



**Mogden Sewage Treatment Works**

**TW Site Inspection**

<b>Date of inspection:</b> Tuesday 15 <sup>th</sup> June 2021 (13:00pm)	
<b>Attendees:</b> Mr Zaheer Kadri (London Borough of Hounslow) and Mr Tom 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> - Tank was clean and empty – Hopper 1 was over 25% full however Hopper 2 and 3 had been drained down and were empty.</p> <p><b>Tank 1B</b> - Tank was clear of effluent however had a slight crusty surface toward the river end of the tank. All three hoppers were below 25% level but still needed further draining down.</p> <p><b>Tank 2A</b> - was clear and had a clean surface. Hoppers 1, 2 and 3 were empty.</p> <p><b>Tank 2B</b> – Tank was clean however had some dry gritty patches. Hoppers 1, 2 and 3 were over 25% effluent and needed draining down.</p> <p><b>Tank 3A</b> - The tank was clean and tidy. However hoppers 1, 2 and 3 needed draining down. All three hoppers were above 50% full of effluent.</p> <p><b>Tank 3B</b> - This tank was all clear of effluent however had a thick gritty patches to the left hand side of the tank. Hoppers 1, 2 and 3 were full to the top of effluent and needed draining down.</p>	

**Storm Feed Channel** - The level of effluent in the feed channels was less than 5% in depth along its entire length and even bottomed out in some places. The colour of effluent was murky and black in colour with some green deposits. There was some fatty deposits observed.

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

**Tank 6A** – Tank was clean and clear of effluent. However hoppers 1, 2 and 3 were over 50 % full of effluent - Hoppers needed draining down.

**Tank 6B** – Tank was clean and tidy free of grit. However hoppers 1, 2 and 3 were over 50 % full of effluent and needed draining down.

**Tank 7A** – Tank was clear however the hoppers were overflowing with black effluent, there was a slight green mossy surface.

**Tank 7B** – Tank had overflowing hoppers with a green mossy surface covering the black coloured effluent. The rest of the tank was clean and tidy and free of grit.

**Tank 8A** – Tank was clean and tidy. However all hoppers were full to the top of effluent and needed draining down.

**Tank 8B** – The tank was clean however all hoppers were full of effluent and needed draining down.

**Storm Feed Channel** - The level of effluent in the feed channels was approx. 10% in depth along its entire length and was a sludgy sandy colour – Some fatty deposits observed floating on surface.

There were no observation of malodour at this locality of the works.

### **Complaints**

The Council directly received **3** complaints by telephone in the preceding week.

On 8<sup>th</sup> June a telephone call was received from a resident of Weavers Close, Isleworth regarding odour from the works at 13:40pm. The call was taken by a member of the Councils call centre but was not forwarded to the duty day officer. This matter is still under investigation. This complaint was logged under ref: A16259.

Unfortunately the historic monitor trends were not functioning correctly at the time of the inspection and were not showing OM data for some of the previous week.

On the 8<sup>th</sup> June a further telephone call was received from the same resident of Weavers Close, Isleworth at approx. 22:43pm. The out of hours duty officer telephoned the complainant at approximately 23.07hrs in response to the complaint. Following the conversation the duty officer visited the area and undertook odour monitoring for Hydrogen Sulphide (H<sub>2</sub>S) and made a subjective assessment of the odour. The results of this were that the average level of H<sub>2</sub>S was 0.013ppb for the first ten readings and 0.008ppb for the second ten readings. The subjective assessment confirmed that the level of odour was not excessive, although was periodically noticeable on the breeze. The Officer made contact with TW operations staff and updated the Mogden information line. This complaint was logged under Ref: A16427.

Unfortunately the historic monitor trends were not functioning correctly at the time of the inspection and were not showing OM data for some of the previous week.

On 9<sup>th</sup> June a telephone call was received from a resident of Weavers Close, Isleworth regarding odour from the works at 13:56pm. The call was taken by a member of the Councils call centre but was not forwarded to the duty day officer. This matter is still under investigation and the complainant is due for a response. This complaint was logged under ref: A16324.

Unfortunately the historic monitor trends were not functioning correctly at the time of the inspection and were not showing OM data for some of the previous week.

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

The Council received no complaints by email from MRAG.

### **Odour Monitors**

The odour readouts (H<sub>2</sub>S) for all monitors that were providing data on 15/06/2021 at the time of the inspection are below.

