



# London Borough of Hounslow

## Mogden Sewage Treatment Works

### TW Site Inspection

<b>Date of inspection:</b> 5 <sup>th</sup> April 2018	
<b>Attendees:</b> Mr Steven Maunders (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> – Tank full – No Amajets in operation.</p> <p><b>Tank 1B</b> – Tank full – No Amajets in operation.</p> <p><b>Tank 2A</b> – Tank full – No Amajets in operation.</p> <p><b>Tank 2B</b> – Tank full – No Amajets in operation.</p> <p><b>Tank 3A</b> – Tank full – No Amajets in operation.</p> <p><b>Tank 3B</b> – Tank full – No Amajets in operation.</p> <p><b>Tanks 4A, 4B, 5A &amp; 5B</b> which are covered and odour controlled were all empty - unable to gauge condition as lighting system still not working.</p> <p><b>Tank 6A</b> – Tank full – No Amajets in operation.</p> <p><b>Tank 6B</b> – Tank full – No Amajets in operation.</p>	

**Tank 7A** – Tank full – No Amajets in operation.

**Tank 7B** – Tank full – No Amajets in operation.

**Tank 8A** – Tank full – No Amajets in operation.

**Tank 8B** – Tank full – No Amajets in operation.

**Feed Channel** - The level of effluent in both feed channels was at maximum capacity - some local odour in area in vicinity of Tanks 4 & 5.

**Odour Monitors**

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

Monitor 1	0.007	ppm	14:19
Monitor 2	0.008	ppm	14:19
Monitor 3	0.000	ppm	14:19
Monitor 4	0.006	ppm	14:19
Monitor 5	0.008	ppm	14:19
Monitor 6	0.008	ppm	14:19
Monitor 7	0.007	ppm	14:19
Monitor 8	0.008	ppm	14:19
Monitor 9	0.008	ppm	14:19
Monitor 10	0.006	ppm	14:19
Monitor 11	0.005	ppm	14:19
Monitor 12	0.006	ppm	14:19
Monitor 13	0.008	ppm	14:19
Wind Speed	1	mph	
Wind Direction	215°		

## **Complaints**

**The Council directly received two complaints by telephone in the preceding week.**

**On 1<sup>st</sup> April 2018** a resident of Mogden Lane phoned at 09:28 to advise of excessive odour: “The smell is consistently bad at the moment. Making feel sick.” – contact made with complainant by Duty Officer however visit unnecessary.

The odour log for AM shift on 1<sup>st</sup> April detailed: “No issues”

The historic odour monitoring trends for all OMU’s was unavailable at time of inspection due to SCADA failure.

**On 1<sup>st</sup> April 2018** a resident of Northcote Avenue phoned at 10:34 to advise of excessive odour “The smell is worst (sic) than I’ve ever smelt, Made me actually sick” – contact attempted to be made with complainant by Duty Officer however unsuccessful despite repeated effort – no visit required.

The odour log for AM shift on 1<sup>st</sup> April detailed: “No issues”

The historic odour monitoring trends for all OMU’s was unavailable at time of inspection due to SCADA failure.

**The Council directly received no complaints by email in the preceding week.**

**The Council received no complaints by email from MRAG.**

***Thames Water controller advised that they had received no direct complaints in the preceding week.***

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

**Thursday 29<sup>th</sup> March 2018:**

**AM** – Cold (AM) & Cool (PM) with cloud and rain.

OMU's 4 & 8 out of use - All other OMU's in use.

**Observations:** "OM 1-5 No spikes. OM 6-13 No spikes".

**Actions:** "Monitor 4 flat-lined – defective & Monitor 8 flat-lined – defective".

**PM** – No observations made.

No OMU data recorded.

**Observations:** "No issues."

**Actions:** None noted.

**Friday 30<sup>th</sup> March 2018:**

**AM** – Cold with heavy cloud and rain.

OMU's 4 & 8 out of use - All other OMU's in use.

**Observations:** "OM 1-5 = No spikes. OM 6-13 = No spikes".

**Actions:** None noted.

**PM** – Cool with heavy cloud and rain.

All OMU's in use.

**Observations:** "Monitor No.5 spiked at 00:16 but <15 mins duration (max 0.022ppm) & at 03:31 <15 mins duration (max 0.027ppm). Monitor No.7 spiked at 21:09 for just under an hour (max 0.018ppm). Storming to river all shift."

**Actions:** None noted.

**Saturday 31<sup>st</sup> March 2018:**

**AM** – No observations recorded.

No OMU data recorded.

**Observations:** None recorded

**Actions:** "Power House blackout – No SCADA working.

**PM** – Cold with Partial Sun and heavy cloud and rain.

All OMU's in use.

**Observations:** "Monitor No.5 spiked at 00:22 but <15 mins duration max 0.022ppm and at 03:39 but <15 mins duration max 0.026ppm."

**Actions:** None noted.

**Sunday 1<sup>st</sup> April 2018:**

**AM** – No observations made.

No OMU data recorded.

**Observations:** “No issues.”

**Actions:** None noted.

**PM** – Cool with heavy cloud and rain.

All OMU’s in use.

**Observations:** “Monitor No.8 spiked at 00:45 but <15 mins duration max 0.016ppm. Monitor No.12 spiked at 03:50 – 04:47 max 0.016ppm.”

**Actions:** None noted.

**Monday 2<sup>nd</sup> April 2018:**

**AM** – Cool/Warm with heavy cloud and rain.

No OMU data recorded.

