



# London Borough of Hounslow

## Mogden Sewage Treatment Works

### TW Site Inspection

<b>Date of inspection:</b> 12 <sup>th</sup> July 2018	
<b>Attendees:</b> Mr Andrew Devine (L B Hounslow) & Mr Waleed Janjua (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>Tank 1A was empty but had some dried grit in the base of the tank. Hoppers 1, 2 &amp; 3 were all drained down but there was some scum on the surface which require over pumping.</p> <p>Tank 1B was empty and clean of grit. Hoppers 1, 2 &amp; 3 were drained down.</p> <p>Tank 2A was empty and clean. Hoppers 1, 2 &amp; 3 were all drained down but there was some scum on the surface which require over pumping.</p> <p>Tank 2B was empty and clean. Hopper 1 was approx half full, hoppers 2 &amp; 3 were drained down.</p> <p>Tank 3A was empty and clean. Hoppers 1, 2 &amp; 3 were all drained down.</p> <p>Tank 3B was empty and clean. Hopper 1 was approx half full of black effluent water. Hoppers 2 &amp; 3 were all drained down</p> <p>Tanks 4A, 4B, 5A &amp; 5B are covered and odour controlled.</p> <p>Tank 6A was empty and clean. Hoppers 1, 2 &amp; 3 were all approx half full and were covered by a green algae.</p> <p>Tank 6B was empty and clean. Hoppers 1, 2 &amp; 3 were all approx ¼ full.</p>	

Tank 7A was empty and clean. Hoppers 1, 2 & 3 (shallow hoppers) were all full.

Tank 7B was empty and clean. Hoppers 1, 2 & 3 (shallow hoppers) were all full.

Tank 8A was empty and clean. Hopper 1 was approx ¼ full with black effluent and sludge. Hopper 2 was drained down and hopper 3 was approx ¼ full. A local odour was noted in this area.

Tank 8B was empty and clean. Hopper 1 was approx ½ full with effluent covered with green algae. Hoppers 2 and 3 were drained down.

### **Storm Water Channel**

The storm feed channel serving STW's 1A-8B was virtually empty with only a shallow level of clean water along its entire length.

### **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 12:30 on 12<sup>th</sup> July 2018).

Monitor 1	0.003	ppm
Monitor 2	0.000	ppm
Monitor 3	0.000	ppm
Monitor 4	0.000	ppm
Monitor 5	0.000	ppm
Monitor 6	0.005	ppm
Monitor 7	0.003	ppm
Monitor 8	0.000	ppm
Monitor 9	0.000	ppm
Monitor 10	0.000	ppm
Monitor 11	0.004	ppm
Monitor 12	0.000	ppm
Monitor 13	0.000	ppm
Wind Dir	52.000	
Wind Spd	0.000	

## Complaints

The council received one complaint via telephone in the preceding week.

On the 5<sup>th</sup> July 2018 at approx 15:28 a telephone complaint was received from a resident of Turham Green Terrace, Chiswick (ref: 974621). During the inspection, the odour trends were inspected for the time of the complaint. The historic odour monitoring trends at the time of the complaint showed that there were no spikes or excessive readings around the time the complaint was made.

The Storm tanks are located on the east side of the works and both the AM and PM logs on the 5<sup>th</sup> July recorded that the only uncovered tanks that were in use was tanks 4A and 4B and that only Tank 7A needed flushing and hoppers 1A, 1B, 3B, 8A and 8B required over pumping. The digester records for the 5<sup>th</sup> July recorded that there were no spills. The odour log for both the AM and PM shifts on the 5<sup>th</sup> July recorded no odour issues and nothing of note on trends, however the AM and PM shift recorded Odour monitor 1 not working and odour monitor 10 not working for the PM shift. It has not been possible on this occasion to identify the source of odour complained of by the resident.

The council received three complaint via email in the preceding week.

On the 07<sup>th</sup> July 2018 at approximately 22:19 an email complaint was received from a resident, however the resident did not give their address details. An email has been sent to request these (ref: 974711). The complainant stated that there is a foul stink of sewage in the air tonight in TW1. Not nice on such a warm night when you absolutely have to have your windows open. During the inspection, the odour trends were inspected for the time of the complaint. The historic odour monitoring trends at the time of the complaint showed that there were no spikes or excessive readings around the time the complaint was made.

