



Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: Wednesday 8 th July 2020 (11:30am)	
Attendees: Mr L. Phillips (London Borough of Hounslow) and Ms C Page (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A - Was empty clean - All hoppers were drained to lowest point.</p> <p>Tank 1B - Was empty clean - All hoppers were drained to lowest point.</p> <p>Tank 2A - Was empty clean – All hoppers 1 and 2 were drained to lowest point. However hopper 3 was completely full and required draining. TW advised hopper 3 was blocked.</p> <p>Tank 2B - Was empty and clean - Hopper 1 was completely full, hoppers 2 and 3 was approx 30% full, all require draining down. TW advised hopper 1 was blocked.</p> <p>Tank 3A - Was empty and clean - All hoppers full and require draining/over-pumping.</p> <p>Tank 3B - Was empty clean - All hoppers full and require draining/over-pumping.</p> <p>Tanks 4A, 4B, 5A & 5B - All tanks are covered and odour controlled. Unable to gauge condition as lighting system still not working.</p>	

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

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

Tank 7A - Was empty - Dry surface grit was evident across parts of the tank floor - All Hoppers (shallow hoppers) were full of stagnant green water and require cleaning.

Tank 7B - Was empty - Dry surface grit was evident across parts of the tank floor - All Hoppers (shallow hoppers) full and require draining/over-pumping.

Tank 8A - Was empty clean - All hoppers full and require draining/over-pumping.

Tank 8B - Was empty clean - All hoppers full and require draining/over-pumping.

Feed Channel - The level of effluent in both feed channels was low along its entire length.

Complaints

The Council has received 0 complaints by email in the preceding week and 0 complaints by telephone.

The historic monitoring trends provide the following information:

TW advised of a possible bio gas main shutdown last week and a local pumping station blockage on the network that may have added to the problem.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection

Monitor 1	0.000	ppm	11:31am
Monitor 2	0.000	ppm	11:31am
Monitor 3	0.000	ppm	11:31am
Monitor 4	0.000	ppm	11:31am
Monitor 5	-0.000	ppm	11:32am
Monitor 6	0.000	ppm	11:32am
Monitor 7	0.000	ppm	11:32am
Monitor 8	0.004	ppm	11:32am
Monitor 9	0.000	ppm	11:32am
Monitor 10	0.000	ppm	11:32am
Monitor 11	0.000	ppm	11:32am
Monitor 12	0.000	ppm	11:32am
Monitor 13	0.000	ppm	11:32am
Wind Speed	4.544	mph	11:32am
Wind Direction	231.472		11:32am

Odour Log (Thames)

Thursday 2nd July 2020:

DAY SHIFT:

Temp: Warm.

Weather: Sunny W/ Patchy.

Odour Readings: All Omu's in operation.

Time: 17:30.

Observations / Customer Complaint: OM3 @10:20 & 16:35 (0.034 & 0.024 ppm) for less than 15 mins.

Operational issues / causes observed: PST'S 13 – 20 checked No 12 PST blocked and being flushed.

Actions Taken: 12 PST back pumping.

NIGHT SHIFT:

Temp: Cool.

Weather: Cloudy.
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 3rd July 2020:

DAY SHIFT:

Temp: Warm.

Weather: Sunny W/ Patchy clouds..

Odour Readings: All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint: OM3 0.031 10:19 – 10:34 OM2
0.021 07:13 – 07:27 0.026 08:13 – 08:29

Operational issues / causes observed: Inlet area checked PST'S
checked.

Actions Taken: Blank.

NIGHT SHIFT:

Temp: Cool.

Weather: Rain.

Odour Readings: All OMU's in use.

Time: 05:30.

Observations / Customer Complaint: OM2 spike to 0.071 at 22:41 –
22:57 OM3 0.026 at 00.49 -22:57.

Operational issues / causes observed: OCU11 high PPB output due
to chemical dosing off east inlet area washed down.

Actions Taken: Blank.

Saturday 4th July 2020

DAY SHIFT:

Temp: Warm.

Weather: Cloudy.

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:** Warm.**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.**Sunday 5th July 2020****DAY SHIFT:****Temp:** Warm.**Weather:** Sunny W / Patch clouds.**Odour Readings:** All OMU's in operation.**Time:** 17:30.**Observations / Customer Complaint:** OM3 0.037 – 10:33 – 10:49
0.017 09:18 – 09:33 0.021 17:18 ongoing.**Operational issues / causes observed:** OCU11 high PPB output due to chemical dosing off PST'S checked.**Actions Taken:** Blank.**NIGHT SHIFT:****Temp:** Cool.**Weather:** Clear night.**Odour Readings:** All OMU's in operation.**Time:** 05:30.**Observations / Customer Complaint:** OM3 0.031 at 21:04 – 21:33
OM3 0.043 at 23:48 00:04.**Operational issues / causes observed:** OCU11 high PPB output due to chemical dosing off.**Actions Taken:** Blank.**Monday 6th July 2020:****DAY SHIFT:****Temp:** Warm.**Weather:** Sunny W/ Patchy clouds.**Odour Readings:** All OMU's in operation.**Time:** 17:30.**Observations / Customer Complaint:** OM3 0.027ppm 07:34 – 07:49.

