



# London Borough of Hounslow

## Mogden Sewage Treatment Works

### TW Site Inspection

**Date of inspection:** Tuesday 20<sup>th</sup> September 2020 (12:30pm)

**Attendees:** 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 empty and clean. Hoppers 1, 2 and 3 were all empty having just be drained/pumped out.</p> <p><b>Tank 1B</b> was empty and clean. Hoppers 1, 2 and 3 were all full and were about to be pumped out.</p> <p><b>Tank 2A</b> was empty and clean. Hopper 1 was approx. 50% full, hopper 2 was approx. 33% full and hopper 3 was approx. 25% full, all required pumping out.</p> <p><b>Tank 2B</b> was empty and relatively clean except for a large area of dry grit on the left hand side of the tank. Hopper 1 was approx. 50% full, hoppers 2 and 3 were both approx. 70% full, all required pumping out.</p> <p><b>Tank 3A</b> was empty and relatively clean. Hopper 1 was approx. 25% full, hoppers 2 and 3 were both approx. 30% full, all required pumping out.</p> <p><b>Tank 3B</b> was empty and relatively clean, but had areas of dry grit at</p>	

the top and along the left hand side of the tank.  
Hoppers 1, and 3 were all approx. 75% full and required pumping out.

**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 and 2 were both approx. 25% full, hopper 3 was approx. 70% full, all require pumping out.

**Tank 6B** was empty and relatively clean but had areas of dry grit at both the top end and left hand side of the tank.  
Hopper 1 and 3 were both full, hopper 2 was approx. 70% full. All required pumping out.

**Tank 7A** had filthy thick grey sludge covering approx. 85% of the tank surface, overflowing from the hoppers.  
Hoppers 1, 2 and 3 (shallow hoppers) were all full and overflowing into the tank.

**Tank 7B** had grit and sludge covering the bottom end of the tank (approx. 25%).  
Hoppers 1, 2 and 3 (shallow hoppers) were all full and required cleaning.

**Tank 8A** was empty and clean.  
Hoppers 1, 2 and 3 were all full and required pumping out.

**Tank 8B** had black inky liquid across 50% of the tanks surface, overflowing from the hoppers.  
Hoppers 1, 2 and 3 were all full and required pumping out.

**Storm Feed Channel** - The level of effluent in both feed channels was relatively low along its entire length. Over pumping from the hoppers into storm feed channel was taking place that gave rise to strong offensive odour.

### **Complaints**

The Council received 3 complaints in the preceding week.

On 14<sup>th</sup> October at 10:16am an on-line web complaint was received from a resident of Whitton Dene, Isleworth

The historic odour monitor trends for the time around the complaint on 14<sup>th</sup> October showed no excessive H2S readings above 0.008ppm.

On 15<sup>th</sup> October at 13:06pm an on-line web complaint was received from resident of Whitton Dene, Isleworth (ref: A06281).

At 18:33pm the same resident logged a further on-line web complaint (ref: A06309).

The historic odour monitor trends for the time around the complaints on 15<sup>th</sup> October showed OM2 spiking between 0.010-0.012ppm from 13:30pm until approx. 14:30pm.

OM2 again spiked between 17:00-21:20pm but no readings were above 0.009ppm.

Only OM8 showed one other spike of 0.009ppm between 18:15-18:35pm.

### **Odour Monitors**

The odour readouts (H<sub>2</sub>S) for all monitors that were providing data on 20/10/2020 at the time of the inspection are below.

Monitor 1	0.007	ppm	12.30pm
Monitor 2	0.009	ppm	12.30pm
Monitor 3	0.000	ppm	12.30pm
Monitor 4	0.006	ppm	12.30pm
Monitor 5	0.009	ppm	12.30pm
Monitor 6	0.004	ppm	12.30pm
Monitor 7	0.006	ppm	12.30pm
Monitor 8	0.006	ppm	12.30pm
Monitor 9	0.006	ppm	12.30pm
Monitor 10	0.006	ppm	12.30pm
Monitor 11	0.004	ppm	12.30pm
Monitor 12	0.006	ppm	12.30pm
Monitor 13	0.006	ppm	12.30pm

