



## Mogden Sewage Treatment Works

### TW Site Inspection

**Date of inspection:** Wednesday 2<sup>nd</sup> September 2020 (12:00am)

**Attendees:** Mr Z. Kadri (London Borough of Hounslow) and Mr Tom Costin (Thames Water)

#### LB Hounslow Observation

#### Thames Water Action / Response

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

**Tank 1A** was empty and clean. Hoppers 1 and 2 were empty however Hopper 3 was full and required draining down.

**Tank 1B** was empty and clean. Hoppers 1, 2 and 3 were all drained down in the morning and clear.

**Tank 2A** was empty and clean. Hoppers 1, 2 and 3 were all drained down in the morning and clear.

**Tank 2B** was empty and clean however sludgy grit observed at the River end of the tank. Hoppers 1, 2 and 3 were all full and required draining down.

**Tank 3A** was empty and clean however slight grit across the surface at hopper end. Hoppers 1, 2 and 3 were all clear of effluent.

**Tank 3B** was empty and clean however slight sludgy grit at Hopper end. Hoppers 1, 2 and 3 were all full and required 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** was empty and clean. Hoppers 1, 2 and 3 were all 20 % full of effluent.

**Tank 6B** was empty and clean- There was work taking place on the Amajets by contractors. Hoppers 1 and 2 were empty however Hopper 3 required draining down.

**Tank 7A** surface had a substantial amount of sludgy grit across the surface near the Hopper end. TW advised that the Tank would be cleaned. Hoppers 1, 2 and 3 were all full and required draining down. (shallow hoppers).

**Tank 7B** was empty and clean however slight grit across the surface at hopper end. Hoppers 1, 2 and 3 were all full and required draining down. (shallow hoppers).

**Tank 8A** was empty and clean. Hoppers 1, 2 and 3 were all full but at the time of inspection they were being pumped out manually.

**Tank 8B** was empty and clean. Hoppers 1, 2 and 3 were all full and next in line to be over pumped after Tank 8A completed.

**Feed Channel** - The level of effluent in both feed channels was low and bottomed out in some places. The effluent was murky along its entire length. Some deposits of fat across the surface. No odours witnessed.

### **Complaints**

The Council received NO complaints by telephone / Email in the preceding week.

### **Odour Monitors**

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

|                |         |     |         |
|----------------|---------|-----|---------|
| Monitor 1      | 0.004   | ppm | 12.11pm |
| Monitor 2      | 0.000   | ppm | 12.11pm |
| Monitor 3      | 0.000   | ppm | 12.11pm |
| Monitor 4      | 0.004   | ppm | 12.11pm |
| Monitor 5      | 0.004   | ppm | 12.11pm |
| Monitor 6      | 0.008   | ppm | 12.11pm |
| Monitor 7      | 0.005   | ppm | 12.11pm |
| Monitor 8      | 0.004   | ppm | 12.11pm |
| Monitor 9      | 0.007   | ppm | 12.11pm |
| Monitor 10     | 0.007   | ppm | 12.11pm |
| Monitor 11     | 0.003   | ppm | 12.11pm |
| Monitor 12     | 0.005   | ppm | 12.11pm |
| Monitor 13     | 0.004   | ppm | 12.11pm |
| Wind Speed     | 253.509 | mph | 12.11pm |
| Wind Direction | 8.721   |     | 12.11pm |

**Odour Log (Thames)**

**Thursday 27<sup>th</sup> August 2020**

**DAY SHIFT**

**Temp.** Cool.

**Weather.** Rain with sunny spells.

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

**Time:** 17:30.

**Observations / Customer Complaint.** OM2 spiked at 15:24-15:54 maximum 0.038ppm.

**Operational issues / causes observed.** Area checked no source of odour detected.

**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.

**Friday 28<sup>th</sup> August 2020**

**DAY SHIFT**

**Temp.** Cool .

**Weather.** Rain 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.** Rain.

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

**Time:** 05:30.

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

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

**Actions Taken.** Blank.

**Saturday 29<sup>th</sup> August 2020**

**DAY SHIFT**

**Temp.** Cool.

**Weather.** Rain 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.**

OM1 spiked at 20:30-20:48 maximum 0.028ppm.

**Operational issues / causes observed.** Storm Tanks retuning.

**Actions taken.** Blank.

**Sunday 30<sup>th</sup> August 2020**

**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.** 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 31<sup>st</sup> August 2020**

**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.** Clear night.

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

**Time:** 05:30.

**Observations / Customer Complaint.** OM2 spiked at 00:10-00:24 to 0.029ppm Max <15 minute duration.

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

**Actions Taken.** Blank.

**Tuesday 1<sup>st</sup> September 2020**

**DAY SHIFT**

**Temp.** Warm.

**Weather.** Sunny w/patchy.

**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.**

OM2 spiked at 22:38- 22:54 max 0.039ppm.

OM2 spiked at 00:39- 00:54 max 0.02ppm.

