



# London Borough of Hounslow

## Mogden Sewage Treatment Works

### TW Site Inspection

**Date of inspection:** Thursday 20<sup>th</sup> February 2020 (12:00pm)

**Attendees:** Mr I Inman (London Borough of Hounslow) and Mr D Chowings (Thames Water)

#### LB Hounslow Observation

#### Thames Water Action / Response

#### Weather

Light rain and full cloud cover at start, very heavy rain by the end of inspection.

#### Storm Water Storage Tanks (SWST)

**Tank 1A** was completely full.  
All amajets were in operation.

**Tank 1B** was completely full.  
All amajets were in operation.

**Tank 2A** was completely full.  
All amajets were in operation.

**Tank 2B** was completely full.  
Amajets 1 & 2 were in operation.

**Tank 3A** was completely full.  
All amajets were in operation.

**Tank 3B** was completely full.  
All amajets were in operation.

**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 completely full.  
All amajets were in operation.

**Tank 6B** was completely full.  
All amajets were in operation.

**Tank 7A** was completely full.  
All amajets were in operation.

**Tank 7B** was completely full.  
Only amajet 1 was in operation.

**Tank 8A** was completely full.  
All amajets were in operation.

**Tank 8B** was completely full.  
Amajets 1 & 2 were in operation.

**Storm Feed Channel** - The channel was 60% full.

Thames advised of planned works to replace all of the hopper valves to prevent back flow of effluent.

They are still also awaiting parts in order to bring the wash water pump system back into operation.

### **Complaints**

The Council has received no complaints by email 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 20<sup>th</sup> February 2020 at 12:20.

Monitor 1	0.009	ppm	12:20
Monitor 2	0.010	ppm	12:20
Monitor 3	0.000	ppm	12:20
Monitor 4	0.003	ppm	12:20
Monitor 5	0.007	ppm	12:20
Monitor 6	0.008	ppm	12:20
Monitor 7	0.006	ppm	12:20
Monitor 8	0.000	ppm	12:20
Monitor 9	0.009	ppm	12:20
Monitor 10	0.009	ppm	12:20
Monitor 11	0.007	ppm	12:20
Monitor 12	0.007	ppm	12:20
Monitor 13	0.008	ppm	12:20
Wind Speed	13.214	mph	12:20
Wind Direction	194.582	°	12:20

### **Odour Log (Thames) - Photocopies of log entries taken:**

#### **Thursday 13<sup>th</sup> February 2020**

#### **DAY SHIFT**

**Temp.** Cold.

**Weather.** Rain.

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

**Time:** 00:00.

**Observations / Customer Complaint.** OM1 spiked at 12:35-13:08 max 0.021ppm.

OM2 spiked at 16:39-17:01 max 0.029ppm.

OM8 spiked at 13:44-14:00 max 0.016 but <15 min duration.

**Operational issues / causes observed.** Strom tanks full and storming to river.

**Actions Taken.** Blank.

**NIGHT SHIFT**

**Temp.** Cool.

**Weather.** Clear night.

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

**Time:** 05:30.

**Observations / Customer Complaint.** OM2 0.020ppm 23:27-00:10.

**Operational issues / causes observed.** No odour discovered when checking east inlet area.

**Actions Taken.** Blank.

**Friday 14<sup>th</sup> February 2020**

**DAY SHIFT**

**Temp.** Cool.

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

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

**Time:** 17:30.

**Observations / Customer Complaint.** OM2 spiked at 07:20-07:50 max 0.104ppm.

**Operational issues / causes observed.** East side rag skip hosed down.

**Actions Taken.** Blank.

**NIGHT SHIFT**

**Temp.** Cold.

**Weather.** Overcast night.

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

**Time:** 05:25.

**Observations / Customer Complaint.** OM2 0.046 spike 03:16-04:02.

OM9 0.020ppm 23:04-00:04.

**Operational issues / causes observed.** No odour discovered when checking area.

**Actions Taken.** Blank.

**Saturday 15<sup>th</sup> February 2020**

**DAY SHIFT**

**Temp.** Cool.

**Weather.** Rain.

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

**Time:** 17:30.

**Observations / Customer Complaint.** OM2 spiked at 10:20-10:35 max 0.043ppm but <15 min duration.

**Operational issues / causes observed.** Emptying storm tanks AM.

**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.** Storm tanks.

**Actions taken.** Blank.

### Sunday 16<sup>th</sup> February 2020

**DAY SHIFT**

**Temp.** Cool.

**Weather.** Storms.

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

**Time:** 17:30.

**Observations / Customer Complaint.** OM2 spiked at 12:30-13:30 max 0.105ppm.

**Operational issues / causes observed.** Very high flows being treated, storm tanks full and storming to river.

**Actions Taken.** Blank.

**NIGHT SHIFT**

**Temp.** Cool.

**Weather.** Rain.

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

**Time:** 05:30.

**Observations / Customer Complaint.** OM5 0.017ppm 17:37-18:37.

OM1 0.017ppm 20:17-20:35.

**Operational issues / causes observed.** Storm tanks full, wearing to river.

**Actions Taken.** Blank.

**Monday 17<sup>th</sup> February 2020**

**DAY SHIFT**

**Temp.** Cool.

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

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

**Time:** 17:30.

**Observations / Customer Complaint.** OM2 0.030ppm 10:24-10:46.

**Operational issues / causes observed.** Area checked no source found.

**Actions Taken.** Blank.

**NIGHT SHIFT**

**Temp.** Cool.

**Weather.** Clear night.

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

**Time:** 05:30.

**Observations / Customer Complaint.** Blank.

**Operational issues / causes observed.** No odour issues found or reported.

**Actions Taken.** Blank.

**Tuesday 18<sup>th</sup> February 2020**

**DAY SHIFT**

**Temp.** Cool.

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

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

**Time:** 17:30.

**Observations / Customer Complaint.** OM3 0.068ppm 11:08-11:24.

OM1 0.020ppm 11:14-11:56; 0.016ppm 10:05-10:09.

