



# London Borough of Hounslow

## Mogden Sewage Treatment Works

### TW Site Inspection

<b>Date of inspection:</b> 9 <sup>th</sup> January 2020	
<b>Attendees:</b> Mr Steven Maunders and Miss Charlotte Page (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><b>Tank 1A</b> – Tank empty - approximately 50% of tank covered by grit/sludge – requires further flushing – Hoppers 1 &amp; 2 approx. 20% full, Hopper 3 full – requires draining/over-pumping.</p> <p><b>Tank 1B</b> – Tank empty - approximately 50% of tank covered by grit/sludge – requires further flushing – Hoppers 1, 2 &amp; 3 full – requires draining/over-pumping.</p> <p><b>Tank 2A</b> – Tank empty - approximately 10% of tank covered by grit/sludge – requires further flushing – Hoppers 1 &amp; 2 approx. 15% full, Hopper 3 full – requires draining/over-pumping.</p> <p><b>Tank 2B</b> – Tank empty – recently returned 100% of tank covered by grit/sludge – requires further flushing – Hopper 1 approx. 75% full, Hoppers 2 &amp; 3 approx. 40% full – requires draining/over-pumping.</p> <p><b>Tank 3A</b> – Tank empty and flushed clean – Hoppers 1, 2 &amp; 3 approx. 25% full – requires draining/over-pumping.</p> <p><b>Tank 3B</b> – Tank empty – recently returned 100% of tank covered by</p>	

grit/sludge – requires further flushing – Hoppers 1, 2 & 3 approx. 80% full – requires draining/over-pumping.

**Tanks 4A, 4B, 5A & 5B** which are covered and odour controlled were all empty - unable to gauge condition as lighting system still not working.

**Tank 6A** – Tank empty - approximately 20% of tank covered by grit/sludge – requires further flushing – Hoppers 1, & 3 approx. 60% full, Hopper 2 approx. 40% full – requires draining/over-pumping.

**Tank 6B** – Tank empty – recently returned 100% of tank covered by grit/sludge – requires further flushing - Hoppers 1, 2 & 3 approximately 40% full - requires draining/over-pumping.

**Tank 7A** – Tank empty – recently returned – approximately 30% of tank covered by grit/sludge – requires further flushing. Hoppers 1, 2 & 3 full – requires draining/over-pumping.

**Tank 7B** – Tank empty – recently returned 100% of tank covered by grit/sludge – requires further flushing - Hoppers 1, 2 & 3 full - requires draining/over-pumping.

**Tank 8A** – Tank empty - approximately 50% of tank covered by grit/sludge – requires further flushing – Hoppers 1 & 3 full, Hopper 2 approx. 90% full – requires draining/over-pumping.

**Tank 8B** – Tank recently returned 100% of tank still covered with grit/sludge – requires further flushing. Hoppers 1 & 2 full, Hopper 3 approx. 40% full – requires draining/over-pumping.

**Feed Channel** - The level of effluent in both feed channels was approximately 50% - no local odours.

### **Complaints**

**The Council directly received no complaints by telephone in the preceding week.**

The Council directly received no complaints by email in the preceding week.

The Council received no complaints by email from MRAG.

*Thames Water controller advised that they had received no direct complaints in the preceding week.*

### Odour Monitors

The odour readouts (H<sub>2</sub>S) were unavailable for all of the monitors due to a failure of the Computer Server at the time of the inspection:

Monitor 1	007	ppm	13:05
Monitor 2	007	ppm	13:05
Monitor 3	000	ppm	13:05
Monitor 4	006	ppm	13:05
Monitor 5	010	ppm	13:05
Monitor 6	010	ppm	13:05
Monitor 7	007	ppm	13:05
Monitor 8	007	ppm	13:05
Monitor 9	006	ppm	13:05
Monitor 10	008	ppm	13:05
Monitor 11	007	ppm	13:05
Monitor 12	009	ppm	13:05
Monitor 13	007	ppm	13:05
Wind Speed	3.1	mph	13:05
Wind Direction	234		13:05

### Odour Log (Thames):

**Thursday 2<sup>nd</sup> January 2020:**

**AM** – Cool – Cloudy.

All OMU's in use.

**Observations/Complaints:** "OM2 spiked at 06:25-06:41 max 0.024ppm."

**Operational Issues/Causes:** "Rag skip change area hosed down on completion."

**Actions:** None noted.

**PM** – Cool – Clear Night.

All OMU's in use.

**Observations/Complaints:** "OM5 0.023ppm 18:35 – 19:35."

**Operational Issues/Causes:** "Area checked. Odour detected occasionally from PAS area. Nothing out of the ordinary. No sludge spills or vessels venting odour."

