



# London Borough of Hounslow

## Mogden Sewage Treatment Works

### TW Site Inspection

**Date of inspection:** Tuesday 23<sup>rd</sup> February 2021 (13:00pm)

**Attendees:** Mr Zaheer Kadri (London Borough of Hounslow) and Mr Dan Grady (Thames Water)

#### LB Hounslow Observation

#### Thames Water Action / Response

#### Storm Water Storage Tanks (SWST)

**Tank 1A-** Tank was clean and empty- All hoppers had been drained down to the bottom

**Tank 1B-** Tank was clear of effluent however had a slight sludgy surface toward the river end of the tank. All three hoppers were full to the top and needed draining down.

**Tank 2A** – was over 20% full of effluent and was being returned. The amajets were in operation. There were thick deposits of fat on the surface at the hopper end.

**Tank 2B-** was mostly clean however to the left of the tank portion of the tank there was a layer of thick sludgy effluent – All the hoppers were full and also needed draining down.

**Tank 3A-** The tank was clear of effluent however had a thick sludgy surface right across the tank. Hopper 1 was full to the top and needed draining down. Hoppers 2 and 3 were ¼ full.

**Tank 3B-** This tank was 20% full of effluent and rapidly filling up – overflow from covered tanks. The amajets were in operation.

**Storm Feed Channel** - The level of effluent in the feed channels was approx. 10% in depth along its entire length and murky and black in colour. No 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 and Tank 6B** – Both tanks were approx. over 20% full of effluent. Amajets were not in operation at time of inspection. There were fatty deposits floating on the surface.

**Tank 7A and 7B** - The tanks were both empty of effluent but had thick sludgy layers at the hopper end. All the hoppers were full to the top of effluent.

**Tank 8A and Tank 8B-** were both full of effluent at the hopper end but thinned out across the tank. The surface was clear of fatty deposits and sludge.

**Storm Feed Channel** - The level of effluent in the feed channels was approx. 10% in depth along its entire length and murky and black in colour with some fatty deposits floating on surface.

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

### **Complaints**

The Council directly received no complaints by telephone in the preceding 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 23/02/2021 at the time of the inspection are below.

Monitor 1	0.000	ppm	13:05pm
Monitor 2	0.008	ppm	13:05pm
Monitor 3	0.000	ppm	13:05pm
Monitor 4	0.004	ppm	13:05pm
Monitor 5	0.005	ppm	13:05pm
Monitor 6	0.004	ppm	13:05pm
Monitor 7	0.000	ppm	13:05pm
Monitor 8	0.005	ppm	13:05pm
Monitor 9	0.005	ppm	13:05pm
Monitor 10	0.004	ppm	13:05pm
Monitor 11	0.000	ppm	13:05pm
Monitor 12	0.000	ppm	13:05pm
Monitor 13	0.000	ppm	13:05pm
Wind Speed	11.044	mph	13:05pm
Wind Direction	199.535		13:05pm

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

**Wednesday 17<sup>th</sup> February 2021**

**DAY SHIFT**

**Temp.** Cool.

**Weather.** Rain.

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

**Time:** 17:30.

**Observations / Customer Complaint.** No odour spikes/odour complaints.

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

**NIGHT SHIFT**

**Temp.** Cool.

**Weather.** Clear night .

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

**Time:** 05:30.

**Observations / Customer Complaint.**

No odour issues found or reported.

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

**Thursday 18<sup>th</sup> February 2021****DAY SHIFT**

**Temp.** Cool.

**Weather.** Rain.

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

**Time:** 17:30.

**Observations / Customer Complaint.**

No odour issues found or reported.

**Operational issues / causes observed.** ABLE on site carrying out calibration on monitors .

**NIGHT SHIFT**

**Temp.** Cool.

**Weather.** Clear Night.

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

**Time:** 07:12.

**Observations / Customer Complaint.**

OM6 spiked to 0.025ppm at 00:33-01:32

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

**Friday 19<sup>th</sup> February 2021****DAY SHIFT**

**Temp.** Cool

**Weather.** Cloudy.

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

**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 / No Faults.

**Time:** 05:30.

**Observations / Customer Complaint.** No odour issues/Spikes or complaints .

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

**Saturday 20<sup>th</sup> February 2021****DAY SHIFT**

**Temp.** Cool.

**Weather.** Sunny with Patchy clouds.

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

**Time:** 17:30.

**Observations / Customer Complaint.**

No odour issues found or reported.

