



# London Borough of Hounslow

## Mogden Sewage Treatment Works

### TW Site Inspection

<b>Date of inspection:</b> Tuesday 8 <sup>th</sup> March 2022 (13:00pm)	
<b>Attendees:</b> Mr I Inman (London Borough of Hounslow), Ms C Simmonds (Thames Water).	
LB Hounslow Observation	Thames Water Action / Response
<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 approx. 50% full and required draining down.</p> <p><b>Tank 1B</b> was empty but had grit and sludge along the left side and top end of the tank. Hoppers 1, 2 and 3 were all approx. 50% full and required draining down.</p> <p><b>Tank 2A</b> was approx. 20% full (just above the top of the Amajets). No Amajets were in operation.</p> <p><b>Tank 2B</b> was approx. 20% full (just above the top of the Amajets). No Amajets were in operation.</p> <p><b>Tank 3A</b> was empty but had sludge at the bottom end of the tank. Hoppers 1, 2 and 3 were all approx. 40% full and required draining down.</p> <p><b>Tank 3B</b> was partially empty but hoppers 1, 2 and 3 were all full and</p>	<div><p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p></div>

appeared to be overflowing back into the tank. All hoppers required draining down.

**Tanks 4A, 4B, 5A & 5B** All tanks are covered and odour controlled. Still unable to gauge condition of these tanks as the internal lighting system is still not working.

**Tank 6A** was empty and clean.

Hoppers 1, 2 and 3 were all approx. 80% full and required draining down.

**Tank 6B** was empty and clean.

Hopper 1 was full, hoppers 2 and 3 were both approx. 50% full. All hoppers required draining down.

**Tank 7A** contained a low level of effluent and appeared to be returning.

Amajets 1, 2 and 3 were all in operation.

**Tank 7B** was empty but had wet sludge and grit along the left side and top end of the tank.

Hoppers 1, 2 and 3 were all full and required draining down.

**Tank 8A** was empty and clean.

Hoppers 1 and 3 were full, hopper 2 was approx. 80% full, all required draining down.

**Tank 8B** was empty and clean.

Hoppers 1, 2 and 3 were all full and required draining down.

**Storm Feed Channel** - The level of effluent in both feed channels was low, bottomed out in some areas. Yet again large amounts of grit (possibly 18" thick in places) was present, along with sludge containing solid deposits in a number of areas.

This material was present in both the near and far side channel and odorous in places.

**Complaints**

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

The Council 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 in the preceding week.

**Odour Monitors**

The odour readouts (H<sub>2</sub>S) for all monitors that were providing data on 08/03/2022 at the time of the inspection are below.

Monitor 1	0.004	ppm	13:14pm
Monitor 2	0.002	ppm	13:14pm
Monitor 3	0.004	ppm	13:14pm
Monitor 4	0.006	ppm	13:14pm
Monitor 5	0.008	ppm	13:14pm
Monitor 6	0.007	ppm	13:14pm
Monitor 7	0.000	ppm	13:14pm
Monitor 8	0.005	ppm	13:14pm
Monitor 9	0.006	ppm	13:14pm
Monitor 10	0.004	ppm	13:14pm
Monitor 11	0.007	ppm	13:14pm
Monitor 12	0.003	ppm	13:14pm
Monitor 13	0.005	ppm	13:14pm
Wind Speed	8.195	mph	13:14pm
Wind Direction	124.906		13:14pm

**Odour Log (Thames)**

**Wednesday 2<sup>nd</sup> March 2022**

**DAY SHIFT**

**Temp.** Cool.

**Weather.** Patchy/Rain.

**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.** Rain.

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

**Time:** 05:30.

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

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

**Actions Taken.** Blank.

**Thursday 3<sup>rd</sup> March 2022**

**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.

**Actions Taken.** Blank.

**NIGHT SHIFT**

**Temp.** Cold.

**Weather.** Clear night.

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

**Time:** 05:30.

**Observations / Customer Complaint.** Blank.

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

**Actions Taken.** Blank.

**Friday 4<sup>th</sup> March 2022**

**DAY SHIFT**

**Temp.** Cold.

**Weather.** Patchy Rain.

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

**Time:** 17:30.

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

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

**Actions taken.** No issues onsite.

**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.

**Actions taken.** Blank.

**Saturday 5<sup>th</sup> March 2022****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.

**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 found or reported.

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

**Actions taken.** Blank.

**Sunday 6<sup>th</sup> March 2022**

**DAY SHIFT**

**Temp.** Cool.

**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.

**Actions taken.** Blank.

**NIGHT SHIFT**

**Temp.** Cool.

**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.** Blank.

**Actions Taken.** Blank.

**Monday 7<sup>th</sup> March 2022****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.

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

**Actions taken.** Blank.

**NIGHT SHIFT**

**Temp.** Cold.

**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.** Blank.

**Actions Taken.** Blank.

**Tuesday 8<sup>th</sup> March 2022**

**DAY SHIFT**

**Temp.** Cool.

**Weather.** Cloudy W/Patchy Clouds.

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

**Time:** 17:30.

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

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

**Actions taken.** 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.

**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					
28/02/2022	0	1236	1030	2266	1568	3934
02/03/2022	0	1200	2531	3731	1568 <b>*2531</b>	5299 <b>*6563</b>
07/03/2022	59	1611	2906	4576	936	5512 <b>*4512</b>

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.

**\* Incorrect totals entered on Thames Water paperwork.**

### Imported Sludge

There have been an average of 20 imports of sludge in the preceding week.

### No.5 Pumping Station

The door and one window of No.5 pumping station were open at the time of the inspection due to ongoing internal maintenance.

### Sludge Import Area

The condition around the sludge import area has improved and was noticeably cleaner.

As LBH note, this has not been required in the last week.



Both of the two skips present were fully covered and both skips with the tailor-made tarpaulins.

### **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 out of service.

**Digester 6** was in service but had a high bell and was bubbling and spitting.

**Digesters 7, 8, 9, 10, 11, 12, 13 and 14** were all in service and had very wet seals that were bubbling off minimal amounts of gas.

**Digester 15** was out of service.

**Digester 16** was in service but had a high bell and was bubbling and spitting.

**Digesters 17, 18, 19 and 20** were all in service and had very wet seals that were bubbling off minimal amounts of gas.

Anti-foaming agent is in use, which TW advised was being applied manually to all operational digesters due to the automatic dosing equipment not operating.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester. The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

## **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 appeared to be in operation at the time of the inspection. It was noted that all tanks had varying amounts of green algae and/or scum on tanks surface, some of which appeared lumpy, although no odour was present.

### **Skips**

On the East side was one 14yds closed skip that was clearly signed "Rag only".

Also present was one 20yds open bulk carrier that contained a small amount of grit and rad, and was clearly signed "Grit only", and one 20yds open bulk carrier for general rubbish that was full.

Two of the three roller shutter doors on the East side grit building were open and a Bobcat Skidsteer loader was parked inside.

On the service road between FST's 20 and 24 was closed 14yds skip that was clearly signed "Rag only".

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

All empty/spare skips had been removed from the West side of the works.

### **East Side Screen House**

Both sets of roller shutter 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 clogged along 70% of its length, there was a significant number of weeds were growing out of it and through the steel grating.

### **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. All had some surface scum that appeared to be fatty type algae.

Circular PST 12 is currently out of service. It was noted that the tank still contained a large quantity of solid fat, thick dry sludge, algae, rag and other debris.

### **Pasteurisation Plant**

The pasteurisation plant is in service. TW advised all 7 streams are currently operational.

### **Section 106 agreement**

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

### **West Side Aeration Lanes**

The previous biological issue in all lanes now seems to have been resolved and the effluent appeared to be free flowing with reduced surface foam.

A large number of the sprinklers were still out of operation and floating debris was present in most of these areas.

The surface area of the mixed liquor feed channel serving the aeration lanes of E-Battery was free-flowing between lanes 22-25. However, lane 22 was still partially clogged on the surface with thick sludge.

#### **New Inlet Works (West Side)**

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

#### **Old Inlet Works (West Side)**

A walk around of the existing inlet was carried out and everything appeared in good order.

