

Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: Thursday 26th September 2019 (12:00)

Attendees: Mr Zaheer Kadri (LBH) and Ms Charlotte Page (Thames Water)

LB Hounslow Observation

Thames Water Action / Response

Storm Water Storage Tanks (SWST)

Tank 1A was empty and clean however some wet sludge residue on the surface of the Tank (Hopper end). Hoppers 1, 2, and 3 had all been drained down.

Tank 1B was empty and clean however some wet sludge residue across the surface of the Tank. Hoppers 1, 2, and 3 had all been drained down.

Tank 2A was empty and clean however some wet sludge residue across the surface of the Tank (Hopper end mainly). Hoppers 1, 2, and 3 had all been drained down.

Tank 2B was empty and clean however some wet sludge residue on the surface of the Tank (Hopper end). Hoppers 1, 2, and 3 had all been drained down.

Tank 3A & Tank 3B were both being flushed at time of inspection—effluent was 30% high and amajets were fully operational.

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 was empty and clean however some wet sludge residue on the surface of the Tank (Hopper end). Hoppers 1, 2, and 3 had all been drained down.

Tank 6B was empty and clean however some wet sludge residue on the surface of the Tank (Hopper end). Hoppers 1, 2, and 3 had all been drained down.

Tank 7A was empty and clean however some wet sludge residue on the surface of the Tank (Hopper end). Hoppers 1, 2, and 3 had all been drained down.

Tank 7B was empty and clean however some wet sludge residue on the surface of the Tank (Hopper end). Hoppers 1, 2, and 3 had all been drained down.

Tank 8A was empty and clean. Hoppers 1, 2, and 3 were all drained down to the bottom and were very low level.

Tank 8B was empty and clean. Hoppers 1, 2, and 3 were all drained down to the bottom and were very low level.

Amajets No reports of any faults with amajets. All in working order.

Feed Channel - The level of effluent in both feed channels was at 20% high - in places it was murky with fatty deposits visible. Most of the channel was free flowing and odourless. No local odours rags, fats or solids.

Complaints

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

The Council 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	12:40
Monitor 2	0.003	ppm	12:40
Monitor 3	0.000	ppm	12:40
Monitor 4	0.004	ppm	12:40
Monitor 5	0.004	ppm	12:40
Monitor 6	0.006	ppm	12:40
Monitor 7	0.005	ppm	12:40
Monitor 8	0.004	ppm	12:40
Monitor 9	0.003	ppm	12:40
Monitor 10	0.004	ppm	12:40
Monitor 11	0.000	ppm	12:40
Monitor 12	0.000	ppm	12:40
Monitor 13	No data	No data	12:40
Wind Speed	No data	mph	12:40

Wind Direction	No data	Deg	12:40	
<p><u>Odour Log (Thames) - Photocopies of log entries taken:</u></p> <p><u>Thursday 19th September 2019</u> AM - Warm and Cloudy. All OMU's in use. Time: 17:30. Observations/Complaints: No odour issues. Operational Issues/Causes: No odours. Actions: None noted. PM - Warm and Sunny All OMU's in use. Time: 05:30. Observations/Complaints. No odour issues. Operational Issues/Causes: No odour issues. Actions: None noted.</p> <p><u>Friday 20th September 2019</u> AM - Warm and Sunny All OMU's in use. Time: None Noted. Observations/Complaints: No odour issues reported. Operational Issues/Causes: No odour issues reported. Actions: None noted. PM - Cool and Clear night. All OMU's in use. Time: 05:30. Observations/Complaints: OM3 spiked to 0.017ppm max (less than a 15 minute duration). Operational Issues/Causes: None noted. Actions: None noted.</p>				

Saturday 21st September 2019

AM - Warm and Sunny.

All OMU's in use.

Time: 17:30.

Observations/Complaints. OM2 spiked to 0.031ppm max at 14:35 and then again at 09:02 to 0.103ppm (both spikes lasted less than a 15 minute duration).

Operational Issues/Causes: No odour issues.

Actions: None noted.

PM - Cool clear night.

All OMU's in use.

Time: 05:30.

Observations/Complaints. No odour issues.

Operational Issues/Causes: No odour identified.

Actions: None Noted.

Sunday 22nd September 2019

AM - Warm and cloudy with sunny spells.

All OMU's in use.

Time: 17:30.

Observations/Complaints.

OM2 spikes:

0.033ppm @ 4:46-05:55

0.071ppm @ 06:02-06:28

0.017ppm @ 10:42-10:57

0.022ppm @ 10:05-10:22

0.039ppm @ 09:18-09:59

0.017ppm @ 14:13-14:18

0.016ppm @ 15:57-16:03

Operational Issues/Causes: Area checked no abnormalities

Actions: None Noted.

PM - Cool/ clear night.

All OMU's in use.

Time: 05:30.

Observations/Complaints.

OM2 spikes:

0.044ppm @ 20:19-20:42

0.039ppm @ 21:12-22:17

0.025ppm @ 00:08-00:24

Operational Issues/Causes: Area checked - confirmed all doors and covers are closed - East inlet skip area washed down - No odours identified.

Actions: None noted.

Monday 23th September 2019

AM - Cool / Rain with sunny spells.

All OMU's in use.

Time: 17:30

Observations/Complaints.

