

Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: Wednesday 30th August 2023 (13:30pm)

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 of the tank and Hoppers 1, 2 & 3 contained minimal effluent.

Tank 2A was clean across the surface of the tank and hoppers 1,2 and 3 had been drained down.

Tank 2B was clean across the surface and hoppers 1, 2 and 3 had been drained down.

Tank 3A was clean across the surface and hoppers 1 and 2 were empty however hopper 3 contained minimal effluent.

Tank 3B had patches of thick sludge across the surface of the tank and all hoppers needed to be drained down.

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 was clean across the entire surface of the tank and hoppers 1,2 and 3 needed draining down.

Tank 6B was clean across the entire surface however hoppers 1,2 and 3 contained minimal effluent less than 20%.

Tank 7A was 30% full of effluent and returning at time of inspection – All amajets were in operation.

Tank 7B had a thick layer of wet sludgy effluent at the hopper end of the tank and all hoppers needed draining down.

Tank 8A had muddy patches and Hoppers 1,2 & 3 needed draining down.

Tank 8B had a layer of grit and mud patches in several areas and Hoppers 1,2 & 3 needed draining down.

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

A total of 7 online complaints were received in the preceeding week. The majority of these complaints emanated from Sussex Avenue in Isleworth.

On the 22/08/2023 an online complaint was received at 12.44 from Clayton Road. On the day of inspection 30th August 2023 the SKADA system did not demonstrate any spikes or unusual increases in odour levels.

On the 23/08/2023 an online complaint was received at 19.08 from Sussex Avenue. On the day of inspection 30th August 2023 the SKADA system did not demonstrate any spikes or unusual increases in odour levels.

On the 23/08/2023 an online complaint was received at 21.33 from Sussex Avenue. On the day of inspection 30th August 2023 the SKADA system did not demonstrate any spikes or unusual increases in odour levels.

On the 23/08/2023 an online complaint was received at 22.17 from Sussex Avenue. On the day of inspection 30th August 2023 the SKADA system did not demonstrate any spikes or unusual increases in odour levels.

On the 24/08/2023 an online complaint was received at 16.25 from Sussex Avenue. On the day of inspection 30th August 2023 the SKADA system did not demonstrate any spikes or unusual increases in odour levels.

On the 26/08/2023 an online complaint was received at 00.36 from Twickenham Road. On the day of inspection 30th August 2023 the SKADA system did not demonstrate any spikes or unusual increases in odour levels.

On the 27/08/2023 an online complaint was received at 16.02 from Octavia Road. On the day of inspection 30th August 2023 the SKADA system did not demonstrate any spikes or unusual increases in odour levels.

Odour Monitors

The odour readouts (H₂S) at 14:41 on the 30th August 2023.

Monitor 1	0.000	ppm
Monitor 2	0.001	ppm
Monitor 3	0.000	ppm
Monitor 4	0.000	ppm
Monitor 5	0.003	ppm
Monitor 6	0.000	ppm
Monitor 7	0.000	ppm
Monitor 8	0.003	ppm
Monitor 9	0.000	ppm
Monitor 10	0.004	ppm
Monitor 11	0.000	ppm
Monitor 12	0.004	ppm
Monitor 13	0.000	ppm
Wind Speed	10.319	mph
Wind Direction	282.658	Deg

Odour logs

Wednesday 23rd August 2023

DAY SHIFT

Temp. Hot

Weather. Sunny

Odour Readings. All OMU's in operation

Time: 17:30.

Observations / Customer Complaint.

OM3 spiked to 0.023 at 19:00-20:00

Spiked to 0.034 at 18:49-19:05

Spiked to 0.044 at 23:35-00:49

Spiked to 0.022 at 01:04-01:20

Operational issues / causes observed. Blank

Actions taken. Blank

NIGHT SHIFT

Temp. Warm

Weather. Clear Night

Odour Readings. All OMU's in operation

Time: 05:30.

Observations / Customer Complaint.

OM3 spiked to 0.016 at 23:22-23:36

Spiked to 0.016 at 23:52-00:07

Spiked to 0.025 at 03:36-03:52

OM5 spiked to 0.0333 at 00:38-01:09

Operational issues / causes observed.

OCU11 poor performance

Actions taken. Blank.

Thursday 24th August 2023

DAY SHIFT

Temp. Warm

Weather. Sunny with patchy clouds

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. Warm

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

Friday 25th August 2023

DAY SHIFT

Temp. Warm

Weather. Sunny with patchy clouds

Odour Readings. All OMU's in operation

Time: 17:30.