#### **Odour Control Unit (OCU) performance monitoring: 07/03/2022**

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station outlet	0.00 0.00 0.00	0.2	Unknown
East OCU	0.00 0.00 0.00	0.05	Unknown
West inlet OCU	0.00 0.00 0.00	0.05	Unknown
Thickening plant outlet	0.02 0.01 0.03	0.6	Unknown
New West inlet (OCU 11)	0.00 0.00	0.5	Unknown

	0.00		
Pasteurisation (OCU 12)	00.8 0.09 0.11	0.5	Unknown
Transfer PS inlet	27.31 22.18 26.41	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00	0.6	Unknown
GBT Plant OCU Outlet	0.00 0.00 0.00	Unknown	Unknown



## Mogden Sewage Treatment Works

### TW Site Inspection

<b>Date of inspection:</b> Tuesday 22 <sup>nd</sup> February 2022 (13:00pm)	
<b>Attendees:</b> Mr I Inman (London Borough of Hounslow), Ms C Simmonds (Thames Water).	
LB Hounslow Observation	Thames Water Action / Response
<p><b><u>Storm Water Storage Tanks (SWST)</u></b></p> <p><b>Tank 1A</b> was approx. 25% full and returning. Amajets 1 and 3 were in operation.</p> <p><b>Tank 1B</b> was approx. 25% full and returning. Amajets 1, 2 and 3 were all in operation.</p> <p><b>Tank 2A</b> was approx. 40% full and returning. No Amajets were in operation.</p> <p><b>Tank 2B</b> was approx. 40% full and returning. No Amajets were in operation.</p> <p><b>Tank 3A</b> was approx. 40% full and returning. Amajets 2 and 3 were in operation.</p> <p><b>Tank 3B</b> was approx. 40% full and returning. Amajets 1, 2 and 3 were all in operation.</p> <p><b>Tanks 4A, 4B, 5A &amp; 5B</b> All tanks are covered and odour controlled. Still unable to gauge condition of these tanks as the internal lighting</p>	<div>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</div>

system is still not working.

**Tank 6A** was approx. 40% full and returning.  
Amajets 1, 2 and 3 were all in operation.

**Tank 6B** was approx. 40% full and returning.  
Amajets 1, 2 and 3 were all in operation.

**Tank 7A** was approx. 40% full and returning.  
Amajets 1, 2 and 3 were all in operation.

**Tank 7B** was approx. 40% full and returning.  
Amajets 2 and 3 were all in operation.

**Tank 8A** was approx. 40% full and returning.  
Amajets 1, 2 and 3 were all in operation.

**Tank 8B** was approx. 40% full and returning.  
Amajets 1 and 2 were in operation.

**Storm Feed Channel** - The level of effluent in both feed channels was low, bottomed out in some areas. Yet again large amounts of grit (possibly 18" thick in places) was present, along with sludge containing solid deposits in a number of areas.  
This material was present in both the near and far side channel and odorous in places.

### **Complaints**

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

The Council 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 in the preceding week.

### **Odour Monitors**

The odour readouts (H<sub>2</sub>S) for all monitors that were providing data on 22/02/2022 at the time of the inspection are below.

Monitor 1	0.005	ppm	13:14pm
Monitor 2	0.002	ppm	13:14pm
Monitor 3	0.008	ppm	13:14pm
Monitor 4	0.007	ppm	13:14pm
Monitor 5	0.007	ppm	13:14pm
Monitor 6	0.008	ppm	13:14pm
Monitor 7	0.000	ppm	13:14pm
Monitor 8	0.007	ppm	13:14pm
Monitor 9	0.004	ppm	13:14pm
Monitor 10	0.005	ppm	13:14pm
Monitor 11	0.010	ppm	13:14pm
Monitor 12	0.003	ppm	13:14pm
Monitor 13	0.005	ppm	13:14pm
Wind Speed	19.224	mph	13:14pm
Wind Direction	262.024		13:14pm

### **Odour Log (Thames)**

**Tuesday 15<sup>th</sup> February 2022**

**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.

**Actions Taken.** Blank.



**Wednesday 16<sup>th</sup> February 2022**

**DAY SHIFT**

**Temp.** Cool.

**Weather.** Rain/Sunny spells.

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

**Time:** 17:30.

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

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

**Actions Taken.** Blank.

**NIGHT SHIFT**

**Temp.** Cool.

**Weather.** Patchy Rain.

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

**Time:** 05:30.

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

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

**Actions Taken.** Blank.

**Thursday 17<sup>th</sup> February 2022**

**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.

**Actions Taken.** Blank.

**NIGHT SHIFT**

**Temp.** Cold.

**Weather.** Patchy Rain.

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

**Time:** 05:30.

**Observations / Customer Complaint.** OM5 spiked at 19.02-19.18, max 0.024ppm.

**Operational issues / causes observed.** Pasteurisation odour in air.

**Actions Taken.** Blank.

**Friday 18<sup>th</sup> February 2022**

**DAY SHIFT**

**Temp.** Cold.

**Weather.** Storms.

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

**Time:** 17:30.

**Observations / Customer Complaint.** OM11 0.028max 7.35-8.52.

**Operational issues / causes observed.** Some odour from PAS.

**Actions taken.** No issues onsite.

**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.

**Actions taken.** Blank.

**Saturday 19<sup>th</sup> February 2022**

**DAY SHIFT**

**Temp.** Cold.

**Weather.** Rain W/Sunny Spells.

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

**Time:** 17:30.

**Observations / Customer Complaint.** OM11 0.024 12.05-12.22.

**Operational issues / causes observed.** Some odour from PAS.

**Actions taken.** 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.

**Actions taken.** Blank.

**Sunday 20<sup>th</sup> February 2022**

**DAY SHIFT**

**Temp.** Cold.  
**Weather.** Cloudy.  
**Odour Readings.** All OMU's in operation.  
**Time:** 17:30.  
**Observations / Customer Complaint.** OM11 0.026 12.04-12.22, 0.022 7.50-8.07.  
**Operational issues / causes observed.** Some odour from PAS.  
**Actions taken.** Blank.  
**NIGHT SHIFT**  
**Temp.** Cold.  
**Weather.** Rain.  
**Odour Readings.** All OMU's in operation.  
**Time:** 05:30.  
**Observations / Customer Complaint.** OM11 0.022ppm 21.05-21.22.  
**Operational issues / causes observed.** Odour from PAS area. No sludge spills.  
**Actions Taken.** Blank.

**Monday 21<sup>st</sup> February 2022**

**DAY SHIFT**

**Temp.** Cold.  
**Weather.** Cloudy.  
**Odour Readings.** All OMU's in operation.  
**Time:** 17:30.  
**Observations / Customer Complaint.** OM11 spiked at 07.05-07.22 max 0.021ppm.  
**Operational issues / causes observed.** Digester Np.16 gassing off.  
**Actions taken.** Blank.

**NIGHT SHIFT**

**Temp.** Cool.  
**Weather.** Clear night.  
**Odour Readings.** All OMU's in operation.  
**Time:** 05:30.  
**Observations / Customer Complaint.** OM4 0.018 20.19-21.20.  
**Operational issues / causes observed.** Area checked no source found.  
**Actions Taken.** Blank.

**Tuesday 22<sup>nd</sup> February 2022**

**DAY SHIFT**

**Temp.** Cloudy.

**Weather.** Clear Night.

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

**Time:** 17:30.

**Observations / Customer Complaint.** OM11 spiked at 1030-10.51 max 0.023ppm.

**Operational issues / causes observed.** Digester No.16 gassing off.

**Actions taken.** 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.

**Actions Taken.** Blank.

**Wednesday 23<sup>rd</sup> February 2022**

**DAY SHIFT**

**Temp.** Cool.

**Weather.** Cloudy.

**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.

### 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					
18/02/2022	39	1841 1781*	885	2765	1264	4029 3969*
21/02/2022	0	1654	885	2539	1264	3803

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.

\* Incorrect totals entered on Thames Water paperwork.

### Imported Sludge

There have been an average of 20 imports of sludge in the preceding week.

### No.5 Pumping Station

The door and one window of No.5 pumping station were open at the time of the inspection due to ongoing internal maintenance.

### Sludge Import Area

The condition around the sludge import area has improved and was noticeably cleaner.

Both of the two skips present were fully covered and both skips with the

As LBH note, this has not been required in the last week.

tailor-made tarpaulins.

### **Raw Sludge Screening House**

The large roller shutter door of the Raw Sludge Screening building was partly open at the time of the inspection due to ongoing internal maintenance.

Thames advised this unit is now back in service.

### **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 out of service.

**Digester 6** was in service and had a very wet seal that was bubbling off minimal amounts of gas.

**Digester 7** was in service and had a very wet seal that was bubbling off minimal amounts of gas. It was noted digester 7 had a high bell and had been spitting on the service road side of the unit that required cleaning.

