

Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: Monday 23rd December 2019 (10:00)

Attendees: Mr Zaheer Kadri (LBH) and Ms Charlotte Page (Thames Water)

LB Hounslow Observation

Thames Water Action / Response

Storm Water Storage Tanks (SWST)

Tank 1A - 3B were all at approximately 80% full of effluent due to prior rainfall. There were no observations of odour within the locality of the SWT. The amajets were said to be all in normal working operation (all in order).

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 - 8B were all at approximately 80% full of effluent due to prior rainfall. There were no observations of odour within the locality of the SWT. The amajets were said to be all in normal working operation (all in order).

Feed Channel - The level of effluent in both feed channels was at 20% high - in places it was murky with fatty deposits visible. Most of the channel was free flowing and odourless. No local odours rags, fats or solids.

As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.

Complaints

The Council received (1) complaint by telephone in the preceding week.

On the 18th of December 2019 at approx 16:22 a telephone call was passed to the Enforcement Team of Odours allegedly emanating from TW site. The complaint was received from the James Street area of Hounslow TW3 1SP. A visit was made on the 23rd of December 2019 for the routine site inspection. There were no abnormalities or significant spikes in the Trends when observing Odour Monitors 2, 3 and 13. The weather at the time of the complaint was wet and rainy hence no objective assessment was taken at the time. The complainant was notified of the action taken and updated. The Flare reference for this complaint has been logged under 992022.

The Council received no complaints by email in the preceding week.

The Council received no complaints by email from MRAG.

Thames Water controller advised that they had received no direct complaints in the preceding week.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection:

Monitor 1	0.005	ppm	10:10
Monitor 2	0.004	ppm	10:10

Monitor 3	0.000	ppm	10:10
Monitor 4	0.005	ppm	10:10
Monitor 5	0.006	ppm	10:10
Monitor 6	0.007	ppm	10:10
Monitor 7	0.006	ppm	10:10
Monitor 8	0.006	ppm	10:10
Monitor 9	0.004	ppm	10:10
Monitor 10	0.004	ppm	10:10
Monitor 11	0.004	ppm	10:10
Monitor 12	0.008	ppm	10:10
Monitor 13	0.006	ppm	10:10
Wind Speed	5.936	mph	10:10
Wind Direction	231.610	Deg	10:10

Odour Log (Thames) - Photocopies of log entries taken:

Thursday 19th December 2019

AM – Cool temperature with Rain.

All OMU's in use.

Time: 17:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: No odours.

Actions: None noted.

PM – Cool temperature with Rain.

All OMU's in use.

Time: 05:30.

Observations/Complaints. No odour issues.

Operational Issues/Causes: No odour issues.

Actions: None noted.

Friday 20th December 2019

AM – Cool temperature with Rain.

All OMU's in use.

Time: 17:30

Observations/Complaints: OM5 spiked to 0.017ppm max (<15).

Operational Issues/Causes: No odour issues reported.

Actions: None noted.

PM – Cool temperature with Rain.

All OMU's in use.

Time: 05:30.

Observations/Complaints: No Odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

Saturday 21st December 2019

AM – Cool temperature with Rain.

All OMU's in use.

Time: 17:30.

Observations/Complaints. No odour issues.

Operational Issues/Causes: No odour issues.

Actions: None noted.

PM – Cool temperature with Rain.

All OMU's in use.

Time:05:30.

Observations/Complaints. No odour issues.

Operational Issues/Causes: No odour identified.

Actions: None Noted.

Sunday 22nd December 2019

AM – Cool temperature with Rain.

All OMU's in use.

Time: 17:30.

Observations/Complaints. No odour issues.

Operational Issues/Causes: No odour issues.

Actions: None Noted.

PM – Cool/ clear night.

All OMU's in use.

Time: 05:30.

Observations/Complaints. No odour issues.

Operational Issues/Causes: No odour issues.

Actions: None noted.

Monday 23th December 2019

AM – Cool / Rain with sunny spells.

All OMU's in use.

Time: 17:30.

Observations/Complaints. No odour issues.

Operational Issues/Causes: No odour issues.

Actions: None.

PM – Cool with Rain.

All OMU's in use.

Time: 05:30

Observations/Complaints. OM2 spiked to 0.044ppm at 00:00 (<15)

Operational Issues/Causes: Rag skip area hosed down.

Actions: No odour issues.

Tuesday 24th December 2019

AM – Cool and cloudy

All OMU's in use.

Time: 17:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: No odours found.

Actions: none noted.

PM – Cold clear night.

All OMU's in use.

Time: 05:30.

Observations/Complaints: OM8 spiked to 0.024ppm at 01:10 (<15).

Operational Issues/Causes: None odours found.

Actions: None noted.

Wednesday 25th December 2019

AM – Cool overcast night.

All OMU's in use.

Time: 17:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: None odours found.

Actions: None noted.

PM – Cool clear night.

All OMU's in use.

Time: 05:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: All areas checked.

Actions: None noted.

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					
23/12/2019	0	389	328	717	2570	3287

The sludge stock levels for the West side circular primary settlement tank 1 were **compliant** with the OMP trigger level (500m³) for all of the dates for which data has been provided.

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.

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. Long term project currently initiated to bring these units back into service - will require significant investment.

Digester 5 - in use - seal level approx. 1ft below coping stones - good seal thick in texture.

Digester 6 - in use - seal level approx. 1ft below coping stones - good seal slightly gassy.

As LBH note, this has not been required in the last week.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester.

The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

Digester 7 - Out of service.

Digester 8 - Out of service.

Digester 9 - in use - seal level approx. 1ft below coping stones - good seal dry and thick.

Digester 10 - in use - seal level approx. 1ft below coping stones - good seal.

Digester 11 - in use - seal level approx. 1ft below coping stones - good seal slightly watery in places.

Digester 12 - in use - seal level approx. 1ft below coping stones - good seal.

Digester 13 - in use - seal level approx. 1ft below coping stones - good seal.

Digester 14 - out of use.

Digester 15 - out of use.

Digester 16 - in use - seal level approx. 1ft below coping stones - good seal.

Digester 17 - in use - seal level approx. 1ft below coping stones - good seal.

Digester 18 - in use - seal level approx. 1ft below coping stones - good seal.

Digester 19 - in use - seal level approx. 1ft below coping stones - good seal thick.

Digester 20 - in use - seal level approx. 1ft below coping stones - good seal thick in texture.

No odour in the area observed at times of inspection

GENERAL

Sludge Screening House

All doors closed at time of inspection No odours observed.

Imported Sludge

Imports were closed – No deliveries made.

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 jets and hoses were in operation and no excessive build-up of algae.

Skips

No Skips present at the East side screening House- All clear.
Eastside Grit House- 2 x 12 yard skips full with general waste / NO covers
No Skips present at the West Side gritting house. - All clear.
No odour detected at both locations.

East Side Raw Sludge Screen House

Doors closed at time of inspection.

West side primary settlement tanks (PST)

Rectangular PSTs – No issues noticed at time of inspection

Circular PST's 9 and 10 were in use and all hoses were in operation. Circular PST number 11 and 12 had been drained down and out of service. No Odours observed.

Pasteurisation Plant

Pasteurisation plant had ten streams in service fully operational.

West Side Aeration Lanes (Old)

Battery C aeration feed channel approximately 100% clear of any obstruction- effluent is flowing with ease NO rags or build up noticed..

New Works (West Side)

Feed Channel for Aeration Lanes 21-24 free flowing no obstructions or odours.

The “Fluffy” coverage (obscured internal dividing walls within tank) that had been observed on previous visits had lightened in texture revealing the dividing walls within the tank. There were no concerning odours around this area.

Odour Control Unit (OCU) performance monitoring – (NO RECORD AVAILABLE DUE TO CHRISTMAS)

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.00 0.00 0.00 Ave: 0.00	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00 Ave: 0.00	0.2	Yes
East OCU	0.00 0.00 0.00 Ave: 0.00	0.05	Yes
West inlet OCU	0.00 0.00 0.00 Ave: 0.00	0.05	Yes
Sludge reception inlet	0.00 0.00 0.00 Ave: 0.00	Unknown	Unknown
Sludge reception outlet	0.00 0.00 0.00 Ave: 0.00	0.8	Yes
Thickening plant inlet	No data	Unknown	Unknown
Thickening plant outlet	0.00	0.6	Yes

	0.00 0.00 Ave: 0.00		
Transfer PS inlet	0.00 0.00 0.00 Ave: 0.00	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00 Ave: 0.00	0.6	Yes
New West inlet (OCU 11)	0.00 0.00 0.00 Ave: 0.00	0.5	Yes
OCU 12 (Pasteurisation Plant)	0.00 0.00 0.00 Ave: 0.00	0.5	Yes



London Borough of Hounslow

Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: Monday 16 th December 2019 (12:15pm)	
Attendees: Mr I Inman (London Borough of Hounslow) and Mr T Palmer (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Weather</u></p> <p>Recent heavy rain meant the site was near to full capacity.</p> <p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A was completely full. No Amajets were in operation.</p> <p>Tank 1B was completely full. No Amajets were in operation.</p> <p>Tank 2A was completely full. No Amajets were in operation.</p> <p>Tank 2B was completely full. No Amajets were in operation.</p> <p>Tank 3A was completely full. No Amajets were in operation.</p>	<div style="border: 1px solid black; padding: 10px;"><p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p></div>

Tank 3B was completely full.
No Amajets were in operation.

Tanks 4A, 4B, 5A & 5B All tanks are covered and odour controlled.
Unable to gauge condition as lighting system still not working.

Tank 6A was completely full.
No Amajets were in operation.

Tank 6B was completely full.
No Amajets were in operation.

Tank 7A was completely full.
No Amajets were in operation.

Tank 7B was completely full.
No Amajets were in operation.

Tank 8A was completely full.
No Amajets were in operation.

Tank 8B was completely full.
No Amajets were in operation.

Storm Feed Channel - The channel was >50% full.

Thames advised of planned works to replace all of the hopper valves to prevent back flow of effluent.

They are still also awaiting parts in order to bring the wash water pump system back into operation.

Complaints

The Council has received no complaints in the preceding week.

Tanker cleans out the channel on a weekly basis

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection: Thursday 14th November 2019 at 12:30.

Monitor 1	0.007	ppm	12:30
Monitor 2	0.007	ppm	12:30
Monitor 3	0.000	ppm	12:30
Monitor 4	0.004	ppm	12:30
Monitor 5	0.009	ppm	12:30
Monitor 6	0.008	ppm	12:30
Monitor 7	0.008	ppm	12:30
Monitor 8	0.007	ppm	12:30
Monitor 9	0.006	ppm	12:30
Monitor 10	0.007	ppm	12:30
Monitor 11	0.000	ppm	12:30
Monitor 12	0.007	ppm	12:30
Monitor 13	0.007	ppm	12:30
Wind Speed	0.276	mph	12:30
Wind Direction	277.083	°	12:30

Odour Log (Thames) - Photocopies of log entries taken:

Thursday 5th December 2019

DAY SHIFT

Temp. Cold.

Weather. Cloudy.

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. Rain.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. No odour issues.

Operational issues / causes observed. Blank.

Actions Taken. Blank.

Friday 6th December 2019

DAY SHIFT

Temp. Cold.

Weather. Rain.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. No odour spikes.

Operational issues / causes observed. Blank.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Blank.

Weather. Blank.

Odour Readings. All OMU's in use.

Time: 05:30.

Observations / Customer Complaint. No odour issues.

Operational issues / causes observed. Blank.

Actions Taken. Blank.

Saturday 7th December 2019

DAY SHIFT

Temp. Cold.

Weather. Cloudy.

Odour Readings. All OMU's in operation.

Time: 17:20.

Observations / Customer Complaint. No odour issues.

Operational issues / causes observed. Blank.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Blank.

Weather. Blank.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. No odour issues.
Operational issues / causes observed. Blank.
Actions taken. Blank.

Sunday 8th December 2019

DAY SHIFT

Temp. Cold.

Weather. Cloudy w/sunny spells.

Odour Readings. All OMU's in operation.

Time: 17:20.

Observations / Customer Complaint. No odours

Operational issues / causes observed. Blank.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Blank.

Weather. Blank.

Odour Readings. All OMU's in operation.

Time: Blank.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. Blank.

Actions Taken. Blank.

Monday 9th December 2019

DAY SHIFT

Temp. Cool.

Weather. Blank.

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. Blank.

Weather. Blank.

Odour Readings. All OMU's in operation.

Time: Blank.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. Blank.

Actions Taken. Blank.

Tuesday 10th December 2019

DAY SHIFT

Temp. Cool.

Weather. Rain.

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. Blank.

Weather. Blank.

Odour Readings. All OMU's in operation.

Time: Blank.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. Blank.

Actions Taken. Blank.

Wednesday 11th December 2019

DAY SHIFT

Temp. Cool.

Weather. Cloudy.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM2 0.022ppm at 08:04-08:20.

Operational issues / causes observed. Area checked no odour detected.

Action Taken. Blank.

NIGHT SHIFT

Temp. Blank.

Weather. Blank.

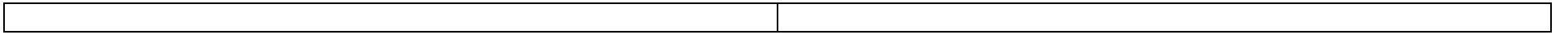
Odour Readings. All OMU's in operation.

Time: Blank.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. Blank.

Actions Taken. Blank.



Sludge Dip Records

Date	West PSTs	West PSTs	West PSTs	West Total	East PSTs	Grand Total
	1	2	3			
All units in m ³						
OMP limit	500					
08/12/2019	127	1635	328	2090	3706	5798
11/12/2019	128	1533	661	2322	4897	7219

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 77 imports of sludge over the last week (11 per day).

No.5 Pumping Station

The doors of No.5 pumping station was open at the time of the inspection although no odour was evident.

Raw 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). Thames advised of a long term project currently initiated to bring these units back into service that will

As LBH note, this has not been required in the last week.

require significant investment.

Digesters 5 & 6: Both were in service and had totally wet seals that were bubbling off small amounts of gas.

Digester 7: Out of service.

Digester 8-12: All were in service and had totally wet seals that were bubbling off small amounts of gas.

Digester 13: In service and had a very high wet seal level (just below the retaining coping stones) and was bubbling off gas.

Digesters 14 & 15: Both were out of service.

Digester 16: In service and a very large spill had occurred that required cleaning.

Digester 17: Was in service and had a totally wet seal that was bubbling off gas.

Digester 18: Was in service and had a good dry seal.

Digesters 19 & 20: Both were in service and had totally wet seals that were bubbling off gas.

There was evidence of anti-foaming agent in use and TW advised that this is applied daily to all of the digesters that are operational.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester. The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

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 and no issues were evident.

Skips

On the East side there were two 8yds open skips, one of which contained general non-inert rubbish and one was approx 30% full of rag, which was only part covered with a tarpaulin and had weeds growing out of it.

Also present was one closed 14yds skip that was empty.

In the area next to STW 1A there was an open 14yds skip that contained scrap metal pumps.

On the service road next to raw sludge screening building was an 8yds open skip that contained rag and other waste, which was part covered with a tarpaulin.

On the West side there was one 20yds open bulk carrier that was empty.

East Side Screen House

The doors to the screen house building were closed at the time of the inspection. However, TW were unable to confirm how many or which screens were in operation?

Return Activated Sludge Channel

The nearside RAS channel (which runs in the ground between FST's 61-64 & 65-67) was clogged along 75% of the near-side channel.

TW were advised this needed to be rectified to avoid potential insect and odour problems.

West Side Aeration Lanes (Old)

No issues.

Skips containing rag and grit are routinely covered. General waste and empty skips which are not odorous may be uncovered.

Tanker cleans out the channel on a weekly basis

West side primary settlement tanks (PST)

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

Circular PST 9 was in service and had fat across 20% of the surface in front of the sweep arm.

Circular PST 10 was out of service and outer overflow channel was being over pumped at the time of the inspection.

Circular PST's 11 & 12 had clean fat free surfaces.

Pasteurisation Plant

The pasteurisation plant is in service. TW advised all 10 streams were in service.

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 were much improved. The tops of the internal dividing walls were clearly visible and liquid inside the tanks appeared free flowing.

Nearly all of the sprinklers appeared to be in operation.

The mixed liquor feed channel serving E-Battery was clear of debris and free flowing along its entire length.

TW advised a tanker crew is regularly on site undertaking clearance of any clogged areas.

New Inlet Works (West Side)

No issues.

Odour Control Unit (OCU) performance monitoring: 10/11/2019

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.01 0.01 0.01	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00	0.2	Yes
East OCU	0.01 0.02 0.01	0.05	No
West inlet OCU	0.00 0.00 0.00	0.05	Yes
Sludge reception inlet	Blank	Unknown	Unknown
Sludge reception outlet	Blank	0.8	Yes
Thickening plant inlet	Blank	0.5	Yes
Thickening plant outlet	0.00 0.00 0.00	0.6	Yes
Transfer PS inlet	Blank	Unknown	Unknown
Transfer PS outlet	0.01 0.01 0.01	0.6	Yes
New West inlet (OCU 11)	0.00 0.00 0.00	0.5	Yes
Pasteurisation (OCU 12)	0.00 0.00 0.00	0.5	Yes



Mogden Sewage Treatment Works

TW Site Inspection

<p>Date of inspection: 5th December 2019</p>	
<p>Attendees: Mr Steven Maunders and Mr Cliff Rumsey (Thames Water)</p>	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A – Tank empty - approximately 20% of tank covered by grit/sludge – requires further flushing – Hopper 1 full, Hoppers 2 & 3 approx. 30% full – requires draining/over-pumping.</p> <p>Tank 1B – Tank empty - approximately 20% of tank covered by grit/sludge – requires further flushing – Hopper 1 approx. 90% full, Hoppers 2 & 3 approx. 75% full – requires draining/over-pumping – requires draining/over-pumping.</p> <p>Tank 2A – Tank empty – approximately 10% of tank covered by grit/sludge – requires further flushing – Hoppers 1 & 2 approx. 85% full, Hopper 3 full – requires draining/over-pumping.</p> <p>Tank 2B – Tank empty - approximately 30% of tank covered by grit/sludge – requires further flushing – Hoppers 1, 2 & 3 approx. 60% full – requires draining/over-pumping.</p> <p>Tank 3A – Tank empty - approximately 50% of tank covered by grit/sludge – requires further flushing – Hoppers 1, 2 & 3 approx. 75% full – requires draining/over-pumping.</p>	<div style="border: 1px solid black; padding: 10px;"> <p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning</p> </div>

Tank 3B – Tank empty - approximately 90% of tank covered by grit/sludge – requires further flushing – Hoppers 1, 2 & 3 approx. 40% full – requires draining/over-pumping.

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 – Tank empty - approximately 30% of tank covered by grit/sludge – requires further flushing – Hoppers 1, & 3 approx. 60% full, Hopper 2 approx. 40% full – requires draining/over-pumping.

Tank 6B – Tank empty - - approximately 40% of tank covered by grit/sludge – requires further flushing - Hoppers 1, 2 & 3 approximately 40% full - requires draining/over-pumping.

Tank 7A – Tank in use and in process of being retuned – All Amajets in use.

Tank 7B – Tank recently returned – approx. 60% of tank still covered with grit/sludge – Hoppers 1 & 3 empty, Hopper 2 approx. 40% full – requires draining/over-pumping.

Tank 8A – Tank empty - approximately 30% of tank covered by grit/sludge – requires further flushing – Hopper 1 full, Hopper 2 approx. 90% full & Hopper 3 approx. 50% full – requires draining/over-pumping.

Tank 8B – Tank recently returned – approx. 80% of tank still covered with grit/sludge – Hoppers 1 & 2 full, Hopper 3 approx. 40% full – requires draining/over-pumping.

Feed Channel - The level of effluent in both feed channels was approximately 25% - no local odours.

Complaints

The Council directly received no complaints by telephone in the

preceding week.

The Council directly received no complaints by email in the preceding week.

The Council received no complaints by email from MRAG.

Thames Water controller advised that they had received no direct complaints in the preceding week.

Odour Monitors

The odour readouts (H₂S) were unavailable for all of the monitors due to a failure of the Computer Server at the time of the inspection:

Monitor 1		ppm	
Monitor 2		ppm	
Monitor 3		ppm	
Monitor 4		ppm	
Monitor 5		ppm	
Monitor 6		ppm	
Monitor 7		ppm	
Monitor 8		ppm	
Monitor 9		ppm	
Monitor 10		ppm	
Monitor 11		ppm	
Monitor 12		ppm	
Monitor 13		ppm	
Wind Speed		mph	
Wind Direction			

Odour Log (Thames):

Thursday 28th November 2019:

AM – Cool – Cloudy.

All OMU's in use.

Observations/Complaints: "No odour issues."

Operational Issues/Causes: None noted.

Actions: None noted.

PM – Cool – Rain.

All OMU's in use.

Observations/Complaints: "No odour issues."

Operational Issues/Causes: None noted.

Actions: None noted.

Friday 29th November 2019:

AM – Cold – Cloudy with Sunny Spells.

All OMU's in use.

Observations/Complaints: "No odour issues."

Operational Issues/Causes: None noted.

Actions: None noted.

PM – Cold – Clear Night.

All OMU's in use.

Observations/Complaints: "OM2 0.016 22:17 – 22:23 less than 15 mins."

Operational Issues/Causes: None noted.

Actions: None noted.

Saturday 30th November 2019:

AM – Cold – Cloudy with Sunny spells.

All OMU's in use.

Observations/Complaints: "Complaint from Harvesters Close."

Operational Issues/Causes: None noted.

Actions: "Odour Suppression Unit" on E Battery inlets running. Day works jetting down around skips and pad (sic), Tech 1 checked area and no obvious odours detected."

PM – Cold – Clear Night.

All OMU's in use.

Observations/Complaints: "No odour issues."

Operational Issues/Causes: None noted.

Actions: None noted.

Sunday 1st December 2019:

AM – Cool – Cloudy with Sunny spells.

All OMU's in use.

Observations/Complaints: "No odour issues."

Operational Issues/Causes: None noted.

Actions: None noted.

PM – Cold – Clear Night.

All OMU's in use.

Observations/Complaints: "No odour issues."

Operational Issues/Causes: None noted.

Actions: None noted.

Monday 2nd December 2019:

AM – Cold – Sunny.

All OMU's in use.

Observations/Complaints: "OM4 0.016 @ 16:46 – 17:01."

Operational Issues/Causes: "Engine Exhaust. "

Actions: None noted.

PM – Cold – Clear Night.

All OMU's in use.

Observations/Complaints: "OM2 0.018 00:50 – 01:07; 0.023 04:13 – 04:35."

Operational Issues/Causes: "Area checked – no source found."

Actions: None noted.

Tuesday 3rd December 2019:

AM – Cold – Sunny with Patchy Clouds.

All OMU's in use.

Observations/Complaints: "OM2 0.058 @ 06:23; OM2 0.015 16:34 – 17:05."

Operational Issues/Causes: None noted.

Actions: None noted.

PM – Cold – Cloudy.

All OMU's in use.

Observations/Complaints: "No odour issues."

Operational Issues/Causes: None noted.

Actions: None noted.

Wednesday 4th December 2019:

AM – Cool – Sunny with Patch Clouds.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: None noted.

Actions: None noted.

PM – Freezing – Overcast Night.

All OMU's in use.

Observations/Complaints: "O/M 2 peaked to max 0,03ppm 19:34 – 20:15."

Operational Issues/Causes: "Area checked. No obvious odours found. Wind direction from North."

Actions: None noted.

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					
02/12/19	290	1285	267	1842	3858 (TW figure 3426)	5700 (TW figure 5263)
04/12/19	449	1574	618	2641	5857	8498

The sludge stock levels for the West side circular primary settlement tank 1 were **compliant** with the OMP trigger level (500m³) for all of the dates for which data has been provided.

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.

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. Long term project currently initiated to bring these units back into service – will require significant investment.

Digester 5 - In use – seal level approx. 4ft below coping stones – seal weak and bubbling.

Digester 6 - In use – seal level approx. 1ft below coping stones – seal weak and bubbling – ongoing spill requiring anti-foam and clean-up.

As LBH note, this has not been required in the last week.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester.

The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

Digester 7 - Out of use – empty and clean – contractor on site undertaking maintenance.

Digester 8 - In use – seal level approx. 18” below coping stones - seal weak and bubbling.

Digester 9 - In use – seal level approx. 6” below coping stones - seal weak and bubbling – evidence of recent dry spill requiring clean-up.

Digester 10 - In use – seal level approx. 1ft below coping stones - seal weak and bubbling.

Digester 11 - In use – seal level approx. 2ft below surface of coping stones – seal weak and bubbling – ongoing spill requiring anti-foam and clean-up.

Digester 12 - In use – seal level approx. 18” below coping stones - seal weak and bubbling.

Digester 13 - In use – seal level approx. 6” below coping stones – seal weak and bubbling – ongoing spill requiring anti-foam and clean-up. Bell height high requiring draw down of Biogas.

Digester 14 – Out of use – empty and clean – contractor on site undertaking maintenance.

Digester 15 - Out of use – empty and clean – contractor on site undertaking maintenance.

Digester 16 - In use – seal level approx. 6” below coping stones – seal weak and bubbling – ongoing spill requiring anti-foam and clean-up. Bell height high requiring draw down of Biogas

Digester 17 - In use – seal level approx. 2ft below coping stones - seal weak and bubbling.

Digester 18 - Out of use – empty and clean – contractor on site undertaking maintenance.

Digester 19 - In use – seal level approx. 18” below coping stones -

seal weak and bubbling.

Digester 20 - In use – seal level approx. 18” below coping stones – seal weak and bubbling.

GENERAL

Sludge Screening House

Access door open at time of inspection – closed by CR - All other doors closed at time of inspection.

Imported Sludge

Approx. 6 imports daily for 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).

Skips

1x large open skip (1x (8 yard) open skip (containing rag covered with tarpaulin), 1x (8 yard) general waste skip & 1x covered skip (8 yard) located in Service Road by Storm Water Tanks.

1x partially filled small grit skips by Sludge Screening House.

1x empty open container skip in Service Road by PST's 9-12.

1x open 8 yard general waste skip by East Sludge Screening House.

Pasteurisation Plant

Skips containing rag and grit are routinely covered.
General waste and empty skips which are not odorous may be uncovered.

Pasteurisation plant 10 streams running.

East Side Raw Sludge Screen House

Doors open at time of inspection following skip changeover – closed by SM/CR. Drivers should be reminded of importance to close shutter on odour controlled building.

West Side Aeration Lanes (Old)

Battery C aeration feed channel 100% obstructed in one channel – requires jetting.

West side primary settlement tanks (PST)

Rectangular PSTs – no issues

Circular PST's 10, 11 & 12 in use. Tank 9 drained and out of use.

New Works (West Side)

Feed Channel for Aeration Lanes 21-24 completely clear.

“Fluffy” coverage across surface broken down completely since previous visit – visible churn across entirety of tank.

Tanker cleans out the channel on a weekly basis

Odour Control Unit (OCU) performance monitoring – (03/12/19)

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.01	Unknown	Unknown
	0.01		
	0.01		

Main pumping station outlet	0.00 0.00 0.00	0.2	Yes	
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	No data	Unknown	Unknown	
Sludge reception outlet	No data	0.8	Yes	
Thickening plant inlet	No data	Unknown	Unknown	
Thickening plant outlet	0.00 0.00 0.00	0.6	Yes	
Transfer PS inlet	No data	Unknown	Unknown	
Transfer PS outlet	0.00 0.00 0.00	0.6	Yes	
New West inlet (OCU 11)	0.00 0.00 0.00	0.5	Yes	
Pasteurisation Plant (OCU 12)	0.00 0.00 0.00	0.5	Yes	

Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: Thursday 28 th November 2019 (11:10).	
Attendees: Mr L Phillips (LBH) Ms Charlotte Page (Thames Water).	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A Was empty and clean and all hoppers had been drained down to lowest point.</p> <p>Tank 1B Was empty and clean slight grit build up at the end of the tank nearest to the hoppers. All hoppers full and required draining.</p> <p>Tank 2A Was empty and clean all hoppers full and require draining. Slight grit build up at the end of the tank nearest the hoppers.</p> <p>Tank 2B Was empty and clean. All hoppers full and required draining.</p> <p>Tank 3A Tank full no odour.</p> <p>Tank 3B Tank full no odour.</p>	<div style="border: 1px solid black; padding: 10px;"><p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p></div>

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 Tank full no odour.