**Actions:** None noted.

#### **Friday 3<sup>rd</sup> January 2020:**

**AM** – Cool – Cloudy with Sunny Spells.

All OMU's in use.

**Observations/Complaints:** "OM4 spiked at 16:08 – 16:33 max 0.013ppm. OM8 spiked at 16:25 – 16:46, 16:56 – 17:15 & 17:40 – 17:55 max 0.031ppm."

**Operational Issues/Causes:** "PAS area to be checked as there is a PAS type odour in the wind blowing across site towards OM4 and OM8."

**Actions:** None noted.

**PM** – Cool – Clear Night.

All OMU's in use.

**Observations/Complaints:** "OM4 0.021 22:17–22:31, 0.020 22:47-23:01, 0.019 23:16-23:32, OM8 0.024 19:53-20:12, 0.020 20:54-21:10, 0.021 22:42-23:12."

**Operational Issues/Causes:** "Areas checked but no source found. PAS shift asked to check area."

**Actions:** None noted.

#### **Saturday 4<sup>th</sup> January 2020:**

**AM** – Cool – Cloudy with Sunny spells.

All OMU's in use.

**Observations/Complaints:** "OM2 spiked at 10:20-10:47 max 0.086ppm. OM5 spiked at 06:20-06:35, 06:50-07:04 and 07:20-07:37 max 0.022ppm. OM8 spiked at 13:28-13:41 max 0.016ppm."

**Operational Issues/Causes:** "East inlet skip odorous. Pasteurised sludge odour in the air."

**Actions:** "Area hosed down. PAS Tech checking around water seals on PAS stream vents and topped up one found to be low."

**PM** – Cool – Clear Night.

All OMU's in use.

**Observations/Complaints:** "OM5 0.017 13:20-13:35, 0.027 21:04-21:20 & 0.018 02:50-03:05. OM12 0.017 02:43-03:43. OM10 0.016 21:38-21:52."

**Operational Issues/Causes:** "Pasteurised sludge odour in the air. Areas checked no source found."

**Actions:** "PAS Tech checked area."

#### **Sunday 5<sup>th</sup> January 2020:**

**AM** – Cool – Cloudy with Sunny spells.

All OMU's in use.

**Observations/Complaints:** "OM5 spiked twice to max 0.021 but less than 15 mins @ 07:00."

**Operational Issues/Causes:** None noted.

**Actions:** None noted.

**PM** – Cold – Overcast Night.

All OMU's in use.

**Observations/Complaints:** "No odour issues."

**Operational Issues/Causes:** None noted.

**Actions:** None noted.

#### **Monday 6<sup>th</sup> January 2020:**

**AM** – Cool – Cloudy with Sunny spells.

All OMU's in use.

**Observations/Complaints:** "OM5 0.017 12:50 – 13:04. OM6 0.017 15:43-16:43."

**Operational Issues/Causes:** "Area checked – no source found."

**Actions:** None noted.

**PM** – Cool – Overcast Night.

All OMU's in use.

**Observations/Complaints:** "OM2 spiked at 02:00-02:14 max 0.017ppm and at 04:18-04:57 max 0.021ppm. OM5 spiked at 13:34-13:43, 23:05-23:13, 23:34-23:42 & 01:50-02:05 max 0.028ppm."

**Operational Issues/Causes:** "Areas in vicinity of monitors checked but no obvious odour sources discovered."

**Actions:** "Logged."

**Tuesday 7<sup>th</sup> January 2020:**

**AM** – Cool – Cloudy with Sunny spells.

All OMU's in use.

**Observations/Complaints:** "OM5 0.020 07:34–07:50, 0.023 16:34-16:50."

**Operational Issues/Causes:** "Area checked no source found."

**Actions:** None noted.

**PM** – Cool – Overcast Night.

All OMU's in use.

**Observations/Complaints:** "OM5 0.013 02:35-02:50."

**Operational Issues/Causes:** None noted.

**Actions:** None noted.

**Wednesday 8<sup>th</sup> January 2020:**

**AM** – Cool – Cloudy with Sunny spells.

All OMU's in use.

**Observations/Complaints:** "No odour issues."

**Operational Issues/Causes:** None noted.

**Actions:** None noted.

**PM** – Cool – Overcast Night.

All OMU's in use.

