



# London Borough of Hounslow

## Mogden Sewage Treatment Works

### TW Site Inspection

<b>Date of inspection:</b> Wednesday 17 <sup>th</sup> February 2021 (13:00pm)	
<b>Attendees:</b> Mr I Inman (London Borough of Hounslow) and Mr T Costin (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 approx. 25% full and being returned. All Amajets were in operation.</p> <p><b>Tank 1B</b> was approx. 25% full and being returned. All Amajets were in operation.</p> <p><b>Tank 2A</b> was approx. 40% full. No Amajets were in operation.</p> <p><b>Tank 2B</b> was approx. 40% full. No Amajets were in operation.</p> <p><b>Tank 3A</b> was approx. 40% full. No Amajets were in operation.</p> <p><b>Tank 3B</b> was approx. 40% full and being returned. All Amajets were in operation.</p> <p><b>Tanks 4A, 4B, 5A &amp; 5B</b> All tanks are covered and odour controlled. Unable to gauge condition as lighting system still not working.</p>	

**Tank 6A** was approx. 50% full.

No Amajets were in operation. TW advised of electrical fault on these Amajets.

60% of the effluents surface was covered with a layer of fatty scum on the left side and top end of the tank that was spilling into tank 6B.

**Tank 6B** was approx. 50% full.

No Amajets were in operation. TW advised of electrical fault on these Amajets.

15% of the effluents surface was covered with a layer of fatty scum at the top end of the tank (flowing through from tank 6A).

**Tank 7A** was approx. 50% full.

No Amajets were in operation.

**Tank 7B** was approx. 50% full.

No Amajets were in operation.

**Tank 8A** had just been returned and was virtually empty. Tank required further flushing due to sludge deposits being left on the empty tanks surface.

**Tank 8B** had just been returned and was virtually empty. Tank required further flushing due to sludge deposits being left on the empty tanks surface.

**Storm Feed Channel** - The level of effluent in both feed channels was approx. 25% along their entire lengths.

### **Complaints**

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

The Council directly received no complaints by either email or the on-line web system 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 monitors that were providing data on 17/02/2021 at the time of the inspection are below.

Monitor 1	0.000	ppm	13:35pm
Monitor 2	0.004	ppm	13:35pm
Monitor 3	0.000	ppm	13:35pm
Monitor 4	0.000	ppm	13:35pm
Monitor 5	0.008	ppm	13:35pm
Monitor 6	0.004	ppm	13:35pm
Monitor 7	0.000	ppm	13:35pm
Monitor 8	0.006	ppm	13:35pm
Monitor 9	0.000	ppm	13:35pm
Monitor 10	0.000	ppm	13:35pm
Monitor 11	0.000	ppm	13:35pm
Monitor 12	0.000	ppm	13:35pm
Monitor 13	0.000	ppm	13:35pm
Wind Speed	5.515	mph	13:35pm
Wind Direction	184.689		13:35pm

**Odour Log (Thames)**

**Wednesday 10<sup>th</sup> February 2021**

**DAY SHIFT**

**Temp.** Cold.

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

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

**Time:** 17:30.

**Observations / Customer Complaint.** No odour issues found or reported.

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

**NIGHT SHIFT**

**Temp.** Freezing.

**Weather.** Clear night.

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

**Time:** 05:30.

**Observations / Customer Complaint.** OM5 0.025ppm 17:59-18:11.

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

**Thursday 11<sup>th</sup> February 2021**

**DAY SHIFT**

**Temp.** Freezing.

**Weather.** Clear night.

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

**Time:** 17:30.

**Observations / Customer Complaint.** 1 spike from OM5 to 0.016 for less than 15 mins.

**Operational issues / causes observed.** Storm tanks returning.

**NIGHT SHIFT**

**Temp.** Freezing.

**Weather.** Clear night.

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

**Time:** 05:30.

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

**Operational issues / causes observed.** Storm tanks returning.

**Friday 12<sup>th</sup> February 2021**

**DAY SHIFT**

**Temp.** Freezing.

**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.

**NIGHT SHIFT**

**Temp.** Freezing.

**Weather.** Overcast night.

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

**Time:** 05:30.

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

**Operational issues / causes observed.** Storm tanks returning.

**Saturday 13<sup>th</sup> February 2021**

**DAY SHIFT**

**Temp.** Freezing.

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

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

**Time:** 17:30.

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

**Operational issues / causes observed.** Storm tanks returning.

**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.

**Sunday 14<sup>th</sup> February 2021**

**DAY SHIFT**

**Temp.** Cold.

**Weather.** Cloudy.

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

**Time:** 17:30.

**Observations / Customer Complaint.** OM5 – 3 spikes at 0.015 for less than 15 mins.

**Operational issues / causes observed.** Storm tanks filling.

**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.** Blank.

**Monday 15<sup>th</sup> February 2021**

**DAY SHIFT**

**Temp.** Cool.

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

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

**Time:** 17:30.

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

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

**NIGHT SHIFT**

**Temp.** Cool.

**Weather.** Overcast night.

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

**Time:** 05:30.

**Observations / Customer Complaint.** No odour issues found or reported.

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

**Tuesday 16<sup>th</sup> February 2021**

**DAY SHIFT**

**Temp.** Cool.

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

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

**Time:** 17:30.

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

**Operational issues / causes observed.** 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.

### **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					
10/02/2021	0	1574	885	2459	1240	3699
12/02/2021	0	1823	2344	4167	1929	6096
15/02/2021	0	1593	2530	4123	6254	10377

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 has been an average of 7 imports of sludge per day.

