



London Borough of Hounslow

Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: Thursday 14 th November 2019 (12:05pm)	
Attendees: Mr I Inman (London Borough of Hounslow) and Miss C Page (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Weather</u></p> <p>Recent heavy rain meant the site was near to full capacity.</p> <p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A was completely full. No Amajets were in operation.</p> <p>Tank 1B was completely full. No Amajets were in operation.</p> <p>Tank 2A was completely full. No Amajets were in operation.</p> <p>Tank 2B was completely full. No Amajets were in operation.</p> <p>Tank 3A was completely full. Amajets 1, 2 & 3 were all in operation.</p>	

Tank 3B was completely full.
Amajets 1, 2 & 3 were all in operation.

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 completely full.
Amajets 1, 2 & 3 were all in operation.

Tank 6B completely full.
Amajets 1, 2 & 3 were all in operation.

Tank 7A was completely full.
Amajets 1, 2 & 3 were all in operation.

Tank 7B was completely full.
Only Amajet 1 was in operation.

Tank 8A was completely full.
Amajets 1, 2 & 3 were all in operation.

Tank 8B was completely full.
Only Amajets 1 & 2 were in operation.

Feed Channel - The channel was completely full and almost at maximum level.

Thames advised of planned works to replace all of the hopper valves to prevent back flow of effluent.

They are still also awaiting parts in order to bring the wash water pump system back into operation.

Complaints

The Council has received no complaints in the preceding week.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection: Thursday 14th November 2019 at 12:20.

Monitor 1	0.007	ppm	12:20
Monitor 2	0.008	ppm	12:20
Monitor 3	0.000	ppm	12:20
Monitor 4	0.004	ppm	12:20
Monitor 5	0.009	ppm	12:20
Monitor 6	-----	ppm	12:20
Monitor 7	-----	ppm	12:20
Monitor 8	0.007	ppm	12:20
Monitor 9	0.007	ppm	12:20
Monitor 10	0.007	ppm	12:20
Monitor 11	0.000	ppm	12:20
Monitor 12	0.006	ppm	12:20
Monitor 13	0.000	ppm	12:20
Wind Speed	0.206	mph	12:20
Wind Direction	138.677	°	12:20

Odour Log (Thames) - Photocopies of log entries taken:

Thursday 7th November 2019

DAY SHIFT

Temp. Cool.

Weather. Rain.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM5 2 spikes less than 15 mins.

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. OM2 0.022ppm at 21:01-21:18.
0.038ppm at 20:06-20:31.
OM5 0.023ppm at 19:46-20:46.
Operational issues / causes observed. Area checked no source found.
Actions Taken. Blank.

Friday 8th November 2019

DAY SHIFT

Temp. Cold.

Weather. Clear night.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. No odour spikes.

Operational issues / causes observed. Smell of biogas in air during siloxane plant regeneration.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Cold.

Weather. Clear night.

Odour Readings. All OMU's in use.

Time: 05:30.

Observations / Customer Complaint. OM4 spiked at 01:00-02:00, max 0.015ppm.

Operational issues / causes observed. Blank.

Actions Taken. Blank.

Saturday 9th November 2019

DAY SHIFT

Temp. Cold.

Weather. Rain.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM2 spiked to 0.03 at 17:09-17:28.

Operational issues / causes observed. Jerry visited area could not find odour source.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Cold.

Weather. Rain.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. OM2 spiked at 21:51-22:09, max 0.019ppm.

Operational issues / causes observed. Blank.

Actions taken. Blank.

Sunday 10th November 2019

DAY SHIFT

Temp. Cold.

Weather. Rain w/sunny spells.

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. Cold.

Weather. Rain.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. OM2 spiked at 22:20-22:45, max 0.051ppm.

Operational issues / causes observed. No obvious odour source found.

Actions Taken. East inlet hosed down.

Monday 11th November 2019

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. Cold.

Weather. Clear night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. No odour issues.

Operational issues / causes observed. Blank.

Actions Taken. Blank.

Tuesday 12th November 2019

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. Clear night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. No odour issues.

Operational issues / causes observed. Blank.

Actions Taken. Blank.

Wednesday 13th November 2019

DAY SHIFT

Temp. Cold.

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.

Action Taken. Blank.

