



Mogden Sewage Treatment Works

TW Site Inspection

| | |
|---|---------------------------------------|
| Date of inspection: 7th March 2019 | |
| Attendees: Mr Zaheer Kadri and Mr Kumail Haider (LBH) with Mr Waleed Janjua (Thames Water) | |
| LB Hounslow Observation | Thames Water Action / Response |
| <p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A was empty and had dry residue on the tank floor at the hopper end. Hopper 1 was approx. 1/3 full, hoppers 2 & 3 were both approx <1/4 full and had started to form a crust on the surface.</p> <p>Tank 1B was empty. Hoppers 1, 2 & 3 were all approx <1/4 full and had started to form a crust on the surface.</p> <p>Tank 2A was empty. Hoppers 1 & 2 were approx <1/4 full and had started to form a crust on the surface, hopper 3 was empty.</p> <p>Tank 2B had grit in the bottom of the tank. Hoppers 1, 2 & 3 were all approx <1/2 full and had started to form a crust on the surface.</p> <p>Tank 3A was empty. Hoppers 1 & 3 were all approx <1/4 full and had started to form a crust on the surface. Hopper 2 was drained down.</p> <p>Tank 3B was empty. Hoppers 1, 2 & 3 were all approx <1/4 full.</p> <p>Tanks 4A, 4B, 5A & 5B which are covered and odour controlled were all empty - unable to gauge condition as lighting system still not working.</p> | |

Tank 6A was empty with some residual grit. Hoppers 1, 2 & 3 were all approx 1/2 full and had started to form a crust on the surface.

Tank 6B was empty. Hopper 1 was full, hopper 2 was approx ¼ full & hopper 3 was approx ½ full.

Tank 7A was empty. Hoppers 1, 2 & 3 (shallow hoppers) all had large amounts of grit and some effluent in them.

Tank 7B had been returning at time of inspection. Approx 20% full of effluent.

Tank 8A was empty however some patches of sludge but hoppers 1, 2 & 3 were all full.

Tank 8B was empty but hoppers 1, 2 & 3 were all full, at the time of the inspection staff were beginning to over pump them.

Amajets- No reports of any faults with amajets. All in working order.

Feed Channel - The level of effluent in both feed channels was low – almost bottomed out in places. Dark and murky throughout the channel– no local odours.

Complaints

The Council received one complaint by telephone in the preceding week.

A complaint was received at approx 17:19 on the 28th February 2019 from the Napier Road area of Isleworth TW7 7HP. The duty Officer returned the call at approx 17:42 however the odours had ceased. The Odour Monitor trends for the day illustrated that at approx 17:33 there was a slight hike with OM1 which measured odour at 0.008ppm however the odour logs didn't show any odours at the site apart from a spike in OM5 earlier that morning. Our Ref for this complaint is logged as 981406.

The Council received one complaint by email in the preceding week.

On the 26th of February 2019 an email was received by the Council at approx 16:37 from the Elmer Garden area of Isleworth TW7 6HA. The duty officer corresponded with the complainant and advised to call the Mogden out of hours telephone line if an odour incident was to recur. This was also followed up by a letter to the complainant. Our Ref for this complaint is logged as 981295.

The Council received no complaints by email from MRAG.

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

Odour Monitors

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

| | | | |
|----------------|---------|-----|-------|
| Monitor 1 | 0.000 | ppm | 13:02 |
| Monitor 2 | 0.007 | ppm | 13:02 |
| Monitor 3 | 0.000 | ppm | 13:02 |
| Monitor 4 | 0.007 | ppm | 13:02 |
| Monitor 5 | 0.007 | ppm | 13:02 |
| Monitor 6 | 0.006 | ppm | 13:02 |
| Monitor 7 | 0.009 | ppm | 13:02 |
| Monitor 8 | 0.008 | ppm | 13:02 |
| Monitor 9 | 0.005 | ppm | 13:02 |
| Monitor 10 | 0.006 | ppm | 13:02 |
| Monitor 11 | 0.006 | ppm | 13:02 |
| Monitor 12 | 0.007 | ppm | 13:02 |
| Monitor 13 | 0.005 | ppm | 13:02 |
| Wind Speed | 10.317 | mph | 13:02 |
| Wind Direction | 234.430 | Deg | 13:02 |

Odour Log (Thames) - Photocopies of log entries taken

Thursday 28th February 2019

AM – Cool= Rain with sunny spells.

