present in 2000.   <b>Off site:</b> No changes.         </td> </tr> <tr> <td data-bbox="470 392 646 481"> <b>2021</b>  <b>(1:10,560)</b> </td> <td data-bbox="646 392 1412 750"> <b>On site:</b> The small point in the south of the site has been infilled. The copse of trees directly south of the site now extends partially into the site surrounding the circular storage tank present in 2000. Nine storage bays are present along the north site boundary directly north of the most easterly rectangular tanks and two sets of four filter beds. The four circular filter beds in the west of the site have been replaced by six beds parallel to the western site boundary in a line of two and then four moving into the site from the boundary. Directly to the east of these beds a new small rectangular bed structure is present with associated infrastructure directly east of that. The four largest circular filter beds towards the east of the site have been replaced by six circular beds arranged in two columns of three.   <b>Off site:</b> Immediately north of the site the Fullerton Solar Farm is now present.         </td> </tr> </table>	<b>2006</b> <b>(1:10,560)</b>	<b>On site:</b> An additional storage bay is present in the southwest corner of the site in between the conveyor and four storage bays present in 2000.  <b>Off site:</b> No changes.	<b>2021</b> <b>(1:10,560)</b>	<b>On site:</b> The small point in the south of the site has been infilled. The copse of trees directly south of the site now extends partially into the site surrounding the circular storage tank present in 2000. Nine storage bays are present along the north site boundary directly north of the most easterly rectangular tanks and two sets of four filter beds. The four circular filter beds in the west of the site have been replaced by six beds parallel to the western site boundary in a line of two and then four moving into the site from the boundary. Directly to the east of these beds a new small rectangular bed structure is present with associated infrastructure directly east of that. The four largest circular filter beds towards the east of the site have been replaced by six circular beds arranged in two columns of three.  <b>Off site:</b> Immediately north of the site the Fullerton Solar Farm is now present.
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<p>Evidence of historic contamination, for example, historical site investigation, assessment, remediation and verification reports (where available)</p>	<p><b><u>Contaminants of concern</u></b></p> <p>The following contaminants are of concern regarding the industrial activities stated above, in addition to the current use of the site:</p> <ul style="list-style-type: none"> <li>● total petroleum hydrocarbons (TPH);</li> <li>● polycyclic aromatic hydrocarbons (PAH);</li> <li>● heavy metals and inorganics;</li> <li>● pathogens;</li> <li>● asbestos;</li> <li>● polychlorinated biphenyls (PCBs);</li> <li>● chlorinated solvents and phenols; and</li> <li>● volatile and semi-volatile organic compounds (VOC/SVOC).</li> </ul> <p>There may also be ground gases present, likely comprising CO<sub>2</sub> and CH<sub>4</sub>.</p> <p><b><u>Site walkover</u></b></p> <p>A site visit was conducted in October 2021. A summary of the findings are as follows:</p> <ul style="list-style-type: none"> <li>● A few cracks and potholes were noted in the pavements and hardstanding across the site.</li> <li>● Total waste storage capacity at the site includes 14 cake bays – 1000t bays.</li> <li>● Permitted activities on site include TTW operation and one Combined Heat and Power (CHP) plant for site running, excess is exported to grid. A T21 exemption is used on site.</li> <li>● Sludge is accepted from approximately 30 other sites. This Site does not accept hazardous waste.</li> <li>● Cake moved using telehandler and treated with a centrifuge the transported by conveyor (10ft from ground) to a receiving bay and eventually to a cake bay. The site contains 14 cake bays six of which are reserved for the sites own cake, and eight of which are for imported cake after digestion process. The site also accommodates emergency cake from other sites occasionally. The site takes on average five-six weeks to fill a bay. Cake</li> </ul>				

