



# London Borough of Hounslow

## Mogden Sewage Treatment Works

### TW Site Inspection

<b>Date of inspection:</b> 19 <sup>th</sup> August 2020	
<b>Attendees:</b> Mr Steven Maunders and Miss Charlotte Page (Thames Water)	
<b>LB Hounslow Observation</b>	<b>Thames Water Action / Response</b>
<p><b><u>Storm Water Storage Tanks (SWST)</u></b></p> <p><b>Tank 1A</b> – Tank empty - approximately 10% of tank covered by grit – requires further flushing – Hopper 1 approx. 95% full, Hoppers 2 &amp; 3 approx. 85% full – requires draining/over-pumping.</p> <p><b>Tank 1B</b> – Tank empty - approximately 20% of tank covered by grit – requires further flushing – Hopper 1 approx. 80% full, Hoppers 2 &amp; 3 approx. 60% full – requires draining/over-pumping.</p> <p><b>Tank 2A</b> – Tank empty - approximately 10% of tank covered by grit – requires further flushing – Hoppers 1 approx. 80% full, Hoppers 2 &amp; 3 approx. 60% full – requires draining/over-pumping.</p> <p><b>Tank 2B</b> – Tank empty – approximately 60% of tank covered by grit/sludge – requires further flushing – Hoppers 1, 2 &amp; 3 approx. 50% full.</p> <p><b>Tank 3A</b> – Tank empty – approximately 10% of tank covered by grit/sludge – requires further flushing – Hoppers 1, 2 &amp; 3 approx. 25% full.</p>	

**Tank 3B** – Tank empty – recently returned - 100% of tank covered by grit/sludge – requires further flushing – Hoppers 1, 2 & 3 full – 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 - approximately 15% of tank covered by grit/sludge – requires further flushing – Hoppers 1, 2 & 3 approx. 85% full – requires draining/over-pumping.

**Tank 6B** – Tank empty – recently returned - 100% of tank covered by grit/sludge – requires further flushing – Hoppers 1, 2 & 3 full – requires draining/over-pumping.

**Tank 7A** - Tank empty – recently returned 85% of tank covered by grit/sludge – requires further flushing - Hoppers 1, 2 & 3 full – requires draining/over-pumping.

**Tank 7B** – Tank empty – recently returned – 100% of tank covered by grit/sludge – requires further flushing. Hoppers 1, 2 & 3 full – requires draining/over-pumping.

**Tank 8A** – Tank empty - approximately 20% of tank covered by grit/sludge – requires further flushing – Hoppers 1, 2 & 3 full – requires draining/over-pumping.

**Tank 8B** – Tank empty – approximately 10% of tank still covered with grit/sludge – requires further flushing. Hoppers 1, 2 & 3 full – requires draining/over-pumping.

**Feed Channel** - The level of effluent in both feed channels was approx. 40% capacity - no local odours.

### **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 (H<sub>2</sub>S) for all monitors which were providing data at time of inspection:

Monitor 1	.000	ppm	13:15
Monitor 2	.010	ppm	13:15
Monitor 3	.000	ppm	13:15
Monitor 4	.000	ppm	13:15
Monitor 5	.000	ppm	13:15
Monitor 6	.000	ppm	13:15
Monitor 7	.000	ppm	13:15
Monitor 8	.000	ppm	13:15
Monitor 9	.000	ppm	13:15
Monitor 10	.003	ppm	13:15
Monitor 11	.000	ppm	13:15
Monitor 12	.000	ppm	13:15
Monitor 13	.000	ppm	13:15
Wind Speed	5.6	mph	13:15
Wind Direction	123.5°		

**Odour Log (Thames):**

**Thursday 20<sup>th</sup> August 2020:**

**AM – Sunny with Patchy Clouds.**

All OMU's in use.

**Observations/Complaints:** "OM2 0.023 10:38 – 10:54".

**Operational Issues/Causes:** "Inlet checked. No odour detected".

**Actions:** None noted.

**PM** – Clear Night.

All OMU's in use.

