

Issue and Revision Record

Revision	Date	Originator	Checker	Approver	Description
A	19/11/21	M Sweeney	S Blackman	Anita Manns	For client comment
B	15/02/22	Natalia Cunningham	Shannon Stone	Anita Manns	Second Draft
C	22/03/22	Natalia Cunningham	Shannon Stone	Anita Manns	Final
D	25/01/24	Sadiq Musa Bukar	Anita Manns	Anita Manns	Update for client comment
E	27/-2/24	Shannon Stone	Anita Manns	Anita Manns	Final for EA submission
F	15/01/25	S Musa	S Blackman	Anita Manns	Update for duly making

Document reference: 790101_MSD_SCR_BUD January 2025

Information class: Standard

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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)¹. The template structure is directly from the Environment Agency's H5 Site Condition Report word template².

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

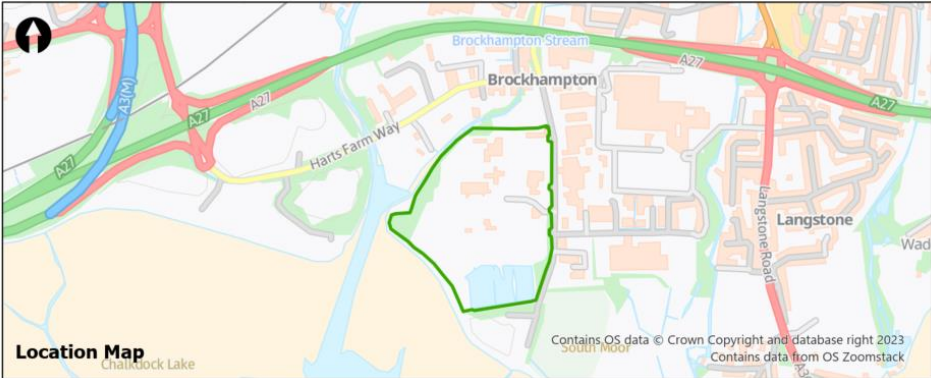
For sites that are currently permitted **section 1 to 7** will be completed, updating sections from the previous Site Condition Report where available.

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>

² <https://www.gov.uk/government/publications/environmental-permitting-h5-site-condition-report>

1.0 SITE DETAILS	
Name of the applicant	Southern Water
Activity address	Budds Farm Sewage Treatment Works, Southmoor Lane, Havant, PO9 1JW
National grid reference	SU 70722 05539
Document reference and dates for Site Condition Report at permit application and surrender	Site Condition Report: 790101_MSD_SCR_BUD January 2025 Date of Permit Application: TBC Date of Surrender: TBC
Document references for site plans (including location and boundaries)	Budds Farm STC Site Location Plan (Southern Water): 790101_MSD_SiteLayoutPlan_BUD January 2025

2.0 Condition of the land at permit issue	
<p>Environmental setting including:</p> <ul style="list-style-type: none"> • geology • hydrogeology • surface waters 	<p><u>Land use</u></p> <p>The site (Figure 1.1) comprises Budds Farm Wastewater Treatment Works (WTW), within which the Budds Farm Sludge Treatment Centre (STC) (hereby referred to as the 'Site') is located. It is a parcel of land between the town of Brockhampton and the inlet of the English Channel, bounded by Southmoor Lane to the west and Brockhampton Stream to the east. The areas to the north and east are commercial/industrial, with Southmoor Nature Reserve to the south-east, and the inlet of the English Channel to the south-west.</p> <p>Figure 1.1: Budds Farm Sludge Treatment Centre Site Plan</p>  <p>Source: Extract from 790101_MSD_SitelayoutPlan_BUD</p> <p><u>Geology</u></p>

