**Mogden Sewage Treatment Works**

**TW Site Inspection**

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| **Date of inspection:** Tuesday 2nd August 2022 (13:30pm) | |
| **Attendees:** Mr Z Kadri (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, 2 and 3 were empty at time of inspection.  **Tank 1B** was empty and clear of grit across the entire surface.  Hoppers 1, 2 and 3 were all empty at time of inspection.  **Tank 2A** was empty and clear of grit across the entire surface.  Hoppers 1, 2 and 3 were all empty at time of inspection.  **Tank 2B** was empty and clear of grit across the entire surface.  Hoppers 1, 2 and 3 were all empty at time of inspection.  **Tank 3A** was empty and clear of grit across the entire surface.  Hoppers 1, 2 and 3 were over 50% full of effluent.  **Tank 3B** was empty however contained some sludgy patches. Hoppers 1,2 and 3 had been drained down however hopper 2 contained some dried grit which was in process of being removed.  **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 clear of grit/sludge across the entire surface. Hopper 1 , 2 and 3 were all drained down and contained minimal effluent.  **Tank 6B** was empty and clear of grit/sludge across the entire surface. Hopper 1 , 2 and 3 were all drained down and contained minimal effluent.  **Tank 7A** had effluent across half the surface of the tank and all Hoppers 1,2 and 3 were over flowing with effluent that had a green algae surface.  **Tank 7B** had effluent across half the surface of the tank and all Hoppers 1,2 and 3 were over flowing with effluent that had a green algae surface.  **Tank 8A** was empty and clear of grit/sludge across the entire surface. Hopper 1 , 2 and 3 were all drained down and clear of effluent (minimal effluent).  **Tank 8B** was empty and clear of grit/sludge across the entire surface. Hopper 1 , 2 and 3 were all drained down and clear of effluent (minimal effluent).  **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 **7 online** complaints and **0** out of hours call outs in respect to odour (preceding week) . Majority of the online complaints received did not specify an exact time of the odour incident. All the online complainants had received an email encouraging use of the dedicated out of hours hotline to report odour incidents. |  |
| **Odour Monitors**  The odour readouts (H2S) for all monitors that were providing data on 2nd of August 2022 at approx. 13:30 are below.   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Monitor 1 | 0.000 | ppm |  | 13:30 | | Monitor 2 | 0.001 | ppm |  | 13:30 | | Monitor 3 | 0.000 | ppm |  | 13:30 | | Monitor 4 | 0.000 | ppm |  | 13:30 | | Monitor 5 | 0.004 | ppm |  | 13:30 | | Monitor 6 | 0.000 | ppm |  | 13:30 | | Monitor 7 | 0.000 | ppm |  | 13:30 | | Monitor 8 | 0.000 | ppm |  | 13:30 | | Monitor 9 | 0.000 | ppm |  | 13:30 | | Monitor 10 | 0.000 | ppm |  | 13:30 | | Monitor 11 | 0.000 | ppm |  | 13:30 | | Monitor 12 | 0.000 | ppm |  | 13:30 | | Monitor 13 | 0.000 | ppm |  | 13:30 | | Wind Speed | 4.693 | mph |  | 13:30 | | Wind Direction | 235.793 | Deg |  | 13:30 | |  |
| **Odour Log**  **Wednesday 27th July 2022**  **DAY SHIFT**  **Weather.** Cloudy with Sunny spells  **Odour Readings.** All OMU’s in operation  **Time:** 17:30  **Observations / Customer Complaint.**  OM3 max 0.019ppm 14:34-14:48  OM3 max 0.024ppm 15:34-15:49  OM3 max 0.015ppm 16:19-16:33  **Operational issues / causes observed**  OCU11 discharging high odour from outlet stack  **Actions Taken.**  Area around west inlet and PSTs checked no obvious odours detected- west inlet skip pad washed down  **NIGHT SHIFT**  **Weather.** Overcast night  **Odour Readings.** All OMU’s in operation  **Time:** 05:30.  **Observations / Customer Complaint.**  No odours detected  **Operational issues / causes observed.**  Triggered by PST running  **Actions Taken.** Blank  **Thursday 28th July 2022**  **DAY SHIFT**  **Weather.** Cloudy with sunny spells  **Odour Readings.** All OMU’s in operation  **Time:** 17:30.  **Observations / Customer Complaint.**  OM3 0.026ppm at 00:05-00:18  **Operational issues / causes observed.**  OCU11 discharging high odour from outlet stack  **Actions Taken.**  Area checked and inlet asked to be hosed down  **NIGHT SHIFT**  **Weather.** Overcast night  **Odour Readings.** All OMU’s in operation  **Time:** 05:30.  **Observations / Customer Complaint.**  OM3 spiked to 0.021ppm at 00:05-00:33  **Operational issues / causes observed.**  OCU11 1450ppb H2S stack outlet  **Actions Taken.**  Area around West inlet and PSTs checked no obvious odours  **Friday 29th July 2022**  **DAY SHIFT**  **Weather.** Sunny with 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**  **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 30th July 2022**  **DAY SHIFT**  **Weather.** Sunny with patchy clouds  **Odour Readings.** All OMU’s in operation  **Time:** 17:30.  **Observations / Customer Complaint.**  OM8 spiked to 0.018ppm from10:40  **Operational issues / causes observed.**  No odour found  **Actions taken.