



London Borough of Hounslow

Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: 25 th April 2019	
Attendees: Mr Steven Maunders and Mr Peter Hutchins (London Borough of Hounslow) and Mr Channi Varsani (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A – Tank empty - approximately 40% of tank covered by dried grit and sludge – requires flushing/hosing to remove - Hoppers 1, 2 & 3 approx. 10% full.</p> <p>Tank 1B – Tank empty and flushed - approximately 10% of tank covered by dried grit – requires further flushing – Hoppers 1, 2 & 3 drained down to bottom.</p> <p>Tank 2A – Tank empty and flushed clean – Hoppers 1, 2 & 3, drained down to bottom</p> <p>Tank 2B – Tank empty and flushed clean – Hoppers 1, 2 & 3, drained down to bottom.</p> <p>Tank 3A – Tank empty and flushed clean – Hoppers 1, 2 & 3 drained down to bottom.</p> <p>Tank 3B – Tank empty – approx. 50% of tank covered by dried grit and sludge – requires flushing/hosing to remove – Hopper 1 approx. 85% full - requires draining/over-pumping, Hoppers 2 & 3 drained down to</p>	

bottom.

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 clean. Hoppers 1 & 3 drained down to bottom, Hopper 2 approximately 50% full - requires draining/over-pumping.

Tank 6B – Tank empty and flushed - approximately 20% of tank covered by grit and sludge – requires further flushing/hosing to remove. – Hoppers 1, 2 & 3 approximately 30% full - requires draining/over-pumping.

Tank 7A – Tank empty – approx. 60% of tank covered by grit and sludge – requires further flushing/hosing to remove – Hoppers 1 & 2 full – requires draining/over-pumping. Hopper 3 drained down to bottom.

Tank 7B – Tank empty – approx. 50% of tank covered by grit and sludge – requires further flushing/hosing to remove – Hoppers 1, 2 & 3 full – requires draining/over-pumping.

Tank 8A – Tank empty – approx. 25% of tank covered by dried grit and sludge – requires further flushing/hosing to remove – Hoppers 1, 2 & 3 approximately 30% full – requires draining/over-pumping.

Tank 8B – Tank empty – approx. 25% of tank covered by dried grit and sludge – requires further flushing/hosing to remove – Hoppers 1, 2 & 3 approximately 10% full – requires draining/over-pumping.

Feed Channel - The level of effluent in both feed channels was low – 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 (H₂S) for all of the monitors, which were providing data at time of inspection:

Monitor 1	0.006	ppm	13:21
Monitor 2	0.008	ppm	13:21
Monitor 3	0.000	ppm	13:21
Monitor 4	0.004	ppm	13:21
Monitor 5	0.004	ppm	13:21
Monitor 6	0.007	ppm	13:21
Monitor 7	0.009	ppm	13:21
Monitor 8	0.008	ppm	13:21
Monitor 9	0.005	ppm	13:21
Monitor 10	0.007	ppm	13:21
Monitor 11	0.005	ppm	13:21
Monitor 12	0.009	ppm	13:21
Monitor 13	0.007	ppm	13:21
Wind Speed	13	mph	
Wind Direction	184°		

Odour Log (Thames) - Photocopies of log entries taken

Thursday 18th April 2019

AM – Warm - Sunny.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: None noted.
Actions: “No odour issues. Nothing of note on Trends.”
PM – No observations noted.
All OMU’s in use.
Observations/Complaints: None noted.
Operational Issues/Causes: None noted.
Actions: None noted.

Friday 19th April 2019

AM – Warm - Sunny.
All OMU’s in use.
Observations/Complaints: None noted.
Operational Issues/Causes: None noted.
Actions: “No odour issues. Nothing of note on Trends.”
PM – Cool – Clear Night.
All OMU’s in use.
Observations/Complaints: None noted.
Operational Issues/Causes: “No odour issues.”
Actions: None noted.

