



# London Borough of Hounslow

## Mogden Sewage Treatment Works

### TW Site Inspection

<b>Date of inspection:</b> 28 <sup>th</sup> March 2019	
<b>Attendees:</b> Mr Steven Maunders and Mr Manzoor Hussein (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 empty and flushed – recently returned - approximately 40% of tank covered by grit and sludge – requires further flushing - Hoppers 1, 2 &amp; 3 approx. 50% full requires draining/over-pumping.</p> <p><b>Tank 1B</b> – Tank empty and flushed - approximately 10% of tank covered by grit – requires further flushing – Hoppers 1, 2 &amp; 3 full to brim - requires draining/over-pumping.</p> <p><b>Tank 2A</b> – Tank empty and flushed clean – Hoppers 1, 2 &amp; 3, approx. 25% full - requires draining/over-pumping.</p> <p><b>Tank 2B</b> – Tank recently returned – approx. 10% of tank covered by grit and sludge – requires further flushing - Hoppers 1, 2 &amp; 3 approximately 75% full - requires draining/over-pumping.</p> <p><b>Tank 3A</b> – Tank empty and flushed clean – Hoppers 1, 2 &amp; 3 approx. 20% full.</p> <p><b>Tank 3B</b> – Tank recently returned – approx. 60% of tank covered by grit and sludge – requires further flushing – Hoppers 1, 2 &amp; 3</p>	

approximately 75% full - requires draining/over-pumping.

**Tanks 4A, 4B, 5A & 5B** which are covered and odour controlled were all empty - unable to gauge condition as lighting system still not working.

**Tank 6A** – Tank empty and flushed - approximately 10% of tank covered by grit and sludge – requires further flushing. – Hoppers 1, 2 & 3 approximately 20% full - requires draining/over-pumping.

**Tank 6B** – Tank empty and flushed - approximately 20% of tank covered by grit and sludge – requires further flushing. – Hoppers 1, 2 & 3 full to brim - requires draining/over-pumping.

**Tank 7A** – Tank recently returned – approx. 75% of tank covered by grit and sludge – requires further flushing – Hoppers 1, 2 & 3 full – requires draining/over-pumping.

**Tank 7B** – Tank recently returned – approx. 40% of tank covered by grit and sludge – requires further flushing – Hoppers 1, 2 & 3 full – requires draining/over-pumping.

**Tank 8A** – Tank recently returned – approx. 75% of tank covered by grit and sludge – requires further flushing – Hoppers 1, 2 & 3 full – requires draining/over-pumping.

**Tank 8B** – Tank recently returned – approx. 25% of tank covered by grit and sludge – requires further flushing – Hoppers 1, 2 & 3 full – requires draining/over-pumping.

**Feed Channel** - The level of effluent in both feed channels was low – almost bottomed out – no local odours.

### **Complaints**

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

**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 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	14:25
Monitor 2	0.007	ppm	14:25
Monitor 3	0.000	ppm	14:25
Monitor 4	0.007	ppm	14:25
Monitor 5	0.007	ppm	14:25
Monitor 6	0.007	ppm	14:25
Monitor 7	0.009	ppm	14:25
Monitor 8	0.008	ppm	14:25
Monitor 9	0.007	ppm	14:25
Monitor 10	0.007	ppm	14:25
Monitor 11	0.007	ppm	14:25
Monitor 12	0.007	ppm	14:25
Monitor 13	0.005	ppm	14:25
Wind Speed	3	mph	
Wind Direction	56°		

**Odour Log (Thames)**

**Thursday 21<sup>st</sup> March 2019**

**AM** – Warm - Cloudy with Sunny Spells.

All OMU's in use.

**Observations/Complaints:** "No odour issues."

**Operational Issues/Causes:** None noted.

**Actions:** None noted.

**PM** – Cool - Clear Night.

All OMU's in use.

**Observations/Complaints:** "No odour issues."

**Operational Issues/Causes:** "OM1 not trending."

**Actions:** None noted.

### **Friday 22<sup>nd</sup> March 2019**

**AM** – Cool - Cloudy with Sunny Spells.

All OMU's in use.