Wind Speed	10.700	mph	12.30pm
Wind Direction	192.370		12.30pm

**Odour Log (Thames)**

**Wednesday 14<sup>th</sup> October 2020**

**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.** Clear night.

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

**Time:** 05:30.

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

**Operational issues / causes observed.** Blank

**Thursday 15<sup>th</sup> October 2020**

**DAY SHIFT**

**Temp.** Cool.

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

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

**Time:** 17:12.

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

**Operational issues / causes observed.** 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.

**Friday 16<sup>th</sup> October 2020**

**DAY SHIFT**

**Temp.** Cool.

**Weather.** Cloudy night.

**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 use.

**Time:** 05:30.

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

**Operational issues / causes observed.** Blank

**Saturday 17<sup>th</sup> October 2020**

**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.

**Sunday 18<sup>th</sup> October 2020**

**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.** OM2 spiked through the night but each spike less than 15 mins.

**Operational issues / causes observed.** Area round east inlet checked, no obvious odours found, area washed down.

**Monday 19<sup>th</sup> October 2020**

**DAY SHIFT**

**Temp.** Cool.

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

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

**Time:** 17:30.

**Observations / Customer Complaint.** OM3 @ 08:37 till 08:51 Max 0.046ppm.

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

**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 20<sup>th</sup> October 2020**

**DAY SHIFT**

**Temp.** Warm.

**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.**  
**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.

### **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					
14/10/2020	39	267	473	779	1920	2699
16/10/2020	0	679	305	984	1088	2072
16/10/2020	0	328	305	633	608	1241

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 8 imports of sludge per day.

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

The doors of No.5 pumping station were open at the time of the inspection although odour did not appear present.

### **Sludge Import Area**

It was noted that the condition around the sludge import area has improved.

Although the previous tank leak has been resolved the area surrounding the skips requires regular cleaning.

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.

**Digesters 5 and 6** were both in service and had good dry seals. Dry crust from a previous spill was still present and required clearing up.

**Digester 7** was being bought back into service.

**Digester 8** was in service and had a very wet seal that was bubbling off gas. It was noted the bell was very high.

**Digester 9** was in service and had a very wet seal that was bubbling off gas.

**Digester 10** was in service and had a very wet seal that was bubbling off gas. It was noted the bell was very high.

**Digesters 11, 12, 13 and 14** were all in service but had wet sloppy seals and were all bubbling off gas. Dry crust of previous spills were still present around these digesters and required clearing up.

**Digester 15** was out of service.

**Digester 16** was in service and had a very wet seal that was bubbling off gas.

**Digester 17** was in service and had a relatively good dry seal.

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

**Digester 20** was in service and had a very wet seal that was bubbling 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 12yds open skip that was empty and one 40yds closed bulk carrier that was also empty

In the Sludge Import area there were two 8yds open skips, both of which contained rag and other debris, both were only part covered.

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

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

**East Side Screen House**

The doors at both ends of the screen house building were closed at the time of the inspection.

**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 partially clogged along approx. 50% of its length, was visibly crusty in areas and had weeds growing out of it.

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

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

Circular PST 12 is currently out of service.  
PST's 9, 10 and 11 were all in service and had fat free surfaces.

#### **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.

#### **D-battery Aeration Lanes (old)**

4 lanes of D19 were out of service due to ongoing maintenance. No issues were evident.

#### **West Side Aeration Lanes**

All lanes are now much improved and appeared to be free flowing, with the internal dividing walls being visible again.  
Most of the sprinklers were back in operation and floating debris had been removed.

The mixed liquor feed channel serving aeration lane 25 of E-Battery was only partially clogged but no other issues were evident.

**New Inlet Works (West Side)**

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

**Odour Control Unit (OCU) performance monitoring: 20/10/2020**

<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	23.66 11.09 7.55	0.2	Unknown
East OCU	4.03 3.93 3.83	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	21.80 11.78 20.47	0.6	Yes
New West inlet (OCU 11)	32.64 27.86 25.62	0.5	No
Pasteurisation (OCU 12)	10.38 8.34 7.37	0.5	Yes
Transfer PS inlet	97.61 81.11	Unknown	Unknown

	72.51		
Transfer PS outlet	0.00 0.00 0.00	0.6	Yes