

Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: Tuesday 6th June 2023 (13:00am)

Attendees: Mr Z Kadri (LB Hounslow) and Ms Emma McDonald (Thames Water)

LB Hounslow Observation

Thames Water Action / Response

Storm Water Storage Tanks (SWST)

Tank 1A was clean across the entire surface however Hoppers 1, 2 & 3 needed draining down. All Hoppers were over 90% full of effluent.

Tank 1B was clean across the surface however Hoppers 1 & 3 were in need of draining down. Hopper 2 was clear.

Tank 2A was clean across the surface and hoppers 1,2 and 3 contained minimal effluent.

Tank 2B was clean across the surface however Hoppers 1, 2 and 3 needed draining down.

Tank 3A had a thick layer of crust across and all hoppers needed draining down.

Tank 3B was clean across the surface and Hoppers 1,2 & 3 needed draining down.

Storm Feed Channel - The level of effluent in this feed channels were approx. 10% throughout the channels. The effluent looked brown and murky.

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 was clean across the surface however hoppers 1,2 and 3 needed draining down as they contained effluent.

Tank 6B was clean across the surface however hoppers 1,2 and 3 needed draining down.

Tank 7A had a dried gritty surface and all hoppers needed draining down.

Tank 7B was clean across the surface of the tank however hoppers 1,2 and 3 all needed draining down.

Tank 8A had a dried gritty surface and all hoppers needed draining down.

Tank 8B had a dried gritty surface and all hoppers needed draining down.

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

Complaints

There was one complaint received on the 3rd of June at 12:52 via online form from the Arnold Crescent area of Isleworth. The complaint was logged under reference number A44030. On the day of inspection

the SKADA system did not demonstrate any spikes or unusual increases in odour spikes for the morning of the 3rd of June.

Odour Monitors

The odour readouts (H₂S) at 13:15 on the 6th June 2023.

Monitor 1	0.003	ppm
Monitor 2	0.001	ppm
Monitor 3	0.004	ppm
Monitor 4	0.000	ppm
Monitor 5	0.004	ppm
Monitor 6	0.005	ppm
Monitor 7	0.000	ppm
Monitor 8	0.006	ppm
Monitor 9	0.004	ppm
Monitor 10	0.005	ppm
Monitor 11	0.005	ppm
Monitor 12	0.004	ppm
Monitor 13	0.000	ppm
Wind Speed	5.918	mph
Wind Direction	37.098	Deg

Odour logs

Wednesday 31st May 2023

DAY SHIFT

Temp. Warm

Weather. Sunny with patchy clouds

Odour Readings. All OMU's in operation apart from OM4

Time: 17:30.

Observations / Customer Complaint.

no odour issues found

Operational issues / causes observed.

Area checked no odour issues found

Actions taken. Blank

NIGHT SHIFT

Temp. Cool

Weather. Clear Night

Odour Readings. All OMU's in operation apart from OM4

Time: 05:30.

Observations / Customer Complaint.

No odour issues found or reported

Operational issues / causes observed. Blank

Actions taken. Blank.

Thursday 1st June 2023

DAY SHIFT

Temp. Warm

Weather. Sunny with patchy clouds

Odour Readings. All OMU's in operation apart from OM4

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 apart from OM4

Time: 17:30

Observations / Customer Complaint.

No odour issues found or reported

Operational issues / causes observed. Blank

Actions taken. Blank

Friday 2nd June 2023

DAY SHIFT

Temp. Warm

Weather. Sunny with Patchy clouds

Odour Readings. All OMU's in operation apart from OM4

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 apart from OM4

Time: 05:30.

Observations / Customer Complaint.

No odour issues found or reported

Operational issues / causes observed.

Area checked no odours detected

Actions taken. Blank

Saturday 3rd June 2023

DAY SHIFT

Temp. Warm

Weather. Cloudy with sunny spells

Odour Readings. All OMU's in operation apart from OM4

Time: 17:30.

Observations / Customer Complaint.

