

## Mogden Sewage Treatment Works

### TW Site Inspection

<b>Date of inspection:</b> 20 <sup>th</sup> April 2017	
<b>Attendees:</b> Mr Zaheer Kadri (London Borough of Hounslow), Mr Demetrius Kalamantis (Thames Water)	
<b>LB Hounslow Observation</b>	<b>Thames Water Action / Response</b>
<p><b><u>Storm Water Storage Tanks (SWST)</u></b></p> <p>Tanks 1A –3A: All tanks were empty and free of effluent, all hoppers had been completely drained down however the tanks needed a slight sweep as there was left over grit at the hopper end. There were no signs of odour.</p> <p>Tanks 4a, 4b, 5a &amp; 5b are covered and odour controlled.</p> <p>Tanks 6A – 8B: All tanks were empty and did not require flushing however most of them needed a sweep due to build-up of grit at the hopper end. There was significant algae growth in hoppers 7A-8B. Hoppers 8A and 8B look like they need draining down however it was noted that there have been issues with a crack in the hopper chamber that allows the hoppers to fill up with final effluent. There was no odour noted from this area at the time of the inspection.</p>	

### **Storm Water Channel**

The storm feed channels serving STW's 1A-8B were low however looked sludgy. There was no noticeable odours. The sludge in these channels was dark and murky in colour.

### **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. 14:33).

Monitor 1	0.006	ppm
Monitor 2	0.007	ppm
Monitor 3	0.003	ppm
Monitor 4	0.012	ppm
Monitor 5	0.006	ppm
Monitor 6	0.006	ppm
Monitor 7	0.004	ppm
Monitor 8	0.024	ppm
Monitor 9	0.010	ppm
Monitor 10	0.005	ppm
Monitor 11	0.004	ppm
Monitor 12	0.008	ppm
Monitor 13	0.009	ppm

### **Complaints**

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

On the 18<sup>th</sup> of April 2017 a telephone call was received from a resident of Whitton Dene at 12.44. The Duty officer called the complainant back

and advised that the complaint would be investigated. Following the conversation the Officer visited the area and undertook odour monitoring for Hydrogen Sulphide (H<sub>2</sub>S) and made a subjective assessment of the odour. The results of this were that average level of H<sub>2</sub>S was 0.00ppm and the subjective assessment confirmed that the level of odour was not causing a nuisance. The complaint was further investigated at the weekly inspection and monitors 1-13 did not show any significant spikes or unusual trends and were all generally below 0.007ppm at the time that the complaint was made and investigated. The source for the odour complaint is likely to be due to work being undertaken to the carbon filter of OCU12 which was intermittently being shut down so gas was being released without being filtered through the carbon medium. During the weekly inspection the trends for the date in concern was investigated and this showed no adverse readings or spikes with the odour monitors. Thames did issue a notification on 18<sup>th</sup> April advising that they were undertaking remedial work on that day and that work was being undertaken on OCU 12 which is close to Whitton Dene and is likely to explain the source of odour complained of by the resident.

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

**Thursday 13<sup>th</sup> April 2017**

**AM** – No odour issues on site – Nothing to report on trends

**PM** – No odour issues on site – Nothing to report on trends

**Friday 14<sup>th</sup> April 2017**

**AM** – No odour issues on site – Nothing to report on trends- odour complaint received , site checked all ok .

**PM** – OM- 1-5- monitor 3 in specific 0.05ppm at 10:54-11:07

OM 6-15 No spikes

**Saturday 15<sup>th</sup> April 2017**

**AM** – No odour issues on site – Nothing to report Trends FST 83 back in service

**PM** – OM 1-5 No spikes. OM 6-13 monitor 8- 0.016ppm- 20:53– 21:05 and then it spiked again at 21:23 -21:35

**Sunday 16<sup>th</sup> April 2017**

**AM** – OM spiked at 10:19 – 10:31. Overflow alarm showing PAS No 1 reactor. Small spillage in drain, Hose running in drain.

**PM** – OM3 spiked at three different occasions.

0.025ppm between 12:07- 12:19, 10:07-10:19 and again at 08:52-09:04

OM8 – 0.06 at 10:07-10:19

**Monday 17<sup>th</sup> April 2017**

**AM** – No odour issues on site – Nothing to report Trends.

**PM** – OM9 – One spike max 0.016ppm at 1:58 – 2:56

**Tuesday 18<sup>th</sup> April 2017**

**AM** – No odour issues on site – Nothing to report Trends

**PM** – No odour issues on site – nothing to report on Trends

**Wednesday 19<sup>th</sup> April 2017**

**AM** – No odour issues on site – nothing to report on Trends

**PM** – OM5 – two spikes less than 15 minutes all other trends showing no odours. No odours found on site.

### 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	<b>500</b>					
14/4/2017	0	661	0	661	6578	<b>7239</b>
17/4/2017	0	1012	0	1012	6246	<b>7258</b>
19/4/2017	0	1448	0	1448	4612	<b>6060</b>

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 deliveries per day of imported sludge each of 30m<sup>3</sup> 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 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 TW 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 7 tanks were in operation and tank number 78 was out of action. All 8 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. Tank 78 not in service.

### **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.

### **Skips**

#### **East side**

2 x 6 yard skips full with grit and covered with tarpaulin  
1 x 16 yard skip – empty and uncovered

#### **West side**

1 x 16 yard skip empty but covered (tarpaulin pulled over)  
1 x 6 yard skip carrier – empty and covered  
3x 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.

### **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 – 18/04/2017**

<b>Plant</b>	<b>Reading (ppm)</b>	<b>Action Level (ppm)</b>	<b>Compliant</b>
Main pumping station outlet	0.000(av)	0.2	Yes
East OCU	0.015(av)	0.05	Yes
West inlet	0.000(av)	0.05	Yes
Sludge reception outlet	0.000(av)	0.8	Yes
Thickening plant outlet	0.001(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	0.013(av)	0.6	Yes

# Jerome reading