	<p>Whilst absent from BGS Mapping (British Geological Survey, 1998) for the Site, the southern areas are indicated to be underlain by made ground, as shown through on site boreholes SU70NW236, SU70NW237, and SU70NW238. Made ground is described as soft to firm grey to brown silty Clay with angular chalk, flint gravel and brick fragments, encountered between 1.25 – 2.80m bgl up to 2.80m thickness.</p> <p>BGS Mapping (British Geological Survey, 1998) indicates that the eastern half of the site is underlain by superficial deposits comprising Head Gravel: clayey Gravel, and the western half of the Site is underlain by Alluvium (clay, silt, sand, and peat).</p> <p>On-site BGS Boreholes (British Geological Survey, 2020) indicate the presence of Head Deposits: clayey Gravel across the site area, encountered between 2.43 – 7.50 m bgl, encountered up to 4.70 m thickness. The majority of encountered Head Deposits are described as sandy chalky Gravel with numerous chalk and flint fragments.</p> <p>Alluvium is also encountered across the site area, encountered between 0.20 – 3.00 m bgl to a maximum thickness of 2.80 m and described as “stiff to hard light brown mottled Clay”. Thicker deposits are noted local to Brockhampton Stream but are generally consistent across the site area.</p> <p>BGS Mapping (British Geological Survey, 2020) indicates that the bedrock geology comprises strata of the Lewes Nodular Chalk Formation is thought to be 35m thick, defined by the BGS Lexicon as “<i>Composed of hard to very hard nodular chalks and hardgrounds (which resist scratching by finger-nail) with interbedded soft to medium hard chalks (some grainy) and marls; some griotte chalks</i>”.</p> <p>On site BGS Boreholes (SU70NW349, SU70NW358, SU70NW358 and SU70NW237) indicate that the bedrock geology is encountered at 3.9 – 8.1 m bgl underlying the site, with the depth to base not proven in any borehole.</p> <p><u>Hydrogeology</u></p> <p>The superficial deposits of both the Head Deposits and Alluvium, were designated as a Secondary A aquifer, defined by the Environment Agency as ‘<i>permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers.</i>’ (Environment Agency, 2021).</p> <p>The bedrock geology of the Lewes Nodular Chalk formation at the site is designated as a Principal aquifer, defined by the Environment Agency as ‘<i>layers of rock or drift deposits that have high intergranular and/or fracture permeability - meaning they usually provide a high level of water storage</i>’ (Environment Agency, 2021).</p> <p>The Site is not located within 250m of a Source Protection Zone (SPZ).</p> <p>Two discharges to groundwater are known to occur within 250m of the Site, each are recorded for the same licence over different periods. The licence is recorded 73m northwest of the site, registered to Scottish & Southern Energy Plc. The discharge was trade effluent discharge – site drainage, received to groundwater via soakaway.</p> <p><u>Hydrology</u></p>
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	<p>Ponds are noted in the southern areas of the site, assumed former settling ponds associated with the sewage works.</p> <p>The Site is bounded to the southwest by the Broad Lake, which is in hydraulic continuity with the English Channel, approximately 6km south of the site area. The northwest of the site is bounded by Brockhampton Stream.</p> <p>There are 12 recorded Environmental Permits for discharge to water for the site area, all recorded to Southern Water Services Ltd, the earliest recorded date for the licence was 2002, and several have no revocation date. The discharge for each of the consents was final/treated effluent, and the receiving water for each of the Environmental Permit was the Solent/Langstone Harbour.</p> <p>There are a further 44 Environmental Permits for discharge to water within 250m of the site area, of which a further 24 of these recorded permits were recorded for Southern Water Services Ltd.</p> <p><u>Sensitive land use</u></p> <p>The Site lies within a Nitrate Vulnerable Zone, identified as Chichester, Langstone and Portsmouth Harbours Eutrophic NVZ (Environment Agency, 2021).</p> <p>Within 250m of the site area, the Langstone Harbour, also identified as Solent Maritime, is designated as a Ramsar Site, a Site of Special Scientific Interest, a Special Area of Conservation, and a Special Protection Area.</p> <p><u>Flooding</u></p> <p>The Site is located within a food zone 3 – an area with a high probability of flooding that benefits from flood defences.</p>
<p>Pollution history including:</p> <ul style="list-style-type: none"> • pollution incidents that may have affected land • historical land-uses and associated contaminants • any visual/olfactory evidence of existing contamination • evidence of damage to pollution prevention measures 	<p>This section is informed by information taken from an Envirocheck Report commissioned in support of this project.</p> <p><u>Pollution incidents to controlled waters</u></p> <p>There are five pollution incidents to controlled waters recorded within 250m of the site. All five incidents were classed as Category 3 (minor incident).</p> <p><u>Integrated Pollution Prevention and Control</u></p> <p>The Envirocheck Report (Envirocheck, 2021) indicates that are three recorded integrated pollution prevention and controls recorded for the WTW. Two of the controls are dated to 2008, with the same licence number, recorded for combustion: Waste derived fuel greater or equal to 3MW but less than 50MW. The third control is recorded in 2019 and is recorded for ‘tranche B SG permitting date 1st January 2019’. No further controls are identified within 250m of the site area.</p> <p><u>Local Authority Integrated Pollution Prevention and Control</u></p> <p>There are two recorded local authority controls identified within 250m of the site. Both are recorded 139m northwest of the Site, both recorded for concrete batching.</p> <p><u>Local Authority Pollution Prevention and Controls</u></p> <p>There are 15 recorded Local Authority Pollution Prevention and Controls recorded within 250m of the site area. Within 100m of the site, nine records are present, of</p>

which seven are recorded for respraying of road vehicles, and the further two are recorded for coating of metal and plastic and 'part B processes – no specific reference'.

