**Mogden Sewage Treatment Works**

**TW Site Inspection**

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| **Date of inspection:** Tuesday 21st June 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. There was an island/patch of vegetation growing around the middle section of the tank. Hopper 1 was full of effluent however hoppers 2 and 3 contained minimal effluent..  **Tank 1B** had a clean and tidy surface across the entire length. Hoppers 1, 2 and 3 were all 50% full of effluent and needed draining down..  **Tank 2A** had a clean and tidy surface across the entire length however the right hand side of the tank had slight sludgy patches. Hoppers 1, 2 and 3 were all 50% full of effluent and would need draining down.  **Tank 2B** had a clear tank however the left hand side of the tank contained sludgy patches. Hoppers 1, 2 and 3 were all 50% full of effluent.  **Tank 3A** had a crusty surface throughout most of the surface of the tank. All hoppers 1,2 and 3 were 50% full of effluent and had green surfaces.  **Tank 3B** was empty however the right hand side of the tank had a sludgy area. Hoppers 1,2 and 3 were all full of effluent and overflowing in to the tank.  **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 50% full of effluent and in need of draining down.  **Tank 6B** was empty and clear of grit across the entire surface however observed vegetation growth (in front of hopper 1). Hopper 1 , 2 and 3 all contained effluent and in need of draining down.  **Tank 7A** was returning and contained effluent. It was noted all amajets were in operation.  **Tank 7B** contained effluent at the hopper end however thinned out across the surface. Hoppers 1, 2 and 3 were all full of effluent and needed draining down. There was a green surface born out of algae.  **Tank 8A** was empty and clear of grit/sludge across the entire surface. Hopper 1 , 2 and 3 contained minimal effluent.  **Tank 8B** was empty and clear of grit/sludge across the entire surface. Hopper 1 , 2 and 3 were all being drained down manually as grit was blocking the channels. Contractors were at the Tank attempting to draw out the grit.  **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 noticiable 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 (preceeding week) |  |
| **Odour Monitors**  The odour readouts (H2S) for all monitors that were providing data on 21st of June 2022 at approx. 13:39 are below.   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Monitor 1 | 0.000 | ppm |  | 13:39 | | Monitor 2 | 0.001 | ppm |  | 13:39 | | Monitor 3 | 0.000 | ppm |  | 13:39 | | Monitor 4 | 0.005 | ppm |  | 13:39 | | Monitor 5 | 0.005 | ppm |  | 13:39 | | Monitor 6 | 0.005 | ppm |  | 13:39 | | Monitor 7 | 0.000 | ppm |  | 13:39 | | Monitor 8 | 0.005 | ppm |  | 13:39 | | Monitor 9 | 0.005 | ppm |  | 13:39 | | Monitor 10 | 0.000 | ppm |  | 13:39 | | Monitor 11 | 0.005 | ppm |  | 13:39 | | Monitor 12 | 0.004 | ppm |  | 13:39 | | Monitor 13 | 0.005 | ppm |  | 13:39 | | Wind Speed | 4.775 | mph |  | 13:39 | | Wind Direction | 168.146 | Deg |  | 13:39 | |  |
| **Odour Log**  **Tuesday 14th June 2022**  **DAY SHIFT**  **Temp.** Hot  **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.**  OM5 max 0.025ppm 01:54- 02:38  OM9 max 0.024ppm 02:49-04:33  OM10 max 0.025ppm 03:35-04:23  **Operational issues / causes observed.**  Digester 7 gassing off a little  **Actions Taken.** Valve adjusted to lower gas  **Wednesday 15th June 2022**  **DAY SHIFT**  **Temp.** Hot  **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.**  OM5 max 0.022ppm 01:54-02:23  OM5 max 0.018ppm 03:53- 04:23  **Operational issues / causes observed.**  Smell / odour coming from mixed liqor feed channel or drain on main drive  **Actions Taken.** Reported  **Thursday 16th June 2022**  **DAY SHIFT**  **Temp.** Hot  **Weather.** Sunny  **Odour Readings.** All OMU’s in operation  **Time:** 17:30.  **Observations / Customer Complaint.**  OM3 spiked to 0.028ppm at 12:12-12:28  **Operational issues / causes observed.**  PAS aea smelling  **Actions Taken.** Area checked  **NIGHT SHIFT**  **Temp.** Warm  **Weather.** Clear night  **Odour Readings.** All OMU’s in operation  **Time:** 05:30.  **Observations / Customer Complaint.**  OM5 spiked to 0.019ppm at 20:57-21:24  **Operational issues / causes observed.**  Odour coming from mixed liqor feed channel or drain on main drive  **Actions Taken.** Blank.  **Friday 17th June 2022**  **DAY SHIFT**  **Temp.** very hot  **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.** Warm  **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.**  Blanked  **Actions taken.** Blank.  **Saturday 18th June 2022**  **DAY SHIFT**  **Temp.** Warm  **Weather.** Rain 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.** Warm  **Weather.** Patchy rain  **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 19th June 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  **Operational issues / causes observed.** Blank  **Actions taken.** Blank  **NIGHT SHIFT**  **Temp.** Warm  **Weather.** Patchy rain  **Odour Readings.** All OMU’s in operation  **Time:** 05:30.  **Observations / Customer Complaint.**  OM3 multiple spikes:  18:56-19:13 max 0.017ppm  19:57-20:10 max 0.017ppm  21:41-21:56 max 0.023ppm  00:25-00:40 max 0.019ppm  **Operational issues / causes observed.**  Area checked no odour source located  **Actions Taken.** Blank  **Monday 20th June 2022**  **DAY SHIFT**  **Temp.** Hot  **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.** 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 21st June 2022**  **DAY SHIFT**  **Temp.** Hot  **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.**  OM3 spiked to 0.022ppm at 22:42-23:24  OM5 spiked to 0.069ppm at 01:09-01:23  **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** |  |  | | | | | 15/06/2022 | 40 | 886 | 61 | 987 | 1121 | 2108 | | 17/06/2022 | 20 | 1237 | 267 | 1524 | 1416 | 2940 |   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 67imports of sludge per day in the preceding week. This was reported on the 21st June 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 closed at the time of the inspection.  **Digesters on the 21st June 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 approx. 2ft) sludgy seal – No evidence of recent/previous sludge spillages.  **Digester 7** was in service and had a low (below approx. 2ft) sludgy 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. 2ft) sludgy seal – No evidence of recent/previous sludge spillages.  **Digester 9** was in service and had a low (below approx. 2ft) sludgy seal – No evidence of recent/previous sludge spillages.  **Digester 10** was in service and had a low (below approx. 2ft) sludgy seal – No evidence of recent/previous sludge spillages.  **Digester 11** was in service and had a low (below approx. 2ft) sludgy seal – No evidence of recent/previous sludge spillages.  **Digester 12** was in service and had a low (below approx. 2ft) sludgy seal – No evidence of recent/previous sludge spillages.  **Digester 13** was in service and had a low (below approx. 2ft) sludgy seal – No evidence of recent/previous sludge spillages.  **Digester 14** was in service and had a low (below approx. 2ft) wet to 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 approx. 2ft) sludgy seal – No evidence of recent/previous sludge spillages.  **Digester 18 Out of service.**  **Digester 19** was in service and had a low (below approx. 2ft) wet seal – No evidence of recent/previous sludge spillages.  **Digester 20** was in service and had a low (below approx. 2ft) wet 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 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. 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 ¼ 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 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 was empty and permenently 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 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 8/12 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. 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: 21st June 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  0.01ppm | 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) | 0.00ppm  0.00ppm  0.00ppm | 0.5 | Yes | | Transfer PS inlet | 0.30ppm  0.29ppm  0.15ppm | 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 | |  |