All OMU's in use.

Time: 17:30

Observations/Complaints:

OM5 = hiked to 0.030ppm @ 08.07-08.21 (under 15min duration)

Operational Issues/Causes: None noted.

Actions: None noted.

PM – cool with rain

All OMU's in use.

Time: 05:30

Observations/Complaints:

OM4- spiked to 0.022ppm at 23:33-00:32 (Under 15min duration)

OM8- multiple spikes over shift from.20:00 onwards

Operational Issues/Causes: unable to pinpoint source

Actions: None noted.

Friday 1st March 2019

AM – Cool and Cloudy

All OMU's in use.

Time: 17:30

Observations/Complaints:

OM8 - 0.019ppm @ 10.03-10.18

OM8 - 0.016ppm @ 12.18 - 12.29

Both spikes lasted less than a 15 minute duration.

Operational Issues/Causes: PAS area odorous

Actions: None noted.

PM – Cool and Rainy

All OMU's in use.

Time: 05:30

Observations/Complaints:

OM5 spiked at 19:53-20:06 but <15mins duration max spike 0.017ppm

Operational Issues/Causes: None noted.

Actions: None noted.

Saturday 2nd March 2019

AM – Cool Sunny with Patchy Cloud

All OMU's in use.

Time: 05:30

Observations/Complaints:

OM5 = spiked to 0.016 @ 12.21 - 12.36

Operational Issues/Causes: PAS stream overflowed. Area cleaned up

Actions: None noted.

PM – Cool and Rainy

All OMU's in use.

Time: 17:30

Observations/Complaints:

OM4 Spiked at 01:19-02:18, max spiked to 0.019ppm

Operational Issues/Causes:

Flare stack compressor failed, digesters gassing off whilst gas main and CHP's off for heating pipework repaired

Actions: Flare stack compressor changed out for a spare one as quickly as possible to bring flare stack back into service

Sunday 3rd March 2019

AM – Cool- Rain with Sunny spells

All OMU's in use.

Time: 17:30

Observations/Complaints:

OM5 =0.015@07.52-08.21.

OM8 = 0.019 @10.17-10.33.(max spike was 0.082ppm)

Operational Issues/Causes: PAS area

Actions: None Noted

PM – Cool and Rainy

All OMU's in use.

Time: 05:30

Observations/Complaints:

OM5 Spiked at 19:07-20:08 max spike 0.026ppm

OM8 spiked at 03:30-03:46 max spike to 0.026 ppm

Operational Issues/Causes: No Odours found

Actions: None noted.

Monday 4th March 2019

AM – Cool and Rainy

All OMU's in use.

Time: 17:30

Observations/Complaints: No odour issues

Operational Issues/Causes: None noted

Actions: None noted

PM – Cool and Cloudy

All OMU's in use.

Time: 05:30

Observations/Complaints: No odour issues

Operational Issues/Causes: None noted

Actions: None noted.

Tuesday 5th March 2019

AM – Warm and Cloudy

All OMU's in use.

Time: 17:30

Observations/Complaints: No odour issues

Operational Issues/Causes: none noted

Actions: none noted

PM – Cool and Rainy

All OMU's in use.

Time: 05:30

Observations/Complaints: No odour issues

Operational Issues/Causes: None noted

Actions: None noted.

Wednesday 6th March 2019

AM – Cool and Rainy

All OMU's in use.

Time: 17:30

Observations/Complaints: No odour issues

Operational Issues/Causes: None noted.

Actions: None noted.

PM – Cool - Clear Night.

All OMU's in use.

Time: 06:00

Observations/Complaints: No odour issues

Operational Issues/Causes: None noted.

Actions: None noted.

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 | | | | | |
| 28/02/19 | 283 | 1364 | 61 | 1708 | 6058 | 7766 |
| 5/03/19 | 322 | 1968 | 244 | 2534 | 4047 | 6581 |
| 6/01/19 | 273 | 1842 | 910 | 3025 | 5725 | 8750 |

The sludge stock levels for the West side circular primary settlement tank 1 were **compliant** with the OMP trigger level (500m³) for all of the dates for which data has been provided.

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.

Digesters

Digesters 1-4 – Out of use (permanent) – noticeable quantity of water accumulated to the brim of these tanks which is thick with algae – requires draining. Long term project currently initiated to bring these units back into service – will require significant investment.

