



London Borough of Hounslow

Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: 25 th January 2018																																
Attendees: Mr A Devine (L B Hounslow) & Mr D Kalamantis (Thames Water).																																
LB Hounslow Observation		Thames Water Action / Response																														
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>All storm water tanks (1A to 8B) were full at the time of the inspection. Amajets 1, 2 and 3 were on in tanks 2A, 3A, 3B and tanks 6A to 8B.</p> <p><u>Storm Water Channel</u></p> <p>The storm feed channel serving STW's 1A-8B was approximately 70% full of effluent along its entire length.</p>																																
<p><u>Odour Monitors</u></p> <p>The odour readouts (H₂S) for all of the monitors, which were providing data at the time of inspection (approx 14:49).</p> <table border="1"> <tr><td>Monitor 1</td><td>0.005</td><td>ppm</td></tr> <tr><td>Monitor 2</td><td>0.008</td><td>ppm</td></tr> <tr><td>Monitor 3</td><td>0.000</td><td>ppm</td></tr> <tr><td>Monitor 4</td><td>0.008</td><td>ppm</td></tr> <tr><td>Monitor 5</td><td>0.009</td><td>ppm</td></tr> <tr><td>Monitor 6</td><td>0.010</td><td>ppm</td></tr> <tr><td>Monitor 7</td><td>0.007</td><td>ppm</td></tr> <tr><td>Monitor 8</td><td>0.009</td><td>ppm</td></tr> <tr><td>Monitor 9</td><td>0.009</td><td>ppm</td></tr> <tr><td>Monitor 10</td><td>0.009</td><td>ppm</td></tr> </table>		Monitor 1	0.005	ppm	Monitor 2	0.008	ppm	Monitor 3	0.000	ppm	Monitor 4	0.008	ppm	Monitor 5	0.009	ppm	Monitor 6	0.010	ppm	Monitor 7	0.007	ppm	Monitor 8	0.009	ppm	Monitor 9	0.009	ppm	Monitor 10	0.009	ppm	
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Monitor 11	0.009	ppm	
Monitor 12	0.008	ppm	
Monitor 13	0.009	ppm	

Complaints

The Council received no complaints in the preceding week.

Odour Log (Thames) - Photocopies of log entries taken:

Thursday 18th January 2018
AM Odour monitor 8 spiking at 09:56am. Less than 15 minutes duration (max 0.017ppm).
PM No spikes on trends. No odour issues during shift.

Friday 19th January 2018
AM Monitor No.7 spiked at 13:25pm. Less than 15 minutes duration (max0.018ppm)
PM No odour problems.

Saturday 20th January 2018
AM No odour issues reported or discovered.
PM No odour spikes.

Sunday 21th January 2018
AM No odour spikes. Spillage in east inlet combi area. Digesters foaming – day ops cleaning up.
PM Odour monitor 4 spiked less than 15 minutes 0.016ppm. Odour monitor 8 spiked less than 15 minutes 0.010ppm.
Actions Taken Digester anti foamed and area cleaned up. New I.B.C. placed on antifoam pump.

Monday 22nd January 2018
AM No odour spikes. No other issues.
PM No odour spikes. No other issues.

Tuesday 23rd January 2018

AM Odour monitor 5 0.029ppm from 11:24 to 11:38. No other issues.

Actions Taken Odour suspected to be from PAS area. No source found. Dimitrios was doing walk around with detector later in the day.

PM Odour monitor number 8 spiked once at 18:52 but less than 15 minutes duration (0.019ppm).

Wednesday 24th January 2018

AM Odour monitor 2 spiked at 0.019ppm from 6:27am. Suspect monitor not updated on SCADA as of 17:30pm. Odour monitor 8 spiked at 0.022ppm between 13:24pm to 13:36pm. No other issues

Any Action Taken No odour source found.

PM Odour monitor number 5 spiked at 22:08 but less than 15 minutes duration (max 0.018ppm). Storm tanks full and storming to river for most of shift.

Sludge Dip Records

Date	West PSTs 1	West PSTs 2	West PSTs 3	West Total	East PSTs	Grand Total
	All units in m ³					
OMP limit	500					
19/01/18	2036	2254	1218	5508	5573	11081
22/01/18	748	2048	1136	3932	1785	5717
24/01/18	2682	2465	971	6118	2898	9016

The sludge stock levels for the West side circular primary settlement tank 1 were **not compliant** with the OMP trigger level (500m³) on the 19/01/18, 22/01/18 and 24/01/18 for which data has been provided.

