



# London Borough of Hounslow

## Mogden Sewage Treatment Works

### TW Site Inspection

<b>Date of inspection:</b> 12 <sup>th</sup> April 2017	
<b>Attendees:</b> Mr I Inman (L B Hounslow) & Mr D Kalamantis (Thames Water).	
LB Hounslow Observation	Thames Water Action / Response
<p><b><u>Storm Water Storage Tanks (SWST)</u></b></p> <p>Tank 1A was empty &amp; clean. Hoppers 1, 2 &amp; 3 were all drained down.</p> <p>Tank 1B was empty &amp; clean. Hoppers 1, 2 &amp; 3 were all drained down.</p> <p>Tank 2A was empty &amp; clean. Hoppers 1, 2 &amp; 3 were all drained down.</p> <p>Tank 2B was empty &amp; clean. Hopper 1 was approx 1/3 full, hoppers 2 &amp; 3 were both approx 1/4 full and needed over-pumping.</p> <p>Tank 3A was empty &amp; clean. Hopper 1 was approx 2/3 full and needed over pumping. Hoppers 2 &amp; 3 were drained down.</p> <p>Tank 3B was empty &amp; clean. Hopper 1 was approx 3/4 full and being over pumped at the time of the inspection. Hoppers 2 &amp; 3 were both approx 1/3 full and needed over pumping.</p> <p>Tanks 4A, 4B, 5A &amp; 5B are covered and odour controlled.</p> <p>Tank 6A was empty &amp; clean. Hoppers 1, 2 &amp; 3 were all approx 1/4 full and needed over pumping.</p> <p>Tank 6B was empty &amp; clean. Hoppers 1, 2 &amp; 3 were all approx 1/2 full and needed over pumping.</p>	

Tank 7A was empty & clean. Hoppers 1, 2 & 3 (shallow hoppers) all contained a quantity of stagnant water and needed over pumping.

Tank 7B was empty & clean. Hoppers 1, 2 & 3 (shallow hoppers) all contained a quantity of stagnant water and needed over pumping.

Tank 8A was empty & clean. Hoppers 1, 2 & 3 were all approx  $\frac{3}{4}$  full and needed over pumping. Thames advised that there is an issue with faulty subterranean non-return valve allowing back-filling of hoppers which requires repair/replacement.

Tank 8B was empty & clean. Hoppers 1, 2 & 3 were all completely full and needed over pumping. Thames advised that there is an issue with faulty subterranean non-return valve allowing back-filling of hoppers which requires repair/replacement.

### **Storm Water Channel**

The storm feed channel serving STW's 1A-8B was virtually empty of effluent and only had a shallow level of water (<5%) along part of its length.

### **Odour Monitors**

The odour readouts (H<sub>2</sub>S) for all of the monitors, which were providing data at the time of inspection (approx 11:50).

Monitor 1	0.003	ppm
Monitor 2	0.004	ppm
Monitor 3	0.000	ppm
Monitor 4	0.004	ppm
Monitor 5	0.004	ppm
Monitor 6	0.005	ppm
Monitor 7	0.003	ppm
Monitor 8	0.004	ppm
Monitor 9	0.003	ppm
Monitor 10	0.000	ppm
Monitor 11	-0.000	ppm

Monitor 12	0.005	ppm	
Monitor 13	0.007	ppm	

**Complaints**

**The Council received 2 complaints via Email in the preceding week.**

On 9<sup>th</sup> April 2017 at 08:15 an e-mail was received from a resident of Ellerdine Road, Hounslow located to the west of the works who advised that “ *The ongoing pungent smell from Saturday night is continuing with increased intensity. Please take steps to contain it*”. The historic odour monitoring trends around the time of the complaint showed no high readings and the odour log for the PM shift on 8<sup>th</sup> April showed that there were no odour issues on site and for the AM shift on 9<sup>th</sup> April again showed that there were no odour issues and that nothing was showing on the trends. The digesters are part of the works closest to the resident and the digester log taken at 19.30 of 8<sup>th</sup> 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. The log for the AM shift taken on 9<sup>th</sup> April at 09.30 showed that eight of the digesters that were operating showed evidence of foam in the sludge seal, there was 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.