The Storm tanks are located on the east side of the works and both the AM and PM storm water tanks logs for the 7<sup>th</sup> July recorded that only the covered tanks 4A to 5B were in use and hoppers 1B, 3B and 7A to 8B required over pumping but that none of the tanks required flushing. The digester records for the 7<sup>th</sup> July recorded that there were no spills. The odour log for both the AM and PM shifts on the 7<sup>th</sup> July recorded no odour issues but that odour monitoring 1 was not working. Therefore it has not been possible on this occasion to identify the source of odour complained of by the resident.

On the 11<sup>th</sup> July 2018 at approximately 14:19 an email complaint was received from a resident of Church Street, Isleworth, which is located to the north east of the works (ref: 974800). The complainant stated that there is a foul smell from Mogden. During the inspection, the odour trends were inspected for the time of the complaint. The historic odour monitoring trends at the time of the complaint showed odour monitor 1 spiking to 0.059ppm between 13:34pm to 14:33pm decreasing to 0.000ppm by 15:542pm. There were no other spikes or excessive readings around the time the complaint was made.

The Storm tanks are located on the east side of the works and both the AM and PM storm water tanks logs for the 11<sup>th</sup> July recorded that only the covered tanks 4A to 5B were in use and hoppers 1B, 3B, 8A and 8B required over pumping but that none of the tanks required flushing. The digester records for the 11<sup>th</sup> July recorded that there were no spills. The odour log for both the AM and PM shifts on the 11<sup>th</sup> July recorded no odour issues. Therefore it has not been possible on this occasion to identify the source of odour complained of by the resident.

On the 11<sup>th</sup> July 2018 at approximately 18:53 an email complaint was received from a resident of Church Street, Isleworth, which is located to the north east of the works (ref: 974824). The complainant stated that there is a stench of Mogden is here again this evening, this is the third day in a row. During the inspection, the odour trends were inspected for the time of the complaint. The historic odour monitoring trends at the time of the complaint showed that there were no spikes or excessive readings around the time the complaint was made.

The Storm tanks are located on the east side of the works and both the AM and PM storm water tanks logs for the 11<sup>th</sup> July recorded that only the covered tanks 4A to 5B were in use and hoppers 1B, 3B, 8A and 8B required over pumping but that none of the tanks required flushing. The digester records for the 11<sup>th</sup> July recorded that there were no spills. The odour log for both the AM and PM shifts on the 11<sup>th</sup> July recorded no odour issues. Therefore it has not been possible on this occasion to identify the source of odour complained of by the resident.

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

**Thursday 05<sup>th</sup> July 2018**

**AM**

**Observations** No odour issues. Odour Monitors 1 and 10 flat lined.

**Actions Reported**

**PM**

**Observations** No odour issues.

**Actions** None.

**Friday 06<sup>th</sup> July 2018**

**AM**

**Observations** No odour issues. Odour Monitor 1 flat lined.

**Actions** None.

**PM**

**Observations** No odour issues. Odour Monitor 1 flat lined.

**Actions** None.

**Saturday 07<sup>rd</sup> J July 2018**

**AM**

**Observations** No odour issues. Odour Monitor 1 flat lined.

**Actions** None.

**PM**

**Observations** No odour issues. Odour Monitor 1 flat lined.

**Actions** None.

**Sunday 08<sup>th</sup> July 2018**

**AM**

**Observations** No odour issues. Odour Monitor 1 flat lined.

**Actions** None.

**PM**

**Observations** No odour issues. Odour Monitor 1 flat lined.

**Actions** None.

**Monday 09<sup>th</sup> July 2018**

**AM**

**Observations** No odour issues. Odour Monitor 1 flat lined.

**Actions** None.

**PM**

**Observations** No odour issues. Odour Monitor 1 flat lined.

**Actions** None.

**Tuesday 10<sup>th</sup> July 2018**

**AM**

**Observations** No odour issues. Odour Monitor 1 flat lined.

**Actions** None.

**PM**

**Observations** No odour issues. Odour Monitor 1 flat lined.

**Actions** None.

**Wednesday 11<sup>th</sup> July 2018**

**AM**

**Observations** No odour issues. Odour Monitor 1 now working.

**Actions** None.

**PM**

**Observations** No odour issues.

**Actions** None.

## 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					
09/07/18	870	1030	870	1961	1416	3377
10/06/18	155	642	*	797	1440	2237
11/06/18	39	740	0	779	1568	2347

The sludge stock levels for the West side circular primary settlement tank 1 were **NOT** compliant with the OMP trigger level (500m<sup>3</sup>) for the data provided on the 09/0718.

