



London Borough of Hounslow

Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: 2nd January 2019

Attendees: Mr L Phillips (London Borough of Hounslow) and Mr Manzoor (Thames Water)

LB Hounslow Observation

Thames Water Action / Response

Storm Water Storage Tanks (SWST)

Tank 1A was in use empty and clean however slight grit visible at the end of the tank (Hopper end) All hoppers drained down to lowest point. No odour issues to address.

Tank 1B was in use empty and clean however signs of slight grit visible at end of the tank (Hopper end) All hoppers were drained down to the lowest point.

Tank 2A was in use empty and clean however slight grit built up at the end of the tank (Hopper end) All Hoppers were all drained down to lowest point. No odour was detected.

Tank 2B was in use empty and clean. Hopper 1, was full and required draining. Hoppers 2 & 3 were approximately half full and also required draining.

Tank 3A was in use empty and clean. All hoppers full and required draining.

Tank 3B was in use empty and clean. All hoppers drained down to lowest point no odour issues.

Tanks 4A, 4B, 5A & 5B are covered and odour controlled. Unable to gauge condition as lighting system still not working.

Tank 6A was in use however tank was returning during inspection.

Tank 6B Had some sludge and grit in the tank. Hoppers 1, 2 and 3 were approximately 80% full and required overpumping.

Tank 7A was in use empty and clean slight grit at the end of tank (Hopper end). All hoppers drained down to lowest point.

Tank 7B was in use empty and clean slight grit at the end of tank (Hopper end). All hoppers drained down to lowest point.

Tank 8A 50% full of effluent and being flushed. All Amajets in operation.

Tank 8B 50% full of effluent and being flushed. All Amajets in operation.

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

Complaints

The Council received no complaints via telephone or emails from either residents or MRAG in the preceding week.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection: Thursday 2nd January 2019 at 12:32.

Monitor 1	0.006	ppm	12:32
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Monitor 2	0.009	ppm	12:32
Monitor 3	0.010	ppm	12:32
Monitor 4	0.006	ppm	12:32
Monitor 5	0.008	ppm	12:33
Monitor 6	0.005	ppm	12:33
Monitor 7	0.008	ppm	12:33
Monitor 8	0.007	ppm	12:34
Monitor 9	0.006	ppm	12:34
Monitor 10	0.007	ppm	12:34
Monitor 11	0.007	ppm	12:35
Monitor 12	0.006	ppm	12:35
Monitor 13	0.009	ppm	12:35
Wind Speed	7.000	mph	12:36
Wind Direction	319.000	DEG	12:36

Odour Log (Thames)

Thursday 27th December 2018

AM

Temp. Cold.

Weather. Cloudy.

Odour Readings. All OMU's in operation.

Time: 15:13

Observations / Customer Complaints. OM3 peak to max 0.030 PPM at 15:13. Lasted until 16:57.

Operational issues / causes observed OCU number 11 issues.

Actions Taken. Blank.

PM

Temp. Cool

Weather. Overcast/ Night

Odour Readings. All OMU's in operation.

Time: 05:30

Observations / Customer Complaint. OM3 spiked 03:14 – current time max 0.022.

Operational issues / causes observed. OCU11 issues.

Actions Taken. Blank.

Observations / Customer Complaint. OM5 spiked at 19:47 – 20:00 less than 15 mins duration max 0.025 ppm, OM5 spiked 23:17 – 23:30 less than 15 minutes duration max 0.022 ppm.

Operational issues / causes observed. No odours found when investigated.

Actions Taken. Blank.

Friday 28th December 2018

AM

Temp. Cool.

Weather. Cloudy W/ sunny spells.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM3 spiked at 03:00 until 08:30 max 0.023.

Operational issues / causes observed. OCU 11 issues.

Actions Taken. Blank.

PM

Temp. Cool.

Weather. Overcast night.

Odour Readings. All OMU's in use.

Time: 05:30

Observations / Customer Complaint. OM3 spiked at 19:12 till end of shift - max 0.26ppm. OM5 – 0.02 at 22:17 – 23:16, OM5 – 0.035 at 23:32 – 01:00.

Operational issues / causes observed. OCU11 on going issues.

Actions Taken. Blank.

Saturday 29th December 2018

AM

Temp. Cool.

Weather. Cloudy w/ Sunny spells.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM3 stayed high until 13:15 max 0.024 at start of shift.

Operational issues / causes observed. OCU 11 issues.

Actions Taken. Blank.

PM

Temp. Cool.

Weather. Clear night.

Time: 05:30

Odour Readings. All OMU's in operation.

Observations / Customer Complaint. OM3 high 0.022 at 03:15.

Operational issues / causes observed. OCU11 issues.

Actions taken. Blank.

Sunday 30th December 2018

AM

Temp. Cool.

Weather. Sunny W/ Patchy clouds.

Time: 17:30.

Odour Readings. All OMU's in operation.

Observations / Customer Complaint. OM3 stayed high from beginning of shift. Till 12:14 0.023.

Operational issues / causes observed. OCU 11 issues.

Actions Taken. Blank.

PM

Temp. Cool.

Weather. Overcast Night.

Time: 05:30.

Odour Readings. All OMU's in operation.

Observations / Customer Complaint. OM3 spiked at 22:40 current time max 0.023 PPM.

