

Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: 8th May 2017

Attendees: Mr A Devine (London Borough of Hounslow), Mr Dimitrios Kalamantis (Thames Water)

LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A – Tank empty and flushed clean - Hoppers 1, 2 & 3 approximately one third full and require over-pumping</p> <p>Tank 1B – Tank empty and flushed clean - Hoppers 1, 2 & 3 approximately one third full and require over-pumping</p> <p>Tank 2A – Tank empty and flushed clean - Hoppers 1, 2 & 3 drained down to bottom level.</p> <p>Tank 2B – Tank empty and flushed clean - Hoppers 1, 2 & 3 approximately one third full and require over-pumping</p> <p>Tank 3A – Tank empty and flushed clean - Hoppers 1 full and requires over-pumping. Hoppers 2 and 3 drained down to bottom level.</p> <p>Tank 3B – Tank empty and flushed clean - Hopper 1 full and requires over-pumping. Hoppers 2 and 3 approximately ¼ full and require over-pumping.</p>	

<p>Tanks 4A, 4B, 5A & 5B which are covered and odour controlled were all empty - unable to gauge condition as lighting system still not working.</p> <p>Tank 6A – Tank empty and flushed clean – Hoppers 1 and 2 approximately one third full and require over-pumping. Hopper 3 approximately two thirds full and require over-pumping.</p> <p>Tank 6B – Tank empty and flushed clean – Hoppers 1 and 2 approximately one third full. Hopper 3 full and require over-pumping.</p> <p>Tank 7A – Tank has recently been returned – Hoppers 1, 2 and 3 drained down to bottom level.</p> <p>Tank 7B – Tank empty and flushed clean – Hoppers 1, 2 & 3 drained down to bottom level.</p> <p>Tank 8A – Tank empty and flushed clean – Hoppers 1, 2 & 3 approximately two thirds full and require over-pumping.</p> <p>Tank 8B – Tank empty and flushed clean – Hoppers 1, 2 & 3 full and require over-pumping. Slight localised odour noted.</p> <p><u>Storm Water Channel</u></p> <p>The storm feed channels serving STW's 1A-8B were low. There was no noticeable odours. The sludge in these channels was dark and murky in colour.</p>	

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at the time of inspection (approx. 09:37).

Monitor 1	0.004	ppm
Monitor 2	0.007	ppm
Monitor 3	0.004	ppm
Monitor 4	0.006	ppm
Monitor 5	0.006	ppm
Monitor 6	0.006	ppm
Monitor 7	0.004	ppm
Monitor 8	0.006	ppm
Monitor 9	0.007	ppm
Monitor 10	0.000	ppm
Monitor 11	-0.000	ppm
Monitor 12	0.006	ppm
Monitor 13	0.007	ppm

Complaints

The Council received 1 complaint via email and 0 complaints via e-mail or complaints via MRAG in the previous week.

On the 27th of April 2017 an e-mail was received from a resident of Varsity Drive at 12:29. The resident is located to the south of the works who advised that *"I am absolutely fed up of not being able to peg my washing out, or have my windows open, even do any gardening due to the revolting smell."* The complaint was investigated during the weekly inspection. The historic odour trends around the time of the complaint were not available due to a server error. Both servers were checked for data, however no information was available from either. The odour log

for the am shift on the 27th April recorded no odour issues. The pm log recorded one spike of 0.015ppm on odour monitor 3, however the duration was less than 5 minutes. The digesters are part of the works closest to the resident and the digester log taken at 06:30 and 18:45 on 27th April showed that none of the digesters showed any evidence of foam in the sludge seal, no spillage of digested sludge via the annular seals had occurred in any of the digesters and none of the pressure relief valves were releasing gas. It has not been possible on this occasion to identify the source of odour complained of by the resident.

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

Thursday 27th April 2017

AM – Odour monitors 1 to 13 no spikes

PM – Odour monitor 3 – One spike 0.015ppm under 15 minutes. No other issues on site.