Prosecutions Relating to Authorised Processes

There is one record of a prosecution, recorded 4m northeast of the site area, prosecuted for tipping brick and rubble onto land without a WML.

Registered Radioactive Substances

There is one recorded registered substance, recorded 197m northeast of the site, designated for disposal of radioactive waste, dated 2003 and has since been superseded by a variation.

Industrial land uses

There are eight recorded industrial land uses that are listed as Active within 250m of the Site area.

Contemporary Trade Directory Entries	Direction	Distance (m)
Pallets, Crates, & Packing Cases	Southeast	5
Precision Engineers	North	36
Car Body Repairs	Northeast	48
Precision Engineers	East	50
Precision Engineers	Northeast	55
Car Body Repairs	East	66
Refrigerators & Freezers – Services & Repairs	East	68
Spraying – Paint & Coatings	East	97
Tool Design, Manufacturers & Makers	Northeast	112
Sand, Gravel & Other Aggregates	Northwest	117
Pest & Vermin Control	East	124
Car Body Repairs	North	140
Generators – Sales & Services	North	198
Metal Finishing Services	North	217
Marine Electrical Services	East	221
Concrete & Mortar Ready Mixed	Northwest	230
Builders Merchants	Northwest	232
Scrap Metal Merchants	Northwest	236

Landfill and waste sites

There is one Historic Landfill site and one Local Authority Recorded Landfill site recorded within the WTW area. The Historic Landfill site is recorded for deposited waste including household waste, where the location is described as land south of Budds Farm Sewage works. The Local Authority Recorded Landfill site is closed, and is listed as accepting household, acid and commercial waste. Both landfill sites are situated approximately 100m east to the STC permit boundary.