**Operational issues / causes observed.** Area dried and cleaned No odours detected.

**Actions Taken.** Blank.

**Wednesday 2<sup>nd</sup> September 2020**

**DAY SHIFT**

**Temp.** Warm.

**Weather.** Cloudy with sunny spells.

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

**Time:** 17:30.

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

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

**Action Taken.** Blank.

**NIGHT SHIFT**

**Temp.** Warm.

**Weather.** Overcast Night.

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

**Time:** 05:30.

**Observations / Customer Complaint.** OM9 spiked at 23:28-00:38 max 0.019ppm.

**Operational issues / causes observed.** None.

**Actions Taken.** Blank.

**Sludge Dip Records**

| Date       | West PSTs | West PSTs | West PSTs | West Total                  | East PSTs | Grand Total |
|------------|-----------|-----------|-----------|-----------------------------|-----------|-------------|
|            | 1         | 2         | 3         | All units in m <sup>3</sup> |           |             |
| OMP limit  | 500       |           |           |                             |           |             |
| 28/08/2020 | 0         | 244       | 450       | 694                         | 1609      | 2303        |
| 02/09/2020 | 205       | 679       | 244       | 1128                        | 2598      | 3726        |

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 12 imports of sludge daily (2 per week) over 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.



## **Digesters**

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

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

**Digester 5** was in service and had a wet sludgy seal. Surface was bubbling in places. No evidence of previous sludge spillage – clean coping stones. Overall good low seal.

**Digester 6** was in service and had a wet sludgy seal. Surface was bubbling in places. No evidence of previous sludge spillage – clean coping stones. Overall good low seal.

**Digester 7** is currently out of service.

**Digester 8** was in service and had a low wet seal. No evidence of previous sludge spillage – clean coping stones. Overall good seal.

**Digester 9** was in service and had a good wet seal . There was evidence of previous spillage and TW reminded to sweep up the crust around part of Digester.

**Digesters 10, 11, 12 and 13** were all in service and had low wet seals. No sign of sludge spillage. Good low seal.

**Digester 14** was in service and had a low wet seal. No evidence of previous sludge spillage – clean coping stones. Overall good seal.

**Digester 15** is currently out of service.

**Digester 16** was in service and had a wet seal. No sign of sludge spillage. Good low seal. There was sign of previous spillage on the coping stones all dried up that needed sweeping.

**Digester 17** was in service and had a wet sloppy seal. No evidence of previous sludge spillage – clean coping stones. Overall good low seal.

**Digester 18** was out of service.

**Digester 19** was out of service.

**Digester 20** was in service and had a wet sloppy seal. No sign of sludge spillage. Good low seal.

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

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

## **GENERAL**

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

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

The weirs were being cleaned manually by TW staff. All tanks were operational at the time of the inspection. Algae growth on top of the surfaces of all the Tanks. Sprinklers were in operation.

### **Skips**

There were NO skips at the Screening House.  
There were NO skips at the East Side Grit House.  
There were NO skips at the West Side Grit House.

### **East Side Screen House**

The doors at one end of the screen house building was open due to one of the screens being pumped/cleaned out - Contractors were on site.

### **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 partly clogged throughout much of its length, the surface was visibly crusty in areas and had weeds growing out of it.

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

Rectangular PSTs are now covered and odour controlled.  
TW advised no issues.

Circular PST's 9, 10 and 12 were all in service except PST 11 this was out of service. All PST's had relatively fat free surfaces however some algae growth across the surface. No odours detected.

### **Pasteurisation Plant**

The pasteurisation plant is in service. TW advised 9 streams out of twelve are currently operational.

### **Section 106 agreement**

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

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

All lanes are now much improved and appeared to be free flowing, with the internal dividing walls being visible again.

The sprinkler systems were in operation and floating debris had been removed.

The mixed liquor feed channel serving aeration lanes 22 to 25 of E-Battery was partially clogged with thick dark sludge. TW will be unclogging this channel.

**New Inlet Works (West Side)**

No issues appeared evident at the new inlet works.

**Odour Control Unit (OCU) performance monitoring: 03/09/2020**

| Plant                       | Reading (ppm)                               | Action Level (ppm) | Compliant |
|-----------------------------|---|--------------------|-----------|
| Main pumping station inlet  | Blank                                       | Unknown            | Unknown   |
| Main pumping station outlet | Blank                                       | 0.2                | Unknown   |
| East OCU                    | 0.00<br>0.00<br>0.00                        | 0.05               | Yes       |
| West inlet OCU              | 0.00<br>0.00<br>0.00                        | 0.05               | Yes       |
| Sludge reception inlet      | Blank                                       | Unknown            | Unknown   |
| Sludge reception outlet     | Blank                                       | 0.8                | Unknown   |
| Thickening plant inlet      | Blank                                       | Unknown            | Unknown   |
| Thickening plant outlet     | 0.00<br>0.00<br>0.00                        | 0.6                | Yes       |
| New West inlet (OCU 11)     | 0.00<br>0.00<br>0.00                        | 0.5                | No        |
| Pasteurisation (OCU 12)     | 0.00<br>0.00<br>0.00                        | 0.5                | Yes       |
| Transfer PS inlet           | 1.837<br>1.429<br>1.240<br><b>Ave: 3.67</b> | Unknown            | Unknown   |
| Transfer PS outlet          | 0.00  | 0.6                | Yes       |

|  |      |  |  |  |
|--|------|--|--|--|
|  | 0.00 |  |  |  |
|  | 0.00 |  |  |  |