



Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: 5 th June 2019	
Attendees: Mr Steven Maunders 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 - Hopper 1 approx. 20% full. Hoppers 2 & 3 drained down to bottom.</p> <p>Tank 1B – Tank empty and flushed - approximately 10% of tank covered by dried grit – requires further flushing – Hoppers 1, 2 & 3 approx. 20% full - require draining/over-pumping.</p> <p>Tank 2A – Tank empty and flushed clean – Hopper 1 approx. 20% full. Hoppers 2 & 3 full to brim and require draining/over-pumping.</p> <p>Tank 2B – Tank empty and flushed - approximately 25% of tank covered by dried grit – requires further flushing – Hoppers 1 & 2 approx. 70% full - requires draining/over-pumping. Hoppers 3 drained down to bottom.</p> <p>Tank 3A – Tank empty and flushed clean – Hoppers 1, 2 & 3 approx. 25% full – requires draining/over-pumping.</p> <p>Tank 3B – Tank empty – approx. 50% of tank covered by dried grit and</p>	

sludge – requires flushing/hosing to remove – Hoppers 1, 2 & 3 drained down to 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 - approximately 10% of tank covered by dried grit – requires further flushing - Hopper 1 approximately 10% full - requires draining/over-pumping. Hoppers 2 & 3 drained down to bottom.

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 10% full - requires draining/over-pumping.

Tank 7A – Tank empty – approx. 50% 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 in process of being returned – Hoppers 1, 2 & 3 full.

Tank 8A – Tank empty – approx. 25% of tank covered by dried grit and sludge – requires further flushing/hosing to remove – Hopper 1 approx. 50% full, Hoppers 2 & 3 full – requires draining/over-pumping.

Tank 8B – Tank empty – approx. 15% of tank covered by dried grit and sludge – requires further flushing/hosing to remove – Hoppers 1, 2 & 3 approximately 50% 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	0.005	ppm	14:00
Monitor 2	0.005	ppm	14:00
Monitor 3	0.007	ppm	14:00
Monitor 4	0.006	ppm	14:00
Monitor 5	0.004	ppm	14:00
Monitor 6	0.005	ppm	14:00
Monitor 7	0.007	ppm	14:00
Monitor 8	0.006	ppm	14:00
Monitor 9	0.003	ppm	14:00
Monitor 10	0.007	ppm	14:00
Monitor 11	0.006	ppm	14:00
Monitor 12	0.005	ppm	14:00
Monitor 13	0.004	ppm	14:00
Wind Speed	7.3	mph	
Wind Direction	247°		

Odour Log (Thames)

Thursday 30th May 2019

AM – Cool – Cloudy with Sunny spells.

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: "OM5 = 0.036 @20:50 – 21:06. OM9 = 0.029 @01:13-01:28."
Operational Issues/Causes: "Picking up odours from PAS."
Actions: None noted.

Friday 31st May 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: "No odour issues."
Actions: None noted.

Saturday 1st June 2019

AM – Warm – Sunny.
All OMU's in use.
Observations/Complaints: "OM5 0.021ppm 15:36-15:51, OM2 0.064ppm 12:28-13:06, 0.039ppm 13:40-14:04."
Operational Issues/Causes: "Odour Monitor 5 no odour identified. East inlet skip area hosed down."
Actions: None noted.
PM – Warm – Clear Night.
All OMU's in use.
Observations/Complaints: "OM8 0.053ppm 03:37, OM9 0.066ppm 03:42 till end of shift."
Operational Issues/Causes: "Area checked. No obvious odour found."
Actions: None noted.

Sunday 2nd June 2019

AM – Hot – Sunny.

All OMU's in use.

Observations/Complaints: "OM2 0.035ppm 13:13-13:33, OM5 0.015ppm 16:37-16:51."

Operational Issues/Causes: "No odour identified."

Actions: None noted.

PM – Cool – Clear Night.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: No odour issues."

Actions: None noted.

Monday 3rd June 2019

AM – Warm – Sunny with Patchy Clouds.

All OMU's in use.

Observations/Complaints: "OM5 spike under 15 mins. OM3 0.018 @ 15:10-15:25."

Operational Issues/Causes: "No odour identified."

Actions: None noted.

PM – Cool – Overcast Night.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: "No odour issues."

Actions: None noted.

Tuesday 4th June 2019

AM – Warm – Rain with Sunny spells.

All OMU's in use.

Observations/Complaints: "OM5 0.025 @ 14:36-14:52."

Operational Issues/Causes: "No odour identified."

Actions: None noted.

PM – Cool – Clear Night.

All OMU's in use.

Observations/Complaints: "OM5 0.018ppm 03:22-03:36, 0.030ppm 21:36-21:52. OM2 0.024ppm 00:14-00:30, 0.023ppm 23:27-00:03, 0.023ppm 22:29-22:49."

Operational Issues/Causes: "Area checked no odour issues. East

inlet skip area hosed down. Screen House doors confirmed closed.”

Actions: None noted.

Wednesday 5th June 2019

AM – Warm – Sunny with patch clouds.

All OMU’s in use.

Observations/Complaints: “OM3, 5 & 8 spiked but less than 15 mins.
OM8 0.016 11:53-12:08.

Operational Issues/Causes: “PAS stream 10 drained down today.
Area smelt.”

Actions: None noted.

PM – Cool – Clear Night.

All OMU’s in use.

Observations/Complaints: “OM5 two spikes 0.025ppm 21:51–22:07,
0.18ppm 00:07-00:36.”

Operational Issues/Causes: “Occasional odour detected from PAS.
No sludge spills from either reactors or heat exchangers.”

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					
29/05/19	0	0	244	244	304	548
30/05/19	78	206	244	528	456	984
04/06/19	0	206	183	389	456	845 (785 TW figure)

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. 2ft below coping stones - seal weak and bubbling.

Digester 6 - in use – seal level approx. 2ft below coping stones - seal weak and bubbling.

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

Digester 11 - in use – seal level approx. 2ft below surface of coping stones – seal weak and bubbling.

Digester 12 - in use – seal level approx. 2ft below coping stones - seal weak and bubbling.

Digester 13 in use – seal level approx. 1ft below surface of coping stones – seal weak and bubbling – evidence of recent spill accumulated under adjacent cabling ducting – requires anti-foam and clean-up. Exacerbated by issue with “restricted valve”.

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

Digester 18 - in use – seal level approx. 3ft below coping stones – seal weak and bubbling.

Digester 19 - in use – seal level approx. 3ft below coping stones – seal weak and bubbling.

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

GENERAL

Sludge Screening House

All doors closed at time of inspection.

Imported Sludge

No 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 (covered with tarpaulin) located in Service Road by Storm Water Tanks.

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

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 currently six streams out of service (number unspecified).

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. Tank 11 has fat across 50% of surface.

West Side Aeration Lanes (Old)

Battery C aeration feed channel approximately 75% obstructed in one channel – requires jetting.

New Works (West Side)

Feed Channel for Aeration Lanes 21-24 completely clear.

“Fluffy” coverage across surface broken down significantly since previous visit - internal dividing walls within tank now visible. Quantity of sanitary items by-passing screener reduced.

Odour Control Unit (OCU) performance monitoring – (03/06/19) – (dated 03/09/19 on TW sheet)

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.00 0.00 0.00	Unknown	Unknown
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	0.00 0.00 0.00	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	0.01 0.01 0.01	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)	0.02 0.01 0.00	0.5	Yes