**Mogden Sewage Treatment Works**

**TW Site Inspection**

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| **Date of inspection:** Tuesday 14th June 2022 (13:06pm) | |
| **Attendees:** Mr L Phillips (London Borough of Hounslow) and Caitlin Simmonds (Thames Water) | |
| **LB Hounslow Observation** | **Thames Water Action / Response** |
| **Storm Water Storage Tanks (SWST)**  **Tank 1A -** Was empty clean hopper 1 and 3 were full and needed draining. Hopper 2 had been drained to its lowest point.  **Tank 1B** **-** Was empty slight grit in tank requires further flushing. Nall hoppers need draining.  **Tank 2A -** Was empty slight grit in tank all hoppers full and need draining.  **Tank 2B -** Was empty tank grit build up hopper end of tank. All hoppers were full and need draining.  **Tank 3A -** Was empty tank however 50% of tank covered in grit. All hoppers were 50% full of effluent and required draining.  **Tank 3B -**  Was empty 20% of the tank covered by grit tank requires flushing. Tank backfilling all hoppers filled 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. Large amount of vegetation growth.  **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 clean however all tanks full and require draining.  **Tank 6B -** Was empty and clear of grit across all hoppers full and required draining.  **Tank 7A –** Wasempty backfilling (hopper end) tank needs flushing/draining.  **Tank 7B -** Was empty tank backfilling grit and vegetation in tank. All hoppers need draining.  **Tank 8A** - Was empty and clear of grit/sludge across the entire surface. All hoppers need draining.  **Tank 8B -**  Was empty and clear of grit/sludge across the entire surface. All hoppers were full and required draining.  **Storm Feed Channel** - The level of effluent in both feed channels was minimal and bottomed out in places- In places the effluent looked murky and muddy. It was noticeable that vegetation has been growing along the channel.  **Complaints**  The Council received **0** online complaints and **0** out of hours call outs in respect to odour (preceding week) |  |
| **Odour Monitors**  The odour readouts (H2S) for all monitors that were providing data on 14th of June 2022 at approx. 13:06 are below.   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Monitor 1 | 0.000 | ppm |  | 13:06 | | Monitor 2 | 0.002 | ppm |  | 13:06 | | Monitor 3 | 0.004 | ppm |  | 13:06 | | Monitor 4 | 0.006 | ppm |  | 13:06 | | Monitor 5 | 0.008 | ppm |  | 13:06 | | Monitor 6 | 0.005 | ppm |  | 13:06 | | Monitor 7 | 0.000 | ppm |  | 13:06 | | Monitor 8 | 0.007 | ppm |  | 13:06 | | Monitor 9 | 0.006 | ppm |  | 13:06 | | Monitor 10 | 0.003 | ppm |  | 13:06 | | Monitor 11 | 0.007 | ppm |  | 13:06 | | Monitor 12 | 0.005 | ppm |  | 13:06 | | Monitor 13 | 0.007 | ppm |  | 13:06 | | Wind Speed | 7.133 | mph |  | 13:06 | | Wind Direction | 154.649 | Deg |  | 13:06 | |  |
| **Odour Log**  **Monday 06th June 2022**  **DAY SHIFT**  **Temp.** Warm.  **Weather.** Sunny W/ Patchy clouds.  **Odour Readings.** All OMU’s in operation.  **Time:** 17:30.  **Observations / Customer Complaint.**  OM8 0.016 07:02 – 07:19.  **Operational issues / causes observed.** Blank.  **Actions taken.** Blank.  **NIGHT SHIFT**  **Temp.** Cool.  **Weather.** Overcast 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.  **Tuesday 7th June 2022**  **DAY SHIFT**  **Temp.** Warm.  **Weather.** Sunny W/ Patchy clouds.  **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.** Warm.  **Weather.** Overcast 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.  **Wednesday 08th June 2022**  **DAY SHIFT**  **Temp.** Warm.  **Weather.** Sunny W/ Patchy clouds.  **Odour Readings.** All OMU’s in operation.  **Time:** 17:30.  **Observations / Customer Complaint.**  OM3 0.021ppm spike 16:26 ongoing 0.016 10:56 – 11:11.  **Operational issues / causes observed.**  No sources found.  **Actions Taken.** Blank.  **NIGHT SHIFT**  **Temp.** Warm.  **Weather.** Overcast night.  **Odour Readings.