



**Mogden Sewage Treatment Works**

**TW Site Inspection**

<b>Date of inspection:</b> 25 <sup>th</sup> October 2018	
<b>Attendees:</b> Mr I Inman (London Borough of Hounslow) and Mr M Hussain (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 and relatively clean but had dry residue at the hopper end of the tank. Hopper 1 was approximately <math>&lt; \frac{1}{4}</math> full and required further draining down. Hoppers 2 &amp; 3 were drained down.</p> <p><b>Tank 1B</b> was empty and clean. Hoppers 1, 2 &amp; 3 were all approximately <math>\frac{2}{3}</math> full and required draining down.</p> <p><b>Tank 2A</b> was empty and relatively clean but had dry residue at the hopper end of the tank. Hopper 1 was approx <math>&lt; \frac{1}{4}</math> full and required further draining down. Hoppers 2 &amp; 3 were drained down.</p> <p><b>Tank 2B</b> was empty and clean. Hoppers 1, 2 &amp; 3 were all approximately <math>\frac{1}{2}</math> full and required draining down.</p> <p><b>Tank 3A</b> was empty and clean. Hoppers 1, 2 &amp; 3 were all approximately <math>\frac{1}{4}</math> full and required draining down.</p> <p><b>Tank 3B</b> was empty and clean. Hopper 1 was <math>\frac{2}{3}</math> full, hopper 2 was approximately <math>&lt; \frac{1}{4}</math> full, both required draining down. Hopper 3 was drained down.</p>	

**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** was empty and clean. Hoppers 1, 2 & 3 were all approximately 1/3 full and required draining down.

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

**Tank 7A** was empty and relatively clean, but had dry grit on the surface of the tank at the hopper end. Hoppers 1, 2 & 3 (shallow hoppers) all contained large quantities of grit and required cleaning up.

**Tank 7B** was empty and relatively clean, but had dry grit on the surface of the tank at the hopper end. Hoppers 1, 2 & 3 (shallow hoppers) all contained large quantities of grit and required cleaning up.

**Tank 8A** was clean and empty. Hoppers 1, 2 & 3 were all approximately 1/3 full and required draining down.

**Tank 8B** was clean and empty. Hoppers 1, 2 & 3 were all full and required draining down.

**Feed Channel** - The level of effluent in both feed channels was very low along its entire length and bottomed out in places where grit was present.

### **Complaints**

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

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

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: Thursday 25<sup>th</sup> October 2018 at 12:20.

Monitor 1	0.006	ppm	12:20
Monitor 2	0.005	ppm	12:20
Monitor 3	0.004	ppm	12:20
Monitor 4	0.004	ppm	12:20
Monitor 5	0.006	ppm	12:20
Monitor 6	0.004	ppm	12:20
Monitor 7	0.005	ppm	12:20
Monitor 8	0.005	ppm	12:20
Monitor 9	0.004	ppm	12:20
Monitor 10	0.005	ppm	12:20
Monitor 11	0.004	ppm	12:20
Monitor 12	0.005	ppm	12:20
Monitor 13	0.004	ppm	12:20
Wind Speed	3.000	mph	12:20
Wind Direction	287.000	°	12:20

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

#### **Thursday 18<sup>th</sup> October 2018**

##### **AM**

**Temp.** Cool.

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

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

**Time:** Blank.

**Observations / Customer Complaint.** Blank.

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

**Actions Taken.** Blank.

##### **PM**

**Temp.** Cold.

**Weather.** Clear night.

**Odour Readings.** All OMU's in operation.  
**Time:** Blank.  
**Observations / Customer Complaint.** Blank  
**Operational issues / causes observed.** No odour issues.  
**Actions Taken.** Blank.

