



Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: Friday 3 rd May 2019	
Attendees: Mr I Inman (London Borough of Hounslow) and Mr C Varsani (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A was empty but had dry crust across 25% of the tanks surface. Hopper 1 was less than <25% full, hoppers 2 & 3 were both drained down to their bottom level.</p> <p>Tank 1B was empty and clean. Hoppers 1, 2 & 3 were all drained down to their bottom level.</p> <p>Tank 2A was empty and clean except for large area of dry grit on the right hand side of the tanks surface. Hoppers 1, 2 & 3 were all drained down to their bottom level.</p> <p>Tank 2B was empty and clean except for a large area of dry grit on the left hand side of the tanks surface. Hoppers 1, 2 & 3 were all drained down to their bottom level.</p> <p>Tank 3A was empty and clean. Hoppers 1, 2 & 3 were all drained down to their bottom level.</p> <p>Tank 3B was empty and clean except for a large area of dry crust at the hopper end of the tank. Hoppers 1, 2 & 3 were all drained down to</p>	

their bottom level.

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

Tank 6A was empty and clean. Hoppers 1, 2 & 3 were all drained down to their bottom level.

Tank 6B was empty and clean. Hoppers 1 & 2 were both approx 25% full and hopper 3 was approx 30% full. All required draining down.

Tank 7A was empty and clean but had patchy areas of dry grit across the tanks surface. Hoppers 1, 2 & 3 (shallow hoppers) had all recently been cleared of grit and only had a shallow amount of final effluent in them.

Tank 7B was empty and clean but had patchy areas of dry grit across the tanks surface. Hoppers 1, 2 & 3 (shallow hoppers) had all recently been cleared of grit.

Tank 8A was empty and clean. Hoppers 1 & 2 were approx >30% full and hopper 3 was less than <25% full, all required further draining down.

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

Feed Channel - The level of effluent in both feed channels was low along its entire length. However, there was thick scum and sludge on the surface along large sections of the channel.

Thames advised of planned works to replace all of the hopper valves to prevent back flow of effluent, Scheduled to begin towards the end of April and lasting approx 3 months.

Overall the storm tank hoppers were much improved and Thames advised that a tanker crew had been employed to clear the hoppers of grit and sludge.

Complaints

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

The Council received an Email complaint on 27th April at 13:54 from an undisclosed location in Bankside Close, Isleworth (ref: 983344). However, the complainant failed to provide full contact details (full address or telephone number).

Details in the Thames Odour Log 'around' the time of the complaint show some excessive odour spikes were recorded on site.

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: Friday 3rd May 2019 at 10:08.

Monitor 1	0.004	ppm	10:08
Monitor 2	0.006	ppm	10:08
Monitor 3	0.000	ppm	10:08
Monitor 4	0.010	ppm	10:08
Monitor 5	0.004	ppm	10:08
Monitor 6	0.005	ppm	10:08
Monitor 7	0.005	ppm	10:08
Monitor 8	0.011	ppm	10:08
Monitor 9	0.004	ppm	10:08
Monitor 10	0.005	ppm	10:08
Monitor 11	0.005	ppm	10:08
Monitor 12	0.000	ppm	10:08
Monitor 13	0.005	ppm	10:08
Wind Speed	2.789	mph	10:08
Wind Direction	335.593	°	10:08

Odour Log (Thames)

Thursday 25th April 2019

DAY SHIFT

Temp. Warm.

Weather. Sunny with patchy clouds.

Odour Readings. All OMU's in operation.

Time: Blank.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. No odour issues.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Cool.

Weather. Clear night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. OM2 five odour spikes less than 15 minutes. Two spikes over 15 minutes. 0.016ppm 20:05-20:22. 0.023ppm 01:27-01:43.

Actions Taken. East inlet area checked. Confirmed screen house doors are closed. No odour identified.

Operational issues / causes observed. OM5 0.023ppm 05:08 - end of shift.

Actions Taken. No odour identified. OCU11 chemical dosing out of range.

Friday 26th April 2019

DAY SHIFT

Temp. Warm.

Weather. Sunny w/patchy clouds.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. OM2 spiked at 09:00 for 17 mins max 0.027ppm.

Actions Taken. No obvious source of odour found in vicinity of OM No.2.

NIGHT SHIFT

Temp. Cool.

Weather. Rain.
Odour Readings. All OMU's in use.
Time: 05:30.
Observations / Customer Complaint. Blank.
Operational issues / causes observed. No odour issues
Actions Taken. Blank.

Saturday 27th April 2019

DAY SHIFT

Temp. Cool.

Weather. Cloudy.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. OM3 spiked at 07:08-08:21 and 08:38-08:51 <15 mins duration max 0.023ppm.

OM8 spiked at 13:36-13:49 and 14:07-14:21, 15 mins duration max 0.019ppm.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Cool.

Weather. Overcast Night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. OM10 spiked to 0.018ppm 01:56-02:54.

Actions taken. Area checked no obvious odours found.

Sunday 28th April 2019

DAY SHIFT

Temp. Warm.

Weather. Sunny w/patchy clouds.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. OM4 spiked at 07:52-08:03 <15 mins duration, max 0.017ppm. OM8 spiked at 07:52-08:03, 15

mins duration, max 0.020ppm.