No odour issues found or reported

Operational issues / causes observed. Blank

Actions taken. Blank

NIGHT SHIFT

Temp. warm

Weather. Clear night

Odour Readings. All OMU's in operation apart from OM4

Time: 05:30.

Observations / Customer Complaint.

OM3 spiked at 00:02 -00:18 max 0.025ppm

Operational issues / causes observed. Blank

Actions taken. Blank

Sunday 4th June 2023

DAY SHIFT

Temp. Warm

Weather. Sunny with patchy clouds

Odour Readings. All OMU's in operation apart from OM4

Time: 17:30.

Observations / Customer Complaint.

No odour issues found or reported

Operational issues / causes observed. Blank

Actions taken. Blank

NIGHT SHIFT

Temp. Warm

Weather. Clear night

Odour Readings. All OMU's in operation apart from OM4

Time: 05:30.

Observations / Customer Complaint.

OM3 spiked at 20:14-20:34 max 0.029ppm

Operational issues / causes observed. Blank

Actions taken. Blank

Monday 5th June 2023

DAY SHIFT

Temp. Warm

Weather. Sunny

Odour Readings. All OMU's in operation apart from OM4

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 apart from OM4

Time: 05:30.

Observations / Customer Complaint.

No odour issues found or reported

Operational issues / causes observed. Blank

Actions taken. Blank

Tuesday 6th June 2023

DAY SHIFT

Temp. Warm

Weather. Sunny

Odour Readings. All OMU's in operation apart from OM4

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 apart from OM4

Time: 05:30.

Observations / Customer Complaint.

OM10 spiked to 0.016ppm max at 02:21-02:35

Operational issues / causes observed.

Flare running digester 7 gassing off

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					
07/06/2023	0	0	0	0	0	0
08/06/2023	0	1322	867	2189	2081	4270

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 have been an average of 113m³ imports of sludge per delivery in the preceding week. This was reported on the 6th June 2023

No.5 Pumping Station (West Side)

The doors and windows of No.5 pumping station were open 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 was mentioned that the operation here has been out of service for over three months.

Digesters on the 6th June 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. 5ft 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 low (approx. 5ft 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 no evidence of spillage and gas was being released which is usually the case.

Digester 8 was in service and had a low (approx. 4ft 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. 2ft below coping stone) 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. 1ft below coping stone) 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 Out of service.

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 high (approx. 1ft below coping stones) solid hardened seal – No evidence of recent/previous sludge spillages.

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

Digester 20 was in service and had a high (approx. 2ft below coping stone) crusty seal – No evidence of recent/previous sludge spillages.

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 (uncovered) that was designated for grit – The carrier was empty. 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 adjacent to 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 – There was large items around the skip that were due to be collected later in the day

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 closed at the time of the inspection. All doors were 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 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 is still out of service.

Pasteurisation Plant

The pasteurisation plant is in service. TW advised 8/12 streams were in operation. Stream 7,8,10 & 12 were out of service. This was reported on the 6th of June 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: 6th June 2023

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	Not provided	Unknown	Unknown
Main pumping station outlet	0.00ppm 0.00ppm 0.00ppm	0.2	Yes
East OCU	0.06ppm 0.07ppm 0.08ppm Ave: 0.07ppm	0.05	No
West inlet OCU	0.00ppm 0.00ppm 0.00ppm	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	0.053ppm 0.054ppm 0.056ppm Ave: 0.054ppm	0.6	Yes
New West inlet (OCU 11)	0.06ppm 0.06ppm 0.06ppm Ave: 0.06ppm	0.5	YES
Pasteurization (OCU 12)	1.333ppm 1.811ppm 1.957ppm Ave: 1.700ppm	0.5	No
Transfer PS inlet	1.055ppm 1.066ppm 1.121ppm Ave:3.518ppm	Unknown	Unknown
Transfer PS outlet	0.014ppm 0.007ppm	0.6	Yes

	0.013ppm Ave: 0.011ppm			
GBT Plant OCU Outlet	0.000ppm 0.000ppm 0.000ppm Ave: 0.000ppm	Unknown	Unknown	