**Mogden Sewage Treatment Works**

**TW Site Inspection**

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| **Date of inspection:** Tuesday 29th March 2022 (13:00pm) | |
| **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 all under ½ way full of effluent.  **Tank 1B** had a clean and tidy surface across the entire length. Hoppers 1, 2 and 3 contained no effluent.  **Tank 2A** was clear of any grit and sludge across the entire length. Hoppers 1,2 and 3 contained no effluent.  **Tank 2B** had slight sludgy patches to the left of the tank from the hopper end going across to the river outlets. Hopper 1 was full of effluent whereas Hoppers 2 and 3 were under ¼ of the tank full of effluent.  **Tank 3A** was heavily soiled and contained large amounts of thick sludge across the entire length of the tank. Hopper 1 and 3 were empty and contained no effluent. Hoppers 2 was a ¼ full of effluent.  **Tank 3B** was heavily soiled and contained large amounts of thick sludge across the entire length of the tank. Hoppers 1,2 and 3 were full to the top with effluent and in need of draining down.  **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 clear of grit across the entire surface. Hopper 1 , 2 and 3 were all full of effluent and in need of draining down.  **Tank 6B** was empty and clear of grit across the entire surface. Hopper 1 , 2 and 3 were all full of effluent and needed draining down.  **Tank 7A** was over ½ full of effluent and amajets were in operation – (Shallow hoppers).  **Tank 7B** was heavily soiled and contained large amounts of thick sludge across the entire length of the tank. All hoppers were full of effluent and in need of draining down.  **Tank 8A** was empty and clear of grit across the entire surface. Hopper 1 , 2 and 3 were all full of effluent and in need of draining down.  **Tank 8B** was empty and clear of grit across the entire surface. Hopper 1 , 2 and 3 were all full of effluent and needed draining down.  **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 **2 online** complaints in the preceding week.  The first complaint was received from the Whitton Dene area of Isleworth,TW7 7LU. The complainant stated that the odour was apparent from 16:00hrs onward on the 28th March 2022. An email response was sent to the complainant on the 29th March 2022 with further information on the Councils out of hours service. The service request was filed under reference **A27312**.  On the day of inspection the odour monitor trends were checked and there were no significant spikes in odour recorded. The highest spikes during the 28th were recorded at 17:48- OM9 (0.006ppm), OM10 (0.005ppm), OM11 (0.005ppm), OM11 (-0.025ppm), OM12 (0.005ppm) and OM13 (0.006ppm).  The second complaint was also received on the 29th of March 2022 at approx. 12:43 from Arnold Crescent area of Isleworth TW7 7NS. There was no detail of the exact time and date of the odour incident. An email was sent to the complainant with further information about the Councils out of hours odour monitoring service. The service request was filed under reference **A27332.** |  |
| **Odour Monitors**  The odour readouts (H2S) for all monitors that were providing data on 29/03/2022 at the time of the inspection are below.   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Monitor 1 | 0.000 | ppm |  | 13:04pm | | Monitor 2 | 0.001 | ppm |  | 13:04pm | | Monitor 3 | 0.005 | ppm |  | 13:04pm | | Monitor 4 | 0.005 | 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 |  | 13:04pm | | Monitor 9 | 0.004 | ppm |  | 13:04pm | | Monitor 10 | 0.004 | ppm |  | 13:04pm | | Monitor 11 | -0.025 | ppm |  | 13:04pm | | Monitor 12 | 0.004 | ppm |  | 13:04pm | | Monitor 13 | 0.006 | ppm |  | 13:04pm | | Wind Speed | 2.491 | mph |  | 13:04pm | | Wind Direction | 77.970 | Deg |  | 13:04pm | |  |
