



London Borough of Hounslow

Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: 12th September 2023

Attendees: Mr Steven Maunders (London Borough of Hounslow) and Ms Chantelle Dixon (Thames Water)

LB Hounslow Observation

Thames Water Action / Response

Storm Water Storage Tanks (SWST)

Tank 1A – Tank empty – Approx. 25% of tank covered by grit and sludge – with significant sections of weed growth – requires flushing. All Hoppers approx. 50% full with complete blanket of duck-weed covering surface and exposed surface of Hopper - Requires flushing and draining/over-pumping.

Tank 1B – Tank empty – Approx. 40% of tank covered by grit and sludge – with significant sections of weed growth – requires flushing – All Hoppers drained down to bottom but with complete blanket of duck-weed covering surface and exposed surface of Hopper - Requires flushing and draining/over-pumping.

Tank 2A – Tank empty – Approx. 30% of tank covered by grit and sludge – with significant sections of weed growth – requires flushing – Hopper 1 approx. 40% full, Hoppers 2 & 3 approx. 25% full - All with complete blanket of duck-weed 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. 60% full with blanket of sludge and duck-weed - requires draining/over-pumping.

Tank 3A – Tank empty and flushed clean. All Hoppers approx. 60% 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. 80% full - All with complete blanket of duck-weed covering surface - Requires flushing and draining/over-pumping.

Tank 6B – Tank empty – Approx. 10% of tank covered by grit and sludge – requires further flushing – All Hoppers approx. 40% full.

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 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. 50% of tank covered by grit and sludge – requires flushing – All Hoppers full with blanket of sludge and duck-weed – requires draining/over-pumping.

Tank 8B – Tank empty and flushed – Approx. 25% of tank covered by remaining grit and sludge – requires further flushing – Hoppers 1 & 2 full, Hopper 3 approx. 20% 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 10% 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 | | | | | |
| 06/09/23 | 59 | 1213 | 867 | 2139 | 1577 | 3716 |
| 11/09/23 | 128 | 1358 | 1012 | 2498 | 3041 | 5539 |

Complaints

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

Thames Water controller advised that they had received no direct complaints in the preceding week.

The Council directly received no complaints by email in the preceding week:

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 | 12:40 |
| Monitor 2 | 001 | ppm | 12:40 |
| Monitor 3 | 000 | ppm | 12:40 |
| Monitor 4 | 000 | ppm | 12:40 |
| Monitor 5 | 000 | ppm | 12:40 |
| Monitor 6 | 000 | ppm | 12:40 |
| Monitor 7 | 000 | ppm | 12:40 |
| Monitor 8 | 000 | ppm | 12:40 |
| Monitor 9 | 000 | ppm | 12:40 |
| Monitor 10 | 000 | ppm | 12:40 |
| Monitor 11 | -0.025 | ppm | 12:40 |
| Monitor 12 | 004 | ppm | 12:40 |
| Monitor 13 | 000 | ppm | 12:40 |
| Wind Speed | 4.2 | mph | 12:40 |
| Wind Direction | 245° | | 12:40 |

Odour Log (Thames):

Wednesday 6th September 2023:

AM – Very Hot – Sunny.

All OMU's in use.

Observations/Complaints: “No odour issues.”

Operational Issues/Causes: No data.

Actions: No data.

PM – Warm – Overcast Night.

All OMU's in use.

Observations/Complaints: “OM10 0.021ppm 18:41-18:57 & OM12 0.017ppm 20:45-21:00.”

Operational Issues/Causes: “No evidence of odour after site walkaround/investigation.”

Actions: No data.

Thursday 7th September 2023:

AM – Very Hot – Sunny.

All OMU's in use.

Observations/Complaints: “No odour issues found or reported.”

Operational Issues/Causes: No data.

Actions: No data.

PM – Warm – Clear Night.

All OMU's in use.

Observations/Complaints: "OM12 0.028ppm 19:30-19:45 & OM5 0.051ppm 23:38-00:39 & OM5 0.017ppm 03:39-03:54."

Operational Issues/Causes: "Main Drive drain venting. Nop other issues on site."

Actions: No data.

Friday 8th September 2023:

AM – Hot – Sunny.

All OMU's in use.

Observations/Complaints: "OM8 spiked at 16:04-16:19 max 0.021ppm."

Operational Issues/Causes: "PAS area oderous, drains being washed down after overflow on Stream 3 catchpot."

Actions: No data.