**Friday 19<sup>th</sup> October 2018**

**AM**

**Temp.** Cool.

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

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

**Time:** Blank.

**Observations / Customer Complaint.** OM3 05:53-06:09 0.023ppm max.

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

**Actions Taken.** Blank.

**Observations / Customer Complaint.** OM4 08:08-08:22 0.020ppm max. OM9 15:55-16:08 0.017ppm; 16:57-17:09 0.016ppm.

**Operational issues / causes observed.** High bell heights-flaring part of day.

**PM**

**Temp.** Cool.

**Weather.** Clear night.

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

**Time:** Blank.

**Observations / Customer Complaint.** OM9 18:11-18:55 0.015ppm & 19:26-19:55 0.018ppm.

**Operational issues / causes observed.** No odour identified. Digester bell height 27 metres. Waste gas burner on.

**Actions Taken.** Blank.

**Saturday 20<sup>th</sup> October 2018**

**AM**

**Temp.** Warm.

**Weather.** Sunny with patchy cloud.

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

**Time:** Blank.

**Observations / Customer Complaint.** OM5 0.020ppm 08:19-08:35.

**Operational issues / causes observed.** No source identified.

**Actions Taken.** Blank.

**PM**

**Temp.** Cool.

**Weather.** Clear night.

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

**Observations / Customer Complaint.** OM5 21:20-21:50 0.022ppm & 22:50-23:05 0.020ppm.

**Operational issues / causes observed.** No odour identified after carrying out site walk around.

**Actions taken.** Blank.

### Sunday 21<sup>st</sup> October 2018

**AM**

**Temp.** Warm.

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

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

**Observations / Customer Complaint.** OM8 0.032ppm 12:52-13:08.

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

**Actions Taken.** Blank.

**PM**

**Temp.** Cool.

**Weather.** Clear night.

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

**Observations / Customer Complaint.** OM4 0.017ppm 18:09-18:38.  
OM8 0.020ppm 18:22-18:37. OM9 0.018ppm 18:55-19:08 & 0.018ppm  
19:40-19:54. OM3 0.024ppm 03:24-03:38.

**Operational issues / causes observed.** Pas area quite odourous. Unable to identify exact source. No sludge spills. Sludge screening building shutter closed. OCU12 running. OCU11 running but chemical dosing out of range.

**Actions Taken.** Blank.

### Monday 22<sup>nd</sup> October 2018

**AM**

**Temp.** Warm.

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

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

**Observations / Customer Complaint.** Blank.  
**Operational issues / causes observed.** No odour issues.  
**Actions Taken.** Blank.  
**PM**  
**Temp.** Cold.  
**Weather.** Clear night.  
**Odour Readings.** All OMU's in operation.  
**Observations / Customer Complaint.** OM5 0.030ppm 23:35-23:50 & 0.022ppm 01:35-01:50.  
**Operational issues / causes observed.** Investigated the area around monitor 5. No odour detected.  
**Actions Taken.** Blank.

**Tuesday 23<sup>rd</sup> October 2018**

**AM**  
**Temp.** Warm.  
**Weather.** Cloudy w/sunny spells.  
**Odour Readings.** All OMU's in operation.  
**Time:** Blank.  
**Observations / Customer Complaint.** OM1 spiked at 16:53, max 0.018ppm. OM3 spiked at 10:23-10:36 but <15 mins duration. OM3 spiked at 16:23-16:35, max 0.027ppm. OM8 spiked at 15:50-16:06, max 0.024ppm.  
**Operational issues / causes observed.** Odour appears to be coming from Pas/thickening area but unable to pin point issue.  
**Actions Taken:** Reported.  
**PM**  
**Temp.** Cool.  
**Weather.** Clear night.  
**Odour Readings.** All OMU's in operation.  
**Time:** Blank.  
**Observations / Customer Complaint.** OM3 0.018ppm 17:54-18:07, 0.026ppm 20:53-22:24, 0.019ppm 02:26-02:39  
**Operational issues / causes observed.** OCU11 still u/s-chemical scrubbers. Some smell from PAS area.  
**Actions Taken:** Blank.  
**Observations / Customer Complaint.** OM8 0.016pp, 19:07-19:21.  
**Operational issues / causes observed.** Blank.  
**Actions Taken:** Blank.