	<p>removed by telehandler daily. Cake removed by ACS once ready and transported to farmers.</p> <ul style="list-style-type: none"> <li>• Cake bays are generally in good condition and sufficiently contain the cake. The cake bay drainage is cleaned out every 6 months by a specialist contractor.</li> <li>• The Site has one generator in case of an emergency.</li> <li>• There are currently no pest issues on site.</li> </ul> <p><b><u>Site data</u></b></p> <p>No site investigation reports are known to be available for the Site.</p> <p>Cracks in pavement may lead to leachable contaminants being present in the subsurface, but this has not been confirmed.</p> <p><b><u>Planning applications</u></b></p> <p>A search of the Andover District Council planning portal was conducted on the 20<sup>th</sup> January 2025. Within 250m radius of the Site, three applications with relevant information on ground conditions were discovered as follows:</p> <ul style="list-style-type: none"> <li>• Installation of a combined heat and power (CHP) unit within the Site.</li> <li>• An application to vary the conditions relating to the permission for the installation of ground-mounted photovoltaic solar arrays on the northern border of the Site.</li> <li>• Drilling of a water monitoring borehole at the existing Goodworth Clatford Oilfield located approximately 216m north of the Site.</li> </ul> <p>These applications have been granted permission and there is no contamination risk identified in relation to the applications.</p>
<p>Baseline soil and groundwater reference data</p>	<p>No reference data is currently available for the site.</p>
<p><b>Supporting information</b></p>	<p>The main information source used for producing this SCR was the Envirocheck report (Refer to Appendix). Other supporting information along with links for accessing them are summarised below</p> <ul style="list-style-type: none"> <li>• British Geological Survey, Geology of Britain viewer <a href="http://www.bgs.ac.uk">www.bgs.ac.uk</a> consulted January 2025;</li> <li>• Magic Map <a href="http://magic.gov.uk/">http://magic.gov.uk/</a> consulted January 2025;</li> <li>• Test Valley Borough Planning Portal (2025). Planning application search. Available at: View <a href="https://view-applications.testvalley.gov.uk/online-applications/">https://view-applications.testvalley.gov.uk/online-applications/</a> (Accessed January 2025); and</li> <li>• Southern Water (2014) Wastewater Above Ground Capacity Assessment – Fullerton WTW, Issue 2.0</li> </ul>

**3.0 Permitted activities**



**M****M****MOTT  
MACDONALD**

<p>Overview of site processes</p>	<p>Currently, Fullerton STC accepts both indigenous and imported primary sludge. The Site receives around 680m<sup>3</sup> of liquid sludge import by tankers weekly.</p> <p>The indigenous and imported sludge is stored in 2 No. sludge reception tanks (260m<sup>3</sup> each) before being pumped through 2 No. strain presses. Screened sludge is stored in 2 No. screened sludge storage tanks (1,000m<sup>3</sup> each) from where it is fed to 2 No. drum thickeners.</p> <p>Thickened sludge is stored in 1 No. thickened sludge storage tank (90m<sup>3</sup>) from where it is fed to 3 No. anaerobic digesters (950m<sup>3</sup> each) at 7% dry solids (DS), operating between 33°C and 38°C. Temperature is automatically maintained by heat exchangers. Polyelectrolytes are added to aid the thickening process.</p> <p>Digested sludge is stored in 2 No. post digestion storage tanks (PDST) (287m<sup>3</sup> each) from where it is fed to 2 No. centrifuges for dewatering.</p> <p>Digested sludge cake is stored in 6 No. indigenous cake bays (~2,000m<sup>3</sup> in total) before being recycled to farmland. 1 No. cake bay is used for centrifuge reception and moved to one of the other 5 No. bays for storage. The cake bays take 5-6 weeks to fill.</p> <p>Digested sludge cake is imported from Millbrook STC and occasionally from other sites in emergencies (including Budds Farm and Ford). The imported cake is stored in 8 No. imported cake bays (~4,000m<sup>3</sup> in total). Cake from different sites are kept separate. for further maturation. 1 No. cake bay is designated for use for the storage and bulking up imported grit and screenings and other solid wastes from sewer cleaning (e.g. vactor) prior to being sent off site for treatment or disposal elsewhere. The cake bays are thoroughly washdown after emptying to prevent cross contamination and are clearly identified using appropriate signage.</p> <p>Biogas produced by the digestion process is stored 1 No. double skinned gas bag holder (400m<sup>3</sup>). Biogas is combusted in a CHP plant in order to generate electricity to power the Site's electrical equipment and processes, and heat to maintain temperature within the digestion process,</p> <p>The 1 No. CHP unit has a thermal rated input of 1.23MWth and 2 No. dual fuel boilers (1 No. 0.78MWth and 1 No. 0.46MWth) powered by biogas and diesel, which are used then the CHP engine is offline.</p> <p>Liquors from drum thickeners, are pumped to 3 No. liquor buffer tanks (340m<sup>3</sup> each) and centrifuge liquors are pumped to the 2 No. centrifuge liquor buffer tanks (115m<sup>3</sup> each), before being pumped to the primary tank distribution chamber by the works return pumping station downstream of storm separation.</p> <p>The Site has 2 No odour control biofilter systems (utilising seashell media) installed in 1998. 1 No. for sludge treatment area (sludge wells, drum thickeners and centrifuges) and 1 No. for the sludge storage tanks. However, both OCU's are currently not in operation.</p>
<p>Permitted activities</p>	<p>The site currently has two Environmental Permits in operation. Permit EPR/SP3492HL is the Southern Water owned tankered waste permit existing on- site and Permit EPR/PP3303PQ allows the use of a combined heat and</p>