**Digester 8** was in service and had a very wet seal that was bubbling off minimal amounts of gas.

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

**Digester 10** was in service and had a very wet seal that was bubbling off minimal amounts of gas.

**Digester 11** was in service and had a very wet seal that was bubbling off minimal amounts of gas.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester.  
The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

<p><b>Digester 12</b> was in service and had a very wet seal that was bubbling off minimal amounts of gas.</p> <p><b>Digester 13</b> was in service and had a very wet seal that was bubbling off minimal amounts of gas.</p> <p><b>Digester 14</b> was in service and had a very wet seal that was bubbling off minimal amounts of gas.</p> <p><b>Digester 15</b> was out of service.</p> <p><b>Digester 16</b> was in service and had a very wet seal that was bubbling off minimal amounts of gas. It was noted digester 17 had a high bell and appeared very odorous.</p> <p><b>Digester 17</b> was in service and had a very wet seal that was bubbling off minimal amounts of gas.</p> <p><b>Digester 18</b> was out of service.</p> <p><b>Digester 19</b> was in service and had a very wet seal that was bubbling off minimal amounts of gas.</p> <p><b>Digester 20</b> was in service and had a very wet seal that was bubbling off minimal amounts of gas.</p> <p>Anti-foaming agent is in use, which TW advised was being applied manually to all operational digesters due to the automatic dosing equipment not operating.</p>	
<p><b><u>GENERAL</u></b></p> <p><b><u>Final Settlement Tanks East Side of Works</u></b></p> <p>The 8 circular tanks previously used as PSTs are now being used as final tanks (71-78).</p>	

All tanks appeared to be in operation at the time of the inspection. It was noted that all tanks had varying amounts of green algae and/or scum on tanks surface, some of which appeared lumpy, although no odour was present.

### **Skips**

On the East side was one 14yds closed skip that was clearly signed "Rag only".

Also present was one 20yds open bulk carrier that contained a small amount of grit and rad, and was clearly signed "Grit only", and one 20yds open bulk carrier for general rubbish that was virtually empty.

Two of the three roller shutter doors on the East side grit building were open and a Bobcat Skidsteer loader was parked inside.

On the service road between FST's 20 and 24 was closed 14yds skip that was clearly signed "Rag only".

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

All empty/spare skips had been removed from the West side of the works.

### **East Side Screen House**

Both sets of roller shutter 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 clogged along 60% of its length, there was a



significant number of weeds were growing out of it and through the steel grating.

### **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. All had some surface scum that appeared to be fatty type algae.

Circular PST 12 is currently out of service. It was noted that the tank still contained a large quantity of solid fat, thick dry sludge, algae, rag and other debris.

### **Pasteurisation Plant**

The pasteurisation plant is in service. TW advised all 7 streams are currently operational.

### **Section 106 agreement**

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

### **West Side Aeration Lanes**

The previous biological issue in all lanes now seems to have been resolved and the effluent appeared to be free flowing with reduced surface foam.

A large number of the sprinklers were still out of operation and floating debris was present in most of these areas.

The surface area of the mixed liquor feed channel serving the aeration lanes of E-Battery was free-flowing between lanes 22-25. However, lane 22 was still partially clogged on the surface with thick sludge.

**New Inlet Works (West Side)**

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

**Old Inlet Works (West Side)**

A walk around of the existing inlet was carried out and everything appeared in good order.

**Odour Control Unit (OCU) performance monitoring: 25/02/2022**

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station outlet	0.00 0.00 0.00	0.2	Unknown
East OCU	0.00 0.00 0.00	0.05	Unknown
West inlet OCU	0.00 0.00 0.01	0.05	Unknown
Thickening plant outlet	0.05 0.07 0.03	0.6	Unknown
New West inlet (OCU 11)	0.00 0.00 0.00	0.5	Unknown
Pasteurisation (OCU 12)	00.10 0.07 0.08	0.5	Unknown

Transfer PS inlet	44.13 41.11 39.88	Unknown	Unknown	
Transfer PS outlet	0.00 0.00 0.00	0.6	Unknown	
GBT Plant OCU Outlet	0.00 0.00 0.00	Unknown	Unknown	



## Mogden Sewage Treatment Works

### TW Site Inspection

**Date of inspection:** Tuesday 1<sup>st</sup> February 2022 (14:00pm)

**Attendees:** Mr Z Kadri (London Borough of Hounslow), Caitlin Simmonds (Thames Water) & William Randall (Site Manager TW)

#### LB Hounslow Observation

##### Storm Water Storage Tanks (SWST)

**Tank 1A** was empty and clear of grit across the entire surface. Hopper 1 was  $\frac{3}{4}$  full of effluent. Hoppers 2 and 3 were all under  $\frac{1}{4}$  full of effluent.

**Tank 1B** had a clean and tidy surface. Hoppers 1 and 2 were both empty however hopper 3 was full of effluent.

**Tank 2A** was empty and clear of grit and sludge. All 3 hoppers 1, 2 & 3 contained minimal amount of effluent.

**Tank 2B** was mostly empty and clean of grit and had a clean surface. Hoppers 1, 2 and 3 were all full of effluent.

**Tank 3A** was mostly clean and free of sludge and grit. Hoppers 1, 2 and 3 all contained effluent just under  $\frac{1}{2}$  mark.

#### Thames Water Action / Response

As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.

**Tank 3B** contained dark dense effluent at the hopper end which thinned out across the tank. All three hoppers needed draining down.

**Tanks 4A, 4B, 5A & 5B** All tanks are covered and odour controlled. I was able to gauge the conditions which demonstrated the tanks as being full.

**Tank 6A** had a slightly wet and muddy surface across the majority of the tank (hopper end). All three hoppers 1, 2 & 3 were full of effluent and needed draining down.

**Tank 6B** had a clean surface throughout the tank and all three hoppers 1, 2 & 3 were drained down and empty of effluent.

**Tank 7A** was mostly empty and clean however there were sludgy patches in areas. Hoppers 1, 2 & 3 were all in need of draining down – (Shallow hoppers).

**Tank 7B** had a dark coloured effluent at the hopper that thinned out across the tank. All Hoppers needed draining down. There was a team of day shift operation staff who were beginning to manually pump out the hoppers. – (Shallow hoppers).

**Tank 8A** was mostly empty and clean however all Hoppers contained minimal amount of effluent.

**Tank 8B** contained patches of sludge which covered parts of the tank. All Hoppers contained minimal amount of effluent.

**Storm Feed Channel** - The level of effluent in both feed channels was about  $\frac{1}{4}$  high and contained thick deposits of fat. In places the effluent looked murky and muddy.

### **Complaints**

The Council received **0 complaints** by telephone or via the on-line web system and no complaints via email over the last week.

### **Odour Monitors**

The odour readouts (H<sub>2</sub>S) for all monitors that were providing data on 01/02/2022 at the time of the inspection are below.

Monitor 1	0.000	ppm	13:45p m
Monitor 2	0.002	ppm	13:45p m
Monitor 3	0.006	ppm	13:45p m
Monitor 4	0.007	ppm	13:45p m
Monitor 5	0.006	ppm	13:45p m
Monitor 6	0.007	ppm	13:45p m
Monitor 7	0.000	ppm	13:45p m
Monitor 8	0.001	ppm	13:45p m
Monitor 9	0.000	ppm	13:45p m
Monitor 10	0.004	ppm	13:45p m
Monitor 11	0.008	ppm	13:45p m
Monitor 12	0.005	ppm	13:45p m
Monitor 13	0.006	ppm	13:45p m

Wind Speed	18.455	mph	13:45p m
Wind Direction	255.134	Deg	13:45p m
<p><b><u>Odour Log (Thames) needs</u></b></p> <p><b><u>Wednesday 26<sup>th</sup> January 2022</u></b></p> <p><b>DAY SHIFT</b></p> <p><b>Temp.</b> Cold</p> <p><b>Weather.</b> Cloudy with sunny spells .</p> <p><b>Odour Readings.</b> All ODU's in operation.</p> <p><b>Time:</b> 17:30</p> <p><b>Observations / Customer Complaint.</b> No issues found or reported.</p> <p><b>Operational issues / causes observed.</b> No odour issues.</p> <p><b>Actions Taken.</b> Blank.</p>			

**NIGHT SHIFT**

**Temp.** Cold.

**Weather.** Clear night.

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

**Time:** 05:30.

**Observations / Customer Complaint.** OM1 0.015ppm at 23:35-00:33.

**Operational issues / causes observed.** Digester bell heights high.

**Actions Taken.** Digester bell heights lowered with waste gas burner.

**Thursday 27<sup>th</sup> January 2022****DAY SHIFT**

**Temp.** Cool

**Weather.** Cloudy with 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.

**Actions Taken.** Blank.

**NIGHT SHIFT**

**Temp.** Cold

**Weather.** Clear Night.

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

**Time:** 05:30.

**Observations / Customer Complaint.** OM5 0.024ppm 18:18 - 19:10

**Operational issues / causes observed.** No odour issues found or detected

**Actions Taken.** Blank.

**Friday 28<sup>th</sup> January 2022****DAY SHIFT**



**Temp.** Cool

**Weather.** Cloudy with sunny spells.

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

**Time:** 17:30.

**Observations / Customer Complaint.** OM11 spiked at 12:04 12:18 but under 15min duration max 0.021ppm

**Operational issues / causes observed.** Digester 16 gassing off

**Actions taken.** Blank

#### **NIGHT SHIFT**

**Temp.** Cool.

**Weather.** Clear night.

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

**Time:** 05:30.

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

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

**Actions taken.** Blank.

#### **Saturday 29<sup>th</sup> January 2022**

##### **DAY SHIFT**

**Temp.** Warm.

**Weather.** Sunny with patchy clouds

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

**Time:** 17:30.

**Observations / Customer Complaint.** OM11 spiked 12:04-12:16 but less than 15min duration max 0.021ppm.

**Operational issues / causes observed.** Digester 16 gassing off.

**Actions taken.** Blank.

##### **NIGHT SHIFT**

**Temp.** Cold.

**Weather.** Clear night.

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

**Time:** 05:30.

**Observations / Customer Complaint.** OM5 spiked at 03:40-03:54 max 0.019ppm.

OM8 spiked 04:24-05:30 max 0.019ppm.

