

## Mogden Sewage Treatment Works

### TW Site Inspection

**Date of inspection:** Tuesday 9<sup>th</sup> May 2023 (10:00am)

**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 90% full of effluent.

**Tank 1B** was clean across the surface however Hoppers 1, 2 & 3 were all mostly clear of effluent.

**Tank 2A** was full of effluent (over 50%) and returning at the time of inspection. Amajets were in operation.

**Tank 2B** was full of effluent (over 50%) and returning at the time of inspection. Amajets were in operation.

**Tank 3A** had a sludgy surface across half the tank (hopper end) - Hoppers 1,2 & 3 had been drained down.

**Tank 3B** had sludgy patches across the tank and Hoppers 1,2 & 3 needed draining down.

**Storm Feed Channel** - The level of effluent in this feed channels were approx. 30% throughout the channels. The effluent looked grey and murky.

**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 full of effluent (over 50%) and returning at the time of inspection. Amajets were in operation.

**Tank 6B** was full of effluent (over 50%) and returning at the time of inspection. Amajets were in operation.

**Tank 7A** was full of effluent (over 50%) and returning at the time of inspection. Amajets were in operation.

**Tank 7B** was full of effluent (over 50%) and returning at the time of inspection. Amajets were in operation.

**Tank 8A** All hoppers were overflowing and covering the surface of the tank up until the mid-point mark.

**Tank 8B** All hoppers were overflowing and covering the surface of the tank up until the mid-point mark.

**Storm Feed Channel** - The level of effluent in this feed channels were approx. 30% throughout the channels. The effluent looked grey and murky.

### **Complaints**

4/5/23 @08:27 Sussex Avenue, Isleworth- ONLINE

4/5/23 @19:08 Sussex Avenue, Isleworth ONLINE

6/5/23 @04:02 Sussex Avenue, Isleworth ONLINE

8/5/23 @18:30 Sussex Avenue, Isleworth TELEPHONE. A visit was made by the oncall duty officer, measurements were carried out however no odour nuisance or offensive smells witnessed. The trends on the system for the day did not demonstrate any unusual spikes.

**Odour Monitors**

The odour readouts (H<sub>2</sub>S) at 13:10 on the 9<sup>th</sup> May 2023.

Monitor 1	0.000	ppm
Monitor 2	0.001	ppm
Monitor 3	0.000	ppm
Monitor 4	0.000	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	0.000	ppm
Monitor 11	0.004	ppm
Monitor 12	0.004	ppm
Monitor 13	0.000	ppm
Wind Speed	9.867	mph
Wind Direction	275.295	Deg

**Odour logs**

**Wednesday 3<sup>rd</sup> May 2023**

**DAY SHIFT**

**Temp.** Warm

**Weather.** Sunny

**Odour Readings.** All OMU's in operation apart from OM4

**Time:** 17:30.

**Observations / Customer Complaint.**

no odour issues found

**Operational issues / causes observed.**

Area checked no odour issues found

**Actions taken.** Blank

**NIGHT SHIFT**

**Temp.** Cool

**Weather.** Clear Night

**Odour Readings.** All OMU's in operation apart from OM4

**Time:** 05:30.

**Observations / Customer Complaint.**

No odour issues found or reported

**Operational issues / causes observed.** Blank

**Actions taken.** Blank.

**Thursday 4<sup>th</sup> May 2023**

**DAY SHIFT**

**Temp.** Warm

**Weather.** Cloudy with Sunny spells

**Odour Readings.** All OMU's in operation apart from OM4

**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. Clear Night

**Odour Readings.** All OMU's in operation apart from OM4

Time: 05:30.

**Observations / Customer Complaint.**

No odour issues found or reported

**Operational issues / causes observed.** Blank

**Actions taken.** Blank

**Friday 5<sup>th</sup> May 2023**

**DAY SHIFT**

Temp. Warm

Weather. Sunny with Patchy clouds

**Odour Readings.** All OMU's in operation apart from OM4

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. Clear night

**Odour Readings.** All OMU's in operation apart from OM4

Time: 05:30.

**Observations / Customer Complaint.**

No odour issues found or reported

**Operational issues / causes observed.**

Area checked no odours detected

**Actions taken.** Blank

**Saturday 6<sup>th</sup> May 2023**

**DAY SHIFT**

**Temp.** Warm

**Weather.** Rain

**Odour Readings.** All OMU's in operation apart from OM4

**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.** Rain

**Odour Readings.** All OMU's in operation apart from OM4

**Time:** 05:30.

**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					
03/05/2023	0	1861	2034	3895	1744	5639
05/05/2023	0	2255	2034	4289	1568	5857
08/05/2023	196	1860	1284	3340	3050	6390

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 120m<sup>3</sup> imports of sludge per delivery in the preceding week. This was reported on the 9<sup>th</sup> May 2023

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

The doors and windows of No.5 pumping station were closed 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. Skips were being changed.

### **Digesters on the 9<sup>th</sup> May 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 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. 3ft below coping stone) wet surface layer – There was evidence of spillage to one side of the digester- there was gas being released which was causing eruption/spillage.

**Digester 8** 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 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 high (approx. 2ft below coping stone) sludgy 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) 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. 1ft 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) sludgy seal – No evidence of recent/previous sludge spillages.

**Digester 19.** was in service and had a high (approx. 2ft 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) sludgy 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 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. All 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 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 7,8,10 & 12 were out of service.

**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. Most sprinklers 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: 9<sup>th</sup> May 2023**

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	Not provided	Unknown	Unknown
Main pumping station outlet	0.033ppm 0.037ppm 0.035ppm <b>Ave: 0.035ppm</b>	0.2	Yes
East OCU	0.079ppm 0.081ppm 0.086ppm <b>Ave: 0.082ppm</b>	0.05	No
West inlet OCU	0.00ppm 0.00ppm 0.00ppm	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	0.080ppm 0.073ppm 0.071ppm <b>Ave: 0.074ppm</b>	0.6	Yes
New West inlet (OCU 11)	0.00ppm 0.00ppm 0.00ppm	0.5	YES
Pasteurization (OCU 12)	1.827ppm 1.902ppm 1.875ppm <b>Ave: 1.868ppm</b>	0.5	No
Transfer PS inlet	0.341ppm 0.339ppm 0.363ppm <b>Ave:0.347ppm</b>	Unknown	Unknown
Transfer PS outlet	0.012ppm 0.006ppm	0.6	Yes

	0.005ppm <b>Ave: 0.007ppm</b>			
GBT Plant OCU Outlet	0.003ppm 0.004ppm 0.003ppm <b>Ave: 0.003ppm</b>	Unknown	Unknown	