



London Borough of Hounslow

Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: Tuesday 9 th November 2021 13:08PM	
Attendees: Mr L Phillips (London Borough of Hounslow), Ms C Simmonds (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. All hoppers were drained down to lowest point.</p> <p>Tank 1B - Was empty slight grit build up at the hopper end of the tank. All hoppers were drained down to lowest point.</p> <p>Tank 2A - Was empty slight grit build up at the hopper end of the tank. All hoppers were drained down to lowest point.</p> <p>Tank 2B - Was empty slight grit build up at the hopper end of the tank. All hoppers were drained down to lowest point.</p> <p>Tank 3A - Was empty however tank full of sludge. The tank appeared to have been recently returned. All hoppers full and require draining/over pumping.</p> <p>Tank 3B - Tank returning at the time of inspection. Amajets 2 & 3 in operation.</p> <p>Tanks 4A, 4B, 5A & 5B All tanks are covered and odour controlled.</p>	

Still unable to gauge condition of these tanks as the internal lighting system is still not working.

Tank 6A - Tank returning at the time of inspection. Amajet 1 in operation.

Tank 6B - Was empty clean- All hoppers full and require draining/over pumping.

Tank 7A - Was empty but had effluent back-filling from the hoppers which were overflowing - Slight dry grit located at hopper end of the tank – All hoppers full require draining/over pumping.

Tank 7B - Was empty tank surface covered in sludge – All hoppers all appeared clogged with sludge – All hoppers full and require draining/over pumping.

Tank 8A - Tank had effluent that was back-filling from the hoppers - Part of the tank covered in black liquid covering half of the tanks surface- All hoppers full and require draining/over pumping.

Tank 8B – Tank had effluent that was back-filling from the hoppers - Part of the tank covered in black liquid covering half of the tanks surface- All hoppers full and require draining/over pumping.

Storm Feed Channel - The condition of the storm channel appears to be steadily deteriorating.

Although the level of effluent in both feed channels was low, bottomed out in some areas, it was again noted that large amounts of grit (possibly 18” thick in places) was present, along with sludge containing solid deposits in a number of areas.

This material was present in both the near and far side channel, and both were very odorous in places.

Complaints

The Council received no complaints by telephone in the preceding

week.

The Council received no complaints by either email or the on-line web system in the preceding week.

The Council received no complaints by email from MRAG in the preceding week.

Odour Monitors

The odour readouts (H₂S) for all monitors that were providing data on 09/11/2021 at the time of the inspection are below.

Monitor 1	0.004	ppm	13:00pm
Monitor 2	0.001	ppm	13:00pm
Monitor 3	0.000	ppm	13:00pm
Monitor 4	0.005	ppm	13:00pm
Monitor 5	0.004	ppm	13:00pm
Monitor 6	0.000	ppm	13:00pm
Monitor 7	0.004	ppm	13:00pm
Monitor 8	0.007	ppm	13:00pm
Monitor 9	0.000	ppm	13:00pm
Monitor 10	0.000	ppm	13:00pm
Monitor 11	0.000	ppm	13:00pm
Monitor 12	0.005	ppm	13:00pm
Monitor 13	0.003	ppm	13:00pm
Wind Speed	3.706	mph	13:00pm
Wind Direction	227.066		13:00pm

Odour Log (Thames)

Tuesday 2nd November 2021

DAY SHIFT:

Temp: Cool.

Weather: Sunny.

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: OM5 0.020ppm 19:20-20:20;

OM8 0.024ppm 19:17-19:35; OM4 0.019ppm 20:03-20:18.

Operational issues / causes observed: No issues found.

Actions Taken: Site investigation carried out around odour monitors which were spiking. PAS area odours but nothing out of the ordinary found.

Wednesday 3rd November 2021

DAY SHIFT:

Temp: Cool.

Weather: Sunny.

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.

