



**Mogden Sewage Treatment Works**

**TW Site Inspection**

<b>Date of inspection:</b> Thursday 17 <sup>th</sup> October 2019 (11:50am)	
<b>Attendees:</b> Mr I Inman (London Borough of Hounslow) and Miss C Page, Miss Roxanne Denny & Ms Gayle Thomas (Thames Water)	
<b>LB Hounslow Observation</b>	<b>Thames Water Action / Response</b>
<p><b><u>Weather</u></b></p> <p>It was raining constantly throughout the inspection.</p> <p><b><u>Storm Water Storage Tanks (SWST)</u></b></p> <p><b>Tank 1A</b> was empty and clean. Hopper 1 was approx &lt;25% full, hoppers 2 and 3 were all both drained down.</p> <p><b>Tank 1B</b> was empty and clean. Hopper 1 was drained down, hopper 2 was approx &lt;25% full, hopper 3 was approx 50% full and required further draining down.</p> <p><b>Tank 2A</b> was empty and clean. Hopper 1 was &lt;25% full, hopper 2 was drained down, hopper 3 was full and required draining down.</p> <p><b>Tank 2B</b> was empty and clean. Hoppers 1, 2 and 3 were all &lt;25% full and required draining down.</p>	

**Tank 3A** was approx 25% full and returning at the time of the inspection.

Amajets 1, 2 and 3 were all in operation.

**Tank 3B** was empty and had just been returned with sludge across 60% of the tanks surface across

Hoppers 1, 2 and 3 were all approx 25% 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 and 3 were all <25% full and required draining down.

**Tank 6B** was empty but had grit across the tanks surface at the hopper end.

Hoppers 1, 2 and 3 were all approx 25% full and required draining down.

**Tank 7A** was approx 25% full and returning at the time of the inspection, the effluent was noticeably foamy?

Amajets 1, 2 and 3 were all in operation.

**Tank 7B** was approx <15% full and returning at the time of the inspection.

No Amajets were in operation.

**Tank 8A** was empty and clean.

Hopper 1 was full, hoppers 2 & 3 were approx 70% full, all required draining down.

**Tank 8B** was empty and clean.

Hoppers 1, 2 and 3 were all full and required draining down.

**Feed Channel** - The level of effluent in both feed channels was low along its entire length.

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 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 18<sup>th</sup> October 2019 at 12:24.

Monitor 1	0.003	ppm	12:24
Monitor 2	0.006	ppm	12:24
Monitor 3	0.000	ppm	12:24
Monitor 4	0.003	ppm	12:24
Monitor 5	0.005	ppm	12:24
Monitor 6	0.005	ppm	12:24
Monitor 7	0.006	ppm	12:24
Monitor 8	0.005	ppm	12:24
Monitor 9	0.005	ppm	12:24
Monitor 10	0.006	ppm	12:24
Monitor 11	0.000	ppm	12:24
Monitor 12	0.006	ppm	12:24
Monitor 13	-----	ppm	12:24
Wind Speed	0.204	mph	12:24
Wind Direction	166.450	°	12:24

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

**Thursday 10<sup>th</sup> October 2019**

**DAY SHIFT****Temp.** Cool.**Weather.** Cloudy.**Odour Readings.** All OMU's in operation.**Time:** 17:30.**Observations / Customer Complaint.** OM5 spiked at 08:30-08:45, max 0.029ppm.

OM2 spiked at 10:38-10:54, max 0.027ppm.

OM3 spiked at 15:07-15:20, max 0.022ppm but &lt;15 mins duration.

**Operational issues / causes observed.** No odours found but PAS stream No.4 being drained and flushed for maintenance.**Actions Taken.** Blank.**NIGHT SHIFT****Temp.** Cool.**Weather.** Rain.**Odour Readings.** All OMU's in operation.**Time:** 05:30.**Observations / Customer Complaint.** OM5 0.015ppm 02:29-02:43.

OM5 0.016ppm 04:29-04:43.

**Operational issues / causes observed.** No odour identified. Both spikes <15 minute duration.**Actions Taken.** Blank.**Friday 11<sup>th</sup> October 2019****DAY SHIFT****Temp.** Cool.**Weather.** Rain w/sunny spells.**Odour Readings.** All OMU's in operation.**Time:** 17:30.**Observations / Customer Complaint.** OM5 spiked at 11:15-11:28, max 0.015 but <15 mins duration.**Operational issues / causes observed.** Blank.**Actions Taken.** Blank.**NIGHT SHIFT****Temp.** Cool**Weather.** Rain.**Odour Readings.** All OMU's in use.**Time:** 05:30.**Observations / Customer Complaint.** No odour issues.

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

**Saturday 12<sup>th</sup> October 2019**

**DAY SHIFT**

**Temp.** Cool.

**Weather.** Rain.

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

**Time:** 17:30.

**Observations / Customer Complaint.** OM5 peak at 0.027 less than 15 mins.

**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.** No odour issues.

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

**Actions taken.** Blank.

**Sunday 13<sup>th</sup> October 2019**

**DAY SHIFT**

**Temp.** Cool.

**Weather.** Rain w/sunny spells.

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

**Time:** 17:45.

**Observations / Customer Complaint.** OM2 spiked at 09:25-09:47, max 0.030ppm.

OM6 spiked at 11:52-12:10, max 0.032ppm.

