



London Borough of Hounslow

Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: 1st November 2018

Attendees: Mr A Devine (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 but had dry residue at the hopper end of the tank. Hopper 1, 2 and 3 were approximately $< \frac{1}{4}$ full and required further draining down.</p> <p>Tank 1B was empty and clean. Hoppers 1, 2 & 3 were all approximately 10% full.</p> <p>Tank 2A was empty and relatively clean but had dry residue at the hopper end of the tank. Hopper 1, 2 and 3 were drained down.</p> <p>Tank 2B was empty and clean. Hoppers 1, 2 & 3 were all approximately $\frac{3}{4}$ full and required draining down.</p> <p>Tank 3A was empty and clean. Hopper 1 was approximately $\frac{3}{4}$ full, Hoppers 2 and 3 were approximately $\frac{1}{4}$ full. All Hoppers required draining down.</p> <p>Tank 3B was empty and relatively clean but had dry residue at the hopper end of the tank. Hopper 1 was approximately $\frac{3}{4}$ full, Hopper 2 was approximately $\frac{1}{4}$ full and Hopper 3 was approximately $\frac{1}{2}$ full. All</p>	

Hoppers required draining down.

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. Hopper 1 was approximately $\frac{3}{4}$ full, Hoppers 2 and 3 were approximately $\frac{1}{2}$ full. All Hoppers required draining down.

Tank 6B was empty and clean. Hoppers 1, 2 & 3 were all approximately $\frac{3}{4}$ full and had a slight scum forming on the surface. All the Hoppers required draining down.

Tank 7A was empty and relatively clean, but had dry grit on the surface of the tank at the hopper end. Hoppers 1, 2 & 3 (shallow hoppers) all contained large quantities of grit and required cleaning up.

Tank 7B was empty and relatively clean, but had dry grit on the surface of the tank at the hopper end. Hoppers 1, 2 & 3 (shallow hoppers) all contained large quantities of grit and required cleaning up.

Tank 8A was clean and empty. Hoppers 1, 2 & 3 were all approximately $\frac{3}{4}$ full and required draining down.

Tank 8B was clean and relatively clean, but had dry grit on the surface of the tank at the hopper end. Hoppers 1, 2 & 3 were all full and required draining down.

Feed Channel - The level of effluent in both feed channels was low along its entire length.

Complaints

The Council received one complaint by telephone in the preceding week.

On the 30th October 2018 at 13:39 a telephone complaint was received from a resident of Mogden Lane, Isleworth, which is located to the

southeast of the works (ref: 978205). The complainant was contacted at 13:51 and after confirming odour was still causing an issue the duty officer agreed to visit the area as soon as possible. A visit was made to Mogden Lane at approx. 14:30 and H2S sampling was carried which gave average readings of 0.000ppm. The subjective assessment confirmed excessive odour was not present. The historic odour monitoring trends around the time of the complaint showed no excessive readings on odour monitors 1 to 13. A letter was sent out to the complainant on the 30th October 2018 advising details of the site visit along with information on the 24 hour Mogden call out service and information of how to access weekly reports from inspections.

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: Thursday 1st November 2018 at 12:50.

Monitor 1	0.004	ppm	12:50
Monitor 2	0.005	ppm	12:50
Monitor 3	0.004	ppm	12:50
Monitor 4	0.008	ppm	12:50
Monitor 5	0.005	ppm	12:50
Monitor 6	0.004	ppm	12:50
Monitor 7	0.005	ppm	12:50
Monitor 8	0.005	ppm	12:50
Monitor 9	0.004	ppm	12:50
Monitor 10	0.003	ppm	12:50
Monitor 11	0.004	ppm	12:50
Monitor 12	0.003	ppm	12:50
Monitor 13	0.005	ppm	12:50
Wind Speed	2.000	mph	12:50
Wind Direction	283.000	°	12:50

Odour Log (Thames)

Thursday 25th October 2018

AM

Temp. Warm.

Weather. Sunny w/ Patchy Clouds.

Odour Readings. All OMU's in operation.

Time: 18:00.

Observations / Customer Complaint. 17:28-17:55 Reading of 0.021ppm OM2.

Operational issues / causes observed. General odour. No particular sources found.

Actions Taken. Blank.

PM

Temp. Cool.

Weather. Overcast night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. OM8 18:21-18:35 Reading 0.019ppm, OM8 20.08-21.03 Reading 0.016ppm

Operational issues / causes observed. OM3 21:31-21:54 Reading 0.021ppm, OM3 04.54-.5.09 Reading 0.023ppm

Actions Taken. No issues found out on site that could potentially cause odour.

Friday 26th October 2018

AM

Temp. Warm.

Weather. Sunny w/ Patchy Clouds.

Odour Readings. All OMU's in operation.

Time: 17:30

Observations / Customer Complaint. OM3 - 0.028ppm at 06.02 2 short spikes. OM8 - 0.016ppm at 15.47 1 short spike.

Operational issues / causes observed. Blank.

Actions Taken. Blank.

PM

Temp. Cold.

Weather. Clear night.

Odour Readings. All OMU's in use.

Time: 00:00.

