**Mogden Sewage Treatment Works**

**TW Site Inspection**

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| **Date of inspection:** Tuesday 05th July 2022 (13:00pm) | |
| **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 and clear of grit across the entire surface. Hoppers 1 and 3 were full and need draining. Hopper 2 had been drained to lowest point.  **Tank 1B – Was**  empty clean slight grit in tank. All hoppers full and needed draining.  **Tank 2A – Was** empty slight grit in tank. All hoppers full and need draining.  **Tank 2B -**  empty slight grit build up in tank needs flushing. All hoppers full and need draining.  **Tank 3A -**  empty slight grit build up in tank needs flushing. All hoppers full and need draining.  **Tank 3B -**  was empty had some sludgy patches. All hoppers were full of effluent and overflowing and needed 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 and clean across the entire surface. All hoppers were drained to lowest point.  **Tank 6B -** Was empty and clean of grit across the entire surface. hopper 1 was full and needed draining. Hoppers 2 and 3 were drained to lowest point.  **Tank 7A -** Was empty however tank covered in dry grit tank needs flushing. All hoppers full and need draining.  **Tank 7B -** Was empty tank however there were some sludgy patches. All hoppers were all full of effluent and needed draining down.  **Tank 8A -** Was empty and clear of grit/sludge across the entire surface. hoppers 1 and 3 were full and required draining. Hopper 2 had been drained to lowest point.  **Tank 8B -** Was empty and clear of grit across the entire surface. All hoppers were all drained down to lowest point.  **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 05th July 2022 at approx. 13:15 are below.   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Monitor 1 | 0.000 | ppm |  | 13:15 | | Monitor 2 | 0.001 | ppm |  | 13:15 | | Monitor 3 | 0.000 | ppm |  | 13:15 | | Monitor 4 | 0.004 | ppm |  | 13:15 | | Monitor 5 | 0.000 | ppm |  | 13:16 | | Monitor 6 | 0.003 | ppm |  | 13:16 | | Monitor 7 | 0.000 | ppm |  | 13:16 | | Monitor 8 | 0.004 | ppm |  | 13:16 | | Monitor 9 | 0.005 | ppm |  | 13:16 | | Monitor 10 | 0.000 | ppm |  | 13:16 | | Monitor 11 | 0.005 | ppm |  | 13:16 | | Monitor 12 | 0.003 | ppm |  | 13:16 | | Monitor 13 | 0.000 | ppm |  | 13:16 | | Wind Speed | 4.012 | mph |  | 13:16 | | Wind Direction | 256.512 | Deg |  | 13:16 | |  |
| **Odour Log**  **Tuesday 28th 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 found or reported.  **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 issues.  **Operational issues / causes observed.** Blank.  **Actions Taken.** Blank.  **Wednesday 29th June 2022**  **DAY SHIFT**  **Temp.** Hot.  **Weather.** Rain W/ Sunny spells.  **Odour Readings.** All OMU’s in operation.  **Time:** 17:30.  **Observations / Customer Complaint.**  No odours 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.  **Thursday 30th 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.** 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.  **Friday 1st July 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 found or reported.  **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.  **Saturday 2nd July 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 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 3rd July 2022**  **DAY SHIFT**  **Temp.** Warm.  **Weather.** Cloudy W/ Sunny spells.  **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.** Overcast night.  **Odour Readings.** All OMU’s in operation.  **Time:** 05:30.  **Observations / Customer Complaint.**  OM3spiked to 0.21ppm 23:52- 00:49.  **Operational issues / causes observed.** Blank.  **Actions Taken.** Blank.  **Monday 4th July 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.** Warm.  **Weather.** Clear night.  **Odour Readings.** All OMU’s in operation  **Time:** 05:30  **Observations / Customer Complaint.**  OM4 spiked at 20:07 – 20:52max 0.015ppm, OM8 spiked at 22:07- 23:00max 0.017ppm.  **Operational issues / causes observed.** Blank.  **Actions Taken.** Arear monitors checked but no source of odour found.  **Tuesday 5th July 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. |  |
| **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** |  |  | | | | | 01/07/2022 | 0 | 1358 | 618 | 1976 | 936 | 2912 | | 04/07/2022 | 20 | 1213 | 618 | 1851 | 1264 | 3115 |   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 75imports of sludge per delivery in the preceding week.  **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 12th July 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** was in service and had a weak sloppy seal. There was no sign of recent spillage  **Digester 6** was in service and had a weak sloppy seal. No evidence of recent sludge spillages. However there were some signs of the digester bubbling off minimal amounts of gas.  **Digester 7** was in service and had a weak sloppy seal. There was no sign of recent spillage.  **Digester 8** was in service and had a weak sloppy seal. There was no sign of recent spillage  **Digester 9** was in service and had a weak sloppy seal. There was no sign of recent spillage.  **Digester 10** was in service and had a weak sloppy seal. There was no sign of recent spillage.  **Digester 11** was in service and had a weak sloppy seal. There was no sign of recent spillage.  **Digester 12** was in service and had a weak sloppy seal. There was no sign of recent spillage.  **Digester 13** was in service and had a weak sloppy seal. There was no sign of recent spillage.  **Digester 14** was in service and had a weak sloppy seal. There was no sign of recent spillage.  **Digester 15** **Out of service.**  **Digester 16 Out of service.**  **Digester 17** was in service and had a weak sloppy seal. There was no sign of recent spillage.  **Digester 18 Out of service.**  **Digester 19** was in service and had a weak sloppy seal. There was no sign of recent spillage.  **Digester 20** was in service and had a weak sloppy seal. There was no sign 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 72 (furthest away from the service road) at the time of the inspection. Tank 72 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 72 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 14yds skip designated for general waste. The skip had a sign reading “General waste” and was filled with inert material . There was a cover for this skip.  No other skips were present on the East side.  **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 contained minimal rag and permanently covered with a yellow tarpaulin. There was no sign or label that designated this skip for rag only.  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 10 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. Most sprinklers 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: 5th July 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  0.00ppm | 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) | 0.05ppm  0.04ppm  0.02ppm  Ave:0.03 | 0.5 | Yes | | Transfer PS inlet | 11.01ppm  09.00ppm  8.77ppm  Ave:9.59 | 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 | |  |