**Wednesday 24<sup>th</sup> October 2018**

**AM**

**Temp.** Warm.

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

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

**Time:** Blank.

**Observations / Customer Complaint.** OM8 0.020ppm 12:37-12:51.

**Operational issues / causes observed.** No source identified.

**Actions taken:** Blank.

**PM**

**Temp.** Cool.

**Weather.** Clear night.

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

**Time:** Blank.

**Observations / Customer Complaint.** OM2 0.019ppm 21:19-21:40,  
0.019ppm 00:23-00:42.

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

**Actions Taken:** Blank.

**Observations / Customer Complaint.** OM8 0.025ppm 19:51-20:15.

**Operational issues / causes observed.** No source identified.

**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					
22/10/18	40	783	0	823	1440	2263
23/10/18	0	1031	0	1031	1440	2471
24/10/18	0	886	0	886	784	1670

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 3 imports of sludge over the last week.

### 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) – noticeable quantity of water accumulated to the brim of these tanks which is thick with algae – requires draining.

**Digesters 5 & 6** were both in use but had a very wet seals that were bubbling off small amounts of gas.

**Digester 7** was in use and had a good dry seal.



**Digesters 8, 9, 10, 11 & 12** were all in use but had a very wet seals that were all bubbling off small amounts of gas.

**Digesters 13 & 14** were both out of service.

**Digester 15** was in use but had a very wet seal that was bubbling off small amounts of gas.

**Digester 16** was out of service

**Digesters 17, 18, 19 & 20** were all in use but had very wet seals that were all bubbling off small amounts of 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.

### **Skips**

On the East side there was one 20yds open bulk carrier that was full of grit and covered.

In the area next to STW 1A there was one 8yds & one 12yds skip that both contained general non-inert rubbish. There was also a large open skip, estimated to be approx 20yds, which again contained general inert rubbish.

On the access road leading to the digesters there was one 12yds skip that contained a small amount of rag and was partly covered with a

tarpaulin, it was noted that the waste was not-odorous.

On the West side there was no skips.

### **East Side Screen House**

All doors were closed at the time of the inspection. TW advised all screen are in operation.

### **Return Activated Sludge Channel**

The nearside RAS channel (which runs in the ground between FST's 61-64 & 65-67) was free flowing along its length.

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

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

Circular PSTs 10, 11 & 12 were all in operation at the time of the inspection. PST 9 was in the process of being drained down and taken out of service for maintenance.

PST's 10 & 11 had fat free surfaces but PST 12 had fatty scum across approx 40% of the tanks surface.

### **Pasteurisation Plant**

The pasteurisation plant is in service. TW advised 8 of the 12 streams are currently in operation.

### **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 appeared to be free flowing and the surface appeared much improved, all sprinklers appeared to be in operation.

The mixed liquor feed channel serving aeration lanes 21-25 (E Battery) were free flowing and much improved

No odour was noticeable.

TW advised a tanker crew are 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: 22/10/2018**

<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	Unknown	Unknown
Main pumping station outlet	0.00 0.01 0.01	0.2	Yes
East OCU	0.00 0.00 0.00	0.05	Yes
West inlet OCU	0.00 0.00 0.00	0.05	Yes
Sludge reception inlet	-	Unknown	Unknown
Sludge reception outlet	-	0.8	Yes
Thickening plant inlet	-	Unknown	Unknown
Thickening plant outlet	0.01 0.02	0.6	Yes

	0.00		
Transfer PS inlet	-	Unknown	Unknown
Transfer PS outlet	0.03 0.02 0.01	0.6	Yes
New West inlet (OCU 11)	0.00 0.01 0.00	0.5	Yes
OCU 12 (Pasteurisation Plant)	0.00 0.00 0.00	0.5	Yes