



# London Borough of Hounslow

## Mogden Sewage Treatment Works

### TW Site Inspection

**Date of inspection:** 17<sup>th</sup> August 2017

**Attendees:** Mr Andrew Devine (London Borough of Hounslow) and Mr Manzoor Hussain (Thames Water)

<b>LB Hounslow Observation</b>	<b>Thames Water Action / Response</b>
<p><b><u>Storm Water Storage Tanks (SWST)</u></b></p> <p><b>Tank 1A</b> was empty with some dried sludge in the tank. Hopper 1 was approximately half full. Hoppers 2 and 3 were drained down with some sludge on the surface. .</p> <p><b>Tank 1B</b> was empty and clean. Hoppers 1, 2 and 3 were all approximately 30% full and had a hard sludge covering the surface. A slight localised odour was noted at this tank.</p> <p><b>Tank 2A</b> was empty and clean. Hoppers 1, 2 and 3 were all approximately 30% full and had a hard sludge covering the surface. A slight localised odour was noted at this tank.</p> <p><b>Tank 2B</b> tank was empty and clean. All hoppers were approximately 30% full and required overpumping.</p> <p><b>Tank 3A</b> tank was empty and clean. All hoppers were approximately 30% full and required overpumping.</p> <p><b>Tank 3B</b> tank was empty but had some dried grit and sludge in the tank. All hoppers were approximately 30% full and required</p>	

overpumping.

**Tanks 4A, 4B, 5A & 5B** are all covered and odour controlled.

**Tank 6A** tank was empty and clean. All hoppers were approximately 30% full and required overpumping.

**Tank 6B** tank was empty and clean. Hoppers 1 and 2 were approximately 30% full and required overpumping. Hopper 3 was approximately 80% full and required overpumping.

**Tank 7A - 7B** tank was empty and clean. All hoppers were drained down but there was some residual sludge ion the hoppers. .

**Tank 8A** - was empty and clean, hoppers 1 and 2 were approximately 80% full and required overpumping. Hopper 3 was being drained down while on site.

**Tank 8B** - was empty and clean, all hoppers were drained down.

**Feed Channel** – The feed channel level was very low. The base of the channel feeding tanks 4-8 contained some sludge and was locally odorous. Thames Water advised that the feed channel would be flushed.

### **Odour Monitors**

The odour readouts (H<sub>2</sub>S) for all of the monitors, which were providing data at time of inspection (2:00pm) are as follows:

Monitor 1	0.004	ppm
Monitor 2	0.000	ppm
Monitor 3	0.000	ppm
Monitor 4	0.000	ppm
Monitor 5	0.000	ppm
Monitor 6	0.003	ppm
Monitor 7	0.004	ppm
Monitor 8	0.005	ppm
Monitor 9	0.000	ppm
Monitor 10	0.004	ppm
Monitor 11	0.000	ppm
Monitor 12	0.000	ppm
Monitor 13	-0.001	ppm

All readings accessed using Envirosuite which provides data in ppb.

### **Complaints**

**The Council received one complaint by telephone in the preceding week. No complaints were received via e-mail.**

On 15<sup>th</sup> August 2017 at approximately 19:23 a resident of Summerwood Road, Isleworth located to the south of the site phoned to advise of odour arising from Mogden Sewage Treatment Works. The duty officer contacted the complainant who stated that the odour had been bad since Saturday and that it has been really bad today. The area was visited by the duty officer and the average readings were 0.00ppm which is below the threshold level. The historic odour monitoring trends were inspected during the weekly inspection and Odour Monitors 1 to 13 did not record any elevated levels at the time of the complaint. The odour log for PM shift on 15<sup>th</sup> August detailed recorded no odour spikes on monitor 1 to 13 but that they did receive a

smell complaint at approximately 19:45. The following action was taken by Thames Water officers on site. Investigated PAS/Digesters - no odour. Investigated east and west inlets - no odour. No odour being generated by siloxane plant. Thames Water officer also confirmed that all OCU's were working on site and the digester bell height was not high and was currently 24m. The Thames Water officers reported back to NOCC with above finds. The storm tank logs for both the AM and PM shift for the 15<sup>th</sup> August show that none of the open uncovered tanks were in use. The digester records for the 15<sup>th</sup> August show that there were no spillages at the digesters. It has therefore not been possible on this occasion to identify the source of odour complained of.

**The Council received one complaint by email from MRAG.**

On 15<sup>th</sup> August 2017 a complaint was received by email via MRAG to advise of ongoing odour arising from *Mogden STWs*. No address for the complaint was given in the email. The historic odour monitoring trends were inspected during the weekly inspection and Odour Monitors 1 to 13 did not record any elevated levels at the time of the complaint. The odour log for AM and PM shift on 15<sup>th</sup> August detailed that there were no spikes on odour monitors 1 to 13. A odour complaint was recorded as being received on the PM shift at approximately 19:45. The following action was taken by Thames Water officers on site. Investigated PAS/Digesters - no odour. Investigated east and west inlets - no odour. No odour being generated by siloxane plant. Thames Water officer also confirmed that all OCU's were working on site and the digester bell height was not high and was currently 24m. The Thames Water officers reported back to NOCC with above finds. The storm tank logs for both the AM and PM shift for the 15<sup>th</sup> August show that none of the open uncovered tanks were in use. The digester records for the 15<sup>th</sup> August show that there were no spillages at the digesters. It has therefore not been possible on this occasion to identify the source of odour complained of.

