



Mogden Sewage Treatment Works

TW Site Inspection

| Date of inspection: 22 nd February 2018 | |
|---|---------------------------------------|
| Attendees: Mr Zaheer Kadri (London Borough of Hounslow) and Mr Dimitrios Kalmantis (Thames Water) | |
| LB Hounslow Observation | Thames Water Action / Response |
| <p><u>Storm Water Storage Tanks</u></p> <p>Tank 1A – Tank empty and flushed. Hoppers 1, 2 & 3 drained down to 25% from bottom level.</p> <p>Tank 1B – Tank empty and flushed clean. Hoppers 1, 2 & 3 drained down to bottom level.</p> <p>Tank 2A – Tank empty and flushed clean. Hoppers 1, 2 & 3 drained down to bottom level.</p> <p>Tank 2B – Tank empty and flushed. Hoppers 1, 2 & 3 drained down to bottom level.</p> <p>Tank 3A – Tank empty and flushed clean. Hoppers 1, 2 & 3 drained down to bottom level.</p> <p>Tank 3B – Tank empty and flushed - approximately 10% of tank covered by grit – requires further flushing. Hoppers 1, 2 & 3 drained down to bottom level.</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 – Tank empty and flushed - approximately 5% of tank covered by grit – requires further flushing. Hoppers 1, 2 & 3 drained down to bottom level.

Tank 6B – Tank empty and flushed - approximately 5% of tank covered by grit – requires a sweep. Hoppers 1, 2 & 3 drained down to bottom level

Tank 7A – Tank empty and flushed - approximately 10% of tank covered by grit – requires further flushing. Hoppers 1, 2 & 3 drained down to bottom level

Tank 7B – Tank empty and flushed – approximately 5% of tank covered by grit – requires further flushing/sweeping up of grit. Hoppers 1, 2 & 3 full – issue with faulty subterranean non-return valve allowing back-filling of hoppers – requires repair/replacement.

Tank 8A – Tank recently returned – approximately 5% of tank covered by grit – requires further flushing. Hoppers 1, 2 & 3 drained down to 50% from bottom level.

Tank 8B – Tank empty and flushed - approximately 5% of tank covered by grit – requires further flushing. Hoppers 1, 2 & 3 drained down to 50% from bottom level.

Feed Channel - The level of effluent in both feed channels was low – approximately 5-10% - almost bottomed out in places – some grit and sludge – no local odour.

Complaints

The Council directly received no complaints by telephone in the preceding week.

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

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 | 0.008 | ppm | 13:43 |
| Monitor 2 | 0.009 | ppm | 13:43 |
| Monitor 3 | 0.000 | ppm | 13:43 |
| Monitor 4 | 0.009 | ppm | 13:43 |
| Monitor 5 | 0.006 | ppm | 13:43 |
| Monitor 6 | 0.009 | ppm | 13:43 |
| Monitor 7 | 0.008 | ppm | 13:43 |
| Monitor 8 | 0.009 | ppm | 13:43 |
| Monitor 9 | 0.009 | ppm | 13:43 |
| Monitor 10 | 0.010 | ppm | 13:43 |
| Monitor 11 | 0.000 | ppm | 13:43 |
| Monitor 12 | 0.008 | ppm | 13:43 |
| Monitor 13 | 0.009 | ppm | 13:43 |
| Wind Speed | - | mph | 13:43 |
| Wind Direction | - | mph | 13:43 |

Odour Log (Thames) - Photocopies of log entries taken:

Thursday 15th February 2018

AM – Cold and Cloudy

Observations: OM 2 spiked at 16:42 (0.018ppm) Contractors cleaning No1 flume.

Actions: No action.

PM – Cold and Cloudy.

All OMU's in use.

Observations: OM 5 spiked at 20:56- 21:55 (0.025ppm).

Actions: None noted.

Friday 16th February 2018

AM – Cool with partial cloud.

All OMU's in use.

Observations: No odour problems.

Actions: None noted.

PM – Cool and Cloudy.

Observations: No odour problems.

Actions: None noted.

Saturday 17th February 2018

AM – Freezing with partial clouds.

All OMU's in use.

Observations:

No odour spikes.

Actions: None noted.

PM – Cold with Partial cloud and rain.

All OMU's in use.

Observations: OM3 flat lining.

Actions: None noted.

Sunday 18th February 2018

AM – Freezing with no clouds

All OMU's in use.

Observations: OM 2 and 3 flat lining only on new Scada.

Actions: No other issues.

PM – Cool but cloudy.

All OMU's in use.

Observations: OM3 flat lining.

Actions: None noted.

Monday 19th February 2018

AM – Cool temperature.

OMU – No observation.

Observations: OM 5 spiked to 0.021ppm at 07:26 (under 15 minute duration).

Actions: None noted.

PM – Cool with cloud and rain.

11/13 OMU's in use.

Observations: OM 3 and 8 flat lining – No other issues found.

Actions: None noted.

Tuesday 20th February 2018

AM – Cold.

OMU- No observations.