OM2 spikes:

0.048ppm @ 10:20-10:40

0.040ppm @ 11:24-11:38 (lasted less than 15 minute duration).

Operational Issues/Causes: Area checked no obvious signs of odour production - East inlet looked normal.

Actions: None.

PM - Cool with Rain.

All OMU's in use.

Time: 05:30.

Observations/Complaints. None Noted.

Operational Issues/Causes: None.

Actions: No odour issues.

Tuesday 24th September 2019

AM - Cool with Rain.

All OMU's in use.

Time: 17:40.

Observations/Complaints: No odour issues.

Operational Issues/Causes: No odours found.

Actions: none noted.

PM – Cool with Rain.

All OMU's in use.

Time: 17:30.

Observations/Complaints:

OM2 spikes:

0.040ppm @ 06:20-06:44

0.089ppm @ 09:00-09:30.

Operational Issues/Causes: None odours found.

Actions: None noted.

Wednesday 25th September 2019

AM – Cool Rain with sunny spells.

All OMU's in use.

Time: 17:30.

Observations/Complaints:

OM2 spikes:

0.018ppm @ 07:12-07:19 (Less than 5 minute duration)

0.016ppm @ 08:30-08:43.

Operational Issues/Causes: None odours found.

Actions: None noted.

PM – Cool with Rain.

All OMU's in use.

Time: 05:20.

Observations/Complaints:

OM2 spikes 0.017ppm @ 04:41-04:49

OM6 spikes 0.019ppm @ 19:52-20:07

OM6 spikes 0.019ppm @ 19:52-20:07 and again to 0.017ppm at 20:22-20:37.

Operational Issues/Causes: All areas checked.

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					
20/09/19	0	122	244	366	1264	1630
23/09/19	0	386	244	630	936	1566
25/09/19	0	412	450	862	760	1622

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. 1ft below coping stones - good seal.

Digester 6 - in use - good seal level approx. 1ft below coping stones. Thick and crusty in places.

Digester 7 - Out of service

Digester 8 - in use - good seal level approx. 1ft below coping stones. Slightly watery and foamy

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

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

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

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

Digester 13 - in use - seal level approx. 1ft below coping stones - good seal thick in texture.

Digester 14 - out of use.

Digester 15 - out of use.

Digester 16 - in use - seal level approx. 1ft below coping stones - seal thick and crusty in places.

Digester 17 - in use - seal level approx. 1ft below coping stones - Good crusty seal thick in texture.

Digester 18 - out of use.

Digester 19 - in use - seal level approx. 2ft below coping stones - good thick seal thick in texture .

Digester 20 - in use - seal level approx. 1ft below coping stones - good seal thick in texture.

No odour in the area observed at times of inspection

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. No odours observed.

Imported Sludge

There have been 30 imports of sludge over the last week (10 on Friday the 20th, Monday the 23rd and Wednesday the 25th of September 2019).

Final Settlement Tanks East Side of Works

The 8 circular tanks previously used as PSTs are now being used as final tanks (71-78). All jets and hoses were in operation and no excessive build-up of algae.

Skips

No Skips present at the East side screening House- All clear.
Eastside Grit House had 2 x 12 yard skips full with general waste and partially covered
1 x Bulk carrier (OPEN) with metals and other inert material inside - this was uncovered (used for general waste).
No Skips present at the West Side gritting house, all clear.
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 noticed at time of inspection.

Circular PST's 9 and 10 were in use and all hoses were in operation.
Circular PST number 11 and 12 had been drained down and out of service. No Odours observed.

Pasteurisation Plant

Pasteurisation plant had four streams (1, 8, 9 and 12) that were out of service. All remaining pasteurisation plant in service fully operational.

West Side Aeration Lanes (Old)

Battery C aeration feed channel approximately 100% clear of any obstruction- effluent is flowing with ease no rags or build up noticed.

New Works (West Side)

Feed Channel for Aeration Lanes 21-24 free flowing no obstructions or odours. The contractor Celvac now only attends intermittently or when needed.

The “Fluffy” coverage (obscured internal dividing walls within tank) that had been observed on previous visits had lightened in texture revealing the dividing walls within the tank. There were no concerning odours around this area.

Odour Control Unit (OCU) performance monitoring – (11th September 2019)

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.00 0.00 0.00 Ave: 0.00	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00 Ave: 0.00	0.2	Yes
East OCU	0.00 0.00 0.00 Ave: 0.00	0.05	Yes
West inlet OCU	0.00 0.00 0.00	0.05	Yes

	Ave: 0.00		
Sludge reception inlet	0.00 0.00 0.00 Ave: 0.00	Unknown	Unknown
Sludge reception outlet	0.00 0.00 0.00 Ave: 0.00	0.8	Yes
Thickening plant inlet	No data	Unknown	Unknown
Thickening plant outlet	4.41 3.39 3.09 Ave: 3.63	0.6	Yes
Transfer PS inlet	4.26 3.72 3.54 Ave: 3.84	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00 Ave: 0.00	0.6	Yes
New West inlet (OCU 11)	0.00 0.00 0.00 Ave: 0.00	0.5	Yes
OCU 12 (Pasteurisation Plant)	0.00 0.00 0.00 Ave: 0.00	0.5	Yes

