

## Mogden Sewage Treatment Works

### TW Site Inspection

**Date of inspection:** Thursday 23<sup>rd</sup> January 2020 (12:00pm)

**Attendees:** Mr Z Kadri (London Borough of Hounslow) and Ms C Page (Thames Water)

#### LB Hounslow Observation

#### Thames Water Action / Response

##### Weather

Mild with slight cloud at the time of the inspection.

##### 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 0 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 23<sup>rd</sup> January 2020 at 12:38.

Monitor 1	0.006	ppm	12:38
Monitor 2	0.008	ppm	12:38
Monitor 3	0.005	ppm	12:38
Monitor 4	0.004	ppm	12:38
Monitor 5	0.004	ppm	12:38
Monitor 6	0.006	ppm	12:38
Monitor 7	0.005	ppm	12:38
Monitor 8	0.005	ppm	12:38

Monitor 9	0.007	ppm	12:38
Monitor 10	0.007	ppm	12:38
Monitor 11	0.006	ppm	12:38
Monitor 12	0.006	ppm	12:38
Monitor 13	0.005	ppm	12:38
Wind Speed	0.204	mph	12:38
Wind Direction	53.315	°	12:38

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

**Thursday 16<sup>th</sup> January 2020**

**DAY SHIFT**

**Temp.** Cool.

**Weather.** Rain

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

**Time:** 17:30.

**Observations / Customer Complaint. Operational issues / causes observed.** Blank.

**Actions Taken.** Blank.

**NIGHT SHIFT**

**Temp.** Cool.

**Weather.** Rain.

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

**Time:** 05:30.

**Observations / Customer Complaint.** OM11 spiked at 01:44 - 02:43, max 0.016ppm.

**Operational issues / causes observed.** Area around digesters checked - no unusual smells or digesters gassing

**Actions Taken.** Blank

**Friday 17<sup>th</sup> January 2020**

**DAY SHIFT**

Temp. Cool.

Weather. Rain w/sunny spells

Odour Readings. All OMU's in operation.

Time: 17:30.

**Observations / Customer Complaint. Operational issues / causes observed.** No odours detected.

**Actions Taken.** Blank.

**NIGHT SHIFT**

Temp. Freezing.

Weather. Clear night.

Odour Readings. All OMU's in use.

Time: 05:30.

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

**Operational issues / causes observed. Actions Taken.** Blank.

**Saturday 18<sup>th</sup> January 2020****DAY SHIFT**

Temp. Cold

Weather. Sunny w/patchy clouds

Odour Readings. All OMU's in operation.

Time: 17:30.

**Observations / Customer Complaint.** OM2 & OM5 one spike each both less than 15 minutes long.

**Operational issues / causes observed.** Blank.

**Actions Taken.** Blank.

**NIGHT SHIFT**

Temp. Freezing.

Weather. Clear night.

Odour Readings. All OMU's in operation.

Time: 05:30.

