



# London Borough of Hounslow

## Mogden Sewage Treatment Works

### TW Site Inspection

<b>Date of inspection:</b> Wednesday 9 <sup>th</sup> September 2020 (12:15pm)	
<b>Attendees:</b> Mr L Phillips (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 - Tank empty clean – All hoppers drained to lowest point.</p> <p><b>Tank 1B</b> - Was empty clean – All hoppers drained to lowest point.</p> <p><b>Tank 2A</b> - Was empty clean – All hoppers drained to lowest point.</p> <p><b>Tank 2B</b> - Was empty clean – All hoppers drained to lowest point.</p> <p><b>Tank 3A</b> - Was empty clean – All hoppers drained to lowest point.</p> <p><b>Tank 3B</b> - Was empty – However tank recently returned and needs flushing - All hoppers full and require draining / over pumping.</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> <p><b>Tank 6A</b> - Was empty clean, hoppers 1 &amp; 2 drained to lowest point, however hopper was 3 full and requires draining / over pumping.</p>	

**Tank 6B** - Was empty slight grit build up at hopper end of the tank - Hoppers 1 & 2 drained to lowest point, however hopper 3 full and required draining / over pumping.

**Tank 7A** - Was empty – 50% of tank covered with grit - all hoppers full and required draining / over pumping.

**Tank 7B** - Was empty- slight grit at hopper end of the tank - All hoppers full and require draining / over pumping.

**Tank 8A** - Was empty and clean – All hoppers full and require draining / over pumping.

**Tank 8B** - Was empty and clean – All hoppers full and require draining / over pumping.

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

**Complaints**

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

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

**The Council received no complaints by email from MRAG.**

***Thames Water controller advised that they had received no direct complaints in the preceding week.***

**Odour Monitors**

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

Monitor 1	0.003	ppm	12.34pm
Monitor 2	0.004	ppm	12.34pm
Monitor 3	0.000	ppm	12.34pm
Monitor 4	0.004	ppm	12.34pm
Monitor 5	0.000	ppm	12.34pm
Monitor 6	0.003	ppm	12.34pm
Monitor 7	0.000	ppm	12.34pm
Monitor 8	0.003	ppm	12.34pm
Monitor 9	0.003	ppm	12.34pm
Monitor 10	0.004	ppm	12.34pm
Monitor 11	0.000	ppm	12.34pm
Monitor 12	0.000	ppm	12.34pm
Monitor 13	0.000	ppm	12.34pm
Wind Speed	3.549	mph	12.34pm
Wind Direction	271.592		12.34pm

**Odour Log (Thames)**

**Thursday 3<sup>rd</sup> September 2020**

**DAY SHIFT:**

**Temp:** Warm.

**Weather:** Sunny W/patchy cloud.

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

**Time:** 17:30.

**Observations / Customer Complaint:**

OM3 0.033ppm 06:33 – 06:48.

OM6 0.016ppm 08:39 – 09:23.

OM5 0.015ppm less than 15 minutes.

**Operational issues / causes observed:** Storm tank hoppers being pumped out into storm channel.

**Actions Taken:** Blank.

**NIGHT SHIFT:**

**Temp:** Cool.

**Weather:** Clear night.

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

**Time:** 05:30.

**Observations / Customer Complaint:** OM3 – 0.087ppm less than 15 minutes.

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

**Actions Taken:** Blank.

**Friday 4<sup>th</sup> September 2020**

**DAY SHIFT:**

**Temp:** Warm.

**Weather:** Cloudy W/Sunny spells.

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

**Time:** 17:30.

**Observations / Customer Complaint:** OM3 0.029ppm 14:19 – 14:34.  
0.051ppm 15:49 – 16:19.

**Operational issues / causes observed:** OCU11 Discharging high odour from stack 0.486ppm.

**Actions Taken:** Blank

**NIGHT SHIFT:**

**Temp:** Cool.

**Weather:** Rain.

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

**Time:** 05:30.

**Observations / Customer Complaint:** OM3 0.021ppm max 21:04-21:48.

**Operational issues / causes observed:** OC11 high discharge but no obvious odours.

**Actions Taken:** Blank.

**Saturday 5<sup>th</sup> September 2020**

**DAY SHIFT:**

**Temp:** Warm.

**Weather:** Cloudy W/patchy cloud.

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

**Time:** 17:30.

**Observations / Customer Complaint:** OM3 0.027ppm 16:19 – 16:48.

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

**Actions Taken:** Inlets checked nothing out of the ordinary.

**NIGHT SHIFT:**

**Temp:** Cool.

**Weather:** Overcast night.

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

**Time:** 05:30.

**Observations / Customer Complaint:** OM2 0.020ppm 20:54 – 21:53.

**Operational issues / causes observed:** Area checked no source of odour detected inlet area washed down.

**Actions taken:** Blank.

### **Sunday 6<sup>th</sup> September 2020**

**DAY SHIFT:**

**Temp:** Warm.

**Weather:** Sunny W/ Patchy clouds.

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

**Time:** 17:30.

**Observations / Customer Complaint:** OM3 0.024ppm 12:49 – 13:04.

**Operational issues / causes observed:** OCU11 discharging odour PAS stream 4 sludge spill. PAS pump damaged discharge pipework.

