Jacobs

Appendix C. Site Condition Report

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	Riverside Sludge Treatment Centre Riverside Sewage Treatment Works Creekside Rainham Essex RM13 8QS
National grid reference	NGR: TQ 51386 82358

Document reference and dates for Site Condition Report at permit application and surrender	Environmental Permit Variation Application – Riverside Sludge Treatment Centre Document number: EPR/GB3739DY/V003 and TW_STC_EPR_16a_RVE_ASD Date: November 2023

Document references for site plans (including location and boundaries)	Please see site plans in Appendix A.

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: • geology • hydrogeology • surface waters	The River Thames runs from west to east approximately 1 km to the south of the site. Rainham Creek flows from the north to the south, into the River Ingrebourne, approximately 40m away from the STW boundary and a drainage ditch can be found to the north and west of the STC. According to the Environment Agency's online flood maps, the site is in a zone 3 flood risk, that is an annual risk of flooding greater than 1:100. However, the site is protected by flood defences. Large parts of the STW and STC are at a low risk of flooding from surface water, including the areas of the THP and site roads surrounding the primary digesters. 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. This is overlain by superficial deposits sedimentary alluvium clay, silt, sand and peat from fluvial origins. Aquifers are classified as unproductive (solid deposits) and Secondary (undifferentiated) (superficial deposits).
Pollution history including: • 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	The site is located in the London Borough of Havering in east London. 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. A sewage works is first noted to the east of Rainham Creek, at the location of the existing site in the 1945 records, prior to which the site was undeveloped marshes. Until the 1970s, the site was smaller and occupied the eastern side of the current site but it expanded into its current form approximately in the 1960s to occupy the current site. Further development of the site took place in the 2000/2010s. A railway line has been present close to the current position since at least the 1890s. The site is outside of a Source Protection Zone. Environment Agency data on pollution incidents

	do not identify any incidents associated with the site.
Evidence of historic contamination, for example, historical site investigation, assessment, remediation and verification reports (where available)	Unknown – although the works was operated as a sewage farm in its earliest phase, the site will therefore be contaminated with sewage related compounds, including E. coli and heavy metals.
Baseline soil and groundwater reference data	None collected. 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. The following substances may be relevant hazardous substances. · Diesel · Oil · Grease · Anti-freeze · Boiler chemicals These substances are stored in and around the boiler house and CHP engines and are used in their routine operation and maintenance. 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. Substances are stored within suitably engineered containers/with containment and volumes are small enough for spillage to be contained prior to reaching a sensitive environment. Use of substances is carefully managed to minimize the likelihood of an accidental release.
Supporting information	• Source information identifying environmental setting and pollution incidents • Historical Ordnance Survey plans • Site reconnaissance • Historical investigation / assessment / remediation / verification reports • Baseline soil and groundwater reference data

3.0 Permitted activities	
Permitted activities	Operation of an anaerobic digestion plant for sewage sludge waste and imported sewage sludge wastes and combustion of biogas within a CHP engine to generate electricity for use on site.
Non-permitted activities undertaken	Discharging of waste Storage of waste Storage of biogas Physical blending of wastes Storage of raw materials
Document references for: • 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?	**If yes, provide a plan showing the changes to the activity boundary.** **Please see drawing B22849AM-JAC-RVE-DR-0002 which shows the new active boundary for this variation application.**
Have there been any changes to the permitted activities?	**If yes, provide a description of the changes to the permitted activities** **Changes to permitted activities are as a result of a change of interpretation of the UWWTD by the Environment Agency.** **Activities are the site are existing activities that were not previously permitted.** **Previously, permitted activities included the biogas storage, gas scrubber (siloxane), waste gas burner, CHP building and connecting biogas pipeline.** **Under the current variation, the boundary is extended to the north, west, and east to include assets associated with biological treatment of wastes which includes:** **Waste Import Points** **Sludge storage tanks** **THP tanks, vessels and dewatering assets** **Primary Digestion tanks** **Sludge Dewatering assets** **Digested Sludge Cake storage** **Imported Sludge Re-wetting**
Have any 'dangerous substances' not identified in the Application Site Condition Report been used or produced as a result of the permitted activities?	**If yes, list of them** **n/a**
Checklist of supporting information	• **Plan showing any changes to the boundary (where relevant)** • **Description of the changes to the permitted activities (where relevant)** • **List of 'dangerous substances' used/produced by the permitted activities that were not identified in the Application Site Condition Report (where relevant)**

5.0 Measures taken to protect land	
Use records that you collected during the life of the permit to summarise whether pollution prevention measures worked. If you can't, you need to collect land and/or groundwater data to assess whether the land has deteriorated.	
Checklist of supporting information	• **Inspection records and summary of findings of inspections for all pollution prevention measures** • **Records of maintenance, repair and replacement of pollution prevention measures**

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

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

8.0 Decommissioning and removal of pollution risk	
Describe how the site was decommissioned. Demonstrate that all sources of pollution risk have been removed. Describe whether the decommissioning had any impact on the land. Outline how you investigated and remedied this.	
Checklist of supporting information	• **Site closure plan** • **List of potential sources of pollution risk** • **Investigation and remediation reports (where relevant)**

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

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