Tank 6B Tank full no odour.

Tank 7A Tank full no odour.

Tank 7B Tank full no odour.

Tank 8A Tank full no odour.

Tank 8B Tank full no odour.

Amajets- No reports of any faults with amajets. All in working order.

Feed Channel - The level of effluent in both feed channels was low and bottomed out in places - it was murky with some sludgy deposits visible. Most of the channel was free flowing and odourless. No local odours rags, fats or solids.

Complaints

On the 28th November 2019 at 13:52 a telephone complaint was received from a resident of Mogden Lane, Isleworth, which is located to the southeast of the works. The complainant was not contacted as the complaint was passed over on the 11/12/2019. The historic odour monitoring trends were checked around the time of the complaint and showed no excessive readings on odour monitors 1 to 13.

The Council received no complaints by email in the preceding week.

The Council received no complaints by email from MRAG.

Thames Water controller advised that they had received no direct complaints in the preceding week.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection:

Monitor 1	0.007	ppm	11:10
Monitor 2	0.006	ppm	11:10
Monitor 3	0.000	ppm	11:10
Monitor 4	0.005	ppm	11:10
Monitor 5	0.009	ppm	11:10
Monitor 6	0.005	ppm	11:10
Monitor 7	0.005	ppm	11:11
Monitor 8	0.010	ppm	11:11
Monitor 9	0.004	ppm	11:12
Monitor 10	0.005	ppm	11:12
Monitor 11	0.000	ppm	11:12
Monitor 12	0.006	ppm	11:12
Monitor 13	0.005	ppm	11:12
Wind Speed	No data	mph	11:12
Wind Direction	No data	Deg	11:12

Odour Log (Thames) - Photocopies of log entries taken:

Thursday 21st November 2019

AM

Temp: Cold.

Weather: Cloudy W/ sunny spells.

All OMU's in use.

Time: 17:30.

Observations/Complaints: No odour issues found or reported.

Operational Issues/Causes: None noted.

Actions: None noted.

PM

Temp: Cool.

Weather: Rain.

All OMU's in use.

Time: 05:30.

Observations/Complaints. No odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

Friday 22nd November 2019

AM

Temp: Cool.

Weather: Rain W/ Sunny spells.

All OMU's in use.

Time: 07:12.

Observations/Complaints: No odour issues found or reported no spike on trends.

Operational Issues/Causes: None noted.

Actions: None noted.

PM

Temp: Cool.

Weather: Rain.

All OMU's in use.

Time: 05:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

Saturday 23rd November 2019

AM

Temp: Cool.

Weather: Cloudy W sunny spells.

All OMU's in use.

Time: 17:30.

Observations/Complaints. No odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

PM

Temp: Cool.

Weather: Overcast night.

All OMU's in use.

Time: 05:30.

Observations/Complaints. No odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

Sunday 24th November 2019

AM

Temp: Cool.

Weather: Rain.

All OMU's in use.

Time: 17:30.

Observations/Complaints: OM2 spiked at 08:40 - 09:00 max 0.052ppm.

Operational Issues/Causes: East inlet checked no obvious signs of cause hosed down area best practice.

Actions: None Noted.

PM

Temp: Cool.

Weather: Overnight.

All OMU's in use.

Time: 05:30.

Observations/Complaints. No odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

Monday 25th November 2019

AM

Temp: Cool.

Weather: Rain W/ Sunny spells.

All OMU's in use.

Time: 17:20

Observations/Complaints. OM2 0.032ppm 07:54 - 08:14.

Operational Issues/Causes: Area checked no source found no Scada trends between 09:00 - 14:00.

Actions: None noted.

PM

Temp: Cool.

Weather: Rain.

All OMU's in use.

Time: 05:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

Tuesday 26th November 2019

AM

Temp: Cool.

Weather: Cloudy W/ sunny spells.

All OMU's in use.

Time: 17:20.

Observations/Complaints: OM2 0.020ppm 7:03 - 07:17 15 minutes.

Operational Issues/Causes: None noted.

Actions: none noted.

PM

Temp: Cool.

Weather: Overcast Night.

All OMU's in use.

Time: 05:30.

Observations/Complaints: OM2 spiked at 22:04 - 22:17 15 minutes duration max 0.015ppm.

Operational Issues/Causes: None noted.

Actions: None noted.

Wednesday 27th November 2019

AM

Temp: Cool.

Weather: Rain W/ Sunny spells.

All OMU's in use.

Time: 17:30.

Observations/Complaints:

OM2 0.021 16:54 - 17:12.

Operational Issues/Causes: Area checked no source found.

Actions: None noted.

PM

Temp: Cool.

Weather: Rain.

All OMU's in use:

Time: 05:30.

Observations/Complaints: No odour issues found or reported no spikes on trends.

Operational Issues/Causes: None noted.

Actions: None noted.

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					
22/11/19	39	1200	328	1567	3225	4792
25/11/19	0	473	389	862	4042	4904
27/11/19	78	661	473	1212	2889	4101

The sludge stock levels for the West side circular primary settlement tank 1 were **compliant** with the OMP trigger level (500m³) for all of the dates for which data has been provided.

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.

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. Long term project currently initiated to bring these units back into service – will require significant investment.

Digester 5 - in use - weak seal no evidence of spillage.

Digester 6 - in use - weak seal no evidence of spillage.

As LBH note, this has not been required in the last week

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester.

The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

<p>Digester 7 - Out of service.</p> <p>Digester 8 - in use - weak seal no evidence of spillage.</p> <p>Digester 9 - in use - weak seal no evidence of spillage.</p> <p>Digester 10 - in use - weak seal no evidence of spillage.</p> <p>Digester 11 - in use - weak seal no evidence of spillage.</p> <p>Digester 12 - in use - weak seal no evidence of spillage.</p> <p>Digester 13 - in use - weak seal no evidence of spillage.</p> <p>Digester 14 - out of service.</p> <p>Digester 15 - out of service.</p> <p>Digester 16 - in use - weak seal no evidence of spillage.</p> <p>Digester 17 - in use - weak seal no evidence of spillage.</p> <p>Digester 18 - out of service.</p> <p>Digester 19 - in use - weak seal no evidence of spillage.</p> <p>Digester 20 - in use - weak seal no evidence of spillage.</p> <p>No odour in the area observed at times of inspection.</p>	
<p><u>GENERAL</u></p> <p><u>Sludge Screening House</u></p>	

All doors closed at time of inspection however aware that on previous visits these doors have been left open to avoid condensation build up – TW advised that doors being left open to create air flow is a Management decision to improve internal working environment for staff – odour monitors deployed in vicinity to determine whether local odours increase as a consequence. No odours observed.

Imported Sludge

Estimated average of 13 imports per day (high imports due to Chertsey SWT shutdown).

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 jets and hoses were in operation and no excessive build-up of algae.

Skips

No Skips present at the East side screening House- All clear.

Eastside Grit House had 2 x 16 yard skips full with general waste and covered tarpaulin.
2 x Bulk carrier closed.

No Skips present at the West Side gritting house. - All clear.
No odour detected.

East Side Raw Sludge Screen House

Doors closed at time of inspection.

West side primary settlement tanks (PST)

Rectangular PSTs – Circular PST 9 out of service during time of inspection. PST'S 10, 11 and 12 were in use and all hoses were in operation. No Odours observed.

Pasteurisation Plant

All pasteurisation streams (10) in service fully operational.

West Side Aeration Lanes (Old)

Battery C aeration feed channel approximately 100% clear of any obstruction- effluent is flowing with ease, NO rags or build up noticed.

New Works (West Side)

Feed Channel for Aeration Lanes 21-24 free flowing no obstructions or odours. Thames Water advised that the contractor Celvac now only attends intermittently or when needed.

The “Fluffy” coverage (obscured internal dividing walls within tank) that had been observed on previous visits had lightened in texture revealing the dividing walls within the tank. There were no concerning odours around this area.

Odour Control Unit (OCU) Performance Monitoring – (26th November 2019)

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.01 0.01 0.01 Ave: 0.01	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00 Ave: 0.00	0.2	Yes
East OCU	0.00 0.00 0.00 Ave: 0.00	0.05	Yes
West inlet OCU	0.00 0.00 0.00 Ave: 0.00	0.05	Yes
Sludge reception inlet	No data	Unknown	Unknown
Sludge reception outlet	No data	0.8	Yes
Thickening plant inlet	No data	Unknown	Unknown
Thickening plant outlet	0.00 0.00 0.00 Ave: 0.00	0.6	Yes
Transfer PS inlet	No Data	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00 Ave: 0.00	0.6	Yes
New West inlet (OCU 11)	0.00	0.5	Yes

	0.00 0.00 Ave: 0.00			
OCU 12 (Pasteurisation Plant)	0.00 0.00 0.00 Ave: 0.00	0.5	Yes	

Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: Thursday 21 st November 2019 (12:00)	
Attendees: Mr Zaheer Kadri (LBH), Mr Eric Samuel (LBH) and Ms Charlotte Page (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A was empty and clean (tank did not need flushing) and hoppers 1, 2 and 3 had all been drained down.</p> <p>Tank 1B was empty and clean (tank did not need flushing) and hoppers 1, 2 and 3 had all been drained down. There was some patches of wet sludge across the surface of the tank (River Outlet end).</p> <p>Tank 2A was empty and clean (tank did not need flushing) and hoppers 1, 2 and 3 had been drained down however hopper 3 was full of effluent. There were wet sludge patches near the hopper end.</p> <p>Tank 2B was empty and clean (tank did not need flushing) and hoppers 1, 2 and 3 had all been drained down.</p>	<div style="border: 1px solid black; padding: 10px;"><p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p></div>

Tank 3A was empty and clean (tank did not need flushing), however Hoppers 1, 2 and 3 were all empty. There was some dry grit across the surface.

Tank 3B was empty and clean (tank did not need flushing), however Hoppers 1, 2 and 3 were all empty. There was some dry grit across the surface.

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 was empty and clean (tank did not need flushing), however hoppers 1, 2 and 3 were all empty. There was some dry grit across the surface at the hopper end and around the middle of the tank.

Tank 6B was empty and clean (tank did not need flushing), however hoppers 1, 2 and 3 were all empty. There was some dry grit across the surface at the hopper end.

Tank 7A was empty and clean (tank did not need flushing), however hoppers 1 and 2 needed draining down (Shallow hoppers) and hopper 3 was clear of effluent. There was some wet grit/sludge across the surface of the tank.

Tank 7B was empty and clean (tank did not need flushing), however hoppers 1, 2 and 3 needed draining down (Shallow hoppers). There was some wet grit/sludge across the surface of the tank.

Tank 8A and Tank 8B were both clean and empty however there was some over flow from the Hopper end which would need flushing. Hoppers 1, 2 and 3 all needed draining down in both tanks.

Amajets- No reports of any faults with amajets. All in working order.

Feed Channel - The level of effluent in both feed channels was low and bottomed out in places - it was murky with some sludgy deposits visible. Most of the channel was free flowing and odourless. No local odours rags, fats or solids.

Complaints

The Council received no complaints by telephone in the preceding week.

The Council received 1 complaint by email in the preceding week from the Harvester Road area of Isleworth TW7. LBH were CCd in to an email chain between the complainant and Thames Water regarding the odours. Gayle Thomas from Thames Water was able to provide a substantial response to the complainant. No times or dates of the incident were given so we were unable to observe the trends overview to see if any spikes had occurred.

The Council received No complaints by email from MRAG.

Thames Water controller advised that they had received no direct complaints in the preceding week.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection:

Monitor 1	0.005	ppm	12:23
Monitor 2	0.005	ppm	12:23
Monitor 3	0.000	ppm	12:23

Monitor 4	0.004	ppm	12:23
Monitor 5	0.009	ppm	12:23
Monitor 6	0.008	ppm	12:23
Monitor 7	No data	ppm	12:23
Monitor 8	0.004	ppm	12:23
Monitor 9	0.004	ppm	12:23
Monitor 10	0.004	ppm	12:23
Monitor 11	0.000	ppm	12:23
Monitor 12	0.004	ppm	12:23
Monitor 13	0.005	ppm	12:23
Wind Speed	No data	mph	12:23
Wind Direction	No data	Deg	12:23

Odour Log (Thames) - Photocopies of log entries taken:

Thursday 14th November 2019

AM – Rain and cool.

All OMU's in use.

Time: 17:30.

Observations/Complaints: No odour issue.

Operational Issues/Causes: None noted.

Actions: None noted.

PM – Clear night and cold.

All OMU's in use.

Time: 05:30.

Observations/Complaints. No odour issues.

Operational Issues/Causes: No odour issues.

Actions: None noted.

Friday 15th November 2019

AM – Rain with sunny spells.

All OMU's in use.

Time: 17:30.

Observations/Complaints: No odour issues reported.

Operational Issues/Causes: No odour issues reported.

Actions: None noted.

PM – Rain and cold.

All OMU's in use.

Time: 05:30.

Observations/Complaints: No odour issues reported.

Operational Issues/Causes: None noted.

Actions: None noted.

Saturday 16th November 2019

AM – Cloudy and cool.

All OMU's in use.

Time: 17:30.

Observations/Complaints. No odour issues reported.

Operational Issues/Causes: No odour issues.

Actions: None noted.

PM – Cloudy and cool.

All OMU's in use.

Time:05:30.

Observations/Complaints. No odour issues.

Operational Issues/Causes: No odour identified.

Actions: None Noted.

Sunday 17th November 2019

AM – Cloudy and sunny spells.

All OMU's in use.

Time: 17:30.

Observations/Complaints. No odour issues reported.

Operational Issues/Causes: No odour issues reported.

Actions: None Noted.

PM – Rain and cool.

All OMU's in use.

Time: 05:30.

Observations/Complaints. No odour issues reported.

Operational Issues/Causes: No odour issues reported.

Actions: None noted.

Monday 18th November 2019

AM – Cloudy with sunny spells.

All OMU's in use.

Time: 17:20.

Observations/Complaints. OM8 spiked to 0.025ppm between 15:09-15:26 (under 15minute duration).

Operational Issues/Causes: No odour issues reported- area checked.

Actions: None.

PM – Overcast night/ freezing.

All OMU's in use.

Time: 05:30.

Observations/Complaints. No odour issues.

Operational Issues/Causes: None.

Actions: No odour issues.

Tuesday 19th November 2019

AM – Cloudy with sunny spells.

All OMU's in use.

Time: 17:20.

Observations/Complaints: No odour issues.

Operational Issues/Causes: No odours found.

Actions: none noted.

PM – Clear night and cold.

All OMU's in use.

Time: 05:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: None odours found.

Actions: None noted.

Wednesday 20th November 2019

AM – Cloudy with sunny spells.

All OMU's in use.

Time: 17:30.

Observations/Complaints:

OM2 spiked twice: 0.020ppm @ 06:15-06:30, 0.020ppm @ 07:43-07:56.

Operational Issues/Causes: None odour source found.

Actions: None noted.

PM –clear night and cold.

All OMU's in use.

Time: 05:30.

Observations/Complaints:

Customer complaint received. Heather Close – The South West corner of the site reports of strong odour.

Operational Issues/Causes: Walkabout completed no evidence of any odours being generated from e-battery inlet, PAS area and digesters nothing of note on trends.

Actions: Confirmed all OCUs on site area operating normally.

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					
15/11/19	0	1304	394	1698	3074	4772
19/11/19	0	1261	740	2001	3563	5564

The sludge stock levels for the West side circular primary settlement tank 1 were **compliant** with the OMP trigger level (500m³) for all of the dates for which data has been provided.

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.

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. Long term project currently initiated to bring these units back into service - will require significant investment.

Digester 5 - in use - seal level approx. 1ft below coping stones - good seal thick in texture.

As LBH note, this has not been required in the last week

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester.

The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

Digester 6 - in use - seal level approx. 1ft below coping stones - weak watery seal in appearance.

Digester 7 - Out of service.

Digester 8 - in use - seal level approx. 1ft below coping stones - good seal thick in texture.

Digester 9 - in use - seal level approx. 1ft below coping stones - weak watery seal in appearance.

Digester 10 - in use - seal level approx. 1ft below coping stones - weak watery seal in appearance.

Digester 11 - in use - seal level approx. 1ft below coping stones - good seal thick in texture.

Digester 12 - in use - seal level approx. 1ft below coping stones - good seal thick in texture.

Digester 13 - in use - seal level approx. 1ft below coping stones - good seal thick in texture.

Digester 14 - out of service.

Digester 15 - out of service.

Digester 16 - in use - seal level approx. 1ft below coping stones - good seal thick in texture.

Digester 17 - in use - seal level approx. 1ft below coping stones - good seal thick in texture.

Digester 18 - out of service.

<p>Digester 19 - in use - seal level approx. 1ft below coping stones - good seal thick in texture.</p> <p>Digester 20 - in use - seal level approx. 1ft below coping stones - good seal thick in texture.</p> <p>No odour in the area observed at times of inspection</p>	
<p><u>GENERAL</u></p> <p><u>Sludge Screening House</u></p> <p>All doors closed at time of inspection however aware that on previous visits these doors have been left open to avoid condensation build up - TW advised that doors being left open to create air flow is a Management decision to improve internal working environment for staff - odour monitors deployed in vicinity to determine whether local odours increase as a consequence. No odours observed.</p> <p><u>Imported Sludge</u></p> <p>Estimated average of 12 imports per day (2 deliveries made due to resource). Deliveries made on Friday 15th and Tuesday 19th November 2019.</p> <p><u>Final Settlement Tanks East Side of Works</u></p> <p>The 8 circular tanks previously used as PSTs are now being used as final tanks (71-78). All jets and hoses were in operation and no excessive build-up of algae.</p>	

Skips

No Skips present at the **East side screening House** - All clear.

Eastside Grit House had 2 x 12 yard skips full with general waste and partially covered

1 x Bulk carrier (OPEN) with metals and other inert material inside - this was uncovered (used for general waste).

No Skips present at the **West Side gritting house** - All clear.

No odour detected.

East Side Raw Sludge Screen House

Doors closed at time of inspection.

West side primary settlement tanks (PST)

Rectangular PSTs – No issues noticed at time of inspection

Circular PST's 9, 10 and 12 were in use and all hoses were in operation. Circular PST number 11 had been drained down and out of service. No Odours observed.

Pasteurisation Plant

Pasteurisation plant had 2 streams out of twelve that were out of service. All remaining pasteurisation streams (10) in service fully operational.

West Side Aeration Lanes (Old)

Skips containing rag and grit are routinely covered. General waste and empty skips which are not odorous may be uncovered.

Battery C aeration feed channel approximately 100% clear of any obstruction- effluent is flowing with ease, NO rags or build up noticed.

New Works (West Side)

Feed Channel for Aeration Lanes 21-24 free flowing no obstructions or odours. The contractor Celvac now only attends intermittently or when needed.

The “Fluffy” coverage (obscured internal dividing walls within tank) that had been observed on previous visits had lightened in texture revealing the dividing walls within the tank. There were no concerning odours around this area.

Odour Control Unit (OCU) Performance Monitoring - (19th November 2019)

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.01 0.01 0.01 Ave: 0.01	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00 Ave: 0.00	0.2	Yes
East OCU	0.00 0.00 0.00 Ave: 0.00	0.05	Yes
West inlet OCU	0.00	0.05	Yes

	0.00 0.00 Ave: 0.00		
Sludge reception inlet	No data	Unknown	Unknown
Sludge reception outlet	No data	0.8	Yes
Thickening plant inlet	No data	Unknown	Unknown
Thickening plant outlet	0.00 0.00 0.00 Ave: 0.00	0.6	Yes
Transfer PS inlet	No Data	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00 Ave: 0.00	0.6	Yes
New West inlet (OCU 11)	0.00 0.00 0.00 Ave: 0.00	0.5	Yes
OCU 12 (Pasteurisation Plant)	0.00 0.00 0.00 Ave: 0.00	0.5	Yes



London Borough of Hounslow

Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: Thursday 14th November 2019 (12:05pm)

Attendees: Mr I Inman (London Borough of Hounslow) and Miss C Page (Thames Water)

LB Hounslow Observation

Thames Water Action / Response

Weather

Recent heavy rain meant the site was near to full capacity.

Storm Water Storage Tanks (SWST)

Tank 1A was completely full.
No Amajets were in operation.

Tank 1B was completely full.
No Amajets were in operation.

Tank 2A was completely full.
No Amajets were in operation.

Tank 2B was completely full.
No Amajets were in operation.

Tank 3A was completely full.
Amajets 1, 2 & 3 were all in operation.

As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.

Tank 3B was completely full.
Amajets 1, 2 & 3 were all in operation.

Tanks 4A, 4B, 5A & 5B All tanks are covered and odour controlled.
Unable to gauge condition as lighting system still not working.

Tank 6A was completely full.
Amajets 1, 2 & 3 were all in operation.

Tank 6B completely full.
Amajets 1, 2 & 3 were all in operation.

Tank 7A was completely full.
Amajets 1, 2 & 3 were all in operation.

Tank 7B was completely full.
Only Amajet 1 was in operation.

Tank 8A was completely full.
Amajets 1, 2 & 3 were all in operation.

Tank 8B was completely full.
Only Amajets 1 & 2 were in operation.

Feed Channel - The channel was completely full and almost at maximum level.

Thames advised of planned works to replace all of the hopper valves to prevent back flow of effluent.

They are still also awaiting parts in order to bring the wash water pump system back into operation.

Complaints

The Council has received no complaints in the preceding week.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection: Thursday 14th November 2019 at 12:20.

Monitor 1	0.007	ppm	12:20
Monitor 2	0.008	ppm	12:20
Monitor 3	0.000	ppm	12:20
Monitor 4	0.004	ppm	12:20
Monitor 5	0.009	ppm	12:20
Monitor 6	-----	ppm	12:20
Monitor 7	-----	ppm	12:20
Monitor 8	0.007	ppm	12:20
Monitor 9	0.007	ppm	12:20
Monitor 10	0.007	ppm	12:20
Monitor 11	0.000	ppm	12:20
Monitor 12	0.006	ppm	12:20
Monitor 13	0.000	ppm	12:20
Wind Speed	0.206	mph	12:20
Wind Direction	138.677	°	12:20

Odour Log (Thames) - Photocopies of log entries taken:

Thursday 7th November 2019

DAY SHIFT

Temp. Cool.

Weather. Rain.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM5 2 spikes less than 15 mins.

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. OM2 0.022ppm at 21:01-21:18.
0.038ppm at 20:06-20:31.
OM5 0.023ppm at 19:46-20:46.
Operational issues / causes observed. Area checked no source found.
Actions Taken. Blank.

Friday 8th November 2019

DAY SHIFT

Temp. Cold.

Weather. Clear night.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. No odour spikes.

Operational issues / causes observed. Smell of biogas in air during siloxane plant regeneration.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Cold.

Weather. Clear night.

Odour Readings. All OMU's in use.

Time: 05:30.

Observations / Customer Complaint. OM4 spiked at 01:00-02:00, max 0.015ppm.

Operational issues / causes observed. Blank.

Actions Taken. Blank.

Saturday 9th November 2019

DAY SHIFT

Temp. Cold.

Weather. Rain.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM2 spiked to 0.03 at 17:09-17:28.

Operational issues / causes observed. Jerry visited area could not find odour source.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Cold.

Weather. Rain.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. OM2 spiked at 21:51-22:09, max 0.019ppm.

Operational issues / causes observed. Blank.

Actions taken. Blank.

Sunday 10th November 2019

DAY SHIFT

Temp. Cold.

Weather. Rain w/sunny spells.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. No odours

Operational issues / causes observed. Blank.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Cold.

Weather. Rain.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. OM2 spiked at 22:20-22:45, max 0.051ppm.

Operational issues / causes observed. No obvious odour source found.

Actions Taken. East inlet hosed down.

Monday 11th November 2019

DAY SHIFT

Temp. Cool.

Weather. Sunny w/patchy clouds.

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. Blank.

Actions Taken. Blank.

Tuesday 12th November 2019

DAY SHIFT

Temp. Cool.

Weather. Sunny w/patchy clouds.

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.

Wednesday 13th November 2019

DAY SHIFT

Temp. Cold.

Weather. Sunny w/patchy clouds.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. No odour issues.

Operational issues / causes observed. Blank.

Action Taken. Blank.

NIGHT SHIFT

Temp. Cool.

Weather. Rain.

Odour Readings. All OMU's in operation.

Time: Blank.

Observations / Customer Complaint. No odour issues.

Operational issues / causes observed. Blank.

Actions Taken. Blank.

Sludge Dip Records

Date	West PSTs	West PSTs	West PSTs	West Total	East PSTs	Grand Total
	1	2	3			
	All units in m ³					
OMP limit	500					
08/11/2019	0	1012	61	1073	2100	3173
11/11/2019	0	1012	206	1218	2400	3618
13/11/2019	39	1448	328	1815	3411	5226

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 70 imports of sludge over the last week (10 per day).

No.5 Pumping Station

The doors of No.5 pumping station were closed at the time of the inspection.

Raw Sludge Screening House

The large roller shutter door of the Raw Sludge Screening building was open at the time of the inspection, although unable to establish why?

Digesters

Digesters 1-4 Out of use (permanent). Thames advised of a long term

As LBH note, this has not been required in the last week.

project currently initiated to bring these units back into service that will require significant investment.

Digesters 5 and 6: Both were in service and spills had occurred which had flowed over the retaining coping stones of both digesters.

Digester 7: Out of service.

Digester 8: In service and a spill had occurred which had flowed over the retaining coping stone. It was also noted that the bell was very high.

Digesters 9 & 10: Both were in service and had very high wet seal levels (almost at the point of spilling over the retaining coping stones) that were bubbling of gas.

Digester 11: In service and a spill had occurred over the retaining coping stone.

Digester 12: In service and had a very high wet seal level (almost at the point of spilling over the retaining coping stone) that was bubbling of gas.

Digester 13: In service and a spill had occurred which had flowed over the retaining coping stone.

Digesters 14 & 15: Both were out of service.

Digester 16: Unable to access area around the digester due to spill at digester 18.

Digester 17: Had a wet sloppy seal that was bubbling off gas.

Digester 18: A massive spill had occurred around the entire area surrounding the digester. Two site operatives were present attempting to clear the spill that was in places in excess of 8 inches deep.

Digesters 19 & 20: Both were in service but had wet sloppy seals that were bubbling off gas.

There was evidence of anti-foaming agent in use and TW advised that

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester. The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

this is applied daily to all of the digesters that are operational.

The spill around digester 18 was the most significant ever witnessed by the inspecting council officer.

Spillage cleared post inspection

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 and no issues were evident.

Skips

On the East side there was one 20yd open bulk carrier that was empty. There were two 8yds open skips, one of which contained general non-inert rubbish and one was approx 30% full of rag, which was only part covered with a tarpaulin and had weeds growing out of it. Also present was one closed 14yds skip that was empty.

In the area next to STW 1A there was an open 14yds skip that contained scrap metal pumps.

On the service road next to raw sludge screening building was an 8yds open skip that contained rag and other waste, which was part covered with a tarpaulin.

On the West side there were two 40yds closed bulk carriers that were both empty.

East Side Screen House

The doors to the screen house building were closed at the time of the inspection. However, TW were unable to confirm how many or which

Skips containing rag and grit are routinely covered. General waste and empty skips which are not odorous may be uncovered.

screens were in operation?

Return Activated Sludge Channel

The nearside RAS channel (which runs in the ground between FST's 61-64 & 65-67) was clogged along 30% of the near-side channel.

TW were advised this needed to be rectified to avoid potential insect and odour problems.

West Side Aeration Lanes (Old)

It was noted that lanes 17 & 18 had large floating deposits on the tanks surface that appeared to be hindering the process?

There was also overpumping being carried out into the feed channel on the south side of the lanes that was causing sludge to splash over the area and retaining wall.

West side primary settlement tanks (PST)

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

Circular PST 9 was in service and had fat across 15% of the surface in front of the sweep arm.

Circular PST 10 was out of service.

Circular PST's 11 & 12 had clean fat free surfaces.

Pasteurisation Plant

The pasteurisation plant is in service. TW advised all 10 streams were in service.

Tanker cleans out the channel on a weekly basis

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 were much improved. The tops of the internal dividing walls were clearly visible and liquid inside the tanks appeared free flowing.

Nearly all of the sprinklers appeared to be in operation.

The mixed liquor feed channel serving E-Battery was clear of debris and free flowing along its entire length.

