



Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: Thursday 4 th April 2019	
Attendees: Mr I Inman & Mr A Matthews (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 sludge across 25% of the tanks surface. Hoppers 1, 2 & 3 were all 50% full and required draining down.</p> <p>Tank 1B was empty and clean. Hoppers 1, 2 & 3 were all full, partly overflowing, and required draining down.</p> <p>Tank 2A was empty and clean. Hoppers 1, 2 & 3 were all approx 25% full and required drained down.</p> <p>Tank 2B was empty and clean. Hoppers 1, 2 & 3 were all approx 75% full and required draining down.</p> <p>Tank 3A was empty and clean. Hoppers 1, 2 & 3 were all approx 25% full and required draining down.</p> <p>Tank 3B was empty but had grit across the centre of the tank and along the left side of the tanks surface. Hoppers 1, 2 & 3 were all 33% full and required draining down.</p> <p>Tanks 4A, 4B, 5A & 5B which are covered and odour controlled were</p>	

all empty. Unable to gauge condition as lighting system still not working.

Tank 6A was empty but had grit across the left side of the tank surface. Hopper 1 was approx 50% full, hopper 2 was completely full & hopper 3 was approx 70% full, all required draining down.

Tank 6B was empty but had grit across the centre of the tank and along the left side of the tank surface. Hoppers 1 & 2 were 25% full & hopper 3 was 75% full, all required draining down.

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

Tank 7B had grit and sludge across large areas of the tanks surface (approx 30%) and appeared filthy. Hoppers 1, 2 & 3 (shallow hoppers) all contained large quantities of grit & sludge and required cleaning.

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

Tank 8B was empty and clean. Hoppers 1 & 2 were both full and required draining down, hopper 3 was <25% full. Hopper 2 was in the process of being overpumped at the time of the inspection (Hopper 3 having just been overpumped).

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 parts of the channel that was noticeably odourous.

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.

Complaints

The Council received 1 complaints by telephone in the preceding week.

On 2nd April a complaint was received from a non-Hounslow resident (from Cole Park Road, Twickenham) at 16:25.
 In response to the complaint the duty officer telephoned the complainant and advised an officer would visit the area as soon as possible.

The Council received an Email complaint on 26th March at 20:46. However, the complainant failed to provide contact details (name, address or telephone number), despite being responded to by email and asked to do so.

The historic odour trends on the date of the complaint showed a spike on OM7 of 0.022ppm between 19:34-19:50, then a further spike of 0.025ppm between 20:50-21:05.

OM8 had a slight spike of 0.017ppm between 19:15-20:20.

OM3 had a slight spike of 0.015ppm between 20:20-20:35.

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 4th April 2019 at 13:33.

Monitor 1	0.006	ppm	13:33
Monitor 2	0.009	ppm	13:33
Monitor 3	0.000	ppm	13:33
Monitor 4	0.005	ppm	13:33
Monitor 5	0.007	ppm	13:33
Monitor 6	0.007	ppm	13:33
Monitor 7	0.009	ppm	13:33
Monitor 8	0.008	ppm	13:33
Monitor 9	0.006	ppm	13:33
Monitor 10	0.008	ppm	13:33
Monitor 11	0.005	ppm	13:33
Monitor 12	0.008	ppm	13:33
Monitor 13	0.007	ppm	13:33

Wind Speed	10	mph	13:33
Wind Direction	194	°	13:33

Odour Log (Thames) - Photocopies of log entries taken

Thursday 28th March 2019

DAY SHIFT

Temp. Warm.

Weather. Sunny with patchy clouds.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. OM8 0.019 06:47-07:48.

Actions Taken. No obvious source discovered.

NIGHT SHIFT

Temp. Cool.

Weather. Overcast night.

Odour Readings. All OMU's in operation.

Time: 05:15.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. No odour issues.

Actions Taken. Blank.

Friday 29th March 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. No odour issues.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Cool.

Weather. Cloudy.

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 30th March 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. OM12 0.017 07:50-08:50.

OM8 0.016 12:04-12:19. 0.018 16:04-16:19.

Actions Taken. No obvious source discovered.

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. OM8 0.018 @ 19:21-20:19.

PAS areas smelly.

Actions taken. Blank.

