



London Borough of Hounslow

Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: 31st of January 2019	
Attendees: Mr Zaheer Kadri and Mr Manzoor Hussain (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A – Tank empty and flushed – Hopper 1, 2 & 3 needed draining down however at time of inspection the layers had frozen over due to cold and icy temperatures – Once thawed these requires draining/over-pumping.</p> <p>Tank 1B – Tank empty and flushed – Hopper 1, 2 & 3 needed draining down however at time of inspection the layers had frozen over due to cold and icy temperatures – These hoppers require draining/over-pumping.</p> <p>Tank 2A – Tank empty and flushed clean – Hoppers 1, 2 & 3, had all been drained down and clear of effluent.</p> <p>Tank 2B – Tank empty and flushed – Hopper 1, 2 & 3 needed draining down however at time of inspection the top layer of effluent had frozen over due to cold and icy temperatures – These hoppers require draining/over-pumping.</p> <p>Tank 3A – Tank empty and flushed clean – Hoppers 1, 2 & 3, had all been drained down and clear of effluent. Tank empty and flushed clean</p>	

Tank 3B – Tank empty and flushed – Hopper 1, 2 & 3 needed draining down however at time of inspection the top layer of effluent had frozen over due to cold and icy temperatures – These hoppers require 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 cleaned – Hoppers 1 , 2 and 3 full – requires draining/over-pumping.

Tank 6B – Tank empty and flushed - approximately 10% of tank covered by grit and sludge – requires further flushing. – Hoppers 1 & 2 approx. 50% full - requires draining/over-pumping – Hopper 3 drained down to bottom level.

Tank 7A – Tank recently returned – Hopper end of the tank covered by grit and sludge – requires further flushing – Hoppers 1, 2 & 3 full – requires draining/over-pumping. Some icy patches on top layer

Tank 7B – Tank was widely covered with frozen effluent at 10% high. All hoppers were full and also frozen over. Hoppers 1, 2 & 3 full – requires draining/over-pumping.

Tank 8A – Tank was widely covered with frozen effluent at 10% high. All hoppers were full and also frozen over. Hoppers 1, 2 & 3 full – requires draining/over-pumping.

Tank 8B – Tank empty and flushed - approximately 5% 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 (H₂S) for all of the monitors, which were providing data at time of inspection:

Monitor 1	0.009	ppm	10:34
Monitor 2	0.014	ppm	10:34
Monitor 3	0.011	ppm	10:34
Monitor 4	0.010	ppm	10:34
Monitor 5	0.009	ppm	10:34
Monitor 6	0.000	ppm	10:34
Monitor 7	0.009	ppm	10:34
Monitor 8	0.009	ppm	10:34
Monitor 9	0.009	ppm	10:34
Monitor 10	0.010	ppm	10:34
Monitor 11	0.000	ppm	10:34
Monitor 12	0.005	ppm	10:34
Monitor 13	0.014	ppm	10:34
Wind Speed	-	mph	10:34
Wind Direction	-		10:34

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

Thursday 24th January 2019

AM

Cold – Cloudy with sunny spells.

All OMU's in use.

Time: 17:30.

Observations/Complaints:

OM5 had 4 spikes throughout the shift.

0.029ppm 08:04-08:21

0.026ppm 09:50-10:06

0.027ppm 11:34-11:51

0.052ppm 15:04-15:21

Operational Issues/Causes:

Odours detected from PAS area, No sludge spills or heat exchanges.

OCU12 running normally with 0.2ppb from stack. Multiple sludge imports received on site throughout the day.

Actions: None noted.

PM

Temp/Weather not recorded.

All OMU's in use.

Time: None noted.

Observations/Complaints: None.

Operational Issues/Causes: Spreadsheet locked out/ No complaints received.

Actions: None noted.

Friday 25th January 2019**AM**

None noted.

All OMU's in use.

Time: None noted.

Observations/Complaints: None noted.

Operational Issues/Causes: Spreadsheet locked out/ No complaints received.

Actions: None noted.

PM

None noted.

All OMU's in use.

Time: None noted.

Observations/Complaints:

Operational Issues/Causes: Spreadsheet locked out/ No complaints received.

Actions: None noted.

Saturday 26th January 2019

AM

None noted.

All OMU's in use.

Time: None noted.

Observations/Complaints: None noted.

Operational Issues/Causes: Spreadsheet locked out/ No complaints received.

Actions: None noted.

PM

None noted.

All OMU's in use.

Time: None noted.

Observations/Complaints: None noted.