TW advised a tanker crew is regularly on site undertaking clearance of any clogged areas.

New Inlet Works (West Side)

The Archimedean screw on No.13 had been removed for servicing of the channel.

Odour Control Unit (OCU) performance monitoring: 11/11/2019

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.00 0.01 0.01	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00	0.2	Yes
East OCU	0.00 0.00 0.00	0.05	No
West inlet OCU	0.00	0.05	Yes

	0.00 0.00		
Sludge reception inlet	Blank	Unknown	Unknown
Sludge reception outlet	Blank	0.8	Yes
Thickening plant inlet	Blank	0.5	Yes
Thickening plant outlet	0.00 0.00 0.00	0.6	Yes
Transfer PS inlet	Blank	Unknown	Unknown
Transfer PS outlet	0.01 0.01 0.00	0.6	Yes
New West inlet (OCU 11)	0.00 0.00 0.00	0.5	Yes
Pasteurisation (OCU 12)	0.00 0.00 0.00	0.5	Yes



Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: 7 th November 2019	
Attendees: Mr Steven Maunders and Miss Charlotte Page (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A – Tank approximately 50% full – all Amajets in use.</p> <p>Tank 1B – Tank approximately 50% full – all Amajets in use.</p> <p>Tank 2A – Tank approximately 50% full – all Amajets in use.</p> <p>Tank 2B – Tank approximately 50% full – all Amajets in use.</p> <p>Tank 3A – Tank full – all Amajets in use.</p> <p>Tank 3B – Tank full – all Amajets in use.</p> <p>Tanks 4A, 4B, 5A & 5B which are covered and odour controlled were all empty - unable to gauge condition as lighting system still not working.</p> <p>Tank 6A – Tank approximately 75% full – all Amajets in use.</p> <p>Tank 6B – Tank approximately 75% full – all Amajets in use.</p>	<div style="border: 1px solid black; padding: 10px;"><p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p></div>

Tank 7A – Tank approximately 50% full – all Amajets in use.

Tank 7B – Tank approximately 50% full – all Amajets in use.

Tank 8A – Tank approximately 50% full – all Amajets in use.

Tank 8B – Tank approximately 50% full – all Amajets in use.

Feed Channel - The level of effluent in both feed channels was approximately 50% - no local odours.

Complaints

The Council directly received no complaints by telephone in the preceding week.

The Council directly received no complaints by email in the preceding week.

The Council received no complaints by email from MRAG.

Thames Water controller advised that they had received no direct complaints in the preceding week.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection:

Monitor 1	0.007	ppm	12:30
Monitor 2	0.006	ppm	12:30
Monitor 3	0.000	ppm	12:30
Monitor 4	0.004	ppm	12:30
Monitor 5	0.015	ppm	12:30

Monitor 6	No Data	ppm	12:30
Monitor 7	No Data	ppm	12:30
Monitor 8	0.006	ppm	12:30
Monitor 9	0.005	ppm	12:30
Monitor 10	0.005	ppm	12:30
Monitor 11	0.000	ppm	12:30
Monitor 12	0.006	ppm	12:30
Monitor 13	0.000	ppm	12:30
Wind Speed	11.7	mph	
Wind Direction	260°		

Odour Log (Thames):

Thursday 31st October:

AM – Cool – Sunny with Patchy Cloud.

All OMU's in use.

Observations/Complaints: "No odour issues."

Operational Issues/Causes: None noted.

Actions: None noted.

PM – Cool – Rain.

All OMU's in use.

Observations/Complaints: "No odour issues."

Operational Issues/Causes: None noted.

Actions: None noted.

Friday 1st November:

AM – Cool – Sunny with Patchy Cloud.

All OMU's in use.

Observations/Complaints: "No odour issues."

Operational Issues/Causes: None noted.

Actions: None noted.

PM – Cool – Clear Night.

All OMU's in use.

Observations/Complaints: "No odour issues."

Operational Issues/Causes: None noted.

Actions: None noted.

Saturday 2nd November:

AM – Cool – Rain with Sunny spells.

All OMU's in use.

Observations/Complaints: "OM2 0.024 05:24-05:41."

Operational Issues/Causes: None noted.

Actions: None noted.

PM – Cool – Rain.

All OMU's in use.

Observations/Complaints: "OM2 0.022ppm 03:56-04:10."

Operational Issues/Causes: "Area checked – no odour detected."

Actions: None noted.

Sunday 3rd November:

AM – Cool – Cloudy with Sunny spells.

All OMU's in use.

Observations/Complaints: "OM1 0.016 13:27-13:32, OM8 0.017 14:41-14:46, OM2 0.027 11:55-12:12, OM2 0.103 07:34-08:04."

Operational Issues/Causes: "Area checked no source found."

Actions: None noted.

PM – Cool – Rain.

All OMU's in use.

Observations/Complaints: "OM2 0.024ppm 18:23-19:02."

Operational Issues/Causes: "East inlet area checked. Skip area hosed down."

Actions: None noted.

Monday 4th November 2019:

AM – Cool – Rain with Sunny spells.

All OMU's in use.

Observations/Complaints: "OM2 spiked at 07:26-07:38 & 10:30-10:42 <15 mins duration max 0.029."

Operational Issues/Causes: "No odours detected in vicinity of East Inlet. "

Actions: None noted.

PM – Cool – Clear Night.

All OMU's in use.

Observations/Complaints: "No odour issues."

Operational Issues/Causes: None noted.

Actions: None noted.

Tuesday 5th November 2019:

AM – Cool – Cloudy.

All OMU's in use.

Observations/Complaints: "No odour issues."

Operational Issues/Causes: None noted.

Actions: None noted.

PM – Cool – Clear Night.

All OMU's in use.

Observations/Complaints: "OM8 0.018 02:40-02:52."

Operational Issues/Causes: None noted.

Actions: None noted.

Wednesday 6th November 2019:

AM – Cool – Cloudy.

All OMU's in use.

Observations/Complaints: "No odour issues."

Operational Issues/Causes: None noted.

Actions: None noted.

PM – Cool – Rain.

All OMU's in use.

Observations/Complaints: "OM2 0.056 21:47-22:01 <15 mins."

Operational Issues/Causes: "Area checked no source found."

Actions: None noted.

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					
01/11/19	79	1491	183	1753	2561	4314
05/11/19	0	1158	824	1982	2737	4719

The sludge stock levels for the West side circular primary settlement tank 1 were **compliant** with the OMP trigger level (500m³) for all of the dates for which data has been provided.

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.

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. Long term project currently initiated to bring these units back into service – will require significant investment.

Digester 5 - In use - seal level approx. 1ft below coping stones - seal weak and bubbling.

Digester 6 - In use - seal level approx. 3ft below coping stones - seal weak and bubbling.

Digester 7 - Out of use - empty and clean - contractor on site undertaking maintenance.

As LBH note, this has not been required in the last week.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester.
The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

Digester 8 - In use - seal level approx. 4ft below coping stones - seal weak and bubbling.

Digester 9 - In use - seal level approx. 1ft below coping stones - seal weak and bubbling.

Digester 10 - In use - seal level approx. 2ft below coping stones - seal weak and bubbling.

Digester 11 - In use - seal level approx. 1ft below surface of coping stones - seal weak and bubbling.

Digester 12 - Out of use - empty and clean - contractor on site undertaking maintenance.

Digester 13 - In use - seal level approx. 1ft below coping stones - seal weak and bubbling - evidence of prior spill requiring clean-up.

Digester 14 - Out of use - empty and clean - contractor on site undertaking maintenance.

Digester 15 - Out of use - empty and clean - contractor on site undertaking maintenance.

Digester 16 - In use - seal level approx. 1ft below coping stones - seal weak and bubbling.

Digester 17 - In use - seal level approx. 2ft below coping stones - seal weak and bubbling.

Digester 18 - Out of use - empty and clean - contractor on site undertaking maintenance.

Digester 19 - In use – seal level approx. 3ft below coping stones - seal weak and bubbling.

Digester 20 - In use - seal level approx. 3ft below coping stones - seal weak and bubbling.

GENERAL

Sludge Screening House

All doors closed at time of inspection.

Imported Sludge

Approx. 12 imports daily for 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).

Skips

1x large open skip (1x (8 yard) open skip (containing rag covered with tarpaulin), 1x (8 yard) general waste skip & 1x covered skip (8 yard) located in Service Road by Storm Water Tanks.

1x partially filled small grit skips by Sludge Screening House.

2x empty enclosed container skips in Service Road by PST's 9-12.

Pasteurisation Plant

Pasteurisation plant 10 streams running.

East Side Raw Sludge Screen House

Doors closed at time of inspection.

West Side Aeration Lanes (Old)

Battery C aeration feed channel approximately 90% obstructed in one channel – requires jetting.

Tanker cleans out the channel on a weekly basis

West side primary settlement tanks (PST)

Rectangular PSTs – no issues

Circular PST's 10, 11 & 12 in use. Tank 9 drained and out of use.

New Works (West Side)

Feed Channel for Aeration Lanes 21-24 completely clear.

“Fluffy” coverage across surface broken down completely since previous visit – visible churn across entirety of tank.

Odour Control Unit (OCU) performance monitoring – (04/11/19)

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.05 0.05 0.05	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00	0.2	Yes
East OCU	0.00 0.00 0.00	0.05	Yes
West inlet OCU	0.01 0.01 0.01	0.05	Yes
Sludge reception inlet	No data	Unknown	Unknown
Sludge reception outlet	No data	0.8	Yes

Thickening plant inlet	No data	Unknown	Unknown	
Thickening plant outlet	0.00 0.00 0.00	0.6	Yes	
Transfer PS inlet	No data	Unknown	Unknown	
Transfer PS outlet	0.00 0.00 0.00	0.6	Yes	
New West inlet (OCU 11)	0.00 0.00 0.00	0.5	Yes	
Pasteurisation Plant (OCU 12)	0.00 0.00 0.00	0.5	Yes	



Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: 31 th October 2019	
Attendees: Mr L Phillips and Ms Charlotte Page (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A - Tank empty clean - All hoppers drained to lowest point.</p> <p>Tank 1B - Tank empty clean - Hoppers 1 & 2 had been fully drained. Hopper 3 required draining approx. 25% full.</p> <p>Tank 2A - Tank empty and flushed clean - All hoppers required draining approx. 50% full.</p> <p>Tank 2B - Tank empty clean - All hoppers full & require draining.</p> <p>Tank 3A - Tank empty clean - All hoppers full & require draining.</p> <p>Tank 3B - Tank empty with slight grit build up approximately 30% of tank covered by grit requires further flushing. All Hoppers require draining approx. 60% full.</p> <p>Tanks 4A, 4B, 5A & 5B which are covered and odour controlled were all empty - unable to gauge condition as lighting system still not working.</p>	<div style="border: 1px solid black; padding: 10px;"><p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p></div>

Tank 6A - Tank empty clean - All hoppers full & require draining.

Tank 6B - Tank empty slight grit build up approximately 20% of tank covered by grit tank requires further flushing. Hoppers 1 & 2 require draining, approximately 50% full. Hopper 3 approximately 30% full & requires draining.

Tank 7A - Tank in use and in process of being retuned - All Amajets in use.

Tank 7B - Tank recently returned - approx. 90% of tank still covered.

Tank 8A - Tank empty and flushed clean. Hoppers 1, 2 & 3 full, requires draining.

Tank 8B - Tank empty and flushed clean. Hoppers 1, 2 & 3 full, requires draining.

Feed Channel - The level of effluent in both feed channels was low – no local odours.

Complaints

The Council directly received no complaints by telephone in the preceding week.

The Council directly received no complaints by email in the preceding week.

The Council received no complaints by email from MRAG.

Thames Water controller advised that they had received no direct complaints in the preceding week.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing

data at time of inspection 12:20 31/10/2019 :

Monitor 1	0.004	ppm	12:21
Monitor 2	0.005	ppm	12:21
Monitor 3	0.000	ppm	12:21
Monitor 4	0.003	ppm	12:21
Monitor 5	0.005	ppm	12:21
Monitor 6	-----	ppm	12:21
Monitor 7	-----	ppm	12:21
Monitor 8	0.004	ppm	12:22
Monitor 9	0.004	ppm	12:22
Monitor 10	0.004	ppm	12:22
Monitor 11	0.000	ppm	12:22
Monitor 12	0.004	ppm	12:22
Monitor 13	0.000	ppm	12:22
Wind Speed	3.3	mph	12:22
Wind Direction	260°		12:22

Odour Log (Thames)

Thursday 24th October:

AM

Temp: Cool.

Weather: Rain.

All OMU's in use.

Time: 17:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

PM

Temp: Cool.

Weather: Cloudy.

All OMU's in use.

Time: 05:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

Friday 25th October:

AM

Temp: Cool.

Weather: Cloudy.

All OMU'S in use.

Time: 17:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

PM

Temp: Cool.

Weather: Rain.

All OMU's in use.

Time: 17:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

Saturday 26th October

AM

Temp: Warm.

Weather: Rain.

All OMU's in use.

Time: 17:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

PM

Temp: Cold.

Weather: Rain.

All OMU's in use.

Time: 05:30.

Observations/Complaints: OM4 0.025 at 23:01 – 23:58.

Operational Issues/Causes: Engine exhaust.

Actions: None noted.

Sunday 27th October:

AM

Temp: Cold.

Weather: Sunny.

All OMU's in use.

Time: 17:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

PM

Temp: Freezing.

Weather: Clear night.

All OMU's in use.

Time: 05:30.

Observations/Complaints: OM4 0.017 at 21:02 – 21:58, OM5 – 0.017 at 22:31 – 22:44.

Operational Issues/Causes: None noted.

Actions: None noted.

Monday 28th October 2019:

AM

Temp: Cold.

Weather: Sunny with patch clouds.

All OMU's in use.

Time: 17:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

PM

Temp: Cold.

Weather: Overcast night.

All OMU's in use.

Time: 05:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

Tuesday 29th October 2019:

AM

Temp: Cold.

Weather: Cold Sunny with Patchy Clouds.

All OMU's in use.

Time:

Observations/Complaints: No odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

PM

Temp: Cool.

Weather: Clear night.

All OMU's in use.

Time: 05:30

Observations/Complaints: OM9 – 0.017 at 22:22 – 22:31.

Operational Issues/Causes: None noted.

Actions: None noted.

Wednesday 30th October 2019:

AM

Temp: Cool.

Weather: Sunny with patchy clouds.

All OMU's in use.

Time: 17:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

PM

Temp: Cold.

Weather: Clear.

All OMU's in use.

Time: 05:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

Sludge Dip Records

Date	West PSTs	West PSTs	West PSTs	West Total	East PSTs	Grand Total
	1	2	3			
	All units in m ³					
OMP limit	500					
28/10/2019	0	970	183	1153	2737	3890
30/10/2019	0	970	0	970	2400	3370

The sludge stock levels for the West side circular primary settlement tank 1 were **compliant** with the OMP trigger level (500m³) for all of the dates for which data has been provided.

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.

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. Long term project currently initiated to bring these units back into service - will require significant investment.

Digester 5 - In use - weak sloppy seal no evidence of spillage.

Digester 6 - In use - weak sloppy seal no evidence of spillage.

Digester 7 - Out of use - empty and clean - contractor on site undertaking maintenance.

Digester 8 - In use - weak sloppy seal no evidence of spillage.

Digester 9 - In use - weak sloppy seal no evidence of spillage.

As LBH note, this has not been required in the last week.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester.
The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

Digester 10 - In use - weak sloppy seal no evidence of spillage.

Digester 11 - In use - weak sloppy seal no evidence of spillage.

Digester 12 - In use - weak sloppy seal no evidence of spillage.

Digester 13 - In use - weak sloppy seal no evidence of spillage.

Digester 14 - Out of use - empty and clean - contractor on site undertaking maintenance.

Digester 15 - In use - weak sloppy seal no evidence of spillage.

Digester 16 - Out of use - empty and clean - contractor on site undertaking maintenance.

Digester 17 - In use - good thick crusty seal no evidence of spillage.

Digester 18 - Out of use - empty and clean - contractor on site undertaking maintenance.

Digester 19 - In use - weak sloppy seal no evidence of spillage.

Digester 20 - In use - weak sloppy seal no evidence of spillage.

GENERAL

Sludge Screening House

All doors closed at time of inspection.

Imported Sludge

Approx. 14 imports daily for 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).

Skips

1x (8 yard) open skip empty covered with tarpaulin.
1x empty skips in Service Road located by the PST's 9-12.

Pasteurisation Plant

Pasteurisation plant 1, 9, 10 & 12 currently out of service.

East Side Raw Sludge Screen House

Doors open at time of inspection. Skip recently changed - door closed by DC - he confirmed that skip drive should shut upon completion of change.

West Side Aeration Lanes (Old)

Battery C aeration feed channel approximately 70% obstructed in one channel - requires jetting.

West side primary settlement tanks (PST)

Rectangular PSTs - no issues
Circular PST's 10, 11 & 12 in use. Tank 9 drained and out of use.

New Works (West Side)

Feed Channel for Aeration Lanes 21-24 completely clear.

"Fluffy" coverage across surface broken down completely since

previous visit - visible churn across entirety of tank.

Odour Control Unit (OCU) performance monitoring – (23/10/19)

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.00 0.00 0.00	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00	0.2	Yes
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	0.00 0.00 0.00	Unknown	Unknown
Sludge reception outlet	0.00 0.00 0.00	0.8	Yes
Thickening plant inlet	No data	Unknown	Unknown
Thickening plant outlet	No data	0.6	Yes
Transfer PS inlet	0.00 0.00 0.00	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00	0.6	Yes
New West inlet (OCU 11)	0.00 0.00 0.00	0.5	Yes

Pasteurisation Plant (OCU 12)	0.00 0.00 0.00	0.5	Yes		
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Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: 24 th October 2019	
Attendees: Mr Steven Maunders and Mr David Chowings (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A – Tank empty and flushed clean - Hoppers 1, 2 & 3 approx. 30% full.</p> <p>Tank 1B – Tank empty - approximately 20% of tank covered by grit/sludge – requires further flushing – Hoppers 1, 2 & 3 approx. 25% full – requires draining/over-pumping.</p> <p>Tank 2A – Tank empty and flushed clean - Hoppers 1, 2 & 3 approx. 50% full - requires draining/over-pumping.</p> <p>Tank 2B – Tank empty - approximately 30% of tank covered by grit/sludge – requires further flushing – Hoppers 1, 2 & 3 approx. 60% full – requires draining/over-pumping.</p> <p>Tank 3A – Tank empty and flushed clean - Hoppers 1, 2 & 3 approx. 60% full – requires draining/over-pumping.</p> <p>Tank 3B – Tank empty - approximately 40% of tank covered by grit/sludge – requires further flushing – Hoppers 1, 2 & 3 approx. 60% full – requires draining/over-pumping.</p>	<div style="border: 1px solid black; padding: 10px;"> <p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p> </div>

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 – Tank empty and flushed clean - Hoppers 1, 2 & 3 approximately 25% full - requires draining/over-pumping.

Tank 6B – Tank empty - approximately 20% of tank covered by grit/sludge – requires further flushing - Hoppers 1, 2 & 3 approximately 30% full - requires draining/over-pumping.

Tank 7A – Tank in use and in process of being retuned – All Amajets in use.

Tank 7B – Tank recently returned – approx. 90% of tank still covered.

Tank 8A – Tank empty and flushed clean – Hopper 1 full, Hoppers 2 & 3 approx. 75% full – requires draining/over-pumping.

Tank 8B – Tank empty and flushed clean – Hoppers 1, 2 & 3 full – requires draining/over-pumping.

Feed Channel - The level of effluent in both feed channels was low – no local odours.

Complaints

The Council directly received no complaints by telephone in the preceding week.

The Council directly received no complaints by email in the preceding week.

The Council received no complaints by email from MRAG.

Thames Water controller advised that they had received no direct complaints in the preceding week.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection:

Monitor 1	0.005	ppm	12:30
Monitor 2	0.003	ppm	12:30
Monitor 3	0.000	ppm	12:30
Monitor 4	0.000	ppm	12:30
Monitor 5	0.004	ppm	12:30
Monitor 6	0.009	ppm	12:30
Monitor 7	0.011	ppm	12:30
Monitor 8	0.003	ppm	12:30
Monitor 9	0.000	ppm	12:30
Monitor 10	0.000	ppm	12:30
Monitor 11	0.000	ppm	12:30
Monitor 12	0.004	ppm	12:30
Monitor 13	0.000	ppm	12:30
Wind Speed	3.3	mph	
Wind Direction	260°		

Odour Log (Thames):

Thursday 17th October:

AM – Cool – Sunny with Patchy Cloud.

All OMU's in use.

Observations/Complaints: "OM2 spiked to max 0.021ppm between 06:58 to 07:48."

Operational Issues/Causes: "East Inlet Area checked – no obvious odours found."

Actions: None noted.

PM – Cool – Rain.

All OMU's in use.

Observations/Complaints: "OM6 spiking at 04:55-05:10 max

0.021ppm.”

Operational Issues/Causes: “Filling Storm Tanks.”

Actions: None noted.

Friday 18th October:

AM – Cool – Sunny with Patchy Cloud.

All OMU's in use.

Observations/Complaints: “No odour issues.”

Operational Issues/Causes: None noted.

Actions: None noted.

PM – Cool – Overcast Night.

All OMU's in use.

Observations/Complaints: “No odour issues.”

Operational Issues/Causes: None noted.

Actions: None noted.

Saturday 19th October:

AM – Cool – Rain with Sunny spells.

All OMU's in use.

Observations/Complaints: “No odour issues.”

Operational Issues/Causes:

None noted.

Actions: None noted.

PM – Cool – Overcast Night.

All OMU's in use.

Observations/Complaints: “OM2 0.019 01:32-01:37, 0.020 22:58-23:16, 0.017 18:46-18:51. OM5 0.017 22:00-22:15, 0.021 18:45-19:15.”

Operational Issues/Causes: “Area checked – no obvious odour found.”

Actions: None noted.

Sunday 20th October:

AM – Cool – Cloudy.

All OMU's in use.

Observations/Complaints: “No odour issues.”

Operational Issues/Causes: None noted.

Actions: None noted.

PM –Cool – Clear Night.

All OMU's in use.

Observations/Complaints: “No odour issues.”

Operational Issues/Causes: None noted

Actions: None noted

Monday 21st October 2019:

AM – Cool – Rain.

All OMU's in use.

Observations/Complaints: “No odour issues.”

Operational Issues/Causes: None noted.

Actions: None noted

PM – Cool – Clear Night.

All OMU's in use.

Observations/Complaints: “No odour issues.”

Operational Issues/Causes: None noted.

Actions: None noted.

Tuesday 22nd October 2019:

AM – Cool – Sunny with Patchy Clouds.

All OMU's in use.

Observations/Complaints: “No odour issues.”

Operational Issues/Causes: None noted.

Actions: None noted.

PM – Cool – Overcast Night.

All OMU's in use.

Observations/Complaints: “No odour issues.”

Operational Issues/Causes: None noted.

Actions: None noted.

Wednesday 23rd October 2019:

AM – Cool – Cloudy with Sunny spells.

All OMU's in use.

Observations/Complaints: “No odour issues.”

Operational Issues/Causes: None noted.

Actions: None noted.

PM – Cool – Overcast Night.

All OMU's in use.

Observations/Complaints: "No odour issues."

Operational Issues/Causes: None noted.

Actions: None noted.

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					
18/10/19	0	473	122	595	1088	1683
21/10/19	0	909	61	970	2561	3531
23/10/19	0	976 (TW Figure 970)	595	1571	1601	3172

The sludge stock levels for the West side circular primary settlement tank 1 were **compliant** with the OMP trigger level (500m³) for all of the dates for which data has been provided.

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.

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. Long term project currently initiated to bring these units back into service – will require significant investment.

Digester 5 - In use – seal level approx. 1ft below coping stones – good seal.

Digester 6 - In use – seal level approx. 2ft below coping stones – good seal.

As LBH note, this has not been required in the last week.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester.

The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

Digester 7 – Out of use – empty and clean – contractor on site undertaking maintenance.

Digester 8 - In use – seal level approx. 3ft below coping stones - seal weak and bubbling vigorously.

Digester 9 - In use – seal level approx. 6” below coping stones - seal weak and bubbling.

Digester 10 - In use – seal level approx. 18” below coping stones - seal weak and bubbling.

Digester 11 - In use – seal level approx. 1ft below surface of coping stones – good seal.

Digester 12 - In use – seal level approx. 1ft below coping stones – good seal.

Digester 13 - In use – seal level approx. 6” below coping stones – seal weak and bubbling – evidence of prior spill requiring clean-up.

Digester 14. – Out of use – empty and clean – contractor on site undertaking maintenance.

Digester 15 - Out of use – empty and clean – contractor on site undertaking maintenance.

Digester 16. - In use – seal level approx. 1ft below coping stones – seal weak and bubbling.

Digester 17 - In use – seal level approx. 3ft below coping stones - seal weak and bubbling.

Digester 18 - Out of use – empty and clean – contractor on site undertaking maintenance.

Digester 19 - In use – seal level approx. 2ft below coping stones - seal weak and bubbling.

Digester 20 - In use – seal level approx. 3ft below coping stones – seal

weak and bubbling.

GENERAL

Sludge Screening House

All doors closed at time of inspection.

Imported Sludge

Approx. 10 imports daily for 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).

Skips

1 x (8 yard) open skip (containing rag covered with tarpaulin) & 1x covered skip (8 yard) located in Service Road by Storm Water Tanks.
1 x partially filled small grit slips by Sludge Screening House.
2 x empty skips in Service Road by PST's 9-12.

Pasteurisation Plant

Pasteurisation plant 1, 9, 10 & 12 currently out of service.

East Side Raw Sludge Screen House

Doors open at time of inspection. Skip recently changed – door closed by DC – he confirmed that skip drive should shut upon completion of change.

West Side Aeration Lanes (Old)

Battery C aeration feed channel approximately 90% obstructed in one channel – requires jetting.

West side primary settlement tanks (PST)

Rectangular PSTs – no issues

Circular PST's 10, 11 & 12 in use. Tank 9 drained and out of use.

New Works (West Side)

Feed Channel for Aeration Lanes 21-24 completely clear.

“Fluffy” coverage across surface broken down completely since previous visit – visible churn across entirety of tank.

Odour Control Unit (OCU) performance monitoring – (23/10/19)

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.00 0.00 0.00	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00	0.2	Yes
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	0.00 0.00 0.00	Unknown	Unknown	
Sludge reception outlet	0.00 0.00 0.00	0.8	Yes	
Thickening plant inlet	No data	Unknown	Unknown	
Thickening plant outlet	0.00 0,00 0,00	0.6	Yes	
Transfer PS inlet	0.00 0.00 0.00	Unknown	Unknown	
Transfer PS outlet	0.00 0.00 0.00	0.6	Yes	
New West inlet (OCU 11)	0.00 0.00 0.00	0.5	Yes	
Pasteurisation Plant (OCU 12)	0.00 0.00 0.00	0.5	Yes	



London Borough of Hounslow

Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: Thursday 17 th October 2019 (11:50am)	
Attendees: Mr I Inman (London Borough of Hounslow) and Miss C Page, Miss Roxanne Denny & Ms Gayle Thomas (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Weather</u></p> <p>It was raining constantly throughout the inspection.</p> <p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A was empty and clean. Hopper 1 was approx <25% full, hoppers 2 and 3 were all both drained down.</p> <p>Tank 1B was empty and clean. Hopper 1 was drained down, hopper 2 was approx <25% full, hopper 3 was approx 50% full and required further draining down.</p> <p>Tank 2A was empty and clean. Hopper 1 was <25% full, hopper 2 was drained down, hopper 3 was full and required draining down.</p> <p>Tank 2B was empty and clean. Hoppers 1, 2 and 3 were all <25% full and required draining down.</p>	<div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: 80%;"> <p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p> </div>

Tank 3A was approx 25% full and returning at the time of the inspection.

Amajets 1, 2 and 3 were all in operation.

Tank 3B was empty and had just been returned with sludge across 60% of the tanks surface across

Hoppers 1, 2 and 3 were all approx 25% full and required draining down.

Tanks 4A, 4B, 5A & 5B All tanks are covered and odour controlled. Unable to gauge condition as lighting system still not working.

Tank 6A was empty and clean.

Hoppers 1, 2 and 3 were all <25% full and required draining down.

Tank 6B was empty but had grit across the tanks surface at the hopper end.

Hoppers 1, 2 and 3 were all approx 25% full and required draining down.

