



Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: 24 th January 2019	
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 clean. Hoppers 1, 2 & 3 were all over 50% full and required draining down.</p> <p>Tank 1B was empty and clean. Hoppers 1, 2 & 3 were all over 70% full and required draining down.</p> <p>Tank 2A was empty and clean. Hoppers 1 & 2 were 30% full and required drained down, hopper 3 was drained down to its bottom level.</p> <p>Tank 2B was empty and clean. Hoppers 1, 2 & 3 were all over 70% full and required draining down.</p> <p>Tank 3A was empty and clean. Hoppers 1, 2 & 3 were all 50% full and required draining down.</p> <p>Tank 3B was empty and clean. Hoppers 1, 2 & 3 were all over 30% full and required 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 empty and clean. Hoppers 1, 2 & 3 were all full and required draining down.

Tank 6B was empty and clean. Hoppers 1, 2 & 3 were all approx 30% full and required draining down.

Tank 7A had grit and sludge across 50% of the tanks surface. Hoppers 1, 2 & 3 (shallow hoppers) all contained large quantities of grit & sludge and required cleaning.

Tank 7B had grit and sludge across 25% of the tanks surface. Hoppers 1, 2 & 3 (shallow hoppers) all contained large quantities of grit and required cleaning.

Tank 8A was empty and clean. Hoppers 1, 2 & 3 were all full and required draining down.

Tank 8B was empty and clean. Hoppers 1, 2 & 3 were all full and required draining down.

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: Thursday 24th January 2019 at 12:47.

Monitor 1	0.007	ppm	12:47
Monitor 2	0.008	ppm	12:47
Monitor 3	0.008	ppm	12:47
Monitor 4	0.008	ppm	12:47
Monitor 5	0.008	ppm	12:47
Monitor 6	0.000	ppm	12:47
Monitor 7	0.006	ppm	12:47
Monitor 8	0.007	ppm	12:47
Monitor 9	0.007	ppm	12:47
Monitor 10	0.007	ppm	12:47
Monitor 11	0.008	ppm	12:47
Monitor 12	0.005	ppm	12:47
Monitor 13	0.009	ppm	12:47
Wind Speed	Not displayed	0mph	12:47
Wind Direction	Not displayed	°	12:47

Odour Log (Thames)

Thursday 17th January 2019

DAY SHIFT

Temp. Cold.

Weather. Cloudy.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM4 0.019 @ 16:15-16:30.

OM8 0.066 @ 16:14-16:30.

Operational issues / causes observed. OM4 spiked due to sludge imports. OM8 spiking from PAS vessels.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Freezing.

Weather. Clear Night.
Odour Readings. All OMU's in operation.
Time: 05:30.
Observations / Customer Complaint. OM3 spiking through night.
Operational issues / causes observed. OCU11 issues.
Actions Taken. Blank.

Friday 18th January 2019

DAY SHIFT

Temp. Cold.

Weather. Sunny with patchy clouds.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM3 spiking through night

Operational issues / causes observed. OCU11 issues.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Cold.

Weather. Clear night.

Odour Readings. All OMU's in use.

Time: 05:30.

Observations / Customer Complaint. OM3 spiking throughout night,
max 0.66ppm.

Operational issues / causes observed. OCU11 issues.

Actions Taken. Blank.

Saturday 19th January 2019

DAY SHIFT

Temp. Cold.

Weather. Cloudy.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM3 spiking throughout night,
max 0.39ppm.

Operational issues / causes observed. OCU11 issues.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Cold.

Weather. Clear Night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. OM3 spiking on and off throughout shift, max 0.020ppm.

Operational issues / causes observed. OCU11 issues.

Actions taken. Blank.

Sunday 20th January 2019

DAY SHIFT

Temp. Cold.

Weather. Sunny w/patchy clouds.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM3 spiking throughout night, max 0.33ppm.

Operational issues / causes observed. OCU11 issues.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Cold.

Weather. Clear night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. OM3 spiking 23:00-23:30 max 0.020ppm. OM5 spiking 05:00-06:00 max 0.035ppm.

Operational issues / causes observed. OCU11 issues.

Actions Taken. Blank.

Monday 21st January 2019

DAY SHIFT

Temp. Cold.

Weather. Cloudy w/sunny spells.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM3.

Operational issues / causes observed. OCU11 issues.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Cold.
Weather. Clear night.
Odour Readings. All OMU's in operation.
Time: 05:30.
Observations / Customer Complaint. OM3 spiking throughout night, max 0.24ppm, OM8 spiked at 04:14 but 15 mins duration max 0.016ppm.
Operational issues / causes observed. OCU11 issues.
Actions Taken. Blank.