Friday 28th April 2017

AM – OM1 to 5 – No spikes. OM 6 to 13 – OM9 – 0.019ppm from 07:14 to 08:12.

PM – No odour issues found or reported, no spikes on trends.

Saturday 29th April 2017

AM – Odour monitors 1 to 13 no spikes.

PM – No odour issues.

Sunday 30th April 2017

AM – Odour monitors 1 to 13 no spikes.

PM – Odour monitors 1 to 13 no spikes.

Monday 01st May 2017

AM – No odour issues. Nothing to report on Trends found.

PM – Odour monitor 6 spiked once at 18:45 but less than 15 minutes

<p>duration (max 0.023ppm).</p> <p>Tuesday 02nd May 2017 AM – No odour issues. Nothing to report on Trends found. PM – No odour issues.</p> <p>Wednesday 03rd May 2017 AM – Odour monitors 1 to 13 no spikes. PM – No odour issues. Nothing to report on Trends found.</p>	
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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					
28/4/2017	0	1181	0	1181	5618	6799
01/5/2017	59	1260	0	1319	3941	5260
03/5/2017	0	1260	0	1260	5909	7169

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.

Imported Sludge

There have been 7 deliveries per day of imported sludge each of 30m³ in the last week.

Digesters

Digesters 1-4 are permanently out of use.

Digester 13, 16 and 19 were out of use at the time of inspection.

All of the remaining digesters were in use and had good seals.

Digester 7 and 8 had some noticeable gassing and there was evidence of sludge spillage on the coping stone and during the inspection the digester was vigorously gassing heavily on one side via the annular seal. This was reported to Thames Water at time of inspection to take action.

Automatic dosing of anti-foaming agent is now in use and TW advised that this is also applied manually as required to all operational digesters. Digesters 14 and 18 clearly had pellets in use.

Return Activated Sludge Channel

The RAS channel (which runs in the ground between FST's 61-64 & 65-67) were free flowing, there were no deposits or sludge.

West side primary settlement tanks (PST)

Rectangular PSTs are now covered and odour controlled.

Circular PSTs 9, 10, 11 & 12 were all in operation with no noticeable issues and no algae build up.

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 the tanks were in operation. All tanks have hose and sprinkler systems fitted onto the sweeper bridges. Thames Water confirmed that there were currently no

issues with these tanks. There was sign of algae build up but no fatty solids.

East Side Screen House

The screen house now has new doors fitted, both sets of doors were closed at the time of the inspection. Thames Water confirmed all screens were in operation. There were no skips outside the screen house. There was pipework and metal outside however Thames Water advised that this would be removed and no odour was noted in the area

Skips

East side

1 x 16 yard skip – empty and uncovered

West side

1 x 6 yard skip carrier – empty and covered

2 x bulk carriers which were closed units

Pasteurisation Plant

The pasteurisation plant was in service at the time of the inspection with no reported problems. Works are ongoing with OCU12 where replacement activated carbon is being installed. This means that OCU12 is intermittently shut down whilst works are being carried out which may be the source of odour complaints. There was one 6 yard skip covered (tarpaulin pulled over) outside the PAS screening house

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 and looked as if they were operating effectively.

New Works (West Side)

West side aeration lanes seemed to have a lot of sludge and rag that had collected in part of the lane. TW explained that MTS regularly are on site to draw out the rag and allow free flow of effluent. Thames confirmed that crews would be on site to clear this out manually.

New Inlet Works (West Side)

There were no reported issues on this part of the site.

Odour Control Unit (OCU) performance monitoring – 02/05/2017			
Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station outlet	0.000(av)	0.2	Yes
East OCU	0.011(av)	0.05	Yes
West inlet	0.000(av)	0.05	Yes
Sludge reception outlet	0.000(av)	0.8	Yes
Thickening plant outlet	0.000(av)	0.6	Yes
Pasteurisation plant outlet (OCU 12)	0.000(av)	0.5	Yes
Transfer PS outlet	0.000(av)	0.6	Yes
New West OCU 11 outlet	0.000(av)	0.6	Yes
# Jerome reading			