**Mogden Sewage Treatment Works**

**TW Site Inspection**

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| **Date of inspection:** Tuesday 10th May 2022 (10:00am) | |
| **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 full and needed draining down.  **Tank 1B** had a clean and tidy surface across the entire length. Hoppers 1 & 2 were empty however hopper 3 was full of effluent.  **Tank 2A** had a clean and tidy surface across the entire length however hopper 1 & 2 contained effluent and hopper 3 was empty  **Tank 2B** had a clear tank however hoppers 1, 2 and 3 were full of effluent.  **Tank 3A** had a crusty surface (hopper end) that needed attention furthermore hoppers 1,2 and 3 were full of effluent.  **Tank 3B** was heavily soiled with dried remanence of effluent and all hoppers 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 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 returning and the amajets were in operation.  **Tank 7B** had a sludgy layer that needed attention and all hoppers 1,2 and 3 were overflowing  **Tank 8A** was empty and clear of grit across the entire surface. Hopper 1 , 2 and 3 were all empty and had just been manually drained down.  **Tank 8B** was empty and clear of grit across the entire surface. Hopper 1 , 2 and 3 were all empty and had drained down.  **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.  **Complaints**  The Council received no complaints in the preceding week. |  |
| **Odour Monitors**  The odour readouts (H2S) for all monitors that were providing data on 10th of May 2022 at approx. 10:04am are below.   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Monitor 1 | 0.000 | ppm |  | 10:04 | | Monitor 2 | 0.002 | ppm |  | 10:04 | | Monitor 3 | 0.005 | ppm |  | 10:04 | | Monitor 4 | 0.004 | ppm |  | 10:04 | | Monitor 5 | 0.009 | ppm |  | 10:04 | | Monitor 6 | 0.006 | ppm |  | 10:04 | | Monitor 7 | 0.000 | ppm |  | 10:04 | | Monitor 8 | 0.004 | ppm |  | 10:04 | | Monitor 9 | 0.004 | ppm |  | 10:04 | | Monitor 10 | 0.004 | ppm |  | 10:04 | | Monitor 11 | -0.025 | ppm |  | 10:04 | | Monitor 12 | 0.005 | ppm |  | 10:04 | | Monitor 13 | 0.006 | ppm |  | 10:04 | | Wind Speed | 2.035 | mph |  | 10:04 | | Wind Direction | 211.718 | Deg |  | 10:04 | |  |
| **Odour Log**  **Tuesday 10th May 2022**  **DAY SHIFT**  **Temp.** Warm  **Weather.** Sunny with Patchy clouds  **Odour Readings.** All OMU’s in operation part from 11.  **Time:**. 17:30  **Observations / Customer Complaint.**  No odour issues  **Operational issues / causes observed.** Blank  **Actions taken.** Blank.  **NIGHT SHIFT**  **Temp.** Cool  **Weather.** Overcast Night  **Odour Readings.** All OMU’s in operation part from 11  **Time:** 05:30  **Observations / Customer Complaint.**  OM3 spiked 0.021ppm at 19:40-20:40  **Operational issues / causes observed.**  Area checked around monitors no obvious odours detected  **Actions Taken.** Blank  **Wednesday 4th May 2022**  **DAY SHIFT**  **Temp.** Warm  **Weather.** Sunny with patchy clouds  **Odour Readings.** All OMU’s in operation part from 11  **Time:** 17:30  **Observations / Customer Complaint.**  OM3 spiked to 0.022ppm at 12:24-12:39.  **Operational issues / causes observed**  No odour detected in the area West Inlet checked  **Actions Taken.** Blank.  **NIGHT SHIFT**  **Temp.** Cool  **Weather.** Patchy rain  **Odour Readings.** All OMU’s in operation part from 11  **Time:** 05:30.  **Observations / Customer Complaint.**  No odour issues found or reported  **Operational issues / causes observed.** Blank  **Actions Taken.** Blank  **Thursday 5th May 2022**  **DAY SHIFT**  **Temp.** Warm  **Weather.** Sunny with patchy clouds  **Odour Readings.** All OMU’s in operation part from 11  **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.** Cloudy  **Odour Readings.** All OMU’s in operation part from 11  **Time:** 05:30.  **Observations / Customer Complaint.**  OM5 spiked to 0.022ppm at 22:27 -23:07  **Operational issues / causes observed.**  Main Drive checked no obvious odours found  **Actions Taken.** Blank.  **Friday 6th May 2022**  **DAY SHIFT**  **Temp.** Warm  **Weather.** Sunny  **Odour Readings.** All OMU’s in operation part from 11.  **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.** Patchy rain  **Odour Readings.** All OMU’s in operation part from 11  **Time:** 05:30.  **Observations / Customer Complaint.**  OM3 spiked to max 0.037ppm at 19:55  **Operational issues / causes observed.**  Area checked no odour detected  **Actions taken.** Blank.  **Saturday 7th May 2022**  **DAY SHIFT**  **Temp.** Warm  **Weather.** Cloudy with sunny spells  **Odour Readings.** All OMU’s in operation part from 11  **Time:** 17:30.  **Observations / Customer Complaint.**  No Odour issues  **Operational issues / causes observed.** Blank  **Actions taken.** Blank  **NIGHT SHIFT**  **Temp.** Cool  **Weather.** Cloudy  **Odour Readings.** All OMU’s in operation part from 11  **Time:** 05:30.  **Observations / Customer Complaint.