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

**Actions taken.** Blank.

**Sunday 30<sup>th</sup> January 2022**

**DAY SHIFT**

**Temp.** Cold.

**Weather.** Cloudy with 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

**Actions taken.** Blank

**NIGHT SHIFT**

**Temp.** Cool.

**Weather.** Patchy rain.

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

**Time:** 05:30.

**Observations / Customer Complaint.** OM8 showing odours  
02:00 max 0.027ppm.

OM3 spiked at 04:21-04:34 max 0.022ppm

**Operational issues / causes observed.** PAS area smelling and  
PST 14 being pumped out.

**Actions Taken.** Area checked.

**Monday 31<sup>st</sup> January 2022**

**DAY SHIFT**

**Temp.** Cold.

**Weather.** Sunny with patchy clouds.

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

**Time:** 17:30.

**Observations / Customer Complaint.** OM8 spiked at 10:35-  
10:52 0.020ppm.

**Operational issues / causes observed.** PAS area smelly – no issues found.

**Actions taken.** Blank.

**NIGHT SHIFT**

**Temp.** Cool.

**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.** Blank.

**Actions Taken.** Blank.

**Tuesday 1<sup>st</sup> February 2022**

**DAY SHIFT**

**Temp.** Cool.

**Weather.** Sunny with patchy clouds

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

**Time:** 17:30.

**Observations / Customer Complaint.** OM5 spiked to 0.021 at 16:55 – ONGOING.

OM8 0.019ppm at 11:37-11:54

**Operational issues / causes observed.** PAS area smelly – no issues found and boilers were running

**Actions taken.** Blank.

**NIGHT SHIFT**

**Temp.** Cool.

**Weather.** Clear night.

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

**Time:** 05:30.

**Observations / Customer Complaint.** OM2 spiked to 0.026ppm 03:06-04:05.

**Operational issues / causes observed.** PST14 pumping out .

**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					
28/1/2022	0	1030	885	1915	760	2675
31/1/2022	0	1030	1218	2248	760	3008

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 **56 imports** of sludge per day in the preceding week.

### 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. No odours witnessed.

### Raw Sludge Screening House

As LBH note, this has not been required in the last week.

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** Out of service.

**Digester 6** was in service and had a low (below 2ft) thickish wet seal – No evidence of recent/previous sludge spillages.

**Digester 7** was in service and had a low wet seal that was bubbling off minimum amounts of gas, it was noted that the seal level was low below 2ft. There was no evidence of previous spillage.

**Digester 8** was in service and had a low seal (below 1ft) which was wet to sludgy in places. – No evidence of recent/previous sludge spillages.

**Digester 9** was in service and had a good low (<1ft) wet seal which was sludgy in places – There was evidence of recent/previous spillage on coping stones.

**Digester 10** was in service and had a low (<2ft) wet seal – No evidence of recent/previous sludge spillages.

**Digester 11** was in service and had a low (<2ft) thick seal – No evidence of recent/previous sludge spillages.

**Digester 12** was in service and had a low (<2ft) sludge seal – No evidence of recent/previous sludge spillages.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester. The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

**Digester 13 Out of service.**

**Digester 14** was in service and had a low thick sludgy seal that was approx. 1ft below the coping stone.

**Digester 15 Out of service.**

**Digester 16** was in service and had a high wet to thick seal. There were signs of spill furthermore the digester was bubbling off and erupting causing overspill.

**Digester 17** was in service and had a low-level thick seal that was approx. 2ft below the coping stone. No signs of previous spill.

**Digester 18 Out of service.**

**Digester 19** was in service and had a low-level thick seal that was approx. 2ft below the coping stone. There were signs of historic spillage with dried gritty deposits across the surface of coping stones.

**Digester 20** was in service and had a low-level thick seal that was approx. 2ft below the coping stone.

Anti-foaming agent is in use, which TW advised was also being applied manually to all operational digesters.

**GENERAL**

**Final Settlement Tanks East Side of Works**

All 8 circular tanks (71-78) were in operation at the time of the inspection and had good clear surfaces. There was no evidence

of fatty deposits on the surface. The hoses on the arms were all rotating and clearing off any remaining deposits. No odours or offensive odours witnessed.

### **Skips**

#### **On the East side:**

There was 1x 20yds open bulk carrier that was designated for grit however contained some rag at time of inspection and was uncovered. There was a sign stating the skip was for "Grit Only".

There was 1x 20yds skip designated for inert material which was empty at the time of inspection and uncovered. There was no sign or labelling that designated the skip of general waste.

There was 1x 14yds skip designated for rag which was a closed skip with plastic large flaps which were closed at time of inspection. The skip had a sign reading "Rag Only".

#### **On the West Side:**

There was 1x 14yds skip adjacent to the pasteurization plant (West of the works) that was designated for Metals only- At time of inspection the skip was empty.

There was 1x 14yds skip adjacent to the Sludge Import area (West of the works) that was designated for rag only- At time of inspection the skip was empty and covered with a yellow tarpaulin. There was no sign or label that designated this skip for rag only.

### **East Side Screen House**

The doors at one end of the screen house were closed at the time of the inspection. All the doors including the metal shutter doors were closed.

### **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 80% of its length, there was a significant number of weeds which have been growing out of it and through the steel grating.

### **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. Slight algae covered the surfaces of the PSTs.

No other issues were evident with these tanks.

Circular PST 12 is still out of service.

### **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**

The surface area of the mixed liquor feed channel serving the aeration lanes of E-Battery was mostly free-flowing between lanes 22-25 – there was some blockage at around aeration lane 21 for about a meter but majority of the lane was free flowing. Progress has been made with this channel. All the lanes in E Battery were distinct and dividing walls were all visible. Not all the sprinkler systems were in operation.

### **New Inlet Works (West Side)**

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

### **Odour Control Unit (OCU) performance monitoring:** **01/02/2022**

<b>Plant</b>	<b>Reading (ppm)</b>	<b>Action Level (ppm)</b>	<b>Compliance</b>
Main pumping station inlet	Not provided	Unknown	Unknown
Main pumping station outlet	0.00ppm 0.00ppm 0.00ppm	0.2	Unknown
East OCU	0.02ppm 0.07ppm 0.01ppm	0.05	Yes
West inlet OCU	0.00ppm	0.05	Yes

	0.00ppm 0.00ppm			
Sludge reception inlet	Not provided	Unknown	Unknown	
Sludge reception outlet	Not provided	0.8	Unknown	
Thickening plant inlet	Not provided	Unknown	Unknown	
Thickening plant outlet	0.19ppm 0.13ppm 0.09ppm	0.6	Yes	
New West inlet (OCU 11)	0.00ppm 0.00ppm 0.00ppm	0.5	No	
Pasteurization (OCU 12)	0.00ppm 0.00ppm 0.00ppm	0.5	Yes	
Transfer PS inlet	19.81ppm 17.61ppm 16.92ppm	Unknown	Unknown	
Transfer PS outlet	0.00ppm 0.00ppm 0.00ppm	0.6	Yes	
GBT Plant OCU Outlet	0.00ppm 0.00ppm 0.00ppm	Unknown	Unknown	



# London Borough of Hounslow

## Mogden Sewage Treatment Works

### TW Site Inspection

<b>Date of inspection:</b> Tuesday 25 <sup>th</sup> January 2022 (13:00pm)	
<b>Attendees:</b> Mr I Inman (London Borough of Hounslow), Ms C Simmonds (Thames Water).	
LB Hounslow Observation	Thames Water Action / Response
<p><b><u>Storm Water Storage Tanks (SWST)</u></b></p> <p><b>Tank 1A</b> was empty and clean. Hopper 1 was approx. 40% full, hoppers 2 and 3 were both approx. 15% full.</p> <p><b>Tank 1B</b> was empty and relatively clean except for dry grit along the left-hand side of the tank. Hopper 1 was approx. 15% full, hopper 2 was empty/drained down, hopper 3 was approx. 80% full and required draining down or over-pumping.</p> <p><b>Tank 2A</b> was empty and clean but had dry grit along the right-hand side of the tank. Hopper 1 was approx. 25% full, hopper 2 was approx. 10% full and hopper 3 was empty/drained down.</p> <p><b>Tank 2B</b> was empty and clean but had dry grit along the left-hand side of the tank. Hopper 1 was approx. 80% full, hopper 2 was approx. 30% full and hopper 3 was approx. 70% full. All hoppers required draining down or over-pumping.</p>	<div><p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p></div>

**Tank 3A** was empty but had wet sludge across 50% of the tanks surface at the hopper end  
Hopper 1 was approx. 40% full, hoppers 2 and 3 were both approx. 30% full, all required drained down or over-pumping.