	power plant (CHP). Five directly associated activities (DAAs) are also permitted and include sludge reception and storage, sludge thickening and dewatering, biogas conversion, storage and combustion, and cake storage.
Non-permitted activities undertaken	Waste activities comprising imports, physio-chemical and anaerobic digestion treatment and waste storage are currently non-permitted activities on-site. Anaerobic digestion is to be permitted under the Industrial Emissions Directive under a Bespoke Installation Permit as Anaerobic Digestion of sludge is no longer excluded under the Urban Waste Water Treatment Directive and associated regulations. Permitted Directly Associated Activities include waste import, physio-chemical treatment of sludges and storage of indigenous and imported sludges.
Document references for: <ul style="list-style-type: none"> <li>plan showing activity layout; and</li> <li>environmental risk assessment.</li> </ul>	<ul style="list-style-type: none"> <li>Southern Water. Fullerton STC Site Location Plan.</li> <li>Southern Water (2010) Environmental Permits. Permit Ref. EPR/SP3492HL.</li> <li>Southern Water (2016) Environmental Permits. Permit Ref. EPR/PP3303PQ.</li> </ul>

**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?	<p>Due to impending changes in the way the Waste Management industry is regulated by the Environment Agency, STCs are obliged to apply for Installation Permits under the Industrial Emissions Directive (IED) and comply with new permit conditions by March 2025. 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)).</p> <p>Activities at Fullerton STC will continue, as prior to the introduction of the updated and amalgamated permit, although under any new requirements imposed by the permit.</p>

<p>Have any 'dangerous substances' not identified in the Application Site Condition Report been used or produced as a result of the permitted activities?</p>	<p>No prior site condition report (SCR) is known to exist for the site. 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.</p> <p>'Dangerous substances' that are used or produced at the site include:</p> <ul style="list-style-type: none"> <li>• Red diesel;</li> <li>• Fuel oil;</li> <li>• Ferric Chloride;</li> <li>• Polymer (powder form) use in drum thickener and centrifuge</li> <li>• Methane (produced from the digestors and stored in the on-site double membrane gas holder);</li> <li>• Effluent screenings (rag and grit from screening process at inlet works).</li> </ul>
<p>Checklist of supporting information</p>	

<p>5.0 Measures taken to protect land</p>	
<p>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.</p>	
<p>Checklist of supporting information</p>	<ul style="list-style-type: none"> <li>• Inspection records and summary of findings of inspections for all pollution prevention measures</li> <li>• Records of maintenance, repair and replacement of pollution prevention measures</li> </ul>

<p>6.0 Pollution incidents that may have had an impact on land, and their remediation</p>	
<p>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.</p>	
<p>Checklist of supporting information</p>	<ul style="list-style-type: none"> <li>• Records of pollution incidents that may have impacted on land</li> <li>• Records of their investigation and remediation</li> </ul>

<p>7.0 Soil gas and water quality monitoring (where undertaken)</p>	
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<p>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.</p>	
<p>Checklist of supporting information</p>	<ul style="list-style-type: none"> <li>• Description of soil gas and/or water monitoring undertaken</li> <li>• Monitoring results (including graphs)</li> </ul>

<p>8.0 Decommissioning and removal of pollution risk</p>	
<p>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.</p>	
<p>Checklist of supporting information</p>	<ul style="list-style-type: none"> <li>• Site closure plan</li> <li>• List of potential sources of pollution risk</li> <li>• Investigation and remediation reports (where relevant)</li> </ul>

<p>9.0 Reference data and remediation (where relevant)</p>	
<p>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.</p> <p>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.</p>	
<p>Checklist of supporting information</p>	<ul style="list-style-type: none"> <li>• Land and/or groundwater data collected at application (if collected)</li> <li>• Land and/or groundwater data collected at surrender (where needed)</li> <li>• Assessment of satisfactory state</li> <li>• Remediation and verification reports (where undertaken)</li> </ul>