	<p>There are two Registered Waste Treatment or Disposal Sites recorded on site, and a further three Registered Waste Transfer Sites within 250m of the site area.</p> <p>The two Registered Waste Treatment or Disposal Sites recorded on site are both recorded for Southern Water Services Ltd, the first was issued in 1992 and was superseded in 1996, licenced for 10,000 to 25,000 tonnes per year for biological treatment of waste.</p> <p>Three Registered Waste Transfer sites are recorded within 250m of the site area:</p> <ul style="list-style-type: none"> ● A & J Bull (solent) Ltd, located 24m north of the site, has a licence since 1997 for the transfer of construction wastes between 25,000 to 75,000 tonnes per year. ● Skips R Us Ltd, located 83m northwest of the site, has a licence since 2000 for the transfer of commercial, inert and hazardous waste between 25,000 to 75,000 tonnes per year. ● Hampshire Recycling Ltd, located 185m northwest of the site, has a licence since 1978 for the transfer of commercial and domestic waste between 10,000 to 25,000 tonnes per year. <p><u>Mining sites and mineral extraction</u></p> <p>The site is located in a non-coal mining area.</p> <p>There is one mineral extraction site recorded within 250m of the site. Bedhampton Wharf is noted for Marine Sand and Gravel, operated by Tarmac (company).</p> <p><u>Review of historical mapping</u></p> <p><u>On-site history</u></p> <p>Earliest available mapping from 1867, with the exception of Budds Farm in the south-eastern areas of the site, is used as agricultural fields until the development of the Budds Farm Sewage Works first shown on the 1963 mapping. In 1972, areas in the south and west of the site appear to be worked into sludge lagoons. Further development and expansion of the work can be observed through the 20th century, with construction of multiple tanks, lagoons, and beds, up until the present day.</p> <p><u>Off-site history</u></p> <p>Earliest mapping notes the area surrounding the site also largely comprised marshland, adjacent to the nearby estuary and creeks. Brockhampton Mill (corn) is noted 40m to the north of the site area, with a mill pond also associated with the Mill. Historic maps from 1986 indicate that an electrical substation (housing multiple substations) is noted 30m northwest of the site. Two further substations are noted 100m northeast. A works is developed on the eastern boundary of the site, first identified on mapping in 1975, along with numerous other works in the area to the north and east, with further industrial development shown on the 1992 mapping.</p> <p><u>Contaminants of concern</u></p>
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	<p>Contaminants of concern at the site are likely to be related to the sewage works, and may include:</p> <ul style="list-style-type: none"> ● heavy metals and inorganics; ● ammoniacal nitrogen; ● pathogens; ● total petroleum hydrocarbons (TPH); ● polycyclic aromatic hydrocarbons (PAH); ● polychlorinated biphenyls (PCB); ● chlorinated solvents and phenols; ● volatile and semi-volatile organic compounds (VOC/SVOC); and ● asbestos. <p>There may also be ground gases present, likely comprising CO₂ and CH₄.</p>
<p>Evidence of historic contamination, for example, historical site investigation, assessment, remediation and verification reports (where available)</p>	<p><u>Site walkover</u></p> <p>A site visit was conducted in July 2021 by a permitting and waste specialist from Mott MacDonald. A summary of the findings are as follows:</p> <ul style="list-style-type: none"> ● The site appeared to be clean and tidy. ● Annual waste throughput in tonnes each year is 25,000tds/yr. ● Permitted activities on site include two Combined Heat and power (CHP) units, permitted Medium Combustion Plant and accepting Tankered Trade Waste. The site holds S1, D5, S2 and U6 exemptions. ● The site currently accepts Tankered Trade Waste: approximately 3/4 commercial tankers per week. Sludge is imported from Victoria works including approximately (4-6k tankers/day 18-27000²m tankers) and 15 tonnes of cake blended for SAS ready for digestion. The site does not accept hazardous waste. ● The site has Combined Heat and Power CHPs plants and 3 standby boilers for when CHPs have downtime. ● The site has two generators, one for ASP tanks/triads and is permitted for 80 hours use per year and the second is used for site standby and emergencies. ● Cake facilities include 1 x 220t bay and 1 x 50t- 60t small hold bay. The small cake bay allows for six hour storage during production in emergencies. ● Digesters are surrounded by permeable gravel. ● Cake is removed daily from the site and taken soon after production by hauliers. If cake fails tests, cake is moved to the Fullerton site for storage. ● Monthly pest control checks conducted, including bait boxes set up for mice and rats. ● Waste contractors remove stored waste (including; general waste, WEEE, oils, pallets, IBCs, metal etc) <p><u>Planning applications</u></p> <p>A search of the Havant Borough Council planning portal was conducted on the 14th January 2025. No relevant information to contamination was found.</p>

Baseline soil and groundwater reference data	No reference data is currently available.
Supporting information	<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"> • British Geological Survey, GeoIndex https://mapapps2.bgs.ac.uk/geoindex/home.html. Consulted January 2025; • British Geological Survey, Borehole Scans www.bgs.ac.uk consulted January 2025; • Magic Map https://magic.defra.gov.uk/magicmap.aspx/. Consulted January 2025; • Mott MacDonald (2025) Main Supporting Document: 790101_MSD_Main_BUD January 2025.

3.0 Permitted activities	
Overview of site processes	<p>Budds Farm STC is the largest STC operated by Southern Water and currently treats indigenous sludge from Havant and Eastney Wastewater Pumping Stations (WPS), as well as accepting imported liquid sludge and sludge cake.</p> <p>Imported raw sludge cake is discharged into the raw cake reception point and then blended with surplus activated sludge (SAS) from the 2 No. SAS tanks before being pumped to the 2 No. thickened sludge storage tanks.</p> <p>The fraction of SAS not blended with imported raw cake is thickened by 5 No. drum thickeners before being stored in the 2 No. thickened sludge storage tanks.</p> <p>Imported liquid sludge is received in 1 No. sludge reception tank. Indigenous sludge is transferred to 2 No sludge holding tanks. It then joins the imported liquid sludge as it is pumped through 2 No. strain presses and stored in 2 No. screened sludge storage tanks.</p> <p>Thickened sludge from the 2 No. thickened sludge storage tanks is fed into the 5 No. anaerobic digesters. Digested sludge is stored in 2 No. post digestion sludge tanks prior to being dewatered by 3 No. centrifuges.</p> <p>Lime is injected to digested sludge during dewatering which enables digested sludge cake to be disposed to farmland directly from 1 No. cake storage silo.</p> <p>Biogas produced by the digestion process is stored in an existing gas bag holder. Biogas is combusted by either of the 2 No. CHP plants (5.04 MWth / 2.59 MWth) or the 3 No. dual fuel boilers in order to generate electricity and heat the digesters.</p> <p>The site utilises 87% of electricity produced for processes such as maintaining the temperature of digesters. Excess electrical power is exported to the national</p>