Observations / Customer Complaint. Monitor No.8 spiked at 18:46-19:13 max 0.028ppm and at 02:31-12:43 max 0.017ppm but < 15 mins duration.

Operational issues / causes observed. Blank.

Actions Taken. Blank.

Saturday 27th October 2018

AM

Temp. Cold.

Weather. Cloudy w/ Sunny Spells.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. OM3 0.022ppm at 12:33 – 13:01. OM3 0.023ppm at 13:18 – 13:31

Actions Taken. Blank.

PM

Temp. Cold.

Weather. Clear night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. Multiple spikes from OMU No.3 throughout the shift. Various magnitudes and lengths min 0.015 ppm - max of 0.043ppm

Operational issues / causes observed. OCU No.11 performance below par

Actions taken. Reported.

Sunday 28th October 2018

AM

Temp. Cold.

Weather. Cloudy w/ Sunny Spells.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM3 - Multiple spikes throughout the shift.

Operational issues / causes observed. OM3 visited at 8.15. wind direction from west inlet.

Actions Taken. No odour detected. Windy.

PM

Temp. Cold.

Weather. Clear night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. OM3 - Multiple spikes throughout the shift from midnight onwards.

Operational issues / causes observed. Only available extraction fan keeps tripping, ? Vibration

Actions Taken. Reported.

Monday 29th October 2018

AM

Temp. Cool.

Weather. Sunny.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. No odour issues.

Actions Taken. Blank.

PM

Temp. Cold.

Weather. Clear night.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM3 spiking throughout night shift max at 0.033ppm

Operational issues / causes observed. OCU 11 extractor fan constantly tripping on low flow?

Actions Taken. Reported again.

Tuesday 30th October 2018

AM**Temp.** Cool.**Weather.** Sunny w/ Patchy Clouds.**Odour Readings.** All OMU's in operation.**Time:** 00:00.**Observations / Customer Complaint.** No odour issues**Operational issues / causes observed.** Blank.**Actions Taken:** Blank.**PM****Temp.** Freezing.**Weather.** Clear night.**Odour Readings.** All OMU's in operation.**Time:** 05:30.**Observations / Customer Complaint.** OM3 0.031ppm at 18:31 – 18:59**Operational issues / causes observed.** No operational issues.**Actions Taken:** Blank.**Wednesday 31st October 2018****AM****Temp.** Cool.**Weather.** Sunny w/ Patchy Clouds.**Odour Readings.** All OMU's in operation.**Time:** Blank.**Observations / Customer Complaint.** OM3 spiking to max of 0.024ppm between 06:55-07:54.**Operational issues / causes observed.** Area checked around PST's 21-25 no obvious odours found, OCU 11 needs attention management aware.**Actions taken:** Blank.**PM****Temp.** Cool.**Weather.** Rain.**Odour Readings.** All OMU's in operation.**Time:** 05:30.**Observations / Customer Complaint.** OM3 0.022ppm at 19.31 - 22.44. OM3 - 23.31 - 23.44. OM3 0.024ppm - 03.31 to 05.15.**Operational issues / causes observed.** No source found.**Actions Taken:** Blank.

Observations / Customer Complaint. OM8 0.025ppm 19:51-20:15.
Operational issues / causes observed. OCU 11. wind 71o from west inlet over OCU11 to OM3
Actions Taken: Reported.

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					
25/10/18	0	909	0	909	1264	2173
26/10/18	60	905	61	1026	1929	2955
31/10/18	340	717	244	1301	1905	3206

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) – noticeable quantity of water accumulated to the brim of these tanks which is thick with algae – requires draining.

Digesters 5 to 11 were in use but had a very wet seals that were bubbling off small amounts of gas.

Digester 12 was in use and had a good dry seal but it was noted to be very high.

Digesters 13 & 14 were both out of service.

Digester 15 was in use but had a very wet seal that was bubbling off small amounts of gas. There was evidence of an historic spill.

Digester 16 was out of service

Digesters 17 and 18 were in use and had good dry seals.

Digester 19 was in use but had a very wet seal that were bubbling off small amounts of gas.

Digester 20 was in use and had a good dry seal.

Thames Water advised that digesters had been foaming due to anti-foam issues. Thames Water advised that this has now been resolved.

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 uncovered.

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 was no skips.

East Side Screen House

All doors were closed at the time of the inspection. TW advised all screen are in operation. A small amount of general waste and pipework was noted outside on the tarmac.

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.

West side primary settlement tanks (PST)

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

Circular PSTs 10, 11 & 12 were all in operation at the time of the inspection. PST's 10 & 11 had fat free surfaces but PST 12 had fatty scum across approx 40% of the tanks surface.

Pasteurisation Plant

The pasteurisation plant is in service. TW advised 8 of the 12 streams are currently 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 21-25 (E Battery) were free flowing and much improved

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: 31/10/2018

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.11 0.10 0.11	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.01	0.2	Yes
East OCU	0.00 0.01 0.00	0.05	Yes
West inlet OCU	0.01 0.02 0.01	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	0.6	Yes

	0.00		
Transfer PS inlet	-	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)	0.01 0.02 0.00	0.5	Yes