



London Borough of Hounslow

Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: 20th December 2018

Attendees: Mr Zaheer Kadri (London Borough of Hounslow) and Mr Manzoor Hussain (Thames Water)

LB Hounslow Observation

Thames Water Action / Response

Storm Water Storage Tanks (SWST)

Tank 1A was empty and clean however spots of grit visible at Hopper end. Hoppers 1 & 2 were full of effluent and needed draining down. Hopper 3 was empty.

Tank 1B was empty and clean. Hoppers 1, 2 & 3 were full of effluent and needed draining down.

Tank 2A was empty and clean however areas near hopper end had areas covered by grit. Hoppers 1, 2 & 3 were all drained down.

Tank 2B was empty and clean, hoppers 1, 2 & 3 had all been drained down.

Tank 3A and 3B were both empty and clean. Hoppers 1, 2 & 3 of both tanks had been drained down.

Tanks 4A, 4B, 5A & 5B which are covered and odour controlled were all empty. Unable to gauge condition as lighting system still not working.

Tank 6A & 6B were both being flushed at time of inspection and were over 20% full of effluent. All Amajets were in operations.

Tank 7A & 7B were both empty and relatively clean, but had dry grit on the surface of the tank at the hopper end. Hoppers 1, 2 & 3 (shallow hoppers) of both tanks all needed draining down.

Tank 8A & 8B were both being flushed at time of inspection and were over 20% full of effluent. All Amajets were in operations.

All AMAJETS WERE IN ORDER – NO FAULTS

Feed Channel - The level of effluent in both feed channels was very murky in colour however at a low level along its entire length and bottomed out in places where grit was present.

Complaints

The Council received no complaints via telephone or emails from either residents or MRAG in the preceding week.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection: Thursday 20th December 2018 at 12:05.

Monitor 1	0.004	ppm	11.05
Monitor 2	0.007	ppm	11.05
Monitor 3	0.005	ppm	11.05
Monitor 4	0.000	ppm	11.05
Monitor 5	0.006	ppm	11.05
Monitor 6	0.000	ppm	11.05
Monitor 7	0.007	ppm	11.05
Monitor 8	0.008	ppm	11.05
Monitor 9	0.000	ppm	11.05
Monitor 10	0.006	ppm	11.05

Monitor 11	0.009	ppm	11.05
Monitor 12	0.006	ppm	11.05
Monitor 13	0.007	ppm	11.05
Wind Speed	-	mph	11.05
Wind Direction	-	DEG	11.05

Odour Log (Thames) - Photocopies of log entries taken

Thursday 13th December 2018

AM

Temp. Cold .

Weather. Sunny with patchy clouds .

Odour Readings. All OMU's in operation.

Time: Blank

Observations / Customer Complaints OM3 had two spikes

0.021ppm @ 14.11-14.28

0.022ppm @ 14.41-14.58

Operational issues / causes observed OCU11 chemical dosing out of range. Carbon filter saturated.

Actions Taken. Blank.

PM

Temp. Freezing

Weather. Clear night.

Odour Readings. All OMU's in operation.

Time: Blank

Observations / Customer Complaint. OM3 had three spikes

0.021ppm @ 01.58 - 03.11

0.016ppm @ 21.43 - 22.43

0.015ppm @ 19.57 - 20.00

OM7 0.016ppm @ 03.46 - 04.01

Operational issues / causes observed. OCU11 chemical dosing out of range. Carbon filter saturated.

no.8b swt partially full. Amajets running.

Actions Taken. Blank

Friday 14th December 2018

AM

Temp. Cold

Weather. Cloudy w/ sunny spells.

Odour Readings. All OMU's in operation.

Time: Blank.

Observations / Customer Complaint. OM 3 Multiple spike/breaches.

0.024ppm @ 07.58-0900

0.024ppm @ 12.42-15.13

0.020ppm @ 15.42-15.58

Operational issues / causes observed. Area investigated. No odour detected. OCU11 discharging 329ppb from OCU stack according to instrumentation. Remedial works ongoing .