**  Hose set up on PST9  **NIGHT SHIFT**  **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.  **Sunday 31st July 2022**  **DAY SHIFT**  **Weather.** Cloudy with Sunny  **Odour Readings.** All OMU’s in operation  **Time:** 17:30.  **Observations / Customer Complaint.**  OM8 spiked to 0.019ppm 14:08-14:18  **Operational issues / causes observed.**  PAS smelling  **Actions taken.**  Area checked  **NIGHT SHIFT**  **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  **Monday 1st August 2022**  **DAY SHIFT**  **Weather.** Sunny with 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**  **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.  **Tuesday 2nd August 2022**  **DAY SHIFT**  **Weather.** Sunny with 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**  **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 |  |
| **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** |  |  | | | | | 27/07/2022 | 40 | 366 | 642 | 1048 | 3275 | 4323 | | 29/07/2022 | 39 | 661 | 993 | 1693 | 2578 | 4271 | | 01/08/2022 | 40 | 656 | 328 | 1024 | 760 | 1784 |   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 70imports of sludge per delivery in the preceding week. This was reported on the 2nd August 2022  **No.5 Pumping Station (West Side)**  The doors of No.5 pumping station were open 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 2nd August 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 low (below approx. 1ft) wet seal – No evidence of recent/previous sludge spillages- the coping stones were tidy.There were some signs of the digester bubbling off minimal amounts of gas.  **Digester 6** was in service and had a low (below approx. 2ft) thick seal – No evidence of recent/previous sludge spillages. There were some signs of the digester bubbling off minimal amounts of gas.  **Digester 7** was in service and had a low (below approx. 1ft) wet seal –There was some noticeable amount of bubbling and eruption of sludge to the service road side of the digester. This was soiling the coping stones.  **Digester 8** was in service and had a low (below approx. 1ft) wet seal which was bubbling minimal amounts of gas– No evidence of recent/previous sludge spillages.  **Digester 9** was in service and had a low (below approx. 2ft) sludgy thickish seal – No evidence of recent/previous sludge spillages.  **Digester 10** was in service and had a low (below approx. 1ft) wet seal – No evidence of recent/previous sludge spillages.  **Digester 11** was in service and had a low (below approx. 1ft) sludgy seal – No evidence of recent/previous sludge spillages.  **Digester 12** was in service and had a low (below approx. 1ft) wet to thickish seal – No evidence of recent/previous sludge spillages.  **Digester 13** was in service and had a low (below approx. 2ft) wet seal – No evidence of recent/previous sludge spillages.  **Digester 14 Out of service**.  **Digester 15** **Out of service.**  **Digester 16 Out of service.**  **Digester 17** was in service and had a low (below approx. 1ft) thick to sludgy seal – No evidence of recent/previous sludge spillages.  **Digester 18** was in service and had a low (below approx. 1ft) sludgy seal – No evidence of recent/previous sludge spillages.  **Digester 19** was in service and had a low (below approx. 1ft) sludgy seal – No evidence of recent/previous sludge spillages.  **Digester 20** was in service and had a low (below approx. 1ft) sludgy seal – No evidence of recent/previous sludge spillages.  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 all in operation at time of the inspection. The 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.  **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 rag only. The skip had a sign reading “Rag Only” and was empty at time of inspection . There was a cover (lid) however the cover was not in use.  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 open due to contractors working on site and needing ventilation. 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 9/12 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. 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: 2nd August 2022**   |  |  |  |  | | --- | --- | --- | --- | | **Plant** | **Reading (ppm)** | **Action Level (ppm)** | **Compliant** | |  |  |  |  | |  |  |  |  | | Main pumping station inlet | Not provided | Unknown | Unknown | | Main pumping station outlet | 0.072ppm  0.056ppm  0.028ppm  Ave: 0.052ppm | 0.2 | Unknown | | East OCU | 0.056ppm  0.079ppm  0.082ppm  Ave: 0.072ppm | 0.05 | Yes | | West inlet OCU | 0.232ppm  0.263ppm  0.232ppm  Ave: 0.242ppm | 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 | 0.598ppm  0.585ppm  0.573ppm  Ave: 0.585ppm | 0.6 | Yes | | New West inlet (OCU 11) | 0.662ppm  0.063ppm  0.669ppm  Ave: 0.464ppm | 0.5 | No | | Pasteurization (OCU 12) | High Concentration | 0.5 | Yes | | Transfer PS inlet | 0.556ppm  0.558ppm  0.662ppm  Ave: 0.592ppm | Unknown | Unknown | | Transfer PS outlet | 0.160ppm  0.126ppm  0.104ppm  Ave: 0.13ppm | 0.6 | Yes | | GBT Plant OCU Outlet | 0.00ppm  0.00ppm  0.00ppm | Unknown | Unknown | |  |