** All OMU’s in operation.  **Time:** 05:30.  **Observations / Customer Complaint.**  Multiple spikes from OM3 19:58 – 20:55, 21:26 - 21:41, 22:27 22:41max 0.05ppm.  **Operational issues / causes observed.** Blank.  **Actions Taken.** Reported.  **Thursday 09th June 2022**  **DAY SHIFT**  **Temp.** Warm.  **Weather.** Cloudy.  **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.** Warm.  **Weather.** Patchy rain.  **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.  **Friday 10th June 2022**  **DAY SHIFT**  **Temp.** Hot.  **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 11th June 2022**  **DAY SHIFT**  **Temp.** Warm.  **Weather.** Sunny.  **Odour Readings.** All OMU’s in operation  **Time:** 17:30.  **Observations / Customer Complaint.**  Customer complaint north of storm tank at 11:45.  OM3 0.021PPM at 11:27 less than 15 mins.  **Operational issues / causes observed.**  Checked area around storm tanks no sources found.  **Actions taken.** Blank.  **NIGHT SHIFT**  **Temp.** Cool.  **Weather.** Clear night.  **Odour Readings.** All OMU’s in operation  **Time:** 05:30.  **Observations / Customer Complaint.**  OM5 0.016 04:24 – 05:23.  OM3 0.024 21:26 – 21:56.  0.025 19:26 – 19:41.  0.027 11:11 – 11:26.  OM8 0.019 21:20 – 21:35.  **Operational issues / causes observed.**  No sources found.  **Actions Taken.** Blank.  **Sunday 12th June 2022**  **DAY SHIFT**  **Temp.** Hot.  **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.** Warm.  **Weather.** Clearnight.  **Odour Readings.** All OMU’s in operation.  **Time:** 05:30.  **Observations / Customer Complaint.**  OM3 spiked at 19:40 – 19:55 max0.021ppm and OM8 spiked at 19:35 – 1948 but less than 15 mins. 00.16ppmmax0.016ppm.  **Operational issues / causes observed.**  Strong pas odour in the breeze OCU11 output 0.046 which is above Triger level 0.015ppm.  **Actions Taken.** Reported.  **Monday 13th June 2022**  **DAY SHIFT**  **Temp.** Hot.  **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.** Warm.  **Weather.** Clear night.  **Odour Readings.** All OMU’s in operation  **Time:** 05:30.  **Observations / Customer Complaint.** No odour issue found.  **Operational issues / causes observed.** Blank.  **Actions Taken.** Blank.  **Tuesday 14th June 2022**  **DAY SHIFT**  **Temp.** Hot.  **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.** Warm.  **Weather.** clear night.  **Odour Readings.** All OMU’s in operation  **Time:** 05:30.  **Observations / Customer Complaint.**  OM5 max 0.025ppm 01:54- 02:38.  OM9 max 0.024ppm 02:49-04:33.  OM10 max 0.025ppm 03:35-04:23.  **Operational issues / causes observed.**  Digester 7 gassing off a little.  **Actions Taken.** Valve adjusted to lower gas.  **Wednesday 15th June 2022**  **DAY SHIFT**  **Temp.** Hot.  **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.** Warm.  **Weather.** clear night.  **Odour Readings.** All OMU’s in operation.  **Time:** 05:30.  **Observations / Customer Complaint.**  OM5 max 0.022ppm 01:54 – 02:23.  OM5 max 0.018ppm 03:53 – 04:23.  **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** |  |  | | | | | 08/06/2022 | 20 | 862 | 679 | 1561 | 1088 | 2649 | | 13/06/2022 | 0 | 1007 | 473 | 1480 | 1568 | 3048 |   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 have been an average of 65imports of sludge per day in the preceding week. This was reported on the 14th June 2022.  **No.5 Pumping Station (West Side)**  The doors of No.5 pumping station were closed at the 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 Building (West Side)**  The large roller shutter doors of the Raw Sludge Screening building were closed at the time of the inspection.  **Digesters on the 14th June 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 sloppy seal – No evidence of recent spillage.  **Digester 7 -** Was in service weak sloppy seal – No evidence of recent spillage.  **Digester 8 - W**as in service weak sloppy seal – No evidence of recent spillage.  **Digester 9 -** Was in service weak sloppy seal – No evidence of recent spillage.  **Digester 10 -** Was in service weak sloppy seal – No evidence of recent spillage.  **Digester 11 -** Was in service weak sloppy seal – No evidence of recent spillage.  **Digester 12 -** Was in service weak sloppy seal – No evidence of recent spillage.  **Digester 13 -** Was in service weak sloppy seal – No evidence of recent spillage.  **Digester 14 -** Was in service weak sloppy seal – No evidence of recent spillage.  **Digester 15 - Out of service.**  **Digester 16 - Out of service.**  **Digester 17 -** Was in service and had a low (below approx. 2ft) sludgy seal – No evidence of recent/previous sludge spillages.  **Digester 18 - Out of service.**  **Digester 19 -** Was in service weak sloppy seal – No evidence of recent spillage.  **Digester 20 -** Was in service weak sloppy seal – No evidence of recent spillage.  Anti-foaming agent is in use, which TW advised was also being applied manually to all operational digesters. |  |
| **GENERAL**  **Final Settlement Tanks East Side of Works**  The 8 circular tanks (71-78) were in operation apart from 71 at the time of the inspection. Tank 71 was out of service and was completely drained down and fenced off. The remainder of circular tanks had good clear surfaces. The hoses on the arms were all rotating and clearing off any remaining deposits. No odours or offensive odours witnessed.  \*\*Tank 71 out of service  **Skips**  **Skips on the East side:**  There was 1x 20yds open bulk carrier (uncovered) 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 bulk skip (closed) which was either due to be collected or had just been delivered.  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 ¼ 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 filled with inert material . 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 full of large metal 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 permenently covered with a yellow tarpaulin. There was no sign or label that designated this skip for rag only. The skip contained minimal rag.  There was 1x 14yds skip adjacent to the raw sludge screening building (West of the works) that was designated for general waste only- At time of inspection the skip was full and covered.  **East Side Screen House**  The doors at one end of the screen house were closed at the time of the inspection. The middle set of blue doors and roller shutter doors were also closed. There were no issues or concerns raised in this area.  **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.  **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 fatty deposits covered the surfaces of the PSTs but these were gradually being removed by the rotation arm.  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 9 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. 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. |  |

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| **Odour Control Unit (OCU) performance monitoring: 16thJune 2022**   |  |  |  |  | | --- | --- | --- | --- | | **Plant** | **Reading (ppm)** | **Action Level (ppm)** | **Compliant** | |  |  |  |  | |  |  |  |  | | Main pumping station inlet | Not provided | Unknown | Unknown | | Main pumping station outlet | 0.00ppm  0.00ppm  0.00ppm | 0.2 | Unknown | | East OCU | 0.00ppm  0.00ppm  0.00ppm | 0.05 | Yes | | West inlet OCU | 0.00ppm  0.00ppm  0.01ppm | 0.05 | Yes | | Sludge reception inlet | Not provided | Unknown | Unknown | | Sludge reception outlet | Not provided | 0.8 | Unknown | | Thickening plant inlet | Not provided | Unknown | Unknown | | Thickening plant outlet | 0.00ppm  0.00ppm  0.00ppm | 0.6 | Yes | | New West inlet (OCU 11) | 0.00ppm  0.00ppm  0.00ppm | 0.5 | No | | Pasteurization (OCU 12) | 0.00ppm  0.00ppm  0.00ppm | 0.5 | Yes | | Transfer PS inlet | 0.30ppm  0.29ppm  0.15ppm  Ave:0.24 | Unknown | Unknown | | Transfer PS outlet | 0.00ppm  0.00ppm  0.00ppm | 0.6 | Yes | | GBT Plant OCU Outlet | 0.00ppm  0.00ppm  0.00ppm | Unknown | Unknown | |  |