Tuesday 22nd January 2019

DAY SHIFT

Temp. Cold.
Weather. Cloudy.
Odour Readings. All OMU's in operation.
Time: 17:30.
Observations / Customer Complaint. OM3 spiking.
Operational issues / causes observed. OCU11.
Actions Taken: Blank.

NIGHT SHIFT

Temp. Freezing.
Weather. Clear night.
Odour Readings. All OMU's in operation.
Time: 05:30.
Observations / Customer Complaint. OM3 0.020 – 2 spikes for 1 hour each. OM4 0.026 @ 23:31-23:47.
Operational issues / causes observed. OM4 spiking due to sludge imports. OM8 spiking from PAS vessels. OCU11
Actions Taken: Blank.

Wednesday 23rd January 2019

DAY SHIFT

Temp. Cold.
Weather. Blank.
Odour Readings. All OMU's in operation.
Time: 17:30.
Observations / Customer Complaint. No odour issues.
Operational issues / causes observed. Blank.

NIGHT SHIFT

Temp. Freezing.

Weather. Clear night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. OM2 0.015 @ 20:53-21:08.

Operational issues / causes observed. CESS imports.

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					
19/01/2019	235	2961	0	3196	1929	5125
20/01/2019	0	2192	0	2192	1777	3969
22/01/2019	0	1818	122	1940	1777	3717

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, of approx 11 imports daily.

Raw Sludge Screening House

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

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.

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

Digester 5 was in use and had a good dry seal. However there was evidence of a sludge spill that required cleaning up.

Digester 6 was in use but had a wet sloppy seal.

Digester 7 was in use but had a wet sloppy seal. Although little gas appeared to be bubbling off it was noted that the bell height was very high.

Digesters 8, 9 & 10 were all in use but had a very wet seals, although little gas appeared to be bubbling off. It was noted that there was evidence of sludge spills between all three digesters that required cleaning up.

Digesters 11 & 12 were both in use and had very wet seals, however little gas appeared to be bubbling off. It was also noted that there was evidence of sludge spills between the digesters that required cleaning up.

Digesters 13, 14, 15 & 16 were all out of service, although digester 15 was filled with sludge.

Digesters 17, 18 & 19 were all in use but had very wet seals, although little gas appeared to be bubbling off.

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

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.

TW also confirmed that the recent problem with one of the anti-foam pumps was likely to have been the cause of a number of spilt sludge incidents, however this has now been rectified.

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. It was noted that green algae covered the entire surface of tanks 73 & 74.

Skips

On the East side there was one 20yds open bulk carrier that was uncovered but only contained a small amount of non-inert general rubbish. Also present was one closed 14yd skip and were two 8yd skips that were all empty

In the area next to STW 1A there was one 8yd & one 12yd skip that both contained general non-inert rubbish. There was also a large open skip, estimated to be approx 20yd, which again contained general non-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 was 40yd closed bulk carrier that was empty.

East Side Screen House

Three sets of doors of the building were open at the time of the inspection.

TW advised all screens were in operation and their policy is now to leave these doors open.

When questioned about this policy at the time of the inspection TW advised that this is a Management decision to improve internal working environment for staff.

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 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 is currently out of operation.

Pasteurisation Plant

The pasteurisation plant is in service. TW advised streams 4, 7 & 9 were currently out of 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 had thick scum across their surfaces that appeared to be bubbling and spitting and was thick enough to obscure all of the internal dividing walls.

None of the sprinklers appeared to be in operation.

The mixed liquor feed channel serving aeration lane 21 (E Battery) were free flowing. However, the feed channel serving lanes 22-25 were completely clogged with debris and had a thick surface covering.

A tanker crew was on site at the time of the inspection trying to clear the build-up.

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: 24/01/2019

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	Blank Blank Blank	Unknown	Unknown
Main pumping station outlet	0.027 0.025 0.024	0.2	Yes
East OCU	0.004 0.004 0.003	0.05	Yes
West inlet OCU	0.004 0.003 0.003	0.05	Yes
Sludge reception inlet	Blank	Unknown	Unknown
Sludge reception outlet	0.003 0.00 0.003	0.8	Yes
Thickening plant inlet	Blank	Unknown	Unknown
Thickening plant outlet	1.4 1.3 1.3	0.6	Yes
Transfer PS inlet	Blank	Unknown	Unknown
Transfer PS outlet	0.013 0.012 0.012	0.6	Yes
New West inlet (OCU 11)	0.2 0.04 0.048	0.5	Yes
OCU 12 (Pasteurisation Plant)	1.2 1.1 1	0.5	Yes

