



**Mogden Sewage Treatment Works**

**TW Site Inspection**

**Date of inspection:** 10<sup>th</sup> January 2019

**Attendees:** Mr Andrew Devine (London Borough of Hounslow) and Mr Waleed Janjua (Thames Water)

**LB Hounslow Observation**

**Thames Water Action / Response**

**Storm Water Storage Tanks (SWST)**

**Tank 1A & 1B** were both empty and clean however spots of grit visible at Hopper end. Hoppers 1, 2 & 3 were drained down but required further overpumping.

**Tank 2A** was empty and clean however areas near hopper end had areas covered by grit. Hoppers 1, 2 & 3 were all drained down but required further overpumping. A slight odour was noted in the vicinity of the tank.

**Tank 2B** was empty and clean. Hoppers 1, 2 & 3 were approximately half full and required overpumping.

**Tank 3A & 3B** were both empty and clean. Hoppers 1, 2 & 3 of both tanks had been drained down.

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

**Tank 6A** had some sludge and grit in the tank. Hoppers 1, 2 and 3 were all full and required overpumping.

**Tank 6B** had some sludge and grit in the tank. Hoppers 1, 2 and 3 were approximately 80% full and required overpumping.

**Tank 7A & 7B** were both empty but had dry grit on the surface of the tank at the hopper end. Hoppers 1, 2 & 3 (shallow hoppers) of tank 7A required draining down, however hoppers in tank 7B were drained down.

**Tank 8A** was being overpumped while on site. Hoppers 1, 2 and 3 were approximately 50% full. A slight odour was noted in the vicinity of this tank.

**Tank 8B** was empty and relatively clean. Hoppers 1 & 2 were full and hopper 3 was approximately 50% full. All hoppers required overpumping.

**Feed Channel** - The level of effluent in both feed channels was very dark in colour and at a low level along its entire length and bottomed out in places where grit and sludge was present.

### **Complaints**

The Council received no complaints via telephone or emails from either residents or MRAG in the preceding week.

### **Odour Monitors**

The odour readouts (H<sub>2</sub>S) for all of the monitors, which were providing data at time of inspection: Thursday 10<sup>th</sup> January 2019 at 12:57.

Monitor 1	0.006	ppm	12:57
Monitor 2	0.008	ppm	12:57
Monitor 3	0.027*	ppm	12:57
Monitor 4	0.008	ppm	12:57
Monitor 5	0.007	ppm	12:57
Monitor 6	0.005	ppm	12:57
Monitor 7	0.007	ppm	12:57

Monitor 8	0.008	ppm	12:57
Monitor 9	0.006	ppm	12:57
Monitor 10	0.006	ppm	12:57
Monitor 11	0.008	ppm	12:57
Monitor 12	0.007	ppm	12:57
Monitor 13	0.009	ppm	12:57
Wind Speed	4	mph	12:57
Wind Direction	68.00	DEG	12:57

\*Exceedance of the 0.015ppm trigger level was noted on Odour Monitor 3 and this was raised with Thames Water. This exceedance above the trigger level was also noted on other days e.g. Monday 7/3/18 Odour Monitor 3 0.027ppm at 10:00 continuing to 15:00 where the level recorded fell to 0.023ppm then falling to 0.014ppm at 19:59. This was raised with Thames Water who advised they would investigate further. This is also recorded on Thames Water Odour Log.

