**Mogden Sewage Treatment Works**

**TW Site Inspection**

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| **Date of inspection:** Wednesday 23rd March 2022 (13:00pm) | |
| **Attendees:** Mr L Phillips (London Borough of Hounslow) Caitlin Simmonds (Thames Water) | |
| **LB Hounslow Observation** | **Thames Water Action / Response** |
| **Storm Water Storage Tanks (SWST)**  **Tank 1A** was empty and clear slight grit across the entire surface. All hoppers were half full and required draining no odour detected.  **Tank 1B** was empty and clean. All hoppers drained to lowest point no odours detected.  **Tank 2A** was empty and clean. All hoppers drained to lowest point no odours detected.  **Tank 2B** was empty some slight sludge patches at the hopper end of the tank. All hoppers were ¼ full and required draining.  **Tank 3A** was empty however tank covered in thick sludge across the entire length of the tank. Hoppers 1 and 3 were drained to lowest point. Hoppers 2 was a ¼ and required draining.  **Tank 3B** was empty however tank covered in thick sludge across the entire length of the tank. All hoppers were full and require draining.  **Storm Feed Channel** - The level of effluent in this feed channels was minimal and bottomed out in places. The remaining effluent looked murky.  **Tanks 4A, 4B, 5A & 5B** All tanks are covered and odour controlled. I was able to gauge the conditions which demonstrated the tanks as being full and in use.  **Tank 6A** was empty and clean. All hoppers were full and required draining.  **Tank 6B** was empty and clean. All hoppers were full and required draining.  **Tank 7A** was empty and clean. All hoppers were full and required draining.  **Tank 7B** was empty however tank covered in thick sludge across the entire length of the tank. All hoppers were full and require draining.  **Tank 8A** was empty and clean. All hoppers were full and required draining.  **Tank 8B** was empty and clean. All hoppers were full and required draining.  **Storm Feed Channel** - The level of effluent in both feed channels was about ¼ high and contained thick deposits of fat. In places the effluent looked murky and muddy.  **Complaints**  The Council received **0** complaints in the preceding week. |  |
| **Odour Monitors**  The odour readouts (H2S) for all monitors that were providing data on 23/03/2022 at the time of the inspection are below.   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Monitor 1 | 0.000 | ppm |  | 13:04pm | | Monitor 2 | 0.000 | ppm |  | 13:04pm | | Monitor 3 | 0.003 | ppm |  | 13:04pm | | Monitor 4 | 0.002 | ppm |  | 13:04pm | | Monitor 5 | 0.005 | ppm |  | 13:04pm | | Monitor 6 | 0.005 | ppm |  | 13:04pm | | Monitor 7 | 0.000 | ppm |  | 13:04pm | | Monitor 8 | 0.003 | ppm |  | 13:05pm | | Monitor 9 | 0.004 | ppm |  | 13:05pm | | Monitor 10 | 0.004 | ppm |  | 13:05pm | | Monitor 11 | -0.025 | ppm |  | 13:05pm | | Monitor 12 | 0.004 | ppm |  | 13:05pm | | Monitor 13 | 0.006 | ppm |  | 13:05pm | | Wind Speed | 2.340 | mph |  | 13:05pm | | Wind Direction | 59.870 | Deg |  | 13:05pm | |  |
| **Odour Log**  **Wednesday 16th March 2022**  **DAY SHIFT**  **Temp.** Cool.  **Weather.** Rain w/ Sunny spells.  **Odour Readings.** All OMU’s in operation.  **Time:** 17:30.  **Observations / Customer Complaint.** No odour issues.  **Operational issues / causes observed** Blank.  **Actions Taken.** Blank.  **NIGHT SHIFT**  **Temp.** Cool.  **Weather.** Rain.  **Odour Readings.** All OMU’s in operation.  **Time:** 05:30.  **Observations / Customer Complaint.**  OM1 spiked at 18:35- 18:52 max 0.034ppm.  **Operational issues / causes observed.**  Filling storm tanks.  **Actions Taken.** Blank.  **Thursday 17th March 2022**  **DAY SHIFT**  **Temp.** Warm.  **Weather.** Sunny.  **Odour Readings.** All OMU’s in operation.  **Time:** 05:30.  **Observations / Customer Complaint.**  No odour issues found or reported.  **Operational issues / causes observed.** Blank.  **Actions Taken.** Blank.  **NIGHT SHIFT**  **Temp.** Cold.  **Weather.** Clear Night.  **Odour Readings.** All OMU’s in operation.  **Time:** 05:30.  **Observations / Customer Complaint.**  OM5 spiked at 20:49 21:04 max 0.019ppm.  **Operational issues / causes observed.**  Pasteurisation type odour in the wind.  **Actions Taken.** Blank.  **Friday 18th March 2022**  **DAY SHIFT**  **Temp.** Warm.  **Weather.** Sunny.  **Odour Readings.** All OMU’s in operation.  **Time:** 17:30.  **Observations / Customer Complaint.**  No odour issues found or reported.  **Operational issues / causes observed.** Blank.  **Actions taken.** Blank.  **NIGHT SHIFT**  **Temp.** Cool.  **Weather.** Clear night.  **Odour Readings.** All OMU’s in operation.  **Time:** 05:30.  **Observations / Customer Complaint.