

Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: 24th May 2018

Attendees: Mr Zaheer Kadri (London Borough of Hounslow) and Mr Manzoor Hussain (Thames Water)

LB Hounslow Observation

Thames Water Action / Response

Storm Water Storage Tanks

Tank 1A – 2B - Tank level was approximately 80% full of effluent due to earlier rainfall. Amajets were observed to be in operation. The effluent was murky in some areas generally across all four tanks. No odours in this locality.

Tank 3A – Tank was empty. Hoppers 1, 2 & 3 needed draining down. Amajets are in order.

Tank 3B – Tank was empty. Hoppers 1, 2 & 3 needed draining down. Amajets are in order.

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 – 7B – Tank levels were approximately 80% full of effluent due to earlier rainfall. Amajets were observed to be in operation. The effluent

was murky in some areas generally across all four tanks. No odours in this locality.

Tank 8A – Hoppers were full of effluent and needed draining. There was effluent across ¼ of the tank however the rest of the tank was clear of grit and odour. The level of effluent in the tank was below the amajet hose.

Tank 8B – Hoppers 1, 2 and 3 were full of effluent and needed draining down. The tank was clear and amajets were all in order.

Feed Channel - The level of effluent in both feed channels was approximately 40% full of murky effluent no signs of deposits or sludge – no local odour.

Complaints

The Council received no 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	13:00
Monitor 2	0.003	ppm	13:00
Monitor 3	0.000	ppm	13:00
Monitor 4	0.000	ppm	13:00
Monitor 5	0.000	ppm	13:00
Monitor 6	0.006	ppm	13:00
Monitor 7	0.005	ppm	13:00

Monitor 8	0.006	ppm	13:00
Monitor 9	0.004	ppm	13:00
Monitor 10	0.000	ppm	13:00
Monitor 11	0.003	ppm	13:00
Monitor 12	0.004	ppm	13:00
Monitor 13	0.005	ppm	13:00
Wind Speed	64.000	mph	13:00
Wind Direction	7.000	Deg	13:00

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

Thursday 17th May 2018

Observations AM: No Spikes in Trends.

Actions: None.

Observations PM: OM5 spiked to 0.021 at 00:56 (under 15min).

Actions: None.

Friday 18th May 2018

Observations AM: No Spikes in Trends.

Actions: None.

Observations PM: OM7 spiked to 0.016ppm at 22:28-23:22.

Actions: None.

Saturday 19th May 2018

Observations AM: No odour spikes.

Actions: None.

Observations PM: No odour spikes.

Actions: None.

Sunday 20th May 2018

Observations AM: No odour spikes.

Actions: None.

Observations PM: No odour issues on site. No spikes on trends.

Actions: None.

Monday 21st May 2018

Observations AM: No odour issues on site. No spikes on trends.

Actions: None.

Observations PM: No odour issues on site. No spikes on trends.

Actions: None.

Tuesday 22nd May 2018

Observations AM: No odour issues on site. No spikes on trends.

Actions: None.

Observations PM: No odour issues on site. No spikes on trends.

Actions: None.

Wednesday 23rd May 2018

Observations AM: No odour issues on site. No spikes on trends.

Actions: None.

Observations PM: No odour issues on site. No spikes on trends.

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 ³					
OMP limit	500					
18/05/18	1467	948	3752	6167	450	6617
21/05/18	1070	1092	328	2490	2266	4756
23/05/18	1070	1776	450	3296	3268	6564

The sludge stock levels (highlighted in red) for the West side circular primary settlement tank 1 were NOT 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 within three days.

Digesters

Digesters 1-4 - Out of use (permanent).

Digester 5 - in use - seal level approx. 1ft below coping stones - seal weak watery but stable. No signs of spillages.

Digester 6 - in use - seal level approx. 1ft below coping stones - seal sludgy and stable. No signs of spillages.

Digester 7 - in use - seal level approx. 1ft below coping stones - seal weak watery and gassy in some part. No signs of spillages at time of inspection.

Digester 8 - in use - seal level approx. 1ft below coping stones - seal thick and sludgy but stable. No signs of spillages.

Digester 9 - in use - seal level approx. 1ft below coping stones - seal thick and sludgy but stable. No signs of spillages.

Digester 10 - in use - seal level approx. 1ft below coping stones - seal weak watery but stable. No signs of spillages.

Digester 11 - in use - seal level approx. 1ft below coping stones - seal weak watery but stable. No signs of spillages.

Digester 12 - in use - seal level approx. 1ft below coping stones - seal thick and sludgy. No signs of spillages.

Digester 13 - Out of use.

Digester 14 - Out of use.

Digester 15 - in use - seal level approx. 1ft below coping stones - seal weak watery but stable. No signs of spillages.

Digester 16 - Out of use.

Digester 17 - in use - seal level approx. 1ft below coping stones - seal weak watery but stable. No signs of spillages.

Digester 18 - in use - seal level approx. 1ft below coping stones - seal thick and stable (Pellets used). No signs of spillages.

<p>Digester 19 - in use - seal level approx. 1ft below coping stones - seal thick and stable (Pellets used). No signs of spillages.</p> <p>Digester 20 - in use - seal level approx. 1ft below coping stones - seal thick and stable. No signs of spillages in use.</p> <p>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.</p>	
<p><u>GENERAL</u></p> <p><u>Return Activated Sludge Channel</u> The nearside RAS channel (which runs in the ground between FST's 61-64 & 65-67) was relatively free flowing but was clogged along approx <math>< \frac{1}{4}</math> of its length on the nearside channel with thick sludge.</p> <p><u>West side primary settlement tanks (PST)</u> 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.</p> <p><u>Sludge Screening House</u> Shutter doors closed at time of inspection - no local odours.</p> <p><u>Imported Sludge</u> Eight imports of 35m³ daily for preceding week (Monday - Friday).</p>	

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

1 x empty 14yd skip (Grit house) empty and uncovered.
2 x 14yd open skip empty and uncovered.

East Side Screen House

All doors closed at time of inspection.

Pasteurisation Plant

The pasteurisation plant is in service and fully operational.

West Side Aeration Lanes (Old)

Battery C aeration feed channel approximately 20% obstructed in one channel – requires jetting.

New Works (West Side)

Feed Channel for Aeration Lanes 20 & 22 – 25 clear. Aeration Lane 21 approximately 80% free flowing – requires jetting.
Approximately 60% of tank had developed “thick fluffy” coverage across surface –sprinklers were in operation at time of inspection.

Odour Control Unit (OCU) performance monitoring (18/05/18)

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	0,00 0,00 0.00	0.8	Yes
Thickening plant inlet	No data	Unknown	Unknown
Thickening plant outlet	0.000 0.000 0.000	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 (Pasteurization Plant)	0.00 0.00 0.00	0.5	Yes	
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