Actions Taken. Blank

PM

Temp. Cold

Weather. Clear night Rain

Odour Readings. All OMU's in use.

Time: 05:30

Observations / Customer Complaint. nothing to note from trends

Operational issues / causes observed. Blank.

Actions Taken. Blank.

Saturday 15th December 2018

AM

Temp. Cold

Weather. Rain.

Odour Readings. All OMU's in operation.

Time: Blank

Observations / Customer Complaint. OM5 one spike

0.019ppm @ 11.54-12.08.

Operational issues / causes observed. No odour identified. Less than 15 minutes

Actions Taken. Blank.

PM

Temp. Cool

Weather. Rain.

Time: Blank

Odour Readings. All OMU's in operation.

Observations / Customer Complaint. OM5 spiked @ 22:08-22:50

max 0.031ppm and again @ 03:38-04:38 max 0.016ppm

Operational issues / causes observed. Area checked and no noticeable odours detected

Actions taken. Blank.

Sunday 16th December 2018

AM

Temp. Cool

Weather. Rain.

Time: 17:30.

Odour Readings. All OMU's in operation.

Observations / Customer Complaint. OM3 spiked
0.027ppm @ 15.57-18.00

Operational issues / causes observed. No odour detected. Monitor still high at end of shift. OCU11 still discharging high odour.

Actions Taken. Blank.

PM

Temp. Cool.

Weather. Rain.

Time: 05:30.

Odour Readings. All OMU's in operation.

Observations / Customer Complaint. OM3 spiked
max 0.024ppm @ 19:12

Operational issues / causes observed. No odour detected. Monitor still high at end of shift. OCU11 still discharging high odour.

Actions Taken. Blank.

Monday 17th December 2018

AM

Temp. Cool.

Weather. Sunny w/ Patchy Clouds

Time: 17:45

Odour Readings. All OMU's in operation.

Observations / Customer Complaint.. OM3 SPIKED
0.024ppm @ 16:30.

Operational issues / causes observed. OCU 11 SHOWING HIGH
ODOURS.- AREA ROUND MONITOR CHECKED AND ALL OK

Actions Taken.

PM

Temp. Cool.

Weather. Overcast night

Time: 05:30.

Odour Readings. All OMU's in operation.

Observations / Customer Complaint. OM3 spiked to max 0.026

Operational issues / causes observed. OCU 11, area checked

Actions Taken. Blank.

Tuesday 18th December 2018

AM

Temp. Cool

Weather. Rain w/ Sunny Spells

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. NO ODOUR ISSUES

Operational issues / causes observed. NO ODOUR ISSUES

Actions Taken: Blank.

PM

Temp. Cool.

Weather. Rain.

Odour Readings. All OMU's in operation.

Time: 05:45.

Observations / Customer Complaint. NO ODOUR ISSUES

Operational issues / causes observed. No odour issues

Actions Taken: Blank

Wednesday 19th December 2018

AM

Temp. Cool.

Weather. Cloudy w/ Sunny Spells

Odour Readings. All OMU's in operation.

Time: 17:45.

Observations / Customer Complaint. No odour issues

Operational issues / causes observed. No odour issues.

Actions taken: Blank.

PM

Temp. Cool.

Weather. Overcast night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint.

OM11 one spike

0.017ppm @ 01.22-02.22

OM5 one spike

0.016ppm @ 03.31-03.45

Operational issues / causes observed. Area checked. No odour identified. Waste gas burner on and off all night. CHP 3 unavailable therefore digester bell heights are up and down.

Sludge Dip Records

Date	West PSTs 1	West PSTs 2	West PSTs 3	West Total	East PSTs	Grand Total
	All units in m ³					
OMP limit	500					
13/11/18	155	1715	0	1870	2209	4079
14/11/18	206	1946	0	2152	2865	5017
19/11/18	225	2048	534	2807	1601	4408

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 20 imports of sludge daily over the last week.

Sludge Screening House

The large roller shutter door of the Raw Sludge Screening building was closed at the time of the inspection.

