



London Borough of Hounslow

Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: 10th October 2023

Attendees: Mr Steven Maunders (London Borough of Hounslow) and Ms Emma McDonald (Thames Water)

LB Hounslow Observation

Thames Water Action / Response

Storm Water Storage Tanks (SWST)

Tank 1A – Tank empty – Approx. 10% of tank covered by grit and sludge – with significant sections of weed growth – requires flushing. Hopper 1 full, Hopper 2 approx. 90% full and Hopper 3 approx. 80% full - all with complete blanket of duckweed covering surface - Requires flushing and draining/over-pumping.

Tank 1B – Tank empty – Approx. 50% of tank covered by grit and sludge – with significant sections of weed growth – requires flushing – All Hoppers approx. 60% full - Requires flushing and draining/over-pumping.

Tank 2A – Tank empty – Approx. 10% of tank covered by grit and sludge – with significant sections of weed growth – requires flushing – All Hoppers approx. 40% full - All with complete blanket of duckweed covering surface - Requires flushing and draining/over-pumping.

Tank 2B – Tank empty – Approx. 75% of tank covered by grit and sludge – with significant sections of weed growth – requires flushing – All Hoppers approx. 40% full with blanket of sludge and duck-weed - requires draining/over-pumping.

Tank 3A – Tank empty – Approx 75% of tank covered by grit and sludge – requires flushing. and flushed clean. All Hoppers approx. 90% full with blanket of sludge and duck-weed - requires draining/over-pumping.

Tank 3B — Tank empty and flushed – Approx. 25% remains covered with sludge and grit – requires further flushing. All Hoppers full with complete blanket of sludge and duck-weed - requires draining/over-pumping.

Tanks 4A, 4B, 5A & 5B which are covered, and odour controlled, were all in use - unable to gauge condition as lighting system still not working.

Tank 6A – Tank empty and flushed clean. All Hoppers approx. 30% full - All with complete blanket of duckweed covering surface - Requires flushing and draining/over-pumping.

Tank 6B – Tank empty – Approx. 10% of tank covered by grit and sludge with significant weed growth – requires further flushing – All Hoppers approx. 20% full.

Tank 7A – Tank 100% covered in grit and sludge – requires flushing. All Hoppers full.

Tank 7B – Tank empty – 100% of tank covered with thick layer of grit and sludge – with significant sections of weed growth – requires flushing – All Hoppers bottomed out with heavy sludge deposits – requires flushing.

Tank 8A – Tank empty - Approx. 80% of tank covered by grit and sludge – requires flushing – All Hoppers full.

Tank 8B – Tank empty – Approx. 90% of tank covered by grit and sludge – requires flushing – Hopper 1 approx. 75: full, Hopper 2 approx. 90% full and Hopper 3 full with complete blanket of sludge and duck-weed - requires draining/over-pumping.

Feed Channel - The level of effluent in both feed channels was approximately 20% capacity.

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					
06/10/23	0	595 (TW figure 593)	455	1050	3715	4765 (TW figure 4763)

Complaints

The Council received no complaints by email from MRAG in the preceding week.

Thames Water controller advised that they had received one direct complaint in the preceding week.

The Council directly received 15 complaints by email/online in the preceding week:

25/09/23 (21:35) = Sussex Avenue.

01/10/23 (12:02) = Boulogne House, Frazer Nash Close. (OMU data highest reading .004ppm for corresponding period)

02/10/23 (22:43) = Talbot Road. (OMU data highest reading .005ppm for corresponding period. Wind 240° 6mph)

06/10/23 (16:02) = Talbot Road. (OMU3 showing spike of .047 ppm - All other OMU data shows highest reading .005ppm for corresponding period. Wind 255° 8.6mph)

07/10/23 (12:52) = Holme Court, Twickenham Road. (OMU data highest reading .005ppm for corresponding period. Wind 220° 6.3mph)

07/10/23 (17:17) = Holme Court, Twickenham Road. (OMU data highest reading .007ppm for corresponding period. Wind 228° 3.1mph)

07/10/23 (18:11) Lynton Close.

08/10/23 (12:52) = Holme Court, Twickenham Road. (OMU data highest reading .007ppm for corresponding period. Wind 264° 3.2mph)

08/10/23 (21:18) = Boulogne House, Frazer Nash Close. (OMU data highest reading .007ppm for corresponding period. Wind 264° 3.2mph)

08/10/23 (22:11) = Mill Plat Avenue.

08/10/23 (22:53) = Swan Court, Swan Street.

08/10/23 (23:16) = Mill Plat Avenue.