**Actions Taken:** Day OPS cleaning PAS stream 4 area.

**NIGHT SHIFT:**

**Temp:** Cool.

**Weather:** Clear night.

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

**Time:** 05:30.

**Observations / Customer Complaint:** OM2 showing odours all shift, max 0.049ppm.

**Operational issues / causes observed:** East inlet and MPS checked.

**Actions Taken:** Area around skips and washpactors washed down. No abnormal smells found.

### **Monday 7<sup>th</sup> September 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 found or reported.

**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:** No odour issues.

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

**Actions Taken:** Blank.

**Tuesday 8<sup>th</sup> September 2020**

**DAY SHIFT:**

**Temp:** Warm.

**Weather:** Sunny W/ Patchy clouds.

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

**Time:** 17:30.

**Observations / Customer Complaint:** OM2 and 3 spiked for less than 15 minutes AM both 0.032 max.

**Operational issues / causes observed:** High H25 levels in PST's 21-25.

**Actions Taken:** East inlet hosed down OCU 11 showing high readings on stack.

**NIGHT SHIFT:**

**Temp:** Cool.

**Weather:** Clear night.

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

**Time:** 05:30.

**Observations / Customer Complaint:** OM3 0.021ppm 18:30 – 18:48

OM5 0.024ppm 04:09 – 04:24.

**Operational issues / causes observed:** PAS area odour detected no sludge spillages.

**Actions Taken:** Confirmed OCU12 was running correctly.

**Wednesday 9<sup>th</sup> September 2020**

**DAY SHIFT:**

**Temp:** Warm.

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

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

**Time:** 17:30.

**Observations / Customer Complaint:** OM3 0.055ppm 09:03 – 09:17.

**Operational issues / causes observed:** New west inlet hosed down.

**Action Taken:** Blank.

**NIGHT SHIFT:**

**Temp:** Warm.

**Weather:** Clear night.

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

**Time:** 05:30.

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

**Operational issues / causes observed:** Area checked no sources of odour discovered.

**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					
04/09/2020	39	244	183	427	2113	2579
07/09/2020	0	267	244	511	2246	2757
09/09/2020	0	412	389	801	1942	2743

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 an average of 15 imports of sludge per day in the preceding week.

### **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 sludge import area was still in a very poor condition.

Although the tank leak has been resolved the area surrounding the skips is in a poor state and requires 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.

**Digester 5** - Was in service - Weak sloppy seal - No evidence of spillage.

**Digester 6** - Was in service - Weak sloppy seal - No evidence of spillage.

**Digester 7** - Out of service.

**Digester 8** - Was in service - Weak sloppy seal - No evidence of spillage.

**Digester 9** - Was in service - Weak sloppy seal - No evidence of spillage.

**Digester 10** - Was in service - Weak sloppy seal - No evidence of spillage.

**Digester 11** - Was in service - Weak sloppy seal - No evidence of spillage.

**Digester 12** - Was in service - Weak seal - Evidence of a spill dry crust that needs cleaning.

**Digester 13** - Was in service - Weak sloppy seal - No evidence of spillage.

**Digester 14** - Was in service - Weak sloppy seal - No evidence of spillage.

**Digester 15** - Was out of service.

**Digester 16** - Was in service - Weak seal - Evidence of a spill dry crust that needs cleaning.

**Digester 17** - Was in service - Weak sloppy seal - No evidence of spillage.

**Digester 18** - Out of service.

**Digester 19** - Out of service.

**Digester 20** - Was in service - Weak sloppy seal - No evidence of spillage.

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.

The area around all digesters was much improved with no evidence of recent or historical sludge spills. Thames advised they have been actively undertaking regular clean-ups of this area of the works.

## **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 an 8yds open skip that was approx. 50% full of rag and only partially covered.

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

### **East Side Screen House**

The doors 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. 40% 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 relatively 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.

**West Side Aeration Lanes (New)**

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 the first 2 lanes of aeration lane 25 of E-Battery was partially clogged but no other issues were evident.

**New Inlet Works (West Side)**

No issues appeared evident at the new inlet works.

**Odour Control Unit (OCU) performance monitoring: 08/09/2020**

<b>Plant</b>	<b>Reading (ppm)</b>	<b>Action Level (ppm)</b>	<b>Compliant</b>
Main pumping station inlet	0.00 0.00 0.00	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	0.00 0.00 0.00	0.6	Yes
New West inlet (OCU 11)	0.03 0.03 0.03	0.5	No
Pasteurisation (OCU 12)	0.00 0.00 0.00	0.5	Yes
Transfer PS inlet	No data 0.00	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00	0.6	Yes