



Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: Tuesday 23rd March 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 were over ½ full of effluent and needed draining 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 full to the top and needed draining down.

Tank 2A - was mostly clean however a gritty surface at the hopper end. Hopper 1 was low, however hopper 2 and 3 needed draining down.

Tank 2B - was mostly clean however to the left of the tank portion of the tank there was a layer of thick sludgy effluent and some gritty areas - All the hoppers were full and needed draining down.

Tank 3A - The tank had a layer of thick sludgy effluent all the way across to the river end. All hoppers were full and needed draining down.

Tank 3B - This tank had a thick layer of sludge more toward the hopper end. Hoppers 1 & 2 were empty, however hopper 3 needed draining down.

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

Tank 6A – The tank was clean throughout, however hoppers 1, 2 & 3 needed draining down.

Tank 6B- Tank had a black effluent at hopper end – All hoppers were full and needed draining down. There was a thin layer across the surface of fatty deposits.

Tank 7A - The tank was full of black effluent at the hopper end. All the hoppers needed draining down. The hoppers were overflowing with effluent.

Tank 7B- The Tank was clear, however Hoppers 1, 2 & 3 needed draining down. The effluent from the hoppers was overflowing.

Tank 8A and Tank 8B - were both full of effluent at the hopper end but thinned out across the tank. The surface was clear of fatty deposits and sludge. Hoppers in both tanks were overflowing and needed attention. This is partly due to the cracks in walls which have been a problem with these Tanks.

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 with some fatty deposits floating along the surface.

There were no observation of malodour at this locality of the works. Thames Water had been advised to take action to clean the tanks and drain down the hoppers.

Complaints

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

The Council directly received 1 complaint by email in the preceding week (18/03/2021 ref A12562). No exact date and time of the odour incident

was received. In response a letter was sent to the complainant encouraging to use the 24/7 telephone reporting service.

The Council directly received 2 complaints via online reporting system in the preceding week. Both complaints were received after the time of the incident. A letter was sent to both complainants encouraging them to use the telephone service. Both complaints were actioned on the 21/03/2021 under ref A12595 / A12596

The Council received no complaints by email from MRAG.

Odour Monitors

The odour readouts (H₂S) for all monitors that were providing data on 23/03/2021 at the time of the inspection are below.

| | | | |
|----------------|---------|-----|---------|
| Monitor 1 | 0.000 | ppm | 13:05pm |
| Monitor 2 | 0.000 | ppm | 13:05pm |
| Monitor 3 | 0.000 | ppm | 13:05pm |
| Monitor 4 | 0.000 | ppm | 13:05pm |
| Monitor 5 | 0.004 | ppm | 13:05pm |
| Monitor 6 | 0.000 | ppm | 13:05pm |
| Monitor 7 | 0.000 | ppm | 13:05pm |
| Monitor 8 | 0.004 | ppm | 13:05pm |
| Monitor 9 | 0.004 | ppm | 13:05pm |
| Monitor 10 | 0.000 | ppm | 13:05pm |
| Monitor 11 | 0.000 | ppm | 13:05pm |
| Monitor 12 | 0.000 | ppm | 13:05pm |
| Monitor 13 | 0.000 | ppm | 13:05pm |
| Wind Speed | 4.163 | mph | 13:05pm |
| Wind Direction | 238.090 | | 13:05pm |

Odour Log (Thames)

Wednesday 17th March 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. No odour issues.

Operational issues / causes observed. Blank.

NIGHT SHIFT

Temp. Cold

Weather. Clear night .

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

Time: 05:30.

Observations / Customer Complaint.

No odour issues found or reported.

Operational issues / causes observed. Blank.

Thursday 18th March 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 or reported.

Operational issues / causes observed. Blank

NIGHT SHIFT

Temp. Cool.

Weather. Clear Night.

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

Time: 05:30.

Observations / Customer Complaint. No odour issues found or reported

Operational issues / causes observed. Blank.

Friday 19th March 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 issues found or reported.

Operational issues / causes observed. Blank.

NIGHT SHIFT

Temp. Cool.

Weather. Clear night.

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

Time: 05:30.

Observations / Customer Complaint. No odour issues

Operational issues / causes observed. Blank.

