

Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: Thursday 23rd November 2023 (13:30pm)

Attendees: Mr Z Kadri (LB Hounslow) and Ms Chantelle Dixon (Thames Water)

LB Hounslow Observation

Thames Water Action / Response

Storm Water Storage Tanks (SWST)

Tank 1A – Tank empty – significant sections of weed growth –. All Hoppers approx. over 50% full of effluent Requires flushing and draining/over-pumping.

Tank 1B – Tank empty – significant sections of weed growth and sludgy remanence –. All Hoppers were full however Hopper 2 was empty.

Tank 2A – Tank empty – significant sections of weed growth and patches of sludgy remanence –. All Hoppers were empty.

Tank 2B – Tank empty – significant sections of sludgy remanence –. All Hoppers contained minimum effluent.

Tank 3A – Tank empty and flushed clean. All Hoppers contained minimal amounts of effluent.

Tank 3B – Tank contained effluent at hopper end – hoppers were overspilling and needed to be drained down/over pumped.

Storm Feed Channel - The level of effluent in this feed channel was approx. 10% throughout the channels. The effluent looked brown and murky and bottomed out in places.

Tanks 4A, 4B, 5A & 5B All tanks are covered, and odour controlled. I was able to gauge the conditions which demonstrated the tanks as being full and in use.

Tank 6A – Tank empty and flushed clean. All Hoppers approx. over 50% full of effluent. Required draining/over-pumping.

Tank 6B – Tank empty — All Hoppers approx. 40% full of effluent. Required draining/over-pumping.

Tank 7A – Tank in use – All Amajets in operation as Tank being returned.

Tank 7B – Tank empty – 100% of tank covered with thick layer of sludge –Hopper 1 was clear however Hopper 2 & 3 needed draining down (Shallow Hoppers).

Tank 8A – Tank empty - Approx. 50% of tank covered by grit and sludge – required flushing – All Hoppers full of blanket of sludge– requires draining/over-pumping.

Tank 8B – Tank in use – All Amajets in operation as Tank being returned.

Storm Feed Channel - The level of effluent in this feed channel was approx. 10% throughout the channels. The effluent looked brown and murky and bottomed out in places.

Complaints

There were no odour complaints in the preceding week.

Odour Monitors

The odour readouts (H₂S) at 13:33 on the 23rd of November 2023.

Monitor 1	0.000	ppm
Monitor 2	0.001	ppm
Monitor 3	0.003	ppm
Monitor 4	0.000	ppm
Monitor 5	0.000	ppm
Monitor 6	0.003	ppm
Monitor 7	0.003	ppm
Monitor 8	0.006	ppm
Monitor 9	0.000	ppm
Monitor 10	0.004	ppm
Monitor 11	0.000	ppm
Monitor 12	0.003	ppm
Monitor 13	0.003	ppm
Wind Speed	0.208	mph
Wind Direction	263.713	Deg

Odour logs

Wednesday 15th November 2023

DAY SHIFT

Temp. Cool

Weather. Cloudy with sunny spells

Odour Readings. All OMU's in operation

Time: 17:30.

Observations / Customer Complaint.

No 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 spiked to 0.018 between 01:27-01:42

OM5 spiked to 0.017 between 02:38-22:53

OM5 spiked to 0.021 between 22:08-22:24

Operational issues / causes observed.

OCU11 high ppm output & odour from vent on main drive

Actions taken. Blank.

Thursday 16th November 2023

DAY SHIFT

Temp. Cold

Weather. Cloudy

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.

OM5 spiked to 0.022 at 23:14-23:30

OM8 spiked to 0.023 at 18:01-18:18

OM8 spiked to 0.022 at 19:31-19:49

OM8 spiked to 0.016 at 19:03-19:16

Operational issues / causes observed.

Odour from vent on main drive.

Actions taken. Blank

Friday 17th November 2023

DAY SHIFT

Temp. Cool

Weather. Sunny

Odour Readings. All OMU's in operation

Time: 17:30.

Observations / Customer Complaint.

OM5 Spiked to 0.016ppm maximum.