Operational issues / causes observed: OCU11 chemical dosing out of range.

Actions Taken: Blank.

NIGHT SHIFT:

Temp: Cool.

Weather: Clear night.

Odour Readings: All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint: Customer complaint from Clifton Road Twickenham.

Operational issues / causes observed: Wind direction was now to 0mph. No spikes on trends at time of complaint. PAS stream one maybe the source from heating coil in heat exchanger OM2 0.019 at 01:07 – 01:34.

Actions Taken: Site checked no sources found but P.house carpark was smelly at the start of shift.

Tuesday 7th July 2020

DAY SHIFT

Temp: Cool.

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: Rain.

Odour Readings: All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint: No odour issues.

Operational issues / causes observed: Blank.

Actions Taken: Blank.

Wednesday 8th July 2020

DAY SHIFT:

Temp: Cool.

Weather: Rain.

Odour Readings: All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint: OM8 0.022ppm 12:12 – 12:28.

Operational issues / causes observed: PAS stream 1 & 9 drained to remove from service.

Action Taken: Area around streams 1 & 9 hosed down to clear sludge spills.

NIGHT SHIFT:

Temp: Cool.

Weather: Rain.

Odour Readings: All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint: No odour issues.

Operational issues / causes observed: Blank

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					
06/07/2020	0	328	244	572	1920	2492
07/07/2020	59	267	244	570	1920	2490
08/07/2020	0	122	122	244	1920	2164

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 10 imports of sludge daily over the last week.

No.5 Pumping Station

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

Sludge Import Area

No issues to report on during inspection.

Raw Sludge Screening House

The large roller shutter door of the Raw Sludge Screening building was

closed 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 in use weak sloppy seal. No evidence of spillage.

Digester 6 - was in use weak sloppy seal. No evidence of spillage.

Digester 7 - was in use weak sloppy seal. No evidence of spillage.

Digester 8 - was in use weak sloppy seal. No evidence of spillage.

Digester 9 - was in use weak sloppy seal. No evidence of spillage.

Digester 10 - was in use weak sloppy seal. No evidence of spillage.

Digester 11- was in use weak sloppy seal. No evidence of spillage.

Digester 12 - was in use weak sloppy seal. No evidence of spillage.

Digester 13 - was in use weak sloppy seal. No evidence of spillage.

Digester 14 - was out of service

Digester 15 - was out of service.

Digester 16 - was in service weak sloppy seal. No evidence of spillage.

Digester 17 - was in service but had a weak sloppy seal.

Digester 18 - was out of service.

Digester 19 - was out of service.

Digester 20 - was in service weak sloppy seal. No evidence of spillage.

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.

The area around all digesters was much improved with no evidence of recent or historical sludge spills. Thames advised they have been actively undertaking regular clean-ups of this area of the works.

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 x2 20yds open bulk carrier that contained general inert rubbish and had been on site for a number of months. TW were requested to arrange its removal ASAP.

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

East Side Screen House

The doors at the screen house building were closed during 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 partially clogged along approx 30% of its

length, was visibly crusty in areas and had weeds growing out of it.

West side primary settlement tanks (PST)

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

Circular PST 12 was out of service. PST's 9, 11 and 12 were all in use and had relatively fat free surfaces but with some floating debris. PST12 also had a large area of green algae across part of its surface.

Pasteurisation Plant

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

Section 106 agreement

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

West Side Aeration Lanes (New)

All lanes are now much improved and appeared to be free flowing, with the internal dividing walls being visible again.
However, a number of the sprinklers were clogged with pondweed and floating debris was present around these areas.

The mixed liquor feed channel serving aeration lanes 22 to 25 of E-Battery was clogged.

TW were advised they should consider using a tanker crew to undertake a clearance of all clogged areas.

New Inlet Works (West Side)

No issues appeared evident at the new inlet works.

Odour Control Unit (OCU) performance monitoring:
08/07/2020

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	No data	Unknown	Unknown
Main pumping station outlet	No data	0.2	Unknown
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	Blank	0.8	Unknown
Thickening plant inlet	Blank	Unknown	Unknown
Thickening plant outlet	0.00 0.01 0.01	0.6	Yes
New West inlet (OCU 11)	0.00 0.00 0.00	0.5	No
Pasteurisation (OCU 12)	0.00 0.00 0.00	0.5	Yes
Transfer PS inlet	Blank	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00	0.6	Yes