	<p>grid. Any excess biogas produced is flared in the waste biogas burner located on the Site.</p> <p>SAS and raw sludge thickener filtrate, centrate from the dewatering centrifuges and biogas condensates all gravitates to the liquor sump. The sludge liquor is then routed to the Havant PST flow distribution chamber.</p>
<p>Permitted activities</p>	<p>The site currently has two Environmental Permits in operation. Permit EPR/AP3392HG is the Southern Water owned tankered waste and bespoke waste permit existing on-site and permit EPR/ZP3235XJ allows for the running of two biogas fuelled combined heat and power (CHP) engines. The CHP engines generate electricity for the site, one is classed as a tranche A and one as a tranche B. Several directly associated activities (DAAs) are also permitted and include sludge and cake reception, storage and blending, treatment of grit and screenings and dewatering. The sludge dryer on-site has been mothballed.</p>
<p>Non-permitted activities undertaken</p>	<p>The STC operation is a non-hazardous waste activity which is currently carried out under registered S1, D5, S2 and U6 exemptions. The waste activity comprises imports, physio-chemical and anaerobic digestion treatment, and the storage of waste, all for recovery purposes. The STC handles waste derived from the wastewater treatment process, either indigenously produced on-site or imported from other Southern Water owned assets.</p> <p>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.</p> <p>The Site also accepts tankered wastes including trade and domestic waste.</p>
<p>Document references for:</p> <ul style="list-style-type: none"> • plan showing activity layout; and • environmental risk assessment. 	<ul style="list-style-type: none"> • Southern Water (2021) Budds Farm STC Site Location Plan: 790101_MSD_SiteLayoutPlan_BUD January 2025 • Southern Water Environmental Permits. Folio No. EPR/AP3392HG • Southern Water Environmental Permits. Folio No. EPR/ZP3235XJ

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.

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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 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 March 2025. 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).</p> <p>Activities at Budds Farm STC will continue, as prior to the introduction of the updated and amalgamated permit, although under any new requirements imposed by the permit.</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>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">● Red diesel, oils and gas oil;● Sodium hypochlorate and sodium hydroxide;● Sulphuric acid;● Hydrated lime;● Methanol (used in the wider WTW);● Polymer (solid cationic powder and liquid);● Anti-foam (used in centrifuge);● 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	

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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Site closure plan • List of potential sources of pollution risk • Investigation and remediation reports (where relevant)

9.0 Reference data and remediation (where relevant)	
<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>	
Checklist of supporting information	<ul style="list-style-type: none"> • 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	
<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"> • 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 Notes

Site Name	Budds Farm
Date	14/07/2021
Attendees	Anita Manns [REDACTED] [REDACTED]
Permit and exemption references	
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:

Site is located on an industrial estate with the NW-SE sides surrounded by the IE and the SE-NW surrounded by a SSSI (Langstone Harbour).

Site appears to be clean and tidy

Site does not have a weather station



RFI Ref	Site operations	
	Operational contact details for the application forms	FPM/APC as per previous tranches forms
	No of site staff (day and shift operators etc)	10 shift ops 24/7, 2 on at a time. 4 day ops 1 sr op. Mon-Fri + rotating standby
I15	During what hours is the site staffed Monday – Friday and at weekends?	07.30-4 M-F No weekends, just shift ops
	What hours can waste enter the site (planning)	24/7 TTW and imported sludge
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.	Tds/day TBC ~25,000t/year

118	<p>What is the total waste storage capacity (tonnes) at the site?</p> <p>Note: Cake, digestors, other tanks relating to STC)</p>	TBC
119	<p>What is the annual waste throughput (tonnes each year) at the site?</p> <p>(TDS volume for the STC)</p>	25,000tds/yr
120	<p>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.</p>	
121	<p>How many years is each permit expected to be required for?</p> <p>List details of each permit separately</p>	Permanent
GEN07	<p>Please describe the aspects of the site that generate litter, mud and debris within and outside the site boundary.</p>	<p>Usual – as per other sites</p> <p>Rag treatment/screening, grit separation, general waste, scrap metal, recycling, WEEE store, waste oils (M&E)</p>
GEN08	<p>Describe the site cleaning procedures on site.</p> <p>Including any infrastructure cleaning, wheel wash etc</p>	<p>No wheel wash</p> <p>Hose pipes available and FE used</p>
GEN09	<p>Please describe the site security measures in place at site.</p> <p>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</p>	<p>Automatic gates, metal palisade, 2.8m in height. Access via fob or control room.</p> <p>Perimeter fence – chainlink</p> <p>20+ CCTV cameras, infra-red and motion detectors on gas and oil tanks, inlet areas. ANPR</p> <p>BTU are installing additional to site boundary adjacent PSTs area</p>
	Site Plans	
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>	Mott MacDonald to produce

