



**Mogden Sewage Treatment Works**

**TW Site Inspection**

<b>Date of inspection:</b> Wednesday 29 <sup>th</sup> May 2019 (10:30am)	
<b>Attendees:</b> Mr I Inman & Mr T Blackford (London Borough of Hounslow) and Mr C Varsani (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> was empty but had dry crust across 25% of the tanks surface. Hopper 1 was 25% full, hoppers 2 &amp; 3 were both &lt;25% full.</p> <p><b>Tank 1B</b> was empty and clean. Hoppers 1, 2 &amp; 3 were all less &lt;25% full.</p> <p><b>Tank 2A</b> was empty and clean. Hopper 1 was &lt;25% full, hoppers 2 &amp; 3 were both full and required draining down. TW advised the valves on hoppers 2 &amp; 3 were both jammed and both hoppers were due to be overpumped by a tanker tomorrow,</p> <p><b>Tank 2B</b> was empty and clean. Hoppers 1, 2 &amp; 3 were all full and required draining down. TW advised the valves on all three hoppers were jammed but were due to be overpumped by a tanker tomorrow,</p> <p><b>Tank 3A</b> was empty and clean. Hopper 1 was 25% full, hopper 2 was 50% full and hopper 3 was &lt;25% full, hoppers 1 &amp; 3 required draining down.</p>	

**Tank 3B** was empty and clean but had dry crust across 25% of the tanks surface. Hoppers 1 & 3 were both <25% full, hopper 2 was >30% full and required draining down.

**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 and clean. Hoppers 1, 2 & 3 were <25% full.

**Tank 6B** was empty and clean. Hoppers 1, 2 & 3 were all were >30% full and required draining down.

**Tank 7A** was empty and clean but had patchy areas of dry grit across the tanks surface. Hoppers 1, 2 & 3 (shallow hoppers) were all full of grit and black sludge that required cleaning.

**Tank 7B** was relatively empty and clean but had large patchy areas of dry grit across the tanks surface at the hopper end. Hoppers 1, 2 & 3 (shallow hoppers) were all full of grit and black sludge that required cleaning.

**Tank 8A** was empty and clean. Hopper 1 was full and hoppers 2 & 3 were both 75% full of black liquid. At the time of the inspection hopper 1 was being overpumped into the storm channel.

**Tank 8B** was empty and clean. Hopper 1 was full and hoppers 2 & 3 were both 75% full, all hoppers required draining down.

**Feed Channel** - The level of effluent in both feed channels was low along its entire length. However, there was thick scum and sludge on the surface along large sections of the channel.

Thames advised of planned works to replace all of the hopper valves to prevent back flow of effluent, Scheduled to begin towards the end of April and lasting approx 3 months.

### **Complaints**

The Council has received no complaints by telephone in the preceding

week.

The Council received an Email complaint on 21<sup>st</sup> May at 16:26 from a Varsity Drive, Twickenham (ref: 984163).  
The historic odour monitoring trends showed no spikes around the time of the complaint.

The Council received no complaints by email from MRAG.

**Odour Monitors**

The odour readouts (H<sub>2</sub>S) for all of the monitors, which were providing data at time of inspection: Wednesday 29<sup>th</sup> May 2019 at 11:39.

Monitor 1	0.006	ppm	11:39
Monitor 2	0.006	ppm	11:39
Monitor 3	0.000	ppm	11:39
Monitor 4	0.004	ppm	11:39
Monitor 5	0.004	ppm	11:39
Monitor 6	0.005	ppm	11:39
Monitor 7	0.006	ppm	11:39
Monitor 8	0.006	ppm	11:39
Monitor 9	0.005	ppm	11:39
Monitor 10	0.007	ppm	11:39
Monitor 11	0.006	ppm	11:39
Monitor 12	0.006	ppm	11:39
Monitor 13	0.004	ppm	11:39
Wind Speed	3.704	mph	11:39
Wind Direction	211.336	°	11:39

**Odour Log (Thames)**

**Thursday 23<sup>rd</sup> May 2019**

**DAY SHIFT**

**Temp.** Warm.

**Weather.** Sunny with.

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

**Time:** 17:30..

**Observations / Customer Complaint.** OM2 = 0.021ppm @ 15:50-16:15.

**Operational issues / causes observed.** No odour found.

**Actions Taken.** Blank.

**NIGHT SHIFT**

**Temp.** Warm.

**Weather.** Clear night.

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

**Time:** 05:30.

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

Customer complaint of H2S in neighbourhood. No location information recorded.

**Operational issues / causes observed.** No significant odours found.

Normal odours from PAS and storm tank channels.