Observations / Customer Complaint.

OM3 spiked at 15:21-15:37 to 0.022ppm

Spiked to 0.015ppm at 16:08-16:22

Operational issues / causes observed.

No issues on site OCU11 discharging odour from stack

Actions taken. Blank

<p>NIGHT SHIFT Temp. Warm 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</p> <p><u>Saturday 26th August 2023</u></p> <p>DAY SHIFT Temp. Cool Weather. Sunny with patchy clouds 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</p> <p>NIGHT SHIFT Temp. Cool Weather. Clear night Odour Readings. All OMU's in operation Time: 05:30. Observations / Customer Complaint. No odours found or reported Operational issues / causes observed. Blank Actions taken. Blank</p>	
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Sunday 27th August 2023

DAY SHIFT

Temp. Warm

Weather. Sunny with patchy clouds

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.

OM3 spiked at 20:37-20:52 to 0.027ppm

Operational issues / causes observed. Blank

Actions taken.

OCU11 poor performance with stack reading

Monday 28th August 2023

DAY SHIFT

Temp. Warm

Weather. Sunny with patchy clouds

Odour Readings. All OMU's in operation

Time: 17:30.

Observations / Customer Complaint.

No odours 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 odours found or reported

Operational issues / causes observed. Blank

Actions taken. Blank

Tuesday 29th August 2023

DAY SHIFT

Temp. Warm

Weather. Cloudy

Odour Readings. All OMU's in operation

Time: 17:30.

Observations / Customer Complaint.

No odours 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 at 17:52- 18:08 to 0.057ppm

Operational issues / causes observed. Blank

Actions taken.

OCU11 poor performance

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					
23/08/2023	18	1818	1200	3036	3369	6405

Imported Sludge

No indication of Imported sludge this week.

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 1st of August 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 high (approx. 1ft 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. 4ft below coping stone) hardened surface layer – There was no evidence of spillage

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

Digester 11 was in service and had a high (approx. 2ft 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.

<p>Digester 13 Out of service.</p> <p>Digester 14 Out of service.</p> <p>Digester 15 Out of service.</p> <p>Digester 16 Out of service.</p> <p>Digester 17 was in service and had a high (approx. 2ft below coping stone) thick sludgy seal– No evidence of recent/previous sludge spillages.</p> <p>Digester 18 was in service and had a high (approx. 1ft below coping stones) solid hardened seal – No evidence of recent/previous sludge spillages.</p> <p>Digester 19. was in service and had a low (approx. 3ft below coping stone) sludgy seal – No evidence of recent/previous sludge spillages.</p> <p>Digester 20 was in service and had a high (approx. 2ft below coping stone) crusty seal – No evidence of recent/previous sludge spillages.</p> <p>Anti-foaming agent is in use, which TW advised was also being applied manually to all operational digesters.</p>	

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 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 2x 20yds open bulk carrier (uncovered) that was full of bulky inert material

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..

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 10 and 11 were all in use and had relatively fat free surfaces.

No other issues were evident with these tanks.

Circular PST 9 & 12 were out of service.

Pasteurisation Plant

The pasteurisation plant is in service. TW advised 7/12 streams were in operation. Stream 2,3,7,8 & 10 were out of service. This was reported on the 30th of August 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: 30th August 2023

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	Not provided	Unknown	Unknown
Main pumping station outlet	0.036ppm 0.040ppm 0.042ppm Ave: 0.039ppm	0.2	Yes
East OCU	0.027ppm 0.030ppm 0.032ppm Ave: 0.029ppm	0.05	No
West inlet OCU	0.003ppm 0.003ppm 0.00ppm Ave: 0.002ppm	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	0.015ppm 0.015ppm 0.023ppm Ave: 0.017ppm	0.6	Yes
New West inlet (OCU 11)	0.613ppm 0.638ppm 0.664ppm Ave: 0.638ppm	0.5	YES
Pasteurization (OCU 12)	0.004ppm 0.003ppm 0.003ppm Ave: 0.003ppm	0.5	No
Transfer PS inlet	7.40ppm 7.86ppm 7.88ppm Ave: 3.00ppm	Unknown	Unknown
Transfer PS outlet	0.023ppm 0.006ppm	0.6	Yes

	0.008ppm Ave: 0.012ppm			
GBT Plant OCU Outlet	0.00ppm 0.00ppm 0.00ppm Ave: 0.00ppm	Unknown	Unknown	