



# London Borough of Hounslow

## Mogden Sewage Treatment Works

### TW Site Inspection

**Date of inspection:** 15<sup>th</sup> December 2016

**Attendees:** Mr Anthony Robinson, Mr D Kalamantis (Thames Water)

#### LB Hounslow Observation

#### Thames Water Action / Response

#### Storm Water Storage Tanks (SWST)

Tanks 1A & 1B were empty, drained down and clean – all hoppers were empty.

Tank 2A – front part of tank contained a pool of sludge. Hoppers 1 and 2 required over pumping.

Tank 2B was clear, hoppers 1 and 2 required draining down and over pumping.

Tank 3A - pool of effluent in the front corner, the hoppers were half full.  
Tank 3B contained some grit, the hoppers were all clear.

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

Tanks 6A & 6B were empty and clear.

Tank 7 A was clear. All the hoppers were full and required over pumping.

Tank 7B contained a fair amount of sludge, hopper 2 required over pumping and hopper 3 was being over pumped at the time of the inspection.

Tank 8A was clear, all the hoppers were filled with black sludge and required over pumping.

Tank 8B was clear, the hoppers were all nearly full and required over pumping.

### **Storm Water Channel**

The level of effluent in storm feed channels serving STW's 1A-8B was very low. The sludge in these channels was very dark.

### **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. 13:35).

Monitor 1	0.003	ppm
Monitor 2	0.004	ppm
Monitor 3	0.000	ppm
Monitor 4	0.003	ppm
Monitor 5	0.005	ppm
Monitor 6	0.000	ppm
Monitor 7	0.000	ppm
Monitor 8	0.000	ppm
Monitor 9	0.004	ppm
Monitor 10	0.003	ppm
Monitor 11	0.004	ppm
Monitor 12	0.003	ppm
Monitor 13	0.104*	ppm

\*Fault with unit logged for repair.

### **Complaints**

**The Council received two complaints via telephone and two via e-mail in the previous 7 days.**

On Tuesday 13<sup>th</sup> December at 10:28hrs the Council received an e-mail regarding odour affecting staff at Worton Hall Industrial Estate on the North West side of the works. On this day all odour traces at the boundary were below the threshold of 0.015ppm, the highest spikes

recorded were 0.009ppm at 07:41 and 0.011ppm at 13:24 on odour monitor 2 which is in relatively close proximity to the source of the complaint. The site odour for that day showed that for the AM shift there were no odour spikes on the trends. No odour detected whilst out on site and for the PM shift no odour spikes were noted and no other issues were noted. The storm tanks are part of the work close to this area and the storm log for the AM shift on that day showed that all of the uncovered tanks were empty and that tanks 2a and 3a which are uncovered required flushing and that the hoppers to tanks 2b and 7a required over pumping. There were no reported issues with other parts of the plant and it has not been possible to identify the source of odour complained of.

On 14<sup>th</sup> December at 11:14hrs the Council received a telephone call and subsequent e-mail regarding odour from Mogden from a resident of Ellerdine Road, Isleworth (approximately 350 metres West of the Works). None of the odour traces at the site boundary were above the agreed 0.015ppm threshold on this day although the central monitors showed spikes of 0.020ppm between 02:26 and 02:36 (monitor 5) and 0.021ppm at 10:13hrs for less than 10 minutes (monitor 5). These spikes were reported on the site odour log with no other reported issues or actions. The storm tanks were empty on this day. The digesters are part of the works closest to Ellerdine Road and the logs taken both at 13.45 and 19.00 showed that there were no spillages of sludge via the annular seals apart from digester 14 on the AM inspection and that none of the pressure relief valves were releasing gas. The site odour logs for that day showed that for the AM shift Monitor 5 (central)6 showed two spikes both under ten minutes with a maximum of 0.021ppm and for the PM shift there were no odour spikes and no odour problems. It has not been possible to identify the source of odour complained of by the resident on this occasion.

