



# London Borough of Hounslow

## Mogden Sewage Treatment Works

### TW Site Inspection

<b>Date of inspection:</b> 16 <sup>th</sup> March 2017	
<b>Attendees:</b> Mr A Robinson (LB Hounslow) & 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>All hoppers on Tank 2A were half full and needed over pumping. The tank was being hosed down at the time of the inspection.</p> <p>Hopper 1 in tank 3A was full with thick sludge and required over pumping.</p> <p>Hopper 1 in tank 8A was full with final effluent.</p> <p>All other tanks and hoppers were empty and clear.</p> <p><b><u>Storm Water Channel</u></b></p> <p>The storm feed channel serving STW's 1A-8B was low with no significant build-up of sludge.</p>	

### Odour Monitors

The odour readouts (H<sub>2</sub>S) for all of the monitors, which were providing data at the time of inspection (approx. 12:45).

Monitor 1	0.004	ppm
Monitor 2	0.003	ppm
Monitor 3	0.000	ppm
Monitor 4	0.005	ppm
Monitor 5	0.003	ppm
Monitor 6	0.004	ppm
Monitor 7	0.003	ppm
Monitor 8	0.005	ppm
Monitor 9	0.004	ppm
Monitor 10	0.003	ppm
Monitor 11	0.003	ppm
Monitor 12	0.005	ppm
Monitor 13	0.006	ppm

### Complaints

The Council received one odour complaint by telephone in the preceding week.

On 13<sup>th</sup> March 2017 at 11:44 a resident of Easedale House, Summerwood Road (South East side of the works) called to complain about odour from Mogden. The duty Officer called the resident back though a visit was not made as the odour had ceased and advised that the matter would be taken up during the weekly inspection. The historic odour traces for this date show that there were large spikes on Odour monitor 9 (South side) for prolonged periods during 13<sup>th</sup> March:

#### **Odour Monitor 9, 13<sup>th</sup> March 2017**

0.016ppm 07:26 - 07:38

0.015ppm at 11:11

0.018ppm between 14:11 and 14:21

0.020ppm rising to 0.028 between 14:56 and 15:21 (**odour incident – above 0.015ppm for duration**)

0.025ppm rising to 0.033 between 15:41 and 16:06 (**odour incident**)

The site odour log (AM) for this date makes the following observations: No 9 monitor spiked to max of 0.033ppm @ 15:40 30 min max. No. 8 spiked @ 16:50 to max of 0.033. Actions taken: Area checked at digester road and main gate. No obvious smells found. The weather conditions on 13<sup>th</sup> March at 11:50hrs were overcast with moderate wind from a West-Northwest direction and a temperature of 5°C. This may have carried odour from the works towards Summerwood Road. Potential sources of odour from this part of the plant are the digesters, raw sludge handling area or pasteurisation plant. There were no reported problems with any plant on this day. It is difficult to identify the source of odour on this occasion but the digesters are in relatively close proximity to Easedale House and the prevailing wind would have carried any odour from the digesters in this direction.



Map illustrating wind direction on 13<sup>th</sup> March 2017 at 11:50.

The Council did not receive any complaints either by e-mail or via MRAG.

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

### **Thursday 9<sup>th</sup> March 2017**

**AM** Monitor 9 – multiple spikes throughout afternoon. Max 0.041ppm. Investigated area no odour detected.

Monitor 8 – three spikes max 0.020ppm. All under 15 minutes.

**PM** No odour problems. No spikes on trends.

### **Friday 10<sup>th</sup> March 2017**

**AM** No odour issues. Nothing on trends.

**PM** No odour issues on site.

### **Saturday 11<sup>th</sup> March 2017**

**AM** No odour issue. Nothing to report on trends.

**PM** Monitor 5 – one spike 0.017ppm under 15 minutes.

Monitor 13 – one spike 0.021ppm 01:00/01:58.

Monitor 8 – one spike 0.018ppm under 15 minutes.

### **Sunday 12<sup>th</sup> March 2017**

**AM** No odour problems. Nothing to report on trends.

**PM** Monitor 9 – multiple spikes throughout shift. Max reading 0.043ppm. Investigated area. No odour detected.

### **Monday 13<sup>th</sup> March 2017**

**AM** No. 9 Monitor spiked to max of 0.033ppm @ 15:40 30 minutes max. No. 8 spiked @ 16:50 to max of 0.033ppm.

Actions taken: Area checked at digester road and main gate. No obvious smells found.

