



Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: 12th December 2018

Attendees: Mr I Inman (London Borough of Hounslow) and Mr M Hussain (Thames Water)

LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A was empty and relatively clean. Hoppers 1, 2 & 3 were all full and needed draining down.</p> <p>Tank 1B was empty and relatively clean. Hoppers 1, 2 & 3 were all full and needed draining down.</p> <p>Tank 2A was empty and clean. Hoppers 1, 2 & 3 were all drained down.</p> <p>Tank 2B was empty and clean. Hoppers 1, 2 & 3 were all approximately ¼ full and required further draining down.</p> <p>Tank 3A was empty and clean. Hoppers 1, 2 & 3 were all approximately ¼ full and required further draining down.</p> <p>Tank 3B was empty and clean. Hoppers 1 & 2 were drained down, hopper 3 was approximately ¼ full and required further draining down.</p> <p>Tanks 4A, 4B, 5A & 5B which are covered and odour controlled were all empty. Unable to gauge condition as lighting system still not</p>	

working.

Tank 6A was full and being returned at the time of the inspection. Amajets 1, 2 & 3 were all in operation.

Tank 6B had just been returned and the tank surface was covered in sludge. Hoppers 1 & 3 were full and hopper 2 was ½ full, all required draining down.

Tank 7A had just been returned and the tank surface was covered in sludge. Hoppers 1, 2 & 3 (shallow hoppers) all contained large quantities of grit & sludge and required cleaning up.

Tank 7B had just been returned and the tank surface was covered in sludge. Hoppers 1, 2 & 3 (shallow hoppers) all contained large quantities of grit & sludge and required cleaning up.

Tank 8A was just finishing being returned and still had a shallow level of effluent across 2/3 of its surface. Hoppers 1, 2 & 3 were all full.

Tank 8B was full and being returned at the time of the inspection. Amajets 1, 2 & 3 were all in operation.

Feed Channel - The level of effluent in both feed channels was very low along its entire length and bottomed out in places where grit was present.

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.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection: Wednesday 12th December 2018 at 09:28.

Monitor 1	0.006	ppm	09:28
Monitor 2	0.005	ppm	09:28
Monitor 3	0.004	ppm	09:28
Monitor 4	0.004	ppm	09:28
Monitor 5	0.006	ppm	09:28
Monitor 6	0.004	ppm	09:28
Monitor 7	0.005	ppm	09:28
Monitor 8	0.005	ppm	09:28
Monitor 9	0.004	ppm	09:28
Monitor 10	0.005	ppm	09:28
Monitor 11	0.004	ppm	09:28
Monitor 12	0.005	ppm	09:28
Monitor 13	0.004	ppm	09:28
Wind Speed	Not displayed	mph	09:28
Wind Direction	Not displayed	°	09:28

Odour Log (Thames) - Photocopies of log entries taken

Thursday 6th December 2018

DAY SHIFT

Temp. Cool.

Weather. Cloudy.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. No odours.

Operational issues / causes observed. Blank.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Cool.

Weather. Cloudy.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. No odour issues..

Operational issues / causes observed. Blank.

Actions Taken. Blank.

Friday 7th December 2018

DAY SHIFT

Temp. Cool.

Weather. Rain.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM7 – 0.016 – 16:59-17:15.

Operational issues / causes observed. Digester 7 blowing wesso.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Cold.

Weather. Overcast night.

Odour Readings. All OMU's in use.

Time: 05:30.

Observations / Customer Complaint. No odour issues.

Operational issues / causes observed. Blank.

Actions Taken. Blank.

Saturday 8th December 2018

DAY SHIFT

Temp. Cool.

Weather. Rain with sunny spells.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM2 – 0.15 @ 15:40-16:43.

Operational issues / causes observed. Sean visited area. No odours detected.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Cold.

Weather. Cloudy.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. No odour issues.

Operational issues / causes observed. Blank.

Actions taken. Blank.

Sunday 9th December 2018

DAY SHIFT

Temp. Cool.

Weather. Sunny w/patchy clouds.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. No odour issues.

Operational issues / causes observed. Blank.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Cool.

Weather. Overcast night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. Monitor No.4 spiked at 19:58-20:10 <15 mins duration max 0.018, Monitor No.7 spiked at 01:30-01:45 max 0.020.

Operational issues / causes observed. Blank.

Actions Taken. Blank.

Monday 10th December 2018

DAY SHIFT

Temp. Cool.

Weather. Cloudy w/sunny spells.

Odour Readings. All OMU's in operation.

Time: 15:58.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. OM3 spiked to 0.020ppm at 15:58 till 17:13. Area round new west inlets and pat's no obvious odours found. OCU11 still not working properly.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Cold.

Weather. Clear night.
Odour Readings. All OMU's in operation.
Time: 05:30.
Observations / Customer Complaint. OM3 spiked at 17:418:12 max 0.020, OM1 spiked at 19:00 but <10 mins duration.
Operational issues / causes observed. OCU11 not working correctly.
Actions Taken. Blank.