Saturday 20th March 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. No odour issues

Operational issues / causes observed. Blank.

NIGHT SHIFT

Temp. Cool.

Weather. Clear night.

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

Time: 05:30.

Observations / Customer Complaint. No odour issues.

Operational issues / causes observed. Blank

Sunday 21st March 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 issues

Operational issues / causes observed. East OCU only 1/3 fans available

NIGHT SHIFT

Temp. Cool.

Weather. Clear Night.

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

Time: 05:30.

Observations / Customer Complaint.

OM9 spiked to 0.016ppm between 01:45-02:00

Operational issues / causes observed. PAS Stream 7 reactor draining for overhaul

Monday 22nd March 2021**DAY SHIFT**

Temp. Warm.

Weather. Sunny with patchy clouds

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

Time: 00:00.

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 / No Faults.

Time: 05:30.

Observations / Customer Complaint.

OM9 spiked to 0.016ppm between 19:18-19:33

Operational issues / causes observed. Digester bell height high-burner on to drop bell.

Tuesday 23rd March 2021**DAY SHIFT**

Temp. Warm

Weather. Cloudy with sunny spells.

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

Time: 17:30.

Observations / Customer Complaint.

OM5 spiked to 0.016 at 10:45 -11:00.

Operational issues / causes observed.

No odours found

NIGHT SHIFT

Temp. Cool.

Weather. Clear Nights.

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

Time: 05:30.

Observations / Customer Complaint.

OM5 spiked to 0.018 at 19:29 - 19:45.

OM5 spiked to 0.015 at 19:00 - 19:14

Operational issues / causes observed.

Odour from sewer on main drive.

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 | | | | | |
| 17/03/2021 | 0 | 1841 | 1218 | 3059 | 4541 | 7600 |
| 19/03/2021 | 0 | 1012 | 1823 | 2835 | 3539 | 6374 |
| 22/03/2021 | 0 | 1097 | 1678 | 2775 | 4724 | 7499 |

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

An average of 0 import of sludge per day. No imports made this week.

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 thick seal that was approx. 2ft below the coping stones. No evidence of previous spillages.

Digester 6 was out of service.

Digester 7 was in service and had a low wet seal that was bubbling off minimal amounts of gas. There were signs of previous spillage. Level of seal was approx. 3ft below coping stones.

Digester 8 was in service and had a very wet low seal that was bubbling off minimal amounts of gas. The seal was 3ft below the coping stone. No signs of previous spillages.

Digester 9 was in service and had a very high wet seal that was 1ft below the coping stones.

Digesters 10 & 11 were both in service and both had very wet seals that were bubbling off minimal amounts of gas. It was also noted that the sludge level of both digesters was very high, approx. a few inches below coping stone and in some places at the same level as the coping stones.

Digester 12 was in service and had a very wet seal 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 stone.

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. 2ft 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 wet watery seal that was bubbling off minimal amounts of gas approx. 4 ft. below coping stones.

The walkways around Digesters 5- 10 had dried gritty surfaces possibly from previous 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 arms with hoses connected were rotating and clearing the fatty deposits.

Skips

On the East side (Grit house) there were 2 x 16yard skips. One of the skips contained inert material unlikely to rot or cause an odour (No cover). The second skip was empty. There was also 1 large red BIFFA 20yard skip for rag which was empty at the time of visit.

No other skips on site.

East Side Screen House

All the doors and roller shutter were closed at time of visit.

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 along the length of this channel.

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 7 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 slightly visible again. 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 and sanitary towels).

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: 23rd March 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 | 0.06 0.05 0.05 | 0.05 | YES |

| | | | |
|-------------------------|----------------------|---------|---------|
| | 0.05 | | |
| West inlet OCU | 0.01 0.01 0.01 | 0.05 | YES |
| Sludge reception inlet | No Data | Unknown | Unknown |
| Thickening plant outlet | 7.81 7.92 5.71 | 0.8 | Unknown |
| Thickening plant inlet | No Data | Unknown | Unknown |
| Thickening plant outlet | 7.81 7.92 5.17 | 0.6 | NO |
| 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 |
| GBT Plant OCU Outlet | 0.00 0.00 0.00 | | |