**Observations/Complaints:** "No odour issues."

**Operational Issues/Causes:** None noted.

**Actions:** None noted.

**PM** – Cool – Clear Night.

All OMU's in use.

**Observations/Complaints:** "OM5 0.018 19:52-20:08, OM5 0.023 @ 22:36-22:51, OM3 0.035 @22:54-end of shift, 0.025 20:37-21:08, 0.018 01:07-01:23, 0.016 01:54-02:08."

**Operational Issues/Causes:** "Unable to identify source."

**Actions:** "Spillages around PAS 10-11 heat exchangers, Spillages around Digesters foaming. Areas hosed down."

### **Saturday 23<sup>rd</sup> March 2019**

**AM** – Warm – Cloudy with Sunny Spells.

All OMU's in use.

**Observations/Complaints:** "No odour issues."

**Operational Issues/Causes:** None noted.

**Actions:** None noted.

**PM** – Cold – Clear Night.

All OMU's in use.

**Observations/Complaints:** None noted.

**Operational Issues/Causes:** "OM3 0.024 descending gradually 04:05 - ? , OM5 0.019 00:38 – 00:53, OM10 0.023 01:20 – 02:20."

**Actions:** "Possible malfunction, No obvious source identified."

**Sunday 24<sup>th</sup> March 2019**

**AM** – Warm – Sunny with Patchy Clouds.

All OMU's in use.

**Observations/Complaints:** "No odour issues."

**Operational Issues/Causes:** None noted.

**Actions:** None noted.

**PM** – Cool – Clear Night.

All OMU's in use.

**Observations/Complaints:** None noted.

**Operational Issues/Causes:** "OM8 0.020 02:50 – 03:04, OM8 0.019 20:05 – 21:03."

**Actions:** "No obvious source identified."

**Monday 25<sup>th</sup> March 2019**

**AM** – Warm – Sunny with Patchy Clouds.

All OMU's in use.

**Observations/Complaints:** "No odour issues."

**Operational Issues/Causes:** None noted.

**Actions:** None noted.

**PM** – Cold – Clear Night.

All OMU's in use.

**Observations/Complaints:** None noted.

**Operational Issues/Causes:** "OM7 0.022 19:22 – 20:22, OM3 0.026 & descending 04:04 – ongoing. OM4 0.017 00:49 – 01:03."

**Actions:** "No obvious source identified in area."

**Tuesday 26<sup>th</sup> March 2019**

**AM** – Warm – Sunny with Patchy Clouds.

All OMU's in use.

**Observations/Complaints:** "No odour issues."

**Operational Issues/Causes:** None noted.

**Actions:** None noted.

**PM** – Cool – Overcast night.

All OMU's in use.

**Observations/Complaints:** "No odour issues."

**Operational Issues/Causes:** None noted.

**Actions:** None noted.

**Wednesday 27<sup>th</sup> March 2019**

**AM** – Cool – Sunny with Patchy Clouds.

All OMU's in use.

**Observations/Complaints:** "No odour issues."

**Operational Issues/Causes:** None noted.

**Actions:** None noted.

**PM** – Cool – Overcast Night.

All OMU's in use.

**Observations/Complaints:** None noted.

**Operational Issues/Causes:** "OM3 0.024 max 23:50 – 01:05."

**Actions:** "Area checked no obvious odours detected."

### 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					
21/03/19	127	2774	1097	3998	2405 (TW figure 2455)	6403 (TW figure 6453)
25/03/19	728*	267	534	1529	2746	4275
27/03/19	435	1885	394	2714	3940	6654

**\*There is an apparent exceedance of OMP levels as detailed above for 25/03/19 and for which notification was provided by TW by email on 28/03/19.**

### 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. Long term project currently initiated to bring these units back into service – will require significant investment.

**Digester 5** - in use – seal level approx. 1t below coping stones - seal weak and bubbling – ongoing spill – requires anti-foam and clean-up – Bell height high – requires draw down of biogas.