While on site Thames Water stated Sludge dip record sheet 09/07/18 - PST 1 exceeds 500m<sup>3</sup> as over the weekend they contended with a blockage on PST9 which was quickly addressed but resulted in a slight backlog of sludge in the subsequent tanks. We carefully monitored the odour levels which did not cause any concern during this period.

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.

\*recorded as H<sub>2</sub>S on sheet. Thames Water advised that the Sludge dip record sheet 10/7/18 - has H<sub>2</sub>S written in PST 3 due the recent weather and increased temperatures, H<sub>2</sub>S coming into the works from the network resulted in spikes of H<sub>2</sub>S in some of our PSTs - as a precautionary measure, we restricted access but at the same time did ensure there was no elevation of sludge levels by running our Desludge pumps continuously.

## Imported Sludge

There have been 47 imports of sludge over the last week with each import containing 35m<sup>3</sup>.

### **Sludge Screening House**

The large roller shutter door of the Raw Sludge Screening building was closed at the time of the inspection.

### **Digesters**

Digesters 1-4 are permanently out of use.

Digesters 5, 6, 7, 8 & 9 were all in use and had good dry crusty seals.

Digester 10 was in use and had wet seals but were only bubbling off minimal amounts of gas.

Digesters 11 and 12 was in use and had a good dry crusty seal.

Digesters 13 & 14 were both out of use.

Digester 15 was in use and had a good dry crusty seal.

Digester 16 was out of use.

Digesters 17 & 18 were both in use and had good dry crusty seals.

Digesters 19 & 20 were both in use and had been pelleted.

All digesters and bell heights just below the half way mark.

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 relatively free flowing along its length.

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

Rectangular PSTs are now covered and odour controlled.

Circular PSTs 9, 10, 11 & 12 were all in operation at the time of the inspection, all had clean fat free surfaces.

**GENERAL**

**Final Settlement Tanks East Side of Works**

The 8 circular tanks previously used as PSTs are now being used as final settlement tanks (71-78). At the time of the inspection all tanks were in operation.

**East Side Screen House**

The screen house doors were closed at the time of the inspection.

**Skips**

On the East side there was one 20yds skip open bulk carrier which was empty at time of inspection. There were also two 6yd skips, one of which was empty and uncovered and 1 was a general waste which was uncovered.

On the West side there was one 20yds open bulk carrier that was empty.

**Pasteurisation Plant**

The pasteurisation plant was in service at the time of the inspection. Thames Water advised all the streams were in operation.

**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)**

All of the aeration tanks have improved and the thick “fluffy” coverage across their entire surface is no longer present. The surface appears much improved and free flowing. Almost all the sprinklers were in operation at the time of the inspection and appeared to be functioning correctly.

The mixed liquor feed channel serving aeration lanes 24-25 (E Battery) was flowing and not clogged on the surface however there were some sludgy areas noticed.

The channel serving aeration lanes 22 & 23 were free flowing.

Thames Water officer advised that a company called Kalvac has now been contracted out to clear the sludge and rag build up along the channels.

**New Inlet Works (West Side)**

No issues appeared evident at the new inlet works.

**Odour Control Unit (OCU) performance monitoring – 26/06/2018**

<b>Plant</b>	<b>Reading (ppm)</b>	<b>Action Level (ppm)</b>	<b>Compliant</b>
Main pumping station outlet	0.000(av)	0.2	Yes
East OCU	0.000(av)	0.05	Yes

West inlet	0.000(av)	0.05	Yes
Sludge reception outlet	*	0.8	Yes
Thickening plant outlet	0.000(av)	0.6	Yes
Pasteurisation plant outlet (OCU 12)	0.000(av)	0.5	Yes
Transfer PS outlet	0.001(av)	0.6	Yes
New West OCU 11 outlet	0.004 (av)	0.6	Yes
# Jerome reading * No information given as Thames Water have advised that the sludge reception plant is currently out of service.			