<p>10.0 Statement of site condition</p>	
<p>Using the information from sections 3 to 7, give a statement about the condition of the land at the site. This should confirm that:</p> <ul style="list-style-type: none"> <li>• the permitted activities have stopped</li> <li>• decommissioning is complete, and the pollution risk has been removed</li> <li>• the land is in a satisfactory condition.</li> </ul>	

## A. Site Walkover

<b>Site Name</b>	Fullerton
<b>Date</b>	22 <sup>nd</sup> October 2021
<b>Attendees</b>	Anita Manns, [REDACTED]
<b>Permit and exemption references</b>	EPR/PP3303PQ. 1x biogas fuelled CHP and 1x diesel fuelled back-up generator (for testing – no more than 50hrs/yr) SP3492HL – TTW permit up to 415,300t
<b>Covid secure measures for accessing site</b>	

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:**

Site is fairly remote. The nearest and only human receptors are 2 houses (previously for site staff until sold on, now privately owned) adjacent to the site entrance gate and within 10m of the cess import and inlet works.

However, there are no complaints received from the residents

<b>RFI Ref</b>	<b>Site operations</b>	
	Operational contact details for the application forms	FPM/ APC as per previous tranches
	No of site staff (day and shift operators etc)	4 based on site/ 3 at any one time/week. 4 week rota.

I15	During what hours is the site staffed Monday – Friday and at weekends?	Mon – Fri: 7am – 5pm Sat: 7am – 1pm Sun: 7am – 11am On call – Milbrook and Slowhill (opse)
	What hours can waste enter the site (planning)	Opening hours for TTW (Mon – Fri). Sludge can enter 24/7
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)	14 cake bays – 1000t bays
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.	
I21	How many years is each permit expected to be required for?  List details of each permit separately	Permanent
GEN07	Please describe the aspects of the site that generate litter, mud and debris within and outside the site boundary.	Usual as per other sites/ Rag/ treatment/ screening, grit separation, general waste etc.
GEN08	Describe the site cleaning procedures on site.  Including any infrastructure cleaning, wheel wash etc	Standard. Wheel wash station with FE hose
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	Gates are manually operated and locked out of hours, open in opening hours. CCTV above cess plant.  Perimeter fencing: ¾ of site has 10ft chainlink fence with barbed wire. ¼ has a 3 wired barbed wire fence. This are is densely covered with trees and bushes.

	of, height etc? Gate control, CCTV, how many cameras etc	
<b>Site Plans</b>		
GEN13	<p>Please provide a copy of the Site Plan showing the proposed permitting boundary in green.</p> <p>This can be overlaid the Site Layout Plan.</p> <p>The Site Plan will be placed in the permit and needs to show a north arrow, identifiable location indicators (such as roads).</p>	
<b>Visual impacts</b>		
GEN10	Please describe the visual impacts of each site.	
<b>Site condition report</b>		
SCR02	Please provide a list of permitted activities per site.	1 x CHP TTW
SCR03	<p>Please provide a list of non-permitted activities per site.</p> <p>Including exemptions</p>	T21 Exemption
SCR05	Please provide any environmental risk assessments for site.	Air screening assessment provided
SCR06	Site overview	See updated IMP for info on the assets and site plan
<b>Emergency procedures</b>		
GEN17	Provide a description of the emergency procedures for each site	Standard co EMS
<b>Sludge import</b>		
SV01	Does the site accept trade waste (commercial tankers)?	Yes
SV01/02	<p>How many tankers arrive at the site per day?</p> <p>Where are the tankers unloaded? Is an odour control hose used during unloading?</p>	<p>TTW – max 7 allowed per day due to ammonia levels. Typically 3-4 in spring-autumn and 7 in winter.</p> <p>Sludge – 150-170m<sup>3</sup> /day in 29m<sup>3</sup> tanker. 5-6 tankers/day</p> <p>No ocu hoses used</p> <p>All sludge side on SCADA</p> <p>No H<sub>2</sub>S monitors other than on CHP</p>