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

**NIGHT SHIFT**

**Temp.** Cool

**Weather.** Overcast night.

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

**Time:** 05:30.

**Observations / Customer Complaint.** No odours spikes or complaints

**Operational issues / causes observed.**

**Sunday 21<sup>st</sup> February 2021****DAY SHIFT**

**Temp.** Cool

**Weather.** Sunny with patchy clouds.

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

**Time:** 17:30.

**Observations / Customer Complaint.**

OM5 spiked to 0.022ppm 17:13-17:28

**Operational issues / causes observed.**

No odours detected

**NIGHT SHIFT**

**Temp.** Cool

**Weather.** Overcast Night.

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

**Time:** 05:30.

**Observations / Customer Complaint.**

No odour spikes or complaints

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

**Monday 22<sup>nd</sup> February 2021**

**DAY SHIFT**

**Temp.** Warm

**Weather.** Rain with sunny spells.

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

**Time:** 17:30.

**Observations / Customer Complaint.**

OM2 spiked to 0.022ppm at 05:51-07:04.

**Operational issues / causes observed.** Storm tanks need cleaning.

**NIGHT SHIFT**

**Temp.** Cool

**Weather.** Clear nights.

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

**Time:** 05:00.

**Observations / Customer Complaint.**

No odour issues found or reported

**Operational issues / causes observed.**

**Tuesday 23<sup>rd</sup> February 2021**

**DAY SHIFT**

**Temp.** Cool .

**Weather.** Sunny.

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

**Time:** 17:30.

**Observations / Customer Complaint.**

OM2 spiked to 0.016 at 11:36-11:50

**Operational issues / causes observed.**

Storm tank cleaning underway

**NIGHT SHIFT**

**Temp.** Cool.

**Weather.** Clear Nights.

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

**Time:** 05:30.

**Observations / Customer Complaint.**

OM2 spiked to 0.021 at 22:36-22:35

**Operational issues / causes observed.**

Strom tanks emptying via diesel over pump.

### **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					
17/02/2021	0	1635	1030	2665	912	3577
19/02/2021	78	1968	2343	4389	7916	12305
22/02/2021	0	1199	2905	4104	8930	13034

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 1 import of sludge per day. Deliveries made on the 17<sup>th</sup>, 19<sup>th</sup> and 22<sup>nd</sup> February 2021.

### **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** was in service and had a thick seal that was approx. 3ft below the coping stones.

**Digester 6** was out of service.

**Digester 7** was in service and had a low wet seal that was bubbling off minimal amounts of gas. There were signs of previous spillage. Level of seal was approx. 3ft below coping stones.

**Digester 8** was in service and had a very wet low seal that was bubbling off minimal amounts of gas. The seal was 3ft below the coping stone.

**Digester 9** was in service and had a very high wet seal that was 1ft below the coping stones.

**Digesters 10 & 11** were both in service and both had very wet seals that were bubbling off minimal amounts of gas. It was also noted that the sludge level of both digesters was very high, approx. a few inches below coping stone and in some places at the same level as the coping stones.

**Digester 12** was in service and had a very wet seal that was bubbling off minimal amounts of gas. The sludge level was approx. 3ft below the coping stone.

**Digester 13** was in service and had a very thick sludgy seal that was at the same level as the coping stone. .

**Digester 14** was in service and had a thin wet seal approx. 1ft below coping stones. There were signs of previous spillage.

**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 effluent was high approx. 2ft below coping stone in some places higher.

**Digester 17** was in service and had a wet seal that was approx. 2ft below coping stones.

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

**Digester 20** was in service and had a wet watery seal that was bubbling off minimal amounts of gas approx. 3 ft. below coping stones.

The walkways around Digesters 5- 10 had dried gritty surfaces possibly from previous spillages that needed to be cleaned and maintained. TW advised

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.

### **Skips**

On the East side (Grit house) there were 2 x 16yard skips. One of the skips contained inert material - unlikely to rot or cause an odour (No cover). The second skip was empty. There were also 2 large red BIFFA 20yard skips which were empty.

At the West side Grit house there was one 20yard skip which was empty at the time of inspection.

No other skips 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.

### **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 8 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. 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 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: 23<sup>rd</sup> February 2021- NO CHECKS COMPLETED DUE TO STAFF SHORTAGE**

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	NO DATA	Unknown	Unknown
Main pumping station outlet	NO DATA	0.2	Unknown
East OCU	NO DATA	0.05	Yes
West inlet OCU	NO DATA	0.05	Yes
Sludge reception inlet	NO DATA	Unknown	Unknown
Sludge reception outlet	NO DATA	0.8	Unknown
Thickening plant inlet	NO DATA	Unknown	Unknown
Thickening plant outlet	NO DATA	0.6	Yes
New West inlet (OCU 11)	NO DATA	0.5	No
Pasteurisation (OCU 12)	NO DATA	0.5	Yes
Transfer PS inlet	NO DATA	Unknown	Unknown
Transfer PS outlet	NO DATA	0.6	Yes