

Appendix C. Site Condition Report – H5

SITE CONDITION REPORT TEMPLATE

For full details, see H5 *SCR guide for applicants* v2.0 4 August 2008

COMPLETE SECTIONS 1-3 AND SUBMIT WITH APPLICATION

DURING THE LIFE OF THE PERMIT: MAINTAIN SECTIONS 4-7

AT SURRENDER: ADD NEW DOC REFERENCE IN 1.0; COMPLETE SECTIONS 8-10; & SUBMIT WITH YOUR SURRENDER APPLICATION.

1.0 SITE DETAILS	
Name of the applicant	Thames Water Utilities Limited
Activity address	Deephams Sludge Treatment Centre Deephams Sewage Treatment Works Pickett's Lock Lane London N9 0BA
National grid reference	TQ35879336

Document reference and dates for Site Condition Report at permit application and surrender	Environmental Permit Variation Application – Deephams Sludge Treatment Centre Document number: EPR/FP3535LD/V008 and TW_STC_EPR_23a_DHS_ASD. Date: December 2023
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Document references for site plans (including location and boundaries)	Please see site plans in Appendix A.
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Note:

In Part A of the application form you must give us details of the site's location and provide us with a site plan. We need a detailed site plan (or plans) showing:

- Site location, the area covered by the site condition report, and the location and nature of the activities and/or waste facilities on the site.
- Locations of receptors, sources of emissions/releases, and monitoring points.
- Site drainage.
- Site surfacing.

If this information is not shown on the site plan required by Part A of the application form then you should submit the additional plan or plans with this site condition report.

2.0 Condition of the land at permit issue	
Environmental setting including:	There is a culverted brook, Pymmes Brook, within the central area of the wider STC that

<ul style="list-style-type: none"> • geology • hydrogeology • surface waters 	<p>is also found 30m to the East of the site and the River Lee Navigation is located approximately 80m to the East of the site. A large reservoir, William Girling Reservoir, is located approximately 170m to the East of the site boundary.</p> <p>According to the Environment Agency’s online flood maps, the installation is located predominately within Flood Zone 1 (area with a low risk of flooding, > 1:100 annual probability of river flooding).</p> <p>The geology of the site is a bedrock of London Clay Formation, clay, silt and sand sedimentary bedrock that is deep sea marine in origin. Superficial deposits are alluvium, clay, silt, sand and gravel that are fluvial in origin.</p> <p>Aquifers are classified as Unproductive (bedrock) and Secondary A (superficial drift).</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>The site is located in London, approx. 1.4 km east of Edmonton and 3 km south-east of Enfield. The site is bounded Pymmes Brook, River Lee Navigation and the William Girling Reservoir to the East. To the south and west are industrial and commercial warehouses and residential properties. A waste transfer station and also an energy from waste and incinerator facility are located 600 m south of the site. To the North is further housing and the Lee Valley Leisure Complex.</p> <p>The installation activities at the site are part of a wider TWUL operated sewage treatment works which handles and treats material which is similar in composition and makeup to the wastes treated within the installation.</p> <p>A sewage farm, Edmonton Sewage Farm, has been located between the Great Eastern Railway and the River Lea Navigations since the late 1890s. Edmonton Sewage Works was also located to the east of the railway line. Prior to this, the area was farmland and partially within a rifle range.</p> <p>The sewage farm was developed in the 1930s and extended in size to include large filter beds and sludge beds. By the 1940s, the Chingford Reservoir was under construction to the east (now the William Girling Reservoir) and by the 1960s the works had expanded into its current footprint. Development since this time has seen</p>