SV03	Where is sludge imported from? Sludge imported from other satellite sites? How many?	30 sites on average
<b>I22</b>	<b>Air Emissions</b>	
	<b>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:</b>	
	<b>Source 1</b> <b>CHP</b>	<i>Indicate individual sources on site layout plan</i>
	National Grid Reference	
	Source type	<b>Biogas</b>
	Parameter (e.g. oxides of nitrogen)	
	Quantity (with its unit)	
	Stack height	<b>10m</b>
	<b>Source 2</b> <b>Boilers x2 (1 duty 1 standby)</b>	<i>Indicate individual sources on site layout plan</i>
	National Grid Reference	
	Source type	<b>Dual – biogas and diesel</b>
	Parameter (e.g. oxides of nitrogen)	
	Quantity (with its unit)	
	Stack height	
	<b>Source 3</b> <b>Flare x1</b>	<i>Indicate individual sources on site layout plan</i>
	National Grid Reference	
	Source Type	<b>Biogas – emergency use/CHP downtime</b>
	Parameter (e.g. oxides of nitrogen)	
	Quantity (with its unit)	
	<b>Source 4</b> <b>Generators x1</b>	<i>Indicate individual sources on site layout plan</i>
	National Grid Reference	
	Source Type	<b>Diesel</b>
	Parameter (e.g. oxides of nitrogen)	
	Quantity (with its unit)	
	<b>Source 5</b> <b>OCU and whessoe</b>	<i>Indicate individual sources on site layout plan</i>
	National Grid Reference	



	Source Type	<b>Redundant OCU – whessoe x6 – 2x3 digesters. None on gas holder</b>	
	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?	Condensate pots x4 discharge to drainage -> inlet works. CHP maintained by Veolia Flare - DSL	
	Please clarify whether safety zoning of areas is undertaken under DSEAR/PEXA at site.		
	<b>Air Emissions from plant</b>		
		<b>Plant 1 - CHP</b>	<b>Plant 2 – Diesel gen Plant 3 - boiler</b>
I27	What date did the combustion plant become operational?	<b>2019-</b>	
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		
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?		
I32	<del>What is the stack height for each stack?</del>		
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?		
	Provide manufacturer's specifications for all combustion plant where possible.		

	<b>Additional space for information on plant (if required)</b>	
	<b>AQ screening assessment received for Fullerton Jan 2019 – Ricardo. Includes boilers numbers and generators.</b>	
	<b>Emissions</b>	
	<b>Emissions to land</b>	
GEN20	<p>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.</p> <p>Include NGR is discharges to ground.</p> <p>Include location of inlet works if condensate goes to site drainage.</p> <p>If container used to collect condensate, where and how often, does it get emptied?</p>	<p><b>To drainage on site. National grid references (NGRs) needed.</b></p> <p><b>Carbon packs (CHP) – none according to site manager but 3 noted by CHP</b></p>
	<b>Exemptions</b>	
	<p>What exemptions are used on site?</p> <p>Typically SW have T21, D5 and S1.</p>	T21
	<b>Cake storage</b>	
SV04	<p>Is any cake imported? If so, how is it unloaded from trucks and where is it unloaded?</p>	<p>Issue with liming plant at Millbrook.</p> <p>6-8 RoRos/ day 7 days a week, 24/7.</p> <p>Budds on test, 12-16/ day 2-3 days- 1/month</p> <p>Receives cake for further maturation if doesn't meet correct pH to spread to land</p>
SV05	<p>Where is cake stored?</p> <p>How is cake stored? E.g. Cake bays, silos, directly into skips etc</p>	Bays
	<p>How many cake bays/silos/other are there on site?</p> <p>How long does it take to fill a bay e.g. 4-6weeks?</p>	<p>14 bays – 6 for sites own cake, 8 for imported. Imported after digestion process.</p> <p>Occasionally cake from other sites – emergency only.</p> <p>Millbrook 32-42 days to mature. Fullerton 64 days.</p> <p>5-6 weeks to fill a bay.</p>
	<p>What is the total surface area of the cake bays?</p> <p>Or total volume that can be stored if known? E.g. L x H x W.</p> <p>What is the total capacity (if in a silo)?</p>	1000t bays – check whether this total capacity