Saturday 20th April 2019

AM – Hot – Sunny.
All OMU’s in use.
Observations/Complaints: None noted.
Operational Issues/Causes: None noted.
Actions: “No odour issues.”
PM – Cool – Clear Night.
All OMU’s in use.
Observations/Complaints: None noted.
Operational Issues/Causes: “OM4 spiked to 0.04ppm max 01:20 – 02:20, OM8 spiked to 0.033ppm max 01:20 – 02:50, OM6 spiked to 0.03ppm max 03:47 – 04:47.”
Actions: “Area checked. No obvious odours found.”

Sunday 21st April 2019

AM – Hot – Sunny.
All OMU’s in use.

Observations/Complaints: None noted.

Operational Issues/Causes: None noted.

Actions: "No odour issues."

PM – Cool – Clear Night.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: "OM5 spiked to 0.025ppm 01:21 – 02:21."

Actions: "Areas checked no obvious odours found."

Monday 22nd April 2019

AM – Warm – Sunny with Patchy Clouds.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: "OM2 spiked @ 13:50. Max 0.023 for less than 15 min's. OM8 spiked @ 15:50. Max 0.016 for less than 15 min's."

Actions: "Area checked and found to be OK, no other actions taken."

PM – Cool – Clear Night.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: "OM10 spiked to max 0.02ppm 01:25 – 02:55. OM9 spiked to max 0.017ppm 02:03 – 03:02."

Actions: "Area around monitors checked, no obvious odours detected."

Tuesday 23rd April 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 0.020ppm 20:37 – 21:37, OM7 0.021ppm 21:40 – 22:40, OM3 0.021ppm 23:52 – 00:07."

Actions: "Area investigated for odour. No odour detected."

Wednesday 24th April 2019

AM – Warm – Sunny with Patchy Clouds.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: "No odour issues."

Actions: None noted.

PM – Cool – Clear Night.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: "OM2 0.021ppm 22:37 – 22:59,
0.023ppm 01:38 – 01:58."

Actions: "East Inlet Area checked. Confirmed Screen House doors closed. No odour found."

Sludge Dip Records

Date	West PSTs 1	West PSTs 2	West PSTs 3	West Total	East PSTs	Grand Total
	All units in m ³					
OMP limit	500					
21/04/19	20	1303	516	1839	1929	3768
22/04/19	20	1303	516	1839	1929	3768

The sludge stock levels for the West side circular primary settlement tank 1 were **compliant** with the OMP trigger level (500m³) 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.

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. 2t below coping stones - seal weak and bubbling – evidence of prior dried spill - requires anti-foam and clean-up.

Digester 6 - in use – seal level approx. 2t below coping stones - seal weak and bubbling – evidence of prior dried spill - requires anti-foam and clean-up.

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

Digester 9 - in use – seal level approx. 3ft below coping stones - seal weak and bubbling.

Digester 10 - in use – seal level approx. 5ft below coping stones - seal weak and bubbling.

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

Digester 12 - in use – seal level approx. 4ft below coping stones - seal weak and bubbling.

Digester 13 - in use – seal level approx. 4ft below coping stones – seal weak and bubbling.

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. 3ft below coping stones - seal weak and bubbling.

Digester 18 - in use – seal level approx. 1ft below coping stones – - seal weak and bubbling – evidence of prior dried spill - requires anti-foam and clean-up.

Digester 19 - in use – seal level approx. 1ft below coping stones – seal weak and bubbling.

Digester 20 - in use – seal level approx. 1ft below coping stones – seal weak and bubbling.

GENERAL

Sludge Screening House

All doors closed at time of inspection.

Imported Sludge

Average of 10 imports daily 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 1/7/8/9 currently out of service - All remaining pasteurisation plant in service and fully operational.

East Side Raw Sludge Screen House

Doors open 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 40% 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 broken down significantly since previous visit - internal dividing walls within tank now visible.

Odour Control Unit (OCU) performance monitoring – (24/04/19)

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

	0.00		
Main pumping station outlet	0.06 0.06 0.05	0.2	Yes
East OCU	0.00 0.00 0.00	0.05	Yes
West inlet OCU	0.00 0.00 0.00	0.05	Yes
Sludge reception inlet	No data	Unknown	Unknown
Sludge reception outlet	0.00 0.00 0.00	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	0.01 0.01 0.01	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