**Odour Log (Thames)**

**Thursday 3rd January 2019**

**AM**

**Temp.** Cold.

**Weather.** Cloudy.

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

**Time:** 17:30

**Observations / Customer Complaints.** Nil.

**Operational issues / causes observed** no issues

**Actions Taken.** Blank.

**PM**

**Temp.** Freezing

**Weather.** Clear night.

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

**Time:** 05:30

**Observations / Customer Complaint.** OM3 high through whole shift.

**Operational issues / causes observed.** OCU11 on going issues.

**Actions Taken.** Blank

**Friday 4th January 2019**

**AM**

**Temp.** Cold

**Weather.** Cloudy w/ sunny spells.

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

**Time:** 17:30

**Observations / Customer Complaint.** Nil

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

**Actions Taken.** Blank

**PM**

**Temp.** Cold

**Weather.** Overcast night.

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

**Time:** 05:30

**Observations / Customer Complaint.** OM3 high through whole shift.

**Operational issues / causes observed.** OCU11 on going issues.

**Actions Taken.** Blank.

**Saturday 5<sup>th</sup> January 2019**

**AM**

**Temp.** Cold

**Weather.** Sunny w/ patchy clouds.

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

**Time:** 17:30

**Observations / Customer Complaint.** OM3 Showing odours.

**Operational issues / causes observed.** OCU 11.

**Actions Taken.** Blank.

**PM**

**Temp.** Cold

**Weather.** Overcast night

**Time:** 05:30

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

**Observations / Customer Complaint.** OM3 high through whole shift.

Om 8 = 0.017 @ 05.13 - 05.27.

**Operational issues / causes observed.** OCU11 on going issues

**Actions taken.** Blank.

**Sunday 6<sup>th</sup> January 2019**

**AM**

**Temp.** Cold

**Weather.** Cloudy w/ sunny spells.

**Time:** 17:30.

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

**Observations / Customer Complaint.** OM3 All shift on and off.

**Operational issues / causes observed.** Blank

**Actions Taken.** Blank.

**PM**

**Temp.** Cold

**Weather.** Overcast Night.

**Time:** 07:12

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

**Observations / Customer Complaint.** OM3 All shift on and off.

**Operational issues / causes observed.** OM3 All shift on and off.

**Actions Taken.** Blank.

**Monday 7<sup>th</sup> January 2019**

**AM**

**Temp.** Cold.

**Weather.** Cloudy w/ sunny spells.

**Time:** 18:00

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

**Observations / Customer Complaint.** OM3 Spiking all shift.

**Operational issues / causes observed.** OCU 11 ongoing issues.

**Actions Taken.**

**PM**

**Temp.** Cold.

**Weather.** Overcast night

**Time:** 05:30.

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

**Observations / Customer Complaint.** OM3 Spiking all shift. OM 8 @03.09 - 04.06.

**Operational issues / causes observed.** OCU 11 ongoing issues.

**Actions Taken.** Blank.

**Tuesday 8<sup>th</sup> January 2019**

**AM**

**Temp.** Cool

**Weather.** Cloudy w/ Sunny Spells.

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

**Time:** 17:30.

**Observations / Customer Complaint.** OM3 high throughout whole shift. OM8 one spike peaked at 0.022ppm 05:43 - 06:15.

**Operational issues / causes observed.** OCU 11 issues. No odour identified.

**Actions Taken:** Blank.

**PM**

**Temp.** Cold.

**Weather.** Clear Night.

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

**Time:** 05:30.

**Observations / Customer Complaint.** Nothing to report.

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

**Actions Taken:** Blank.

**Wednesday 9<sup>th</sup> January 2019**

**AM**

**Temp.** Cold.

**Weather.** Cloudy w/ Sunny Spells.

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

**Time:** 17:30.

**Observations / Customer Complaint.** OM3 spiked from 13.43 till the end of shift. Peaked @0.034ppm.

**Operational issues / causes observed.** OCU 11 on going issues.

**Actions taken:** Blank.

**PM**

**Temp.** Cold

**Weather.** Clear night.

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

**Time:** 05:00.

**Observations / Customer Complaint.** OM3 carried on till 20:15

**Operational issues / causes observed.** OCU 11

**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					
03/01/19	0	1964	122	2086	2266	4352
04/01/19	0	1921	267	2188	3235	5423
07/01/19	135	1588	0	1723	2233	3956

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 10 imports of sludge daily over the last week.