**Observations:** “No odour issues. Nothing to report on Trends.”

**Actions:** None noted.

**PM** – Cool with heavy cloud and rain.

All OMU’s in use.

**Observations:** “Monito No.2 spiked at 18:52-19:49 max 0.017ppm. Monitor No.9 spiked at 02:47-03:45 max 0.018ppm. No odours discovered. Heavy rain.”

**Actions:** “Combi Washers spilling due to blockages during high flows.”

**Tuesday 3<sup>rd</sup> April 2018:**

**AM** – Cool with heavy cloud and rain.

No OMU data recorded.

**Observations:** “No odour issues. Nothing to report on Trends.”

**Actions:** None noted.

**PM** – Cool with Sun, heavy cloud and rain.

All OMU’s in use.

**Observations:** “No odour issues found or reported – No spikes on Trends.”

**Actions:** None noted.

**Wednesday 7<sup>th</sup> February 2018:**

**AM** – No observations recorded.

No OMU data recorded.

**Observations:** "O/M 5 spike to 0.024 @ 07:48 less than 15 mins."

**Actions:** None noted.

**PM** – Cool with heavy cloud and rain.

OMU's 1- 5 in use – No data for OMU's 6-13.

**Observations:** "Monitor No.5 spiked at 20:50 but <15 mins duration max 0.020ppm. Odour monitor No.8 spiked at 01:43 & 04:43 both times < 15 mins duration max 0.021ppm."

**Actions:** None noted.

## 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					
30/03/18	0	1986	764	2750	11624	14374
02/04/18	0	1593	722	2315	6343	8658
04/04/18	0	2121	267	2388	7298	9686

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 of the dates for 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.

## Digesters

**Digesters 1-4** – Out of use (permanent) – noticeable quantity of water accumulated to the brim of these tanks which is thick with algae – requires draining.

**Digester 5** - in use – seal level approx. 4ft below coping stones – seal weak and bubbling.

**Digester 6** - in use – seal level approx. 3ft below coping stones – seal weak and bubbling.

**Digester 7** - in use – seal level approx. 3ft below coping stones – seal weak and bubbling.

**Digester 8** – in use – seal level approx. 3ft below coping stones – seal weak and bubbling.

**Digester 9** - in use – seal level approx. 1ft below coping stones – seal weak and bubbling.

**Digester 10** – in use – seal level approx. 2ft below coping stones – seal weak and bubbling.

**Digester 11** - in use – seal level approx. 1ft below coping stones – seal weak and bubbling.

**Digester 12** - in use – seal level approx. 18” below coping stones – seal weak and bubbling.

**Digester 13** - out of use – empty and clean – contractor on site undertaking maintenance.

**Digester 14** - out of use – empty and clean – contractor on site undertaking maintenance.

**Digester 15** - in use – seal level approx. 18” below coping stones – seal weak and bubbling – ongoing spill from tank requiring clean-up.

**Digester 16** - out of use – empty and clean – contractor on site undertaking maintenance.

**Digester 17** - in use – seal level approx. 18” below coping stones – seal weak and bubbling.

**Digester 18** - in use – seal level approx. 3ft below coping stones – good seal – stones in use.

**Digester 19** -- in use – seal level approx. 2ft below coping stones – seal weak and bubbling.

**Digester 20** - in use – seal level 3ft below coping stones - seal weak and bubbling.

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.

2x full, 3x partially filled & 3x empty tanks of anti-foaming agent seen



positioned throughout area. Installation of “auto-dosing” for anti-foam agent to all digesters operational – currently using 2-3 tanks weekly.

## **GENERAL**

### **Sludge Screening House**

All doors closed at time of inspection - no local odours.

### **Imported Sludge**

No imports received currently due to breakdown in pump to Iver works.

### **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 71 drained down and out of service.

### **Skips**

1x empty small grit slips. – Ongoing spill from plant above – with ponded sludge/grit and rag hanging from plant – requires removal.

1x open skip in use for transfer materials from mobile screening plant located by Pasteurisation Plant.

### **East Side Screen House**

All doors closed.

### **Pasteurisation Plant**

The pasteurisation plant is in service and fully operational.

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

Rectangular PSTs – no issues

Circular PST's 9, 10, 11 & 12 all in use.

**West Side Aeration Lanes (Old)**

Battery C aeration feed channel approximately 50% obstructed in one channel – requires jetting.

**New Works (West Side)**

Feed Channel for Aeration Lanes 20 – 25 blocked – jetting ongoing at time of inspection.

Whole of tanks have again developed “fluffy” coverage across surface – developing to a thick crust in some areas – worsened since previous inspection so as all internal dividing walls have been covered. Significant quantity of surface sludge has surged over external retaining wall onto surrounding grass and roadway – requires removal and cleaning of area.

**Odour Control Unit (OCU) performance monitoring – (03/04/18)**

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	No data	Unknown	Unknown
Main pumping station outlet	0.09 0.10 0.09	0.2	Yes
East OCU	0.003 0.003 0.004	0.05	Yes
West inlet OCU	0.04 0.04	0.05	Yes

	0.03		
Sludge reception inlet	No Data	Unknown	Unknown
Sludge reception outlet	0,00 0,00 0.10	0.8	Yes
Thickening plant inlet	No data		Unknown
Thickening plant outlet	0.30 0.30 0.40	0.6	Yes
Transfer PS inlet	No Data	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.10	0.6	Yes
New West inlet (OCU 11)	0.40 0.40 0.30	0.5	Yes
OCU 12 (Pasteurisation Plant)	0.00 0.00 0.00 0.008	0.5	Yes