Operational issues / causes observed.

Odour from vent on main drive.

Actions taken. Blank

NIGHT SHIFT

Temp. Cool

Weather. Patchy rain.

Odour Readings. All OMU's in operation

Time: 05:30.

Observations / Customer Complaint.

No odour issues found or reported.

Operational issues / causes observed. Blank

Actions taken. Blank

Saturday 18th November 2023

DAY SHIFT

Temp. Cool

Weather. Patchy rain

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. Overcast Night

Odour Readings. All OMU's in operation

Time: 05:30.

Observations / Customer Complaint.

No odour issues found or reported.

Operational issues / causes observed. Blank

Actions taken. Blank

Sunday 19th November 2023

DAY SHIFT

Temp. Cool

Weather. Patchy rain

Odour Readings. All OMU's in operation

Time: 17:30.

Observations / Customer Complaint.

OM3 Spiked to 0.025ppm at 16:32-16:48.

Operational issues / causes observed. Blank

Actions taken. Blank

NIGHT SHIFT

Temp. Cool

Weather. Overcast Night

Odour Readings. All OMU's in operation

Time: 05:30.

Observations / Customer Complaint.

OM5 spiked at 03:00- 03:16 spiked to 0.016ppm

Operational issues / causes observed. Blank

Actions taken. Blank

Monday 20th November 2023

DAY SHIFT

Temp. Cool

Weather. Sunny with patchy clouds

Odour Readings. All OMU's in operation

Time: 17:30.

Observations / Customer Complaint.

OM8 spiked at 15:15-16:00 to 0.025ppm.

Operational issues / causes observed.

Area around monitor checked – nothing to note.

Actions taken. Blank

NIGHT SHIFT

Temp. Cool

Weather. Patchy rain.

Odour Readings. All OMU's in operation

Time: 05:30.

Observations / Customer Complaint.

OM3 spiked at 19:18-20:03 max spike to 0.024ppm

Operational issues / causes observed. Blank

Actions taken. Blank

Tuesday 21st November 2023

DAY SHIFT

Temp. Cool

Weather. Cloudy with 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 found or reported.

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					
15/11/2023	127	1860	1199	3186	0	3186
20/11/2023	98	1528	824	2450	304	2754

Imported Sludge

Imported sludge in the preceding week 1960m³.

No.5 Pumping Station (West Side)

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

Sludge Import Area

It was noted that the condition around the sludge import area was much improved and noticeably clean. No odours witnessed.

Raw Sludge Screening Building (West Side)

The large roller shutter doors of the Raw Sludge Screening building were open at the time of the inspection however it is still out of operation so not causing any issues of odour.

Digesters on the 23rd of November 2023

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 (approx. 3ft below coping stone) sludgy/hard layer – No evidence of recent/previous sludge spillages- the coping stones were clean, tidy.

Digester 6 was in service and had a high (approx. 2ft below coping stone) sludgy layer – No evidence of recent/previous sludge spillages- the coping stones were clean, tidy.

Digester 7 was in service and had a low (approx. 3ft below coping stone) hardened surface layer – There was evidence of spillage on the part of the coping stone near the service road- The digester was letting off minimal gas at time of inspection.

Digester 8 was in service and had a low (approx. 3ft below coping stone) hard layer – No evidence of recent/previous sludge spillages- the coping stones were clean & tidy.

Digester 9 was in service and had a high (approx. 1ft below coping stone) sludgy layer – No evidence of recent/previous sludge spillages- the coping stones were clean & tidy.

Digester 10 was in service and had a high (approx. 1/2 ft below coping stone) thick sludgy layer – No evidence of recent/previous sludge spillages- the coping stones were clean & tidy.

Digester 11 was in service and had a high (approx. 1/2 ft below coping stone) thick sludgy layer – No evidence of recent/previous sludge spillages- the coping stones were clean & tidy.

Digester 12 was in service and had a high (approx. 1ft below coping stone) sludgy layer – No evidence of recent/previous sludge spillages- the coping stones were clean & tidy.

Digester 13 Out of service.

