



London Borough of Hounslow

Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: Tuesday 20th April 2021 (13:00pm)

Attendees: Mr Zaheer Kadri (London Borough of Hounslow) and Mr Tom Costin (Thames Water)

LB Hounslow Observation

Thames Water Action / Response

Storm Water Storage Tanks (SWST)

Tank 1A - Tank was clean and empty - All hoppers had been drained down to the bottom. Hopper one was below 25% level. Hoppers 2 and 3 were drained down.

Tank 1B - Tank was clear of effluent however had a slight sludgy surface toward the river end of the tank. All three hoppers were below 25% level but still needed draining down.

Tank 2A - was clear and had a clean surface. Hoppers 1 and 3 were empty, however hopper 2 needed draining down.

Tank 2B - mostly was covered with dried gritty effluent and all Hoppers 1,2 and 3 were full to the top and needed draining down.

Tank 3A - The tank was clear of effluent however all hoppers were full to the top and needed draining down.

Tank 3B - This tank was all clear of effluent and Hoppers 1, 2 and 3 were all drained down.

Storm Feed Channel - The level of effluent in the feed channels was approx. 10% in depth along its entire length and murky and black in colour. some fatty deposits observed

Tanks 4A, 4B, 5A & 5B - All tanks are covered and odour controlled. Unable to gauge condition as lighting system still not working.

Tank 6A – Tank was clean and clear of effluent however Hoppers 1, 2 and 3 were over 50 % full of effluent- Hoppers needed draining down.

Tank 6B – Tank was mostly covered with a dry gritty surface and all Hoppers needed cleaning out and draining down.

Tank 7A and 7B – Both tanks had a thick gritty surface that needed cleaning and all the hoppers of both tanks needed draining down. Shallow Hoppers.

Tank 8A and Tank 8B – The surface of the majority of both tanks was full of effluent starting at the hoppers- all the hoppers were completely full and overflowing. This was due to the cracks in the hoppers and tanks.

Storm Feed Channel - The level of effluent in the feed channels was approx. 10% in depth along its entire length and was a murky and black shade / colour – No fatty deposits floating on surface.

There were no observation of malodour at this locality of the works.

Complaints

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

The Council directly 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 monitors that were providing data on 20/04/2021 at the time of the inspection are below.

Monitor 1	0.004	ppm	13:18pm
Monitor 2	0.004	ppm	13:18pm
Monitor 3	0.005	ppm	13:18pm
Monitor 4	0.000	ppm	13:18pm
Monitor 5	0.004	ppm	13:18pm
Monitor 6	0.000	ppm	13:18pm
Monitor 7	0.004	ppm	13:18pm
Monitor 8	0.004	ppm	13:18pm
Monitor 9	0.004	ppm	13:18pm
Monitor 10	0.000	ppm	13:18pm
Monitor 11	0.000	ppm	13:18pm
Monitor 12	0.004	ppm	13:18pm
Monitor 13	0.000	ppm	13:18pm
Wind Speed	0.212	mph	13:18pm
Wind Direction	111.430		13:18pm

Odour Log (Thames)

Wednesday 14th April 2021

DAY SHIFT

Temp. Cool.

Weather. Cloudy with sunny spells .

Odour Readings All Odour monitors are in operation / No Faults.

Time: 17:30.

Observations / Customer Complaint.

OM2 spiked to 0.025ppm at 10:28 and flat lined thereafter at this level.

Operational issues / causes observed.

No odour reports.

NIGHT SHIFT

Temp. Cool.

Weather. Clear night .
Odour Readings. All Odour monitors are in operation except OM2 which had a Faults.
Time: 05:30.
Observations / Customer Complaint.
No odour issues found or reported.
Operational issues / causes observed. Blank.

Thursday 15th April 2021

DAY SHIFT

Temp. Cool.

Weather. Rain with sunny spells .

Odour Readings. All Odour monitors are in operation except OM2 which had a Faults.

Time: 17:30.

Observations / Customer Complaint.

No odour issues found or reported.

Operational issues / causes observed. Blank.

NIGHT SHIFT

Temp. Cold

Weather. Overcast night.