**  No odour issues found or reported  **Operational issues / causes observed.** Blank  **Actions taken.** Blank.  **Sunday 8th May 2022**  **DAY SHIFT**  **Temp.** Warm  **Weather.** Sunny  **Odour Readings.** All OMU’s in operation part from 11.  **Time:** 17:30.  **Observations / Customer Complaint.**  No odour issues found  **Operational issues / causes observed.** Blank  **Actions taken.** Blank  **NIGHT SHIFT**  **Temp.** Cool  **Weather.** Clear night  **Odour Readings.** All OMU’s in operation part from 11.  **Time:** 05:30.  **Observations / Customer Complaint.**  OM3 spiked to 0.021ppm at 01:40-01:55  **Operational issues / causes observed.**  Area checked no odour source located  **Actions Taken.** Blank  **Monday 9th May 2022**  **DAY SHIFT**  **Temp.** Warm  **Weather.** Sunny  **Odour Readings.** All OMU’s in operation part from 11.  **Time:** 17:30.  **Observations / Customer Complaint.**  OM6 0.020ppm 11:40-11:55  **Operational issues / causes observed.**  Unable to identify source of odour  **Actions taken.** Blank.  **NIGHT SHIFT**  **Temp.** Cool  **Weather.** Clear night  **Odour Readings.** All OMU’s in operation part from 11.  **Time:** 05:30.  **Observations / Customer Complaint.**  OM5 spiked to 0.018ppm at 22:37-22:52  OM5 spiked to 0.026ppm at 23:37-23:52  OM5 spiked to 0.016ppm at 03:53 -04:06  OM5 spiked to 0.017ppm at 04:52- ongoing  **Operational issues / causes observed.**  Odour from main drive drain  **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** |  |  | | | | | 4/05/2022 | 20 | 1673 | 1405 | 3098 | 1929 | 5027 | | 6/05/2022 | 0 | 1673 | 1405 | 3078 | 2223 | 5301 | | 9/05/2022 | 20 | 1322 | 1073 | 2415 | 1088 | 3503 |   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 12 **imports** of sludge per day in the preceding week. This was reported on the 11th May 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 open at the time of the inspection. There were TW staff operating at this location at time of inspection.  **Digesters on the 10th May 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) sludgy seal – No evidence of recent/previous sludge spillages.  **Digester 7** was in service and had a low sludgy seal. There was no sign of previous spillage- coping stones were clean and tidy.  **Digester 8** was in service and had a sludgy seal (below 2ft)– No evidence of recent/previous sludge spillages.  **Digester 9** was in service and had a good thick sludgy (below 1ft) surface– There was no evidence of recent/previous spillage on coping stones.  **Digester 10** was in service and had a low (below 3ft) wet seal all round– No evidence of recent/previous sludge spillages.  **Digester 11** was in service and had a low (below 3ft) sludgy seal – There was evidence of a previous spillages which had become dry and crusty.  **Digester 12** was in service and had a low (below 3ft) thick sludgy seal – No evidence of recent/previous sludge spillages  **Digester 13** was in service and had a low (below 1ft) sludgy seal – No evidence of recent/previous sludge spillages the coping stones were clean and tidy.  **Digester 14** was in service and had a low (below 2ft) wet to thick sludgy seal – No evidence of recent/previous sludge spillages.  **Digester 15** **Out of service.**  **Digester 16 Out of service.**  **Digester 17** was in service and had a low (below 1ft) wet to sludgy seal – No evidence of recent/previous sludge spillages.  **Digester 18 Out of service.**  **Digester 19** was in service and had a low (below 1ft) wet seal – it was evident that the digester was letting off some gas in places - No evidence of recent/previous sludge spillages.  **Digester 20** was in service and had a low (below 1ft) wet seal – it was evident that the digester was letting off some gas in places. 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 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. 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.  \*\*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 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 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 ¼ full of rag and 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 ½ full and covered.  **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. 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.  **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 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. |  |

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| **Odour Control Unit (OCU) performance monitoring: 10/05/2022**   |  |  |  |  | | --- | --- | --- | --- | | **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 | 0.011ppm  0.011ppm  0.009ppm  **Ave:0.103ppm** | 0.6 | Yes | | New West inlet (OCU 11) | 0.01ppm  0.00ppm  0.03ppm  **Ave:0.013ppm** | 0.5 | No | | Pasteurization (OCU 12) | 0.10ppm  0.14ppm  0.07ppm  **Ave:0.010ppm** | 0.5 | Yes | | Transfer PS inlet | 28.32ppm  28.21ppm  29.01ppm  **Ave:28.51ppm** | 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 | |  |