Digester 14 Out of service.

Digester 15 was in service and had a low (approx. 3ft below coping stone) sludgy layer – No evidence of recent/previous sludge spillages- the coping stones were clean & tidy.

Digester 16 Out of service.

Digester 17 was in service and had a high (approx. 2ft below coping stone) thick sludgy seal– No evidence of recent/previous sludge spillages.

Digester 18 was in service and had a low (approx. 3ft below coping stones) solid hardened seal – No evidence of recent/previous sludge spillages.

Digester 19. was in service and had a low (approx. 3ft below coping stone) crusty seal – No evidence of recent/previous sludge spillages.

Digester 20 Out of service.

Anti-foaming agent is in use, which TW advised was also being applied manually to all operational digesters.

GENERAL

Final Settlement Tanks (East Side)

The 8 circular tanks 71, 72, 73, 74, 75, 76, 77 and 78 were all in operation at time of the inspection and had good clear surfaces. The hoses on the arms were all rotating and clearing off any remaining deposits. No odours or offensive odours witnessed.

Skips

Skips on the East side:

There was 1x 20yds open bulk carrier (covered) that was designated for grit – The carrier contained minimal amount of grit. There was a sign stating the skip was designated for “Grit Only.”

There was 1x 14yds skip designated for rag only. The skip had a sign reading “Rag Only” and contained minimal amount of rag at time of inspection. There was a cover (lid) which was covering the skip.

No other skips were present on the East side.

Skips on the West Side:

There was 1x 14yds skip opposite the raw sludge screening building (West of the works) that was designated for general waste only- At time of inspection the skip was full and covered.

There was 1x 20yds open bulk carrier (uncovered) that was full of bulky inert material. The bulky items which were previously in situ around the skip had reduced considerably.

There were no other skips observed in the West Side of the works.

East Side Screen House

The blue doors closest to the main service road and the roller metal shutters were open at the time of the inspection. There were contractors on site at the time.

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 service road was clogged along 80% of its length.

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 and had relatively fat free surfaces.

No other issues were evident with these tanks.

Circular PST 12 was out of service.

Pasteurisation Plant

The pasteurisation plant is in service. TW advised 7/12 streams were in operation. Stream 1,2,3,7 & 12 were out of service. This was reported on the 23rd of November 2023.

Section 106 agreement

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

West Side Aeration Lanes

The surface area of the mixed liquor feed channel serving the aeration lanes of E-Battery were all free-flowing between lanes 22-25 – At the time of inspection.

All the lanes in E Battery were distinct and dividing walls were all visible. All sprinklers were in operation at time of inspection.

New Inlet Works (West Side)

No issues appeared evident at the new inlet works and everything appeared to be in a good tidy order. No offensive odours noticed.

Odour Control Unit (OCU) performance monitoring: 23rd November 2023

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	Not provided	Unknown	Unknown
Main pumping station outlet	0.110ppm 0.110ppm 0.110ppm Ave: 0.110ppm	0.2	Yes
East OCU	0.024ppm 0.024ppm 0.029ppm Ave: 0.083ppm	0.05	No
West inlet OCU	Ave: 0.000ppm	0.05	Yes
Sludge reception inlet	Not provided	Unknown	Unknown
Sludge reception outlet	Not provided	0.8	Unknown
Thickening plant inlet	Not provided	Unknown	Unknown
Thickening plant outlet	Ave: 0.000ppm	0.6	Yes
New West inlet (OCU 11)	0.094ppm 0.094ppm 0.094ppm Ave: 0.094ppm	0.5	No
Pasteurization (OCU 12)	0.0230ppm 0.0230ppm 0.0230ppm Ave: 0.0230ppm	0.5	Yes
Transfer PS inlet	0.0226ppm 0.0226ppm 0.0226ppm Ave: 0.0226ppm	Unknown	Unknown
Transfer PS outlet	Ave: 0.000ppm	0.6	Yes
GBT Plant OCU Outlet	0.0298ppm 0.0298ppm 0.0298ppm Ave: 0.0298ppm	Unknown	Unknown