**Observations/Complaints:** "OM2 spiked at 17:55-18:08 but <15 mins duration max 0.019ppm."

**Operational Issues/Causes:** None noted.

**Actions:** None noted.

### 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					
03/01/2020	0	1012	206	1218	4563	5781
06/01/2020	0	61	513	574	5201 (TW figure 4901)	5775 (TW figure 5539)
08/01/2020	0	1199	267	1466	5719	7185

The sludge stock levels for the West side circular primary settlement tank 1 were **compliant** with the OMP trigger level (500m<sup>3</sup>) for all of the dates 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.

### Digesters

**Digesters 1-4** – Out of use (permanent) – noticeable quantity of water accumulated to the brim of these tanks which is thick with algae – requires draining. Long term project currently initiated to bring these units back into service – will require significant investment.

**Digester 5** - In use – seal level approx. 3ft below coping stones – seal weak and bubbling.

**Digester 6** - In use – seal level approx. 3ft below coping stones – seal weak and bubbling – evidence of recent dry spill requiring clean-up.

**Digester 7** – Out of use – empty and clean – contractor on site undertaking maintenance

**Digester 8.** - In use – seal level approx. 5ft below coping stones - seal weak and bubbling.

**Digester 9** - In use – seal level approx. 3ft below coping stones - seal weak and bubbling.

**Digester 10** - In use – seal level approx. 2ft below coping stones - seal weak and bubbling.

**Digester 11** - In use – seal level approx. 2ft below surface of coping stones – evidence of recent dry spill requiring clean-up.

**Digester 12** - In use – seal level approx. 4ft below coping stones - seal weak and bubbling.

**Digester 13** - In use – seal level approx. 1ft below coping stones – seal weak and bubbling.

**Digester 14.** – Out of use – empty and clean – contractor on site undertaking maintenance.

**Digester 15** - Out of use – empty and clean – contractor on site undertaking maintenance.

**Digester 16.** - In use – seal level approx. 18” below coping stones – seal weak and bubbling – Bell height high requiring draw down of Biogas

**Digester 17** - In use – seal level approx. 2ft below coping stones - seal weak and bubbling, spitting vigorously– ongoing spill requiring anti-foam and clean-up. Bell height high requiring draw down of Biogas

**Digester 18** - Out of use – empty and clean – contractor on site undertaking maintenance

**Digester 19** - In use – seal level approx. 2ft below coping stones - seal



weak and bubbling, spitting vigorously– ongoing spill requiring anti-foam and clean-up. Bell height high requiring draw down of Biogas

**Digester 20** - In use – seal level approx. 3ft below coping stones – seal weak and bubbling. Bell height high requiring draw down of Biogas

## **GENERAL**

### **Sludge Screening House**

Access door open at time of inspection – closed by CP - All other doors closed at time of inspection.

### **Imported Sludge**

Approx. 9 imports daily for preceding seven days.

### **Final Settlement Tanks East Side of Works**

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

### **Skips**

1x large open container skip (empty), 2x (8 yard) general waste skip & 1x enclosed skip (8 yard) located in Service Road by Storm Water Tanks.

1x partially filled small grit skips by Sludge Screening House.

### **Pasteurisation Plant**

Pasteurisation plant 9 streams running.

**East Side Raw Sludge Screen House**

Doors closed at time of inspection.

**West Side Aeration Lanes (Old)**

Battery C aeration feed channel 100% obstructed in one channel – requires jetting.

**West side primary settlement tanks (PST)**

Rectangular PSTs – no issues  
Circular PST's 10, 11 & 12 in use. Tank 9 drained and out of use.

**New Works (West Side)**

Feed Channel for Aeration Lanes 21-24 approximately 50% blocked – required jetting.

“Fluffy” coverage across surface has again begun to build up, also significant quantity of material bypassing screener.

**Odour Control Unit (OCU) performance monitoring – (07/01/20)**

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.06	Unknown	Unknown
	0.05		
	0.06		
Main pumping station outlet	0.01	0.2	Yes
	0.01		
	0.01		
East OCU	0.00	0.05	Yes
	0.00		

	0.00			
West inlet OCU	0.00 0.00 0.00	0.05	Yes	
Sludge reception inlet	No data	Unknown	Unknown	
Sludge reception outlet	No data	0.8	Yes	
Thickening plant inlet	No data	Unknown	Unknown	
Thickening plant outlet	0.00 0.00 0.00	0.6	Yes	
Transfer PS inlet	No data	Unknown	Unknown	
Transfer PS outlet	0.01 0.01 0.01	0.6	Yes	
New West inlet (OCU 11)	0.00 0.00 0.00	0.5	Yes	
Pasteurisation Plant (OCU 12)	0.00 0.00 0.00	0.5	Yes	