**Observations / Customer Complaint.** OM1 spiked to 0.015ppm at 18:28 - 19:20.

**Operational issues / causes observed.** Blank.

**Actions taken.** Blank.

**Sunday 19<sup>th</sup> January 2020**

**DAY SHIFT**

**Temp.** Cold.

**Weather.** sunny w/patchy clouds.

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

**Time:** 17:30.

**Observations / Customer Complaint.** OM2 spiked to 0.033ppm at 13:19 - 14:20.

**Operational issues / causes observed.** Area checked for odours. East Inlet skip area washed down.

**Actions Taken.** Blank.

**NIGHT SHIFT**

**Temp.** Freezing.

**Weather.** Clear night.

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

**Time:** 05:30.

**Observations / Customer Complaint.** OM2 max spike 0.019ppm at 00:44 - 01:10.

**Operational issues / causes observed.** Blank.

**Actions Taken.** Blank.

**Monday 20<sup>th</sup> January 2020**

**DAY SHIFT**

**Temp.** Cool.

**Weather.** Cloudy w/sunny spells.

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

**Time:** 17:30.

**Observations / Customer Complaint.** OM2 0.060ppm at 10:16 - 11:35

**Operational issues / causes observed.** No odours detected.

**Actions Taken.** Blank.

**NIGHT SHIFT**

**Temp.** Freezing.

**Weather.** Clear night.

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

**Time:** 05:30.

**Observations / Customer Complaint.** OM2 0.015ppm 23:06 - 23:50  
peak of 0.073ppm.

**Operational issues / causes observed.** Blank.

**Actions Taken.** Blank.

**Tuesday 21<sup>st</sup> January 2020**

**DAY SHIFT**

**Temp.** Sunny.

**Weather.** Sunny w/patchy clouds.

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

**Time:** 17:30.

**Observations / Customer Complaint.** OM2 0.050ppm 09:10 - 10:03  
And OM1 0.018 14:45 - 15:48.

**Operational issues / causes observed.** Area checked storm tanks  
returning.

**Actions Taken.** Blank.

**NIGHT SHIFT**

**Temp.** Cold .

**Weather.** Clear night.

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

**Time:** 05:30.

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

**Operational issues / causes observed.** Blank.

**Actions Taken.** Blank.

**Wednesday 22<sup>nd</sup> January 2020**

**DAY SHIFT**

**Temp.** Cool.

**Weather.** Cloudy w/sunny spells.

<p><b>Odour Readings.</b> All OMU's in operation. <b>Time:</b> 17:30. <b>Observations / Customer Complaint.</b> No odour issues. <b>Operational issues / causes observed.</b> Blank. <b>Action Taken.</b> Blank.</p> <p><b>NIGHT SHIFT</b></p> <p><b>Temp.</b> Cool. <b>Weather.</b> overcast night. <b>Odour Readings.</b> All OMU's in operation. <b>Time:</b> 05:30. <b>Observations / Customer Complaint.</b> No odour issues. <b>Operational issues / causes observed.</b> Blank. <b>Actions Taken.</b> Blank.</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					
17/01/2020	0	122	595	717	912	1629
20/01/2020	435	412	610	1457	2233	3690
22/01/2020	0	993	455	1448	6055	7503

#### **\*Incorrect total entered on Thames Water paperwork.**

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 63 imports of sludge over the last week (9 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 and there were NO skips in the vicinity .

### **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 & 6:** Both were in service and had totally wet seals . There was traces of spillages on the coping stones.

**Digester 7:** Out of service.

**Digester 8-12:** All were in service and had totally wet seals that were bubbling off small amounts of gas. There was traces of previous spillages on the coping stones.

**Digester 13:** In service and had a very high wet seal level (just below the retaining coping stones) and was bubbling off gas.

**Digesters 14 & 15:** Both were out of service.

**Digesters 16 & 17:** Both were in service and had wet seals that were bubbling off small amounts of gas.

**Digester 18:** Out of service.

**Digesters 19 & 20:** Both were in service and had totally wet seals that were bubbling off some gas. There was traces of previous spillages on the coping stones.

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 8yds open skips, both of which contained general inert material/rubbish. Both were full to the top and uncovered.

**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.

**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 10 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 0.01 0.01	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00	0.2	Yes
East OCU	0.00 0.00 0.00	0.05	No
West inlet OCU	0.00 0.00 0.00	0.05	Yes
Sludge reception inlet	Blank	Unknown	Unknown
Sludge reception outlet	Blank	0.8	Yes
Thickening plant inlet	Blank	0.5	Yes
Thickening plant outlet	0.01 0.02 0.01	0.6	Yes
Transfer PS inlet	Blank	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00	0.6	Yes
New West inlet (OCU 11)	0.00 0.00 0.00	0.5	Yes
Pasteurisation (OCU 12)	0.00	0.5	Yes

	0.00			
	0.00			