

## Mogden Sewage Treatment Works

### TW Site Inspection

**Date of inspection:** Thursday 30<sup>th</sup> January 2020 (12:00pm)

**Attendees:** Mr L Phillips (London Borough of Hounslow) and Mr Tom (Thames Water)

#### LB Hounslow Observation

#### Thames Water Action / Response

#### **Storm Water Storage Tanks (SWST)**

**Tank 1A** was empty however had just been returned hence there was some sludge deposits on the surface of the tank. There were no reported issues with the Amajets 1, 2 & 3.

**Tank 1B** was empty however had just been returned hence there was some sludge deposits on the surface of the tank. There were no reported issues with the Amajets 1, 2 & 3.

**Tank 2A** was empty however had just been returned hence there was some sludge deposits on the surface of the tank. There were no reported issues with the Amajets 1, 2 & 3, all were in operation.

**Tank 2B** was empty however had just been returned hence there was some sludge deposits on the surface of the tank. There were no reported issues with the Amajets 1, 2 & 3.

**Tank 3A** was empty however had just been returned hence there was some sludge deposits on the surface of the tank. There were no reported issues with the Amajets 1, 2 & 3.

**Tank 3B** was empty however had just been returned hence there was some sludge deposits on the surface of the tank. There were no reported issues with the Amajets 1, 2 & 3.

**Tanks 4A, 4B, 5A & 5B** All tanks are covered and odour controlled. Unable to gauge condition as lighting system still not working.

**Tank 6A** was empty however had just been returned hence there was some sludge deposits on the surface of the tank. There were no reported issues with the Amajets 1, 2 & 3.

**Tank 6B** was empty however had just been returned hence there was some sludge deposits on the surface of the tank. There were no reported issues with the Amajets 1, 2 & 3.

**Tank 7A** was empty however had just been returned hence there was some sludge deposits on the surface of the tank. There were no reported issues with the Amajets 1, 2 & 3.

**Tank 7B** was empty however had just been returned hence there was some sludge deposits on the surface of the tank. There were No reported issues with the Amajets 1, 2 & 3.

**Tank 8A** was empty however had just been returned hence there was some sludge deposits on the surface of the tank. There were No reported issues with the Amajets 1, 2 & 3.

**Tank 8B** was empty however had just been returned hence there was some sludge deposits on the surface of the tank. There were no reported issues with the Amajets 1, 2 & 3.

**Storm Feed Channel** - The channel was 20% full - murky and dark effluent.

Thames advised of planned works to replace all of the hopper valves to prevent back flow of effluent.

They are still also awaiting parts in order to bring the wash water pump system back into operation.

**Complaints**

The Council has received no complaints by email or telephone in the preceding week.

**Odour Monitors**

The odour readouts (H<sub>2</sub>S) for all of the monitors, which were providing data at time of inspection: Thursday 31<sup>st</sup> January 2020 at 12:38.

Monitor 1	0.010	ppm	12:16
Monitor 2	0.007	ppm	12:16
Monitor 3	0.000	ppm	12:16
Monitor 4	0.005	ppm	12:16
Monitor 5	0.007	ppm	12:17
Monitor 6	0.004	ppm	12:17
Monitor 7	0.003	ppm	12:17
Monitor 8	0.007	ppm	12:17
Monitor 9	0.007	ppm	12:17
Monitor 10	0.007	ppm	12:17
Monitor 11	0.000	ppm	12:17
Monitor 12	0.004	ppm	12:17
Monitor 13	0.003	ppm	12:17

