

Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: Tuesday 4 th July 2023 (15:00pm)	
Attendees: Mr Z Kadri (LB Hounslow) and Ms Emma McDonald (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A was clean across the entire surface however Hoppers 1, 2 & 3 needed draining down. All Hoppers were over 90% full of effluent.</p> <p>Tank 1B was clean across the surface and Hoppers 1, 2 & 3 contained minimal effluent.</p> <p>Tank 2A was clean across the surface and hoppers 1,2 and 3 needed draining down (over 90% full of effluent).</p> <p>Tank 2B was clean across the surface however Hoppers 1, 2 and 3 needed draining down (over 90% full of effluent)</p> <p>Tank 3A had a thick layer of crust across the surface however all hoppers contained minimal amount of effluent.</p> <p>Tank 3B had a thick layer of crust across the surface and all hoppers needed to be drained down.</p>	

Storm Feed Channel - The level of effluent in this feed channels were approx. 20% 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 entire surface and hoppers 1,2 and 3 contained minimal effluent.

Tank 6B was clean across the entire surface and hoppers 1,2 and 3 contained minimal effluent.

Tank 7A had muddy patches across the surface and Hoppers 1,2 & 3 needed draining down

Tank 7B was clean across the entire surface of the tank however hoppers 1,2 and 3 contained minimal effluent.

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

Tank 8B had muddy patches in several areas and Hoppers 1,2 & 3 needed draining down.

Storm Feed Channel - The level of effluent in this feed channels were approx. 20% throughout the channels. The effluent looked brown and murky.

Complaints

A45077 - 27/ 6/2023 16.07 Talbot Road, Isleworth (Online)

A45103 - 28/ 6/2023 10.54 Hillary Drive, Isleworth(Online)

A45188 - 29/ 6/2023 23:42 Twickenham Road (Online)

A45205 - 30/ 6/2023 11.51 Sussex Avenue, Isleworth(Online)

On the day of inspection the SKADA system did not demonstrate any spikes or unusual increases in odour at any of the above times complaints were received.

Odour Monitors

The odour readouts (H₂S) at 14:55 on the 4th July 2023.

Monitor 1	0.000	ppm
Monitor 2	0.003	ppm
Monitor 3	-0.001	ppm
Monitor 4	0.000	ppm
Monitor 5	0.000	ppm
Monitor 6	0.000	ppm
Monitor 7	0.000	ppm
Monitor 8	0.004	ppm
Monitor 9	0.000	ppm
Monitor 10	0.004	ppm
Monitor 11	0.000	ppm
Monitor 12	0.000	ppm
Monitor 13	0.000	ppm
Wind Speed	4.320	mph
Wind Direction	202.857	Deg

Odour logs

Wednesday 28th June 2023

DAY SHIFT

Temp. Warm

Weather. Sunny with patchy clouds

Odour Readings. All OMU's in operation

Time: 17:30.

Observations / Customer Complaint.

OM3 multiple spikes throughout the shift peaked at 0.033ppm

Operational issues / causes observed.

OCU 11 poor performance

Actions taken. Blank

NIGHT SHIFT

Temp. Warm

Weather. Rain

Odour Readings. All OMU's in operation

Time: 05:30.

Observations / Customer Complaint.

OM3 peaked to max 0.027ppm at 04:05-05:04

Operational issues / causes observed.

OCU11 poor performance

Actions taken. Blank.

Thursday 29th June 2023

DAY SHIFT

Temp. Warm

Weather. Rain 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. Warm

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

Friday 30th June 2023

DAY SHIFT

Temp. Warm

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. Warm

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.

Area checked no odours detected

Actions taken. Blank

Saturday 1st July 2023

DAY SHIFT

Temp. Warm

Weather. Sunny with patchy clouds

Odour Readings. All OMU's in operation

Time: 17:30.

Observations / Customer Complaint.

OM3 and OM8 showing odours all shifts

Operational issues / causes observed.

OCU11 showing high on stack

Actions taken.

PAS areas smelly but no leaks found

NIGHT SHIFT

Temp. Cool

Weather. Clear night

Odour Readings. All OMU's in operation

Time: 05:30.

Observations / Customer Complaint.

OM8 spiked at 19:25-19:55 max 0.024ppm

Operational issues / causes observed. Blank

Actions taken.

Area around Powerhouse checked no obvious odours detected

Sunday 2nd July 2023**DAY SHIFT**

Temp. Warm

Weather. Sunny with patchy clouds

Odour Readings. All OMU's in operation

Time: 17:30.

Observations / Customer Complaint.

OM3 and OM8 showing odours all shifts

Operational issues / causes observed.

OCU11 showing high on stack

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 19:20-20:00 , 20:34-21:34 and again at 23:00-23:19 max 0.032ppm

Operational issues / causes observed.

OCU11 not performing

Actions taken. Blank

Monday 3rd July 2023

DAY SHIFT

Temp. Warm

Weather. Cloudy with sunny spells

Odour Readings. All OMU's in operation

Time: 17:30.

Observations / Customer Complaint.

OM3 – 5 spikes throughout the shift peaking to 0.046ppm

Operational issues / causes observed.

OCU11 not performing

Actions taken. Blank

NIGHT SHIFT

Temp. Cool

Weather. Overcast night

Odour Readings. All OMU's in operation

Time: 05:30.

Observations / Customer Complaint.

OM3 spiked to 0.031ppm at 19:00-20:19

Operational issues / causes observed.

OCU11 not performing

Actions taken. Blank

Tuesday 4th July 2023

DAY SHIFT

Temp. Cool

Weather. Patchy rain

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

Time: 17:30.

Observations / Customer Complaint.

OM3 spiked to 0.025ppm at 10:20- 10:49

Operational issues / causes observed.

OCU11 not performing

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					
28/06/2023	0	1466	994	2460	3235	5695
30/06/2023	117	1218	849	2184	4573	6757
03/07/2023	98	595	806	1499	4380	5879

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

No indication of Imported sludge this week.

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 4th July 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 low (approx. 3ft 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

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 low (approx. 3ft 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. 1ft 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. 2ft 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. 2ft below coping stone) sludgy layer – No evidence of recent/previous sludge spillages- the coping stones were clean & tidy. There was minimal gas being released to one side of the digester

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. 1ft 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 high (approx. 2ft 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 2x 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 apart from the middle set which was left ajar.

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 6/12 streams were in operation. Stream 2,5,7,8,10 & 11 were out of service. This was reported on the 4th July 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: 4th July 2023

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	Not provided	Unknown	Unknown
Main pumping station outlet	0.28ppm 0.28ppm 0.29ppm Ave: 0.28ppm	0.2	Yes
East OCU	0.08ppm 0.08ppm 0.08ppm Ave: 0.08ppm	0.05	No
West inlet OCU	0.18ppm 0.18ppm 0.18ppm Ave: 0.18ppm	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	0.021ppm 0.020ppm 0.021ppm Ave: 0.020ppm	0.6	Yes
New West inlet (OCU 11)	0.017ppm 0.018ppm 0.018ppm Ave: 0.017ppm	0.5	YES
Pasteurization (OCU 12)	0.000ppm 0.000ppm 0.000ppm Ave: 0.000ppm	0.5	No
Transfer PS inlet	0.23ppm 0.23ppm 0.23ppm Ave:0.023ppm	Unknown	Unknown

Transfer PS outlet	0.000ppm 0.000ppm 0.000ppm Ave: 0.000ppm	0.6	Yes	
GBT Plant OCU Outlet	0.022ppm 0.012ppm 0.003ppm Ave: 0.012ppm	Unknown	Unknown	