Odour Readings. All Odour monitors are in operation except OM2 which had a Faults.

Time: 05:30.

Observations / Customer Complaint.

No odour issues reported.

Operational issues / causes observed. Blank.

Friday 16th April 2021

DAY SHIFT

Temp. Warm.

Weather. Sunny with patchy clouds.

Odour Readings. All Odour monitors are in operation except OM2 which had a Faults.

Time: 17:30.

Observations / Customer Complaint.

No odour issues found or reported.

Operational issues / causes observed. Blank.

NIGHT SHIFT

Temp. Cool.

Weather. Clear night.

Odour Readings. All Odour monitors are in operation except OM2 which had a Faults.

Time: 05:30.

Observations / customer Complaint. No odour issues/Spikes or complaints.

Operational issues / causes observed. Blank.

Saturday 17th April 2021**DAY SHIFT**

Temp. Warm .

Weather. Sunny with Patchy clouds.

Odour Readings. All Odour monitors are in operation except OM2 which had a Faults.

Time: 17:30.

Observations / Customer Complaint.

No odour issues found or reported.

Operational issues / causes observed. Blank.

NIGHT SHIFT

Temp. Cool.

Weather. Clear night.

Odour Readings. All Odour monitors are in operation except OM2 which had a Fault.

Time: 05:30.

Observations / Customer Complaint.

OM3 spiked to 0.0016ppm at 00:33-00:48 odour complaint received from central Avenue.

Operational issues / causes observed.

Usual smells from PAS site checked carried out – nothing abnormal found.

Sunday 18th April 2021**DAY SHIFT**

Temp. Warm.

Weather. Sunny.

Odour Readings. All Odour monitors are in operation except OM2 which had a Faults.

Time: 17:30.

Observations / Customer Complaint.

No odour issues found or reported

Operational issues / causes observed. Blank

NIGHT SHIFT

Temp. Cool.

Weather. Clear night

Odour Readings. All Odour monitors are in operation except OM2 which had a Faults.

Time: 05:30.

Observations / Customer Complaint.

No odour spikes or complaints.

Operational issues / causes observed. Blank.

Monday 19th April 2021

DAY SHIFT

Temp. Cool.

Weather. Sunny with Patchy clouds.

Odour Readings. All Odour monitors are in operation / No Faults.

Time: 17:30.

Observations / Customer Complaint.

No odour issues found .

Operational issues / causes observed. Blank

NIGHT SHIFT

Temp. Cool.

Weather. Clear nights.

Odour Readings. All Odour monitors are in operation except OM2 which had a Fault.

Time: 05:30.

Observations / Customer Complaint.

OM5 spiked on three occasions:

0.022ppm at 02:50-03:06.

0.021ppm at 23:20-23:51.

0.021ppm at 22:36-23:05.

Operational issues / causes observed.

Pas area checked- odour from drain on main drive.

Action taken

OCU12 ppb monitor not working.

Tuesday 20th April 2021

DAY SHIFT

Temp. Warm.

Weather. Sunny with patchy clouds.

Odour Readings. All Odour monitors are in operation / No Faults.

Time: 17:30.

Observations / Customer Complaint.

No odour spikes.

Operational issues / causes observed. Blank.

NIGHT SHIFT

Temp. Cool.

Weather. Clear Nights.

Odour Readings. All Odour monitors are in operation except OM2 which had a Faults.

Time: 20:00/07:30 .

Observations / Customer Complaint.

20:00 - Customer complaint received from west of the site

07:30 – OM4 & OM10 breaching level overnight to max 0.020ppm after 21:30.

Operational issues / causes observed.

In response to customer complaint Digester area and west works checked no obvious odours found Digester 7 gassing a little – flare set point lowered to bring dome down.

In response to breaching levels site wide checks undertaken nothing of note found.

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					
14/04/2021	0	946	1218	2164	4393	6557
16/04/2021	0	1091	1200	2291	4393	6684
19/04/2021	0	824	1949	2773	4721	7494

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 has been an average of 0 import of sludge per day.

No.5 Pumping Station

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

Sludge Import Area

The sludge import area was clean & tidy. No odours detected at time of inspection. TW advised they are frequently hosing this area down.