**  No odour issues.  **Operational issues / causes observed.** Blank.  **Actions taken.** Blank.  **Saturday 19th March 2022**  **DAY SHIFT**  **Temp.** Warm.  **Weather.** Sunny.  **Odour Readings.** All OMU’s in operation.  **Time:** 17:30.  **Observations / Customer Complaint.**  No Odour issues found or reported.  **Operational issues / causes observed.** Blank.  **Actions taken.** Blank.  **NIGHT SHIFT**  **Temp.** Cool.  **Weather.** Clear night.  **Odour Readings.** All OMU’s in operation.  **Time:** 05:30.  **Observations / Customer Complaint.**  No odour issues.  **Operational issues / causes observed.** Blank.  **Actions taken.** Blank.  **Sunday 20th March 2022**  **DAY SHIFT**  **Temp.** Warm.  **Weather.** Sunny.  **Odour Readings.** All OMU’s in operation.  **Time:** 17:30.  **Observations / Customer Complaint.**  No odour issues found or reported.  **Operational issues / causes observed.** Blank.  **Actions taken.** Blank.  **NIGHT SHIFT**  **Temp.** Cold.  **Weather.** Clear night.  **Odour Readings.** All OMU’s in operation.  **Time:** 05:30.  **Observations / Customer Complaint.**  OM13 0.023 3:17 3:32  OM11 0.019 1:31 – 1:46  OM5 0.015 20:34 – 20:50  0.018 21:04 – 21:20.  **Operational issues / causes observed.**  Odour from main drive drain.  **Actions Taken.** Blank.  **Monday 21st March 2022**  **DAY SHIFT**  **Temp.** Warm.  **Weather.** Sunny.  **Odour Readings.** All OMU’s in operation.  **Time:** 17:30.  **Observations / Customer Complaint.**  No odour issues.  **Operational issues / causes observed.** Blank.  **Actions taken.** Blank.  **NIGHT SHIFT**  **Temp.** Cold.  **Weather.** Clear night.  **Odour Readings.** All OMU’s in operation.  **Time:** 05:30.  **Observations / Customer Complaint.**  OM11 0.016 2:17 - 3:16.  **Operational issues / causes observed.**  Digesters gassing off flare running occasionally.  **Actions Taken.** Blank.  **Tuesday 22nd March 2022**  **DAY SHIFT**  **Temp.** Warm.  **Weather.** Sunny.  **Odour Readings.** All OMU’s in operation.  **Time:** 17:30.  **Observations / Customer Complaint.**  No odour issues.  **Operational issues / causes observed.** Blank.  **Actions taken.** Blank.  **NIGHT SHIFT**  **Temp.** Cold.  **Weather.** Clear night.  **Odour Readings.** All OMU’s in operation.  **Time:** 05:30.  **Observations / Customer Complaint.**  No odour issues found or reported.  **Operational issues / causes observed.** Blank.  **Actions Taken.** Blank. |  |
| **Sludge Dip Records**   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | **Date** | **West**  **PSTs 1** | **West**  **PSTs**  **2** | **West**  **PSTs**  **3** | **West**  **Total** | **East PSTs** | **Grand Total** | | **All units in m3** | | | | | | | OMP limit | **500** |  |  | | | | | 22/03/2022 | 78 | 2404 | 1181 | 3663 | 2954 | 6617 | | 18/03/2022 | 78 | 2385 | 3280 | 5743 | 1577 | 7300 (7320) | | 17/03/2022 | 0 | 2198 | 2887 | 5085 | 3867 | 8952 | | 16/03/2022 | 78 | 3196 | 2700 | 5974 | 6406 | 12380 |   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.  **Imported Sludge**  There has been an average of **0 imports** of sludge per day in the preceding week.  **No.5 Pumping Station**  The doors of No.5 pumping station were closed at time of inspection.  **Sludge Import Area**  It was noted that the condition around the sludge import area was much improved and noticeably clean. No odours witnessed.  **Raw Sludge Screening House**  The large roller shutter doors of the Raw Sludge Screening building were closed at the time of the inspection.  **Digesters on the 23rd March 2022**  **Digesters** **1-4** Out of use (permanent).  Thames advised of a long-term project currently initiated to bring these units back into service that will require significant investment.  **Digester 5** **Out of service.**  **Digester 6** was in service - weak seal – No evidence of recent spillages.  **Digester 7** was in service - weak seal – No evidence of recent spillages.  **Digester 8** was in service - weak seal – No evidence of recent spillages.  **Digester** was in service - weak seal – No evidence of recent spillages.  **Digester 10** was in service - weak seal – No evidence of recent spillages.  **Digester 11** was in service - weak seal – No evidence of recent spillages.  **Digester 12** was in service - weak seal – No evidence of recent spillages.  **Digester 13** was in service - weak seal – No evidence of recent spillages.  **Digester 14 -** was in service - weak seal – No evidence of recent spillages.  **Digester 15 -** **Out of service.**  **Digester 16 -** was in service thick seal. Clear sign of a previous spill which had dried.  **Digester 17 -** was in service - weak seal – No evidence of recent spillages  **Digester 18 - Out of service.**  **Digester 19 -** Was in service - weak seal – No evidence of recent spillages  **Digester 20 -** Was in service - weak seal – No evidence of recent spillages  Anti-foaming agent is in use, which TW advised was also being applied manually to all operational digesters. | (Incorrect total correct total 7320) |