SV06	How is cake moved to the cake bays (enclosed truck etc)? How frequently is cake moved around the site?	Cake moved using telehandler and treated with a centrifuge the transported by conveyor (10ft from ground) to a receiving bay and eventually to a cake bay.
SV07	Is the cake treated further after the centrifuge e.g. liming of cake within cake bays?	No liming
SV08	When cake is within the bay, is the cake turned/disturbed at all? How often? Why?	Left. No turning etc.
SV09	How is cake removed from the site? How often? Over what timeframe? e.g. 2weeks constantly	Cake removed by telehandler daily. Cake removed by ACS once ready and transported to farmers.
SV10	What is the condition of the cake bays? Eg condition of base, height of walls? Does this sufficiently contain the cake? Are there any known issues?	Generally good condition. Yes. None – drainage cleaned out 6-monthly by MTS.
	<b>Water usage</b>	
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)	2% potable – poly make up (centrifuge and drum thickener). Office – general. 98% FE – site cleaning, wheel washing
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?	None
	<b>Generators</b>	

SV13 - 19	<p>Are there any generators on site?</p> <p>How many and what size (MW)? What are they used for e.g. primary/secondary. Site running, exporting power to grid?</p> <p>Do they export to grid or import from grid to run the site?</p> <p>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?</p> <p>What are their fuel sources? E.g. diesel, biogas, other source</p> <p>How many hours per year do they operate?</p> <p>Any monitoring undertaken?</p> <p>If so, what for and what are the standards used?</p>	<p>1 generator.</p> <p>Max output 550kW, only runs at 75% load at any time due to gas availability (412.5kw).</p> <p>Site running in case of power in case of emergency</p> <p>Grid import to run site of use CHP</p> <p>Biogas</p> <p>Generally not 24/7. In the last 8 months it has run 4161 hours with an average of 520 hours a month at 75% load.</p> <p>None – entering triad period, but due to emissions from generator is not currently running</p>
<b>CHP engines/boilers</b>		
	How many CHPs/boilers on site?	<i>Take photos of any plates</i>
SV18	What size (MW)? What are they used for e.g. primary/secondary. Site running, exporting power to grid?	1x CHP for site running and excess is exported to grid. 1x redundant CHP.
SV17	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?	1x flare <10% of time for emergencies and CHP downtime.
GRA01	Are the CHP's/boilers/ generators adequate for the amount of gas produced by the site?	Yes.
	Any monitoring undertaken?	Yes – Veolia monitor CHP.
MIL01	If so, what for and what are the standards used?	60-80% using hot water 85 degrees C to heat digester.
	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 %)	
<b>Noise</b>		
I64	Please describe any noise mitigation measures on site.	None – CHP inbuilt and in the middle of the site.
	Other abatement?	None
	Have any noise assessments been undertaken on the site?	None

	Have there been any noise complaints?	None
SV19	Any monitoring undertaken? If so, what standards are used?	None
	<b>Odour</b>	
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?	Biofilter present but not used because there are no odour issues.  No mobile OCU
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?  How and when is the odour control maintained/inspected to ensure they remain effective?  Please provide full maintenance schedules for each site	<i>Obtain as much information as possible on system used and take photos.</i>  Biofilter - not used.  No processes are odour controlled.
SV24	Is odour monitored? If so how?	No monitoring
	Is there a site specific odour management plan?	See generic OMP.
	Any odour complaints?	None.
	Other abatement?	H2S on CHP is monitored
GEN16	Describe the maintenance programmes that are undertaken to ensure odour and bioaerosol control measures are maintained	
OMP02	Please identify the most common sources of odour complaints (i.e. during movement of cake, etc)	
OMP01	Dry solids range (%), sludge type, sludge pH, and storage time at average throughput for different tanks / processes.	Cake 27-29% DS, pH 7.2 Sludge 3-4 DS 14 day retention in AD
OMP04	For each asset on-site, please provide: <ul style="list-style-type: none"> <li>• Potential odour source</li> <li>• Odour controls in place (see SV21)</li> </ul>	STC all enclosed Cake bays open Sludge import – enclosed