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

The doors of No.5 pumping station were open at the time of the inspection.

### **Sludge Import Area**

It was noted that the condition around the sludge import area was much improved and noticeably clean.

TW were advised they are frequently hosing this area down.

### **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.

**Digester 5** was in service and had a very wet seal (virtually no seal) that bubbling off minimal amounts of gas. It was noted that the digester seal level was low.

**Digester 6** was out of service but appeared to have a good dry seal ?

**Digesters 7 and 8** were both in service and had very wet seals (virtually no seal) that bubbling off minimal amounts of gas. It was noted that the digester seal levels was low. Digester 8 had a high bell height.

**Digesters 9 and 10** were both in service and had very wet seals (virtually no seal) that bubbling off minimal amounts of gas. It was noted that the digester seal levels was low although both bell heights were high.

**Digesters 11 and 12** were both in service and had very wet seals (virtually no seal) that bubbling off minimal amounts of gas. It was noted that the digester seal levels was low.

**Digesters 13 and 14** were both in service and had very wet seals (virtually no seal) that bubbling off minimal amounts of gas. It was noted that the digester seal levels was low.

**Digester 15** was out of service.

**Digester 16** was in service and had a very wet seal (virtually no seal), that was bubbling off gas. It was noted that the digester seal level was



low.

**Digester 17** was in service and had a good dry seal. It was noted that the digester seal level was low.

**Digesters 18 and 19** were both out of service.

**Digester 20** was in service and had a very wet seal (virtually no seal) that bubbling off minimal amounts of gas. It was noted that the digester seal level was low.

Although there was evidence of anti-foaming agent in use, which TW advised was being applied daily to all operational digesters, there is currently a serious issue with the automatic anti-foam pumps.

Thames advised this is being partly addressed by manually dosing the digesters.

## **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 in operation at the time of the inspection and other than surface scum covering approx. 30% of tank 75, no other issues were evident.

### **Skips**

On the East side there two 14yds open skips. One was empty and one contained a large circular steel plate.

Also present was one 40yds closed bulk carrier that was empty and one 20yds open bulk carrier that was approx. 80% full of grit.

In the Sludge Import area there were two 8yds open skips, both of

which contained rag and other debris, both were covered.

On the service road next to the raw sludge screening building was a closed 14yds skip.

On the West side there was one 20yds open bulk carrier that was empty.

### **East Side Screen House**

The first set of screen house doors were open at the time of the inspection. No other issues appeared evident.

### **Return Activated Sludge Channel**

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

The far side channel was clogged along approx. 50% of its length, there were visibly crusty areas and a number of weeds were growing out of it.

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

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

Circular PST's 9, 10 and 11 were all in use and had relatively fat free surfaces.

No other issues were evident with these tanks.

Circular PST 12 is currently out of service. It was noted that the area in the middle of the tank contained a large quantity of solid fat, alae and other floating debris.

### **Pasteurisation Plant**

The pasteurisation plant is in service. TW advised 8 streams are currently operational.

**Section 106 agreement**

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

**West Side Aeration Lanes**

All lanes are continuing to have biological issues and little surface movement was visible. Thick fluffy scum covered virtually the entire surface area of all lanes and the dividing walls were barely visible.

A number of the sprinklers were out of operation and floating debris was present in a number of areas.

The surface area of the mixed liquor feed channel serving the aeration lanes of E-Battery was clogged along at least 50% of its length (noticeably between lanes 24-25) and floating debris was present in other areas (lane 22).

**New Inlet Works (West Side)**

No issues appeared evident at the new inlet works and everything appeared to be in a good tidy order.

Combi-pactor 10 is currently being replaced.

**Odour Control Unit (OCU) performance monitoring: 15/02/2021**

<b>Plant</b>	<b>Reading (ppm)</b>	<b>Action Level (ppm)</b>	<b>Compliant</b>
Main pumping station inlet	Blank	Unknown	Unknown
Main pumping station outlet	0.00	0.2	Unknown

	0.00 0.00		
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	Blank	Unknown	Unknown
Sludge reception outlet	Blank	0.8	Unknown
Thickening plant inlet	Blank	Unknown	Unknown
Thickening plant outlet	0.098 0.092 0.087	0.6	Yes
New West inlet (OCU 11)	0.00 0.00 0.00	0.5	No
Pasteurisation (OCU 12)	0.00 0.00 0.00	0.5	Yes
Transfer PS inlet	0.105 0.101 0.097	Unknown	Unknown
Transfer PS outlet	0.00 0.02 0.01	0.6	Yes