	<p>upgrades across the wider site and within the STC, including adding a ninth digester in the 200s and the new CHP engines in the 2010s. The site is within a Source Protection Zone 2 and close to a Source Protection Zone 1.</p> <p>According to Environment Agency information there have been three recorded pollution incidents that have occurred close to the wider STW site. All three reported pollution incidents were Category 2 (Significant) to water with one being for crude sewage and one for final effluent, both from sewage materials. The third incident was related to urban run-off from contaminated water.</p>
<p>Evidence of historic contamination, for example, historical site investigation, assessment, remediation and verification reports (where available)</p>	<p>Unknown – although the works was operated as a sewage works in its earliest phase, the site will therefore be contaminated with sewage related compounds, including E. coli and heavy metals.</p>
<p>Baseline soil and groundwater reference data</p>	<p>None collected.</p> <p>Substances that may be present by storage and use within the newly permitted installation are listed within the Tables of the Residue Management Plan (as previously supplied). These substances (or similar substances used in the same processes) have been used historically at the site since it first operated.</p> <p>The following substances may be relevant hazardous substances.</p> <ul style="list-style-type: none"> • Diesel • Oil • Grease • Anti-freeze • Boiler chemicals <p>These substances are stored in and around the boiler house and CHP engines and are used in their routine operation and maintenance.</p> <p>All other hazardous substances have been removed from assessment as they are not considered relevant. This is because storage and use are controlled at the site.</p> <p>Substances are stored within suitably engineered containers/with containment and volumes are small enough for spillage to be contained prior to reaching a sensitive</p>

	environment. Use of substances is carefully managed to minimize the likelihood of an accidental release.
Supporting information	No baseline data has been gathered. Thames Water acknowledge this may present surrender issues, however, there are no proposals to close the site

3.0 Permitted activities	
Permitted activities	<p>Operation of an anaerobic digestion plant for sewage sludge waste and imported sewage sludge wastes and combustion of biogas within CHP engine to generate electricity for use on site.</p> <p>Imports of waste to the works inlet for treatment via the UWWTD route.</p> <p>The site also undertakes the following DAAs:</p> <ul style="list-style-type: none"> • Discharging of waste • Storage of waste • Storage of biogas • Physical blending of wastes • Storage of raw materials • Operation of a gas-to-grid plant
Non-permitted activities undertaken	n/a
<p>Document references for:</p> <ul style="list-style-type: none"> • plan showing activity layout; and • environmental risk assessment. 	Please see the Technical Summary in Chapter 2 of the main application document

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?	<p>If yes, provide a plan showing the changes to the activity boundary.</p> <p>Please see drawing B22849AM-JAC-DHS-DR-0002 which shows the new active boundary for this variation application.</p>
Have there been any changes to the permitted activities?	<p>If yes, provide a description of the changes to the permitted activities</p> <p>Changes to permitted activities are as a result of a change of interpretation of the UWWTD by the Environment Agency.</p> <p>Activities at the site are existing activities that were not previously permitted.</p> <p>Previously permitted activities included the combustion of biogas in CHP plant, storage of fuel, biogas filtration, biogas pressurisation, operation of the biogas flare, storage and handling of waste, operation of a biogas to biomethane grid plant.</p> <p>Under the current variation, the boundary is extended to the north and east to include assets associated with biological treatment of wastes which includes:</p> <ul style="list-style-type: none"> Waste Import Points Sludge Thickening assets Sludge storage tanks Primary Digestion Tanks Sludge Dewatering assets Digested Sludge Cake storage
Have any 'dangerous substances' not identified in the Application Site Condition Report been used or produced as a result of the permitted activities?	<p>If yes, list of them</p> <p>n/a</p>
Checklist of supporting information	<p>Plan showing any changes to the boundary (where relevant)</p> <p>Description of the changes to the permitted activities (where relevant)</p> <p>List of 'dangerous substances' used/produced by the permitted activities that were not identified in the Application Site Condition Report (where relevant)</p>

5.0 Measures taken to protect land	
<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>	
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	
<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>	
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)	
<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>	
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	
<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>	
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)

Say whether you had to collect land and/or groundwater data. Or say that you didn't need to because the information from sections 3, 4, 5 and 6 of the Surrender Site Condition Report shows that the land has not deteriorated.

If you did collect land and/or groundwater reference data, summarise what this entailed, and what your data found. Say whether the data shows that the condition of the land has deteriorated, or whether the land at the site is in a "satisfactory state". If it isn't, summarise what you did to remedy this. Confirm that the land is now in a "satisfactory state" at surrender.

Checklist of supporting information

- Land and/or groundwater data collected at application (if collected)
- Land and/or groundwater data collected at surrender (where needed)
- Assessment of satisfactory state
- Remediation and verification reports (where undertaken)

10.0 Statement of site condition

Using the information from sections 3 to 7, give a statement about the condition of the land at the site. This should confirm that:

**the permitted activities have stopped
 decommissioning is complete, and the pollution risk has been removed
 the land is in a satisfactory condition.**