	Visual impacts	
GEN10	Please describe the visual impacts of each site.	To be completed by desk study
	Site condition report	
SCR02	Please provide a list of permitted activities per site.	2 CHPs – permitted MCPs TTW
SCR03	Please provide a list of non-permitted activities per site. Including exemptions	S1 S2 U6
SCR05	Please provide any environmental risk assessments for site.	No further documents to be provided during site visit
SCR06	Site overview	On SharePoint
	Emergency procedures	
GEN17	Provide a description of the emergency procedures for each site	Std
	Sludge import	
SV01	Does the site accept trade waste (commercial tankers)?	Yes 3-4 per week, currently few in. No storm separation for TTW - scheme with optimisation team due AMP7? Previously 4/day – 6k tankers.
SV01/02	How many tankers arrive at the site per day? Where are the tankers unloaded? Is an odour control hose used during unloading?	None
SV03	Where is sludge imported from? Sludge imported from other satellite sites? How many?	Victoria works – sludge movement planning E Hants and Sussex. 5-6 (4-6k tankers/day 18-27000 ² m tankers). Cake impact 7-10 (15 tonnes) blended for SAS ready for digestion.
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	<i>Indicate individual sources on site layout plan</i>

	National Grid Reference	
	Source type	
	Parameter (e.g. oxides of nitrogen)	
	Quantity (with its unit)	
	Stack height	
	Source 2	<i>Indicate individual sources on site layout plan</i>
	National Grid Reference	
	Source type	
	Parameter (e.g. oxides of nitrogen)	
	Quantity (with its unit)	
	Stack height	
	Source 3	<i>Indicate individual sources on site layout plan</i>
	National Grid Reference	
	Source Type	
	Parameter (e.g. oxides of nitrogen)	
	Quantity (with its unit)	
	Source 4	<i>Indicate individual sources on site layout plan</i>
	National Grid Reference	
	Source Type	
	Parameter (e.g. oxides of nitrogen)	
	Quantity (with its unit)	
	Source 5	<i>Indicate individual sources on site layout plan</i>
	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?	

	Please clarify whether safety zoning of areas is undertaken under DSEAR/PEXA at site.		
	Air Emissions from plant		
		Plant 1, 2 etc	Plant 1,2 etc
I27	What date did the combustion plant become operational?	See permit Boiler details to be provided	
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	2 CHPs, 2 diesel generators 3 boilers	
I29	What is the MWth input of each plant? Take photos of any plates	See permit (awaiting on boilers)	
I30	What are the guaranteed emission limits for the plant?	No change to previous Tranche applications	
I31	What are the total operating hours for the year?		
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?	Diesel (gas oil)	
	Provide manufacturer's specifications for all combustion plant where possible.		
	Additional space for information on plant (if required) CHPs in application – two generators 1 generator for ASP tanks - triads and permitted for 80 hours/per year. 1 for site standby/emergencies. 3 boilers – standby boilers, when CHPs on downtime		
	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).	
Emissions to land		
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>Condensate in head of works to water treatment.</p> <p>Carbon packs – treating gas prior to CHPs, go for regeneration – scrubbing of gas</p>
Exemptions		
	What exemptions are used on site? Typically SW have T21, D5 and S1.	
Cake storage		
SV04	Is any cake imported? If so, how is it unloaded from trucks and where is it unloaded?	Open/sealed, Roro bins 1 x 40yd tipped into hopper.
SV05	<p>Where is cake stored?</p> <p>How is cake stored? E.g. Cake bays, silos, directly into skips etc</p>	<p>Directly site-field</p> <p>Lime treatment within a cake silo 220t – 20t tippers.</p> <p>Unless test failure – then goes to Fullerton for storage.</p> <p>1 small cake bay allows 6 hour storage during production in emergency.</p>
	<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>1 x 220t</p> <p>1 small cake bay - 50t- 60t hold.</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>	
SV06	How is cake moved to the cake bays (enclosed truck etc)?	<p>20t tippers</p> <p>Max 8 tippers per day - 150t per day however more likely 180-190t per day with new AD</p>