### 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) – noticeable quantity of water accumulated to the brim of these tanks which is thick with algae – requires draining.

**Digester 5** was in use but had a very wet seal.



**Digester 6** was in use and had a wet seal. There was evidence of a very large spill which needs cleaning. Due to uneven ground surface puddles had formed around Digester 6 due to previous rain fall. Thames Water advised this would be actioned while on site.

**Digester 7** was in use and had a wet seal. There was evidence of an historic spill which was dry and crusty in texture around the coping stone (crusty- needs a sweep).

**Digester 8** was in use and had a wet seal. There was evidence of an historic spill which was dry and crusty in texture around the coping stone (crusty- needs a sweep).

**Digester 9** was in use and had a wet seal. No evidence of any spillage.

**Digester 10** was in use and had a wet seal. No evidence of any spillage.

**Digester 11** was in use and had a wet seal. There was evidence of an historic spill which was dry and crusty in texture around the coping stone (crusty- needs a sweep).

**Digester 12** was in use and had a wet seal. No evidence of any spillage.

**Digesters 13 & 14** were both out of service.

**Digester 15** was in use and had good seal. No evidence of any spillage.

**Digester 16** was out of service.

**Digester 17** was in use and had a dry crusty seal. No evidence of any spillage.

**Digester 18** was in use and had a wet seal. No evidence of any spillage.

**Digester 19** was in use and had a wet seal. No evidence of any spillage.

**Digester 20** was in use and had a dry crusty seal. No evidence of any spillage.

## **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 operational at the time of the inspection.

### **Skips**

On the East side there was one 20 yd open bulk carrier that was empty.  
One 16yd skip that was empty and uncovered.  
One 6yd skip that was empty and uncovered.  
On the West side there were No skips present.

### **East Side Screen House**

All doors were open slightly at the time of the inspection. TW advised all screens are in operation. The doors were open due to condensation. Thames Water advised that they are monitoring any potential odour using a portable Jerome and have set up a odour suppression unit in the area.

### **Return Activated Sludge Channel**

The nearside RAS channel (which runs in the ground between FST's 61-64 & 65-67) was relatively free flowing along its entire length.

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

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

Circular PSTs 9, 10, 11 & 12 were all in operation at the time of the inspection (fat free surfaces). PST 10 had an odour control system on

trial whereby an odour neutraliser generated a mist over the Primary settlement tank- only one PST was being used to trial this system. This was not in operation at the time of inspection. No odours were noticeable.

### **Pasteurisation Plant**

The pasteurisation plant is in service. TW advised 3/12 streams were out of operation (4, 7 and 9).

### **Section 106 agreement**

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

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

All of the aeration tanks were in use but the foam covering the surface of the tanks had returned.

The mixed liquor feed channel serving aeration lanes 24-25 (E Battery) was free flowing throughout its entire length. The channel serving aeration lanes 21, 22 & 23 were also free flowing.

Odour was not noticeable along the mixed liquor feed channel. TW advised that a tanker crew are regularly on-site undertaking clearance of the clogged areas (Celvac).

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

No issues appeared evident at the new inlet works.

### **Odour Control Unit (OCU) performance monitoring: 08/01/2019**

<b>Plant</b>	<b>Reading (ppm)</b>	<b>Action Level (ppm)</b>	<b>Compliant</b>
Main pumping station inlet	0.000 0.000 0.000	Unknown	Unknown
Main pumping station outlet	0.00 0.01 0.01	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	-	Unknown	Unknown
Sludge reception outlet	-	0.8	Unknown
Thickening plant inlet	-	Unknown	Unknown
Thickening plant outlet	0.00 0.00 0.00	0.6	Yes
Transfer PS inlet	-	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00	0.6	Yes
New West inlet (OCU 11)	0.03 0.03 0.04	0.5	Yes
OCU 12 (Pasteurisation Plant)	0.00 0.00 0.00	0.5	Yes