**Actions Taken.** Site survey completed.

**Friday 24<sup>th</sup> May 2019**

**DAY SHIFT**

**Temp.** Warm.

**Weather.** Sunny.

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

**Time:** 17:30.

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

**Operational issues / causes observed.** Email system down over Bank holiday.

**Actions Taken.** Reported to management.

**NIGHT SHIFT**

**Temp.** Warm.

**Weather.** Clear night.

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

**Time:** 05:30.

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

**Operational issues / causes observed.** Email system down over Bank holiday.

**Actions Taken.** Blank.

**Saturday 25<sup>th</sup> May 2019**

**DAY SHIFT**

**Temp.** Warm.

**Weather.** Sunny.

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

**Time:** 17:30.

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

**Operational issues / causes observed.** Email system down over Bank holiday.

**Actions Taken.** Blank.

**NIGHT SHIFT**

**Temp.** Warm.

**Weather.** Overcast night.

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

**Time:** 05:30.

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

**Operational issues / causes observed.** Email system down over Bank holiday.

**Actions taken.** Blank.

**Sunday 26<sup>th</sup> May 2019**

**DAY SHIFT**

**Temp.** Warm.

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

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

**Time:** 17:30.

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

**Operational issues / causes observed.** Email system down over Bank holiday.

**Actions Taken.** Blank.

**NIGHT SHIFT**

**Temp.** Cool.

**Weather.** Overcast night.

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

**Time:** 05:30.

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

**Operational issues / causes observed.** Email system down over Bank holiday.

**Actions Taken.** Blank.

**Monday 27<sup>th</sup> May 2019**

**DAY SHIFT**

**Temp.** Cool.

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

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

**Time:** 17:30.

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

**Operational issues / causes observed.** Email system down over Bank holiday.

**Actions Taken.** Blank.

**NIGHT SHIFT**

**Temp.** Cold.

**Weather.** Overcast night.

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

**Time:** 05:30.

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

**Operational issues / causes observed.** Email system down over Bank holiday.

**Actions Taken.** Blank.

**Tuesday 28<sup>th</sup> May 2019**

**DAY SHIFT**

**Temp.** Cool.

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

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

**Time:** 17:30.

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

**Operational issues / causes observed.** Email system down over Bank holiday.

**Actions Taken:** Blank

**NIGHT SHIFT**

**Temp.** Cool.

**Weather.** Overcast night.

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

**Time:** 05:30.

**Observations / Customer Complaint.** 3 X spikes on OM2. All 0.015ppm at 00:18-00:37 / 01:28-01:46 / 04:38-04:57.

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

**Wednesday 29<sup>th</sup> May 2019**

**DAY SHIFT**

**Temp.** Cool.

**Weather.** Rainy w/sunny spells.

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

**Time:** 17:30.

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

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

**Action Taken:** Blank.

**NIGHT SHIFT**

**Temp.** Cool.

**Weather.** Overcast night.

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

**Time:** 05:30.

**Observations / Customer Complaint.** Spike on OM2 0.015ppm at 20:58-21:16 (18 mins).

**Operational issues / causes observed.**

**Actions Taken:** Blank.

### **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					
24/05/2019	59	450	0	509	152	661
26/05/2019	59	450	122	631	152	783
28/05/2019	0	206	0	206	304	510

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 15 imports of sludge over the last week.  
5 on Friday 24<sup>th</sup>, 5 on Sunday 26<sup>th</sup> & 5 on Tuesday 28<sup>th</sup> May.

### **No.5 Pumping Station**

The doors and windows of No.5 pumping station were all open at the time of the inspection. Thames advised works are being undertaken inside and venting of the building was required for staff safety.

### **Raw Sludge Screening House**

The large roller shutter door of the Raw Sludge Screening building was half open at the time of the inspection due to a recent skip change.

### **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, 7, 8, 9, 10, 11 & 12** were all in use and had wet sloppy seals. However, only minimal amounts of gas appeared to be bubbling off.

**Digester 13** was in use and had a fairly good dry seal.

**Digesters 14, 15 & 16** were all out of service.

**Digesters 17, 18, 19 & 20** were all in use and had wet sloppy seals. However, only minimal amounts of gas appeared to be bubbling off.

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.

The area around all digesters was much improved with no evidence of recent or historical sludge spills. Thames advised they have been actively undertaking regular clean-ups of this area of the works.

## **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 but green algae was evident across large areas of the tanks surfaces.

### **Skips**

On the East side there was one 20yds open bulk carrier that contained general inert rubbish (wooden crates). Also present was one open 8yd skip that was covered with a tarpaulin which contained rag.

In the area next to STW 1A there was a large open topped skip, estimated to be approx 20yd, which contained old machinery and metal work.

On the West side there was one 40yd closed bulk carrier that were both full and draining liquid before being taken off site. Thames advised they would be removed today.

### **East Side Screen House**

The doors to the screen house building were all closed at the time of the inspection. TW advised all screens were in operation.

### **Return Activated Sludge Channel**

The nearside RAS channel (which runs in the ground between FST's 61-64 & 65-67) was clogged along <30% of the nearside channel in the mid-section.

Very small insects were clearly visible on top of crusty sections of the blockage. TW were advised this needed to be rectified to avoid potential insect problems.

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

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

Circular PSTs 9, 10, 11 & 12 all appeared to be in operation at the time of the inspection, and all had fat free surfaces.

The new odour suppression system around the perimeter of PST-10 is currently out of operation due to a faulty water main.

### **Pasteurisation Plant**

The pasteurisation plant is in service. TW advised 6 streams were currently out of service.

**Section 106 agreement**

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

**West Side Aeration Lanes (New)**

All of the aeration tanks had patches of scum across their surfaces but were much improved. The tops of the internal dividing walls were clearly visible and liquid inside the tanks appeared free flowing. Nearly all of the sprinklers appeared to be in operation.

The mixed liquor feed channel serving E-Battery was cleared and free flowing along its entire length. TW advised a tanker crew is regularly on site undertaking clearance of any clogged areas.

**New Inlet Works (West Side)**

No issues appeared evident at the new inlet works.

**Odour Control Unit (OCU) performance monitoring: 30/05/2019**

<b>Plant</b>	<b>Reading (ppm)</b>	<b>Action Level (ppm)</b>	<b>Compliant</b>
Main pumping station inlet	0.00 0.00 0.00	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	Yes
West inlet OCU	0.00 0.00	0.05	Yes

	0.00		
Sludge reception inlet	Blank	Unknown	Unknown
Sludge reception outlet	0.00 0.00 0.00	0.8	Yes
Thickening plant inlet	Blank	O/S	O/S
Thickening plant outlet	Blank	O/S	O/S
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 0.00 0.00	0.5	Yes