



# London Borough of Hounslow

## Mogden Sewage Treatment Works

### TW Site Inspection

<b>Date of inspection:</b> Tuesday 2 <sup>nd</sup> February 2021 (12:40pm)	
<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 completely full. No Amajets were in operation.</p> <p><b>Tank 1B</b> was completely full. No Amajets were in operation.</p> <p><b>Tank 2A</b> was completely full. No Amajets were in operation.</p> <p><b>Tank 2B</b> was completely full. No Amajets were in operation.</p> <p><b>Tank 3A</b> was completely full and returning. Amajets 1 and 2 were in operation.</p> <p><b>Tank 3B</b> was completely full and returning. 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 completely full.  
No Amajets were in operation.

**Tank 6B** was completely full.  
No Amajets were in operation.

**Tank 7A** was completely full.  
All Amajets were in operation.

**Tank 7B** was completely full.  
No Amajets were in operation.

**Tank 8A** was completely full.  
No Amajets were in operation.

**Tank 8B** was completely full.  
No Amajets were in operation.

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

### **Complaints**

The Council received 4 complaints in the preceding week, two of which were from non Hounslow residents.

On 17/01/2021 a complaint was received Email from a resident of Lynton Close, Isleworth, logged under our reference A10327. The historic odour monitor trends for the time before, during and after receipt of the complaints showed no abnormalities or excessive H2S readings.

On 24/01/2021 a complaint was received via the Councils on-line web system from a resident of Strafford Road, Twickenham, logged under our reference A10170. This resident does not reside within the London Borough of Hounslow and therefore does not receive our on-call service.

On 28/01/2021 a complaint was received via the Councils on-line web system from a resident of Worple Road, Isleworth, logged under our reference A10369.

The historic odour monitor trends for the time before, during and after receipt of the complaints showed no abnormalities or excessive H<sub>2</sub>S readings. However, it was noted that OM8 was periodically flat-lining.

On 01/02/2021 a complaint was received via the Councils on-line web system from a resident of South Western Road, Twickenham, logged under our reference A10467. This resident does not reside within the London Borough of Hounslow and therefore does not receive our on-call service.

### **Odour Monitors**

The odour readouts (H<sub>2</sub>S) for all monitors that were providing data on 02/02/2021 at the time of the inspection are below.

Monitor 1	0.000	ppm	12:40pm
Monitor 2	0.000	ppm	12:40pm
Monitor 3	0.000	ppm	12:40pm
Monitor 4	0.000	ppm	12:40pm
Monitor 5	0.005	ppm	12:40pm
Monitor 6	0.000	ppm	12:40pm
Monitor 7	0.005	ppm	12:40pm
Monitor 8	0.000	ppm	12:40pm
Monitor 9	0.000	ppm	12:40pm
Monitor 10	0.000	ppm	12:40pm
Monitor 11	0.000	ppm	12:40pm
Monitor 12	0.000	ppm	12:40pm
Monitor 13	0.000	ppm	12:40pm
Wind Speed	2.716	mph	12:40pm
Wind Direction	221.554		12:40pm

**Odour Log (Thames)**

**Wednesday 27<sup>th</sup> January 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.** Rain.

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

**Time:** 05:30.

**Observations / Customer Complaint.** OM6 max 0.097ppm 21:14-23:49.

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

**Thursday 28<sup>th</sup> January 2021**

**DAY SHIFT**

**Temp.** Cold.

**Weather.** Rain.

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

**Time:** 17:30.

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

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

**NIGHT SHIFT**

**Temp.** Cold.

**Weather.** Rain.

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

**Time:** 05:30.

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

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

**Friday 29<sup>th</sup> January 2021**

**DAY SHIFT**

**Temp.** Cold.  
**Weather.** Rain.  
**Odour Readings.** All OMU's in operation.  
**Time:** 17:30.  
**Observations / Customer Complaint.** No odour issues.  
**Operational issues / causes observed.** Blank.  
**NIGHT SHIFT**  
**Temp.** Cold.  
**Weather.** Rain.  
**Odour Readings.** All OMU's in operation.  
**Time:** 05:30.  
**Observations / Customer Complaint.** No odour problems.  
**Operational issues / causes observed.** Blank.

**Saturday 30<sup>th</sup> January 2021**

**DAY SHIFT**

**Temp.** Cold.  
**Weather.** Rain 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.** Freezing.  
**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 31<sup>st</sup> January 2021**

**DAY SHIFT**

**Temp.** Cold.  
**Weather.** Rain 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.** 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.

**Monday 1<sup>st</sup> February 2021**

**DAY SHIFT**

**Temp.** Cool.

**Weather.** Cloudy.

**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.** Rain.

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

**Time:** 05:30.

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

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

**Tuesday 2<sup>nd</sup> February 2021**

**DAY SHIFT**

**Temp.** Cool.

**Weather.** Cloudy.

**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.

<b>Operational issues / causes observed.</b> Blank.	
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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					
27/01/2021	0	867	1218	2115	912	3027
29/01/2021	0	679	885	1564	912	2476
01/02/2021	0	1368	679	2047	912	2959

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 4 imports of sludge per day.

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

The doors of No.5 pumping station were closed 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 suffered a large spill that required cleaning as a matter of urgency.

**Digester 6** was in service and had a very wet seal (virtually no seal), but bubbling off gas was minimal. It was also noted that the seal level was low (approx. 36" below top of coping stone).

**Digester 7** was in service and had suffered a large sludge spill that required cleaning as a matter of urgency.

**Digester 8** was in service and had a very wet seal (virtually no seal), but bubbling off gas was minimal.

**Digester 9** was in service and had suffered a large sludge spill that required cleaning as a matter of urgency.

**Digester 10** was in service but due to large sludge spill was inaccessible.

**Digesters 11 and 12** were both in service and suffering large sludge spills at the time of the inspection.

**Digester 13** was in service and had a very wet seal (virtually no seal), but bubbling off gas was minimal.

**Digester 14** was in service and suffering large sludge spill at the time of the inspection.

**Digester 15** was out of service.

**Digester 16** was in service and suffering large sludge spill at the time of the inspection.

**Digester 17** was in service and had a very wet seal (virtually no seal), but bubbling off gas was minimal.

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

**Digester 20** was in service and had a very wet seal (virtually no seal), but bubbling off gas was minimal.

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. However, during the inspection a number of digesters were uncontrollably spilling sludge, which Thames were advised required immediate attention.

## **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 no 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 empty 40yds closed bulk carrier.

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 far set of screen house doors were open at the time of the inspection.

There is currently ongoing maintenance taking place in this area of the site with screen machinery being replaced.

### **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. 70% 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 9 had large floating patches of fat, scum and floating solids, the sweeper arm did not appear to be operational; Odour was also noticeably present.

Circular PST 10 had two areas of floating fat and scum across the tanks surface.

Circular PST 11 had two areas of floating fat and scum across the

tanks surface.

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

### **Pasteurisation Plant**

The pasteurisation plant is in service. TW advised 9 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 although the dividing walls were still 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 70% of its length (noticeably between lanes 24-25) and floating debris was present in other areas.

### **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: 02/02/2021**

<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 0.00 0.00	0.2	Unknown
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	0.71 0.68 0.59	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	1.178 1.172 1.167	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00	0.6	Yes