Tank 7A was approx 25% full and returning at the time of the inspection, the effluent was noticeably foamy?

Amajets 1, 2 and 3 were all in operation.

Tank 7B was approx <15% full and returning at the time of the inspection.

No Amajets were in operation.

Tank 8A was empty and clean.

Hopper 1 was full, hoppers 2 & 3 were approx 70% full, all required draining down.

Tank 8B was empty and clean.

Hoppers 1, 2 and 3 were all full and required draining down.

Feed Channel - The level of effluent in both feed channels was low along its entire length.

Thames advised of planned works to replace all of the hopper valves to

prevent back flow of effluent.

They are still also awaiting parts in order to bring the wash water pump system back into operation.

Complaints

The Council has received no complaints in the preceding week.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection: Thursday 18th October 2019 at 12:24.

Monitor 1	0.003	ppm	12:24
Monitor 2	0.006	ppm	12:24
Monitor 3	0.000	ppm	12:24
Monitor 4	0.003	ppm	12:24
Monitor 5	0.005	ppm	12:24
Monitor 6	0.005	ppm	12:24
Monitor 7	0.006	ppm	12:24
Monitor 8	0.005	ppm	12:24
Monitor 9	0.005	ppm	12:24
Monitor 10	0.006	ppm	12:24
Monitor 11	0.000	ppm	12:24
Monitor 12	0.006	ppm	12:24
Monitor 13	-----	ppm	12:24
Wind Speed	0.204	mph	12:24
Wind Direction	166.450	°	12:24

Odour Log (Thames) - Photocopies of log entries taken:

Thursday 10th October 2019

DAY SHIFT

Temp. Cool.

Weather. Cloudy.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM5 spiked at 08:30-08:45, max 0.029ppm.

OM2 spiked at 10:38-10:54, max 0.027ppm.

OM3 spiked at 15:07-15:20, max 0.022ppm but <15 mins duration.

Operational issues / causes observed. No odours found but PAS stream No.4 being drained and flushed for maintenance.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Cool.

Weather. Rain.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. OM5 0.015ppm 02:29-02:43.

OM5 0.016ppm 04:29-04:43.

Operational issues / causes observed. No odour identified. Both spikes <15 minute duration.

Actions Taken. Blank.

Friday 11th October 2019**DAY SHIFT**

Temp. Cool.

Weather. Rain w/sunny spells.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM5 spiked at 11:15-11:28, max 0.015 but <15 mins duration.

Operational issues / causes observed. Blank.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Cool

Weather. Rain.

Odour Readings. All OMU's in use.

Time: 05:30.

Observations / Customer Complaint. No odour issues.

Operational issues / causes observed. Blank.
Actions Taken. Blank.

Saturday 12th October 2019

DAY SHIFT

Temp. Cool.

Weather. Rain.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM5 peak at 0.027 less than 15 mins.

Operational issues / causes observed. Blank.

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. Blank.

Actions taken. Blank.

Sunday 13th October 2019

DAY SHIFT

Temp. Cool.

Weather. Rain w/sunny spells.

Odour Readings. All OMU's in operation.

Time: 17:45.

Observations / Customer Complaint. OM2 spiked at 09:25-09:47, max 0.030ppm.

OM6 spiked at 11:52-12:10, max 0.032ppm.

OM1 spiked at 16:30-16:51, max 0.021ppm.

Operational issues / causes observed. Storm tanks full and going to river.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Cool.

Weather. Clear night.

Odour Readings. All OMU's in operation.
Time: 05:30.
Observations / Customer Complaint. OM5 0.041ppm 20:14-20:30.
OM5 0.017ppm 22:00-22:59.
Operational issues / causes observed. Area checked. No odour detected.
Actions Taken. Blank.

Monday 14th October 2019

DAY SHIFT

Temp. Cool.

Weather. Rain.

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.

Tuesday 15th October 2019

DAY SHIFT

Temp. Cool.

Weather. Sunny w/patchy clouds.

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. Overcast night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. OM2 spiked at 18:52-19:30, max 0.032ppm.

OM2 spiked at 20:48-21:02, max 0.01ppm.

OM2 spiked at 22:45-23:06, max 0.017ppm

Operational issues / causes observed. East inlet checked, no odours found.

Actions Taken. Blank.

Wednesday 16th October 2019

DAY SHIFT

Temp. Cool.

Weather. Sunny w/patchy clouds.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM1 0.016ppm 10:09-10:16.

Operational issues / causes observed. Blank.

Action Taken. Blank.

NIGHT SHIFT

Temp. Blank.

Weather. Blank.

Odour Readings. All OMU's in operation.

Time: Blank.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. Blank.

Actions Taken. Blank.

Sludge Dip Records

Date	West PSTs	West PSTs	West PSTs	West Total	East PSTs	Grand Total
	1	2	3			
	All units in m ³					
OMP limit	500					
11/10/2019	264	122	305	691	1756	2587
14/10/2019	0	61	61	122	2400 1920*	2522 2042*
16/10/2019	0	206	122	328	2737	3065

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.

***Incorrect total entered on Thames Water paperwork**

Imported Sludge

There have been 94 imports of sludge over the last week (an average of 13 per day).

No.5 Pumping Station

The doors of No.5 pumping station were closed at the time of the inspection, although no odour was noticeable.

Raw Sludge Screening House

The large roller shutter door of the Raw Sludge Screening building was open at the time of the inspection, which appeared to be from a skip change.

As LBH note, this has not been required in the last week.

Digesters

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.

Digesters 5 and 6 were both in use and had good dry seals despite the constant rain.

Digester 7 was out of service.

Digesters 8 and 9 were both in service and had fairly dry seals.

Digester 10 was in service but had a wet sloppy seal that was bubbling off gas.

Digester 11 was in service and had a good dry seal.

Digester 12 was out of service.

Digester 13 was in service but had a wet sloppy seal that was bubbling off gas.

Digesters 14, 15 and 16 were out of service.

Digesters 17 & 18 were both in use and had good dry seals.

Digesters 19 & 20 were both in use but had wet sloppy seals that were bubbling off gas.

There was evidence of anti-foaming agent in use and TW advised that this is applied daily to all of the digesters that are operational.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester.
The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

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 and no issues were evident.

Skips

On the East side there was one 20yd open bulk carrier that was empty. Also present were two 8yd open skips. One contained general non-inert rubbish and one was approx 25% full of rag, but this was only part covered with a tarpaulin and had weeds growing out of it. Also present was a 40yd closed bulk carrier that was empty.

In the area next to STW 1A there was an open 14yd skip that contained scrap metal pumps.

On the West side there was one open 8yd open skip that was empty, one 12yd open skip that was empty, one 20yd open bulk carrier that was empty and one 40yd closed bulk carrier that was empty.

East Side Screen House

The doors to the screen house building were closed at the time of the inspection. However, TW were unable to confirm how many or which screens were in operation.

Return Activated Sludge Channel

The nearside RAS channel (which runs in the ground between FST's 61-64 & 65-67) was clogged along 80% of the nearside channel.

TW were advised this needed to be rectified to avoid potential insect and odour problems.

West Side Aeration Lanes (Old)

Tanker cleans out the channel on a weekly basis

It was noted that lanes 17 & 18 had large floating deposits on the tanks surface that appeared to be hindering the process?

There was also overpumping being carried out into the feed channel on the south side of the lanes that was causing sludge to splash over the area.

West side primary settlement tanks (PST)

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

Circular PST's 9 and 11 were in operation and had no issues.

Circular PST 10 was out of service.

Circular PST12 had surface scum/fat across 25% of the tanks surface.

(The new odour suppression system around the perimeter of PST-10 has now been removed and there are no plans to continue with this system).

Pasteurisation Plant

The pasteurisation plant is in service. TW advised 6 streams were in service.

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 were much improved. The tops of the internal dividing walls were clearly visible and liquid inside the tanks appeared free flowing.

Nearly all of the sprinklers appeared to be in operation.

The mixed liquor feed channel serving E-Battery was clear of debris and free flowing along its entire length.

TW advised a tanker crew is regularly on site undertaking clearance of any clogged areas.

New Inlet Works (West Side)

No issues evident.

Odour Control Unit (OCU) performance monitoring: 15/10/2019

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.02 0.02 0.02	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00	0.2	Yes
East OCU	0.01 0.00 0.00	0.05	No
West inlet OCU	0.00 0.00 0.00	0.05	Yes
Sludge reception inlet	Blank	Unknown	Unknown
Sludge reception outlet	0.00ppb 0.00ppb 0.00ppb	0.8	Yes
Thickening plant inlet	0.01 0.01 0.01	0.5	Yes

Thickening plant outlet	0.00 0.00 0.00	0.6	Yes	
Transfer PS inlet	Blank	Unknown	Unknown	
Transfer PS outlet	0.00 0.00 0.02	0.6	Yes	
New West inlet (OCU 11)	0.01 0.01 0.01	0.5	Yes	
Pasteurisation (OCU 12)	0.00 0.00 0.00	0.5	Yes	

Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: Friday 11 th October 2019 (12:00)	
Attendees: Mr Zaheer Kadri (LBH) and Ms Charlotte Page (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A was empty and clean. Hoppers 1, 2, and 3 had all been drained down.</p> <p>Tank 1B was empty and clean. Hoppers 1, 2, and 3 had all been drained down.</p> <p>Tank 2A was empty and clean. Hoppers 1 and 2 had been drained down, however hopper 3 was full of effluent.</p> <p>Tank 2B was empty and clean. Hoppers 1, 2, and 3 had all been drained down.</p> <p>Tank 3A was empty and clean. Hoppers 1, 2, and 3 were all full approx 50% of the hopper.</p>	<div style="border: 1px solid black; padding: 10px;"><p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p></div>

Tank 3B was being flushed at time of inspection – effluent was 30% high and amajets were fully operational.

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 was empty and clean. Hoppers 1 and 2 had been drained down, however hopper 3 was full of effluent.

Tank 6B was empty and clean. Hoppers 1, 2, and 3 had all been drained down.

Tank 7A and Tank 7B were both being flushed at time of inspection– effluent in tank was approx 30% high and amajets were fully operational

Tank 8A and Tank 8B were both clean and empty. Hoppers 1, 2, and 3 were all drained down to the bottom level.

Amajets- No reports of any faults with amajets. All in working order.

Feed Channel - The level of effluent in both feed channels was low and bottomed out in places - it was murky with some sludgy deposits visible. Most of the channel was free flowing and odourless. No local odours rags, fats or solids.

Complaints

The Council received no complaints by telephone in the preceding week.

The Council received no complaints by email in the preceding week.

The Council received no complaints by email from MRAG.

Thames Water controller advised that they had received no direct complaints in the preceding week.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection:

Monitor 1	0.004	ppm	12:00
Monitor 2	0.007	ppm	12:00
Monitor 3	0.000	ppm	12:00
Monitor 4	0.005	ppm	12:00
Monitor 5	0.008	ppm	12:00
Monitor 6	0.008	ppm	12:00
Monitor 7	0.006	ppm	12:00
Monitor 8	0.006	ppm	12:00
Monitor 9	0.006	ppm	12:00
Monitor 10	0.006	ppm	12:00
Monitor 11	0.000	ppm	12:00
Monitor 12	0.007	ppm	12:00
Monitor 13	0.000	ppm	12:00
Wind Speed	220.608	mph	12:00
Wind Direction	4.006	Deg	12:00

Odour Log (Thames) - Photocopies of log entries taken:

Thursday 3rd October 2019

AM – Cool Sunny with patchy Clouds.

All OMU's in use.

Time: 17:30.

Observations/Complaints: OM2 spiked to 0.060ppm at 10:36-13:36.

Operational Issues/Causes: East inlet checked – No odours detected.

Actions: None noted.

PM – Rain with Sunny spells.

All OMU's in use.

Time: 05:00.

Observations/Complaints. OM2 spiked to 0.035ppm at 21:36- 21:58.

Operational Issues/Causes: No odour issues.

Actions: None noted.

Friday 4th October 2019

AM – Rain with sunny spells.

All OMU's in use.

Time: 17:30.

Observations/Complaints: No odour issues reported.

Operational Issues/Causes: No odour issues reported.

Actions: None noted.

PM – Cool / Overcast night.

All OMU's in use.

Time: 05:30.

Observations/Complaints: No odour issues reported.

Operational Issues/Causes: None noted.

Actions: None noted.

Saturday 5th October 2019

AM – Cool Sunny with patchy Clouds.

All OMU's in use.

Time: 17:30.

Observations/Complaints. No odour issues reported.

Operational Issues/Causes: No odour issues.

Actions: None noted.

PM – Cool / Rain.

All OMU's in use.

Time: 05:30.

Observations/Complaints. No odour issues.

Operational Issues/Causes: No odour identified.

Actions: None Noted.

Sunday 6th October 2019

AM – Cool/ Rain.

All OMU's in use.

Time: 17:30.

Observations/Complaints. No odour issues reported.

Operational Issues/Causes: No odour issues reported.

Actions: None Noted.

PM – Cool/ Rain.

All OMU's in use.

Time: 05:30.

Observations/Complaints. No odour issues reported.

Operational Issues/Causes: No odour issues reported.

Actions: None noted.

Monday 7th October 2019

AM – Cool /Cloudy.

All OMU's in use.

Time: 17:30.

Observations/Complaints. No odour issues reported.

Operational Issues/Causes: No odour issues reported.

Actions: None.

PM – Cool with Rain.

All OMU's in use.

Time: 05:30.

Observations/Complaints. No odour issues.

Operational Issues/Causes: None.

Actions: No odour issues

Tuesday 8th October 2019

AM – Cool / Cloudy.

All OMU's in use.

Time: 17:20.

Observations/Complaints: No odour issues.

Operational Issues/Causes: No odours found.

Actions: none noted.

PM – Cool / Clear night

All OMU's in use.

Time: 05:30.

Observations/Complaints:

OM2 spikes:

0.027ppm @ 22:08-22:26

0.023ppm @ 01:00-01:15.

Operational Issues/Causes: None odours found.

Actions: None noted.

Wednesday 9th October 2019

AM – Cool / Cloudy.

All OMU's in use.

Time: 17:20.

Observations/Complaints:

OM2 spikes:

0.020ppm @ 08:37-09:07

0.021ppm @ 06:10-06:25

OM8 spiked to 0.019ppm @ 14:53-15:05

Operational Issues/Causes: None odour source found.

Actions: None noted.

PM – Cool / clear night.

All OMU's in use.

Time: 05:30.

Observations/Complaints:

OM5 spikes:

0.016ppm @ 18:14-18:28

0.019ppm @ 19:43-19:59

0.028ppm @ 21:28-22:29

Operational Issues/Causes: occasional odour from PAS area - No spills from heat exchange/reactor overflows. OCU12 running as normal.

Actions: None noted.

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					
4/10/19	0	595	244	839	912	1751
7/10/19	0	473	305	778	2072	2850
9/10/19	0	412	305	717	1568	2285

The sludge stock levels for the West side circular primary settlement tank 1 were **compliant** with the OMP trigger level (500m³) for all of the dates for which data has been provided.

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.

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. Long term project currently initiated to bring these units back into service – will require significant investment.

Digester 5 - in use - seal level approx. 1ft below coping stones - good seal thick in texture.

As LBH note, this has not been required in the last week.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester.

The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

Digester 6 - in use - seal level approx. 1ft below coping stones - good seal thick in texture.

Digester 7 – Out of service

Digester 8 - in use - seal level approx. 1ft below coping stones - good seal thick in texture.

Digester 9 - in use - seal level approx. 1ft below coping stones - good seal thick in texture.

Digester 10 - in use - seal level approx. 1ft below coping stones - good seal thick in texture.

Digester 11 - in use - seal level approx. 1ft below coping stones - good seal thick in texture.

Digester 12 - Out of service

Digester 13 - in use - seal level approx. 1ft below coping stones - good seal thick in texture.

Digester 14 - out of service.

Digester 15 - out of service.

Digester 16 - out of service.

Digester 17 - in use - seal level approx. 1ft below coping stones - good seal thick in texture.

Digester 18 - out of service.

Digester 19 - in use - seal level approx. 1ft below coping stones - good seal thick in texture.

Digester 20 - in use - seal level approx. 1ft below coping stones - good seal thick in texture.

No odour in the area observed at times of inspection

GENERAL

Sludge Screening House

All doors closed at time of inspection however aware that on previous visits these doors have been left open to avoid condensation build up – TW advised that doors being left open to create air flow is a Management decision to improve internal working environment for staff – odour monitors deployed in vicinity to determine whether local odours increase as a consequence. No odours observed.

Imported Sludge

Estimated average of 10 imports per day (average total of 73 over the preceding week).

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 jets and hoses were in operation and no excessive build-up of algae.

Skips

No Skips present at the East side screening House- All clear.

Eastside Grit House had 2 x 12 yard skips full with general waste and partially covered
1 x Bulk carrier (OPEN) with metals and other inert material inside – this was uncovered (used for general waste).
No Skips present at the West Side gritting house. - All clear.
No odour detected.

East Side Raw Sludge Screen House

Doors closed at time of inspection.

West side primary settlement tanks (PST)

Rectangular PSTs – No issues noticed at time of inspection

Circular PST's 9, 10 and 12 were in use and all hoses were in operation.
Circular PST number 11 had been drained down and out of service. No Odours observed.

Pasteurisation Plant

Pasteurisation plant had (6) streams out of twelve that were out of service. - All remaining pasteurisation streams (7) in service fully operational.

West Side Aeration Lanes (Old)

Battery C aeration feed channel approximately 100% clear of any obstruction- effluent is flowing with ease NO rags or build up noticed..

New Works (West Side)

Feed Channel for Aeration Lanes 21-24 free flowing no obstructions or odours. The contractor Celvac now only attends intermittently or when needed.

The “Fluffy” coverage (obscured internal dividing walls within tank) that had been observed on previous visits had lightened in texture revealing the dividing walls within the tank. There were no concerning odours around this area.

Odour Control Unit (OCU) performance monitoring – (9th October 2019)

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.01 0.01 0.01 Ave: 0.01	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00 Ave: 0.00	0.2	Yes
East OCU	0.00 0.00 0.00 Ave: 0.00	0.05	Yes
West inlet OCU	0.00 0.00 0.00 Ave: 0.00	0.05	Yes
Sludge reception inlet	No data	Unknown	Unknown

Sludge reception outlet	No data	0.8	Yes
Thickening plant inlet	No data	Unknown	Unknown
Thickening plant outlet	0.01 0.01 0.01 Ave: 0.01	0.6	Yes
Transfer PS inlet	No Data	Unknown	Unknown
Transfer PS outlet	0.01 0.01 0.00 Ave: 0.00	0.6	Yes
New West inlet (OCU 11)	0.00 0.00 0.00 Ave: 0.00	0.5	Yes
OCU 12 (Pasteurisation Plant)	0.00 0.00 0.00 Ave: 0.00	0.5	Yes

Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: Thursday 03th October 2019 (12:37)

Attendees: Mr L. Phillips (LBH) and Ms Charlotte Page (Thames Water)

LB Hounslow Observation

Thames Water Action / Response

Storm Water Storage Tanks (SWST)

Tank 1A was empty and clean however slight grit build up on the surface of the Tank (Hopper end). Hoppers 1, 2 and 3 had all been drained down to lowest point.

Tank 1B was empty and clean however slight grit build up on the surface of the Tank (Hopper end). Hoppers 1, 2 and 3 had all been drained down to lowest point.

Tank 2A was empty and clean. Hoppers 1, 2 and 3 had all been drained down to lowest point.

Tank 2B was empty and clean however some slight grit build up on the surface of the Tank (Hopper end). Hoppers 1, 2 and 3 requires draining.

Tank 3A & Tank 3B were both being flushed at time of inspection—effluent was 30% high and amajets were fully operational.

As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning

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 was empty and clean however some slight grit build up on the surface of the Tank (Hopper end). Hoppers 1, 2 and 3 requires draining.

Tank 6B was empty and clean however slight grit build up on the surface of the Tank (Hopper end). Hoppers 1, 2 and 3 had all been drained down to lowest point.

Tank 7A was empty and clean however some grit build up on the surface of the Tank (Hopper end). Hoppers 1, 2 and 3 had all been drained down.

Tank 7B was empty and clean however some wet sludge residue on the surface of the Tank (Hopper end). Hoppers 1, 2 and 3 full and require draining.

Tank 8A was empty and clean. All hoppers were full and required draining.

Tank 8B was empty and clean. All hoppers full and require draining.

Amajets No reports of any faults with amajets. All in working order.

Feed Channel - The level of effluent in both feed channels was at 20% high - in places it was murky with fatty deposits visible. Most of the channel was free flowing and odourless. No local odours rags, fats or solids.

Complaints

The Council received no complaints by telephone in the preceding week.

The Council received no complaints by email in the preceding week.

The Council received no complaints by email from MRAG.

Thames Water controller advised that they had received no direct complaints in the preceding week.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection:

Monitor 1	0.004	ppm	12:57
Monitor 2	0.006	ppm	12:57
Monitor 3	0.000	ppm	12:57
Monitor 4	0.003	ppm	12:57
Monitor 5	0.007	ppm	12:58
Monitor 6	0.006	ppm	12:58
Monitor 7	0.004	ppm	12:58
Monitor 8	0.004	ppm	12:58
Monitor 9	0.004	ppm	12:59
Monitor 10	0.005	ppm	12:59
Monitor 11	0.000	ppm	12:59
Monitor 12	0.005	ppm	12:59
Monitor 13	0.005	ppm	12:59
Wind Speed	No data	mph	12:59
Wind Direction	No data	Deg	12:59

Odour Log (Thames) - Photocopies of log entries taken:

Thursday 26th September 2019

AM

Temp: Cool.

Weather: Rain.

All OMU's in use.

Time: 17:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

PM

Temp: Cool

Weather: Clear night.

All OMU's in use.

Time: 05:20.

Observations/Complaints: No odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

Friday 27th September 2019

AM

Temp: Cool.

Temp: Rain W/ sunny spells.

All OMU's in use.

Time: 05:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

PM

Temp: Cool.

Weather: Cloudy.

All OMU's in use.

Time: 05:30.

Observations/Complaints: No odour issues.
Operational Issues/Causes: None noted.
Actions: None noted.

Saturday 28th September 2019

AM

Temp: Cool.
Weather: Cloudy W/ Sunny spells.
All OMU's in use.
Time: 17:30.

Observations/Complaints. No odour issues.
Operational Issues/Causes: None noted.
Actions: None noted.

PM

Temp: Cool.
Weather: Rain.
All OMU's in use.
Time: 05:30.

Observations/Complaints. OM 5 spiked at 19:14- 19:27 15 minutes duration max 0.020 ppm. OM 2 spiked at 22:35 – 22:55 max 0.020ppm.
Operational Issues/Causes: No odours found in vicinity of monitors.
Actions: None Noted.

Sunday 29nd September 2019

AM

Temp: Cool.
Weather: Rain.
All OMU's in use.
Time: 17:30.

Observations/Complaints.
OM5 0.021 at 0.58 – 08.13 odour from PAS area.
Operational Issues/Causes: None noted.
Actions: None Noted.

PM

Temp: Cool.

Weather: Rain with W/ Sunny spells.

All OMU's in use.

Time: 05:30.

Observations/Complaints.

OM2 spiked at 05:25 – 5:37 max 0.020 but 15 minutes duration.

Operational Issues/Causes: None noted.

Actions: None noted.

Monday 30th September 2019

AM

Temp: Warm.

Weather: Sunny W/ Patchy Clouds.

All OMU's in use.

Time: 17:30

Observations/Complaints: No odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

PM

Temp: Warm.

Weather: Rain.

All OMU's in use.

Time: 05:00.

Observations/Complaints. OM1 spiked at 00:40 – 0.034ppm

Operational Issues/Causes: Filling storm tanks.

Actions: No odour issues.

Tuesday 1st October 2019

AM

Temp: Warm.

Weather: Rain W/ Sunny spells.

All OMU's in use.

Time: 17:20.

Observations/Complaints: No odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

PM

Temp: Cool.

Weather: Rain.

All OMU's in use.

Time: 05:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

Wednesday 2nd September 2019

AM

Temp: Warm

Weather: Sunny

All OMU's in use.

Time: 17:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

PM

Temp: Cold.

Weather: Clear night.

All OMU's in use.

Time: 05:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

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					
01/10/2019	20	534	595	1149	304	1453
-*	-	-	-	-	-	-
-*	-	-	-	-	-	-

* **Thames Water only provided one sludge dip record.**

The sludge stock levels for the West side circular primary settlement tank 1 were **compliant** with the OMP trigger level (500m³) for all of the dates for which data has been provided.

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.

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. Long term project currently initiated to bring these units back into service - will require significant investment.

Digester 5 - in use – weak seal no evidence of spillage.

Digester 6 - in use – weak sloppy seal no evidence of spillage.

As LBH note, this has not been required in the last week.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester.

The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

<p>Digester 7 - Out of service.</p> <p>Digester 8 - in use – weak sloppy seal no evidence of spillage.</p> <p>Digester 9 - in use – weak sloppy seal no evidence of spillage.</p> <p>Digester 10 - in use – weak sloppy seal no evidence of spillage.</p> <p>Digester 11 - in use – weak sloppy seal no evidence of spillage.</p> <p>Digester 12 - in use – weak sloppy seal no evidence of spillage.</p> <p>Digester 13 - in use – weak sloppy seal no evidence of spillage.</p> <p>Digester 14 - out of use.</p> <p>Digester 15 - out of use.</p> <p>Digester 16 - in use – weak sloppy seal no evidence of spillage.</p> <p>Digester 17 - in use – weak sloppy seal no evidence of spillage.</p> <p>Digester 18 - out of use.</p> <p>Digester 19 - in use – weak sloppy seal no evidence of spillage.</p> <p>Digester 20 - in use – weak sloppy seal no evidence of spillage.</p>	
<p><u>GENERAL</u></p> <p><u>Sludge Screening House</u></p> <p>All doors closed at time of inspection. No odours observed.</p>	

Imported Sludge

There have been 10 imports of sludge per day.

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 jets and hoses were in operation and no excessive build-up of algae.

Skips

No Skips present at the East side screening House - All clear.
Eastside Grit House had 1 x 12 yard skip empty.
No Skips present at the West Side gritting house, all clear.
No odour detected.

East Side Raw Sludge Screen House

Doors closed at time of inspection.

West side primary settlement tanks (PST)

Rectangular PSTs – No issues noticed at time of inspection.

Circular PST's 9 and 10 were in use and all hoses were in operation.
Circular PST number 11 and 12 had been drained down and out of service. No odour detected during inspection.

Pasteurisation Plant

Pasteurisation plant had four streams (1, 8, 9 and 12) that were out of service. All remaining pasteurisation plant in service fully operational.

West Side Aeration Lanes (Old)

Battery C aeration feed channel approximately 100% clear of any obstruction- effluent is flowing with ease no rags or build up noticed.

New Works (West Side)

Feed Channel for Aeration Lanes 21-24 free flowing no obstructions or odours. The contractor Celvac now only attends intermittently or when needed.

The “Fluffy” coverage (obscured internal dividing walls within tank) that had been observed on previous visits had lightened in texture revealing the dividing walls within the tank. There were no concerning odours around this area.

Odour Control Unit (OCU) performance monitoring – (11th September 2019)

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	- No data - no data - No data - No data	Unknown	Unknown

Main pumping station outlet	0.00 0.00 0.00 Ave: 0.00	0.2	Yes
East OCU	0.00 0.00 0.00 Ave: 0.00	0.05	Yes
West inlet OCU	0.00 0.00 0.00 Ave: 0.00	0.05	Yes
Sludge reception inlet	0.00 0.00 0.00 Ave: 0.00	Unknown	Unknown
Sludge reception outlet	0.00 0.00 0.00 Ave: 0.00	0.8	Yes
Thickening plant inlet	No data	Unknown	Unknown
Thickening plant outlet	0.00 0.00 0.00 Ave: 0.00	0.6	Yes
Transfer PS inlet	10.33 7.66 5.33 Ave: 19.7	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00 Ave: 0.00	0.6	Yes
New West inlet (OCU 11)	0.00	0.5	Yes

	0.00 0.00 Ave: 0.00			
OCU 12 (Pasteurisation Plant)	0.00 0.00 0.00 Ave: 0.00	0.5	Yes	

Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: Thursday 26th September 2019 (12:00)

Attendees: Mr Zaheer Kadri (LBH) and Ms Charlotte Page (Thames Water)

LB Hounslow Observation

Thames Water Action / Response

Storm Water Storage Tanks (SWST)

Tank 1A was empty and clean however some wet sludge residue on the surface of the Tank (Hopper end). Hoppers 1, 2, and 3 had all been drained down.