	<ul style="list-style-type: none"> <li>• Potential for odour emissions</li> <li>• Action to be taken in case of failure</li> <li>• Person responsible</li> </ul>	PST tanks open FE tanks open
	<b>Bioaerosols</b>	
GEN15	Describe the processes and bioaerosol control measures (e.g. odour abatement systems, enclosed tanks, filters) associated with:	None. All STC enclosed
	<ul style="list-style-type: none"> <li>• 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)</li> </ul>	See earlier
	<ul style="list-style-type: none"> <li>• Handling and storage of sludge/digestate throughout AD process</li> </ul>	As with other similar sites
	<ul style="list-style-type: none"> <li>• Disposal of biogas (combustion)</li> </ul>	CHP Flare in emergency
	<ul style="list-style-type: none"> <li>• Any other relevant procedures onsite which could generate bioaerosols</li> </ul>	Cake movement
	If using odour suppression sprays are they used to just mask the smell or to catch and drop the odour?	None
	Is sludge arriving on site processed immediately? If not how long is it until it is fed into the system?	Processed immediately
	<b>Pests</b>	
SV25 & GEN12	<p>Does the site experience pests and if so what are they (birds, vermin etc)?</p> <p>What measures are in place to prevent/control pests?</p> <p>What measures are in place to remove pest issues?</p> <p>What's the frequency of visits by a pest control contractor?</p>	No issues. No contractor not seen under new contract, old contract 12/yr. Bait boxes – no bait.  None currently
	<b>Raw materials – Write here or refer to table at the bottom</b>	
135	<p>Will operations require raw materials?</p> <p>What raw materials are used on site? List all including diesel, poly, lime etc</p> <p>Try to get the proper chemical name as well as what it is referred to.</p>	
I36	How much is stored on site of each at any one time (maximum tonnage)?	
	What is each material used for?	See previous tranches.

SV26	How and where are they stored? Bundled, stored undercover etc? Are they in IBC's, bags, tanks etc?	<i>Take photos of any plates</i>
SV27	What is the storage capacity of tanks, IBC's etc, how many on site?	<i>Take photos of any plates</i>
	How often are they replaced?	
I38	Describe the basic measures for improving energy efficiency of the activities carried out on site	Generic text, any site specific? Check with APC
	<b>Resource efficiency</b>	
I41	Explain and justify the raw and other materials, other substances and water that SW use at site	See generic text in earlier tranches. Anti foam efficiencies by installing a pipe to spray FE water - decreases the need for anti-foam, saving £10,000/ year.
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	Rag and grit removed by MTS to Avonmouth WEEE and metal recovered by Light Bros. Any contaminated waste (rags, spill, poly waste, oils) treated by Light Bros General – Biffa 2x recycle 2 gen waste. 1 skip for other waste.
	Any water saving measures?	FE is used a lot on site.
	<b>Combustion</b>	
I43	Does the site have an aggregated net thermal input of combustion plant/s more than 20MW?	No.
	<b>Site Plans and Processes</b>	
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	As per previous tranches.
	<b>Risk Assessment</b>	
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?	
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.	
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 reported.
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	
<b>Health and Safety</b>		
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.	
	Is SCADA used on site? What processes are covered by SCADA?	STC covered
<b>Digesters</b>		
	How many digesters on the site?	3. All underground. Completely surrounded by concrete in a concrete jacket.
	Digester capacity	952m3 each – check this from photo
SV29	Any Wesso valves? How many?	<i>Mark up a site plan with information during site visit</i>



	Any temperature sensitivity observed in the Whesso valves? (previously we have heard of Whesso valves freezing below -5°C)	6 Whessoe Valves
SV30	Any monitoring of tanks/gas? Is there an alarm system attached to the Wesso valves (inform SCADA when operational)?	No – no monitoring. Only visual inspections. Gas system inspected 6-monthly by DSL.
	What is the ground like surrounding the tanks? E.g. permeable gravel, concrete etc	Concrete floor. All AD fully buried
SV31	Underground pipework? Known condition?	Unknown. Pipe chamber accessible in and out of AD and into heat exchangers above ground.
	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?.	Reduced by 50%
	<b>Drainage</b>	
	Where do the drains go? E.g. Head of the works	All drains go to woks return well and then returned to head of works.
	Is site adjacent to a river or stream?	No soakaways. River to the south of the site.
	Is the whole site bunded	No, but most tanks are bunded.
	Are there any cracks in the pavement	A few cracks and potholes along site road
SV31	In the condition of the underground pipework known?	
GEN21	Please describe whether all drainage (surface or foul water) will be captured by the onsite drainage systems.	Yes
GEN21	Please describe the drainage surrounding the cake storage bays and whether run off from there is also captured by the drainage system.	See earlier.
SV32	Are there any isolation valves, penstock etc operational that can isolate flows? If so where and in what circumstances are these used?	Lots which can stop the flow.
	<b>Abnormal conditions – extreme high temperature, flooding (Climate Change RA)</b>	
SV36	How large is the site's stormwater storage capacity? 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	5200m3 6m x 50m x 10m each