Observations: No observations.

Actions: None noted.

PM – Cold.

OMU- No observations.

Observations: OM 1-13 No spikes.

Actions: None noted.

Wednesday 21st February 2018

AM – Cool with partial cloud.

All OMU's in use. No observations.

Observations: No odour issues – nothing to report on trends.

Actions: None noted.

PM – Cold.

All OMU's in use- No observations.

Observations: No odour spikes.

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 | | | | | |
| 16/02/18 | 0 | 1443 | 595 | 2038 | 4897 | 6935 |
| *19/02/18 | 0 | 2829 (2629) | 1750 (1780) | 4579 (4609) | 9599 (9999) | 14178 (14608) |
| 21/02/18 | 0 | 2253 | 1593 | 3846 | 10616 | 14462 |

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.

*Figures in (brackets) are the correct figures. Discrepancy on data submitted

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 within three days.

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.

Digester 5 - in use – seal level approx. 1ft below coping stones – seal weak and bubbling – No signs of spillages.

Digester 6 - in use – seal level approx. 2ft below coping stones – seal weak and bubbling – No evidence of spillage.

Digester 7 - in use – seal level approx. 3ft below coping stones – seal weak and bubbling vigorously – ongoing spill from tank requiring clean-up – Bell height high – requires draw down of biogas.

Digester 8 – in use – seal level approx. 1ft below coping stones – seal weak and bubbling vigorously – ongoing spill from tank requiring clean-up – Bell height high – requires draw down of biogas.

Digester 9 - in use – seal level approx. 2ft below coping stones – good seal (pellets in use).

Digester 10 – in use – seal level approx. 2ft below coping stones – seal good.

Digester 11 - in use – seal level approx. 3ft below coping stones – seal weak and bubbling slightly.

Digester 12 - in use – seal level approx. 2ft below coping stones – seal weak and bubbling.

Digester 13 - out of use.

Digester 14 - in use – seal level approx. 1ft below coping stones – good seal (Pellets in use).

Digester 15 - in use – seal level approx. 1ft below coping stones – good seal.

Digester 16 - out of use.

Digester 17 - in use – seal level approx. 1ft below coping stones – seal slightly weak and bubbling.

Digester 18 - in use – seal level approx. 1ft below coping stones – seal weak and slightly watery.

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

Digester 20 - in use – seal level 1ft below coping stones - seal weak and watering.

There was evidence of anti-foaming agent in use and TW advised that this is applied daily to all of the digesters that are operational.

GENERAL

Sludge Screening House

Shutter doors closed at time of inspection - no local odours.

Imported Sludge

Twelve imports of 35m³ 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). Tank 71 drained down and out of service.

Skips

1x empty large loader skip located at Grit house. – empty
1x small open skip – half full of general waste located Service Road by Pasteurisation plant.

1x small open skip approximately 50% full of mixture of rag and timber offcuts located by West side Inlet Works.

East Side Screen House

All doors closed.

Pasteurisation Plant

The pasteurisation plant is in service and fully operational.

West side primary settlement tanks (PST)

Rectangular PSTs – no issues.

Circular PST's 9, 10, 11 & 12 all in use.

West Side Aeration Lanes (Old)

Battery C aeration feed channel approximately 30% obstructed in one channel – requires jetting.

New Works (West Side)

Feed Channel for Aeration Lanes 20 & 22 – 25 clear. Aeration Lane 21 approximately 30% obstructed – requires jetting.

Approximately 90% of tanks have again developed “fluffy” coverage across surface – worsened since previous inspection. Quantity of physical detritus in tank that has bypassed screener has decreased significantly. Sprinkler head performance has been improved (cleaned/pressure increase).

Odour Control Unit (OCU) performance monitoring – (22/02/18)

| Plant | Reading (ppm) | Action Level (ppm) | Compliant |
|-----------------------------|---------------|--------------------|-----------|
| Main pumping station inlet | 0.00 | Unknown | Unknown |
| | 0.00 | | |
| | 0.00 | | |
| Main pumping station outlet | 0.00 | 0.2 | Yes |
| | 0.00 | | |
| | 0.00 | | |

| | | | |
|-------------------------------|-------------------------|---------|---------|
| East OCU | 0.00 0.00 0.00 | 0.05 | Yes |
| West inlet OCU | 0.00 0.00 0.00 | 0.05 | Yes |
| Sludge reception inlet | No Data | Unknown | Unknown |
| Sludge reception outlet | 0,00 0,00 0.00 | 0.8 | Yes |
| Thickening plant inlet | No data | Unknown | Unknown |
| Thickening plant outlet | 0.005 0.005 0.005 | 0.6 | Yes |
| Transfer PS inlet | No Data | Unknown | Unknown |
| Transfer PS outlet | 0.00 0.00 0.00 | 0.6 | Yes |
| New West inlet (OCU 11) | 0.00 0.00 0.00 | 0.5 | Yes |
| OCU 12 (Pasteurization Plant) | 0.00 0.00 0.00 | 0.5 | Yes |