Tank 1B was empty and clean however some wet sludge residue across the surface of the Tank. Hoppers 1, 2, and 3 had all been drained down.

Tank 2A was empty and clean however some wet sludge residue across the surface of the Tank (Hopper end mainly). Hoppers 1, 2, and 3 had all been drained down.

Tank 2B was empty and clean however some wet sludge residue on the surface of the Tank (Hopper end). Hoppers 1, 2, and 3 had all been drained down.

Tank 3A & Tank 3B were both being flushed at time of inspection—effluent was 30% high and amajets were fully operational.

As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.

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 was empty and clean however some wet sludge residue on the surface of the Tank (Hopper end). Hoppers 1, 2, and 3 had all been drained down.

Tank 6B was empty and clean however some wet sludge residue on the surface of the Tank (Hopper end). Hoppers 1, 2, and 3 had all been drained down.

Tank 7A was empty and clean however some wet sludge residue on the surface of the Tank (Hopper end). Hoppers 1, 2, and 3 had all been drained down.

Tank 7B was empty and clean however some wet sludge residue on the surface of the Tank (Hopper end). Hoppers 1, 2, and 3 had all been drained down.

Tank 8A was empty and clean. Hoppers 1, 2, and 3 were all drained down to the bottom and were very low level.

Tank 8B was empty and clean. Hoppers 1, 2, and 3 were all drained down to the bottom and were very low level.

Amajets No reports of any faults with amajets. All in working order.

Feed Channel - The level of effluent in both feed channels was at 20% high - in places it was murky with fatty deposits visible. Most of the channel was free flowing and odourless. No local odours rags, fats or solids.

Complaints

The Council received no complaints by telephone in the preceding week.

The Council received no complaints by email in the preceding week.

The Council received no complaints by email from MRAG.

Thames Water controller advised that they had received no direct complaints in the preceding week.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection:

Monitor 1	0.005	ppm	12:40
Monitor 2	0.003	ppm	12:40
Monitor 3	0.000	ppm	12:40
Monitor 4	0.004	ppm	12:40
Monitor 5	0.004	ppm	12:40
Monitor 6	0.006	ppm	12:40
Monitor 7	0.005	ppm	12:40
Monitor 8	0.004	ppm	12:40
Monitor 9	0.003	ppm	12:40
Monitor 10	0.004	ppm	12:40
Monitor 11	0.000	ppm	12:40
Monitor 12	0.000	ppm	12:40
Monitor 13	No data	No data	12:40
Wind Speed	No data	mph	12:40

Wind Direction	No data	Deg	12:40	
<p><u>Odour Log (Thames) - Photocopies of log entries taken:</u></p> <p><u>Thursday 19th September 2019</u> AM - Warm and Cloudy. All OMU's in use. Time: 17:30. Observations/Complaints: No odour issues. Operational Issues/Causes: No odours. Actions: None noted. PM - Warm and Sunny All OMU's in use. Time: 05:30. Observations/Complaints. No odour issues. Operational Issues/Causes: No odour issues. Actions: None noted.</p> <p><u>Friday 20th September 2019</u> AM - Warm and Sunny All OMU's in use. Time: None Noted. Observations/Complaints: No odour issues reported. Operational Issues/Causes: No odour issues reported. Actions: None noted. PM - Cool and Clear night. All OMU's in use. Time: 05:30. Observations/Complaints: OM3 spiked to 0.017ppm max (less than a 15 minute duration). Operational Issues/Causes: None noted. Actions: None noted.</p>				

Saturday 21st September 2019

AM - Warm and Sunny.

All OMU's in use.

Time: 17:30.

Observations/Complaints. OM2 spiked to 0.031ppm max at 14:35 and then again at 09:02 to 0.103ppm (both spikes lasted less than a 15 minute duration).

Operational Issues/Causes: No odour issues.

Actions: None noted.

PM - Cool clear night.

All OMU's in use.

Time: 05:30.

Observations/Complaints. No odour issues.

Operational Issues/Causes: No odour identified.

Actions: None Noted.

Sunday 22nd September 2019

AM - Warm and cloudy with sunny spells.

All OMU's in use.

Time: 17:30.

Observations/Complaints.

OM2 spikes:

0.033ppm @ 4:46-05:55

0.071ppm @ 06:02-06:28

0.017ppm @ 10:42-10:57

0.022ppm @ 10:05-10:22

0.039ppm @ 09:18-09:59

0.017ppm @ 14:13-14:18

0.016ppm @ 15:57-16:03

Operational Issues/Causes: Area checked no abnormalities

Actions: None Noted.

PM - Cool/ clear night.

All OMU's in use.

Time: 05:30.

Observations/Complaints.

OM2 spikes:

0.044ppm @ 20:19-20:42

0.039ppm @ 21:12-22:17

0.025ppm @ 00:08-00:24

Operational Issues/Causes: Area checked - confirmed all doors and covers are closed - East inlet skip area washed down - No odours identified.

Actions: None noted.

Monday 23th September 2019

AM - Cool / Rain with sunny spells.

All OMU's in use.

Time: 17:30

Observations/Complaints.

OM2 spikes:

0.048ppm @ 10:20-10:40

0.040ppm @ 11:24-11:38 (lasted less than 15 minute duration).

Operational Issues/Causes: Area checked no obvious signs of odour production - East inlet looked normal.

Actions: None.

PM - Cool with Rain.

All OMU's in use.

Time: 05:30.

Observations/Complaints. None Noted.

Operational Issues/Causes: None.

Actions: No odour issues.

Tuesday 24th September 2019

AM - Cool with Rain.

All OMU's in use.

Time: 17:40.

Observations/Complaints: No odour issues.

Operational Issues/Causes: No odours found.

Actions: none noted.

PM – Cool with Rain.

All OMU's in use.

Time: 17:30.

Observations/Complaints:

OM2 spikes:

0.040ppm @ 06:20-06:44

0.089ppm @ 09:00-09:30.

Operational Issues/Causes: None odours found.

Actions: None noted.

Wednesday 25th September 2019

AM – Cool Rain with sunny spells.

All OMU's in use.

Time: 17:30.

Observations/Complaints:

OM2 spikes:

0.018ppm @ 07:12-07:19 (Less than 5 minute duration)

0.016ppm @ 08:30-08:43.

Operational Issues/Causes: None odours found.

Actions: None noted.

PM – Cool with Rain.

All OMU's in use.

Time: 05:20.

Observations/Complaints:

OM2 spikes 0.017ppm @ 04:41-04:49

OM6 spikes 0.019ppm @ 19:52-20:07

OM6 spikes 0.019ppm @ 19:52-20:07 and again to 0.017ppm at 20:22-20:37.

Operational Issues/Causes: All areas checked.

Actions: None noted.

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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					
20/09/19	0	122	244	366	1264	1630
23/09/19	0	386	244	630	936	1566
25/09/19	0	412	450	862	760	1622

The sludge stock levels for the West side circular primary settlement tank 1 were **compliant** with the OMP trigger level (500m³) for all of the dates for which data has been provided.

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.

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. Long term project currently initiated to bring these units back into service - will require significant investment.

Digester 5 - in use - seal level approx. 1ft below coping stones - good seal.

As LBH note, this has not been required in the last week.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester. The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use

Digester 6 - in use - good seal level approx. 1ft below coping stones. Thick and crusty in places.

Digester 7 - Out of service

Digester 8 - in use - good seal level approx. 1ft below coping stones. Slightly watery and foamy

Digester 9 - in use - seal level approx. 1ft below surface of coping stones - good seal thick in texture.

Digester 10 - in use - seal level approx. 1ft below surface of coping stones - seal weak and watery.

Digester 11 - in use - seal level approx. 1ft below surface of coping stones - seal weak and watery.

Digester 12 - in use - seal level approx. 1ft below coping stones - good seal.

Digester 13 - in use - seal level approx. 1ft below coping stones - good seal thick in texture.

Digester 14 - out of use.

Digester 15 - out of use.

Digester 16 - in use - seal level approx. 1ft below coping stones - seal thick and crusty in places.

Digester 17 - in use - seal level approx. 1ft below coping stones - Good crusty seal thick in texture.

Digester 18 - out of use.

<p>Digester 19 - in use - seal level approx. 2ft below coping stones - good thick seal thick in texture .</p> <p>Digester 20 - in use - seal level approx. 1ft below coping stones - good seal thick in texture.</p> <p>No odour in the area observed at times of inspection</p>	
<p><u>GENERAL</u></p> <p><u>Sludge Screening House</u></p> <p>All doors closed at time of inspection however aware that on previous visits these doors have been left open to avoid condensation build up - TW advised that doors being left open to create air flow is a Management decision to improve internal working environment for staff - odour monitors deployed in vicinity to determine whether local odours increase as a consequence. No odours observed.</p> <p><u>Imported Sludge</u></p> <p>There have been 30 imports of sludge over the last week (10 on Friday the 20th, Monday the 23rd and Wednesday the 25th of September 2019).</p> <p><u>Final Settlement Tanks East Side of Works</u></p> <p>The 8 circular tanks previously used as PSTs are now being used as final tanks (71-78). All jets and hoses were in operation and no excessive build-up of algae.</p>	

Skips

No Skips present at the East side screening House- All clear.
Eastside Grit House had 2 x 12 yard skips full with general waste and partially covered
1 x Bulk carrier (OPEN) with metals and other inert material inside - this was uncovered (used for general waste).
No Skips present at the West Side gritting house, all clear.
No odour detected.

East Side Raw Sludge Screen House

Doors closed at time of inspection.

West side primary settlement tanks (PST)

Rectangular PSTs – No issues noticed at time of inspection.

Circular PST's 9 and 10 were in use and all hoses were in operation.
Circular PST number 11 and 12 had been drained down and out of service. No Odours observed.

Pasteurisation Plant

Pasteurisation plant had four streams (1, 8, 9 and 12) that were out of service. All remaining pasteurisation plant in service fully operational.

West Side Aeration Lanes (Old)

Battery C aeration feed channel approximately 100% clear of any obstruction- effluent is flowing with ease no rags or build up noticed.

New Works (West Side)

Feed Channel for Aeration Lanes 21-24 free flowing no obstructions or odours. The contractor Celvac now only attends intermittently or when needed.

The “Fluffy” coverage (obscured internal dividing walls within tank) that had been observed on previous visits had lightened in texture revealing the dividing walls within the tank. There were no concerning odours around this area.

Odour Control Unit (OCU) performance monitoring – (11th September 2019)

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.00 0.00 0.00 Ave: 0.00	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00 Ave: 0.00	0.2	Yes
East OCU	0.00 0.00 0.00 Ave: 0.00	0.05	Yes
West inlet OCU	0.00 0.00 0.00	0.05	Yes

	Ave: 0.00		
Sludge reception inlet	0.00 0.00 0.00 Ave: 0.00	Unknown	Unknown
Sludge reception outlet	0.00 0.00 0.00 Ave: 0.00	0.8	Yes
Thickening plant inlet	No data	Unknown	Unknown
Thickening plant outlet	4.41 3.39 3.09 Ave: 3.63	0.6	Yes
Transfer PS inlet	4.26 3.72 3.54 Ave: 3.84	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00 Ave: 0.00	0.6	Yes
New West inlet (OCU 11)	0.00 0.00 0.00 Ave: 0.00	0.5	Yes
OCU 12 (Pasteurisation Plant)	0.00 0.00 0.00 Ave: 0.00	0.5	Yes

Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: Thursday 12 th September 2019 (12:00)	
Attendees: Mr Zaheer Kadri (LBH) and Mr David Chowings (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A was empty and clean however some dry grit / residue on the surface of the Tank (Hopper end). Hoppers 1, 2, and 3 had all been drained down.</p> <p>Tank 1B was empty and clean however some dry grit / residue on the surface of the Tank (Hopper end). Hopper 1 and 3 had been drained down and hopper 2 was 2/3 full and needed draining down.</p> <p>Tank 2A was empty and clean however some dry grit / residue on the surface of the Tank (Hopper end). Hopper 1 needed draining down however Hopper 2 and 3 were clear.</p> <p>Tank 2B was empty and clean however some dry grit / residue on the surface of the Tank (Hopper end). Hoppers 1, 2 and 3 had all been drained down.</p>	<div style="border: 1px solid black; padding: 10px;"><p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p></div>

Tank 3A was empty and clean however some dry grit / residue on the surface of the Tank (Hopper end). Hoppers 1, 2 and 3 had all been drained down

Tank 3B was empty and clean however some dry grit / residue on the surface of the Tank (Hopper end). Hoppers 1, 2, and 3 were all drained down. Hopper 1 has had a blockage since last week. No odours apparent.

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 was empty and clean. Hoppers 1, 2, and 3 were all drained down to the bottom and were very low level.

Tank 6B was empty and clean. Hoppers 1, 2, and 3 were all drained down to the bottom and were very low level.

Tank 7A was empty and clean however thick sludgy residue on the surface near the hopper end. Shallow hoppers 1, 2 and 3 were full and needed draining down.

Tank 7B was empty and clean however thick sludgy residue on the surface near the hopper end. Shallow hoppers 1, 2 and 3 were full and needed draining down.

Tank 8A was empty and clean. Hoppers 1, 2, and 3 were all drained down to the bottom and were very low level.

Tank 8B was empty and clean. Hoppers 1, 2, and 3 needed draining down.

Amajets - No reports of any faults with amajets. All in working order.

Feed Channel - The level of effluent in both feed channels was low – almost bottomed out in places. Dark and murky throughout the channel– no local odours rags, fats or solids. .

Complaints

The Council received no complaints by telephone in the preceding week.

The Council received no complaints by email in the preceding week.

The Council received no complaints by email from MRAG.

Thames Water controller advised that they had received no direct complaints in the preceding week.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection:

Monitor 1	0.003	ppm	12:00
Monitor 2	0.008	ppm	12:00
Monitor 3	0.000	ppm	12:00
Monitor 4	0.003	ppm	12:00
Monitor 5	0.000	ppm	12:00
Monitor 6	0.004	ppm	12:00
Monitor 7	0.003	ppm	12:00

Monitor 8	0.004	ppm	12:00
Monitor 9	0.000	ppm	12:00
Monitor 10	0.000	ppm	12:00
Monitor 11	0.000	ppm	12:00
Monitor 12	0.004	ppm	12:00
Monitor 13	0.000	ppm	12:00
Wind Speed	8.566	mph	12:00
Wind Direction	221.908	Deg	12:00

Odour Log (Thames) - Photocopies of log entries taken:

Thursday 5th September 2019

AM – Warm and Cloudy.

All OMU's in use.

Time: 17:30.

Observations/Complaints: No odour trend throughout the day.

Operational Issues/Causes: No odours.

Actions: None noted.

PM – Cool overcast night.

All OMU's in use.

Time: 05:30.

Observations/Complaints. OM 5 spiked at 04:40-04:57 max spike 0.021ppm and again at 22:12-22:25 trend spiked to 0.020ppm.

Operational Issues/Causes: No odours found.

Actions: None noted.

Friday 6th September 2019

AM – Warm cloudy with Sunny spells.

All OMU's in use.

Time: 17:30.

Observations/Complaints: OM3 spiked to 0.050ppm max. Duration of spike was less than 15 minute.

Operational Issues/Causes: No odour issues reported.

Actions: None noted.

PM – None noted.

All OMU's in use.

Time: 05:30.

Observations/Complaints: No issues.

Operational Issues/Causes: None noted.

Actions: None noted.

Saturday 7th September 2019

AM – Warm cloudy with Sunny spells.

All OMU's in use.

Time: 17:30.

Observations/Complaints. None noted.

Operational Issues/Causes: No odour issues.

Actions: None noted.

PM – None noted.

All OMU's in use.

Time: 05:30.

Observations/Complaints. No odour issues.

Operational Issues/Causes: No odour identified.

Actions: None Noted.

Sunday 8th September 2019

AM – Warm and cloudy.

All OMU's in use.

Time: 17:30.

Observations/Complaints. No odour issues.

Operational Issues/Causes: None Noted.

Actions: None Noted.

PM – None Noted.

All OMU's in use.

Time: None Noted.

Observations/Complaints. None Noted.

Operational Issues/Causes: None Noted.

Actions: None noted.

Monday 9th September 2019

AM – None Noted.

All OMU's in use.

Time: None Noted.

Observations/Complaints. None Noted.

Operational Issues/Causes: none noted.

Actions: None.

PM – None Noted.

All OMU's in use.

Time: None Noted.

Observations/Complaints. None Noted.

Operational Issues/Causes: None.

Actions: No source identified.

Tuesday 10th September 2019

AM – warm and cloudy with sunny spells.

All OMU's in use.

Time: 17:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: No odours found.

Actions: none noted.

PM – Cool overcast night.

All OMU's in use.

Time: 05:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

Wednesday 11th September 2019

AM – Sunny with patchy clouds.

All OMU's in use.

Time: 17:30.

Observations/Complaints: OM3 spiked to 0.017ppm max at 10:36 and 10:50. OM3 spiked again at 13:21 to 0.082ppm max. (All spikes lasted less than 15 minute duration).

Operational Issues/Causes: None noted.

Actions: None noted.

PM – Cool overcast night.

All OMU's in use.

Time: 05:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: None found or reported.

Actions: None noted.

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					
06/09/19	0	206	183	389	760	1149
09/09/19	0	61	450	511	1112	1623
11/09/19	0	267	183	450	1577	2027

The sludge stock levels for the West side circular primary settlement tank 1 were **compliant** with the OMP trigger level (500m³) for all of the dates for which data has been provided.

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.

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. Long term project currently initiated to bring these units back into service – will require significant investment.

Digester 5 - in use - seal level approx. 1ft below coping stones - good seal..

Digester 6 - in use - good seal level approx. 1ft below coping stones.

As LBH note, this has not been required in the last week.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester. The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

Digester 7 – Out of service

Digester 8 - in use - good seal level approx. 1ft below coping stones.

Digester 9 - in use - seal level approx. 1ft below surface of coping stones - good seal.

Digester 10 - in use - seal level approx. 1ft below surface of coping stones - seal weak and watery.

Digester 11 - in use - seal level approx. 1ft below surface of coping stones - seal weak and watery.

Digester 12 - in use - seal level approx. 1ft below coping stones - good seal.

Digester 13 - in use - seal level approx. 1ft below coping stones - good seal.

Digester 14 - out of use.

Digester 15 - out of use.

Digester 16 - in use - seal level approx. 1ft below coping stones - seal thick and crusty in places.

Digester 17 - in use - seal level approx. 1ft below coping stones - Good crusty seal.

Digester 18 - out of use.

Digester 19 - in use - seal level approx. 2ft below coping stones - good thick seal.

Digester 20 - in use - seal level approx. 1ft below coping stones - good seal.

No odour in the area observed at times of inspection

GENERAL

Sludge Screening House

All doors closed at time of inspection however aware that on previous visits these doors have been left open to avoid condensation build up – TW advised that doors being left open to create air flow is a Management decision to improve internal working environment for staff – odour monitors deployed in vicinity to determine whether local odours increase as a consequence. No odours observed.

Imported Sludge

Estimated average of 10 imports daily for preceding week.

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 jets and hoses were in operation and no excessive build-up of algae.

Skips

No Skips present at the East side screening House - All clear.

2 x 12yd skips were located at the East side grit House - These were empty and uncovered (used for general waste).
No Skips present at the West Side gritting house - All clear.
No odour detected.

East Side Raw Sludge Screen House

Doors closed at time of inspection.

West side primary settlement tanks (PST)

Rectangular PSTs – No issues noticed at time of inspection

Circular PST's 9 and 10 were in use and all hoses were in operation.
Circular PST number 11 and 12 had been drained down and out of service. No Odours observed.

Pasteurisation Plant

Pasteurisation plant had three streams (8, 9 and 12) that were out of service - All remaining pasteurisation plant in service fully operational.

West Side Aeration Lanes (Old)

Battery C aeration feed channel approximately 90% clear of any obstruction- effluent is flowing with ease, no rags or build up noticed.
Contractors from unit pump working onsite changing valves and pumps.

New Works (West Side)

Feed Channel for Aeration Lanes 21-24 free flowing no obstructions or odours. The contractor Celvac now only attends intermittently or when needed.

The “Fluffy” coverage (obscured internal dividing walls within tank) that had been observed on previous visits had lightened in texture revealing the dividing walls within the tank. There were no concerning odours around this area.

Odour Control Unit (OCU) performance monitoring (11th September 2019)

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.00 0.00 0.00 Ave: 0.00	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00 Ave: 0.00	0.2	Yes
East OCU	0.00 0.00 0.00 Ave: 0.00	0.05	Yes
West inlet OCU	0.00 0.00 0.00 Ave: 0.00	0.05	Yes
Sludge reception inlet	0.00 0.00 0.00	Unknown	Unknown

	Ave: 0.00		
Sludge reception outlet	1.050ppb 36.09ppb 3.038ppb Ave: 0.00	0.8	Yes
Thickening plant inlet	0.00 0.00 0.00 Ave: 0.00	Unknown	Unknown
Thickening plant outlet	0.00 0.00 0.00 Ave: 0.00	0.6	Yes
Transfer PS inlet	0.138 0.136 0.123 Ave: 0.00	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00 Ave: 0.00	0.6	Yes
New West inlet (OCU 11)	1.14 5,73 4.13 Ave: 0.00	0.5	Yes
OCU 12 (Pasteurisation Plant)	0.00 0.00 0.00 Ave: 0.00	0.5	Yes



Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: Thursday 9 th September 2019 (12:04 pm)	
Attendees: Mr L Phillips (London Borough of Hounslow) and Mr D Chowings (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A was empty and clean. All hoppers drained down to lowest point.</p> <p>Tank 1B was empty and clean. Hoppers 1 & 2 were both approx 50% full and require draining. Hopper 3 had been drained down to its lowest point.</p> <p>Tank 2A was empty and clean slight grit build up at end of tank located by the hoppers. All hoppers drained to lowest point.</p> <p>Tank 2B was empty and clean. All hoppers were all approx 25% full and required draining down.</p> <p>Tank 3A was empty and clean. Hoppers 1 & 2 were approx 25% full and required draining down. Hopper 3 had been drained down to its lowest point.</p> <p>Tank 3B was empty however slight grit build up at the end of the tank located by the hoppers. Hoppers 1, 2 & 3 were all approx 50% full and required draining down.</p>	<div style="border: 1px solid black; padding: 10px;"><p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p></div>

Tanks 4A, 4B, 5A & 5B All tanks are covered and odour controlled. Unable to gauge condition as lighting system still not working.

Tank 6A was empty and clean. All hoppers drained down to lowest point.

Tank 6B was empty and clean. All hoppers were full and required draining.

Tank 7A was dirty with grit and sludge at rear of tank located by the hoppers. All Hoppers (shallow hoppers) were all full of grit and black sludge that required cleaning. No odour detected at time of inspection.

Tank 7B was dirty with grit and sludge across 25% of the tanks surface at the hopper end. Hoppers 1, 2 & 3 (shallow hoppers) were all full of grit and black sludge that required cleaning. Tanker onsite dealing with tank during inspection.

Tank 8A was empty and clean all hoppers were full and required draining.

Tank 8B was empty and clean all hoppers were full and required draining.

Feed Channel - The level of effluent in both feed channels was low along its entire length.

Thames advised of planned works to replace all of the hopper valves to prevent back flow of effluent, Scheduled to begin towards the end of April and lasting approx 3 months.

They are still also awaiting parts in order to bring the wash water pump system back into operation.

Complaints

The Council received one complaint by telephone in the preceding week.

On 1st September 2019 at approximately 16:50 a telephone call was received from a resident of Mogden Lane which is located to the (East side of the works) to report about odour emanating from Mogden sewage works.

The out of hour's duty officer called the complainant back at 17:45 however no response. The Officer left a message on mobile answer service advising that the Council had attempted to make contact. Officer called Comp back at 17:56 Comp advised that the odour is bad today. Agreed to have Officer visit to undertake odour assessment.

The duty Officer visited at 18:48 and undertook both a subjective assessment and measurements with a Jerome monitor. The results of this were that average level of H₂S was 0.00ppm H₂S and the subjective assessment confirmed that the level of odour was not causing a nuisance. The complaint was investigated during the weekly site inspection on 05th of September 2019. Odour monitor 1 is the closest to the area in question. The odour traces for 1st September were all below the 0.015ppm threshold on this date.). There is no conclusive source of odour for this day, with all traces being below the 0.015ppm. It has not been possible to identify the source of odour complained of on this occasion.

The Council received one complaint by email in the preceding week.

A resident e-mailed the Council on the 02nd September 2019 to advise that there was a very strong odour from the Summerwood Road area Isleworth. The complaint was investigated during the weekly site inspection on 05th of September 2019. The odour traces for 02nd September were all below the 0.015ppm threshold on this date.). There is no conclusive source of odour for this day, with all traces being below the 0.015ppm. It has not been possible to identify the source of odour complained of on this occasion.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection: Thursday 5th September 2019 at 12:06.

Monitor 1	0.003	ppm	12:06
Monitor 2	0.005	ppm	12:06
Monitor 3	0.000	ppm	12:06
Monitor 4	0.004	ppm	12:06
Monitor 5	0.004	ppm	12:06
Monitor 6	0.005	ppm	12:07
Monitor 7	0.004	ppm	12:07
Monitor 8	0.004	ppm	12:07
Monitor 9	0.005	ppm	12:07
Monitor 10	0.000	ppm	12:07
Monitor 11	0.000	ppm	12:07
Monitor 12	0.005	ppm	12:07
Monitor 13	No data	ppm	12:07
Wind Speed	8.893	mph	12:07
Wind Direction	253.163	°	12:07

Odour Log (Thames)

Thursday 29th August 2019

AM

Temp: Warm.

Weather: Sunny W/ Patchy clouds.

Odour Readings: All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. No odour issues.

Operational issues / causes observed: Blank.

Actions Taken: Blank.

PM

Temp: Cool.

Weather: Clear night.

Odour Readings: All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint: OM5 0.016ppm >15 minutes.

Operational issues / causes observed: No odour issues.

Actions Taken: Blank.

Friday 30th August 2019

AM

Temp: Warm.

Weather: Sunny w/ Patchy clouds.

Odour Readings: All OMU's in operation.

Time: 09:05.

Observations / Customer Complaint: OM2 spiked at 09:05 – 09:25 max 0.024ppm and at 12:08 – 12:21 but >15 mins duration max 0.025ppm.

Operational issues / causes observed: Rag skip changed at east inlet.

Actions Taken: Area hosed down on completion.

PM

Temp: Warm.

Weather: Clear night.

Odour Readings: All OMU's in use.

Time: 05:00.

Observations / Customer Complaint: OM2 spiking all night very still night 0.038ppm was highest spike.

Operational issues / causes observed: East and old west checked.

Actions Taken: Inlets hosed down.

Saturday 31ST August 2019

AM

Temp: Warm.

Weather: Cloudy w/Sunny spells.

Odour Readings: All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint: OM5 spiked at 09:36 – 09:49 >15 mins duration max 0.028ppm.

Operational issues / causes observed: Blank.

Actions Taken: Blank.

PM:

Temp: Warm.

Weather: Clear night.

Odour Readings: All OMU's in operation.

Time: 05:00.

Observations / Customer Complaint: OM8 spiked at 23:53 – n00:04
max 0.021.

Operational issues / causes observed: No odours found.

Actions taken: Blank.

Sunday 01st September 2019

AM

Temp: Warm.

Weather: Sunny w/ Patchy Clouds.

Odour Readings: All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint: OM3 spiked at 12:50 – 13:04
>15minutes duration

Operational issues / causes observed: Nothing obvious found when
in area but OCU 11 requires some checks and maintenance.

Actions Taken: Blank.

PM

Temp: Cool.

Weather: Clear night.

Odour Readings: All OMU's in operation.

Time: 05:00.

Observations / Customer Complaint: No odour issues.

Operational issues / causes observed: Blank.

Actions Taken: Blank.

Observations / Customer Complaint: No other odour issues found or
reported.

Monday 02nd September 2019

AM

Temp: Warm.

Weather: Sunny w/ Patchy clouds.

Odour Readings: All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint: OM3 0.030 16:50 – 17:06.

Operational issues / causes observed: No source discovered.

Actions Taken: Blank.

