

## Mogden Sewage Treatment Works

### TW Site Inspection

**Date of inspection:** Tuesday 1<sup>st</sup> August 2023 (13:00pm)

**Attendees:** Mr Z Kadri (LB Hounslow) and Ms Emma McDonald (Thames Water)

#### LB Hounslow Observation

#### Thames Water Action / Response

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

**Tank 1A** was clean across the entire surface however Hoppers 1, 2 & 3 needed draining down. All Hoppers were over 70% full of effluent.

**Tank 1B** was clean across the surface of the tank however Hoppers 1, 2 & 3 contained minimal effluent and needed draining down.

**Tank 2A** was clean across the surface of the tank and hoppers 1,2 and 3 had been drained down.

**Tank 2B** was clean across the surface however Hoppers 1, 2 and 3 contained minimal amount of effluent.

**Tank 3A** had a thick layer of wet sludgy effluent at the hopper end and all hoppers needed draining down.

**Tank 3B** had patches of thick sludge across the surface of the tank and all hoppers needed to be drained down.

**Storm Feed Channel** - The level of effluent in this feed channels were approx. 5% throughout the channels. The effluent looked brown and murky and bottomed out in places.

**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 and in use.

**Tank 6A** was clean across the entire surface of the tank and hoppers 1,2 and 3 contained minimal effluent.

**Tank 6B** was clean across the entire surface however hoppers 1,2 and 3 contained minimal effluent.

**Tank 7A** was 30% full of effluent and returning at time of inspection – All amajets were in operation.

**Tank 7B** had a thick layer of wet sludgy effluent at the hopper end of the tank and all hoppers needed draining down.

**Tank 8A** had muddy patches and Hoppers 1,2 & 3 needed draining down.

**Tank 8B** had muddy patches in several areas and Hoppers 1,2 & 3 needed draining down.

**Storm Feed Channel** - The level of effluent in this feed channels were approx. 5% throughout the channels. The effluent looked brown and murky and bottomed out in places.

### **Complaints**

A45077 - 27/ 6/2023 16.07 Talbot Road, Isleworth (Online)

A45103 - 28/ 6/2023 10.54 Hillary Drive, Isleworth(Online)

A45188 - 29/ 6/2023 23:42 Twickenham Road (Online)

A45205 - 30/ 6/2023 11.51 Sussex Avenue, Isleworth(Online)

On the day of inspection the SKADA system did not demonstrate any spikes or unusual increases in odour at any of the above times complaints were received.

**Odour Monitors**

The odour readouts (H<sub>2</sub>S) at 14:55 on the 1<sup>st</sup> August 2023.

Monitor 1	0.000	ppm
Monitor 2	0.001	ppm
Monitor 3	0.005	ppm
Monitor 4	0.005	ppm
Monitor 5	0.000	ppm
Monitor 6	0.000	ppm
Monitor 7	0.000	ppm
Monitor 8	0.006	ppm
Monitor 9	0.000	ppm
Monitor 10	0.004	ppm
Monitor 11	0.000	ppm
Monitor 12	0.005	ppm
Monitor 13	0.000	ppm
Wind Speed	9.921	mph
Wind Direction	284.895	Deg

**Odour logs**

**Wednesday 26<sup>th</sup> July 2023**

**DAY SHIFT**

**Temp.** Warm

**Weather.** Sunny with 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.** 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 27<sup>th</sup> July 2023**