There are no limits for the East Side Primary Settlement tanks as these are covered and odour controlled. Thames is required by the terms of the abatement notice agreed in 2005 to notify LBH on the next working day of any such exceedance and notify LBH within three working days of any appropriate remedial measure taken within three days and which has been complied with in this instance

Explanation to the high levels of sludge in the PSTs: TW advised that the sludge readings are not true readings for sludge in the West Side PSTs 1. Thames Water advised that there is clean water being pumped to the head of the circular PSTs (West Side) and into circular PST 9. The force of this water entering PST 9 is causing the thin layer of sludge within the tank to be blown up and mixed throughout the tank (mixing blanket). When the tanks are dipped for sludge they are encountering it at a much higher level due to this mixing. Thames Water has to record when they encounter sludge as part of their procedures and this is why they believe they consider they have the false higher readings. Another reason why they believe these are false positives is due to the flow out of the PST. If the levels of sludge present in the tank are correct they would expect to see flows at 40l/s however they have flows of 60l/s with current levels. Thames Water advised they would have flow like this with lower levels of sludge in the tank and therefore they do not believe it is an issue and would also not

be an odour issues.

Thames Water have confirmed that the high readings shown have now been addressed by diverting the return flow to the covered rectangular PSTs. Thames Water have also confirmed that the sludge dip readings for the West PSTs 1 have returned to below 500m³. Thames Water took 4 portable Jerome monitor readings while the sludge dip readings were above 500m³ and the results were all zero.

Imported Sludge

There have been 44 imports of sludge over the last week, each import containing 30m³ of sludge.

Sludge Screening House

The large roller shutter door of the Raw Sludge Screening building was closed at the time of the inspection.

Digesters

Digesters 1-4 are permanently out of use.

Digesters 5 & 6 were both in use but had a very weak seals. Digester 5 had a large spill which went over the coping stones and onto the tarmac.

Digester 7 was in use but had a very weak seal that was bubbling off gas.

Digesters 8 was in use but had a very weak seal.

Digester 9 was in use and had a good seal.

Digesters 10, 11 & 12 were in use but had very weak seals.

Digester 13 is currently out of use.

Digester 14 was in use and had a good dry seal.

Digester 15 was in use but had a very weak seal and there was evidence of a spill over the copping stones onto the tarmac.

Digester 16 is currently out of use.

Digester 17, 18, 19 & 20 were all in use but had very weak seals.

Digester 19 was noted to have a very high seal.

Automatic dosing of anti-foaming agent is now in use and TW advised that this is also applied manually at least twice a day to all operational digesters.

Thames Water advised the spills would be cleaned up today.

Return Activated Sludge Channel

The nearside RAS channel (which runs in the ground between FST's 61-64 & 65-67) was relatively free flowing but was clogged along one third of its length on the nearside with thick dry sludge at the time of the inspection.

West side primary settlement tanks (PST)

Rectangular PSTs are now covered and odour controlled.

Circular PSTs 9, 10, 11 & 12 were all in operation at the time of the inspection, all had clean fat free surfaces.

GENERAL

Final Settlement Tanks East Side of Works

The 8 circular tanks previously used as PSTs are now being used as final tanks (71-78).

At the time of the inspection all tanks except 71 were in operation.

East Side Screen House

The screen house doors were closed at the time of the inspection. Thames confirmed all screens are in operation but undergoing cleaning work.

Skips

On the East side there was one open bulk carrier that had general waste that was open and uncovered.

On the West side there was one 6yd skip that contained rag which was uncovered. Thames Water advised that this would be covered.

Pasteurisation Plant

The pasteurisation plant was in service at the time of the inspection. The TW officer confirmed that 9 streams were running.

Section 106 agreement

There have been no breaches of the s106 agreement in the last week.

West Side Aeration Lanes (Old)

No issues appeared evident.

New Works (West Side)

The mixed liquor feed channel serving the aeration lanes was free flowing at the time of the inspection.

The surface of the aeration lanes had got worse with a foam covering

much of the surface of the tanks and much rag a debris noted in the lanes.

The sprinkler system for the aeration lanes was in use and all sprinklers appeared to be working at the time of the inspection.

New Inlet Works (West Side)

No issues appeared evident at the new inlet works.

Odour Control Unit (OCU) performance monitoring – 25/01/2018

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station outlet	0.00(av)	0.2	Yes
East OCU	0.00(av)	0.05	Yes
West inlet	0.00(av)	0.05	Yes
Sludge reception outlet	0.00(av)	0.8	Yes
Thickening plant outlet	0.00(av)	0.6	Yes
Pasteurisation plant outlet (OCU 12)	0.00(av)	0.5	Yes
Transfer PS outlet	0.00(av)	0.6	Yes
New West OCU 11 outlet	0.00(av)	0.6	Yes

Jerome reading