PM

Temp: Cool.

Weather: Overcast night.

Odour Readings: All OMU's in operation.

Time: 05:00.

Observations / Customer Complaint: OM3 spiked twice 0.06 at 18:50 and 0.043 at 00:06 both times less than 15 minutes.

Operational issues / causes observed. OCU11 Recirculation pumps tripping on rest.

Actions Taken: No odour found.

Tuesday 03rd September 2019

AM

Temp: Warm.

Weather: Sunny W/Patchy Clouds.

Odour Readings: All OMU's in operation.

Time: 17:20.

Observations / Customer Complaint: OM3 0.040 07:35 – 07:51
0.025 9:19 – 09:35 0.034 11:04 – 11:21 0.020 14:06 – 14:20.

Operational issues / causes observed: OCU 11High ppb exhausting needs attention.

Actions Taken: Blank

PM

Temp: Cool.

Weather: Clear night.

Odour Readings: All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint: OM2 0.015ppm at 11:30-00:17.

Operational issues / causes observed: East inlet area checked, no odours found.

Actions Taken: Blank.

Wednesday 4th September 2019

AM

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.

Action Taken: Blank.

PM

Temp: Cool.

Weather: Clear night.

Odour Readings: All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint: OM2 0.015ppm at 19:50-20:27,
OM2 0.015 to 0.06ppm at 00:41-01:02.

Operational issues / causes observed: East inlet area checked, no odours found.

Actions Taken: Blank.

Sludge Dip Records

Date	West PSTs	West PSTs	West PSTs	West Total	East PSTs	Grand Total
	1	2	3			
	All units in m ³					
OMP limit	500					
30/08/2019	0	61	267	328	1416	1744
02/09/2019	0	206	305	511	608	1119
04/09/2019	0	0	0	0	1416	1416

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 30 imports of sludge over the last week (10 on Friday 30th September, 10 on Monday 2nd and 10 on Wednesday 4th October).

No.5 Pumping Station

The doors and windows of No.5 pumping station were closed at the time of the inspection.

Raw Sludge Screening House

The large roller shutter door of the Raw Sludge Screening building was open at the time of the inspection due to ongoing maintenance.

Digesters

As LBH note, this has not been required in the last week

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester.
The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

Digesters 1-4 are permanently out of use.

Digesters 5 - Was in use and had a weak seal. No evidence of sludge spill.

Digester 6 - Was in use and had a weak seal. No evidence of sludge spill.

Digester 7 - Was out of service.

Digester 8 - Was in use and had a weak seal. No evidence of sludge spill.

Digester 9 - Was in use and had a weak seal. No evidence of sludge spill.

Digesters 10 - Was in use and had a weak seal. No evidence of sludge spill.

Digester 11 - Was in use and had a weak seal. No evidence of sludge spill.

Digester 12 - Was in use and had a weak seal. No evidence of sludge spill.

Digester 13 - Was in use had a weak seal. No evidence of sludge spill.

Digester 14 - Was out of service.

Digester 15 - Was out of service.

Digester 16 - Was out of service.

Digester 17- Was in use had a weak seal. No evidence of sludge spill.

Digester 18 - Was out of service.

Digester 19 - Was in use had a weak seal. No evidence of sludge spill.

Digester 20 - Was in use good seal. No evidence of sludge spill.

There was evidence of anti-foaming agent in use and TW advised that this is applied daily to all of the digesters that are operational.

The area around all digesters was much improved with no evidence of recent or historical sludge spills. Thames advised they have been actively undertaking regular clean-ups of this area of the works.

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 no issues to note in regards to conditions of PSTs. However green algae was evident across large areas of tanks 75, 76 & 78.

Skips

On the East side there was one 16yd skip empty. One bulk carrier covered contained general non-inert rubbish no dour detected.

On the West side there was one 16yd skip empty.

East Side Screen House

The doors to the screen house building were closed at the time of the inspection.

Return Activated Sludge Channel

The nearside RAS channel (which runs in the ground between FST's 61-64 & 65-67) was clear as tanker onsite clearing blockage.

TW were advised this needed to be rectified to avoid potential insect problems.

West side primary settlement tanks (PST)

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

Circular PSTs 9 & 12 were both out of service.

It was noted that PST10 had some scum across the tank surface approx. 25%. TW advised that the new odour suppression system around the perimeter of PST-10 is currently out of operation due to a faulty water main.

Pasteurisation Plant

The pasteurisation plant is in service. TW advised 3 streams (8, 9 & 10) were out of service.

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 were much improved. The tops of the internal dividing walls were clearly visible and liquid inside the tanks appeared free flowing.

All of the sprinklers appeared to be in operation.

The mixed liquor feed channel serving E-Battery was clear of debris and free flowing along its entire length.

New Inlet Works (West Side)

There appeared to be a problem with wash-pacter 13 that had no bulk contained attached.

Odour Control Unit (OCU) performance monitoring: 04/09/2019

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.00 0.00 0.00	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00	0.2	Yes
East OCU	0.00 0.00 0.00	0.05	No
West inlet OCU	0.00 0.00 0.00	0.05	Yes
Sludge reception inlet	0.00	Unknown	Unknown
Sludge reception outlet	0.00 0.00 0.00	0.8	Yes
Thickening plant inlet	O/S	O/S	O/S
Thickening plant outlet	O/S	O/S	O/S
Transfer PS inlet	Blank	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.04 0.01	0.6	Yes
New West inlet (OCU 11)	3.35 3.41 3.37 3.37	0.5	Yes

Pasteurisation (OCU 12)	0.03 0.01 0.02 0.02	0.5	Yes	
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Mogden Sewage Treatment Works

TW Site Inspection

<p>Date of inspection: Thursday 29th August 2019 (9:15am)</p>	
<p>Attendees: Mr I Inman (London Borough of Hounslow) and Mr D Chowin (Thames Water)</p>	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A was dry empty and clean. Hoppers 1, 2 & 3 were all approx 30% full and required further draining down.</p> <p>Tank 1B was dry empty and clean. Hoppers 1 & 2 were both approx 25% full, hopper 3 was approx 50% full, all required further draining down.</p> <p>Tank 2A was mostly empty and clean but had grit at the hopper end of the tank. Hoppers 1, 2 & 3 were all full, all required draining down.</p> <p>Tank 2B was mostly empty and clean except for surface grit at the far end of the tank. Hoppers 1, 2 & 3 were all approx 30% full and required draining down.</p> <p>Tank 3A was mostly empty and clean except for surface grit at the far end of the tank. Hoppers 1, 2 & 3 were all approx 25% full and required draining down.</p> <p>Tank 3B was mostly empty and clean except for surface grit along the left side of the tank. Hoppers 1, 2 & 3 were all approx 50% full and</p>	<div style="border: 1px solid black; padding: 10px;"> <p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p> </div>

required draining down.

Tanks 4A, 4B, 5A & 5B All tanks are covered and odour controlled. Unable to gauge condition as lighting system still not working.

Tank 6A was dry empty and clean. Hopper 1 was full, hoppers 2 & 3 were both 50% full and required draining down.

Tank 6B was dry empty and clean. Hoppers 1, 2 & 3 were all approx 25% full and all required draining down.

Tank 7A was dirty with grit and sludge across 25% of the tanks surface at the hopper end. Hoppers 1, 2 & 3 (shallow hoppers) were all full of grit and black sludge that required cleaning, the hoppers were noticeably odourous.

Tank 7B was dirty with grit and sludge across 50% of the tanks surface at the hopper end. Hoppers 1, 2 & 3 (shallow hoppers) were all full of grit and black sludge that required cleaning, the tank and hoppers were noticeably odourous.

Tank 8A was dry, empty and clean. Hopper 1 was full, hoppers 2 & 3 were both 70% full, all required draining down.

Tank 8B was mostly empty and clean but had grit at the hopper end of the tank. Hoppers 1, 2 & 3 were all full and required draining down.

Feed Channel - The level of effluent in both feed channels was low along its entire length.

Thames advised of planned works to replace all of the hopper valves to prevent back flow of effluent, Scheduled to begin towards the end of April and lasting approx 3 months.

They are still also awaiting parts in order to bring the wash water pump system back into operation.

Complaints

The Council has received no complaints in the preceding week.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection: Thursday 29th August 2019 at 10:17.

Monitor 1	0.004	ppm	10:17
Monitor 2	0.003	ppm	10:17
Monitor 3	0.004	ppm	10:17
Monitor 4	0.003	ppm	10:17
Monitor 5	0.004	ppm	10:17
Monitor 6	0.003	ppm	10:17
Monitor 7	0.004	ppm	10:17
Monitor 8	0.006	ppm	10:17
Monitor 9	0.003	ppm	10:17
Monitor 10	0.000	ppm	10:17
Monitor 11	0.000	ppm	10:17
Monitor 12	0.004	ppm	10:17
Monitor 13	0.000	ppm	10:17
Wind Speed	1.495	mph	10:17
Wind Direction	257.213	°	10:17

Odour Log (Thames)

Wednesday 21st August 2019

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. OM2 0.015 at 19:50-20:27 to 0.06 at 00:41-01:02.

Operational issues / causes observed. East inlet area checked, no odours found.

Actions Taken. Blank.

Thursday 22nd August 2019

DAY SHIFT

Temp. Warm.

Weather. Sunny w/patchy clouds.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM2 0.066ppm 13:18-13:42, 0.027ppm 14:31-14:52.

Operational issues / causes observed. No odour identified after site walk around.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Cool

Weather. Clear night.

Odour Readings. All OMU's in use.

Time: 05:30.

Observations / Customer Complaint. OM2 0.015 at 02:33-03:24.

Operational issues / causes observed. East inlet area checked, no odours found.

Actions Taken. Blank.

Friday 23rd August 2019

DAY SHIFT

Temp. Hot.

Weather. Sunny.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM2 0.016ppm 11:38-11:53.
0.016ppm at 13:27-13:33. 0.022ppm at 14:55-15:07.

Operational issues / causes observed. Multi spikes from monitor 2
<15 minutes duration. No odours found.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Warm.

Weather. Clear night.

Odour Readings. All OMU's in operation.

Time: 22:00.

Observations / Customer Complaint. OM2 0.017ppm at 21:15 <15
minutes and 0.083ppm at 00:00 < 15 minutes.

OM10 max 0.025ppm 04:35

Operational issues / causes observed. Customer complaint from
Weavers Close. Area checked at all inlets Tech 1. No obvious odours
detected.

Actions taken. Inlet area washed down as a matter of course.

Saturday 24th August 2019

DAY SHIFT

Temp. Hot.

Weather. Sunny.

Odour Readings. All OMU's in operation.

Time: 17:45.

Observations / Customer Complaint. OM10 0.016ppm 06:00-07:50.
OM2 0.025ppm 15:37-16:06.

Operational issues / causes observed. East inlet and digester area
checked. No odour identified.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Warm.

Weather. Clear night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. OM3 0.021ppm 22:21-23:03.
OM5 0.02ppm 21:42-00:26.

OM11 0.021ppm 23:31-01:15.

Operational issues / causes observed. Sludge spill in sludge

thickening area No3 drum feed pump.
Actions Taken. Area cleaned up by Sludge Tech 1, pump isolated.

Sunday 25th August 2019

DAY SHIFT

Temp. Hot.

Weather. Sunny.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM11 0.019ppm 06:01-07:00.

Operational issues / causes observed. No odour detected in Digester area.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Warm.

Weather. Clear night.

Odour Readings. All OMU's in operation.

Time: Blank.

Observations / Customer Complaint. OM3 max 0.055ppm 00:34-01:20.

OM4 max 0.044ppm 23:54-00:56.

OM5 max 0.062ppm multiple through shift.

OM8 max 0.034ppm 00:34-01:08.

Operational issues / causes observed. Area checked around main drive, powerhouse and digester area and no obvious odours detected.

Actions Taken. Blank.

Monday 26th August 2019

DAY SHIFT

Temp. Very hot.

Weather. Sunny.

Odour Readings. All OMU's in operation.

Time: 17:00.

Observations / Customer Complaint. OM2 max 0.018ppm 16:06-16:23.

OM1 trend stopped working 12:00-16:11.

Operational issues / causes observed. East inlet works checked and no abnormal odours detected.

Actions Taken. Blank

NIGHT SHIFT

Temp. Warm.

Weather. Clear night.

Odour Readings. All OMU's in operation.

Time: Blank.

Observations / Customer Complaint. OM2 max 0.051ppm 20:51-00:23.

OM5 max 0.075ppm 20:42-04:42.

OM10 max 0.03ppm 03:04-03:34.

Operational issues / causes observed. Area checked, East inlet washed down by Tech 1, no odours detected in area.

Actions Taken. Blank.

Tuesday 27th August 2019

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.

Action Taken. Blank.

NIGHT SHIFT

Temp. Warm.

Weather. Clear night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. OM8 spiked <15 minutes 03:5404:05.

Operational issues / causes observed. No odour detected on site.

Actions Taken. Blank.

Wednesday 28th August 2019

DAY SHIFT

Temp. Hot.

Weather. Sunny w/patchy clouds.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. OM2 max 0.037ppm 08:30-10:15.

Operational issues / causes observed. Blank.

Action Taken. East E, C inlets hosed down. No:7A storm tank pumped out.

NIGHT SHIFT

Temp. Cool.

Weather. Clear night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. OM2 0.022ppm 19:39-19:51, 0.021ppm 23:24-23:34, 0.029ppm 22:23-22:39.

OM8 0.015ppm 04:53-05:06.

Operational issues / causes observed. East inlet checked.

Confirmed all hatches and doors closed. No odour detected.

Occasional odour from PAS area detected. No sludge spills or venting from heat exchangers or reactors.

Actions Taken. Blank.

Sludge Dip Records

Date	West PSTs	West PSTs	West PSTs	West Total	East PSTs	Grand Total
	1	2	3			
	All units in m ³					
OMP limit	500					
21/08/2019	0	389	61	450	2603	3053
23/08/2019	39	0	740	779	1601	2380
28/08/2019	0	618	183	801	1568 1398*	1648 2199*

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.

***Incorrect total entered on Thames Water paperwork**

Imported Sludge

There have been 20 imports of sludge over the last week (10 on Friday 23rd & 10 on Wednesday 28th August).

No.5 Pumping Station

The doors and windows of No.5 pumping station were closed at the time of the inspection.

Raw Sludge Screening House

The large roller shutter door of the Raw Sludge Screening building was open at the time of the inspection due to ongoing maintenance.

As LBH note, this has not been required in the last week.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester.
The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

Digesters

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.

Digesters 5 & 6 were both in use and had wet seals with only minimal gas bubbling off.

Digester 7 was out of service.

Digester 8 was in service but had a wet seal that was bubbling off gas. It was also noted that the bell was very high and the seal was less than 40cm below the top of the coping stone.

Digesters 9, 10, 11 & 12 were all in use but had wet seals that were all bubbling off gas. It was also noted that the bells of Digesters 9 & 10 were both very high.

Digester 13 was in service and had a wet seal that was bubbling off gas. It was also noted that the bell was very high and the seal was less than 50cm below the top of the coping stone.

Digesters 14 & 15 were out of service.

Digesters 16 & 17 were both in use but had wet seals that were bubbling off gas.

Digester 18 was out of service.

Digesters 19 & 20 were both in use but had wet sloppy seals that were bubbling off gas.

There was evidence of anti-foaming agent in use and TW advised that this is applied daily to all of the digesters that are operational.

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 but green algae was evident across large areas of tanks 75, 76 & 78.

Skips

On the East side there was one 20yds open bulk carrier that contained general inert rubbish (wooden crates). Also present were two open 8yd skips. One contained general non-inert rubbish and one was approx 25% full of rag and covered with a tarpaulin.

Also present was a closed 14yds contained

In the area next to STW 1A there was an open 14yds skip that contained scrap metal pumps.

On the West side there were no skips.

East Side Screen House

The doors to the screen house building were closed at the time of the inspection. TW advised all screens were operational but only 3, 5 & 6 were being used.

Return Activated Sludge Channel

The nearside RAS channel (which runs in the ground between FST's 61-64 & 65-67) was clogged along 50% of the nearside channel.

Very small insects were clearly visible on top of crusty sections of the blockage.

TW were advised this needed to be rectified to avoid potential insect problems.

West Side Aeration Lanes (Old)

It was noted that lanes 17 & 18 had large floating deposits on the tanks surface that appeared to be hindering the process?

West side primary settlement tanks (PST)

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

Circular PSTs 9 & 12 were both out of service.

PST10 had surface scum/fat across 25% of the tanks surface.

The new odour suppression system around the perimeter of PST-10 is currently out of operation due to a faulty water main.

Pasteurisation Plant

The pasteurisation plant is in service. TW advised 4 streams (8, 9, 10 & 12) were out of service.

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 were much improved. The tops of the internal dividing walls were clearly visible and liquid inside the tanks appeared free flowing.

Nearly all of the sprinklers appeared to be in operation.

The mixed liquor feed channel serving E-Battery was clear of debris and free flowing along its entire length.

TW advised a tanker crew is regularly on site undertaking clearance of any clogged areas and Celvac was on site at the time of the inspection doing so.

New Inlet Works (West Side)

There appeared to be a problem with wash-pacter 13 that had no bulk contained attached.

Odour Control Unit (OCU) performance monitoring: 27/08/2019

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.256 0.252 0.236	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00	0.2	Yes
East OCU	7.64ppb 8.20ppb 8.18ppb	0.05	No
West inlet OCU	4.88ppb 4.28ppb 4.34ppb	0.05	Yes
Sludge reception inlet	0.00ppb 0.00ppb 0.00ppb	Unknown	Unknown
Sludge reception outlet	0.00ppb 0.00ppb 0.00ppb	0.8	Yes
Thickening plant inlet	O/S	O/S	O/S
Thickening plant outlet	O/S	O/S	O/S
Transfer PS inlet	0.126 0.148 0.140	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00	0.6	Yes

New West inlet (OCU 11)	4.90 4.71 4.71	0.5	Yes	
Pasteurisation (OCU 12)	0.00 0.00 0.00	0.5	Yes	



Mogden Sewage Treatment Works

TW Site Inspection

<p>Date of inspection: 8th August 2019</p>	
<p>Attendees: Mr Steven Maunders and Mr Manzoor Hussain (Thames Water)</p>	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A – Tank empty - approximately 20% of tank covered by dried grit and sludge – requires flushing/hosing to remove. Hopper 1 approx. 75% full. Hoppers 2 & 3 approx. 20% full – requires draining/over-pumping.</p> <p>Tank 1B – Tank empty and flushed - approximately 10% of tank covered by dried grit – requires further flushing. Hoppers 1, 2 & 3 approx. 25% full.</p> <p>Tank 2A – Tank empty and flushed clean. Hoppers 1, 2 & 3 full pf effluent water - requires draining/over-pumping.</p> <p>Tank 2B – Tank empty and flushed - approximately 25% of tank covered by dried grit/sludge – requires further flushing. Hopper 1 approx. 80 full. Hoppers 2 & 3 approx. 40% full – requires draining/over-pumping.</p> <p>Tank 3A – Tank being returned at time of inspection – all Amajets in operation.</p>	<div style="border: 1px solid black; padding: 10px;"> <p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p> </div>

Tank 3B – Tank empty and flushed - approximately 20% of tank covered by dried grit/sludge – requires further flushing. Hoppers 1, 2 & 3 approx.40% full – requires draining/over-pumping.

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 – Tank empty and flushed clean. Hoppers 1, 2 & 3 approximately 25% full - requires draining/over-pumping.

Tank 6B – Tank empty and flushed clean. Hoppers 1, 2 & 3 approximately 25% full - requires draining/over-pumping.

Tank 7A – Tank empty – approx. 60% of tank covered by dried grit and sludge – requires further flushing/hosing to remove. Hoppers 1 & 2 full – requires draining/over-pumping. Hopper 3 drained down to bottom.

Tank 7B – Tank empty – approx. 80% of tank covered by dried grit and sludge – requires further flushing/hosing to remove. Hoppers 1, 2 & 3 drained down to bottom.

Tank 8A – Tank empty and flushed clean. Hopper 1 full, Hopper 2 approx. 95% full & Hopper 3 approx. 20% full.

Tank 8B – Tank empty – approx. 15% of tank covered by dried grit and sludge – requires further flushing/hosing to remove. Hoppers 1, 2 & 3 approximately 30% full – requires draining/over-pumping.

Feed Channel - The level of effluent in both feed channels was low – no local odours.

Complaints

The Council directly received no complaints by telephone in the preceding week.

The Council directly received no complaints by email in the preceding week.

The Council received no complaints by email from MRAG.

Thames Water controller advised that they had received no direct complaints in the preceding week.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection:

Monitor 1	0.000	ppm	13:34
Monitor 2	0.000	ppm	13:34
Monitor 3	0.000	ppm	13:34
Monitor 4	0.000	ppm	13:34
Monitor 5	0.000	ppm	13:34
Monitor 6	0.000	ppm	13:34
Monitor 7	0.003	ppm	13:34
Monitor 8	0.004	ppm	13:34
Monitor 9	0.004	ppm	13:34
Monitor 10	0.000	ppm	13:34
Monitor 11	0.004	ppm	13:34
Monitor 12	0.005	ppm	13:34
Monitor 13	0.000	ppm	13:34
Wind Speed	3.3	mph	
Wind Direction	237°		

Odour Log (Thames):

Thursday 1st August 2019:

AM – Warm – Sunny.

All OMU's in use.

Observations/Complaints: "No issues."

Operational Issues/Causes: "Digester spill."

Actions: "Area cleaned up."

PM – Cool – Cloudy.

All OMU's in use.

Observations/Complaints: "No odour issues."

Operational Issues/Causes: None noted.

Actions: None noted.

Friday 2nd August 2019:

AM – Warm – Cloudy with Sunny spells.

All OMU's in use.

Observations/Complaints: "No issues."

Operational Issues/Causes: None noted.

Actions: None noted.

PM – Cool – Clear Night.

All OMU's in use.

Observations/Complaints: "No issues."

Operational Issues/Causes: None noted.

Actions: None noted.

Saturday 3rd August 2019:

AM – Warm – Sunny with patchy clouds.

All OMU's in use.

Observations/Complaints: "No odour issues."

Operational Issues/Causes: None noted,"

Actions: None noted.

PM – Cool – Overcast Night.

All OMU's in use.

Observations/Complaints: "OM2 0,019 17:38-17:55."

Operational Issues/Causes: None noted.

Actions: None noted.

Sunday 4th August 2019:

AM – Warm – Sunny with patchy clouds.

All OMU's in use.

Observations/Complaints: "No odour issues."

Operational Issues/Causes: "Odour monitor 3 has red box round?"

Actions: "Job raised."

PM – Warm – Overcast night.

All OMU's in use.

Observations/Complaints: “No odour issues.”

Operational Issues/Causes: None noted

Actions: None noted

Monday 5th August 2019:

AM – Warm – Sunny with Patchy Clouds.

All OMU's in use.

Observations/Complaints: “OM2 0.016ppm 09:38 – 09:45. OM3 0.015ppm 10:47 – 11:00.”

Operational Issues/Causes: “Both spikes less than 15 minutes. No odour detected.”

Actions: None noted

PM – Warm – Overcast night.

All OMU's in use.

Observations/Complaints: “No odour issues.”

Operational Issues/Causes: None noted.

Actions: None noted.

Tuesday 6th August 2019:

AM – Warm – Sunny with Patchy Clouds.

All OMU's in use.

Observations/Complaints: “OM2 0.040ppm 09:02 – 09:23.”

Operational Issues/Causes: “East Inlet Area checked. No odour detected.”

Actions: None noted.

PM – Cool – Clear Night.

All OMU's in use.

Observations/Complaints: “No odour issues.”

Operational Issues/Causes: None noted.

Actions: None noted.

Wednesday 7th August 2019:

AM – Warm – Sunny with patchy clouds.

All OMU's in use.

Observations/Complaints: “OM2 0,023ppm 06:24 – 07:36.”

Operational Issues/Causes: "East Inlet checked. Confirmed all doors and covers closed. No odour detected."

Actions: None noted.

PM – Cool – Overcast Night.

All OMU's in use.

Observations/Complaints: "OM3 @ 19:45 0.054 for less than 15 minutes."

Operational Issues/Causes: "Area around PST 13 to 20 check – all OK."

Actions: None noted.

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					
01/08/19	0	267	305	572	1568	2140
02/08/19	0	412	305	717	1744	2461
03/08/19	20	244	305	569	3748	4317

The sludge stock levels for the West side circular primary settlement tank 1 were **compliant** with the OMP trigger level (500m³) for all of the dates for which data has been provided.

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.

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. Long term project currently initiated to bring these units back into service – will require significant investment.

Digester 5 - in use – seal level approx. 4ft below coping stones - seal weak and bubbling.

Digester 6 - in use – seal level approx. 2ft below coping stones - seal weak and bubbling.

Digester 7 - in use – seal level approx. 4ft below coping stones – good seal.

As LBH note, this has not been required in the last week.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester. The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

Digester 8- in use – seal level approx. 3ft below coping stones - seal weak and bubbling. Evidence of previous dried spill that requires clean-up.

Digester 9 - in use – seal level approx. 1ft below coping stones - seal weak and bubbling.

Digester 10 - in use – seal level approx. 2ft below coping stones - seal weak and bubbling. – Bell height high – requires draw down of biogas.

Digester 11 - in use – seal level approx. 1ft below surface of coping stones – seal weak and bubbling.

Digester 12 - in use – seal level approx. 2ft below coping stones – good seal.

Digester 13 - in use – seal level approx. 6” below coping stones – seal weak and bubbling - Evidence of previous dried spill that requires clean-up.

Digester 14 - out of use – empty and clean – contractor on site undertaking maintenance.

Digester 15 - out of use – empty and clean – contractor on site undertaking maintenance.

Digester 16 - out of use – empty and clean – contractor on site undertaking maintenance.

Digester 17 - in use – seal level approx. 2ft below coping stones - seal weak and bubbling.

Digester 18 - in use – seal level approx. 2ft below coping stones - seal weak and bubbling. – Bell height high – requires draw down of biogas.

Digester 19 - in use – seal level approx. 3ft below coping stones - seal weak and bubbling. – Bell height high – requires draw down of biogas.

Digester 20 - in use – seal level approx. 4ft below coping stones – seal weak and bubbling.

GENERAL

Sludge Screening House

All doors closed at time of inspection.

Imported Sludge

Approx. 10 imports daily for 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). Green Algae on 100% of surface of Tank 74.

Skips

1x large open general waste skip, & 2x (8 yard) open skip (1x containing rag covered with tarpaulin) & 1x general waste located in Service Road by Storm Water Tanks.

1x partially filled small grit slips by Sludge Screening House.

Pasteurisation Plant

Pasteurisation plant 8, 9 & 10 currently out of service.

East Side Raw Sludge Screen House

Doors closed at time of inspection.

West Side Aeration Lanes (Old)

Battery C aeration feed channel approximately 75% obstructed in one channel – requires jetting.

West side primary settlement tanks (PST)

Rectangular PSTs – no issues
Circular PST's 9, & 11 in use. Tanks 10 & 12 drained and out of use.

New Works (West Side)

Feed Channel for Aeration Lanes 21-24 completely clear.

“Fluffy” coverage across surface broken down completely since previous visit – visible churn across entirety of tank. Quantity of sanitary items by-passing screener reduced significantly.

Odour Control Unit (OCU) performance monitoring – (06/08/19)

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.01 0.01 0.01	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00	0.2	Yes
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	No data	Unknown	Unknown
Sludge reception outlet	No data	0.8	Yes

Thickening plant inlet	No data	Unknown	Unknown
Thickening plant outlet	0.01 0.01 0.01	0.6	Yes
Transfer PS inlet	No data	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00	0.6	Yes
New West inlet (OCU 11)	0.00 0.00 0.00	0.5	Yes
OCU 12 (Pasteurisation Plant)	0.01 0.01 0.01	0.5	Yes



Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: Thursday 1st August 2019 (12:00)

Attendees: Mr Zaheer Kadri (LBH), Mr Randolph Bristol 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 some dry grit / residue on the surface of the Tank (Hopper end). Hopper 1, 2, and 3 needed draining down 1/3 full.

Tank 1B was empty and clean however some dry grit / residue on the surface of the Tank (Hopper end). Hopper 1, 2, and 3 needed draining down 1/3 full.

Tank 2A was empty and clean however some dry grit / residue on the surface of the Tank (Hopper end). Hopper 1, 2, and 3 needed draining down as they were full.