**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.** Warm

**Weather.** Clear night

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

**Time:** 05:30

**Observations / Customer Complaint.**

No odour issues found or reported

**Operational issues / causes observed.** Blank

**Actions taken.** Blank

**Friday 28<sup>th</sup> July 2023**

**DAY SHIFT**

**Temp.** Warm

**Weather.** Cloudy with sunny spells

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

**Time:** 17:30.

**Observations / Customer Complaint.**

OM8 spiked at 07:45-07:57 less than 15 minute duration 0.020ppm

**Operational issues / causes observed.** Blank

**Actions taken.** Blank

**NIGHT SHIFT**

**Temp.** Warm

**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 29<sup>th</sup> July 2023**

**DAY SHIFT**

**Temp.** Warm

**Weather.** Sunny with patchy clouds

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

**Time:** 17:30.

**Observations / Customer Complaint.**

OM3 spiked to 0.023ppm ay 15:50-16:05

**Operational issues / causes observed.**

OCU11 not performing

**Actions taken.** Blank

**NIGHT SHIFT**

**Temp.** Cool

**Weather.** Clear night

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

**Time:** 05:30.

**Observations / Customer Complaint.**

No odours found or reported

**Operational issues / causes observed.** Blank

**Actions taken.** Blank

**Sunday 30<sup>th</sup> July 2023**

**DAY SHIFT**

**Temp.** Warm

**Weather.** Rain

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

**Time:** 17:30.

**Observations / Customer Complaint.**

OM3 spike to 0.022ppm at 17:36-17:49

**Operational issues / causes observed.**

Smell from PAS area

**Actions taken.** Blank

**NIGHT SHIFT**

**Temp.** Cool

**Weather.** Rain

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

**Time:** 05:30.

**Observations / Customer Complaint.**

No odours found or reported

**Operational issues / causes observed.** Blank

**Actions taken.** Blank

**Monday 3<sup>1st</sup> July 2023**

**DAY SHIFT**

**Temp.** Warm

**Weather.** Rain with sunny spells

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

**Time:** 17:30.

**Observations / Customer Complaint.**

No odours found or reported

**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 odours found or reported

**Operational issues / causes observed.** Blank

**Actions taken.** Blank

**Tuesday 1<sup>st</sup> August 2023**

**DAY SHIFT**

**Temp.** Cool

**Weather.** Patchy rain

**Odour Readings.** All OMU'S operation

**Time:** 17:30.

**Observations / Customer Complaint.**

No odours found or reported

**Operational issues / causes observed.** Blank

**Actions taken.** Blank

**NIGHT SHIFT**

**Temp.** Warm

**Weather.** Patchy rain

**Odour Readings.** All OMU'S operation

**Time:** 17:30.

**Observations / Customer Complaint.**

No odours 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					
31/07/2023	0	928	510	1438	2048	3486
02/08/2023	20	989	662	1671	2048	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**

No indication of Imported sludge this week.

**No.5 Pumping Station (West Side)**

The doors and windows of No.5 pumping station were open at the time of 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 Building (West Side)**

The large roller shutter doors of the Raw Sludge Screening building were open at the time of the inspection however its operation was out of service.

### **Digesters on the 1<sup>st</sup> of August 2023**

**Digesters 1-4** Out of use (permanent).

Thames advised of a long term project currently initiated to bring these units back into service that will require significant investment.

**Digester 5** was in service and had a high (approx. 1ft below coping stone) sludgy/hard layer – No evidence of recent/previous sludge spillages- the coping stones were clean tidy.

**Digester 6** was in service and had a high (approx. 2ft below coping stone) sludgy layer – No evidence of recent/previous sludge spillages- the coping stones were clean tidy.

**Digester 7** was in service and had a low (approx. 4ft below coping stone) hardened surface layer – There was no evidence of spillage

**Digester 8** was in service and had a low (approx. 3ft below coping stone) hard layer – No evidence of recent/previous sludge spillages- the coping stones were clean & tidy.

**Digester 9** was in service and had a high (approx. 1ft below coping stone) sludgy layer – No evidence of recent/previous sludge spillages- the coping stones were clean & tidy.

**Digester 10** was in service and had a low (approx. 3ft below coping stone) watery layer – No evidence of recent/previous sludge spillages- the coping stones were clean & tidy.

**Digester 11** was in service and had a high (approx. 2ft below coping stone) thick sludgy layer – No evidence of recent/previous sludge spillages- the coping stones were clean & tidy.