Monitor 1	0.006	ppm	13:31pm
Monitor 2	0.000	ppm	13:31pm
Monitor 3	0.000	ppm	13:31pm
Monitor 4	0.004	ppm	13:31pm
Monitor 5	0.000	ppm	13:31pm
Monitor 6	0.000	ppm	13:31pm
Monitor 7	0.000	ppm	13:31pm
Monitor 8	0.003	ppm	13:31pm
Monitor 9	0.000	ppm	13:31pm
Monitor 10	0.000	ppm	13:31pm
Monitor 11	0.000	ppm	13:31pm
Monitor 12	0.000	ppm	13:31pm
Monitor 13	0.000	ppm	13:31pm
Wind Speed	2.035	mph	13:31pm
Wind Direction	233.900		13:31pm

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

**Wednesday 9<sup>th</sup> June 2021**

**DAY SHIFT**

**Temp.** Hot.

**Weather.** Sunny.

**Odour Readings** All Odour monitors are in operation / No Faults.

**Time:** 17:30.

**Observations / Customer Complaint.**

No odour issues.

**Operational issues / causes observed.**

Blank.

**NIGHT SHIFT**

**Temp.** Warm.  
**Weather.** Clear night.  
**Odour Readings.** All Odour monitors are in operation.  
**Time:** 05:30.  
**Observations / Customer Complaint.**  
No odour issues found or reported.  
**Operational issues / causes observed.**  
Blank.

**Thursday 10<sup>th</sup> June 2021**

**DAY SHIFT**

**Temp.** Very Hot.  
**Weather.** Sunny.  
**Odour Readings.** All Odour monitors are in operation.  
**Time:** 17:30.  
**Observations / Customer Complaint.**  
OM5 0.020ppm 15:32-15:34.  
**Operational issues / causes observed.**  
15:55 complaint from north of site – East skip area checked and hosed down.

**NIGHT SHIFT**

**Temp.** Warm.  
**Weather.** Clear night.  
**Odour Readings.** All Odour monitors are in operation.  
**Time:** 05:30.  
**Observations / Customer Complaint.**  
No odour issues reported.  
**Operational issues / causes observed.** Blank.

**Friday 11<sup>th</sup> June 2021**

**DAY SHIFT**

**Temp.** Hot.  
**Weather.** Sunny with patchy clouds.  
**Odour Readings.** All Odour monitors are in operation.  
**Time:** 17:30.  
**Observations / Customer Complaint.**  
No odour issues found or reported.  
**Operational issues / causes observed.** Blank.

**NIGHT SHIFT**

**Temp.** Warm.

**Weather.** Clear night.

**Odour Readings.** All Odour monitors are in operation.

**Time:** 05:30.

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

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

**Saturday 12<sup>th</sup> June 2021****DAY SHIFT**

**Temp.** Hot.

**Weather.** Sunny with Patchy clouds.

**Odour Readings.** All Odour monitors are in operation.

**Time:** 17:30.

**Observations / Customer Complaint.**

No odour issues found or reported.

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

**NIGHT SHIFT**

**Temp.** Cool.

**Weather.** Clear night.

**Odour Readings.** All Odour monitors are in operation except.

**Time:** 05:30.

**Observations / Customer Complaint.**

OM2 spiked to 0.029ppm at 00:18-00:33 – No odour issues found.

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

**Sunday 13<sup>th</sup> June 2021****DAY SHIFT**

**Temp.** Very Hot.

**Weather.** Sunny.

**Odour Readings.** All Odour monitors are in operation.

**Time:** 17:30.

**Observations / Customer Complaint.**

No odour issues found or reported.

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

**NIGHT SHIFT**

**Temp.** Warm.

**Weather.** Clear night.

**Odour Readings.** All Odour monitors are in operation.

**Time:** 05:30.

**Observations / Customer Complaint.**

OM2-0.021ppm – 20:48-21:04, 0.035ppm – 23:47-00:47, 0.021ppm – 01:00-01:48.

**Operational issues / causes observed.**

Nothing out of the ordinary to report- around East inlet- Skips area was hosed down.

**Monday 14<sup>th</sup> June 2021**

**DAY SHIFT**

**Temp.** Hot.

**Weather.** Sunny.

**Odour Readings.** All Odour monitors are in operation / No Faults.

**Time:** 17:30.

**Observations / Customer Complaint.**

OM2 spiked at 08:03-08:17 max 0.016ppm.

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

East inlet hosed down.

**NIGHT SHIFT**

**Temp.** Cool.

**Weather.** Clear nights.

**Odour Readings.** All Odour monitors are in operation.

**Time:** 05:30.

**Observations / Customer Complaint.**

No odour issues.

**Operational issues / causes observed.**

Blank.

**Tuesday 15<sup>th</sup> June 2021**

**DAY SHIFT**

**Temp.** Hot.

**Weather.** Sunny.

**Odour Readings.** All Odour monitors are in operation / No Faults.

**Time:** 17:30.

**Observations / Customer Complaint.**

Customer complaint received North end of the site - asked to check OM2 which was reading 0.00ppm = No issues found.

**Operational issues / causes observed.**

Blank.