**Tank 3B** was in use. Hoppers 1, 2 and 3 were full and overflowing into the tank which contained inky effluent with floating solid, all hoppers required draining down or over-pumping.

**Tanks 4A, 4B, 5A & 5B** All tanks are covered and odour controlled. Still unable to gauge condition of these tanks as the internal lighting system is still not working.

**Tank 6A** was in use. Hoppers 1, 2 and 3 were full and overflowing into the tank which contained inky effluent, all hoppers required draining down or over-pumping.

**Tank 6B** was empty and clean.  
Hopper 1 was completely full, hopper 2 was approx. 50% full and hopper 3 was approx. 80% full; all hoppers required draining down or over-pumping.

**Tank 7A** was empty but was in a filthy state and had dry grit and wet sludge across various sections of the tanks surface.  
Hoppers 1, 2 and 3 (shallow hoppers) were relatively clean.  
The tank required flushing.

**Tank 7B** was empty but had dry grit and wet sludge at the top and along the left-hand side of the tank.  
Hoppers 1, 2 and 3 (shallow hoppers) were all overflowing.  
The tank and hoppers required flushing.

**Tank 8A** was in use and had a low level of effluent covered approx. 70% of the tanks surface.  
The tank required either returning or flushing.

**Tank 8B** was empty but had wet sludge and dry grit across the top half and left-hand side of the tanks surface.  
Hoppers 1, 2 and 3 were all approx. 95% full and required draining

down or over-pumping.

**Storm Feed Channel** - The level of effluent in both feed channels was low, bottomed out in some areas. Yet again large amounts of grit (possibly 18" thick in places) was present, along with sludge containing solid deposits in a number of areas.

This material was present in both the near and far side channel and odorous in places.

### **Complaints**

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

The Council 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 in the preceding week.

### **Odour Monitors**

The odour readouts (H<sub>2</sub>S) for all monitors that were providing data on 25/01/2022 at the time of the inspection are below.

Monitor 1	0.000	ppm	13:40pm
Monitor 2	0.002	ppm	13:40pm
Monitor 3	0.006	ppm	13:40pm
Monitor 4	0.007	ppm	13:40pm
Monitor 5	0.005	ppm	13:40pm
Monitor 6	0.006	ppm	13:40pm
Monitor 7	0.000	ppm	13:40pm
Monitor 8	0.007	ppm	13:40pm
Monitor 9	0.004	ppm	13:40pm
Monitor 10	0.005	ppm	13:40pm
Monitor 11	0.008	ppm	13:40pm
Monitor 12	0.004	ppm	13:40pm
Monitor 13	0.005	ppm	13:40pm
Wind Speed	0.767	mph	13:40pm
Wind Direction	251.290		13:40pm

### **Odour Log (Thames)**

**Wednesday 19<sup>th</sup> January 2022**

**DAY SHIFT**

**Temp.** Cool.

**Weather.** Cloudy/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.

**Actions Taken.** Blank.

**NIGHT SHIFT**

**Temp.** Cold.

**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.  
**Actions Taken.** Blank.

**Thursday 20<sup>th</sup> January 2022**

**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.

**Actions Taken.** Blank.

**NIGHT SHIFT**

**Temp.** Cold.

**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.

**Actions Taken.** Blank.

**Friday 21<sup>st</sup> January 2022**

**DAY SHIFT**

**Temp.** Cold.

**Weather.** Cloudy.

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

**Time:** 17:30.

**Observations / Customer Complaint.** OM5 0016ppm <15 minutes duration.

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

**Actions taken.** No issues onsite.

**NIGHT SHIFT**

**Temp.** Cool.  
**Weather.** Overcast night.  
**Odour Readings.** All OMU's in operation.  
**Time:** 05:30.  
**Observations / Customer Complaint.** OM8 0.022ppm @ 00.21 <15 mins.  
**Operational issues / causes observed.** Blank.  
**Actions taken.** Blank.

**Saturday 22<sup>nd</sup> January 2022**

**DAY SHIFT**

**Temp.** Cold.  
**Weather.** Cloudy.  
**Odour Readings.** All OMU's in operation.  
**Time:** 17:30.  
**Observations / Customer Complaint.** OM8 0.015ppm at 12:24 <15-minute duration. OM5 0.022ppm 17:11-18:09.  
**Operational issues / causes observed.** No issues on site.  
**Actions taken.** Blank.

**NIGHT SHIFT**

**Temp.** Cold.  
**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.  
**Actions taken.** Blank.

**Sunday 23<sup>rd</sup> January 2022**

**DAY SHIFT**

**Temp.** Cold.  
**Weather.** Cloudy.  
**Odour Readings.** All OMU's in operation.  
**Time:** 17:30.  
**Observations / Customer Complaint.** No odour issues.  
**Operational issues / causes observed.** Blank.  
**Actions taken.** Blank.



**NIGHT SHIFT**

**Temp.** Cold.

**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.

**Actions Taken.** Blank.

**Monday 24<sup>th</sup> January 2022****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.

**Actions taken.** Blank.

**NIGHT SHIFT**

**Temp.** Cold.

**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.

**Actions Taken.** Blank.

**Tuesday 25<sup>th</sup> January 2022****DAY SHIFT**

**Temp.** Cold.

**Weather.** Cloudy.

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

**Time:** 17:30.

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

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

**Actions taken.** 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.

**Actions Taken.** Blank.

**Wednesday 26<sup>th</sup> January 2022****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.

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

**Actions taken.** Blank.

**NIGHT SHIFT**

**Temp.** Cold.

**Weather.** Clear night.

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

**Time:** 05:30.

**Observations / Customer Complaint.** OM11 0.015ppm 23:35-00:33.

**Operational issues / causes observed.** Digester bell heights high.

**Actions Taken.** Digester bell heights lowered with waste gas burned.

### **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					
20/01/2022	0	1780	1218	2998	1753	4751
24/01/2022	0	1116	1030	2146	1416	3562

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 56 imports of sludge in the preceding week.

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

The door and one window of No.5 pumping station were closed at the time of the inspection.

### **Sludge Import Area**

The condition around the sludge import area has improved and was noticeably cleaner.

Both of the two skips present were fully covered and both skips with the tailor-made tarpaulins.

As LBH note, this has not been required in the last week.

### **Raw Sludge Screening House**

The large roller shutter door of the Raw Sludge Screening building was closed at the time of the inspection.

Thames advised this unit is now back in service.

### **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 out of service.

**Digester 6** was in service and had a very wet seal that was bubbling off minimal amounts of gas.

**Digester 7** was in service and had a very wet seal that was bubbling off minimal amounts of gas. It was noted digester 7 had a high bell and had been spitting on the service road side of the unit that required cleaning.

**Digester 8** was in service and had a very wet seal that was bubbling off minimal amounts of gas.

**Digester 9** was in service and had a very wet seal that was bubbling off minimal amounts of gas. There was evidence of a spitting or a small spill that required cleaning.

**Digester 10** was in service and had a very wet seal that was bubbling off minimal amounts of gas.

**Digester 11** was in service and had a very wet seal that was bubbling off minimal amounts of gas. There was evidence of a spitting or a small spill on the coping stone that required cleaning.

**Digester 12** was in service and had a very wet seal that was bubbling

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester.  
The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

off minimal amounts of gas. It was noted that the digester had a very low seal level.

**Digester 13 and 14** were both in service and had a very wet seals that was bubbling off minimal amounts of gas.

**Digester 15** was out of service.

**Digester 16** was in service and had a very wet seal that was bubbling off minimal amounts of gas. It was noted digester 17 had a high bell and had been spitting and required cleaning.