Operational issues / causes observed. OCU 11 issues.

Actions Taken. Blank.

Monday 31st December 2018

AM

Temp. Cool.

Weather. Cloudy.

Time: 17:30

Odour Readings. All OMU's in operation.

Observations / Customer Complaint. OM3 – 0.025 from 6am to 10am OM8 small spike under 15 minutes.

Operational issues / causes observed. OCU 11 – all pumps failed inhibited.

Actions Taken. Blank.

PM

Temp. Cool.

Weather. Clear Night.

Time: 05:45.

Odour Readings. All OMU's in operation.

Observations / Customer Complaint. OM3 spiked all night at 0.029 ppm. OM8 one spike 0.019 ppm 22:57 – 23:14.

Operational issues / causes observed. OCU 11 chemically dosing out of range. Area checked around monitor 8 no odour issues found.

Actions Taken. Blank.

Tuesday 1st January 2019

AM

Temp. Cool.

Weather. Cloudy.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM3 – 0.029 at 16:29 – 18:00.

Operational issues / causes observed. OCU 11- All pumps failed or inhibited.

Actions Taken: Blank.

PM

Temp. Cool.

Weather. Clear Night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. OM3 high from start of shift to 21:57 max 0.026.

Operational issues / causes observed. OCU 11 issues.

Actions Taken: Blank.

Wednesday 2nd January 2019

AM

Temp. Cool.

Weather. Cloudy.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM3 – 0.022 at 06:29 – 06:43.

Operational issues / causes observed. OCU 11- All pumps failed or inhibited.

Actions taken: Blank.

PM

Temp. Cold.

Weather. Overcast night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. OM3 spiking through shift.

Operational issues / causes observed. OCU 11 issues.

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					
29/12/2018	293	703	328	1324	2409	3733
31/12/2018	205	1299	305	1809	2746	4555
01/01/2019	205	1777	183	2165	2233	4398

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 10 imports of sludge daily 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.

Digester 5: was in use but had a weak wet seal. There was no evidence of spillage.

Digester 6: was in use and had a wet seal. There was evidence of a spill which needs cleaning. Thames Water advised this would be actioned while on site.

Digester 7: was in use but had a weak wet seal. There was no evidence of spillage.

Digester 8: was in use but had a weak wet seal. There was no evidence of spillage.

Digester 9: was in use and had a wet seal. No evidence of any spillage.

Digester 10: was in use and had a wet seal. No evidence of any spillage.

Digester 11: was in use but had a weak wet seal. There was no evidence of spillage.

Digester 12: was in use and had a wet seal. No evidence of any spillage.

Digester 13: was out of service.

Digester 14: was out of service.

Digester 15: was in use but had a weak wet seal. There was no evidence of spillage.

Digester 16: was out of service.

Digester 17: was in use but had a weak wet seal. There was no evidence of spillage.

Digester 18: was in use and had a wet seal. No evidence of any spillage.

Digester 19: was in use and had a wet seal. No evidence of any spillage.

Digester 20: was in use and had a dry crusty seal. No evidence of any spillage.

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 20 yd. open bulk carrier that was empty.
One 16yd skip that was empty and uncovered.
One 6yd skip that was empty and uncovered.
On the West side one 16yd skip that was empty and uncovered.
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East Side Screen House

All doors were open slightly at the time of the inspection. TW advised all screens are in operation. The doors were open due to condensation. Thames Water advised that they are monitoring any potential odour using a portable Jerome and have set up an odour suppression unit in the area.

Return Activated Sludge Channel

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

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 (fat free surfaces). PST 10 had an odour control system on trial whereby an odour neutraliser generated a mist over the Primary settlement tank- only one PST was being used to trial this system. This

was not in operation at the time of inspection. No odours were noticeable.

Pasteurisation Plant

The pasteurisation plant is in service. TW advised 3/12 streams were out of operation (4, 7 and 9).

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 were in use but the foam covering the surface of the tanks had returned.

The mixed liquor feed channel serving aeration lanes 24-25 (E Battery) was free flowing throughout its entire length. The channel serving aeration lanes 21, 22 & 23 were also free flowing.

Odour was not noticeable along the mixed liquor feed channel. TW advised that a tanker crew are regularly on-site undertaking clearance of the clogged areas (Celvac).

New Inlet Works (West Side)

No issues appeared evident at the new inlet works.

Odour Control Unit (OCU) performance monitoring: 31/12/2019

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.00	Unknown	Unknown

	0.02 0.01 AV 0.01		
Main pumping station outlet	0.00 0.00 0.02 AV 0.02	0.2	Yes
East OCU	0.00 0.00 0.00 AV 0.00	0.05	Yes
West inlet OCU	0.00 0.00 0.00 AV 0.00	0.05	Yes
Sludge reception inlet	-	Unknown	Unknown
Sludge reception outlet	-	0.8	Unknown
Thickening plant inlet	-	Unknown	Unknown
Thickening plant outlet	0.00 0.00 0.00 AV 0.00	0.6	Yes
Transfer PS inlet	-	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00 AV 0.00	0.6	Yes
New West inlet (OCU 11)	0.05 0.04 0.05 AV 0.04	0.5	Yes
OCU 12 (Pasteurisation Plant)	0.00 0.00 0.00 AV 0.00	0.5	Yes