	How frequently is cake moved around the site?	
SV07	Is the cake treated further after the centrifuge e.g. liming of cake within cake bays?	Lime up to 5% Liquid lime injected into sludge prior to dewatering
SV08	When cake is within the bay, is the cake turned/disturbed at all? How often? Why?	
SV09	How is cake removed from the site? How often? Over what timeframe? e.g. 2weeks constantly	Daily
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?	
	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 2% - offices, poly make up Trial for making up poly using FE Washdown using FE – 98%
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
	Generators	

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>11kva each</p> <p>1 site running - from grid</p> <p>1 x 2MW</p> <p>1 x 1MW</p> <p>No export generally unless overnight might get exported. Richard Willis</p> <p>Under MCP – Simon Gusterson - yearly</p>
	CHP engines/boilers	
	How many CHPs/boilers on site?	<i>Take photos of any plates</i>
SV18	<p>What size (MW)? What are they used for e.g. primary/secondary. Site running, exporting power to grid?</p> <p>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?</p>	<p>2 CHPs 1 x 2MW</p> <p>1 x 1MW</p> <p>CHPs used – running site</p>
SV17	<p>Are the CHP's/boilers/ generators adequate for the amount of gas produced by the site?</p> <p>Any monitoring undertaken?</p> <p>If so, what for and what are the standards used?</p>	<p>1 x flare – excess burn – emergency 10% time. Monitored through site wide SCADA system</p>
GRA01	<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>As long as cooling water system ok. CHPs work fine</p>
MIL01	<p>What is the annual load of CHP (given as %) for sites in Tranche 3?</p> <p>What is the annual load of CHP (given as %) for sites in Tranche 5?</p>	

	Noise	
I64	Please describe any noise mitigation measures on site.	No noise issues
	Other abatement?	
	Have any noise assessments been undertaken on the site?	None
	Have there been any noise complaints?	None – 1 about 3 yrs ago relating to a damage phlange
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?	Std co one, not site specific as no issues. No imported sludge holding – all tanks have odour extraction.
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?	<i>Obtain as much information as possible on system used and take photos.</i> No All sludge processes Small parts of WWT process. Dry air vapour around cake silo Mobile OCU spray unit – wet spray – Cobra All tanks enclosed Drum thickening enclosed Silos open lidded bur indoors – doors not closed as sets off gas alarms Final cake silo Cake/sludge hoppers open but indoors – air extracted Wet chemical scrubber OCU x 1 No biofilters No carbon scrubbers 1 x Dryers on site but mothballed.

	How and when is the odour control maintained/inspected to ensure they remain effective? Please provide full maintenance schedules for each site	Monthly
SV24	Is odour monitored? If so how?	Odour emissions and chemical tanks on SCADA. H2S monitoring on OCU stacks
	Is there a site specific odour management plan?	No
	Any odour complaints?	None – check BMS
	Other abatement?	None
GEN16	Describe the maintenance programmes that are undertaken to ensure odour and bioaerosol control measures are maintained, prioritising Tranche 2 sites.	
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 in 25%ds, pH 7-8, liquid 1-6%ds. Cake out 22%ds, pH 9 Return to AD in 14 days max, 2 days max in TSST & PDSTS. Silo/day
OMP04	For each asset on-site, please provide: <ul style="list-style-type: none"> • 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 FET, primary settlement tanks 50/50% Storm tanks open Silo when opened for emptying – use a masking spray to mask smell
	Bioaerosols	
GEN15	Describe the processes and bioaerosol control measures (e.g. odour abatement systems, enclosed tanks, filters) associated with:	
	<ul style="list-style-type: none"> • 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)	
	• Handling and storage of sludge/digestate throughout AD process	
	• Disposal of biogas (combustion)	
	• Any other relevant procedures onsite which could generate bioaerosols	
	If using odour suppression sprays are they used to just mask the smell or to catch and drop the odour?	Fine mist – capture and drop, around silo
	Is sludge arriving on site processed immediately? If not how long is it until it is fed into the system?	Yes and discharged in a building
	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?	Pest control contract? Checked monthly Rats/mice - bait boxes mainly
	Raw materials – Write here or refer to table at the bottom	
I35	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.	Sodium hypochlorite, Sodium hydroxide, Sulphuric acid Hydrated lime, Methanol - WTW Poly – solid - cationic powder. Poly - liquid Anti-foam – centrifuge oils / gas oil Red diesel Tank capacity from photos, but require annual quantities and quantities stored at anyone time from FPM