**Digester 17** was in service and had a very wet seal that was bubbling off minimal amounts of gas.

**Digester 18** was out of service.

**Digesters 19 and 20** were both in service and had a very wet seals that was bubbling off minimal amounts of gas.

Anti-foaming agent is in use, which TW advised was being applied manually to all operational digesters due to the automatic dosing equipment not operating.

## **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 (other than tank 77) were in operation at the time of the inspection, Tank 77 that was in the process of being drained down. It was noted that the remaining 7 tanks had varying amounts of green algae and/or scum on tanks surface, some of which appeared lumpy, although no odour was present.

### **Skips**

On the East side was one 14yds closed skip that was clearly signed "Rag only".

Also present was one 20yds open bulk carrier that contained a small amount of grit and rad, and was clearly signed "Grit only", and one 20yds open bulk carrier for general rubbish that was virtually empty.

Two of the three roller shutter doors on the East side grit building were open and a Bobcat Skidsteer loader was parked inside.

On the service road between FST's 20 and 24 was closed 14yds skip that was clearly signed "Rag only".

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

All empty/spare skips had been removed from the West side of the works.

### **East Side Screen House**

At the time of the inspection one of the first set of doors had been left open, the far set of doors and roller shutter door were closed.

### **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 60% of its length, there was a significant number of weeds were growing out of it and through the steel grating.

### **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. All had some surface scum that appeared to be fatty type algae.

Circular PST 12 is currently out of service. It was noted that the tank still contained a large quantity of solid fat, thick dry sludge, algae, rag and other debris.

### **Pasteurisation Plant**

The pasteurisation plant is in service. TW advised all 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**

The previous biological issues in all lanes now seems to have been resolved and the effluent appeared to be free flowing with reduced surface foam.

A large number of the sprinklers were still out of operation and floating debris was present in most of these areas.

The surface area of the mixed liquor feed channel serving the aeration lanes of E-Battery was free-flowing between lanes 22-25. However, lane 22 was partially clogged on the surface with thick sludge.

### **New Inlet Works (West Side)**

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

**Old Inlet Works (West Side)**

A walk around of the existing inlet was carried out and everything appeared in good order.

**Odour Control Unit (OCU) performance monitoring: 27/01/2022**

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station outlet	0.00 0.00 0.00	0.2	Unknown
East OCU	0.00 0.00 0.00	0.05	Unknown
West inlet OCU	0.08 0.04 0.00	0.05	Unknown
Thickening plant outlet	0.00 0.00 0.00	0.6	Unknown
New West inlet (OCU 11)	0.00 0.00 0.07	0.5	Unknown
Pasteurisation (OCU 12)	0.00 0.00 0.00	0.5	Unknown
Transfer PS inlet	33.17 31.07 28.04	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00	0.6	Unknown
GBT Plant OCU Outlet	0.00 0.00 0.00	Unknown	Unknown







## Mogden Sewage Treatment Works

### TW Site Inspection

<b>Date of inspection:</b> 18 <sup>th</sup> January 2022	
<b>Attendees:</b> Mr Steven Maunders and Ms Caitlin Simmonds (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><b><u>Storm Water Storage Tanks (SWST)</u></b></p> <p><b>Tank 1A</b> – Tank empty and flushed clean – Hopper 1 approx. 30% full – requires draining/over-pumping, Hoppers 2 &amp; 3 empty.</p> <p><b>Tank 1B</b> – Tank empty – approx. 25% of tank covered by grit and sludge – requires further flushing – All Hoppers approx. 20% full – requires draining/over-pumping.</p> <p><b>Tank 2A</b> - Tank empty and flushed clean – Hopper 1 approx. 40% full, Hoppers 2 &amp; 3 approx. 20% full – requires draining/over-pumping.</p> <p><b>Tank 2B</b> – Tank empty – Approx. 25% of tank covered by grit and sludge – requires further flushing – Hopper 1 approx. 80% full, Hoppers 2 &amp; 3 approx. 40% full – requires draining/over-pumping.</p> <p><b>Tank 3A</b> – Tank empty – 100% of tank covered by grit and sludge – requires further flushing – All Hoppers approx. 50% full – requires draining/over-pumping.</p> <p><b>Tank 3B</b> – Tank recently returned – 100% of tank covered by grit and</p>	<div>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</div>

<p>sludge – requires further flushing – All Hoppers full – requires draining/over-pumping.</p> <p><b>Tanks 4A, 4B, 5A &amp; 5B</b> which are covered and odour controlled were all in use - unable to gauge condition as lighting system still not working.</p> <p><b>Tank 6A</b> – Tank backfilling with effluent – approx. 75% of tank covered – requires draining/over-pumping.</p> <p><b>Tank 6B</b> – Tank empty – 10% of tank covered by grit and sludge – requires further flushing – Hopper 1 full, Hoppers 2 &amp; 3 approx. 50% full – requires draining/over-pumping.</p> <p><b>Tank 7A</b> – Tank empty – 50% of tank covered by grit and sludge – requires further flushing – Hoppers 1 &amp; 2 full – requires draining/over-pumping.</p> <p><b>Tank 7B</b> – Tank backfilling with effluent and 100% of tank covered by grit and sludge – requires further flushing – All Hoppers full – requires draining/over-pumping.</p> <p><b>Tank 8A</b> – Tank backfilling and approx. 80% of surface of tank covered All Hoppers full – requires draining/over-pumping.</p> <p><b>Tank 8B</b> – Tank empty – approx. 50% of tank covered by grit and sludge – requires further flushing – All Hoppers full – requires draining/over-pumping.</p> <p><b>Feed Channel</b> - The level of effluent in both feed channels was approximately 20% capacity – large deposits of grit/sludge throughout channel - no local odours.</p>	
<p><b><u>Complaints</u></b></p> <p><b>The Council directly received no complaints by telephone in the preceding week.</b></p>	

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 which were providing data at time of inspection:

Monitor 1	.000	ppm	13:44
Monitor 2	.001	ppm	13:44
Monitor 3	.005	ppm	13:44
Monitor 4	.005	ppm	13:44
Monitor 5	.005	ppm	13:44
Monitor 6	.006	ppm	13:44
Monitor 7	.000	ppm	13:44
Monitor 8	.006	ppm	13:44
Monitor 9	.003	ppm	13:44
Monitor 10	.004	ppm	13:44
Monitor 11	.007	ppm	13:44
Monitor 12	.000	ppm	13:44
Monitor 13	.005	ppm	13:44
Wind Speed	0.4	mph	13:44
Wind Direction	180°		13:44

### **Odour Log (Thames):**

#### **Thursday 13<sup>th</sup> January 2022:**

**AM** – Freezing – Cloudy.

All OMU's in use.

**Observations/Complaints:** "No odour issues."

**Operational Issues/Causes:** No data.

**Actions:** "Able on-site calibrating odour monitors."

**PM** – Freezing – Clear Night.

All OMU's in use.

**Observations/Complaints:** "No odour issues."

**Operational Issues/Causes:** No data.

**Actions:** No data.

**Friday 14<sup>th</sup> January 2022:**

**AM** – Cold – Cloudy.

All OMU's in use.

**Observations/Complaints:** "OM5 0.017ppm 09:31-09:46 & 0.025ppm 15:31-16:31, OM8 0.018ppm 10:58-12:16. OM6 0.016ppm 11:39-12:09, OM4 0.017ppm 11:56-12:15, OM11 0.016ppm 12:24-12:55.

**Operational Issues/Causes:** "PAS odour detected. No obvious spills or PAS units venting gas. Strong odour detected from drains in road adjacent to FST 64."

**Actions:** "Drains might need jetting/cleaning."

**PM** – Cold – Overcast Night.

All OMU's in use.

**Observations/Complaints:** "OM10 spiked at 20:12-20:26 max 0.015ppm and at 20:41-20:56 but <15 mins duration max 0.016ppm."

**Operational Issues/Causes:** "Digester No.16 gassing off."

**Actions:** No data.

**Saturday 15<sup>th</sup> January 2022:**

**AM** – Cold – Cloudy with Sunny Spells.

All OMU's in use.

**Observations/Complaints:** "No odour issues."

**Operational Issues/Causes:** No data.

**Actions:** No data.

**PM** – Cold – Overcast Night.

All OMU's in use.

**Observations/Complaints:** "OM No.5 spiked at 20:30-21:30 max 0.021ppm."

**Operational Issues/Causes:** "No obvious cause of odour discovered.."

**Actions:** No data.

**Sunday 16<sup>th</sup> January 2022:**

**AM** – Cold – Cloudy with Sunny Spells.

All OMU's in use.

**Observations/Complaints:** "No odour issues."

**Operational Issues/Causes:** No data.

**Actions:** No data.

**PM** – Cold – Overcast Night.

All OMU's in use.

Observations/Complaints: "No odour issues found or reported."