Actions Taken. PAS stream No.2 overflowing, coil leak therefore taken out of service.

NIGHT SHIFT

Temp. Cool.

Weather. Overcast night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. No odour issues.

Actions Taken. Blank.

Monday 29th April 2019

DAY SHIFT

Temp. Warm.

Weather. Sunny.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. OM3 0.022ppm 05:07-06:37.

OM2 0.021ppm 13:34-13:58, 0.024ppm 12:13-12:30.

Actions Taken. Area checked no obvious odours found.

NIGHT SHIFT

Temp. Cold.

Weather. Overcast night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. OM3 spiked at 05:08, current time max 0.025ppm, OM4 spiked at 19:37-20:35 max 0.016ppm.

Actions Taken. Area in vicinity of OM3 checked no odours found.

Tuesday 30th April 2019

DAY SHIFT

Temp. Warm.

Weather. Sunny.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. Blank.
Operational issues / causes observed. OM2 0.030ppm 06:33-07:01.
OM3 0.025ppm 05:07-05:52, 0.022ppm 06:08-06:22.

Actions Taken: Area checked no obvious odours found.

NIGHT SHIFT

Temp. Cool.

Weather. Overcast night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. OM2 spiked at 22:40-23:02 & 23:42-00:13, max 0.025ppm.

OM3 spiked at 05:08-05:21 <15 mins duration, max 0.020ppm.

Actions Taken: No obvious sources of odour found on checking areas.

Wednesday 1st May 2019

DAY SHIFT

Temp. Warm.

Weather. Sunny.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. OM8 spiked 0.027ppm 16:22-16:37.

Action Taken: Area checked no obvious odour source found.

NIGHT SHIFT

Temp. Cool.

Weather. Overcast night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. OM7 spiked at 20:40-21:39, max 0.021ppm. OM8 spiked 23:35-23:51, 00:06-00:22, 02:23-02:35 and 02:53-03:05 max 0.019ppm.

Actions Taken: No odours found, storm tanks and channel empty.

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					
26/04/2019	88	1781	183	2052	304	3356
29/04/2019	0	1097	183	1280	2090	3370
30/04/2019	59	909	122	1090	632	1722

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 30 imports of sludge over the last week.
10 on Friday 26th, 10 on Monday 29th & 10 on Tuesday 30th April.

No.5 Pumping Station

The doors and windows of No.5 pumping station were all open at the time of the inspection. Thames advised works are being undertaken inside and venting of the building was required for staff safety.

Raw 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).

Thames advised of a long term project currently initiated to bring these units back into service that will require significant investment.

Digesters 5, 6, 7, 8, 9, 10, 11 & 12 were all in use and had wet sloppy seals. However, only minimal amounts of gas appeared to be bubbling off.

Digester 13 was in use and had a fairly good dry seal.

Digester 14 was out of service.

Digester 15 was in use and had a good dry seal.

Digester 16 was out of service.

Digesters 17, 18, 19 & 20 were all in use and had wet sloppy seals. However, only minimal amounts of gas appeared to be bubbling off.

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.

The area around all digesters was much improved with no evidence of recent or historical sludge spills. Thames advised they have been actively undertaking regular clean-ups of this area of the works.

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 but green algae and brown sludge was evident across large areas of the tanks surfaces.

Skips

On the East side there was one 20yds open bulk carrier that contained general inert rubbish. Also present was one open 8yd skip that contained greenery and foliage which had been removed from FST's 71-78. No odour was evident.

In the area next to STW 1A there was a large closed skip, estimated to be approx 20yd, which again contained general inert rubbish.

On the access road leading to the digesters there was one 12yds skip that contained a large amount of general inert rubbish that was not odourous.

On the West side there was two 40yd closed bulk carriers that were both full and draining liquid before being taken off site. Thames advised they would be removed today.

East Side Screen House

One pair of doors to the building were open at the time of the inspection. TW advised all screens were in operation and the doors were open due to staff undertaking daily checks of the screens.

Return Activated Sludge Channel

The nearside RAS channel (which runs in the ground between FST's 61-64 & 65-67) was clogged along approx 25% in the mid-section of both lanes.

West side primary settlement tanks (PST)

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

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

The new odour suppression system around the perimeter of PST-10 is currently out of operation.

Pasteurisation Plant

The pasteurisation plant is in service. TW advised 6 streams were currently out of service.

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 had scum across their surfaces but appeared improved when compared to the previous weeks inspection. The tops of the internal dividing walls were clearly visible and liquid inside the tanks appeared free flowing.

Nearly all of the sprinklers appeared to be in operation.

The mixed liquor feed channel serving E-Battery was partially clogged with rag and other floating debris by lanes 25.

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: 01/05/2019

Plant	Reading (ppm)	Action Level (ppm)	Compliant
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Main pumping station inlet	0.00 0.00 0.00	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	Blank	Unknown	Unknown
Sludge reception outlet	0.00 0.00 0.00	0.8	Yes
Thickening plant inlet	Blank	Unknown	Unknown
Thickening plant outlet	0.00 0.00 0.00	0.6	Yes
Transfer PS inlet	Blank	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00	0.6	Yes
New West inlet (OCU 11)	Out of service	0.5	Yes
Pasteurisation (OCU 12)	0.00 0.00 0.00	0.5	Yes