I36	How much is stored on site of each at any one time (maximum tonnage)?	See table at end
	What is each material used for?	See previous tranches
SV26	How and where are they stored? Bunded, stored undercover etc? Are they in IBC's, bags, tanks etc?	<i>Take photos of any plates</i> Bunded areas or indoors – poly drainage to head of works.
SV27	What is the storage capacity of tanks, IBC's etc, how many on site?	<i>Take photos of any plates</i> See photos and table at end
	How often are they replaced?	See table at the end
I38	Describe the basic measures for improving energy efficiency of the activities carried out on site	Improving throughputs
	Resource efficiency	
I41	Explain and justify the raw and other materials, other substances and water that SW use at site	
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	Grit and screenings – composted MTS sludge transports Light – WEEE Oil waste Pallets MTS sort IBC's - Shutts General waste - Biffa Metal – EMR As per previous tranches
	Any water saving measures?	Usual measures from previous tranches plus the trial for FE use in poly make up
	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	As per previous tranches
	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?	
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.	CSMS
I63	Please describe any noise mitigation measures on site	
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?	Not prone to flooding 1 recent incident 18 th June – overwhelmed drains one site.
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	ADM for MCP
	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.	

	Is SCADA used on site? What processes are covered by SCADA?	Yes – covers all site
	Digesters	
	How many digesters on the site?	5
	Digester capacity	4 x 2750m ³ 1 x 2768m ³ – new
SV29	Any Wesso valves? How many? Any temperature sensitivity observed in the Whesso valves? (previously we have heard of Whesso valves freezing below -5°C)	<i>Mark up a site plan with information during site visit</i> 10 on digestors (2 x 5) 1 pair on each PDST x 2 1 pair in gas compound gas bag
SV30	Any monitoring of tanks/gas? Is there an alarm system attached to the Whesso valves (inform SCADA when operational)?	Pressure monitoring on gas system High alarm and SCADA
	What is the ground like surrounding the tanks? E.g. permeable gravel, concrete etc	All on gravel
SV31	Underground pipework? Known condition?	Sludge pipework between tanks are above ground AD and tanks underground drain down-grit removal only No access panels
	Is biogas generation managed by reducing the digester feed in the event that the flare stack and/or CHP engine failed and caused the Whesso valves to release biogas?.	Whesso valves one way but very slow. New flare stack sized to deal with gas made. CHPs one is duty and the second one will come in if gas bag level is too high.
	Drainage	
	Where do the drains go? E.g. Head of the works	Head of works
	Is site adjacent to a river or stream?	Yes, Brockhampton Creek
	Is the whole site bunded	No
	Are there any cracks in the pavement	

SV31	In the condition of the underground pipework known?	No
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.	Yes
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?	
SV32	Are there any isolation valves, penstock etc operational that can isolate flows? If so where and in what circumstances are these used?	Lots, can isolate off any tank used in emergencies and downtime
	Abnormal conditions – extreme high temperature, flooding (Climate Change RA)	
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 stormwater storage capacity has been exceeded, occurring repeatedly?	7250m ³ - AMP 7 scheme 4 tanks to add 3500 m ³ Full in 40-45 minutes with pumping capacity. They have shut down site for 5-6 hours using them.
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?	Storm tanks only for Havant end
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 flooding – only used access main road on Southmoor Lane as second access for one way emergency.

CC03	What wastewater flow is the site rated at? What is the pass-forward' flow?	Flow to treatment 2 incomings pass forward – Havant 983l/s and Eastney 1379l/s
CC04	How large is the site's stormwater storage capacity, OR how much retention time do the storm storage tanks allow?	Storm tanks only for Havant end
CC06	Does the site require potable water for any of its processes?	
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? Does the AD plant or anything else have optimum temperature range for operation"	Digestors 32-40 degrees C 34 degrees control point.
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?	None
CC08	Does the site already have a generator installed / provision for a plug-in generator at the site?	
	Waste generation	
	What wastes are generated by the site?	
	How is it stored?	
	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?	No
	Planned AMP7 schemes for the site that may impact the permit application?	
	What is the general site infrastructure like? Any areas of concern?	

	Any positive interventions witnessed on site?	
	Age of site? What infrastructure is enclosed?	Since 1953
	Additional notes and questions	

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

B. Landmark Envirocheck Report