Thursday 4th November 2021

DAY SHIFT:

Temp: Cool.
Weather: Cloudy.
Odour Readings: All OMU's in operation.
Time: 17:30.
Observations / Customer Complaint: OM3 spiked at 12:30-12:40 <15 mins duration max 0.025ppm.
Operational issues / causes observed: Odour monitors being calibrated and maintained.
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.

Friday 5th November 2021

DAY SHIFT:
Temp: Cool.
Weather: Cloudy.
Odour Readings: All OMU's in operation.
Time: 17:30.
Observations / Customer Complaint: OM5 5 at 09:35-09:48 but <15 mins duration, max 0.016ppm.
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: OM5 0.015ppm @ 21.35 <15 minutes duration.
Operational issues / causes observed: Blank.
Actions taken: Blank.

Saturday 6th November 2021

DAY SHIFT:

Temp: Cool.

Weather: Cloudy.

Odour Readings: All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint: No odour issues found or reported.

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: OM3 01:08 till 01:22; OM8 @ 02:32 till 02:46.

Operational issues / causes observed: No issues found.

Actions Taken: Site checked for odours & found no abnormal odours found.

Sunday 7th November 2021

DAY SHIFT:

Temp: Cool.

Weather: Cloudy.

Odour Readings: All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint: OM4 spiked at 10:20-10:32 <15 minutes duration max 0.015ppm & at 17:33-17:48 max.

Operational issues / causes observed: Blank.

Actions taken: No odours found in vicinity of OM4.

NIGHT SHIFT:

Temp: Cold.

Weather: Clear night.

Odour Readings: All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint: OM5 spiking all night.

Operational issues / causes observed: Low level sewer in main drive venting.

Actions Taken: No action taken.

Monday 8th November 2021

DAY SHIFT:

Temp: Cool.

Weather: Sunny W/ Patchy clouds.

Odour Readings: All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint: OM5 0.017ppm 17:20 on going.

Operational issues / causes observed: Sewer vent on drive.

Actions taken: Blank.

NIGHT SHIFT:

Temp: Cold.

Weather: Clear night.

Odour Readings: All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint: OM5 max 0.022ppm three times.

Operational issues / causes observed: Smell from PAS.

Actions Taken: PAS over flows checked and all OK.

Tuesday 9th November 2021

DAY SHIFT:

Temp: Cool.

Weather: Sunny W/ Patchy clouds.

Odour Readings: All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint: OM5 0.016ppm 07:36-07:51

Operational issues / causes observed: Smell from sewer vent on drive.

Actions taken: Blank.

NIGHT SHIFT:

Temp: Unable to read data.

Weather: Unable to read data.

Odour Readings: All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint: OM5 spiked at 23:07-23:36

max 0.015ppm.

Operational issues / causes observed: Unable to read data.

Actions Taken: Unable to read data.

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					
05/11/2021	0	946	885	1831	910	2741
08/11/2021	0	1100	1030	2130	1236	3366

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 an average of 12 imports of sludge per day in the preceding week.

No.5 Pumping Station

The door and one window of No.5 pumping station were open at the time of the inspection.

Sludge Import Area

It was noted that the condition around the sludge import area is starting to deteriorate again.

One of the two skips present was only part covered and both skips were virtually full and giving off odour. It was also noted that general rubbish and plastics had been dumped in one of these skips.

TW were again requested to change these skips and ensure they are kept covered when being used.

Raw Sludge Screening House

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

Thames advised this unit is currently out of use due to ongoing maintenance, which appeared to be taking place 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.

Digester 5 - Was out of service.

Digesters 6 - Was in service - weak low sloppy seal - No evidence of spill.

Digester 7 - Was in service - weak low sloppy seal - No evidence of spill.

Digester 8 - Was in service - weak low sloppy seal - No evidence of spill.

Digester 9 - Was in service - weak low sloppy seal - No evidence of spill.

Digester 10 - Was in service - weak low sloppy seal - No evidence of spill.