**Odour Log (Thames)**

**Wednesday 9<sup>th</sup> August 2017**

**AM** – No odour spikes.

**PM** – No odour issues, storm tanks full storming to river all shift.

**Thursday 10<sup>th</sup> August 2017**

**AM** – No odour spikes. No odour issues.

**PM** – Odour Monitor 2 – one spike at 0.024ppm less than 15 minutes.

Odour monitor 5 – one spike at 0.016ppm less than 15 minutes.

**Actions** – East inlet combi washers blocked. Plant unblocked and area hosed down.

**Friday 11<sup>th</sup> August 2017**

**AM** – No odour spikes. No odour issues.

**PM** – No spikes odour monitors 1 to 13. No odour issues on site.

**Saturday 12<sup>th</sup> August 2017**

**AM** – No odour problems.

**PM** – Odour monitor 5 one spike at 0.019ppm under 15 minutes. No odour detected.

**Sunday 13<sup>th</sup> August 2017**

**AM** – No odour problems.

**PM** – Odour monitor 2 – two spikes both less than 15 minutes – max 0.028ppm. No odour detected while investigating. Odour monitor 13 failed reading at 0.025ppm.

**Monday 14<sup>st</sup> August 2017**

**AM** – Odour monitor 1 to 5 – monitor 2 0.021ppm at 09:18am until 09:30am. Odour monitor 6 to 13 no spikes.

**PM** – Odour monitor 2 one spike at 0.022ppm. Duration 22:18pm until 22:43pm. East inlet skip area washed down.

**Tuesday 15<sup>th</sup> August 2017**

**AM** – Odour monitor 4 spike at 0.015ppm between 8:29am until 8:42am. No spikes on odour monitors 6 to 13

**PM** – Odour monitors 1 to 13 no spikes. Smell complaint at 19:45 see odour investigation form.

**Odour noticed** – Investigated PAS/Digesters - no odour. Investigated east and west inlets - no odour. No odour being generated by siloxane plant.

**Operational issues** – All OCU's working on site. Digester bell height not high. Currently 24m

**Actions taken** – Reported back to NOCC with above finds

**Wednesday 12<sup>th</sup> August 2017**

**AM** – No odour spikes.  
one noted.

**PM** – No odour problems. No odour spikes.

### **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					
12/08/17	0	1509	305	1814	7256	9070
14/08/17	88	1176	305	1569	7252	8821
16/08/17	205	577	183	965	10618	11583

The sludge stock levels for the West side circular primary settlement tank 1 were **compliant** with the OMP trigger level (500m<sup>3</sup>) for all dates on which data has been provided. 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 within three days.

### **Sludge Screening House**

Shutter doors closed at time of inspection.

### **Imported Sludge**

Six imports of 35m<sup>3</sup> daily for preceding seven days.

### **Digesters**

**Digesters 1-4** – Out of use (permanent),

**Digester 5** – was in use but had a weak seal.

- Digester 6** – was in use but had a weak seal.
- Digester 7** – was in use but had a weak seal.
- Digester 8** – was in use but had a weak seal and the seal was very high.
- Digester 9** – was in use and had a weak seal.
- Digester 10** – was in use and had a weak seal and there was evidence of a historic spillage. Thames Water advised this would be cleaned up.
- Digester 11** – was in use but had a weak seal.
- Digester 12** – was in use but had a weak seal.
- Digester 13** – was out of use for maintenance.
- Digester 14** – was in use and had a good seal.
- Digester 15** – was in use but had a weak seal.
- Digester 16** – was out of use for maintenance.
- Digester 17** – was in use and had a weak seal.
- Digester 18** – was in use and had a weak seal.
- Digester 19** – was out of use for maintenance.
- Digester 20** – was in use and had a weak seal.

Automatic dosing of anti-foaming agent is now in use and TW advised that this is also applied manually at least twice a day to all operational digesters.

**Return Activated Sludge Channel**



The nearside RAS channel (which runs in the ground between FST's 61-64 & 65-67) was clogged along the three quarters of its length with thick dry sludge at the time of the inspection. Thames advised a tanker is cleaning this out on a weekly basis.

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

Rectangular PSTs are now covered and odour controlled.

Circular PSTs 9, 11 & 12 were all in operation at the time of the inspection. PST 10 is currently out of service and drained down.

### **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). Tank 77 had been drained down and was not in use at the time of the inspection.

Final tanks 4 and 28 were also drained down at the time of the inspection.

#### **East Side Screen House**

All doors closed. Metal pipework left outside on the floor. Slight localised odour from the bin compactor area.

#### **Other Skips**

1 x 15 yd. open general waste skip at rear of screen house.

#### **Pasteurisation Plant**

The pasteurisation plant is in service and fully operational.

**Section 106 agreement**

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

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

Rectangular PSTs – no issues

Circular PST's all in use except for PST 10.

**West Side Aeration Lanes (Old)**

Battery C aeration feed channel was clear, contractors were on site clearing the channels further North.

**New Works (West Side)**

Feed Channel for Aeration Lanes 20 - 25

The aeration lanes appeared much improved from previous visits. sprinklers were working. The volume of rag in the channels appears to have decreased. The feed channel needs clearing, Thames Water advised that a tanker does clean out the feed channel.

**Odour Control Unit (OCU) performance monitoring – (15/08/17)**

<b>Plant</b>	<b>Reading (ppm) (Average)</b>	<b>Action Level (ppm)</b>	<b>Compliant</b>
Main pumping station outlet	0.000	0.2	Yes
East OCU	0.000	0.05	Yes
West inlet OCU	0.000	0.05	Yes
Sludge reception outlet	0.000	0.8	Yes
Thickening plant outlet	0.000	0.6	Yes

Transfer PS outlet	0.000	0.6	Yes
New West inlet (OCU 11)	0.000	0.5	Yes
OCU 12 (Pasteurisation Plant)	0.000	0.5	Yes