**Operational Issues/Causes:** No data.

**Actions:** No data.

**Monday 17<sup>th</sup> January 2021:**

**AM** – Cold – Sunny with Patchy Clouds.

All OMU's in use.

**Observations/Complaints:** "OM5 spiked at 17:16-17:30 <15 mins duration max 0.015ppm. OM11 spiked at 10:39-10:54 <15 mins max 0.015ppm."

**Operational Issues/Causes:** "Digester No.16 gassing off."

**Actions:** No data.

**PM** – Freezing – Overcast Night.

All OMU's in use.

**Observations/Complaints:** "No odour issues found or reported."

**Operational Issues/Causes:** No data.

**Actions:** No data.

**Tuesday 18<sup>th</sup> January 2022:**

**AM** – Cold – Sunny with Patchy Clouds.

All OMU's in use.

**Observations/Complaints:** "No odour issues found or reported."

**Operational Issues/Causes:** No data.

**Actions:** No data.

**PM** – Cool – Overcast Night.

All OMU's in use.

**Observations/Complaints:** "No odour issues found or reported."

**Operational Issues/Causes:** No data.

**Actions:** No data.

**Wednesday 19<sup>th</sup> January 2022:**

**AM** – Cool – Cloudy with Sunny Spells.

All OMU's in use.

**Observations/Complaints:** "No odour issues found or reported."

**Operational Issues/Causes:** No data.

**Actions:** No data.

**PM** – Cold – Overcast Night.

All OMU's in use.

**Observations/Complaints:** "No odour issues found or reported."

**Operational Issues/Causes** No data.

**Actions:** No data.

**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>					
<b>OMP limit</b>	<b>500</b>					
14/01/22	0	1405	1218	2623	2418	5041
17/01/22	0	1387	740	2127	1425	3552

The sludge stock levels for the West side circular primary settlement tank 1 were **compliant** with the OMP trigger level (500m<sup>3</sup>) for all of the dates for which data has been provided.

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.

As LBH note, this has not been required in the last week

**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. Long term project currently initiated to bring these units back into service – will require significant investment.

**Digester 5** – Out of use – contractors on site working.

**Digester 6** - In use – seal level approx. 18” below coping stones – seal weak and bubbling.

**Digester 7** - In use – seal level approx. 2ft below coping stones - seal weak and bubbling vigorously – ongoing spill requiring anti-foam and clean-up – Bell height high requiring draw down of Biogas.

**Digester 8** - In use – seal level approx. 6” below coping stones - seal weak and bubbling.

**Digester 9** - In use – seal level approx. 6” below coping stones - seal weak and bubbling vigorously – ongoing spill requiring anti-foam and clean-up – Bell height high requiring draw down of Biogas.

**Digester 10** - In use – seal level approx. 18” below coping stones - seal weak and bubbling.

**Digester 11** - In use – seal level approx. 6” below coping stones - seal weak and bubbling vigorously – ongoing spill requiring anti-foam and clean-up – Bell height high requiring draw down of Biogas.

**Digester 12** - In use – seal level approx. 1ft below coping stones – seal weak and bubbling

**Digester 13** - In use – seal level approx. 18” below coping stones - seal weak and bubbling vigorously – ongoing spill requiring anti-foam and clean-up.

**Digester 14** - In use – seal level approx. 18” below coping stones - seal weak and bubbling.

**Digester 15** – Out of use.

**Digester 16** - In use – seal level approx. 1ft below coping stones – seal

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester.  
The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.



weak and bubbling vigorously – ongoing spill requiring anti-foam and clean-up – Bell height high requiring draw down of Biogas.

**Digester 17** - In use – seal level approx. 2ft below coping stones – seal weak and bubbling.

**Digester 18** – Out of use.

**Digester 19** – In use – seal level approx. 4ft below coping stones – seal weak and bubbling – ongoing spill requiring anti-foam and clean-up.

**Digester 20** - In use – seal level approx. 18” below coping stones – seal weak and bubbling.

## **GENERAL**

### **Sludge Screening House**

All doors closed at the time of inspection.

### **Imported Sludge**

Average of fifty imports for preceding seven days.

### **Final Settlement Tanks East Side of Works**

The 8 circular tanks previously used as PSTs are now being used as final tanks (71-78).

### **East Side Raw Sludge Screen House**

Doors closed at time of inspection.

### **Pasteurisation Plant**

Eight streams running.

### **Skips**

1x small (blue) skip full of rag/grit & 1x small (blue) skip full of General Waste both uncovered – rear of sludge screen house.

1x open container grit skip (empty) uncovered, 1x open container skip – General Waste (full), 1x 10-Yard Rag skip (covered). New signage added to skip area to clearly identify skip contents.

2x 8-Yard skips – Rag (covered) by Pasteurisation Plant.

1x 10-Yard enclosed General Waste skip in Service Road at rear of East Raw Sludge Screening House.

1x open 8-Yard skip (scrap metal) in Service Road by Pasteurisation Plant.

### **West Side Aeration Lanes (Old)**

Battery C aeration feed channel 100% obstructed in one channel (left) – requires jetting (TW advise that there is continuing flow below surface).

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

Rectangular PSTs – no issues.

Circular PST's 9, 10 & 11 in use, Number 12 drained down.

### **New Works (West Side) Battery E**

Feed Channel for Aeration Lanes – recently jetted and clear – Lane 25

beginning to accumulate. Tank performance progressively improving.

**Odour Control Unit (OCU) performance monitoring – 18/01/22**

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	No data	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00	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	No data	Unknown	Unknown
Sludge reception outlet	No data	0.8	Unknown
Thickening plant inlet	No data	Unknown	Unknown
Thickening plant outlet	0.04 0.07 0.01	0.6	Yes
Transfer PS inlet	33.77 31.46 29.21	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00	0.5	Yes
New West inlet (OCU11)	0.00 0.00 0.00	0.5	Yes
Pasteurisation Plant (OCU12)	0.00 0.00 0.00	0.5	Yes
GBT Plant OCU Outlet	0.00 0.00 0.00	Unknown	Unknown



## Mogden Sewage Treatment Works

### TW Site Inspection

**Date of inspection:** Tuesday 4<sup>th</sup> January 2022 (13:00pm)

**Attendees:** Mr Z Kadri (London Borough of Hounslow), Caitlin Simmonds (Thames Water)

#### LB Hounslow Observation

##### Storm Water Storage Tanks (SWST)

**Tank 1A** was empty and clear of grit across the entire surface. Hoppers 1, 2 and 3 were all under  $\frac{1}{4}$  full of effluent.

**Tank 1B** had a sludgy surface which covered the majority of the tank. Hoppers 1, 2 and 3 were all  $\frac{1}{4}$  full of effluent.

**Tank 2A** was empty and clear of grit and sludge. All 3 hoppers 1, 2 & 3 contained minimal amount of effluent.

**Tank 2B** was mostly empty and clean however some wet patches of sludge were observed to the sides of the tank. Hopper 1 was empty, Hopper 2 contained less than  $\frac{1}{4}$  effluent and Hopper 3 needed draining down as the effluent was over  $\frac{1}{2}$  way full.

**Tank 3A** had a majority of the surface covered in sludgy material. Hoppers 1, 2 and 3 all contained effluent over  $\frac{1}{2}$  full.

#### Thames Water Action / Response

As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.

**Tank 3B** had a black sludgy surface throughout the entire tank. All hoppers 1, 2 and 3 were full to the top of effluent and needed draining down.

**Tanks 4A, 4B, 5A & 5B** All tanks are covered and odour controlled. Unable to gauge condition as lighting system still not working.

**Tank 6A** had a clean surface throughout the tank however all three hoppers 1, 2 & 3 were full of effluent and needed draining down.

**Tank 6B** had a clean surface throughout the tank however all three hoppers 1, 2 & 3 were full of effluent and needed draining down.

**Tank 7A** was mostly empty and clean however there were sludgy patches in areas. Hoppers 1, 2 & 3 were all in need of draining down – (Shallow hoppers).

**Tank 7B** was empty however the hoppers had overflowed and effluent covered half of the tank. Hoppers 1, 2 & 3 were all in need of draining down – (Shallow hoppers).

**Tank 8A** was mostly empty and clean however all Hoppers were full of effluent and needed draining down.

**Tank 8B** contained patches of sludge which covered parts of the tank. All Hoppers were full to the brim of effluent and needed draining down.

**Storm Feed Channel** - The level of effluent in both feed channels was about  $\frac{1}{4}$  high and contained thick deposits of fat. In places the effluent looked murky and muddy.

### **Complaints**

The Council received **0 complaints** by telephone or via the on-line web system and no complaints via email over the Christmas and New Year period.