OM5 0.017ppm 08:38-08:53.

**Operational issues / causes observed.** Area checked, no source found. Storm tanks filling.

**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 18:58-19:36, max 0.022ppm; 23:20-23:30 max 0.020ppm; 23:33-23:40 max 0.016ppm.

OM8 spiked at 03:30-03:44 max 0.018ppm.

**Operational issues / causes observed.** Storm tanks full and storming to river.

**Actions Taken.** Blank.

**Wednesday 19<sup>th</sup> February 2020**

**DAY SHIFT**

**Temp.** Cool.

**Weather.** Rain w / sunny spells.

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

**Time:** 17:30.

**Observations / Customer Complaint.** OM1 0.019ppm 08:36-08:49.

OM2 0.016ppm 09:35-09:48.

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

**Action Taken.** Blank.

**NIGHT SHIFT**

**Temp.** Cool.

**Weather.** Overcast night.

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

**Time:** 05:30.

**Observations / Customer Complaint.** Blank.

**Operational issues / causes observed.** No odour issues found or reported.

**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					
14/02/2020	0	267	473	740	2089	2829
17/02/2020	0	516	206	722	1896	2618
19/02/2020	0	661	61	722	1568	2290

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**

Not confirmed on weekly paperwork.

### **No.5 Pumping Station**

The doors of No.5 pumping station was open at the time of the inspection although no odour was evident.

### **Raw Sludge Screening House**

The large roller shutter door of the Raw Sludge Screening building was open at the time of the inspection and one 40yds bulk container was inside.

A pile of debris had formed at the end of the conveyor belt and was in the process of being cleared.



## 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:** In service and had a wet sloppy seal that was bubbling off small amounts of gas

**Digester 6:** In service and had a wet sloppy seal that was bubbling off small amounts of gas. There had also been a recent spill over the top of the coping stone.

**Digester 7:** Out of service.

**Digesters 8 & 9:** Both were in service and had wet sloppy seals that were bubbling off small amounts of gas.

**Digester 10:** In service and had a wet sloppy seal that was bubbling off small amounts of gas. It was noted that the sludge level was high at nearly at the top on the coping stone.

**Digesters 11 & 12:** Both were in service and had wet sloppy seals that were bubbling off small amounts of gas.

**Digester 13:** In service and had a wet sloppy seal that was bubbling off small amounts of gas.

There had also been a significant spill covering a large area around the tank. Due to the weather (heavy rain) it was difficult to tell whether this had been partly cleared up or was being washed away by the rain fall?

**Digesters 14 & 15:** Both were out of service.

**Digesters 16 & 17:** Both were in service and had wet sloppy seals that were bubbling off small amounts of gas.

**Digester 18:** Out of service.

**Digesters 19 & 20:** Both were in service and had wet sloppy seals that were bubbling off gas.

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 were operational at the time of the inspection and no issues were evident.

**Skips**

On the East side there were two 8yds open skips, both of which were full and contained general non-inert rubbish.

Also present was one closed 14yds skip that was empty and one 20yds open bulk carrier that was approx 35% full of general non-inert rubbish.

In the area next to STW 1A there was an open 14yds skip that was full and contained scrap metal.

On the service road next to raw sludge screening building was an 8yds open skip that was full and contained rag and other waste, this was part covered with a tarpaulin.

On the West side there was one 20yds open bulk carrier that contained a very small amount of rag (>5%) and rain water.

**East Side Screen House**

The doors to the screen house building 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 clear and free flowing following repair to the main air line.

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

No issues.

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

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

Circular PST's 9, 11 & 12 were all in service and had fat free surfaces.

PST 10 was out of service and the outer overflow channel was being over pumped at the time of the inspection.

### **Pasteurisation Plant**

The pasteurisation plant is in service. TW advised 9 streams are currently in service (1, 5 & 12 are out of service).

### **Section 106 agreement**

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

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

A very thick scum has again developed across all of the aeration lane surfaces that was thick enough to obscure most of the internal dividing walls.

Although nearly all of the sprinklers appeared to be in operation

floating debris was clogging these areas of the lanes.

The mixed liquor feed channel serving aeration lanes 25 & part of 24 of E-Battery was clogged with thick scum and floating debris. However, no odour was noticeable.

**New Inlet Works (West Side)**

No issues.

**Odour Control Unit (OCU) performance monitoring: 18/02/2020**

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.03 0.02 0.03	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00	0.2	Yes
East OCU	0.00 0.00 0.00	0.05	No
West inlet OCU	0.00 0.00 0.00	0.05	Yes
Sludge reception inlet	Blank	Unknown	Unknown
Sludge reception outlet	Blank	0.8	Yes
Thickening plant inlet	Blank	0.5	Yes
Thickening plant outlet	0.04 0.04 0.02	0.6	Yes
Transfer PS inlet	Blank	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00	0.6	Yes

New West inlet (OCU 11)	0.00	0.5	Yes
	0.00		
	0.00		
Pasteurisation (OCU 12)	0.00	0.5	Yes
	0.00		
	0.00		