



London Borough of Hounslow

Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: Tuesday 28 th September 2021 (1pm)	
Attendees: Mr I Inman (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 but had dry grit across the entire tanks surface. Hoppers 1, 2 and 3 were all approx. 50% full and required draining down</p> <p>Tank 1B was empty but had dry grit across the entire tanks surface. Hoppers 1 and 3 were both approx. 40% full, hopper 3 was approx. 20% full, all required draining down.</p> <p>Tank 2A was empty but had dry grit and green sludge across the entire tanks surface. Hoppers 1, 2 and 3 were all approx. 80% full and had floating lumps of solid material, all required draining down.</p> <p>Tank 2B had dark/inky coloured effluent across 70% of the tanks surface, with solid and lumpy deposits along the right hand side of the tank, odour was clearly noticeable. All hoppers were therefore full.</p> <p>Tank 3A was empty but had dry grit across the entire tanks surface. Hopper 1 was approx. 15% full, hoppers 2 and 3 were drained down.</p>	

Tank 3B had dark/inky coloured effluent across 50% of the tanks surface, with dry grit/crust across the top 50% of the tanks surface. All hoppers were therefore full.

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 relatively clean except for an area of dry grit on the right hand side at the bottom end of the tank
Hoppers 1, 2 and 3 were all approx. 50% full and contained stagnant odorous effluent and required draining down.

Tank 6B was empty and relatively clean except for an area of dry grit on the left hand side at the bottom end of the tank
Hoppers 1, 2 and 3 were completely full and contained stagnant odorous effluent that required draining down.

Tank 7A had effluent covering 50% of the tanks surface.
No Amajets were in operation.
Hoppers 1, 2 and 3 were therefore all full.

Tank 7B was empty but had dry grit and sludge across 50% of the tanks surface.
Hoppers 1, 2 and 3 (shallow hoppers) were all full and overflowing back into the tank, and were noticeably odorous.

Tank 8A was empty and clean.
Hoppers 1, 2 and 3 were all full and starting to over flow back into the tank.

Tank 8B was empty and clean except for an area of dry grit and sludge at the top end of the tank.
Hoppers 1, 2 and 3 were all completely full and required draining down.

Storm Feed Channel - The level of effluent in both feed channels was low, bottomed out in some areas. It was noted that large amounts of grit and sludge was present in a number of areas along both the near and far side channel, which was odorous in places.

Odour was noticeably present in places.

Complaints

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

The Council received 1 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.

On Monday 20th September an on-line web complaints was received from a resident of Harvesters Close, Isleworth at 22.12pm, logged under reference: A21277.

The historic monitoring trends around the time of the complaint only showed one small spike of 0.015ppm between 22:05-22:19pm.

Odour Monitors

The odour readouts (H₂S) for all monitors that were providing data on 28/09/2021 at the time of the inspection are below.

Monitor 1	0.000	ppm	12:42pm
Monitor 2	0.001	ppm	12:42pm
Monitor 3	0.000	ppm	12:42pm
Monitor 4	0.000	ppm	12:42pm
Monitor 5	0.004	ppm	12:42pm
Monitor 6	0.000	ppm	12:42pm
Monitor 7	0.003	ppm	12:42pm
Monitor 8	0.000	ppm	12:42pm
Monitor 9	0.003	ppm	12:42pm
Monitor 10	0.003	ppm	12:42pm
Monitor 11	0.000	ppm	12:42pm
Monitor 12	0.000	ppm	12:42pm
Monitor 13	0.000	ppm	12:42pm
Wind Speed	15.261	mph	12:42pm
Wind Direction	192.052		12:42pm

Odour Log (Thames)

Tuesday 21st September 2021

DAY SHIFT

Temp. Warm.

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. Odour complaint received from Mogden Lane at 22:15pm.

Operational issues / causes observed. Blank.

Actions Taken. Site inspection made. No evidence of odour and no spikes on trends.

Wednesday 22nd September 2021

DAY SHIFT

Temp. Warm.

Weather. Sunny.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM3 Max 0.029ppm @ 16:04-16:17.

Operational issues / causes observed. FST 85 draining.

Actions Taken. Sludge on tank being hosed down.

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 23rd September 2021

DAY SHIFT

Temp. Warm.

Weather. Sunny w/patchy clouds.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM3 spiked at 09:19-09:36, max 0.036ppm.

Operational issues / causes observed. OCU11 stack output above trigger level at 0.898ppm.

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.

Friday 24th September 2021**DAY SHIFT**

Temp. Warm.

Weather. Sunny w/patchy clouds.