Wind Speed	12.939	mph	12:38
Wind Direction	198.595	°	12:38

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

**Thursday 23<sup>th</sup> January 2020**

**DAY SHIFT**

**Temp:** Cool.

**Weather:** Cloudy W/ Sunny.

**Odour Readings:** All OMU's in operation.

**Time:** 17:30.

**Observations / Customer Complaint:** OM2 0.017 09:57 – 10:08.

**Operational issues / causes observed:** None noted.

**Actions Taken:** Blank.

**NIGHT SHIFT**

**Temp:** Cool.

**Weather:** Clear night.

**Odour Readings:** All OMU's in operation.

**Time:** 05:30.

**Observations / Customer Complaint:** No odour issues.

**Operational issues / causes observed:** None noted.

**Actions Taken:** Blank

**Friday 24<sup>th</sup> January 2020**

**DAY SHIFT**

**Temp:** Cool.

**Weather:** Cloudy W/ Sunny.

**Odour Readings:** All OMU's in operation.

**Time:** 17:30.

**Observations / Customer Complaint:** OM2 0.108 SPIKE 11:51 – 12:18.

**Operational issues / causes observed:** Area checked no source discovered.

**Actions Taken:** None noted.

**NIGHT SHIFT**

**Temp:** Cool.

**Weather:** Clear night.

**Odour Readings:** All OMU's in use.

**Time:** 05:30.

**Observations / Customer Complaint:** OM2 0.018PPM 18:18 – 18:40  
0.022PPM 23:13 – 23:32.

**Operational issues / causes observed:** No odour detected in area.

**Actions Taken:** None noted.

**Saturday 25<sup>th</sup> January 2020**

**DAY SHIFT**

**Temp:** Cool.

**Weather:** Cloudy.

**Odour Readings:** All OMU's in operation.

**Time:** 17:30.

**Observations / Customer Complaint:** OM20.017 6:49 – 6:52, 0.018  
09:04 – 09:19, 0.027 10:26 – 10:51 0.049 10:51 – 11:16, OM10 0.020  
16:25 – 16:39.

**Operational issues / causes observed:** Area checked no source found.

**Actions Taken:** Blank.

**NIGHT SHIFT**

**Temp:** Cool.

**Weather:** Clear night.

**Odour Readings:** All OMU's in operation.

**Time:** 05:30.

**Observations / Customer Complaint:** OM2 0.020PPM 02:04 – 02:24.

**Operational issues / causes observed:** No odour identified.

**Actions taken:** None noted.

**Sunday 26<sup>th</sup> January 2020**

**DAY SHIFT**

**Temp:** Cool.

**Weather:** Rain.

**Odour Readings:** All OMU's in operation.

**Time:** 17:30.

**Observations / Customer Complaint:** OM2 0.031 16:34 – 06:49, 0.016 11:47 – 11:51 0.040 10:16 – 11:02.

**Operational issues / causes observed:** Area checked no source found.

**Actions Taken:** None noted.

**NIGHT SHIFT**

**Temp:** Cool.

**Weather:** Rain.

**Odour Readings:** All OMU's in operation.

**Time:** 05:30.

**Observations / Customer Complaint:** No odour issues.

**Operational issues / causes observed:** None noted.

**Actions Taken:** None noted.

**Monday 27<sup>th</sup> January 2020**

**DAY SHIFT**

**Temp:** Cold.

**Weather:** Cloudy W/Sunny spells.

**Odour Readings:** All OMU's in operation.

**Time:** 17:30.

**Observations / Customer Complaint:** OM10 spiked 14:25 – 14:39, 15 minutes duration max 0.017ppm.

**Operational issues / causes observed:** None noted.

**Actions Taken.** None noted.

**NIGHT SHIFT**

**Temp:** Cold.

**Weather:** Rain.

**Odour Readings:** All OMU's in operation.

**Time:** 05:30.

**Observations / Customer Complaint:** No odour issues.

**Operational issues / causes observed:** None noted.

**Actions Taken:** None noted.

**Tuesday 28<sup>st</sup> January 2020**

**DAY SHIFT**

**Temp:** Cold.

**Weather:** Cloudy W/Sunny spells.

**Odour Readings:** All OMU's in operation.

**Time:** 17:30.

**Observations / Customer Complaint:** OM2 11:03 – 11:34.

**Operational issues / causes observed:** Each inlet checked no obvious sources found hosed down skip area for good measure.

**Actions Taken:** None noted.

**NIGHT SHIFT**

**Temp:** Cold.

**Weather:** Clear night.

**Odour Readings:** All OMU's in operation.

**Time:** 05:30.

**Observations / Customer Complaint:** OM9 0.016 00:50 – 01:50.

**Operational issues / causes observed:** Area checked no source found.

**Actions Taken:** None noted.

**Wednesday 29<sup>th</sup> January 2020**

**DAY SHIFT**

**Temp:** Cool.

**Weather:** Sunny W / Patch Clouds.

**Odour Readings:** All OMU's in operation.

**Time:** 17:30.

<p><b>Observations / Customer Complaint:</b> OM2 spiked at 09:35 – 11:04 max 0.063ppm, OM5 spiked at 16:07 – 16:36 max 0.016ppm.</p> <p><b>Operational issues / causes observed:</b> Each inlet hosed down nothing else found.</p> <p><b>Action Taken:</b> None noted.</p> <p><b>NIGHT SHIFT</b></p> <p><b>Temp:</b> Cool.</p> <p><b>Weather:</b> Clear night.</p> <p><b>Odour Readings:</b> All OMU's in operation.</p> <p><b>Time:</b> 05:30.</p> <p><b>Observations / Customer Complaint:</b> OM2 0.020 spike 03:44 – 04:02 0.028 spike 02:54 – 23:19 OM5 spike 0.019 01:51 – 02:07 0.016 20:51 – 21:06.</p> <p><b>Operational issues / causes observed:</b> Area checked no source found.</p> <p><b>Actions Taken:</b> None noted.</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 <sup>3</sup>					
OMP limit	500					
24/01/2020	40	806	581	1427	5058	6485
27/01/2020	0	848	328	1176	3554	4750 *
29/01/2020	0	994	534	1528	2561	4089