**PM** Monitor 5 – one spike 0.015ppm under 15 minutes.

### **Tuesday 14<sup>th</sup> March 2017**

**AM** OM 1-5 no spikes. OM 8 – 0.022ppm at 09:21 to 09:34.

**PM** Monitor no. 5 showing odours. Area on drive smells of sewer, vent on drive not blowing.

### **Wednesday 15<sup>th</sup> March 2017**

**AM** OM 1-5 – No spikes. 6-13 – No spikes.

**PM** One spike on monitor 5. Area checked. No odours found. No other odour problems.

### 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					
11/03/2017	0	1260	61	1321	10615	11936
13/03/2017	0	2447	0	2447	10615	13062
15/03/2017	0	2344	0	2344	9267	11611

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 and which has been complied with in this instance

### Imported Sludge

There have been 8 imports (30m<sup>3</sup> each) of imported sludge per day for the last week with the exception of last Thursday (9<sup>th</sup> March) when there were 6 imports. Total of 40 x 30m<sup>3</sup> = 1200m<sup>3</sup>

### Sludge Screening House

The large roller shutter door of the Raw Sludge Screening building was closed. Moderate odour was present at the crossroads outside the sludge screening house.

<p><b><u>Digesters</u></b></p> <p>Digesters 1 - 4 are permanently out of use. Digesters 13, 16 and 19 were all out of use</p> <p>Seals were generally good across all digesters and bell heights were relatively low. There was no sign of previous spillages around the coping stones of any of the digesters. There was no significant odour detected around the digester area.</p> <p>Automatic dosing of anti-foaming agent is continuing and there was evidence of the use of pellets to thicken the digester seals.</p>	
<p><b><u>Return Activated Sludge Channel</u></b></p> <p>The West side RAS channel (which runs in the ground between FST's 61-64 &amp; 65-67) was clogged along the first 1/3 of its length.</p> <p><b><u>West side primary settlement tanks (PST)</u></b></p> <p>Rectangular PSTs are now covered and odour controlled.</p> <p>Circular PSTs 9, 10, 11 &amp; 12 were all in operation with no noticeable scum or sludge build-up.</p>	
<p><b><u>GENERAL</u></b></p> <p><b><u>Final Settlement Tanks East Side of Works</u></b></p> <p>The 8 circular tanks previously used as PSTs are now being used as final tanks (71-78). At the time of the inspection all 8 tanks were in operation.</p> <p><b><u>East Side Screen House</u></b></p> <p>Both pairs of which were closed at the time of the inspection.</p>	

**Skips**

On the East side there were two bulk carriers one containing grit and covered with a yellow tarpaulin, one was not covered. Thames advised that contractors were on site shoveling grit into the bulk carrier.

In the West side skips area there were two empty 8 yard skips

On the entrance road to the Digesters there was an 8 yard skip half filled with rag, this was partially covered.

**Pasteurisation Plant**

The pasteurisation plant was in service at the time of the inspection. Thames Water confirmed that the plant is operating normally.

**Section 106 agreement**

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

**West Side Aeration Lanes (Old)**

No issues appeared evident.

**New Works (West Side)**

The mixed liquor feed channel serving aeration lanes 21-25 (E Battery) was filled with rag and sludge along the whole length and was being hosed and sucked out by a tanker crew at the time of the inspection.

The whole surface of aerations lanes 21-25 was filled with a dense layer of scum.

A number of sprinklers were clogged and not working at the time of the inspection.

Thames confirmed tanker crews are cleaning the mixed feed liquor channel out on a weekly basis.

**New Inlet Works (West Side)**

No reported issues at the new inlet works.

**Odour Control Unit (OCU) performance monitoring – 13/03/2017**

<b>Plant</b>	<b>Reading (ppm)</b>	<b>Action Level (ppm)</b>	<b>Compliant</b>
Main pumping station outlet	0.0003(av)	0.2	Yes
East OCU	0.008(av)	0.05	Yes
West inlet	0.000(av)	0.05	Yes
Sludge reception outlet	0.04(av)	0.8	Yes
Thickening plant outlet	0.004(av)	0.6	Yes
Pasteurisation plant outlet (OCU 12)	0.003(av)	0.5	Yes
Transfer PS outlet	0.003(av)	0.6	Yes
New West OCU 11 outlet	0.003(av)	0.6	Yes

# Jerome reading