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. 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.

Saturday 25th September 2021**DAY SHIFT**

Temp. Warm.

Weather. Cloudy w/sunny spells.

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. Clear night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. OM3 max 0.062ppm @ 19:19-19:48pm.

Operational issues / causes observed. FST85.

Actions taken. Hoses cleaning tank.

Sunday 26th September 2021**DAY SHIFT**

Temp. Warm.

Weather. Cloudy w/sunny spells.

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. 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.

Monday 27th September 2021**DAY SHIFT**

Temp. Warm.

Weather. Rain w/sunny spells.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM3 0.103, 9:35-10:06.

Operational issues / causes observed. FST85 drained-sludge in bottom-tanker cleaning. OCU11 High PPB output 469ppb.

Actions taken. Blank.

NIGHT SHIFT

Temp. Cool.

Weather. Overcast 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 28th September 2021

DAY SHIFT

Temp. Warm.

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. Storms.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. OM6 spiked at 00:20-00:31, max 0.025ppm but <15 mins duration.

Operational issues / causes observed. Treating in excess of FFTT and filling storm tanks.

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					
22/09/2021	0	801	740	1541	760	2301
24/09/2021	0	801	595	1396	912	2308
						2247*
27/09/2021	0	1030	740	1770	760	2530
						2591*

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.

* **Incorrect figures entered on Thames Water paperwork.**

Imported Sludge

There have been an average of 10 imports of sludge per day in the preceding week.

No.5 Pumping Station

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

Sludge Import Area

It was noted that the condition around the sludge import area was much improved and noticeably clean.

One of the two skips present was still only part covered and both skips were virtually full and giving off odour. It was again noted that general rubbish and plastics had been dumped in one of these skips, which had still not been changed since the officers previous inspection.

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 closed at the time of the inspection.

Thames advised this unit is currently out of use due to ongoing maintenance.

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.

Digester 6 was in service and had a very wet seal that was bubbling off minimal amounts of gas.

Digester 7 was in service and had a very wet seal that was bubbling off minimal amounts of gas, it was noted that the bell height was very high.

Digesters 8, 9, 10 and 11 were all in service and had a very wet seals that were bubbling off minimal amounts of gas.

Digester 12 was in service and had a thick sludgy seal that was noted to be very low.

Digester 13 was in service and had a very wet seal that was bubbling off minimal amounts of gas. It was noted that the seal was very high and almost to the top of the coping stone.

Digester 14 was in service and had a very wet seal that was bubbling off minimal amounts of gas.

Digester 15 was out of service.

Digester 16 was in service and had a very wet seal that was bubbling off gas.
There was evidence of a very recent spill that required cleaning.

Digester 17 was in service and had a very wet seal that was bubbling off minimal amounts of gas.

Digesters 18 and 19 were both out of service.

Digester 20 was in service and had a very wet seal that was bubbling off minimal amounts of gas.

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. Other than surface algae on tanks 73, 74 and 75 no other issues were evident.

Skips

On the East side there two 14yds open skips.
One contained general rubbish and waste, the other skip contained green vegetation and sodden wet rag and cloth. Both skips were uncovered.

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 approx. 40% full of grit. This skip was uncovered and the tarpaulin to cover it was lying on the floor.

Two of the three roller shutter doors on the East side grit building were open.

On the service road next to the raw sludge screening building was a closed 14yds skip.

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 open at the time of the inspection, TW were unable to confirm why they were open.

No other issues appeared evident.

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 90% of its length, there was a significant number of weeds were growing out of it and through the steel grating.

During the walk to E-Battery it was noted that Aeration Lanes 24 and 25 were out of service for ongoing maintenance.

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 made up of either fat or 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 9 streams are currently operational.

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 and thick sludge was present in most of these areas.

It was again noted that the pile of rag on the walkway grating had still not been removed since the officers previous inspection.

The surface area of the mixed liquor feed channel serving the aeration lanes of E-Battery was free-flowing between lanes 22-25. However, lane 22 was partially clogged with floating debris.

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: 28/09/2021

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station outlet	0.00 0.00 0.00	0.2	Unknown
East OCU	0.00 0.00 0.00	0.05	Unknown
West inlet OCU	0.00 0.00 0.00	0.05	Unknown
Thickening plant outlet	0.05 0.03 0.07	0.6	Unknown
New West inlet (OCU 11)	0.00 0.00 0.00	0.5	Unknown
Pasteurisation (OCU 12)	0.011 0.010 0.013	0.5	Unknown
Transfer PS inlet	31.96 33.81 28.77	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