| **Odour Log**  **Wednesday 23rd March 2022**  **DAY SHIFT**  **Temp.** Warm  **Weather.** Sunny  **Odour Readings.** All OMU’s in operation.  **Time:** 17:30  **Observations / Customer Complaint.** No 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.**  OM9 0.027ppm at 20:54-21:24  OM10 0.032ppm at 00:31-01:20  **Operational issues / causes observed.**  Digesters gassing off  **Actions Taken.** Waste gas burner start level dropped ½ meter  **Thursday 24th 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.**  OM3 0.023ppm 00:52-01:23  OM10 0.21ppm 02:31-04:32  **Operational issues / causes observed.**  Area checked around West PSTs – no obvious odours found  Digesters gassing off effecting OM10  **Actions Taken.** Blank.  **Friday 25th 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.**  No odour issues found or reported  **Operational issues / causes observed.** Blank.  **Actions taken.** Blank.  **Saturday 26th 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.** 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.  **Sunday 27th March 2022**  **DAY SHIFT**  **Temp.** Warm  **Weather.** Overcast night  **Odour Readings.** All OMU’s in operation.  **Time:** 17:30.  **Observations / Customer Complaint.**  No odour issues found  **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  **Monday 28th March 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.** 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 29th March 2022**  **DAY SHIFT**  **Temp.** Cool  **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.** Cold  **Weather.** Cloudy  **Odour Readings.** All OMU’s in operation.  **Time:** 05:30.  **Observations / Customer Complaint.**  No odour issues  **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** |  |  | | | | | 24/03/2022 | 98 | 1780 | 2343 | 4221 | 2091 | 6312 | | 25/03/2022 | 98 | 2198 | 2155 | 4451 | 1753 | 6204 | | 28/03/2022 | 39 | 2216 | 1968 | 4223 | 1753 | 5976 |   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 **0 imports** of sludge per day in the preceding week.  **No.5 Pumping Station**  The doors of No.5 pumping station were wide open 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 29th 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 and had a low (below 2ft) wet seal – No evidence of recent/previous sludge spillages.  **Digester 7** was in service and had a low wet to sludgy seal that was bubbling off and erupting violently in places causing a spillage on the coping stones.  **Digester 8** was in service and had a low thick seal (below 1ft) which was wet to sludgy in places. – No evidence of recent/previous sludge spillages.  **Digester 9** was in service and had a good low (<1ft) sludgy seal – There was no evidence of recent/previous spillage on coping stones.  **Digester 10** was in service and had a low (<1ft) thick seal – No evidence of recent/previous sludge spillages.  **Digester 11** was in service and had a low (<1ft) wet to thick sludgy seal – No evidence of recent/previous sludge spillages.  **Digester 12** was in service and had a low (<1ft) wet to thick sludgy seal – No evidence of recent/previous sludge spillages.  **Digester 13** was in service and had a low (<1ft) wet seal – No evidence of recent/previous sludge spillages.  **Digester 14** was in service and had a low (<2ft) wet seal – No evidence of recent/previous sludge spillages.  **Digester 15** **Out of service.**  **Digester 16** was in service and had a good thick seal. There were signs of a previous spill which had a crusty dry remanence furthermore the digester was slightly gassing off.  **Digester 17** was in service and had a low (<2ft) wet seal – No evidence of recent/previous sludge spillages.  **Digester 18 Out of service.**  **Digester 19** was in service and had a low (<1ft) wet seal – No evidence of recent/previous sludge spillages.  **Digester 20** was in service and had a low (<1ft) wet to 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**  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: 29/03/2022**   |  |  |  |  | | --- | --- | --- | --- | | **Plant** | **Reading (ppm)** | **Action Level (ppm)** | **Compliant** | |  |  |  |  | |  |  |  |  | | Main pumping station inlet | Not provided | Unknown | Unknown | | Main pumping station outlet | 0.144ppm  0.141ppm  0.140ppm  **Ave: 0.141ppm** | 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 | 0.777ppm  0.000ppm  0.000ppm  **Ave:0.259ppm** | 0.6 | Yes | | New West inlet (OCU 11) | 0.00ppm  0.00ppm  0.00ppm | 0.5 | No | | Pasteurization (OCU 12) | 0.988ppm  0.927ppm  0.755ppm  **Ave:0.89ppm** | 0.5 | Yes | | Transfer PS inlet | 0.430ppm  0.485ppm  0.442ppm  **Ave:0.452ppm** | 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 | |  |