Digester 11 - Was in service - weak low sloppy seal - No evidence of spill.

Digester 12 - Was out of service.

Digesters 13 - Was in service - Weak low seal gassing off - No evidence of spill.

Digester 14 - Was in service - Weak low seal gassing off - No evidence of spill.

Digester 15 - Was out of service.

Digester 16 - Was in service - Weak low seal gassing off - Evidence of previous spill that required cleaning.

Digester 17 - Was in service - Weak low seal gassing off - No evidence of spill.

Digester 18 - Was out of service.

Digester 19 - Was in service - Weak low seal gassing off - No evidence of spill.

Digester 20 - Was in service - Weak low seal gassing off - No evidence of spill.

Anti-foaming agent is in use, which TW advised was being applied manually to all operational digesters due to the automatic dosing equipment not operating.

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 in operation at the time of the inspection. It was noted that all 8 tanks had varying amounts of green algae and/or scum on tanks surface, some of which appeared lumpy. However, no odour was

present.

Skips

On the East side there two 14yds open skips.

One contained a quantity of general rubbish and the other contained a small amount of sodden wet rag and cloth, the skip was uncovered and the tarpaulin cover was on the floor.

Thames were again requested to remove these skips and ensure they are kept covered when in use.

Also present was one 40yds closed bulk carrier that was empty and one 20yds open bulk carrier that was full of grit. This skip was uncovered and the tarpaulin to cover it was lying on the floor.

On the West side there was one 20yds open bulk carrier that was empty.

East Side Screen House

The first set of doors to the screen house were closed at the time of the inspection.

Return Activated Sludge Channel

The nearside RAS channel (which runs in the ground between FST's 61-64 & 65-67) was free flowing and clear.

The far side channel was clogged along 50% of its length, there was a significant number of weeds were growing out of it and through the steel grating.

It was noted that FST's 61 to 64 were in a very poor condition. Surface sludge was evident in some of the tanks and a hose was being used to break this up.

A significant sludge spill had recently occurred in the area around the tanks which required cleaning.

West side primary settlement tanks (PST)

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

Circular PST's 9, 10 and 11 were all in use. All had some surface scum that appeared to be fatty type algae.

Circular PST 12 is currently out of service. It was noted that the area in the middle of the tank contained a large quantity of solid fat, algae, rag and other debris.

Pasteurisation Plant

The pasteurisation plant is in service. TW advised 10 streams are currently operational.

During the inspection it was also noted that a spillage(s) had taken place by the plant and machinery and pipework was splashed with sludge, which appeared to have clogged the box channel.

Section 106 agreement

There have been no breaches of the s106 agreement in the last week.

West Side Aeration Lanes

The previous biological issues in all lanes now seems to have been resolved and the effluent appeared to be free-flowing with reduced surface foam.

A large number of the sprinklers were still out of operation and floating debris was present in most of these areas.

The surface area of the mixed liquor feed channel serving the aeration lanes of E-Battery was free-flowing between lanes 22-25.

New Inlet Works (West Side)

No issues appeared evident at the new inlet works and everything appeared to be in a good tidy order.

Odour Control Unit (OCU) performance monitoring:

**Odour Control Unit (OCU) performance monitoring: 09/11/2021
(Results supplied by TW are ppb and need converting to ppm)**

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station outlet	0.00 0.00 0.00	0.2	Unknown
East OCU	0.00 0.02 0.00	0.05	Unknown
West inlet OCU	0.00 0.00 0.00	0.05	Unknown
Thickening plant outlet	0.12 0.07 0.08	0.6	Unknown
New West inlet (OCU 11)	0.00 0.00 0.00	0.5	Unknown
Pasteurisation (OCU 12)	0.04 0.02 0.00	0.5	Unknown
Transfer PS inlet	81.88 78.61 70.33	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00	0.6	Unknown

GBT Plant OCU Outlet	0.00 0.00 0.00	Unknown	Unknown	
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