**\*Incorrect total entered on Thames Water paperwork.  
Correct total should be 4,730.**

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.

### Imported Sludge

There have been 42 imports of sludge over the last week (6 per day).

### No.5 Pumping Station

The doors of No.5 pumping station was closed at the time of the inspection - no odour was evident.

### **Raw 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** Out of use (permanent). Thames advised of a long term project currently initiated to bring these units back into service that will require significant investment.

**Digesters 5:** Was in use had a weak sloppy seal. No evidence of spillage.

**Digester 6:** Was in use had a weak sloppy seal. No evidence of spillage

**Digester 7:** Out of service.

**Digester 8:** Was in use had a weak sloppy seal. No evidence of spillage

**Digester 9:** Was in use had a weak sloppy seal. No evidence of spillage.

**Digesters 10:** Was in use had a weak sloppy seal. No evidence of spillage.

**Digesters 11:** Was in use had a weak sloppy seal. No evidence of spillage.

**Digester 12:** Was in use had a weak sloppy seal. No evidence of spillage.

**Digesters 13:** Was in use had a weak sloppy seal. No evidence of spillage.

**Digester 14:** Out of service.

**Digester 15:** Out of service.

**Digester 16:** Was in use had a weak sloppy seal. No evidence of spillage.

**Digester 17:** Was in use had a weak sloppy seal. No evidence of spillage.

**Digester 18:** Out of service.

**Digester 19:** Was in use had a weak sloppy seal. No evidence of spillage.

**Digester 20:** Was in use had a weak sloppy seal. No evidence of spillage.

There was evidence of anti-foaming agent in use and TW advised that this is applied daily to all of the digesters that are operational.

**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). All tanks were operational at the time of the inspection and no issues were evident.

**Skips**

On the East side there were two 6yds open skips, one skip was empty and not covered. The other skip contained general inert material covered with tarpaulin.

### **East Side Screen House**

The doors to the screen house building were closed at the time of the inspection.

### **Return Activated Sludge Channel**

The nearside RAS channel (which runs in the ground between FST's 61-64 & 65-67) was clogged along 60% of the near-side channel.

### **West Side Aeration Lanes (Old)**

No issues clear.

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

Rectangular PSTs are now covered and odour controlled. TW advised no issues.

Circular PST 9 was out of service at the time of the inspection.

Circular PST's 10, 11 & 12 had clean fat free surfaces.

### **Pasteurisation Plant**

The pasteurisation plant is in service. TW advised 9 streams are currently in service.

**Section 106 agreement**

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

**West Side Aeration Lanes (New)**

A thick fluffy scum has again developed across all of the aeration lane surfaces that was thick enough to almost obscure all of the internal dividing walls. Nearly all of the sprinklers appeared to be in operation.

The mixed liquor feed channel serving aeration lanes 25 & 24 of E-Battery was again clogged with thick scum and surface debris. However, no odour was noticeable.

**New Inlet Works (West Side)**

No issues.

**Odour Control Unit (OCU) performance monitoring: 21/01/2020**

<b>Plant</b>	<b>Reading (ppm)</b>	<b>Action Level (ppm)</b>	<b>Compliant</b>
Main pumping station inlet	0.01 0.00 0.01 Total:0.02	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00 Total:0.00	0.2	Yes

East OCU	0.00 0.00 0.00 Total:0.00	0.05	No
West inlet OCU	0.00 0.00 0.00 Total: 0.00	0.05	Yes
Sludge reception inlet	Blank	Unknown	Unknown
Sludge reception outlet	Blank	0.8	Unknown
Thickening plant inlet	Blank	blank	Unknown
Thickening plant outlet	0.02 0.02 0.02 Total:0.02	0.6	Yes
Transfer PS inlet	Blank	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00 Total: 0.00	0.6	Yes
New West inlet (OCU 11)	0.00 0.00 0.00	0.5	Yes
Pasteurisation (OCU 12)	0.00 0.00 0.00 Total:0.00	0.5	Yes