Operational Issues/Causes: None noted.

Actions: None noted.

Sunday 27th January 2019

AM

Weather/Temp not recorded.

All OMU's in use.

Time: None noted.

Observations/Complaints: None recorded.

Operational Issues/Causes: Spreadsheet locked out/ No complaints received.

Actions: None noted.

PM

Weather/Temp not recorded Cool.

All OMU's in use.

Time: None noted.

Observations/Complaints: None noted.

Operational Issues/Causes: Spreadsheet locked out/ No complaints received.

Actions: None noted.

Monday 28th January 2019

AM

Cold and Sunny.

All OMU's in use.

Time: 17:30.

Observations/Complaints: OM8 - spiked to 0.019 @ 08:01-09:00.

Operational Issues/Causes: Sludge imports.

Actions: None noted.

PM

Freezing – clear night.

All OMU's in use.

Time: 05:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

Tuesday 29th January 2019

AM

Freezing – Sunny.

All OMU's in use.

Time: 17:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: None noted.

Actions: none noted.

PM

Freezing - overcast night.

All OMU's in use.

Time: 05:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

Wednesday 30th January 2019

AM – Freezing – Sunny.

All OMU's in use.

Time: 17:30.

Observations/Complaints: OM8 spiked (less than 15 minute duration).

Operational Issues/Causes: Works on OCU11.

Actions: None noted.

PM

Freezing – Clear Night.

All OMU's in use.

Time: 06:00.

Observations/Complaints: OM spiked to 0.025ppm @ 18:23-21:08 and OM5 spiked 6 times overnight max peak 0.036ppm.

Operational Issues/Causes: works on OCU11 and area investigated for odours – no odours detected – sludge imports during the night.

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 ³					
OMP limit	500					
25/01/19	0	1176	0	1176	2409	3585
26/01/19	39	1630	0	1669	3554	5223
29/01/19	0	656	0	656	2939	3595

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 – good seal – evidence of recent spill – requires anti-foam and clean-up.

Digester 6 - in use – good seal level approx. 2ft below coping stones.

Digester 7 - in use – seal level approx. 2ft below coping stones – seal weak and bubbling - Ongoing spitting/spill – requires anti-foam and clean-up.

Digester 8 – in use –good seal level approx. 1ft below coping stones.

Digester 9 - in use – seal level approx. 1ft below surface of coping stones – good seal.

Digester 10 – in use – seal level approx. 1ft below surface of coping stones – seal weak and bubbling.

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

Digester 12 - in use – seal level approx. 1ft below coping stones – good seal.

Digester 13 - out of use – empty and clean.

Digester 14 - out of use – empty and clean.

Digester 15 - out of use – empty and clean.

Digester 16 - out of use – empty and clean.

Digester 17 - in use – seal level approx. 3ft below coping stones – seal weak and bubbling.

Digester 18 - in use – seal level approx. 2ft below coping stones – seal weak and bubbling.

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

Digester 20 - in use – seal level approx. 3ft below coping stones – good seal.

GENERAL

Sludge Screening House

All doors closed at time of inspection however aware that on previous visits these doors have been left open to avoid condensation build up – TW advised that doors being left open to create air flow is a Management decision to improve internal working environment for staff – odour monitors deployed in vicinity to determine whether local odours increase as a consequence.

Imported Sludge

Estimated average of ten 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

No Skips present at the screening House- All clear

2 x 12yard skips at the East side grit house which were empty with one large Biffa enclosed skip. No odour detected

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. Currently installing trial of odour control "mistlers" on Tank 10 – pipe installed around tank top tail with nozzle sprays at regular intervals which can be utilised to create a plume of deodoriser (same as current mobile units on site) – intention to roll this

out to all “odorous areas” on site if proves effective during trial period – initial testing has proven successful to date – trial ongoing. At time of inspection these misters were not in operation.

Pasteurisation Plant

Pasteurisation plant 4/7/9 currently out of service - All remaining pasteurisation plant in service and fully operational.

West Side Aeration Lanes (Old)

Battery C aeration feed channel approximately 25% obstructed in one channel – requires jetting. Kelvac vehicle on site at time of inspection.

New Works (West Side)

Feed Channel for Aeration Lanes 21-24 obstructed partly but then free flowing – this may require jetting. Kelvac on site at time of inspection.

“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 – (29/01/19)

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.08 0.08 0.07	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	0.04 0.05 0.03	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)	Not in service	0.5	Yes
OCU 12 (Pasteurisation Plant)	0.04 0.04 0.03	0.5	Yes