NIGHT SHIFT

Temp. Cool.

Weather. Rain.

Odour Readings. All OMU's in operation.

Time: Blank.

Observations / Customer Complaint. No odour issues.

Operational issues / causes observed. Blank.

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					
08/11/2019	0	1012	61	1073	2100	3173
11/11/2019	0	1012	206	1218	2400	3618
13/11/2019	39	1448	328	1815	3411	5226

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 70 imports of sludge over the last week (10 per day).

No.5 Pumping Station

The doors of No.5 pumping station were closed at the time of the inspection.

Raw Sludge Screening House

The large roller shutter door of the Raw Sludge Screening building was open at the time of the inspection, although unable to establish why?

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 and 6: Both were in service and spills had occurred which had flowed over the retaining coping stones of both digesters.

Digester 7: Out of service.

Digester 8: In service and a spill had occurred which had flowed over the retaining coping stone. It was also noted that the bell was very high.

Digesters 9 & 10: Both were in service and had very high wet seal levels (almost at the point of spilling over the retaining coping stones) that were bubbling of gas.

Digester 11: In service and a spill had occurred over the retaining coping stone.

Digester 12: In service and had a very high wet seal level (almost at the point of spilling over the retaining coping stone) that was bubbling of gas.

Digester 13: In service and a spill had occurred which had flowed over the retaining coping stone.

Digesters 14 & 15: Both were out of service.

Digester 16: Unable to access area around the digester due to spill at digester 18.

Digester 17: Had a wet sloppy seal that was bubbling off gas.

Digester 18: A massive spill had occurred around the entire area surrounding the digester. Two site operatives were present attempting to clear the spill that was in places in excess of 8 inches deep.

Digesters 19 & 20: Both were in service but had wet sloppy seals that were bubbling off gas.

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 spill around digester 18 was the most significant ever witnessed by the inspecting council officer.

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 and no issues were evident.

Skips

On the East side there was one 20yd open bulk carrier that was empty. There were two 8yds open skips, one of which contained general non-inert rubbish and one was approx 30% full of rag, which was only part covered with a tarpaulin and had weeds growing out of it. Also present was one closed 14yds skip that was empty.

In the area next to STW 1A there was an open 14yds skip that contained scrap metal pumps.

On the service road next to raw sludge screening building was an 8yds open skip that contained rag and other waste, which was part covered with a tarpaulin.

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

East Side Screen House

The doors to the screen house building were closed at the time of the inspection. However, TW were unable to confirm how many or which

screens were in operation?

Return Activated Sludge Channel

The nearside RAS channel (which runs in the ground between FST's 61-64 & 65-67) was clogged along 30% of the near-side channel.

TW were advised this needed to be rectified to avoid potential insect and odour problems.

West Side Aeration Lanes (Old)

It was noted that lanes 17 & 18 had large floating deposits on the tanks surface that appeared to be hindering the process?

There was also overpumping being carried out into the feed channel on the south side of the lanes that was causing sludge to splash over the area and retaining wall.

West side primary settlement tanks (PST)

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

Circular PST 9 was in service and had fat across 15% of the surface in front of the sweep arm.

Circular PST 10 was out of service.

Circular PST's 11 & 12 had clean fat free surfaces.

Pasteurisation Plant

The pasteurisation plant is in service. TW advised all 10 streams were in 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 were much improved. 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 clear of debris and free flowing along its entire length.

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

New Inlet Works (West Side)

The Archimedean screw on No.13 had been removed for servicing of the channel.

Odour Control Unit (OCU) performance monitoring: 11/11/2019

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.00 0.01 0.01	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	No
West inlet OCU	0.00	0.05	Yes

	0.00 0.00		
Sludge reception inlet	Blank	Unknown	Unknown
Sludge reception outlet	Blank	0.8	Yes
Thickening plant inlet	Blank	0.5	Yes
Thickening plant outlet	0.00 0.00 0.00	0.6	Yes
Transfer PS inlet	Blank	Unknown	Unknown
Transfer PS outlet	0.01 0.01 0.00	0.6	Yes
New West inlet (OCU 11)	0.00 0.00 0.00	0.5	Yes
Pasteurisation (OCU 12)	0.00 0.00 0.00	0.5	Yes