On 10<sup>th</sup> April 2017 at 23:05 an e-mail was received from a resident of Church Road, Twickenham which is in the London Borough of Richmond upon Thames who advised that “*Having to close windows again in TW1 due to the stink of sewage outside.*” The historic odour monitoring trends around the time of the complaint showed no high readings and the odour log for the PM shift on that day showed that there were no odour issues on site and no spikes on trend. The digester log taken at 19.00 did not show that there was any evidence of foam in the sludge seal, there was a spillage of digested sludge via the annular seal of digester 18 and none of the pressure relief valves were releasing gas. The PM storm log for that evening taken at 23.30 showed that none of the uncovered storm tanks were in

use on that evening, none of the tanks required flushing and only the hoppers of tanks 3b, 8a and 8b required over pumping. 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 6<sup>th</sup> April 2017**

**AM** No odour issues. Nothing to report on trends.

**PM** No odour issues.

**Friday 7<sup>th</sup> April 2017**

**AM** No odour problems.

**PM** No odour issues.

**Saturday 8<sup>th</sup> April 2017**

**AM** No odour issues. Nothing to report on trends.

**PM** No odour issues.

**Sunday 9<sup>th</sup> April 2017**

**AM** No odour issues. Nothing to report on trends.

**PM** OM7 one spike 0.020ppm, under 15 minutes. No other odour issues on site.

**Monday 10<sup>th</sup> April 2017**

**AM** OM1-5 no spikes. OM6-13 no spikes. OM7 flat lining. OM1 flat lining.

**PM** No odour issues on site. No spikes on trends.

**Tuesday 11<sup>th</sup> April 2017**

**AM** OM1-5 no odour spikes. OM6-13 = 1 spike. OM8 = 0.016 – 07:21-07:34. OM3 flat lining.

**PM** No odour issues. Nothing to report on trends.

### Sludge Dip Records

Date	West PSTs 1	West PSTs 2	West PSTs 3	West Total	East PSTs	Grand Total
	All units in m <sup>3</sup>					
OMP limit	500					
07/04/17	0	1884	61	1945	7263	9208
10/03/17	88	1448	206	1742	6110	7852

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

### Imported Sludge

There have been 6 imports of sludge per day for the last week (42 in total), each import containing 30m<sup>3</sup> 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, 7, 8, 9, 10, 11 & 12 were all in use and had wet seals with no dry areas.

Digester 13 is currently out of use.

<p>Digesters 14 &amp; 15 were both in use and had reasonably dry seals.</p> <p>Digester 16 is currently out of use.</p> <p>Digesters 17 &amp; 18 were both in use and had reasonably dry seals.</p> <p>Digester 19 is currently out of service.</p> <p>Digester 20 was in use and had a reasonably dry seal.</p> <p>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.</p>	
<p><b><u>Return Activated Sludge Channel</u></b></p> <p>The nearside RAS channel (which runs in the ground between FST's 61-64 &amp; 65-67) was clogged along the first quarter of its length with thick sludge (dry in places), rag etc at the time of the inspection. Thames advised a tanker is cleaning this out on a weekly basis. However, the material in the channel appeared to show otherwise.</p> <p><b><u>West side primary settlement tanks (PST)</u></b></p> <p>Rectangular PSTs are now covered and odour controlled.</p> <p>Circular PSTs 9, 10, 11 &amp; 12 were all in operation and had clean 'fat-free' surfaces.</p>	
<p><b><u>GENERAL</u></b></p> <p><b><u>Final Settlement Tanks East Side of Works</u></b></p> <p>The 8 circular tanks previously used as PSTs are now being used as final tanks (71-78).</p> <p>At the time of the inspection all 8 tanks were in operation but the sprinkler arms on several of the tanks were non-operational.</p>	

**East Side Screen House**

The screen house now has new doors fitted, both pairs of which were closed at the time of the inspection.  
Thames confirmed all screens were in operation.

Ongoing maintenance to this plant requiring over-pumping of grit to manual screener located by FST's 71-78

**Skips**

On the East side there was 3 open low level bulk carriers on site that were all empty, no odour was present.

On the West side there was one empty bulk carrier, one empty low level bulk carrier and one 12yd skip that was full of grit and covered with a tarpaulin.

**Pasteurisation Plant**

The pasteurisation plant was in service at the time of the inspection.  
The TW officer confirmed all 12 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 aeration lanes 21-25 (E Battery) was clogged with rag & debris along more than half its length.

The surface of the tanks was filled with a dense layer of scum.

The sprinkler system for the aeration lanes should be in permanent use but a number of sprinklers were not working at the time of the inspection.

Thames confirmed tanker crews are cleaning the mixed feed liquor channel out on a weekly basis.

**New Inlet Works (West Side)**

No issues appeared evident at the new inlet works.

**Odour Control Unit (OCU) performance monitoring – 13/04/2017**

<b>Plant</b>	<b>Reading (ppm)</b>	<b>Action Level (ppm)</b>	<b>Compliant</b>
Main pumping station outlet	0.07(av)	0.2	Yes
East OCU	0.01(av)	0.05	Yes
West inlet	0.00(av)	0.05	Yes
Sludge reception outlet	0.00(av)	0.8	Yes
Thickening plant outlet	0.009(av)	0.6	Yes
Pasteurisation plant outlet (OCU 12)	0.002(av)	0.5	Yes
Transfer PS outlet	0.000(av)	0.6	Yes
New West OCU 11 outlet	0.02 (av)	0.6	Yes

# Jerome reading