Tank 2B was empty and clean however some dry grit / residue on the surface of the Tank (Hopper end). Hopper 1 was full to the top and hopper 2 and 3 needed were 1/3 full. All hoppers needed draining down.

As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.

Tank 3A was returning and 30% full of effluent, all amajets were in operation.

Tank 3B was empty and clean however some dry grit / residue on the surface of the Tank (Hopper end). Hopper 1, 2, and 3 were all 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 was empty and clean. Hopper 1, 2, and 3 were all drained down to the bottom.

Tank 6B was empty and clean. Hopper 1, 2, and 3 were all drained down to the bottom.

Tank 7A was empty and clean. Shallow hoppers 1, 2 and 3 were full and needed draining down.

Tank 7B was empty and clean. Shallow hoppers 1, 2 and 3 were full and needed draining down.

Tank 8A was empty and clean. Hopper 1 was full however 2 and 3 were drained down to the bottom.

Tank 8B was empty and clean however some dry grit / residue on the surface of the Tank (Hopper end). Hopper 1, 2, and 3 needed draining down 2/3 full.

Amajets- No reports of any faults with amajets. All in working order.

Feed Channel - The level of effluent in both feed channels was low – almost bottomed out in places. Dark and murky throughout the channel– no local odours rags, fats or solids. .

Complaints

The Council received one (0) complaint by telephone in the preceding week.

The Council received NO complaints by email in the preceding week.

The Council received no complaints by email from MRAG.

Thames Water controller advised that they had received no direct complaints in the preceding week.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection:

Monitor 1	0.004	ppm	12:56
Monitor 2	0.003	ppm	12:56
Monitor 3	0.000	ppm	12:56
Monitor 4	0.000	ppm	12:56
Monitor 5	0.000	ppm	12:56
Monitor 6	0.000	ppm	12:56
Monitor 7	0.000	ppm	12:56
Monitor 8	0.004	ppm	12:56
Monitor 9	0.003	ppm	12:56
Monitor 10	0.000	ppm	12:56
Monitor 11	0.004	ppm	12:56
Monitor 12	0.005	ppm	12:56

Monitor 13	0.003	ppm	12:56
Wind Speed	0.569	mph	12:56
Wind Direction	317.954	Deg	12:56

Odour Log (Thames) - Photocopies of log entries taken:

Thursday 25th July 2019

AM – very hot and sunny.

All OMU's in use.

Time: 17:30.

Observations/Complaints: No issues.

Operational Issues/Causes: None noted.

Actions: None noted.

PM – Hot clear night.

All OMU's in use.

Time: 05:30.

Observations/Complaints. No issues.

Operational Issues/Causes: None noted.

Actions: None noted.

Friday 26th July 2019

AM – Hot , rain with sunny spells.

All OMU's in use.

Time: 17:30.

Observations/Complaints: No issues.

Operational Issues/Causes: None Noted.

Actions: None noted.

PM – Cool with rain.

All OMU's in use.

Time: 05:25.

Observations/Complaints: No issues.

Operational Issues/Causes: None noted.

Actions: None noted.

Saturday 27th July 2019

AM – Warm with rain.

All OMU's in use.

Time: 17:30.

Observations/Complaints. None noted.

Operational Issues/Causes: OM7 spiked twice during the day less than 15 minute duration. Also Storm Tanks filling and weiring to the river between 10:30-14:30.

Actions: None noted.

PM – Cool overcast night.

All OMU's in use.

Time: 05:25

Observations/Complaints. No odour issues.

Operational Issues/Causes: No odour identified.

Actions: None Noted.

Sunday 28th July 2019

AM – Cloudy with Sunny spells.

All OMU's in use.

Time: 17:30.

Observations/Complaints. No odour issues.

Operational Issues/Causes: Storm tanks returning.

Actions: None Noted.

PM – Cool/ clear night.

All OMU's in use.

Time: 05:25.

Observations/Complaints. OM2 spiked to 0.018ppm observed 05:25 ongoing. OM3 spiked to 0.017ppm observed 20:01 less than a 15 minute duration.

Operational Issues/Causes: Area checked no odours identified.

Actions: None noted.

Monday 29th July 2019

AM – Hot and sunny.

All OMU's in use.

Time: 17:30.

Observations/Complaints. OM2 spiked at 13:39 and again at 17:08 both spikes lasted under a 15 minute duration 0.019ppm max.

Operational Issues/Causes: none noted.

Actions: None.

PM – Warm Clear night.

All OMU's in use.

Time: 05:25.

Observations/Complaints. OM2 spiked to 0,030ppm at 02:33.

Operational Issues/Causes: None.

Actions: No source identified.

Tuesday 30th July 2019

AM – warm, rain with sunny spells.

All OMU's in use.

Time: 17:30.

Observations/Complaints: OM2 spiked to 0,020ppm max at 09:22 lasted less than 15 minutes.

Operational Issues/Causes: No odours found.

Actions: none noted.

PM – Cool overcast night.

All OMU's in use.

Time: 05:40.

Observations/Complaints: No issues.

Operational Issues/Causes: None noted.

Actions: None noted.

Wednesday 31st July 2019

AM – Sunny with patchy clouds.

All OMU's in use.

Time: 17:30.

Observations/Complaints: No observations/Issue.

Operational Issues/Causes: None noted.

Actions: None noted.

PM – Cool overcast night.

All OMU's in use.

Time: 05:30.

Observations/Complaints: No observations.

Operational Issues/Causes: None found or reported.

Actions: None noted.

Sludge Dip Records

Date	West PSTs	West PSTs	West PSTs	West Total	East PSTs	Grand Total
	1	2	3			
All units in m ³						
OMP limit	500					
26/07/19	0	122	61	183	2594	2777
29/07/19	0	412	305	717	2737	3454
30/07/19	0	595	244	839	2737	3576

The sludge stock levels for the West side circular primary settlement tank 1 were **compliant** with the OMP trigger level (500m³) for all of the dates for which data has been provided.

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.

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. Long term project currently initiated to bring these units back into service – will require significant investment.

Digester 5 - in use - seal level approx. 1ft below coping stones - good seal - evidence of recent spill - requires anti-foam and clean-up.

As LBH note, this has not been required in the last week.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester. The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

Digester 6 - in use - good seal level approx. 1ft below coping stones.

Digester 7 - in use - seal level approx. 1ft below coping stones. Seal was weak and bubbling.

Digester 8 - in use - good seal level approx. 1ft below coping stones.

Digester 9 - in use - seal level approx. 1ft below surface of coping stones - good seal.

Digester 10 - in use - seal level approx. 1ft below surface of coping stones - seal weak and bubbling.

Digester 11 - in use - seal level approx. 1ft below surface of coping stones - seal weak and bubbling.

Digester 12 - in use - seal level approx. 1ft below coping stones - good seal.

Digester 13 - in use - seal level approx. 1ft below coping stones - good seal.

Digester 14 - out of use.

Digester 15 - out of use.

Digester 16 - out of use.

Digester 17 - in use - seal level approx. 1ft below coping stones - seal crusty.

Digester 18 - in use - seal level approx. 2ft below coping stones - seal weak and slightly bubbling.

Digester 19 - in use - seal level approx. 3ft below coping stones - good seal.

Digester 20 - in use - seal level approx. 2ft below coping stones - good seal.

No odour in the area observed at times of inspection

GENERAL

Sludge Screening House

All doors closed at time of inspection however aware that on previous visits these doors have been left open to avoid condensation build up – TW advised that doors being left open to create air flow is a Management decision to improve internal working environment for staff – odour monitors deployed in vicinity to determine whether local odours increase as a consequence. No odours observed.

Imported Sludge

Estimated average of 10 imports daily for 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). All jets and hoses were in operation and no excessive build-up of algae.

Skips

No Skips present at the East side screening House- All clear.
2 x 12yd skips were located at the East side grit House- These were empty and uncovered (used for general waste).
No Skips present at the West Side gritting house. - All clear.
No odour detected.

East Side Raw Sludge Screen House

Doors closed at time of inspection.

West side primary settlement tanks (PST)

Rectangular PSTs – No issues noticed at time of inspection

Circular PST's 9 and 12 were in use and all hoses were in operation. Circular PST number 10 and 12 had been drained down and out of service. No Odours observed.

Pasteurisation Plant

Pasteurisation plant had six streams that were out of service. - All remaining pasteurisation plant in service fully operational.

West Side Aeration Lanes (Old)

Battery C aeration feed channel approximately 90% clear of any obstruction- effluent is flowing with ease NO rags or build up noticed.

New Works (West Side)

Feed Channel for Aeration Lanes 21-24 free flowing no obstructions or odours.

The “Fluffy” coverage (obscured internal dividing walls within tank) that had been observed on previous visits had lightened in texture revealing the dividing walls within the tank. There were no concerning odours around this area. Celvac were on site at time of inspection.

Odour Control Unit (OCU) performance monitoring – (31st July 2019)

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.02 0.02 0.02 Ave: 0.02	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00 Ave: 0.00	0.2	Yes
East OCU	0.01 0.01 0.01 Ave: 0.01	0.05	Yes
West inlet OCU	0.00 0.00 0.00 Ave: 0.00	0.05	Yes
Sludge reception inlet	No data	Unknown	Unknown
Sludge reception outlet	No data	0.8	Yes

Thickening plant inlet	No data	Unknown	Unknown
Thickening plant outlet	0.00 0.00 0.00 Ave: 0.00	0.6	Yes
Transfer PS inlet	No Data	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00 Ave: 0.00	0.6	Yes
New West inlet (OCU 11)	0.00 0.00 0.00 Ave: 0.00	0.5	Yes
OCU 12 (Pasteurisation Plant)	0.01 0.01 0.01 Ave: 0.01	0.5	Yes



Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: Friday 26 th July 2019 (08:00am)	
Attendees: Mr I Inman (London Borough of Hounslow) and Mr W Janjua & Ms E Philogene (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A was empty but had dry crust across 30% of the tanks surface (hopper end). Hopper 1 was approx 50% full, hopper 2 was >30% full and hopper 3 was 25%, all required draining down.</p> <p>Tank 1B was empty and clean. Hoppers 1 & 2 were both empty, hopper 3 was 25% full and required draining down.</p> <p>Tank 2A was empty and clean. Hopper 1 was >70% full, hoppers 2 & 3 were both 50% full, all required draining down.</p> <p>Tank 2B was empty and clean except for surface grit at the far end of the tank. Hoppers 1 & 2 were both 50% full, hopper 3 was >30% full, all required draining down.</p> <p>Tank 3A was empty and clean. Hoppers 1 & 2 were both approx 30% full, hopper 3 was 50% full, all required draining down.</p> <p>Tank 3B was empty and clean. Hoppers 1 & 3 were both 50% full, hopper 2 was >30% full, all required draining down.</p>	<div style="border: 1px solid black; padding: 10px;"> <p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p> </div>

Tanks 4A, 4B, 5A & 5B All tanks are covered and odour controlled. Unable to gauge condition as lighting system still not working.

Tank 6A was empty and clean. Hoppers 1, 2 & 3 were all >25% full, all required draining down.

Tank 6B was empty and clean. Hoppers 1, 2 & 3 were all drained down to their lowest point.

Tank 7A was dirty with grit and sludge across 50% of the tanks surface. Hoppers 1, 2 & 3 (shallow hoppers) were all full of grit and black sludge that required cleaning.

Tank 7B was dirty with grit and sludge across 50% of the tanks surface. Hoppers 1, 2 & 3 (shallow hoppers) were all full of grit and black sludge that required cleaning.

Tank 8A was dirty with grit and sludge across 50% of the tanks surface. Hoppers 1, 2 & 3 were all full and overflowing, all required draining down.

Tank 8B was dirty with grit and sludge across 50% of the tanks surface. Hoppers 1, 2 & 3 were all >70% full, all required draining down.

Feed Channel - The level of effluent in both feed channels was low along its entire length. However, there was thick scum and sludge on the surface along large sections of the channel.

Thames advised of planned works to replace all of the hopper valves to prevent back flow of effluent, Scheduled to begin towards the end of April and lasting approx 3 months.

Complaints

The Council has received 2 complaints by Email (1 from MRAG) in the preceding week.

On 22nd July at 11:58am an Email complaint was received from MRAG stating “horrendous odour during the weekend”. No specific times mentioned other than to say residents were driven to contact TW on 21st July at 21:04.

On 23rd July at 13:00 an Email was received from MRAG, that has been sent to them at 19:17 on 22nd July from resident of Weavers Close, Isleworth. The email stated odour had been bad over the weekend.

The historic odour monitor trends showed no excessive spikes around the times stated in the emails. However, Thames Water advised a gear box fault on PST10 had led to a build-up of sludge & crust on the tanks surface that may have been the possible cause of odour complaints.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection: Friday 26th July 2019 at 07:52.

Monitor 1	0.006	ppm	07:52
Monitor 2	0.005	ppm	07:52
Monitor 3	0.000	ppm	07:52
Monitor 4	0.000	ppm	07:52
Monitor 5	0.000	ppm	07:52
Monitor 6	0.000	ppm	07:52
Monitor 7	0.000	ppm	07:52
Monitor 8	0.000	ppm	07:52
Monitor 9	0.000	ppm	07:52
Monitor 10	0.000	ppm	07:52
Monitor 11	0.000	ppm	07:52
Monitor 12	0.000	ppm	07:52
Monitor 13	-0.003	ppm	07:52
Wind Speed	3.474	mph	07:52
Wind Direction	204.906	°	07:52

Odour Log (Thames)

Thursday 18th July 2019

DAY SHIFT

Temp. Warm.

Weather. Cloudy w/sunny spells.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM2 spiked between 07:20-07:34, max 0.023ppm <15mins duration.

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. OM5 0.018ppm 01:09-01:24, 0.017ppm 02:39-02:54.

Operational issues / causes observed. Blank.

Actions Taken. Occasional odour detected from PAS area. Tom has checked water traps on the overflows for the reactors and heat exchangers. No spills.

Friday 19th July 2019

DAY SHIFT

Temp. Cool.

Weather. Rain.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM2 spiked at 11:37-11:47, max 0.20ppm <15mins duration.

Operational issues / causes observed. Blank.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Cool.

Weather. Rain.

Odour Readings. All OMU's in use.

Time: 05:30.

Observations / Customer Complaint. OM2 0.015ppm at 01:44-02:01.

Operational issues / causes observed. Blank.

Actions Taken. Blank.

Saturday 20th July 2019

DAY SHIFT

Temp. Warm.

Weather. Sunny w/patchy clouds.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. No odours found or reported.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Cool.

Weather. Overcast night.

Odour Readings. All OMU's in operation.

Time: Blank.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. No odours found or reported.

Actions taken. Blank.

Sunday 21st July 2019

DAY SHIFT

Temp. Warm.

Weather. Cloudy w/sunny spells.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM1 spiked between 15:11-15:43, max 0.019ppm.

Operational issues / causes observed. Returning storm tanks.

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.
Operational issues / causes observed. Blank.
Actions Taken. Blank.

Monday 22nd July 2019

DAY SHIFT

Temp. Very not.

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. Hot.

Weather. Clear night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. Blank.

Actions Taken. Blank.

Tuesday 23rd July 2019

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. Hot.

Weather. Clear night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. OM5 spiked at 23:11 but <15mins duration max 0.015ppm. OM2 spiked at 02:50-03:04 <15mins

duration, max 0.026ppm.

Operational issues / causes observed. Blank.

Actions Taken. Blank.

Wednesday 24th July 2019

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.

Action Taken. Blank.

NIGHT SHIFT

Temp. Warm.

Weather. Clear night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. OM2 spiked very briefly at 21:00, max 0.015ppm.

Operational issues / causes observed. Blank.

Actions Taken. Blank.

Sludge Dip Records

Date	West PSTs	West PSTs	West PSTs	West Total	East PSTs	Grand Total
	1	2	3			
	All units in m ³					
OMP limit	500					
21/07/2019	0	595	61	656	3074	3730
22/07/2019	39	1091	0	1130	456	1586
23/07/2019	20	661	305	986	2737	3723

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 30 imports of sludge over the last week.
10 on Sunday 21st, 10 on Monday 22nd & 10 on Tuesday 23rd July.

No.5 Pumping Station

The doors and windows of No.5 pumping station were open at the time of the inspection but no odour was present.

Raw Sludge Screening House

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

Digesters

As LBH note, this has not been required in the last week.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester.
The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

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.

Digesters 5 & 6 were both in use and had good dry crusty seals.

Digester 7 was in use and had a wet sloppy seal that was bubbling off small amounts of gas. The bell was high and there was evidence of an overflow and spitting by the gas mixing compressor.

Digester 8 was in use and had a good dry seal.

Digester 9 was in use and had a fairly dry seal.

Digester 10 was out of service.

Digesters 11 & 12 were both in use and had a fairly dry seals.

Digester 13 was in use but had a very high seal that was wet and sloppy and bubbling off large amounts of gas.

Digesters 14, 15 & 16 were all out of service.

Digesters 17 & 18 were both in use and had good dry seals.

Digesters 19 & 20 were both in use but had wet sloppy seals that were bubbling off.

There was evidence of anti-foaming agent in use and TW advised that this is applied daily to all of the digesters that are operational.

The area around all digesters was much improved with no evidence of recent or historical sludge spills. Thames advised they have been actively undertaking regular clean-ups of this area of the works.

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 but green algae was evident across large areas of the tanks surfaces.

Skips

On the East side there was one 20yds open bulk carrier that contained general inert rubbish (wooden crates). Also present were two open 8yd skips. One was empty and one was approx 25% full but covered with a tarpaulin.

In the area next to STW 1A there was an open 8yd skip that contained large pieces of hardcore.

On the West side there was one 40yds closed bulk contained that was empty.

East Side Screen House

The doors to the screen house building were all closed at the time of the inspection. TW advised all screens were in operation.

Return Activated Sludge Channel

The nearside RAS channel (which runs in the ground between FST's 61-64 & 65-67) was clogged along 70% of the nearside channel.

Very small insects were clearly visible on top of crusty sections of the blockage.

TW were advised this needed to be rectified to avoid potential insect problems.

West side primary settlement tanks (PST)

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

Circular PSTs 10, & 12 were both out of service, PST 10 was being hosed down and cleaned at the time of the inspection.
PST's 9 & 11 were both in use and had fat free surfaces.
The new odour suppression system around the perimeter of PST-10 is currently out of operation due to a faulty water main.

Pasteurisation Plant

The pasteurisation plant is in service. TW advised 5 streams were currently out of service.

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 were much improved. The tops of the internal dividing walls were clearly visible and liquid inside the tanks appeared free flowing.

Nearly all of the sprinklers appeared to be in operation.

The mixed liquor feed channel serving E-Battery was clear of debris and free flowing along its entire length.

TW advised a tanker crew is regularly on site undertaking clearance of any clogged areas and Celvac was on site at the time of the inspection doing so.

New Inlet Works (West Side)

No issues appeared evident at the new inlet works.

Odour Control Unit (OCU) performance monitoring: 23/07/2019

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.01 0.01 0.01	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00	0.2	Yes
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	Blank	Unknown	Unknown
Sludge reception outlet	Blank	0.8	Yes
Thickening plant inlet	Blank	O/S	O/S
Thickening plant outlet	0.00 0.00 0.00	O/S	O/S
Transfer PS inlet	Blank	Unknown	Unknown
Transfer PS outlet	0.01 0.01 0.00	0.6	Yes
New West inlet (OCU 11)	0.00 0.00 0.00	0.5	Yes
Pasteurisation (OCU 12)	0.00 0.00 0.00	0.5	Yes



Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: Thursday 18th July 2019 (12:08)

Attendees: Mr Leroy Phillips (LBH), Mr Manzoor Hussain (Thames Water)

LB Hounslow Observation

Thames Water Action / Response

Storm Water Storage Tanks (SWST)

Tank 1A Was empty clean however slight grit build up at the end of tank located at the (Hopper end). Hoppers 1, 2 and 3 all full and require draining.

Tank 1B Was empty and clean however some dry grit build up on the surface of the Tank (Hopper end). Hoppers 1, 2, and 3 require draining hoppers 1/3 full.

Tank 2A Was empty and clean however some dry grit build up on the surface of the Tank (Hopper end). Hoppers 1, 2, and 3 require draining Hoppers 1/3 full.

Tank 2B was empty and clean however some dry grit / residue on the surface of the Tank (Hopper end). Hoppers 1, 2, and 3 require draining hoppers 1/3 full.

As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.

Tank 3A Was empty and clean however some dry grit build up on the surface of the Tank (Hopper end). Hoppers 1, 2, and 3 require draining hoppers 2/3 full.

Tank 3B Was empty and clean all hoppers drained down to their lowest point.

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 Was empty and clean Hopper 1 full required draining hoppers 2, and 3 drained to lowest point.

Tank 6B Was empty and clean. Hoppers all drained to lowest point.

Tank 7A was empty and clean. Hopper 1 and 2 were full however Hopper 3 was empty and had been drained down,

Tank 7B Was empty and clean. Hopper 1 and 2 were full however Hopper 3 was empty and had been drained down.

Tank 8A Was empty and clean. Hoppers 1, 2 and 3 all full and require draining.

Tank 8B Was empty and clean however Hoppers 1, 2, and 3 full and require draining.

Amajets- No reports of any faults with amajets. All in working order.

Feed Channel - The level of effluent in both feed channels was low at the time of inspection. No local odours rags, fats or solids. .

Complaints

The Council received no complaints by telephone in the preceding week.

The Council received no complaints by email in the preceding week.

The Council received no complaints by email from MRAG.

Thames Water controller advised that they had received no direct complaints in the preceding week.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection:

Monitor 1	0.004	ppm	13:00
Monitor 2	0.007	ppm	13:00
Monitor 3	0.000	ppm	13:01
Monitor 4	0.005	ppm	13:01
Monitor 5	0.000	ppm	13:01
Monitor 6	0.003	ppm	13:01
Monitor 7	0.003	ppm	13:01
Monitor 8	0.000	ppm	13:01
Monitor 9	0.004	ppm	13:01
Monitor 10	0.004	ppm	13:02
Monitor 11	0.003	ppm	13:02
Monitor 12	0.004	ppm	13:02
Monitor 13	0.004	ppm	13:02
Wind Speed	3.465	mph	13:02

Wind Direction	171.731	Deg	13:02	
<p><u>Odour Log (Thames) - Photocopies of log entries taken:</u></p> <p><u>Thursday 11th July 2019</u></p> <p>AM</p> <p>Temp: Warm. Weather: Sunny. All OMU's in use. Time: 17:30. Observations/Complaints: None noted. Operational Issues/Causes: No odour issues. Nothing of note on trends. Actions: None noted.</p> <p>PM</p> <p>Temp: Nothing noted. Weather: Nothing noted. All OMU's in use.</p>				

Time: Nothing noted.
Observations/Complaints. None noted.
No issues.
Operational Issues/Causes: None noted.
Actions: None noted.

Friday 12th July 2019

AM

Temp: Hot

Weather: Sunny.

All OMU's in use.

Time: 17:30.

Observations/Complaints: None noted.

Operational Issues/Causes: No odour issues.

Actions: None noted.

PM

Temp: Warm.

Weather: Clear night.

All OMU's in use.

Time: 20:00.

Observations/Complaints: Customer complaint from WOC.

Operational Issues/Causes: No odour spikes on site. Site OCU'S all running.

Actions: Site checked no abnormal odours found.

Saturday 13th July 2019

AM

Temp: Warm

Weather: Sunny W/ Patchy clouds.

All OMU's in use.

Time: 17:30.

Observations/Complaints: None noted.

Operational Issues/Causes: No odour issues.

Actions: None noted.

PM

Temp: Warm.

Weather: Cloudy.

All OMU's in use.

Time: 18:00

Observations/Complaints: Customer complaint.

Operational Issues/Causes: Checked digester area and E batt FST area nothing of note found. No odour spikes on trends. OM2 spiked to 0.022ppm at 21:30 less than 15 minutes.

Actions: Tech 1 done odour patrol around complaint couldn't smell any odours.

Sunday 14th July 2019

AM

Temp: Warm.

Weather: Sunny w/ Patchy Clouds.

All OMU's in use.

Time: None noted.

Observations/Complaints: None noted.

Operational Issues/Causes: No odour issues.

Actions: None Noted.

PM

Temp: Cool.

Weather: Cloudy.

All OMU's in use.

Time: 05:30.

Observations/Complaints: None noted.

Operational Issues/Causes: No odour issues. OM5 spiked to 0.021ppm at 20:39 less than 15 minutes.

Actions: None noted.

Monday 15th of July 2019

AM

Temp: Warm.

Weather: Sunny W / Patchy Clouds.

All OMU's in use.

Time: 17:30.

Observations/Complaints. None noted.

Operational Issues/Causes: No odour issues.

Actions: None noted.

PM

Temp: Warm.

Weather: Overcast.

All OMU's in use.

Time: 05:30.

Observations/Complaints. None noted.

Operational Issues/Causes: OM2 spiked to max 0.022ppm
23:08 – 23:33.

Actions: East inlets area check no obvious odours detected.

Tuesday 16th July 2019

AM

Temp: Hot.

Weather: Sunny.

All OMU's in use.

Time: 17:30.

Observations/Complaints: Nothing noted.

Operational Issues/Causes: No odour issues.

Actions: none noted.

PM

Temp: Warm.

Weather: Overcast.

All OMU's in use.

Time: 05:44.

Observations/Complaints: OM2 0.020ppm 21.32-22.10,
0.019ppm 00.36-00.53, 0.018ppm 02.08-02.17, OM5 0.020ppm
21.54-22.09, 0.021ppm 23.24-23.39.

Operational Issues/Causes: Conducted site walk round. East inlet occasional strong smell of odour. Confirmed all doors were closed and covers sealed.

Actions: None noted.

Wednesday 17th July 2019

AM

Temp: Warm.

Weather: Sunny W/ Patchy Clouds.

All OMU's in use.

Time: 17:30.

Observations/Complaints: OM5 - 0.018 - 08.40 - 08.54, OM2 0.015 - 12.29 - 12.50, OM8 - 0.016 - 16.22 - 16.34.

Operational Issues/Causes OM5 and 8 less than 15 mins.

Actions: None noted.

PM

Temp: Warm.

Weather: Clear night.

All OMU's in use.

Time: 05:30.

Observations/Complaints: OM2 0.028ppm 20.16-20.35, OM5 0.018ppm 02.09-02.23, 0.019ppm 02.39-02.54.

Operational Issues/Causes: Odour spikes investigate. Unable to identify any odour or a potential source of odour.

Actions: None noted.

Sludge Dip Records

Date	West PSTs	West PSTs	West PSTs	West Total	East PSTs	Grand Total
	1	2	3			
All units in m ³						
OMP limit	500					
15/07/19	0	0	244	244	608	852
16/07/19	166	581	534	1281	760	2041
17/07/19	40	824	244	1108	912	2020

The sludge stock levels for the West side circular primary settlement tank 1 were **compliant** with the OMP trigger level (500m³) for all of the dates for which data has been provided.

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.

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. Long term project currently initiated to bring these units back into service – will require significant investment.

Digester 5 - in use – seal level approx. 1ft below coping stones – weak seal – no evidence of spill.

As LBH note, this has not been required in the last week.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester.
The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

Digester 6 - in use – good seal level approx. 1ft below coping stones. Weak seal. No evidence of spill.

Digester 7 - in use – seal level approx. 1ft below coping stones. Weak sloppy seal. No evidence of spill.

Digester 8 - in use – seal level approx. 1ft below coping stones. Weak sloppy seal.

Digester 9 - in use – seal level approx. 1ft below surface of coping stones. Weak seal. No evidence of recent spill.

Digester 10 - in use – seal level approx. 1ft below surface of coping stones. Weak seal. No evidence of spill.

Digester 11 - in use – seal level approx. 1ft below surface of coping stones – seal weak and bubbling.

Digester 12 - in use – seal level approx. 1ft below coping stones – weak seal. No evidence of spill.

Digester 13 - in use – seal level approx. 1ft below coping stones – weak seal. No evidence of spill.

Digester 14 - out of use.

Digester 15 - out of use.

Digester 16 - out of use.

Digester 17 - in use – seal level approx. 1ft below coping stones. Good seal crusty. No evidence of spill.

Digester 18 - in use – seal level approx. 1ft below coping stones. Weak seal.

Digester 19 - in use – seal level approx. 1ft below coping stones.
Weak seal. No evidence of a spill.

