### Mogden Sewage Treatment Works

### TW Site Inspection

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| **Date of inspection:** 7th March 2023 | |
| **Attendees:** Mr L Phillips (London Borough of Hounslow) and Ed Hutton (Thames Water) | |
| **LB Hounslow Observation** | **Thames Water Action / Response** |
| **Storm Water Storage Tanks (SWST)**  **Tank 1A** – Tank empty clean all hoppers full and require draining.    **Tank 1B** – Tank empty around 30% of tank covered by grit/ sludge tank requires further flushing. Hoppers 1 & 2 drained to lowest point. Hopper 3 50% full and requires draining.  **Tank 2A** – Tank empty around 50% of tank covered in grit/sludge tank requires further flushing. All hoppers full and require draining/ Over pumping.  **Tank 2B** – Tank empty around 30% of tank covered by grit/sludge tank requires further flushing. All hoppers full and require draining/over-pumping.  **Tank 3A** – Tank empty 100% of tank covered by grit/sludge tank requires further flushing. – All hoppers full and require draining/over-pumping.  **Tank 3B** – Tank empty 100% of tank covered by grit/sludge tank requires further flushing. All Hoppers full and require draining/over-pumping.    **Tanks 4A, 4B, 5A & 5B** which are covered, and odour controlled, were all in use - unable to gauge condition as lighting system still not working.  **Tank 6A** – Tank empty – Approx. 10% of tank covered by grit/sludge tank requires further flushing. All hoppers full and requires draining/over-pumping.  **Tank 6B** – Tank empty around 10% of tank covered by grit/sludge tank requires further flushing. All Hoppers full and require draining/over-pumping.  **Tank 7A** – Returning all Amajets in operation.  **Tank 7B** – Tank empty 100% of tank covered by grit/sludge tank requires further flushing. All hoppers full and require draining/over-pumping.  **Tank 8A** – Tank backfilling around 60% hopper end of tank around 20% of remaining tank covered by grit/sludge. Tank requires further flushing and draining/over-pumping.  **Tank 8B** – Tank backfilling around 40% – around 60% of remaining tank covered by grit/sludge tank requires further flushing and draining/over-pumping.  **Feed Channel** - The level of effluent in both feed channels was approximately 10% capacity.  **01/03/2023 - Incorrect figure** for total- Correct total should be 5367.  **07/03/2023 \*Incorrect figure for Grand Total 4428 noted however correct figure 4378.** 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** |  |  | | | | | \*01/03/2023 | 0  0 | 1507  1507 | 112  112 | 1619  1619 | 3748  3748 | 5367  5257 | | 02/03/2023 | 135 | 2192 | 412 | 2739 | 1744 | 4483 | | 03/03/2023 | 39 | 1841 | 412 | 2292 | 2898 | 5190 | | 06/03/2023 | 39 | 1842 | 61 | 1942 | 2090 | 4032 | | \*07/03/2023 | 39  39 | 1758  1758 | 61  61 | 1858  1858 | 2520  2520 | 4428  4378 | |  |
| **Complaints**  The Council received no complaints by email from MRAG in the preceding week.  The Council directly received no complaints by email in the preceding week.  The Council received no calls to the out of hours service.  **Odour Monitors**  The odour readouts (H2S) for all monitors which were providing data at time of inspection 07/03/2023: Time 13:20   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Monitor 1 | 0.005 | ppm |  | 13:20 | | Monitor 2 | 0.001 | ppm |  | 13:20 | | Monitor 3 | 0.006 | ppm |  | 13:20 | | Monitor 4 | 0.006 | ppm |  | 13:20 | | Monitor 5 | 0.000 | ppm |  | 13:21 | | Monitor 6 | 0.006 | ppm |  | 13:21 | | Monitor 7 | 0.000 | ppm |  | 13:21 | | Monitor 8 | 0.007 | ppm |  | 13:21 | | Monitor 9 | 0.004 | ppm |  | 13:21 | | Monitor 10 | 0.005 | ppm |  | 13:21 | | Monitor 11 | 0.006 | ppm |  | 13:21 | | Monitor 12 | 0.007 | ppm |  | 13:21 | | Monitor 13 | 0.000 | ppm |  | 13:21 | | Wind Speed | 4.618 | mph |  | 13:21 | | Wind Direction | 302.056° |  |  | 13:21 | |  |
| **Odour Log (Thames):**  **Wednesday 1st March 2023:**  **DAY SHIFT**  **Temp.** Cold.  **Weather.** Cloudy.  **Odour Readings.** All OMU’s in operation.  **Time:** 17:30.  **Observations / Customer Complaint.** No odour issue.  **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.  **Operational issues / causes observed.** Trends failed at 24:00  **Actions taken.** Site checked whilst trends were failed.  **Thursday 2nd March 2023:**  **DAY SHIFT**  **Temp.** Cold.  **Weather.** Cloudy W/ Sunny spells  **Odour Readings.** All OMU’s in operation.  **Time:** 17:30.  **Observations / Customer Complaint.**  OM10 0.020 14:16 -14:31, 0.021 07:46- 08:29.  **Operational issues / causes observed.** Areas checked no source found.  **Actions taken.** Blank.  **NIGHT SHIFT**  **Temp.** Freezing.  **Weather.** Clear Night.  **Odour Readings.** All OMU’s in operation.  **Time:** 05:30.  **Observations / Customer Complaint.**  OM12 0.016ppm at 02:50 03:48.  **Operational issues / causes observed.** Digester area checked.  **Actions taken.** Gas valves adjusted to reduce seals blowing.  **Friday 3rd March 2023:**  **DAY SHIFT**  **Temp.** Cold.  **Weather.** Cloudy W/ 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.** Cool.  **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.  **Saturday 4th March 2023:**  **DAY SHIFT**  **Temp.** Cold.  **Weather.** Cloudy W/ 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.  **Operational issues / causes observed.** Trend data missing from monitors 4 & 8.  **Actions taken.** Blank.  **Sunday 5th March 2023:**  **DAY SHIFT**  **Temp.** Cold.  **Weather.** Cloudy W/ Sunny spells.  **Odour Readings.** All OMU’s in operation.  **Time:** 17:30.  **Observations / Customer Complaint.** No odour issues.  **Operational issues / causes observed.** Trend data missing from monitors 4 & 8.  **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.  **Operational issues / causes observed.** Trend data missing from monitors 4 & 8.  **Actions taken.** Blank.  **Monday 6th March 2023:**  **DAY SHIFT**  **Temp.** Cool.  **Weather.** Patchy rain.  **Odour Readings.** All OMU’s in operation.  **Time:** 17:30.  **Observations / Customer Complaint.**  No odour issues found or reported.  **Operational issues / causes observed.** OM’S 4 &8 trending erratically.  **Actions taken.** Blank.  **NIGHT SHIFT**  **Temp.** Cool.  **Weather.** Rain.  **Odour Readings.** All OMU’s in operation.  **Time:** 05:30.  **Observations / Customer Complaint.**  No odour issues.  **Operational issues / causes observed.** Trend data from monitors 4 & 8.  **Actions taken.** Blank.  **Tuesday 7th March 2023:**  **DAY SHIFT**  **Temp.** Cool.  **Weather.** Patchy rain.  **Odour Readings.** All OMU’s in operation.  **Time:** 17:30.  **Observations / Customer Complaint.**  No odour issues found or reported.  **Operational issues / causes observed.** OM’S 4 & 8 trending erratically.  **Actions taken.** Blank.  **NIGHT SHIFT**  **Temp.** Cold.  **Weather.** Over Night.  **Odour Readings.** All OMU’s in operation.  **Time:** 05:30.  **Observations / Customer Complaint.** No odour issues.  **Operational issues / causes observed.** OM’S 4 & 8 gaps in trends.  **Actions taken.** Blank. |  |
| **Digesters**  **Digesters 1-4** – Out of use (permanent).  **Digester 5** – In use –good thick seal- No evidence of spillage.  **Digester 6** - In use – Weak seal – No evidence of spillage.  **Digester 7** - In use – Weak seal –– Bell height high requiring draw down of Biogas- N o evidence of spillage.  **Digester 8** - In use – Weak seal – No evidence of spillage.  **Digester 9** - In use – Weak seal – No evidence of spillage.  **Digester 10** - In use – Weak seal – No evidence of spillage.  **Digester 11** - In use – Weak seal – No evidence of spillage.  **Digester 12** - In use – Weak seal – No evidence of spillage.  **Digester 13** - In use – Weak seal – No evidence of spillage.  **Digester 14** – Out of use.  **Digester 15** – Out of use.  **Digester 16** – Out of use.  **Digester 17** - In use – Weak seal – No evidence of spillage.  **Digester 18** - In use – Weak seal – No evidence of spillage.  **Digester 19** - In use – Weak seal – No evidence of spillage.  **Digester 20** - In use – Weak seal – No evidence of spillage. |  |
| **GENERAL**  **Sludge Screening House**  Small doors closed at time of inspection. Roller shutter currently missing and awaiting replacement following damage – previously erected screening has been removed and opening now un-covered.  **Imported Sludge**  There were 84m³ imports in preceding seven days.  **Final Settlement Tanks East Side of Works**  The 8 circular tanks previously used as PSTs are now being used as final tanks (71-78) – no issues.  **East Side Raw Sludge Screen House**  Doors closed at time of inspection.  **West Side Aeration Lanes (Old)**  Battery C aeration feed channel 100% obstructed in one channel (left) – requires jetting (TW advise that there is continuing flow below surface).  **West side primary settlement tanks (PST)**  Rectangular PSTs – no issues  Circular PST’s 9,10 and 11 in use no issues. Circular PST number 12 drained down (long term out of service).  **New Works (West Side) Battery E**  No issues all clear.  **Pasteurisation Plant**  Streams 2, 7, 8, 10 11 and 12 out of service.  **Skips**  4x bulk carrier covered at the screen House.  1x 10-Yard Rag skip covered at rear of Sludge Screening House.  1x 10-Yard enclosed General Waste skip in Service Road at rear of East Raw Sludge Screening House.  3x bulk carrier covered West side skip. |  |

**Odour Control Unit (OCU) performance monitoring – 07/03/2023**

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| **Plant** | **Reading (ppm)** | **Action Level (ppm)** | **Compliant** |
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|  |  |  |  |
| Main pumping station inlet | No data | Unknown | Unknown |
| Main pumping station outlet | 0.00  0.00  0.00 | 0.2 | Yes |
| East OCU | 0.045  0.048  0.049 | 0.05 | No |
| West inlet OCU | 0.00  0.00  0.00 | 0.05 | Yes |
| Sludge reception inlet | No data | Unknown | Unknown |
| Sludge reception outlet | No data | 0.8 | Unknown |
| Thickening plant inlet | No data | Unknown | Unknown |
| Thickening plant outlet | 0.254  0.267  0.268 | 0.6 | No |
| Transfer PS inlet | 0.602  0.610  0.565 | Unknown | Unknown |
| Transfer PS outlet | 0.022  0.021  0.019 | 0.5 | Yes |
| New West inlet (OCU11) | 0.032  0.033  0.034 | 0.5 | Yes |
| Pasteurisation Plant (OCU12) | 1.909  1.938  1.905 | 0.5 | No |
| GBT Plant OCU Outlet | 0.00  0.00  0.00 | Unknown | Unknown |