09/10/23 (08:04) = Heddon Close. (OMU5 showing spike of .011ppm
All other OMU data shows highest reading of .002 ppm for
corresponding period. Wind 247° 2.3mph)

09/10/23 (16:41) = Tolson Road.

09/10/23 (22:36) Newton Road. (OMU data highest reading .004ppm
for corresponding period. Wind 192° 2.7mph)

The Council received no calls to the out of hours service.

Odour Monitors

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

Monitor 1	000	ppm	13:25
Monitor 2	001	ppm	13:25
Monitor 3	004	ppm	13:25
Monitor 4	000	ppm	13:25
Monitor 5	004	ppm	13:25
Monitor 6	000	ppm	13:25
Monitor 7	000	ppm	13:25
Monitor 8	000	ppm	13:25
Monitor 9	003	ppm	13:25
Monitor 10	000	ppm	13:25
Monitor 11	-0.025	ppm	13:25
Monitor 12	006	ppm	13:25
Monitor 13	003	ppm	13:25
Wind Speed	2.9	mph	13:25
Wind Direction	249°		13:25

Odour Log (Thames):

Wednesday 4th October 2023:

AM – Warm – Cloudy with Sunny Spells.

OMU 11 out of service - All other OMU's in use.

Observations/Complaints: "OM3 spiked at 12:22-12:37 max 0.022ppm and 15:38-16:07 max 0.031ppm."

Operational Issues/Causes: "OCU 11 not performing."

Actions: No data.

PM – Cool – Clear Night.

OMU 11 out of service - All other OMU's in use.

Observations/Complaints: "OM5 0.015ppm 00:21-01:20."

Operational Issues/Causes: "No odour issues detected on site."

Actions: No data.

Thursday 5th October 2023:

AM – Warm – Sunny with Patchy Clouds.

OMU 11 out of service - All other OMU's in use.

Observations/Complaints: "No odour issues found or reported."

Operational Issues/Causes: No data.

Actions: No data.

PM – Cool – Clear Night.

OMU 11 out of service - All other OMU's in use.

Observations/Complaints: "No odour issues found or reported."

Operational Issues/Causes: No data.

Actions: No data.

Friday 6th October 2023:

AM – Warm – Sunny.

OMU 11 out of service - All other OMU's in use.

Observations/Complaints: "No odour issues found or reported."

Operational Issues/Causes: No data.

Actions: No data.

PM – Warm – Clear Night.

OMU 11 out of service - All other OMU's in use.

Observations/Complaints: "OM3 spiked at 04:50-05:08 max 0.030ppm."

Operational Issues/Causes: "OCU 11 not performing."

Actions: No data.

Saturday 7th September 2023:

AM – Warm – Sunny.

OMU 11 out of service - All other OMU's in use.

Observations/Complaints: "No odour issues found or reported."

Operational Issues/Causes: No data.

Actions: No data.

PM – Warm – Clear Night.

OMU 11 out of service - All other OMU's in use.

Observations/Complaints: "OM5 spiked at 04:05-04:21 max 0.020ppm."

Operational Issues/Causes: "Odour venting from manhole cover on Main Drive."

Actions: No data.

Sunday 8th October 2023:

AM – Hot – Sunny.

OMU 11 out of service - All other OMU's in use.

Observations/Complaints: "No odour issues found or reported."

Operational Issues/Causes: No data.

Actions: No data.

PM – Warm – Clear Night.

OMU 11 out of service - All other OMU's in use.

Observations/Complaints: "Multiple spikes from OM5 between 18:30-22:00 max 0.023ppm."

Operational Issues/Causes: "Odour venting from manhole cover on Main Drive."

Actions: No data.

Monday 9th October 2023:

AM – Hot – Sunny.

OMU 11 out of service - All other OMU's in use.

Observations/Complaints: "No odour issues found or reported."

Operational Issues/Causes: No data.

Actions: No data.

PM – Warm – Clear Night.

OMU 11 out of service - All other OMU's in use.

Observations/Complaints: "Customer Complaint from Weavers Close reported via WOCC at 21:00."

Operational Issues/Causes: "Checked trends OM5 spiking at 18:35-20:50 max 0.030ppm (at 19:00)."

Actions: "Carried out odour patrol but no sources of odour found. Walked down to back gate and still no signs of odour there or at East Inlet."

Tuesday 10th October 2023:

AM – Warm – Sunny with Patchy Clouds.

OMU 11 out of service - All other OMU's in use.

Observations/Complaints: "No odour issues found or reported."

Operational Issues/Causes: No data.