Digester 5 - in use – seal level approx. 2ft below coping stones – good seal – evidence of recent spill – requires anti-foam and clean-up.

Digester 6 - in use – good seal level approx. 2ft below coping stones

Digester 7 - in use – seal level approx. 2ft below coping stones – seal weak and bubbling - Ongoing spitting/spill – requires anti-foam and clean-up

Digester 8 – in use –good seal level approx. 1ft below coping stones.

Digester 9 - in use – seal level approx. 1ft below surface of coping stones – good seal.

Digester 10 – in use – seal level approx. 1ft below surface of coping stones – seal weak and bubbling

Digester 11 - in use – seal level approx. 1ft below surface of coping stones – seal weak and bubbling

Digester 12 - in use – seal level approx. 1ft below coping stones – good seal

Digester 13 - out of use – empty and clean.

Digester 14 - out of use – empty and clean.

Digester 15 -- out of use – empty and clean.

Digester 16 - out of use – empty and clean.

Digester 17 - in use – seal level approx. 3ft below coping stones – seal crusty .

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

Digester 19 - in use – seal level approx. 1ft below coping stones – seal weak and bubbling.

Digester 20 - in use – seal level approx. 3ft below coping stones – good seal.

No Odours in the area observed at times of inspection.

GENERAL

Sludge Screening House

All doors closed at time of inspection however aware that on previous visits these doors have been left open to avoid condensation build up – TW advised that doors being left open to create air flow is a Management decision to improve internal working environment for staff – odour monitors deployed in vicinity to determine whether local odours increase as a consequence. No odours observed.

Imported Sludge

Estimated average of 3 imports daily for 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). Green algae across the surface of Tanks 73 & 74. All other FST are in order.

Skips

No Skips present at the screening House- All clear

2 x 12yard skips at the East side grit house which were empty with one large Biffa enclosed skip. No odour detected

East Side Raw Sludge Screen House

Doors closed at time of inspection.

West side primary settlement tanks (PST)

Rectangular PSTs – no issues

Circular PST's 9, 10, 11 & 12 all in use. Currently installing trial of odour control "mistors" on Tank 10 – pipe installed around tank top tail with nozzle sprays at regular intervals which can be utilised to create a plume of deodoriser (same as current mobile units on site) – intention to roll this out to all "odorous areas" on site if proves effective during trial period – initial testing has proven successful to date – trial ongoing. At time of inspection these mistors were not in operation. No Odours observed.

Pasteurisation Plant

Pasteurisation plant 4/7/9 currently out of service - All remaining pasteurisation plant in service and fully operational.

West Side Aeration Lanes (Old)

Battery C aeration feed channel approximately 25% obstructed in one channel – requires jetting. Kelvac (Contractors) on site at time of inspection.

New Works (West Side)

Feed Channel for Aeration Lanes 21-24 obstructed partly but then free flowing – this may require jetting. Kelvac on site at time of inspection.

"Fluffy" coverage across surface returned across 100% of tank – thickened up so as to obscure internal dividing walls within tank.

Odour Control Unit (OCU) performance monitoring (5th March 2019)

| Plant | Reading (ppm) | Action Level (ppm) | Compliant |
|----------------------------|----------------------|--------------------|-----------|
| Main pumping station inlet | 0.03 0.03 0.03 | Unknown | Unknown |

| | | | |
|-------------------------------|----------------------|---------|---------|
| Main pumping station outlet | 0.00 0.00 0.00 | 0.2 | Yes |
| East OCU | 0.00 0.00 0.00 | 0.05 | Yes |
| West inlet OCU | No data | 0.05 | Yes |
| Sludge reception inlet | No data | Unknown | Unknown |
| Sludge reception outlet | No data | 0.8 | Yes |
| Thickening plant inlet | No data | Unknown | Unknown |
| Thickening plant outlet | 0.01 0.02 0.02 | 0.6 | Yes |
| Transfer PS inlet | No Data | Unknown | Unknown |
| Transfer PS outlet | 0.04 0.04 0.04 | 0.6 | Yes |
| New West inlet (OCU 11) | 0.00 0.00 0.00 | 0.5 | Yes |
| OCU 12 (Pasteurisation Plant) | 0.01 0.01 0.01 | 0.5 | Yes |