### **Odour Monitors**

The odour readouts (H<sub>2</sub>S) for all monitors that were providing data on 04/01/2022 at the time of the inspection are below.

Monitor 1	0.000	ppm	13:45p m
Monitor 2	0.002	ppm	13:45p m
Monitor 3	0.008	ppm	13:45p m
Monitor 4	0.008	ppm	13:45p m
Monitor 5	0.006	ppm	13:45p m
Monitor 6	0.008	ppm	13:45p m
Monitor 7	0.003	ppm	13:45p m
Monitor 8	0.009	ppm	13:45p m
Monitor 9	0.000	ppm	13:45p m
Monitor 10	0.008	ppm	13:45p m
Monitor 11	0.008	ppm	13:45p m
Monitor 12	0.000	ppm	13:45p m



**NIGHT SHIFT**

**Temp.** Cool.

**Weather.** Cloudy.

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

**Time:** 05:30.

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

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

**Actions Taken.** Blank.

**Thursday 30<sup>th</sup> December 2021****DAY SHIFT**

**Temp.** Warm.

**Weather.** Cloudy with 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.

**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 found.

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

**Actions Taken.** Blank.

**Friday 31<sup>st</sup> December 2021****DAY SHIFT**

**Temp.** Warm.

**Weather.** Cloudy with sunny spells.

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

**Time:** 17:30.

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



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

**Actions taken.** Area checked.

**NIGHT SHIFT**

**Temp.** Cool.

**Weather.** Overcast night.

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

**Time:** 05:30.

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

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

**Actions taken.** Blank.

**Saturday 1<sup>st</sup> January 2022**

**DAY SHIFT**

**Temp.** Warm.

**Weather.** Cloudy with sunny spells.

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

**Time:** 17:30.

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

**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 found.

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

**Actions taken.** Blank.

**Sunday 2<sup>nd</sup> January 2022**

**DAY SHIFT**

**Temp.** Warm

**Weather.** Cloudy

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

**Time:** 17:30.

**Observations / Customer Complaint.** OM6 spiked to 0.016ppm at 16:42-17:42.

**Operational issues / causes observed.** Storm tanks area checked – Storm tanks 1A, 3A, 3B need flushing slash cleaning.

**Actions taken.** Area checked.

**NIGHT SHIFT**

**Temp.** Cool.

**Weather.** Overcast Night.

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

**Time:** 05:30.

**Observations / Customer Complaint.** OM3 spiked at 18:15-19:15 max 0.017ppm.

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

**Actions Taken.** Area checked no obvious source of odour found.

**Monday 3<sup>rd</sup> January 2022**

**DAY SHIFT**

**Temp.** Cool.

**Weather.** Cloudy.

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

**Time:** 17:30.

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

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

**Actions taken.** Blank.

**NIGHT SHIFT**

**Temp.** Cool.

**Weather.** Overcast Night.

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

**Time:** 05:30.

**Observations / Customer Complaint.** OM5 spiked at 21:49 – 22:02 max 0.015ppm and 23:33 – 23:47 max spike 0.018ppm both under 15minute durations.

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

**Actions Taken.** Blank.

**Tuesday 4<sup>th</sup> January 2022**

**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.

**Actions taken.** Blank.

**NIGHT SHIFT**

**Temp.** freezing.

**Weather.** Clear night.

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

**Time:** 05:30.

**Observations / Customer Complaint.** OM8 spiked to 0.026ppm during AM period – duration less than 15 minutes, OM8 showing 0.017ppm at 03:46-04:43.

**Operational issues / causes observed.** Smell coming from PAS.

**Actions Taken.** PAS checked and all ok.

### 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					
29/12/2021	0	1030	885	1915	760	2675
03/01/2022	0	1181	1950	3131	5237	8368

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 **0 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. Slight unpleasant / offensive odour was noticeable.

### Sludge Import Area

It was noted that the condition around the sludge import area was much improved and noticeably clean. No odours witnessed.

### Raw Sludge Screening House

As LBH note, this has not been required in the last week.

The large roller shutter door of the Raw Sludge Screening building were 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 Out of service.**

**Digester 6** was in service and had a low (>1ft) thickish wet seal – No evidence of recent/previous sludge spillages.

**Digester 7** was in service and had a low wet seal that was bubbling off minimum amounts of gas, it was noted that the seal level was low <1ft. There was evidence of a slight spillage on the service road side of the digester.

**Digester 8** was in service and had a good low (<1ft) wet to sludgy seal – No evidence of recent/previous sludge spillages.

**Digester 9** was in service and had a good low (<1ft) wet seal which was sludgy in places – No evidence of recent/previous sludge spillages.

**Digester 10** was in service and had a low (<1ft) wet seal – No evidence of recent/previous sludge spillages.

**Digester 11** was in service and had a good low (<1ft) sludgy seal – No evidence of recent/previous sludge spillages.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester. The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

**Digester 12** was in service and had a low (<2ft) sludge seal – No evidence of recent/previous sludge spillages.

**Digester 13** was in service and had a low sludgy seal which was <1ft below the coping stone.

**Digester 14** was in service and had a low thick sludgy seal that was approx. 2ft below the coping stone.

**Digester 15 Out of service.**

**Digester 16** was in service and had a high wet to thick seal. There were signs of previous spill furthermore the digester was bubbling off minimal amounts of gas.

**Digester 17** was in service and had a low level thick seal that was approx. 2ft below the coping stone. No signs of previous spill.

**Digester 18 Out of service.**

**Digester 19 Out of service.**

**Digester 20** was in service and had a low level wet seal that was approx. 2ft below the coping stone.

Anti-foaming agent is in use, which TW advised was also being applied manually to all operational 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 had good clear surfaces. There was no evidence of fatty deposits on the surface. The hose on the arm was rotating and clearing off any remaining deposits. No odours or offensive odours witnessed.

### **Skips**

#### **On the East side:**

There was 1x 20yds open bulk carrier that was designated for grit however was empty at the time of inspection.

There was 1x 20yds skip designated for inert material which was full of general waste. There was no cover or tarpaulin.

There was 1x 14yds skip designated for rag which was a closed skip with plastic large flaps which were closed at time of inspection.

#### **On the West Side:**

There was 1x 14yds skip adjacent to the pasteurization plant (West of the works) that was designated for Metals only- At time of inspection the skip was empty.

There was 1x 14yds skip adjacent to the Sludge Import area (West of the works) that was designated for rag only- At time of inspection the skip was empty and covered with a yellow tarpaulin.

### **East Side Screen House**

The doors at one end of the screen house were open at the time of the inspection. There were contractors from L.O.S working on site. All the doors were either open or ajar however the metal shutter door was closed.

### **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 80% of its length, there was a significant number of weeds which have been growing out of it and through the steel grating. This has been in the same condition most part of the year.

### **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. Slight algae covered the surfaces of the PSTs.

No other issues were evident with these tanks.

Circular PST 12 is still out of service.

### **Pasteurisation Plant**

The pasteurisation plant is in service. TW advised 10 streams are currently operational.

### **Section 106 agreement**

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



### **West Side Aeration Lanes**

The surface area of the mixed liquor feed channel serving the aeration lanes of E-Battery was mostly free-flowing between lanes 22-25 – there was some blockage at around aeration lane 21 for about a meter but majority of the lane was free flowing. Progress has been made with this channel. All the lanes in E Battery were distinct and dividing walls were visible. Not all the sprinkler systems were in operation.

### **New Inlet Works (West Side)**

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

### **Odour Control Unit (OCU) performance monitoring:** **04/01/2022**

Plant	Reading (ppm)	Action Level (ppm)	Compliance
Main pumping station inlet	Not provided	Unknown	Unknown
Main pumping station outlet	0.00ppm 0.00ppm 0.00ppm	0.2	Unknown
East OCU	0.07ppm 0.05ppm 0.04ppm	0.05	Yes
West inlet OCU	0.00ppm 0.00ppm	0.05	Yes

	0.00ppm			
Sludge reception inlet	Not provided	Unknown	Unknown	
Sludge reception outlet	Not provided	0.8	Unknown	
Thickening plant inlet	Not provided	Unknown	Unknown	
Thickening plant outlet	0.11ppm 0.09ppm 0.07ppm	0.6	Yes	
New West inlet (OCU 11)	0.00ppm 0.00ppm 0.00ppm	0.5	No	
Pasteurization (OCU 12)	0.17ppm 0.13ppm 0.10ppm	0.5	Yes	
Transfer PS inlet	87.66ppm 88.19ppm 81.07ppm	Unknown	Unknown	
Transfer PS outlet	0.00ppm 0.00ppm 0.00ppm	0.6	Yes	
GBT Plant OCU Outlet	0.00ppm 0.00ppm 0.00ppm	Unknown	Unknown	