OM1 spiked at 16:30-16:51, max 0.021ppm.

**Operational issues / causes observed.** Storm tanks full and going to river.

**Actions Taken.** Blank.

**NIGHT SHIFT**

**Temp.** Cool.

**Weather.** Clear night.

**Odour Readings.** All OMU's in operation.  
**Time:** 05:30.  
**Observations / Customer Complaint.** OM5 0.041ppm 20:14-20:30.  
OM5 0.017ppm 22:00-22:59.  
**Operational issues / causes observed.** Area checked. No odour detected.  
**Actions Taken.** Blank.

**Monday 14<sup>th</sup> October 2019**

**DAY SHIFT**

**Temp.** Cool.

**Weather.** Rain.

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

**Time:** 17:30.

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

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

**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.** Blank.

**Actions Taken.** Blank.

**Tuesday 15<sup>th</sup> October 2019**

**DAY SHIFT**

**Temp.** Cool.

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

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

**Time:** 17:30.

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

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

**Actions Taken.** Blank

**NIGHT SHIFT**

**Temp.** Cool.

**Weather.** Overcast night.

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

**Time:** 05:30.

**Observations / Customer Complaint.** OM2 spiked at 18:52-19:30, max 0.032ppm.

OM2 spiked at 20:48-21:02, max 0.01ppm.

OM2 spiked at 22:45-23:06, max 0.017ppm

**Operational issues / causes observed.** East inlet checked, no odours found.

**Actions Taken.** Blank.

**Wednesday 16<sup>th</sup> October 2019**

**DAY SHIFT**

**Temp.** Cool.

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

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

**Time:** 17:30.

**Observations / Customer Complaint.** OM1 0.016ppm 10:09-10:16.

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

**Action Taken.** Blank.

**NIGHT SHIFT**

**Temp.** Blank.

**Weather.** Blank.

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

**Time:** Blank.

**Observations / Customer Complaint.** Blank.

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

**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					
11/10/2019	264	122	305	691	1756	2587
14/10/2019	0	61	61	122	2400 <b>1920*</b>	2522 <b>2042*</b>
16/10/2019	0	206	122	328	2737	3065

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.

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

### **Imported Sludge**

There have been 94 imports of sludge over the last week (an average of 13 per day).

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

The doors of No.5 pumping station were closed at the time of the inspection, although no odour was noticeable.

### **Raw Sludge Screening House**

The large roller shutter door of the Raw Sludge Screening building was open at the time of the inspection, which appeared to be from a 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 and 6** were both in use and had good dry seals despite the constant rain.

**Digester 7** was out of service.

**Digesters 8 and 9** were both in service and had fairly dry seals.

**Digester 10** was in service but had a wet sloppy seal that was bubbling off gas.

**Digester 11** was in service and had a good dry seal.

**Digester 12** was out of service.

**Digester 13** was in service but had a wet sloppy seal that was bubbling off gas.

**Digesters 14, 15 and 16** were out of service.

**Digesters 17 & 18** were both in use and had good dry seals.

**Digesters 19 & 20** were both in use but had wet sloppy seals that were bubbling off gas.

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 was one 20yd open bulk carrier that was empty. Also present were two 8yd open skips. One contained general non-inert rubbish and one was approx 25% full of rag, but this was only part covered with a tarpaulin and had weeds growing out of it.

Also present was a 40yd closed bulk carrier that was empty.

In the area next to STW 1A there was an open 14yd skip that contained scrap metal pumps.

On the West side there was one open 8yd open skip that was empty, one 12yd open skip that was empty, one 20yd open bulk carrier that was empty and one 40yd closed bulk carrier that was empty.

### **East Side Screen House**

The doors to the screen house building were closed at the time of the inspection. However, TW were unable to confirm how many or which 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 80% of the nearside channel.

TW were advised this needed to be rectified to avoid potential insect and odour problems.

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

It was noted that lanes 17 & 18 had large floating deposits on the tanks surface that appeared to be hindering the process?  
There was also overpumping being carried out into the feed channel on the south side of the lanes that was causing sludge to splash over the area.

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

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

Circular PST's 9 and 11 were in operation and had no issues.

Circular PST 10 was out of service.

Circular PST12 had surface scum/fat across 25% of the tanks surface.

(The new odour suppression system around the perimeter of PST-10 has now been removed and there are no plans to continue with this system).

### **Pasteurisation Plant**

The pasteurisation plant is in service. TW advised 6 streams were in 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 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 clear of debris 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 evident.

**Odour Control Unit (OCU) performance monitoring: 15/10/2019**

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.02 0.02 0.02	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00	0.2	Yes
East OCU	0.01 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	0.00ppb 0.00ppb 0.00ppb	0.8	Yes
Thickening plant inlet	0.01 0.01 0.01	0.5	Yes

Thickening plant outlet	0.00 0.00 0.00	0.6	Yes
Transfer PS inlet	Blank	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.02	0.6	Yes
New West inlet (OCU 11)	0.01 0.01 0.01	0.5	Yes
Pasteurisation (OCU 12)	0.00 0.00 0.00	0.5	Yes