Raw Sludge Screening House

The large roller shutter door of the Raw Sludge Screening building was closed at the time of 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 in service and had a low thick seal all the way around the digester – there were no signs of a previous spillage on coping stones but the walkways around the digester had historic gritty surface that needed cleaning. The depth of the seal was under 2ft.

Digester 6 was in service and had a low thick seal approx. 2ft below coping stones. Good thick seal all around. The walkway around the digesters were gritty / crusty needed cleaning.

Digester 7 was in service and had a low thick seal approx. 3ft below coping stones.

Digester 8 was in service and had a low thick sludgy seal approx. 2ft below coping stones. Good thick seal all around.

Digester 9 was in service and had a very high wet bubbly seal that was 1ft below the coping stones. Gassing in places but no sign of previous spillage – coping stones were tidy.

Digesters 10 & 11 were both in service and had good thick seals that were bubbling off minimal amounts of gas.

Digester 12 was in service and had a thick seal all round that was bubbling off minimal amounts of gas. The sludge level was approx. 4ft below the coping stone.

Digester 13 was in service and had a very thick sludgy seal that was at the same level as the coping. No previous spillage noticed- coping stones were clean

Digester 14 was in service and had a thin wet seal approx. 2ft below coping stones. There were signs of previous spillage.

Digester 15 was out of service.

Digester 16 was in service and had a good thick seal. There were signs of previous spillage. Level of sludge was high approx. 1ft below coping stone in some places higher.

Digester 17 was in service and had a wet seal that was approx. 4ft below coping stones.

Digesters 18 & 19 were both out of service.

Digester 20 was in service and had a low thick seal approx. 2ft below coping stones. Good thick seal all around.

The walkways around the lower end of the Digesters 5 - 10 had dried gritty surfaces possibly from previous historic spillages that needed to be cleaned and maintained. TW advised.

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/sprinklers were in operation at the time of the inspection. Surfaces were mostly clear and free of any build-up of fatty/mossy deposits. The water hoses/sprinklers were breaking up any remainder residue across the surface.

Skips

1x large open grit skip (full) – covered with tarpaulin.
1x 8 yard grit/rag skip (full) - covered with tarpaulin.
1x 8 yard general waste in Service yard of the Sludge Screen House.

No other skips observed on site.

East Side Screen House

The middle set of blue screen house doors were open at the time of the inspection no contractors working at site at time of inspection. Advised TW these doors must remain closed.

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 nearest the road was clogged along approx. 80% of its length, there were visibly crusty areas and a number of weeds were growing out of it (No change from previous visit on 23rd March 2021).

West side primary settlement tanks (PST)

Rectangular PSTs are now covered and odour controlled.
TW advised no concerns or issues. No noticeable odours at time of inspection.

PST's 9, 10 and 11 were all in service and had relatively fat free surfaces.

Circular PST 12 has been drained down and is currently out of service.

Pasteurisation Plant

The pasteurisation plant is in service. TW advised 8 streams are currently operational.

Section 106 agreement

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

West Side Aeration Lanes

All lanes appeared to be free flowing with the internal dividing walls being visible again in some areas. However it was noted that a thick fluffy foam is again starting to build up across the entire tanks surface area.

Most of the sprinklers were back in operation and a lot of floating of debris was noticeable (rag and a number of floating discarded face masks).

The mixed liquor feed channel serving the aeration lanes of E-Battery was free flowing along its entire length, although thick foam appeared to be starting to build up by lane 22.

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: 20th April 2021

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	NO DATA	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00	0.2	Unknown
East OCU	0.04 0.04 0.04	0.05	YES

	Ave:0.04		
West inlet OCU	0.00 0.00 0.17 Ave:0.05	0.05	Yes
Sludge reception inlet	NO DATA	Unknown	Unknown
Sludge reception outlet	NO DATA	0.8	Unknown
Thickening plant inlet	NO DATA	Unknown	Unknown
Thickening plant outlet	0.00 0.00 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
Transfer PS inlet	0.00 0.00 0.00	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00	0.6	Yes