Digesters

Digesters 1-4 – Out of use (permanent) – noticeable quantity of water accumulated to the brim of these tanks which is thick with algae – requires draining.

Digester 5 was in use but had a very wet seal. There was evidence of a historic spill which needs cleaning (crusty-needs sweeping).

Digester 6 was in use and had a wet seal. There was evidence of a historic spill which needs cleaning (crusty needs sweeping). Due to uneven ground surface puddles had formed around Digester 6 due to previous rain fall. No odours or cause for concern.

Digester 7 was in use and had a dry seal. There was evidence of an historic spill which was dry and crusty in texture around the coping stone (crusty- needs a sweep).

Digester 8 was in use and had a good wet seal. No evidence of spillage.

Digester 9 was in use and had a good dry seal. No evidence of spillage.

Digester 10 was in use and had a good dry seal. No evidence of spillage.

Digester 11 was in use and had a good wet seal. No evidence of spillage.

Digester 12 was in use and had a good wet seal. No evidence of spillage.

Digesters 13 & 14 were both out of service.

Digester 15 was in use and had a wet seal. No evidence of spillage.

Digester 16 was out of service

Digester 17 was in use and had a wet seal. No evidence of spillage

Digester 18 was in use and had a wet seal. No evidence of spillage

Digester 19 was in use and had a dry crusty seal. No evidence of spillage

Digester 20 was in use and had a dry crusty seal. No evidence of spillage

GENERAL

Final Settlement Tanks East Side of Works

The 8 circular tanks previously used as PSTs are now being used as final tanks (71-78). All tanks were operational at the time of the inspection.

Skips

On the East side there was one 20yd open bulk carrier that was empty.

One 12yd skip that was empty and uncovered.

On the West side there were No skips present.

East Side Screen House

All doors were closed at the time of the inspection. TW advised all screens are in operation.

Return Activated Sludge Channel

The nearside RAS channel (which runs in the ground between FST's 61-64 & 65-67) was relatively free flowing along its entire length.

West side primary settlement tanks (PST)

Rectangular PSTs are now covered and odour controlled. TW advised no issues.

Circular PSTs 9, 10, 11 & 12 were all in operation at the time of the inspection (fat free surfaces). PST 10 had an odour control system on trial whereby an odour neutraliser generated a mist over the Primary settlement tank- only one PST was being used to trial this system. This was not in operation at the time of inspection. No odours were noticeable.

Pasteurisation Plant

The pasteurisation plant is in service. TW advised 3/12 streams were out of operation (4, 7 and 9).

Section 106 agreement

There have been no breaches of the s106 agreement in the last week.

West Side Aeration Lanes (New)

All of the aeration tanks appeared to be free flowing and the surface appeared much improved.

The mixed liquor feed channel serving aeration lanes 24-25 (E Battery) was free flowing throughout its entire length. The channel serving aeration lanes 21, 22 & 23 were also free flowing.

Odour was not noticeable along the mixed liquor feed channel. TW advised that a tanker crew are regularly on site undertaking clearance of the clogged areas (Celvac).

New Inlet Works (West Side)

No issues appeared evident at the new inlet works.

Odour Control Unit (OCU) performance monitoring: 12/11/2018

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.003 0.003 0.004	Unknown	Unknown
Main pumping station outlet	0.01	0.2	Yes

	0.01 0.01		
East OCU	0.00 0.00 0.00	0.05	Yes
West inlet OCU	0.00 0.00 0.00	0.05	Yes
Sludge reception inlet	-	Unknown	Unknown
Sludge reception outlet	-	0.8	Unknown
Thickening plant inlet	-	Unknown	Unknown
Thickening plant outlet	0.00 0.00 0.00	0.6	Yes
Transfer PS inlet	-	Unknown	Unknown
Transfer PS outlet	0.03 0.04 0.02	0.6	Yes
New West inlet (OCU 11)	0.04 0.04 0.03	0.5	Yes
OCU 12 (Pasteurisation Plant)	0.00 0.00 0.00	0.5	Yes