| **GENERAL**  **Final Settlement Tanks East Side of Works**  All 8 circular tanks (71-78) were in operation at the time of the inspection and had good clear surfaces. There was no evidence of fatty deposits on the surface. The hoses on the arms were all rotating and clearing off any remaining deposits. No odours or offensive odours witnessed.  **Skips**  **Skips on the East side:**  There was 1x 20yds open bulk carrier that was designated for grit however was empty at time of inspection. There was a sign stating the skip was designated for “Grit Only”.  There was 1x 20yds skip designated for general waste which was ½ full at the time of inspection and uncovered. There was a sign labelling the skip being designated for general waste only.  There was 1x 14yds skip designated for rag which was a closed skip with plastic large flaps which were closed at time of inspection. The skip had a sign reading “Rag Only”. The skip was full at the time of inspection.  There was 1x 14yds skip designated for general waste. The skip had a sign reading “General waste” and was empty at time of inspection. There was no cover for this skip.  **Skips on the West Side:**  There was 1x 14yds skip adjacent to the pasteurisation plant (West of the works) that was designated for Metals only- At time of inspection the skip was ½ full of inert material.  There was 1x 14yds skip adjacent to the Sludge Import area (West of the works) that was designated for rag only- At time of inspection the skip was empty and covered with a yellow tarpaulin. There was no sign or label that designated this skip for rag only. The skip contained minimal rag and two large plastic containers.  **East Side Screen House**  The doors at one end of the screen house were closed at the time of the inspection. All the blue doors including the metal shutter doors were closed.  **Return Activated Sludge Channel**  The nearside RAS channel (which runs in the ground between FST’s 61-64 & 65-67) was free flowing and clear.  The far side channel nearest the service road was clogged along 80% of its length, there was a significant number of weeds which have been growing out of it and through the steel grating.  **West side primary settlement tanks (PST)**  Rectangular PSTs are now covered and odour controlled.  TW advised no issues.  Circular PST’s 9, 10 and 11 were all in use and had relatively fat free surfaces. Slight algae covered the surfaces of the PSTs.  No other issues were evident with these tanks.  Circular PST 12 is still out of service.  **Pasteurisation Plant**  The pasteurisation plant is in service. TW advised 6/12 streams were in operation.  **Section 106 agreement**  There have been no breaches of the s106 agreement in the last week.  **West Side Aeration Lanes**  The surface area of the mixed liquor feed channel serving the aeration lanes of E-Battery was mostly free-flowing between lanes 22-25 – there was some blockage at around aeration lane 22 & 25 for about a meter but majority of the lanes were free flowing.  All the lanes in E Battery were distinct and dividing walls were all visible. Not all the sprinkler systems were in operation.  **New Inlet Works (West Side)**  No issues appeared evident at the new inlet works and everything appeared to be in a good tidy order. No offensive odours noticed. |  |
| **\*\*Odour Control Unit (OCU) performance monitoring: 23/03/2022**   |  |  |  |  | | --- | --- | --- | --- | | **Plant** | **Reading (ppm)** | **Action Level (ppm)** | **Compliant** | |  |  |  |  | |  |  |  |  | | Main pumping station inlet | Not provided | Not provided | Not provided | | Main pumping station outlet | Not provided | Not provided | Not provided | | East OCU | Not provided | Not provided | Not provided | | West inlet OCU | Not provided | Not provided | Not provided | | Sludge reception inlet | Not provided | Not provided | Not provided | | Sludge reception outlet | Not provided | Not provided | Not provided | | Thickening plant inlet | Not provided | Not provided | Not provided | | Thickening plant outlet | Not provided | Not provided | Not provided | | New West inlet (OCU 11) | Not provided | Not provided | Not provided | | Pasteurization (OCU 12) | Not provided | Not provided | Not provided | | Transfer PS inlet | Not provided | Not provided | Not provided | | Transfer PS outlet | Not provided | Not provided | Not provided | | GBT Plant OCU Outlet | Not provided | Not provided | Not provided | |  |