**Mogden Sewage Treatment Works**

**TW Site Inspection**

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| **Date of inspection:** Tuesday 20th September 2022 (13:30pm) | |
| **Attendees:** Mr Z Kadri (LBHounslow) Mr K Haider (LBHounslow) and Emma McDonald (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 all full of effluent.  **Tank 1B** was empty and clear of grit across the entire surface. There was slight layer of thin sludgy patches to the left hand side of the tank.  Hoppers 1, 2 and 3 were all full at time of inspection.  **Tank 2A** was empty and clear of grit across the entire surface.  Hoppers 1, 2 and 3 had been drained down and contained minimal effluent at time of inspection.  **Tank 2B** was empty and clear of grit across the entire surface.  Hoppers 1, 2 and 3 had been drained down and contained minimal effluent at time of inspection.  **Tank 3A** had a thickish gritty surface across most of the length. Hoppers 1,2 and 3 were all approx. 90% full of effluent.  **Tank 3B** was empty however the hoppers were overflowing and covering 20% of the tank surface. Hoppers 1, 2 and 3 needed draining down.  **Storm Feed Channel** - The level of effluent in this feed channels was minimal and bottomed out in places. The remaining effluent looked grey and sludgy. Large amount of vegetation growth covered with sludge in situ.  **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 over 70% full of effluent.  **Tank 6B** was empty and clear of grit/sludge across the entire surface. Hopper 1 , 2 and 3 were all full of effluent.  **Tank 7A** contained a thickish layer of sludge throughout the entire surface of the tank. Hoppers 1 , 2 and 3 were all full of effluent.  **Tank 7B** had patches of sludge spotted around the tank. 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 full to the top of effluent and needed draining down.  **Tank 8B** was empty and clear of grit/sludge across the entire surface. Hopper 1 , 2 and 3 were all full of 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 0 **online** complaints and 1out of hours call outs in respect to odour (preceding week) . This was logged under flare A34245 received on the 16th of September 2022. In response a visit was made to Summerwood Road area of Isleworth and subjective assessment undertaken- there was no malodour witnessed at the time. A letter was sent to complainant with an update. |  |
| **Odour Monitors**  The odour readouts (H2S) for all monitors that were providing data on 20th of September 2022 at approx. 13:30 are below.   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Monitor 1 | 0.000 | ppm |  | 13:30 | | Monitor 2 | 0.001 | ppm |  | 13:30 | | Monitor 3 | 0.003 | ppm |  | 13:30 | | Monitor 4 | 0.005 | ppm |  | 13:30 | | Monitor 5 | 0.000 | ppm |  | 13:30 | | Monitor 6 | 0.003 | ppm |  | 13:30 | | Monitor 7 | 0.000 | ppm |  | 13:30 | | Monitor 8 | 0.005 | ppm |  | 13:30 | | Monitor 9 | 0.005 | ppm |  | 13:30 | | Monitor 10 | 0.004 | ppm |  | 13:30 | | Monitor 11 | 0.004 | ppm |  | 13:30 | | Monitor 12 | 0.004 | ppm |  | 13:30 | | Monitor 13 | 0.004 | ppm |  | 13:30 | | Wind Speed | 3.170 | mph |  | 13:30 | | Wind Direction | 359.203 | Deg |  | 13:30 | |  |
| **Odour Logs**  **Wednesday 14th September 2022**  **DAY SHIFT**  **Temp.** Warm  **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**  **Temp.** Cool  **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  **Thursday 15th September 2022**  **DAY SHIFT**  **Temp.** Warm  **Weather.** Cloudy with sunny spells  **Odour Readings.** All OMU’s in operation  **Time:** 17:30.  **Observations / Customer Complaint.**  No odours 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 found or reported  **Operational issues / causes observed.** Blank  **Actions Taken.** Blank.  **Friday 16th September 2022**  **DAY SHIFT**  **Temp.** Warm  **Weather.** Cloudy with 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.** 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.  **Saturday 17th September 2022**  **DAY SHIFT**  **Temp.** Cool  **Weather.** Cloudy  **Odour Readings.** All OMU’s in operation  **Time:** 17:30.  **Observations / Customer Complaint.**  No odour issues on site  **Operational issues / causes observed.**  No odour issues on site  **Actions taken.** Blank  **NIGHT SHIFT**  **Temp.** Cold  **Weather.** Clear night  **Odour Readings.** All OMU’s in operation  **Time:** 05:30.  **Observations / Customer Complaint.**  OM8 spiked to 0.016ppm at 20:27 (+15 minute duration)  **Operational issues / causes observed.**  No odour issues  **Actions taken.** Blank.  **Sunday 18th September 2022**  **DAY SHIFT**  **Temp.** Cool  **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.** Cool  **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  **Monday 19th September 2022**  **DAY SHIFT**  **Temp.** Warm  **Weather.** Cloudy with 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.