Tuesday 11th December 2018

DAY SHIFT

Temp. Cool.

Weather. Sunny with patchy spells.

Odour Readings. All OMU's in operation.

Time: 14:43.

Observations / Customer Complaint. OM3 spiked to max 0.027 at 14:43 through to end of shift.

Operational issues / causes observed. OCU11.

Actions Taken: Blank.

NIGHT SHIFT

Temp. Cold.

Weather. Clear night.

Odour Readings. All OMU's in operation.

Time: Blank.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. Blank.

Actions Taken: Blank.

Wednesday 12th December 2018

DAY SHIFT

Temp. Cool.

Weather. Sunny.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. OM3 – 0.021 @ 18:00-18:27, 0.022 @ 19:13-20:27, 0.016 @ 4:27-4:42.

Operational issues / causes observed. Scrubber 1 in service on OCU11.

Time: 17:30.

Observations / Customer Complaint. OM3 spiked to max of 0.027.

Operational issues / causes observed. OCU11.

Actions taken: Blank.

NIGHT SHIFT

Temp. Cold.

Weather. Clear night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. OM3 spiked to max of 0.019 @ 15:57-19:13, OM3 spiked to max 0.020 @ 19:28-19:42.

Operational issues / causes observed. Scrubber 1 in service on OCU11.

Actions Taken: Blank.

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					
06/12/18	0	2297	0	2297	2257	4554
10/12/18	0	1715	244	1959	1592	3551
12/12/18	225	2091	0	2316	2537	4853

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.

Imported Sludge

There have been 3 imports of sludge over the last week.

Sludge Screening House

The large roller shutter door of the Raw Sludge Screening building was closed at the time of the inspection.

Digesters

Digesters 1-4 – Out of use (permanent) – a noticeable quantity of water has accumulated to the brim of these tanks which is thick with algae – requires draining.

Digesters 5, 6, 7, 8, 9 & 10 were all in use but had a very wet seals that were bubbling off small amounts of gas.

It was noted that the bell height of digesters 7 & 8 were very high.

Digesters 11 & 12 were both in use and had very wet seals that were bubbling off small amounts of gas.

A Thames operative was hosing the area around the tank following a sludge spill.

Digesters 13 & 14 were both out of use. Sludge was noted around digester 13 although this may have spilled from digester 12.

Digester 15 was in use but had a very wet seal that was bubbling off gas and spitting. Thames advised this would be cleaned up.

Digester 16 was out of service

Digesters 17, 18, 19 & 20 were all in use but had very wet seals that were all bubbling off small amounts of gas.

It was noted that the bell heights of digesters 19 & 20 were very high.

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.

GENERAL

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 tanks were operational at the time of the inspection.

Skips

On the East side there was one 20yds open bulk carrier that was empty and one 8yds skip that was empty.

In the area next to STW 1A there was one 8yds & one 12yds skip that both contained general non-inert rubbish. There was also a large open

skip, estimated to be approx 20yds, which again contained general inert rubbish.

On the access road leading to the digesters there was one 12yds skip that contained a small amount of rag and was partly covered with a tarpaulin, it was noted that the waste was not-odorous.

On the West side there were two 40yds closed bulk carriers that were both empty.

East Side Screen House

All doors were closed at the time of the inspection. TW advised all screen are in operation.

Return Activated Sludge Channel

The nearside RAS channel (which runs in the ground between FST's 61-64 & 65-67) was free flowing along its length.

Raw Sludge Screening House

The roller shutter door was closed at the time of the inspection. It was noted that there was considerable odour at the bottom of the road by the cross roads.

West side primary settlement tanks (PST)

Rectangular PSTs are now covered and odour controlled. TW advised no issues.

Circular PSTs 9, 10, 11 & 12 were all in operation at the time of the inspection, all had fat free surfaces.

The new odour suppression system around the perimeter of PST-10 was in operation and appeared to be functions efficiently

Pasteurisation Plant

The pasteurisation plant is in service. TW advised all streams were in operation.

Section 106 agreement

There have been no breaches of the s106 agreement in the last week.

West Side Aeration Lanes (New)

All of the aeration tanks appeared to be free flowing and the surface appeared much improved, all sprinklers appeared to be in operation.

The mixed liquor feed channel serving aeration lanes 21-24 (E Battery) were free flowing and much improved. However, lane-25 was clogged with debris and had a thick surface covering.

No odour was noticeable.

TW advised a tanker crew are regularly on site undertaking clearance of any clogged areas.

New Inlet Works (West Side)

No issues appeared evident at the new inlet works.

Odour Control Unit (OCU) performance monitoring: 12/12/2018

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.04 0.04 0.03	Unknown	Unknown
Main pumping station outlet	0.00 0.00	0.2	Yes

	0.00		
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	-	Unknown	Unknown
Sludge reception outlet	-	0.8	Yes
Thickening plant inlet	-	Unknown	Unknown
Thickening plant outlet	0.00 0.00 0.00	0.6	Yes
Transfer PS inlet	-	Unknown	Unknown
Transfer PS outlet	0.00 0.05 0.04	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