Sunday 31st March 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. 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. OM3 0.025 @ 05:06-end of shift.

Actions Taken. Blank.

Monday 1st April 2019

DAY SHIFT

Temp. Warm.

Weather. Sunny with patchy clouds.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. OM3 0.025ppm 06:00-07:36.

Actions Taken. No odour detected.

NIGHT SHIFT

Temp. Cold.

Weather. Clear night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. OM3 0.025 @ 05:06-end of shift.

Actions Taken. Blank.

Tuesday 2nd April 2019

DAY SHIFT

Temp. Cool.

Weather. Sunny with patchy clouds.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. OM4 0.021ppm 12:06-12:21.
OM8 0.019ppm 14:04-14:19.

Actions Taken: Occasional strong smell of odour from PAS area.

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. No odour issues.
Actions Taken: Blank.

Wednesday 3rd April 2019

DAY SHIFT

Temp. Warm.

Weather. Sunny w/patchy clouds.

Odour Readings. All OMU's in operation.

Time: Blank.

Observations / Customer Complaint. No odour issues.

Operational issues / causes observed. Blank.

NIGHT SHIFT

Temp. Cool.

Weather. Clear night.

Odour Readings. All OMU's in operation.

Time: 05:15.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. No odour 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					
30/03/2019	39	1272 *1322	455	1766	3418	5184 *5234
01/04/2019	0	1448	642	2090	3226	5316
02/04/2019	20	1842	581	2423	4236	6679

30/03/2019: Incorrect amount entered for West PST's 2 (*1322 entered, should be 1272; resulting in Grand Total *5234 being incorrect, should be 5184).

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 Saturday 30th, 10 on Monday 1st & 10 on Tuesday 2nd April.

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.

Digesters 5 & 6 were both in use and had wet sloppy seals. There was evidence that both digesters had been spitting and a sludge spill between the digesters that had not been cleaning up.

Digesters 7 & 8 were both in use and had a wet sloppy seals. It was noted that the bell heights on both digesters were very high.

Digester 9 was in use and had a very wet seal, although little gas appeared to be bubbling off.

Digester 10 was in use and had a very wet seal, although little gas appeared to be bubbling off. There was evidence of a sludge spill around 25% of the perimeter

Digesters 11 & 12 were both in use and had very wet seals, however little gas appeared to be bubbling off.

Digesters 13 & 14 were both all out of service.

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

Digester 16 was out of service.

Digester 17 was in use but had a very wet seal, although little gas appeared to be bubbling off. There was also evidence of a sludge spill that had not been cleaned up.

Digester 18 was in use and sludge was starting to spill over the coping stones.

Digester 19 was in use but had a very wet seal, although little gas appeared to be bubbling off. There was also evidence of a sludge spill that had not been cleaned up.

Digester 20 was in use but had a very wet seal, although little 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.

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 20yds open bulk carrier that was empty. Also present was one closed 14yd skip.

In the area next to STW 1A there was one 8yd & one 14yd skip that were both full of general non-inert rubbish. There was also a large closed 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 large amount of rag and was partly covered with a tarpaulin, it was noted that the skip was odorous.

On the West side there was two 40yd closed bulk carriers that were both full and draining liquid before being removed off site.

East Side Screen House

All doors of the building were closed at the time of the inspection. TW advised all screens were in operation.

Around the PAS area (noticeable by the drum thickening building) strong offensive odour was present. TW advised there had also been a poly spill.

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% 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 were in operation at the time of the inspection, all had fat free surfaces.

PST 12 was in the process of being drained down before being taken out of service.

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 4 streams (1, 4, 7 & 9) 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 thick scum across their surfaces that appeared to be bubbling and spitting and was thick enough to almost obscure all of the internal dividing walls.

Nearly all of the sprinklers appeared to be in operation.

The mixed liquor feed channel serving E-Battery was clogged with rag

and other floating debris from lanes 25-24 and then lane 21.
 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: 04/04/2019

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.00 0.00 0.00	Unknown	Unknown
Main pumping station outlet	0.02 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	0.6	Yes

	0.00			
New West inlet (OCU 11)	0.00	0.5	Yes	
	0.00			
	0.00			
OCU 12 (Pasteurisation Plant)	0.00	0.5	Yes	
	0.00			