On 15<sup>th</sup> December at 13:49 the Council received a telephone call regarding odour affecting James Street (approximately 500 metres North West of the Works). The duty Officer called the resident back advising that an Officer was on site at the time. The Officer on site took live readings from the on-site odour monitors at 13:35 on this day and observed no excessive odour. There was a faint odour across the site and the air was foggy and still. None of the storm tanks were in use on this day although some of the hoppers needed over pumping. One of the digesters was gassing at the time of the inspection. Given the distance

to the receptor it is more likely that any off site odour was due to the cumulative effect of numerous low level odour sources combined with very low winds speed and high humidity / ground fog.

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

**Thursday 8<sup>th</sup> December 2016**

**AM** – No odour problems, no odour spikes.

**PM**– No odour issues, nothing to report on trends.

**Friday 9<sup>th</sup> December 2015**

**AM** – No odour spikes.

**PM** – Server 2 has crashed. Overview monitored every house. No spikes last night.

**Saturday 10<sup>th</sup> December 2016**

**AM** – Trends not work until 11:30. No odour spikes. No odour problems.

**PM** – Monitor 5 – 0.025ppm @ 02:55 – 03.07, 0.023ppm @ 03:55 – 4.07. 0.015ppm @ 18:10 – 18:22.

**Sunday 11<sup>th</sup> December 2016**

**AM** – No odour spikes.

**PM** – Sheet blank.

**Monday 12<sup>th</sup> December 2016**

**AM** – No spikes.

**PM** – No spikes.

**Tuesday 13<sup>th</sup> December 2016**

**AM** – No odour spikes on trends. No odour detected whilst out on site.

**PM** – Trend showing no odour spikes. No other issues.

**Wednesday 14<sup>th</sup> December 2016**

**AM** – Monitor 5 – two spikes. Both under 10 minutes max 0.021ppm.

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

## Sludge Dip Records

Date	West PSTs	West PSTs	West PSTs	West Total	East PSTs	Grand Total
	1	2	3			
	All units in m <sup>3</sup>					
OMP limit	500					
09/12/2016	833	244	0	1077	3267	4344
12/12/2016	88	740	0	828	4272	5100
14/12/2016	0	244	122	366	8916	9282

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 89 imports each of 30m<sup>3</sup> of sludge in the last week.

### Digesters

Digesters 1-4 are permanently out of use.

Digester 13, 16 and 19 were out of use.

All of the other digesters which were in use had good seals with two exceptions; digester 15 was bubbling and digester had a light seal – TW advised that there was a sludge spill from this digester earlier that day, this had been dealt with.

Automatic dosing of anti-foaming agent is now in use and TW advised that this is also applied manually as required to all operational digesters.

**Return Activated Sludge Channel**

The RAS channel (which runs in the ground between FST's 61-64 & 65-67) was clear of sludge. Staff were on site working on pumps.

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

Rectangular PSTs are now covered and odour controlled.

Circular PSTs 9, 10, 11 & 12 were all in operation with no reported problems.

**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). At the time of the inspection all 8 tanks were in operation. All 8 tanks have hose and sprinkler systems fitted onto the sweeper bridges. Thames Water confirmed that there were currently no issues with these tanks.

**East Side Screen House**

The screen house doors were all closed.

**Skips**

**East side**

3 Bulk carriers – 2 empty, 1 containing grit was covered.

**West side**

There were no skips present on the tarmac area near the West inlet works.

**Pasteurisation Plant**

The pasteurisation plant was in service at the time of the inspection with no reported problems.

**Section 106 agreement**

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

**West Side Aeration Lanes (Old)**

No access due to engineering works.

**New Works (West Side)**

No access due to engineering works.

**New Inlet Works (West Side)**

There were no reported issues on this part of the site.

**Odour Control Unit (OCU) performance monitoring – 13/12/2016**

<b>Plant</b>	<b>Reading (ppm)</b>	<b>Action Level (ppm)</b>	<b>Compliant</b>
Main pumping station outlet	0.1(av)	0.2	Yes
East OCU	0.015(av)	0.05	Yes
West inlet	0.00(av)	0.05	Yes
Sludge reception outlet	0.001(av)	0.8	Yes
Thickening plant outlet	0.048(av)	0.6	Yes
Pasteurisation plant outlet (OCU 12)	0.0002(av)	0.5	Yes
Transfer PS outlet	0.044(av)	0.6	Yes
New West OCU 11 outlet	0.000(av)	0.6	Yes

# Jerome reading