** Cool  **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.  **Tuesday 20th September 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.** Cool  **Weather.** Clear night  **Odour Readings.** All OMU’s in operation  **Time:** 05:30  **Observations / Customer Complaint.**  OM3 spiked to 0.031ppm at 21:21-22:08  OM10 spiked to 0.021ppm at 20:50-21:21  **Operational issues / causes observed.**  OCU 11 stack outlet reading over double what it should be  CHP2 tripped flare running  **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** |  |  | | | | | 14/09/2022 | 40 | 389 | 473 | 902 | 1088 | 1990 | | 16/09/2022 | 39 | 595 | 328 | 962 | 1425 | 2387 |   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 delivery in the preceding week. This was reported on the 20th September 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 open at the time of the inspection. There were two large bulk carriers housed within the screening building.  **Digesters on the 20th September 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. 2ft) thickish 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. 3ft) thick seal – No evidence of recent/previous sludge spillages.  **Digester 7** was in service and had a low (below approx. 1ft) wet seal – No bubbling or large amounts of gas being produced however some signs of previous spillages.  **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. 1ft) sludgy wet seal – No evidence of recent/previous sludge spillages.  **Digester 10 Out of service.**  **Digester 11** was in service and had a low (below approx. 1ft) thick seal – No evidence of recent/previous sludge spillages.  **Digester 12** was in service and had a low (below approx. 1ft) wet to thick seal – There was evidence of previous sludge spillages.  **Digester 13** was in service and had a low (below approx. 1ft) thick 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 sludgy seal – No evidence of recent/previous sludge spillages.  **Digester 18** was in service and had a low (below approx. 2ft) thick sludgy seal – No evidence of recent/previous sludge spillages.  **Digester 19.** was in service and had a low (below approx. 2ft) thick sludgy seal – No evidence of recent/previous sludge spillages.  **Digester 20** was in service and had a low (below approx. 2ft) wet seal – There was evidence of recent spillage which had dried up but covered parts of the coping stones.  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, 72, 73 and 74 were all drained down and out of service at time of inspection. FSTs 75, 76, 77 and 78 were all in operation at time of the inspection and 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 14yds skip (empty) located opposite the screen house . This was not in use at time of inspection.  There was 1x 14yds skip located opposite the screen house which contained some rag and mixed general waste. This was covered at the time of inspection however there was clear evidence of cross contamination of waste.  There was 1x 20yds open bulk carrier (covered) that was designated for grit however there was only a minimal amount of grit 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 contained minimal amount of rag at time of inspection . There was a cover (lid) which was covering the skip. The contents of the skip demonstrated cross contamination of both rag and general waste.  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. There were signs of cross contamination of waste.  There were no other skips observed in the West Side of the works.  **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 were open and roller shutter doors were 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 10/12 streams were in operation. Stream 2 & 6 were out of service.  **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 all free-flowing between lanes 22-25- contractors had manually cleared this at the time of inspection. 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: 20th September 2022**   |  |  |  |  | | --- | --- | --- | --- | | **Plant** | **Reading (ppm)** | **Action Level (ppm)** | **Compliant** | |  |  |  |  | |  |  |  |  | | Main pumping station inlet | Not provided | Unknown | Unknown | | Main pumping station outlet | 0.111ppm  0.109ppm  0.106ppm  Ave: 0.108ppm | 0.2 | Unknown | | East OCU | 0.234ppm  0.230ppm  0.228ppm  Ave: 0.230ppm | 0.05 | Yes | | West inlet OCU | 0.096ppm  0.075ppm  0.068ppm  Ave: 0.079ppm | 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 | 0.030ppm  0.028ppm  0.024ppm  Ave: 0.027ppm | 0.6 | Yes | | New West inlet (OCU 11) | 0.600ppm  0.598ppm  0.590ppm  Ave: 0.596ppm | 0.5 | No | | Pasteurization (OCU 12) | 2.802ppm  2.806ppm  2.796ppm  Ave: 2.801ppm | 0.5 | Yes | | Transfer PS inlet | 0.700ppm  0.708ppm  0.706ppm  Ave: 0.704ppm | Unknown | Unknown | | Transfer PS outlet | 0.110ppm  0.113ppm  0.110ppm  Ave: 0.111ppm | 0.6 | Yes | | GBT Plant OCU Outlet | 0.024ppm  0.026ppm  0.030ppm  Ave: 0.026ppm | Unknown | Unknown | |  |