**NIGHT SHIFT**

**Temp.** Warm.

**Weather.** Clear Night.

**Odour Readings.** All Odour monitors are in operation.

**Time:** 05:30.

**Observations / Customer Complaint.**

OM2-0.016ppm – 21:18 = 21:32, 0.021ppm – 23:17-23:33, 0.019ppm – 00:02- 00:17.

**Operational issues / causes observed.**

East inlet area hosed down.



### **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					
09/06/2021	0	1297	1073	2370	1392	3762
11/06/2021	0	1236	1030	2266	1392	3658
14/06/2021	0	1297	1030	2327	1392	3719

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 0 import of sludge per day.

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

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

### **Sludge Import Area**

The sludge import area was clean & tidy. No odours detected at time of inspection. TW 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 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 thick seal approx. More than 1ft below coping stones. Good thick seal all around. The walkway around the digesters were clean and there were signs of previous spillage.

**Digester 7** was in service and had a low thick seal approx. 1ft below coping stones. Part of the digester was erupting – slight deposits on coping stone

**Digester 8** was in service and had a low thick sludgy seal approx. 1ft plus below the coping stones. Good thick seal all around which was bubbling in places.

**Digester 9** was in service and had a low sludgy seal. Gassing in places but no sign of previous spillage – coping stones were clean and tidy.

**Digester 10** had a low sludgy seal all round. No signs of previous spillage. The depth was over 1ft below the coping stone.

**Digester 11** had a low wet runny seal which was approx. 2ft below the coping stones. There was no evidence of a previous spillage.

**Digester 12** was in service and had a wet seal. The level of the seal was approx. 2ft below the coping stone.

**Digester 13** was in service and had a very thick sludgy seal that was approx. 2ft below the coping stone. There were no signs of previous spillages.

**Digester 14** was in service and had a thin wet seal approx. 2ft below coping stones. There were signs of previous spillages.

**Digester 15 was out of service.**

**Digester 16** was in service and had a good thick seal. There were signs of previous spillage. Level of sludge was high approx. 1ft below coping stone in some places higher.

**Digester 17** was in service and had a dry thick seal – The digester had been pelleted.

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

**Digester 20** was in service and had a low wet seal approx. 2ft below coping stones.

The walkways around the digesters were clean and tidy. There were no signs of previous spillages or crusty remains of historic spillages.

There was evidence of anti-foaming agent in use and TW advised that this is applied daily to all of the digesters that are operational.

## **GENERAL**

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

The 8 circular tanks previously used as PSTs are now being used as final tanks (71-78). All tanks/sprinklers were in operation at the time of the inspection. Surfaces were mostly clear and free of any build-up of fatty/mossy deposits. The water hoses/sprinklers were breaking up any remainder residue across the surface.

### **Skips**

1x large open bulk carrier (half full) with general waste – uncovered

1x 8 yard grit/rag skip (full) - covered with blue tarpaulin

1x 8 yard general waste in Service yard grit house – uncovered (full).

No other skips observed on site.

### **East Side Screen House**

The middle set of blue screen house doors were open at the time of the inspection no contractors working at site at time of inspection. Advised TW these doors must remain 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 nearest the road was clogged along approx. 80% of its length, there were visibly crusty areas and a number of weeds were growing out of it (No change from previous visit on 18<sup>th</sup> May 2021)

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

Rectangular PSTs are now covered and odour controlled. TW advised no concerns or issues. No noticeable odours at time of inspection.

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

Circular PST 12 has been drained down and is currently out of service.

### **Pasteurisation Plant**

The pasteurisation plant is in service. TW advised 6 streams are currently operational.

**Section 106 agreement**

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

**West Side Aeration Lanes**

All lanes appeared to be free flowing with the internal dividing walls being visible again in some areas. However it was noted that a thick fluffy foam is again starting to build up across the entire tanks surface area.

Most of the sprinklers were back in operation and a lot of floating of debris was noticeable (rag and a number of floating discarded face masks).

The mixed liquor feed channel serving the aeration lanes of E-Battery was free flowing along its entire length, although thick foam appeared to be starting to build up again by lane 22.

**New Inlet Works (West Side)**

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

**Odour Control Unit (OCU) performance monitoring: 15<sup>th</sup> June 2021**

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.00 0.00 0.00 Ave:0.00	Unknown	Unknown
East OCU	0.07 0.05 0.03 Ave:0.05	0.05	YES
West inlet OCU	0.00	0.05	Yes

	0.00 0.00 Ave:0.00		
Thickening plant outlet	0.019 0.015 0.011 Ave:0.015	0.6	Yes
New West inlet (OCU 11)	0.00 0.00 0.00 Ave:0.00	0.5	Yes
Pasteurisation (OCU 12)	0.02 0.01 0.04 Ave: 0.02	0.5	Yes
Transfer PS inlet	0.191 0.095 0.068 Ave:0.118	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00 Ave:0.00	0.6	Yes
GBT Plant OCU outlet	0.00 0.00 0.00 Ave:0.00	Unknown	Unknown