PM – Hot – Clear Night.

All OMU's in use.

Observations/Complaints: "OM5 spiking all night max 02069ppm."(?)

Operational Issues/Causes: "Vent on Main Drive causing odours."

Actions: No data.

Saturday 9th September 2023:

AM – Very Hot – Sunny.

All OMU's in use.

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

Operational Issues/Causes: No data.

Actions: No data.

PM – Hot – Clear Night.

All OMU's in use.

Observations/Complaints: "OMU's 3,4,5,6 showing odours 23:30 all through night."

Operational Issues/Causes: "Site checked – inlets washed down."

Actions: No data.

Sunday 10th September 2023:

AM – Hot – Sunny with Patchy Clouds.

All OMU's in use.

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

Operational Issues/Causes: No data.

Actions: No data.

PM – Warm – Clear Night.

All OMU's in use.

Observations/Complaints: "No odour issues."

Operational Issues/Causes: No data.

Actions: No data.

Monday 11th September 2023:

AM – Hot – Cloudy with Sunny Spells.

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

Observations/Complaints: "No odour issues."

Operational Issues/Causes: "OM11 removed for repair."

Actions: No data.

PM – Warm – Overcast 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.

Tuesday 12th September 2023:

AM – Warm – Cloudy with Sunny Spells.

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

Observations/Complaints: "No odour issues."

Operational Issues/Causes: No data.

Actions: No data.

PM – Warm – Overcast Night.

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

Observations/Complaints: "OM3 spiked at 00:05-00:20 max 0.021ppm & 01:50-02:05 max 0.017ppm."

Operational Issues/Causes: "OCU11 not performing."

Actions: No data.

Digesters

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

Digester 5 – In use – seal level approx. 2ft below coping stones – Good Seal - Bell height high requiring draw down of Biogas.

Digester 6 - In use – seal level approx. 3ft below coping stones – Good Seal - Bell height high requiring draw down of Biogas.

Digester 7 - In use – seal level approx. 4ft 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. 4ft below coping stones – Good Seal – Bell height high requiring draw down of Biogas.

Digester 9 - In use – seal level approx. 3ft below coping stones – Good Seal.

Digester 10 - In use – seal level approx. 3ft 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. 6” below coping stones – Good Seal. Evidence of old spill requiring clean-up.

Digester 12 - In use – seal level approx. 1ft below coping stones – Good Seal. Evidence of old spill requiring clean-up.

Digester 13 – Out of use.

Digester 14 – Out of use.

Digester 15 – Out of use.

Digester 16 – Out of use.

Digester 17 - In use – seal level approx. 4ft below coping stones – Good Seal.

Digester 18- In use – seal level approx. 2ft below coping stones – Seal weak and bubbling.

Digester 19 - In use – seal level approx. 6ft below coping stones – Good Seal.

Digester 20 - In use – seal level approx. 3ft below coping stones – Good Seal.

GENERAL

Sludge Screening House

All doors open at time of inspection – Contractors on-site replacing screens.

Imported Sludge

94.67m³ 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, 75 & 78.

East Side Raw Sludge Screen House

Doors 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).

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).

New Works (West Side) Battery E

Inlet lane obstructed up to Aeration Lane 24 – requires hoses to break-up.

Pasteurisation Plant

No data provided.

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) – General Waste has been deposited within contaminating the load 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.

Odour Control Unit (OCU) performance monitoring – 12/09/23:

| Plant | Reading (ppm) | Action Level (ppm) | Compliant |
|------------------------------|-------------------------|---------------------------|------------------|
| Main pumping station inlet | No data | Unknown | Unknown |
| Main pumping station outlet | 0.044 0.044 0.045 | 0.2 | Yes |
| East OCU | 0.013 0.012 0.012 | 0.05 | Yes |
| West inlet OCU | 0.004 0.004 0.003 | 0.05 | Yes |
| 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 | 0.016 0.017 0.020 | 0.6 | Yes |
| Transfer PS inlet | 1.037 1.019 1.045 | Unknown | Unknown |
| Transfer PS outlet | 0.003 0.003 0.003 | 0.5 | Yes |
| New West inlet (OCU11) | 0.648 0.670 0.706 | 0.5 | No |
| Pasteurisation Plant (OCU12) | 0.000 0.000 0.000 | 0.5 | Yes |
| GBT Plant OCU Outlet | 0.000 0.000 0.000 | Unknown | Unknown |