**Digester 6** - in use – seal level approx. 2t below coping stones - seal weak and bubbling – ongoing spill – requires anti-foam and clean-up – Bell height high – requires draw down of biogas.

**Digester 7** - in use – seal level approx. 2ft below coping stones – seal weak and bubbling - Ongoing spitting/spill – tank “gurgling” - requires anti-foam and clean-up – Bell height high – requires draw down of biogas.

**Digester 8**- in use – seal level approx. 3t below coping stones - seal weak and bubbling – ongoing spill – requires anti-foam and clean-up – Bell height high – requires draw down of biogas.

**Digester 9** - in use – seal level approx. 2t below coping stones - seal weak and bubbling – ongoing spill – requires anti-foam and clean-up – Bell height high – requires draw down of biogas.

**Digester 10** - in use – seal level approx. 4ft below coping stones - seal weak and bubbling – ongoing spill – requires anti-foam and clean-up – Bell height high – requires draw down of biogas.

**Digester 11** - in use – seal level approx. 3ft below surface of coping stones – seal weak and bubbling – evidence of recent spill accumulated under adjacent cabling ducting – requires anti-foam and clean-up.

**Digester 12** - in use – seal level approx. 2ft below coping stones - seal weak and bubbling – ongoing spill – requires anti-foam and clean-up.

**Digester 13** - in use – seal level approx. 8t below coping stones – good seal – evidence of prior dried spill – requires clean-up.

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

**Digester 15** - out of use – empty and clean – contractor on site undertaking maintenance

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

**Digester 17** - in use – seal level approx. 5t below coping stones - seal weak and bubbling – ongoing spill – requires anti-foam and clean-up.

**Digester 18** - in use – seal level approx. 2ft below coping stones – good seal – evidence of prior dried spill - requires anti-foam and clean-up.



**Digester 19** - in use – seal level approx. 3ft below coping stones – seal weak and bubbling – evidence of prior dried spill - requires anti-foam and clean-up.

**Digester 20** - in use – seal level approx. 2ft below coping stones – seal weak and bubbling.

## **GENERAL**

### **Sludge Screening House**

All doors closed at time of inspection.

### **Imported Sludge**

No imports for preceding seven days.

### **Final Settlement Tanks East Side of Works**

The 8 circular tanks previously used as PSTs are now being used as final tanks (71-78). Green Algae on 100% of surface of Tanks 73 & 74.

### **Skips**

1x large enclosed skip and 1x 20 yard open skip & 1x (8 yard) open general waste skips located in Service Road by Storm Water Tanks.

1x partially filled small grit slips by Sludge Screening House.

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

1x large enclosed grit/rag skips located by PST's 9-12 – elevated at one end to drain liquid from within as exceed safe carriage weight for vehicles – advised that management of fluids draining from within requires improvement as currently ponding within areas of broken hard-standing where currently located.

**Pasteurisation Plant**

Pasteurisation plant 1/4/8/9 currently out of service - All remaining pasteurisation plant in service and fully operational.

**East Side Raw Sludge Screen House**

Doors closed at time of inspection.

**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 21-24 completely obstructed – jetting required.

“Fluffy” coverage across surface returned across 100% of tank – thickened up so as to obscure internal dividing walls within tank.

**Odour Control Unit (OCU) performance monitoring – (26/03/19)**

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.00 0.02	Unknown	Unknown

	0.03		
Main pumping station outlet	0.00 0.00 0.00	0.2	Yes
East OCU	0.00 0.00 0.00	0.05	Yes
West inlet OCU	Out of Service	0.05	Yes
Sludge reception inlet	No data	Unknown	Unknown
Sludge reception outlet	No data	0.8	Yes
Thickening plant inlet	No data	Unknown	Unknown
Thickening plant outlet	0.00 0.00 0.00	0.6	Yes
Transfer PS inlet	No Data	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00	0.6	Yes
New West inlet (OCU 11)	0.00 0.00 0.00	0.5	Yes
OCU 12 (Pasteurisation Plant)	0.00 0.00 0.00	0.5	Yes