Actions: No data.

PM – Warm – Clear Night.

OMU 11 out of service - All other OMU's in use.

Observations/Complaints: "OM3 spiked at 23:22-23:38 max 0.038ppm."

Operational Issues/Causes: "OCU11 not performing."

Actions: No data.

Digesters

Digesters 1-4 – Out of use (permanent).

Digester 5 – In use – seal level approx. 1ft below coping stones – Good Seal - Bell height high requiring draw down of Biogas.

Digester 6 - In use – seal level approx. 1ft below coping stones – Good Seal - Bell height high requiring draw down of Biogas.

Digester 7 - In use – seal level approx. 3ft below coping stones – Good seal - Bell height high requiring draw down of Biogas. Ongoing spill requiring clean-up and anti-foam.

Digester 8 - In use – seal level approx. 2ft below coping stones – Good Seal – Bell height high requiring draw down of Biogas. Ongoing spill requiring clean-up and anti-foam. Hose running constantly at rear of Digester 8 and causing flooding to Service Road at rear.

Digester 9 - In use – seal level approx. 6” below coping stones – Good Seal.

Digester 10 - In use – seal level approx. 1ft below coping stones - Seal weak and bubbling – Tank noticeably gassing off - Bell height high requiring draw down of Biogas.

Digester 11 - In use – seal level approx. 1ft below coping stones – Good Seal.

Digester 12 - In use – seal level approx. 6” below coping stones – Good Seal.

Digester 13 – Out of use.

Digester 14 – Out of use.

Digester 15 – Being brought back into service – seal level approx. 4ft below coping stones – Tank noticeably gassing off.

Digester 16 – Out of use.

Digester 17 - In use – seal level approx. 3ft below coping stones – Good Seal - Bell height high requiring draw down of Biogas.

Digester 18- In use – seal level approx. 3ft below coping stones – Good Seal.

Digester 19 - In use – seal level approx. 3ft below coping stones – Good Seal.

Digester 20 - In use – seal level approx. 3ft below coping stones – Half tank has Good Seal and remaining weak and bubbling - Bell height high requiring draw down of Biogas.

GENERAL

Sludge Screening House

All doors open at time of inspection – Contractors on-site replacing screens. Odour suppression unit deployed to area outside roller-shutters doors and in use – motor/fan-blade on unit faulty and resulting in noise nuisance – advised requires immediate repair/replacement. Confirmed that spike in odour complaints (Weavers Close) the previous evening that whilst being below “trigger levels” was significantly elevated and correlates with odour detected in this location.

Imported Sludge

2250m³ in preceding seven days.

Final Settlement Tanks East Side of Works

The 8 circular tanks previously used as PSTs are now being used as final tanks (71-78) – currently hoses being used to break up duck weed blooms on tanks 71 & 73.

East Side Raw Sludge Screen House

Shutter doors closed and small door open at time of inspection.

West Side Aeration Lanes (Old)

Battery C aeration feed channel 100% obstructed in one channel (left) – requires jetting (TW advise that there is continuing flow below surface).

New Works (West Side) Battery E

Inlet lane clear.

West side primary settlement tanks (PST)

Rectangular PSTs – no issues

Circular PST's 9, 10 & 11 in use. Number 12 drained down (long term out of service).

Pasteurisation Plant

Streams 2, 3, 7, 8 and 12 out of service.

Skips

2x small (blue) skips – rear of sludge screen house both empty – quantity of rag on ground in surrounding area that requires clean-up.

1x open container grit skip (uncovered) empty and 1x 10-Yard Rag skip (covered) at rear of Sludge Screening House.

1x 10-Yard enclosed General Waste skip in Service Road at rear of East Raw Sludge Screening House.

1x 10-Yard enclosed General Waste skip in Service Road between Aeration lanes 12 & 13.

Odour Control Unit (OCU) performance monitoring – 10/10/23:

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	0.000 0.000 0.000	0.05	Yes
West inlet OCU	No data	0.05	Unknown
Sludge reception inlet	No data	Unknown	Unknown
Sludge reception outlet	No data	0.8	Unknown
Thickening plant inlet	No data	Unknown	Unknown
Thickening plant outlet	0.057 0.057	0.6	Yes
Transfer PS inlet	No data	Unknown	Unknown
Transfer PS outlet	0.230 0.230 0.230	0.5	Yes
New West inlet (OCU11)	No data	0.5	Unknown
Pasteurisation Plant (OCU12)	No data	0.5	Unknown
GBT Plant OCU Outlet	No data	Unknown	Unknown