**Observations/Complaints:** "OM2 showing odours all shift".

**Operational Issues/Causes:** "Some odours coming from PST11".

**Actions:** "East Inlet washed down. PST11 needs cleaning up".

**Friday 21<sup>st</sup> August 2020:**

**AM** – Sunny with Patchy Cloud.

All OMU's in use.

**Observations/Complaints:** "OM3 0.039 08:39 – 08:55. OM2 0.021 17:22 – 17:37".

**Operational Issues/Causes:** "PST 15-16 being pumped out. Inlet checked. No odour detected".

**Actions:** None noted.

**PM** – Clear Night.

All OMU's in use.

**Observations/Complaints:** "OM3 0.039ppm 00:54 – 01:09. 00.73ppm 01:24-01:40. OM2 0.022ppm 01:52 – 02:07".

**Operational Issues/Causes:** "PST 15 & 16 over pump running to empty tank after back-filling. OCU11 discharging 313ppb odour from stack".

**Actions:** "Inlet area washed down".

**Saturday 22<sup>nd</sup> August 2020:**

**AM** – Sunny with Patchy Clouds.

All OMU's in use.

**Observations/Complaints:** "OM3 0.041 15:38 – 15:54. 0.016 12:09 – 12:24. 0.046 10:38 – 10:54. OM2 0.053 09:21 – 09:38".

**Operational Issues/Causes:** "PST 15-16 being pumped out. Inlet checked. No odour detected".

**Actions:** "Inlet hosed down".

**PM** – Clear Night.

All OMU's in use.

**Observations/Complaints:** "OM2 one spike 0.016ppm < 15 minutes.

OM3 0.025ppm 03:40 – 05:10”.

**Operational Issues/Causes:** “OCU11 discharging 0.425ppm from stack”.

**Actions:** “West Inlet checked. Nothing out of the ordinary found”.

**Sunday 23<sup>rd</sup> August 2020:**

**AM** – Sunny with Patchy Clouds.

All OMU’s in use.

**Observations/Complaints:** “OM3 0.025 06:38 – 06:55. 0.016 08:40 – 08:54. 0.017 09:10 – 09:24. 0.021 09:38 – 09:54. 0.034 10:08 – 10:40.”

**Operational Issues/Causes:** “Area checked, no source found”.

**Actions:** None noted.

**PM** – Clear Night.

All OMU’s in use.

**Observations/Complaints:** “OM3 0.052 18:39 – 18:55. 0.021 19:56 – 20:10. 0.028 21:25 – 21:40. 0.035 22:38 – 22:52”.

**Operational Issues/Causes:** “E Battery Inlet skips wet therefore area washed down. OCU11 discharging 0.470ppm from stack”.

**Actions:** None noted.

**Monday 24<sup>th</sup> August 2020:**

**AM** – Sunny with Patchy Clouds.

All OMU’s in use.

**Observations/Complaints:** “OM3 spiked at 09:20 – 09:39 max 0.021ppm, 10:10 – 10:39 max 0.023ppm, 11:23 – 11:40 max 0.027ppm, 12:38 – 12:57 max 0.024ppm OM2 17:07-17:20 max 0.037ppm. OM6 16:36 – 16:52 max 0.020ppm”.

**Operational Issues/Causes:** “No obvious odour sources found”.

**Actions:** None noted.

**PM** – Rain.

All OMU’s in use.

**Observations/Complaints:** “OM2 0.049ppm 18:23 – 19:07”.

**Operational Issues/Causes:** “Inlets checked. Heavy rain”.

**Actions:** None noted.

**Tuesday 25<sup>th</sup> August 2020:**

**AM** – Rain.

All OMU's in use.

**Observations/Complaints:** "Heavy rain AM".

**Operational Issues/Causes:** "No odour issues found or reported".

**Actions:** None noted.

**PM** – Overcast Night.

All OMU's in use.

**Observations/Complaints:** "OM3 0.016 17:54 – 18:08, 0.026 19:23 – 19:39, 0.040 20:23 – 20:38, 0.044 21:08 – 21:24, 0.086 02:23 – 02:39, 0.033 02:52 – 03:09, 0.048 03:23 – 03:39, 0.025 05:08 – 05:23, 0.079 05:38 – 05:54".