**Digester 12** was in service and had a high (approx. 1ft below coping stone) sludgy layer – No evidence of recent/previous sludge spillages- the coping stones were clean & tidy.

**Digester 13 Out of service.**

**Digester 14 Out of service.**

**Digester 15 Out of service.**

**Digester 16 Out of service.**

**Digester 17** was in service and had a high (approx. 2ft below coping stone) thick sludgy seal– No evidence of recent/previous sludge spillages.

**Digester 18** was in service and had a high (approx. 1ft below coping stones) solid hardened seal – No evidence of recent/previous sludge spillages.

**Digester 19.** was in service and had a low (approx. 3ft below coping stone) sludgy seal – No evidence of recent/previous sludge spillages.

**Digester 20** was in service and had a high (approx. 2ft below coping stone) crusty seal – No evidence of recent/previous sludge spillages.

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

**GENERAL**

**Final Settlement Tanks (East Side)**

The 8 circular tanks 71, 72, 73, 74, 75, 76, 77 and 78 were all in operation at time of the inspection and had good clear surfaces. The hoses on the arms were all rotating and clearing off any remaining deposits. No odours or offensive odours witnessed.

**Skips**

**Skips on the East side:**

There was 1x 20yds open bulk carrier (uncovered) that was designated for grit – The carrier was empty. There was a sign stating the skip was designated for “Grit Only”.

There was 1x 14yds skip designated for rag only. The skip had a sign reading “Rag Only” and contained minimal amount of rag at time of inspection. There was a cover (lid) which was covering the skip.

No other skips were present on the East side.

**Skips on the West Side:**

There was 1x 14yds skip adjacent to the raw sludge screening building (West of the works) that was designated for general waste only- At time of inspection the skip was full and covered.

There was 2x 20yds open bulk carrier (uncovered) that was full of bulky inert material – There was large items around the skip that were due to be collected later in the day

There were no other skips observed in the West Side of the works.

**East Side Screen House**

The blue doors closest to the main service road and the roller metal shutters 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 nearest the service road was clogged along 80% of its length.

**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.

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 8/12 streams were in operation. Stream 2,7,8 & 10 were out of service. This was reported on the 1<sup>st</sup> of August 2023.

### **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 were all free-flowing between lanes 22-25 – At the time of inspection.

All the lanes in E Battery were distinct and dividing walls were all visible. All sprinklers were in operation at time of inspection.

### **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: 1<sup>st</sup> August 2023**

<b>Plant</b>	<b>Reading (ppm)</b>	<b>Action Level (ppm)</b>	<b>Compliant</b>
Main pumping station inlet	Not provided	Unknown	Unknown
Main pumping station outlet	00.036ppm 00.036ppm 00.036ppm <b>Ave: 0.036ppm</b>	0.2	Yes
East OCU	0.00ppm 0.00ppm 0.00ppm <b>Ave: 0.00ppm</b>	0.05	No
West inlet OCU	0.0049ppm 0.0049ppm 0.0049ppm <b>Ave: 0.049ppm</b>	0.05	Yes
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	0.0020ppm 0.0020ppm 0.0024ppm <b>Ave: 0.0021ppm</b>	0.6	Yes
New West inlet (OCU 11)	0.00ppm 0.00ppm 0.00ppm <b>Ave: 0.00ppm</b>	0.5	YES
Pasteurization (OCU 12)	0.0018ppm 0.0018ppm 0.0018ppm <b>Ave: 0.0018ppm</b>	0.5	No
Transfer PS inlet	0.0029ppm 0.0029ppm 0.0029ppm <b>Ave:0.0029ppm</b>	Unknown	Unknown
Transfer PS outlet	0.0033ppm 0.0033ppm	0.6	Yes

	0.0031ppm <b>Ave: 0.0032ppm</b>			
GBT Plant OCU Outlet	0.0041ppm 0.0041ppm 0.0041ppm <b>Ave: 0.0041ppm</b>	Unknown	Unknown	