	stormwater storage capacity has been exceeded, occurring repeatedly?	
CC01	<p>Has the site previously experienced any flooding incidents?</p> <p>If yes, is there information on these? When, how frequent, how severe has flooding been.</p> <p>Has the flooding led to untreated wastewater being discharged to the watercourses due to high volume of water exceeding the storm storage capacity?</p>	None.
CC07	<p>Is the access route to the site (main road access) at risk of flooding?</p> <p>Has it flooded previously?</p> <p>Are there alternative access routes?"</p>	No.
CC03	<p>What wastewater flow is the site rated at?</p> <p>What is the pass-forward' flow?</p>	
CC04	<p>How large is the site's stormwater storage capacity, OR how much retention time do the storm storage tanks allow?</p>	
CC06	<p>Does the site require potable water for any of its processes?</p>	
CC05	<p>Does the site operate any temperature-sensitive processes?</p> <p>E.g. do any of the biological treatment processes have optimal operating temperature ranges? What are they?</p> <p>Does the AD plant or anything else have optimum temperature range for operation"</p>	No, AD 36-39 degrees C.
SV38 & CC02	<p>Has the site experienced any issues related to high temperatures in the past – e.g. any odour control issues?</p> <p>Or Potable water availability issues during drought?</p>	<p>No</p> <p>No</p>
CC08	<p>Does the site already have a generator installed / provision for a plug-in generator at the site?</p>	Emergency use
	<b>Waste generation</b>	
	What wastes are generated by the site?	See earlier.
	How is it stored?	See earlier.
	<b>Other</b>	

SV39	Has any ground investigation/monitoring been undertaken on the site eg for planning permissions? Are there any available monitoring boreholes?	TBC, but none known
	Planned AMP7 schemes for the site that may impact the permit application?	Additional ferric closing – FE. Final humus tanks.
	What is the general site infrastructure like? Any areas of concern?	
	Any positive interventions witnessed on site?	
	Age of site? What infrastructure is enclosed?	1969 WTW 1995 STC
	<p>Additional notes and questions</p> <p>To check – taken from AM410.2 excel 2020. Info is also available in the IMP plan photo</p> <p>Storm tank capacity – 5200m<sup>3</sup></p> <p>Inlet works – 1200l/s screen capacity</p> <p>2 x screens duty/standby</p> <p>PST – 4 x PST total 4764.16m<sup>3</sup> P</p> <p style="padding-left: 40px;">PST 1</p> <p style="padding-left: 40px;">PST 2</p> <p style="padding-left: 40px;">PST 3</p> <p style="padding-left: 40px;">PST 4</p> <p>1<sup>st</sup> stage biofilter – redundant</p> <p>1<sup>st</sup> stage humus tanks x 4 2612.69m<sup>3</sup> total vol</p> <p>2ns Humus x 6 2892.73m<sup>3</sup></p> <p>Chemical dosing – ferrous sulphate 35m<sup>3</sup>, delivery weight 20t</p> <p>Sludge import x 2 reception tanks 265m<sup>3</sup> ea</p> <p>No cake blending/import pre AD</p> <p>Thickeners x 2 drum thickeners duty/standby</p> <p>PreTSSTs x 2 2000m<sup>3</sup></p> <p>Post TSSTs x 1 90m<sup>3</sup></p> <p>AD x 3 2850m<sup>3</sup> total</p> <p>PDST x 2 560m<sup>3</sup></p> <p>Gasholder x 1 400m<sup>3</sup></p> <p>Flare capacity 275m<sup>3</sup>/hr</p>	

	<p>CHP capacity 569kwh</p> <p>Digested sludge dewatering – centrifuge x 2 24m<sup>3</sup>/hr</p> <p>Imported cake bays x 8</p> <p>Indigenous cake bays x 6 (1 used for post centrifuge reception)</p>
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**If there are any questions that are unable to be answered on-site, find out when they can be and who to ask. Make the internal team aware of any outstanding information.**

Site name

Notes to FPM/APCS:

**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?
139	Ferric (dosed as indigenous sludge)		35,000L, 4-6 week replacement. on average.	Iron and phosphate
	Poly (powder)		6 x 750kg. 2 weeks/ bag	Drum thickener and centrifuge
	anti foam	None		
	other? Sodium Hypochlorate, sodium hydroxide etc	None		
	Diesel/ gas oil	Red diesel	13,000L 13,000L 1 gen + JCB, 2x boilers. 1x yr	
	Lime	None		
	Odour control	None		

## **B. Landmark Envirocheck Report**