**Operational Issues/Causes:** "Area checked. No source of odour found. OCU11 high ppb output 530".

**Actions:** None noted.

**Wednesday 26<sup>th</sup> August 2020:**

**AM** – Cloudy with Sunny Spells.

All OMU's in use.

**Observations/Complaints:** "OM3 spiked at 07:40 – 08:08 max 0.018ppm, 09:09 – 09:45 max 0.024ppm, 10:38 – 10:54 max 0.028ppm, 13:25 – 13:40 max 0.030ppm".

**Operational Issues/Causes:** "Area checked. No source of odour detected".

**Actions:** "Site wide calibration of odour monitors carried out today by ABLE".

**PM** – Clear Night.

All OMU's in use.

**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 <sup>3</sup>						
OMP limit	500					
No data	No data	No data	No data	No data	No data	No data
No data	No data	No data	No data	No data	No data	No data
No data	No data	No data	No data	No data	No data	No data

### 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 dry spill requiring clean-up.

**Digester 6** - In use – seal level approx. 1ft below coping stones – seal weak and bubbling – evidence of dry spill requiring clean-up.

**Digester 7** – Out of use – empty and clean – contractor on site undertaking maintenance.

**Digester 8** - In use – seal level approx. 18” below coping stones - seal weak and bubbling – ongoing spill requiring anti-foam and clean-up.

**Digester 9** - In use – seal level approx. 18” below coping stones - seal weak and bubbling – ongoing spill requiring anti-foam and clean-up.

**Digester 10** - In use – seal level approx. 18” below coping stones -

seal weak and bubbling - Bell height high requiring draw down of Biogas.

**Digester 11** - In use – seal level approx. 1ft below coping stones – seal weak and bubbling.

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

**Digester 13** - In use – seal level approx. 3ft below coping stones - seal weak and bubbling – Bell height high requiring draw down of Biogas.

**Digester 14** – Coming back into Service.

**Digester 15** - Out of use – empty and clean – contractor on site undertaking maintenance.

**Digester 16** - In use – seal level approx. 6” below coping stones - seal weak and bubbling – ongoing spill requiring anti-foam and clean-up. Bell height high requiring draw down of Biogas.

**Digester 17** - In use – seal level approx. 18” below coping stones - seal weak and bubbling.

**Digester 18** - Out of use – empty and clean – contractor on site undertaking maintenance.

**Digester 19** - Out of use – requires draining.

**Digester 20** - In use – seal level approx. 3ft below coping stones – seal weak and bubbling.

**GENERAL**

**Sludge Screening House**

All doors open at the time of inspection – contractors on site working on screens.



**Imported Sludge**

Unknown.

**Final Settlement Tanks East Side of Works**

The 8 circular tanks previously used as PSTs are now being used as final tanks (71-78).

**Skips**

1x 12 yard & 1x 8 yard skip containing general waste and 1x enclosed container skip (empty) in Service Road at rear of Screen House.

1x 8 yard skip containing general waste in Service Road adjacent to Raw Sludge Screen House.

1x empty open container skip by West Side PST's.

**East Side Raw Sludge Screen House**

Doors closed 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).

**Pasteurisation Plant**

Unknown.

**West side primary settlement tanks (PST)**

Rectangular PSTs – no issues.

Circular PST's 9, 10 & 11 in use, Number 12 drained down.

**New Works (West Side)**

Feed Channel for Aeration Lanes 21-24 approximately 50% blocked – requires jetting.

“Fluffy” coverage across surface has again begun to build up significantly, also quantity of material bypassing screener.

**Odour Control Unit (OCU) performance monitoring – No data**

<b>Plant</b>	<b>Reading (ppm)</b>	<b>Action Level (ppm)</b>	<b>Compliant</b>
Main pumping station inlet	No data	Unknown	Unknown
Main pumping station outlet	No data	0.2	Unknown
East OCU	No data	0.05	Unknown
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	No data	0.6	Unknown
Transfer PS inlet	No data	Unknown	Unknown
Transfer PS outlet	No data	0.5	Unknown
New West inlet (OCU11)	No data	0.5	Unknown
Pasteurisation Plant (OCU12)	No data	0.5	Unknown