Digester 20 - in use – seal level approx. 1ft below coping stones.
Weak seal. No evidence of spill.

No odour the area observed at times of inspection.

GENERAL

Sludge Screening House

All doors closed at time of inspection however aware that on previous visits these doors have been left open to avoid condensation build up – TW advised that doors being left open to create air flow is a Management decision to improve internal working environment for staff – odour monitors deployed in vicinity to determine whether local odours increase as a consequence. No odours observed at time of inspection.

Imported Sludge

Estimated average of 10 imports daily for 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). All jets and hoses were in operation no issues to report.

Skips

No Skips located on at the East side screening House.
3x Large bulk loaders (open carriers) at the East side grit House they were empty and uncovered.
No odour detected.
No Skips present at the West Side gritting house.

East Side Raw Sludge Screen House

Doors closed at time of inspection.

West side primary settlement tanks (PST)

Rectangular PSTs – No issues noticed at time of inspection

Circular PST's 9, 10 and 12 all in use and all hoses were in operation. Circular PST number 11 had been drained down and out of service. No odours noted during observation.

Pasteurisation Plant

Pasteurisation plant had six streams that were out of service. All remaining pasteurisation plant in service fully operational.

West Side Aeration Lanes (Old)

Battery C aeration feed channel approximately 90% clear of any obstruction- effluent is flowing with ease NO rags or build up noticed.

New Works (West Side)

Feed Channel for Aeration Lanes 21-24 free flowing no obstructions or odours.

The “Fluffy” coverage (obscured internal dividing walls within tank) that had been observed on previous visits had lightened in texture revealing the dividing walls within the tank. There were no concerning odours around this area.

Odour Control Unit (OCU) performance monitoring – (15th July 2019)

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.01 0.01 0.01 Ave: 0.01	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00	0.2	Yes
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	No data	Unknown	Unknown
Sludge reception outlet	No data	0.8	Yes
Thickening plant inlet	No data	Unknown	Unknown
Thickening plant outlet	0.00	0.6	Yes

	0.00 0.00 Ave: 0.00			
Transfer PS inlet	No Data	Unknown	Unknown	
Transfer PS outlet	0.00 0.00 0.00	0.6	Yes	
New West inlet (OCU 11)	0.00 0.00 0.00	0.5	Yes	
OCU 12 (Pasteurisation Plant)	0.00 0.00 0.00	0.5	Yes	



Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: Thursday 4th July 2019 (11:30)

Attendees: Mr Zaheer Kadri (LBH), Mr Desmond Wilson and Mr Waleed Janjua (Thames Water)

LB Hounslow Observation

Thames Water Action / Response

Storm Water Storage Tanks (SWST)

Tank 1A was empty and clean however some dry grit / residue on the surface of the Tank (Hopper end). Hopper 1, 2, and 3 needed draining down 1/3 full.

Tank 1B was empty and clean however some dry grit / residue on the surface of the Tank (Hopper end). Hopper 1, 2, and 3 needed draining down 1/3 full.

Tank 2A was empty and clean however some dry grit / residue on the surface of the Tank (Hopper end). Hopper 1, 2, and 3 needed draining down 1/3 full.

Tank 2B was empty and clean however some dry grit / residue on the surface of the Tank (Hopper end). Hopper 1, 2, and 3 needed draining down 1/3 full.

As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning

Tank 3A was empty and clean however some dry grit / residue on the surface of the Tank (Hopper end). Hopper 1, 2, and 3 needed draining down 2/3 full.

Tank 3B was empty and clean however some dry grit / residue on the surface of the Tank (Hopper end). Hopper 1, 2, and 3 needed draining down 2/3 full.

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 was empty and clean however some dry grit / residue on the surface of the Tank (Hopper end). Hopper 1, 2, and 3 needed draining down 1/3 full.

Tank 6B was empty and clean .Hopper 1, 2, and 3 needed draining down 1/3 full.

Tank 7A was empty and clean. Hopper 1 and 2 were full however Hopper 3 was empty and had been drained down,

Tank 7B was empty and clean. Hopper 1 and 2 were full however Hopper 3 was empty and had been drained down.

Tank 8A was empty and clean. Hopper 1 was full however 2 and 3 were empty and had been drained down.

Tank 8B was empty and clean however some dry grit / residue on the surface of the Tank (Hopper end). Hopper 1, 2, and 3 needed draining down 2/3 full.

Amajets- No reports of any faults with amajets. All in working order.

Feed Channel - The level of effluent in both feed channels was low – almost bottomed out in places. Dark and murky throughout the channel– no local odours rags, fats or solids. .

Complaints

The Council received one (0) complaint by telephone in the preceding week.

The Council received NO complaints by email in the preceding week.

The Council received no complaints by email from MRAG.

Thames Water controller advised that they had received no direct complaints in the preceding week.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection:

Monitor 1	0.004	ppm	11:56
Monitor 2	0.007	ppm	11:56
Monitor 3	0.000	ppm	11:56
Monitor 4	0.005	ppm	11:56
Monitor 5	0.000	ppm	11:56
Monitor 6	0.003	ppm	11:56
Monitor 7	0.003	ppm	11:56
Monitor 8	0.000	ppm	11:56
Monitor 9	0.004	ppm	11:56

Monitor 10	0.004	ppm	11:56
Monitor 11	0.003	ppm	11:56
Monitor 12	0.004	ppm	11:56
Monitor 13	0.004	ppm	11:56
Wind Speed	4.465	mph	11:56
Wind Direction	174.725	Deg	11:56

Odour Log (Thames) - Photocopies of log entries taken:

Thursday 27th June 2019

AM – Sunny with Patchy clouds.

All OMU's in use.

Time: 17:30.

Observations/Complaints: No issues.

Operational Issues/Causes: None noted.

Actions: None noted.

PM – Warm and Sunny.

All OMU's in use.

Time: 05:30.

Observations/Complaints.

No issues.

Operational Issues/Causes: None noted.

Actions: None noted.

Friday 28th June 2019

AM – Hot and sunny.

All OMU's in use.

Time: 17:30.

Observations/Complaints: No issues.

Operational Issues/Causes: None Noted.

Actions: None noted.

PM – Warm and clear night.

All OMU's in use.

Time: 05:30.

Observations/Complaints: No issues.

Operational Issues/Causes: None noted.

Actions: None noted.

Saturday 29th June 2019

AM – very Hot and sunny.

All OMU's in use.

Time: 07:12.

Observations/Complaints.

OM2 spiked between 13:31-13:47.

Operational Issues/Causes: No source discovered.

Actions: None noted.

PM – Hot/ Clear night.

All OMU's in use.

Time: not noted.

Observations/Complaints.

OM5 spiked to 0.017ppm between 21:53-22:08

OM3 had three spikes at 0.025ppm between 23:27-23:43,
0.039ppm between 00:42-00:59, 0.024ppm spiked between
02:29-02:43.

Operational Issues/Causes: No odour identified.

OCU11 chemical dosing out of range.

Actions: None Noted.

Sunday 30th June 2019

AM – Hot and Sunny.

All OMU's in use.

Time: 17:20.

Observations/Complaints.

OM5 spiked to 0.019ppm between 17:08 – ongoing.

Operational Issues/Causes: No Source discovered.

Actions: None Noted.

PM – Warm/Clear night.

All OMU's in use.

Time: 05:30.

Observations/Complaints.

OM3 spiked to 0.051ppm between 21:57 – 22:14.

Operational Issues/Causes: Area checked no odours identified.

Actions: None noted.

Monday 1st of July 2019

AM – Sunny with patchy clouds.

All OMU's in use.

Time: 17:30.

Observations/Complaints.

OM3 spiked at 07:42 – 07:57 max spike 0.033ppm.

Operational Issues/Causes: Area investigated OCU11 performance out of range.

Actions: None.

PM – Clear night.

All OMU's in use.

Time: none noted.

Observations/Complaints.

No observations.

Operational Issues/Causes: None.

Actions: None noted.

Tuesday 2nd July 2019

AM – Sunny with patchy clouds.

All OMU's in use.

Time: 17:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: No odours found.

Actions: none noted.

PM – Clear night.

All OMU's in use.

Time: 05:20.

Observations/Complaints: No observations.

Operational Issues/Causes: None noted.

Actions: None noted.

Wednesday 3rd July 2019

AM – Sunny.

All OMU's in use.

Time: 17:30.

Observations/Complaints: No observations/Issue.

Operational Issues/Causes: None noted.

Actions: None noted.

PM – Clear night.

All OMU's in use.

Time: 05:15.

Observations/Complaints: No observations.

Operational Issues/Causes: None found or reported.

Actions: None noted.

Sludge Dip Records

Date	West PSTs	West PSTs	West PSTs	West Total	East PSTs	Grand Total
	1	2	3			
All units in m ³						
OMP limit	500					
30/06/19	0	328	183	511	1088	1599
01/07/19	0	534	0	534	1112	1646
02/07/19	0	787	305	1092	356	1448

The sludge stock levels for the West side circular primary settlement tank 1 were **compliant** with the OMP trigger level (500m³) for all of the dates for which data has been provided.

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.

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. Long term project currently initiated to bring these units back into service – will require significant investment.

Digester 5 - in use – seal level approx. 1ft below coping stones – good seal – evidence of recent spill – requires anti-foam and clean-up.

Tanker cleans out the channel on a weekly basis

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester.
The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use

Digester 6 - in use – good seal level approx. 1ft below coping stones.

Digester 7 - in use – seal level approx. 1ft below coping stones. Seal was weak and bubbling.

Digester 8 - in use – good seal level approx. 1ft below coping stones.

Digester 9 - in use – seal level approx. 1ft below surface of coping stones – good seal.

Digester 10 - in use – seal level approx. 1ft below surface of coping stones.

Digester 11 - in use – seal level approx. 1ft below surface of coping stones – seal weak and bubbling.

Digester 12 - in use – seal level approx. 1ft below coping stones – good seal.

Digester 13 - in use – seal level approx. 1ft below coping stones – good seal.

Digester 14 - out of use.

Digester 15 - out of use.

Digester 16 - out of use.

Digester 17 - in use – seal level approx. 1ft below coping stones – seal crusty.

Digester 18 - in use – seal level approx. 2ft below coping stones – seal weak and slightly bubbling.

Digester 19 - in use – seal level approx. 1ft below coping stones
– good seal.

Digester 20 - in use – seal level approx. 1ft below coping stones
– good seal.

No odour in the area observed at times of inspection

GENERAL

Sludge Screening House

All doors closed at time of inspection however aware that on previous visits these doors have been left open to avoid condensation build up – TW advised that doors being left open to create air flow is a Management decision to improve internal working environment for staff – odour monitors deployed in vicinity to determine whether local odours increase as a consequence. No odours observed.

Imported Sludge

Estimated average of 10 imports daily for 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). All jets and hoses were in operation and no excessive build-up of algae.

Skips

No Skips present at the East side screening House- All clear.
2 Large bulk loaders (open carriers) were present at the East side grit House- These were empty and uncovered (used for general waste).

No odour detected.

No Skips present at the West Side gritting house. - All clear.

East Side Raw Sludge Screen House

Doors closed at time of inspection.

West side primary settlement tanks (PST)

Rectangular PSTs – No issues noticed at time of inspection

Circular PST's 9, 10 and 12 all in use and all hoses were in operation. Circular PST number 11 had been drained down and out of service. No Odours observed.

Pasteurisation Plant

Pasteurisation plant had six streams that were out of service. - All remaining pasteurisation plant in service fully operational.

West Side Aeration Lanes (Old)

Battery C aeration feed channel approximately 90% clear of any obstruction- effluent is flowing with ease NO rags or build up noticed.

New Works (West Side)

Feed Channel for Aeration Lanes 21-24 free flowing no obstructions or odours.

The “Fluffy” coverage (obscured internal dividing walls within tank) that had been observed on previous visits had lightened in texture revealing the dividing walls within the tank. There were no concerning odours around this area.

Odour Control Unit (OCU) performance monitoring – (2nd July 2019)

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.03 0.04 0.04 Ave: 0.03	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00	0.2	Yes
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	No data	Unknown	Unknown
Sludge reception outlet	No data	0.8	Yes
Thickening plant inlet	No data	Unknown	Unknown
Thickening plant outlet	0.06	0.6	Yes

	0.06 0.05 Ave: 0.05			
Transfer PS inlet	No Data	Unknown	Unknown	
Transfer PS outlet	0.00 0.00 0.00	0.6	Yes	
New West inlet (OCU 11)	0.00 0.00 0.00	0.5	Yes	
OCU 12 (Pasteurisation Plant)	0.00 0.00 0.00	0.5	Yes	



Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: Thursday 27 th June 2019 (12:20pm)	
Attendees: Mr I Inman (London Borough of Hounslow) and Mr W Janjua (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A was empty but had dry crust across 30% of the tanks surface. Hoppers 1, 2 & 3 were all <30% full and required draining down.</p> <p>Tank 1B was empty and clean. Hoppers 1, 2 & 3 were all less <25% full.</p> <p>Tank 2A was empty and clean. Hoppers 1, 2 & 3 were all 25% full and required further draining down.</p> <p>Tank 2B was empty and clean. Hoppers 1, 2 & 3 were all 25% full and required further draining down.</p> <p>Tank 3A was empty and clean. Hoppers 1 & 2 were both <30% full and hopper 3 was full, all required draining down.</p> <p>Tank 3B was empty and clean. Hoppers 1, 2 & 3 were all 25% full and required draining down.</p> <p>Tanks 4A, 4B, 5A & 5B All tanks are covered and odour controlled. Unable to gauge condition as lighting system still not working.</p>	<div style="border: 1px solid black; padding: 10px;"> <p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p> </div>

Tank 6A was empty and clean. Hoppers 1, 2 & 3 were all <25% full, hopper 3 was being overpumped into the storm channel.

Tank 6B was empty and clean. Hoppers 1, 2 & 3 were all drained down to their lowest point.

Tank 7A was empty and clean. Hoppers 1, 2 & 3 (shallow hoppers) were all full of grit and black sludge that required cleaning.

Tank 7B was empty and clean. Hoppers 1, 2 & 3 (shallow hoppers) were all full of grit and black sludge that required cleaning.

Tank 8A was empty and clean. Hopper 1 was full and hoppers 2 & 3 were both 30% full of black liquid. At the time of the inspection hopper 1 was being over pumped into the storm channel.

Tank 8B was empty and clean. Hopper 1 was 75% full and hoppers 2 & 3 were both 50% full, all required draining down.

Feed Channel - The level of effluent in both feed channels was low along its entire length. However, there was thick scum and sludge on the surface along large sections of the channel.

Thames advised of planned works to replace all of the hopper valves to prevent back flow of effluent, Scheduled to begin towards the end of April and lasting approx 3 months.

Complaints

The Council has received no complaints by telephone, Email 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 27th June 2019 at 12:15.

Monitor 1	0.004	ppm	12:15
Monitor 2	0.007	ppm	12:15
Monitor 3	0.000	ppm	12:15
Monitor 4	0.006	ppm	12:15
Monitor 5	0.005	ppm	12:15
Monitor 6	0.006	ppm	12:15
Monitor 7	0.000	ppm	12:15
Monitor 8	0.000	ppm	12:15
Monitor 9	0.007	ppm	12:15
Monitor 10	0.007	ppm	12:15
Monitor 11	0.000	ppm	12:15
Monitor 12	0.004	ppm	12:15
Monitor 13	0.004	ppm	12:15
Wind Speed	6.870	mph	12:15
Wind Direction	55.153	°	12:15

Odour Log (Thames)

Thursday 20th June 2019

DAY SHIFT

Temp. Warm.

Weather. Sunny w/patchy clouds.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM1 one spike 0.023ppm
09:44-10:00.

Operational issues / causes observed. Storm tanks returning. No other odour issues.

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.

Operational issues / causes observed. Blank.

Actions Taken. Blank.

Friday 21st June 2019

DAY SHIFT

Temp. Warm.

Weather. Sunny w/patchy clouds.

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 use.

Time: 05:30.

Observations / Customer Complaint. OM5 0.024ppm at 21:52-22:07.

OM5 0.018ppm at 23:38-23:52.

Operational issues / causes observed. Blank.

Actions Taken. Blank.

Saturday 22nd June 2019

DAY SHIFT

Temp. Warm.

Weather. Sunny.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM2 0.030ppm 08:01-08:18.

Operational issues / causes observed. No odour identified.

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 spikes.

Operational issues / causes observed. Blank.

Actions taken. Blank.

Sunday 23rd June 2019

DAY SHIFT

Temp. Warm.

Weather. Sunny w/patchy clouds.

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 spikes.

Operational issues / causes observed. Blank.

Actions Taken. Blank.

Monday 24th June 2019

DAY SHIFT

Temp. Warm.

Weather. Sunny w/patchy clouds.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM5 0.017ppm 14:38-14:53.

OM2 0.029ppm 14:15-14:37.

Operational issues / causes observed. East inlet skip area hosed/washed down. No other odour issues on site.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Cool.

Weather. Rain.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. OM2 0.024ppm at 19:39-20:13.

OM2 0.028ppm at 00:28-00:48.

Operational issues / causes observed. No odour identified.

Actions Taken. Blank.

Tuesday 25th June 2019

DAY SHIFT

Temp. Warm.

Weather. Rain.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM10 0.016ppm 15:32-15:46.

Operational issues / causes observed. Digester area checked, no odour identified.

Actions Taken: Blank

NIGHT SHIFT

Temp. Warm.

Weather. Overcast night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. No odour issues found or reported.

Actions Taken: Blank.

Wednesday 26th June 2019

DAY SHIFT

Temp. Warm.

Weather. Sunny.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. No odour issues on site.

Action Taken: Blank.

NIGHT SHIFT

Temp. Warm.

Weather. Sunny w/patchy clouds.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. No odour issues found or

reported.

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 m ³					
OMP limit	500					
24/06/2019	0	473	305	778	760	1538
26/06/2019	0	679	305	984	1920	2904
27/06/2019	0	534	122	656	1088	1744

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 30 imports of sludge over the last week.
10 on Monday 24th, 10 on Tuesday 25th & 10 on Wednesday 26th June.

No.5 Pumping Station

The doors and windows of No.5 pumping station were all closed at the time of the inspection.

Raw Sludge Screening House

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

Digesters

As LBH note, this has not been required in the last week.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester.
The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use

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.

Digesters 5, 6, 7, 8, 9, 10, 11, 12 & 13 were all in use and had wet sloppy seals. However, only minimal amounts of gas appeared to be bubbling off.

It was noted that the bell height of digester 7 was very high.

Digesters 14, 15 & 16 were all out of service.

Digesters 17, 18, 19 & 20 were all in use and had wet sloppy seals. However, only minimal amounts of gas appeared to be bubbling off.

There was evidence of anti-foaming agent in use and TW advised that this is applied daily to all of the digesters that are operational.

The area around all digesters was much improved with no evidence of recent or historical sludge spills. Thames advised they have been actively undertaking regular clean-ups of this area of the works.

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 but green algae was evident across large areas of the tanks surfaces.

Skips

On the East side there was one 20yds open bulk carrier that contained general inert rubbish (wooden crates).

Also present was one open 8yd skip that was covered with a tarpaulin which contained rag.

In the area next to STW 1A there was a large open topped skip,

Skips containing rag and grit are routinely covered.
General waste and empty skips which are not odorous may be uncovered.

estimated to be approx 20yd, which contained old machinery and metal work.

On the West side there were no skips.

East Side Screen House

The doors to the screen house building were all closed at the time of the inspection. TW advised all screens were in operation.

Return Activated Sludge Channel

The nearside RAS channel (which runs in the ground between FST's 61-64 & 65-67) was clogged along 75% of the nearside channel and <50% of the outside (road side) channel.

Very small insects were clearly visible on top of crusty sections of the blockage.

TW were advised this needed to be rectified to avoid potential insect problems.

West side primary settlement tanks (PST)

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

Circular PSTs 9, 10, & 11 were all in operation at the time of the inspection and it was noted that PST10 had fat across 50% of the tanks surface.

The new odour suppression system around the perimeter of PST-10 is currently out of operation due to a faulty water main.

PST 12 was in the process of being drained down before being taken out of service as part of normal summer procedure.

Pasteurisation Plant

The pasteurisation plant is in service. TW advised 5 streams were

currently out of service.

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 were much improved. The tops of the internal dividing walls were clearly visible and liquid inside the tanks appeared free flowing.

Nearly all of the sprinklers appeared to be in operation.

The mixed liquor feed channel serving E-Battery was clear of debris and free flowing along its entire length.

TW advised a tanker crew is regularly on site undertaking clearance of any clogged areas and Celvac was on site at the time of the inspection doing so.

New Inlet Works (West Side)

No issues appeared evident at the new inlet works.

Odour Control Unit (OCU) performance monitoring: 25/06/2019

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.01 0.01 0.01	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00	0.2	Yes
East OCU	0.00 0.00	0.05	Yes

	0.00		
West inlet OCU	0.00 0.00 0.00	0.05	Yes
Sludge reception inlet	Blank	Unknown	Unknown
Sludge reception outlet	Blank	0.8	Yes
Thickening plant inlet	Blank	O/S	O/S
Thickening plant outlet	0.00 0.00 0.00	O/S	O/S
Transfer PS inlet	Blank	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00	0.6	Yes
New West inlet (OCU 11)	0.03 0.02 0.03	0.5	Yes
Pasteurisation (OCU 12)	0.00 0.00 0.00	0.5	Yes



Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: 20th June 2019 (12:00)

Attendees: Mr Zaheer Kadri (LBH), Mr Aneel Gurang and Mr Waleed Janjua (Thames Water)

LB Hounslow Observation

Thames Water Action / Response

Storm Water Storage Tanks (SWST)

Tank 1A was empty and had wet residue on the surface of the Tank (Hopper end). Hoppers 1, 2, and 3 needed draining down.

Tank 1B was empty and had wet residue on the surface of the Tank (Hopper end). Hoppers 1, 2, and 3 needed draining down.

Tank 2A was empty and had dry gritty residue on the surface of the Tank (Hopper end). Hoppers 1, 2, and 3 needed draining down.

Tank 2B was empty and had dry gritty residue on the surface of the Tank (Hopper end). Hoppers 1, 2, and 3 were all drained down.

Tank 3A Tank was returning all Amajets in operation 20% full of effluent.

As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.

Tank 3B was empty and had wet residue on the tank floor at the hopper end. Hoppers 1, 2, and 3 all needed draining 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 was empty and had wet residue on the tank floor at the hopper end. Hoppers 1, 2, and 3 were drained down.

Tank 6B was empty and had wet residue on the tank floor at the hopper end. Hoppers 1, 2, and 3 all needed draining down.

Tank 7A was empty and had dry residue on the tank floor at the hopper end. Hoppers 1, 2, and 3 shallow hoppers all needed draining down.

Tank 7B was empty and had wet residue on the tank floor at the hopper end. Hoppers 1, 2, and 3 all needed draining down.

Tank 8A was empty and had wet sludgy residue on the tank floor at the hopper end. Hoppers 1, 2, and 3 all needed draining down.

Tank 8B was empty and had wet sludgy residue on the tank floor at the discharge end. Hoppers 1, 2, and 3 all needed draining down.

Amajets- No reports of any faults with amajets. All in working order.

Feed Channel - The level of effluent in both feed channels was low – almost bottomed out in places. Dark and murky throughout the channel– no local odours rags, fats or solids. .

Complaints

The Council received one (0) complaint by telephone in the preceding week.

The Council received NO complaints by email in the preceding week.

The Council received no complaints by email from MRAG.

Thames Water controller advised that they had received no direct complaints in the preceding week.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection:

Monitor 1	0.009	ppm	12:15
Monitor 2	0.006	ppm	12:15
Monitor 3	0.000	ppm	12:15
Monitor 4	0.010	ppm	12:15
Monitor 5	0.004	ppm	12:15
Monitor 6	0.006	ppm	12:15
Monitor 7	0.000	ppm	12:15
Monitor 8	0.003	ppm	12:15
Monitor 9	0.005	ppm	12:15
Monitor 10	0.007	ppm	12:15
Monitor 11	0.000	ppm	12:15
Monitor 12	0.000	ppm	12:15
Monitor 13	0.005	ppm	12:15
Wind Speed		mph	12:15
Wind Direction		Deg	12:15

Odour Log (Thames) - Photocopies of log entries taken:

Thursday 13th June 2019

AM – Cool / Rain with sunny spells.

All OMU's in use.

Time: 17:20.

Observations/Complaints: No issues.

Operational Issues/Causes: Storm tanks filling.

Actions: None noted.

PM – Cool / Rain.

All OMU's in use.

Time: 05:30.

Observations/Complaints: OM2 spiked at 01:15 – 01:34 <15 mins duration max 0.031ppm, OM5 spiked at 22:37-22:51 <15 mins duration max 0.031ppm.

Operational Issues/Causes: Storm Tanks Full/Storming to river.

Actions: None noted.

Friday 14th June 2019

AM – Warm / Rain with Sunny Spells .

All OMU's in use.

Time: 17:30.

Observations/Complaints: No issues.

Operational Issues/Causes: Storm Tanks returning.

Actions: None noted.

PM – Cool / Overcast night.

All OMU's in use.

Time: 05:30

Observations/Complaints: OM2- 0.017 01:20-01:28

Operational Issues/Causes: Storm Tanks returning

Actions: None noted.

Saturday 15th June 2019

AM – Warm / Cloudy with Sunny spells

All OMU's in use.

Time: 17:30.

Observations/Complaints: No odour issues

Operational Issues/Causes: storm tanks returning .

Actions: None noted.

PM – Cool clear night.

All OMU's in use.

Time: 05:30.

Observations/Complaints: OM2 Multiple spikes throughout the night – OM10 – 0.021 05:29-06:28 under operational issues.

Operational Issues/Causes: No Sources found.

Actions: None Noted.

Sunday 16th June 2019

AM – Warm Cloudy sunny spells.

All OMU's in use.

Time: 17:30.

Observations/Complaints: None.

Operational Issues/Causes: No obvious source identified.

Actions: None noted.

PM – Cool Overcast night .

All OMU's in use.

Time: 05:30.

Observations/Complaints: OM2 0.027 02:59-03:43 No Source found

OM5 0.022 22:21- 22:35 - No Operational issues.

Operational Issues/Causes: None.

Actions: None noted.

Monday 17th June 2019

AM – Warm / Sunny with patchy clouds.

All OMU's in use.

Time: 17:30.

Observations/Complaints: OM2 & 5 2 spikes on these monitors

No odours found.

Operational Issues/Causes: None.

Actions: None.

PM – Cool overcast night.

All OMU's in use.

Time: 05:30.

Observations/Complaints:

OM2 - 0.032ppm at 01:44 - 02:05 - No source found.

OM5 - 0.020ppm at 23:06 - 23:22 - No source found.

Operational Issues/Causes: None.

Actions: None noted.

Tuesday 18th June 2019

AM – Warm/ Rain with Sunny spells.

All OMU's in use.

Time: 17:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: No odours found.

Actions: none noted.

PM – Cool / overcast night.

All OMU's in use.

Time: 05:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

Wednesday 19th June 2019

AM – Warm Rain with Sunny spells.

All OMU's in use.

Time: 17:30.

Observations/Complaints: Short spike from OM9 less than 15 minute duration.

Operational Issues/Causes: None noted.

<p>Actions: None noted. PM – Cool / Rain. All OMU's in use. Time: 05:30. Observations/Complaints: No odours reported. Operational Issues/Causes: None found or reported. Actions: None noted.</p>	
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Sludge Dip Records

Date	West PSTs	West PSTs	West PSTs	West Total	East PSTs	Grand Total
	1	2	3			
All units in m ³						
OMP limit	500					
13/06/19	0	267	450	717	304	1021
17/06/19	0	581	0	581	456	1037
18/06/19	0	909	122	1031	969	2000

The sludge stock levels for the West side circular primary settlement tank 1 were **compliant** with the OMP trigger level (500m³) for all of the dates for which data has been provided.

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.

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. Long term project currently initiated to bring these units back into service - will require significant investment.

Digester 5 - in use - seal level approx. 1ft below coping stones - good seal - evidence of recent spill - requires anti-foam and clean-up.

As LBH note, this has not been required in the last week.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester.
The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

Digester 6 - in use - good seal level approx. 1ft below coping stones.

Digester 7 - in use - seal level approx. 1ft below coping stones. Seal was weak and slightly bubbling from one side.

Digester 8 - in use - good seal level approx. 1ft below coping stones.

Digester 9 - in use - seal level approx. 1ft below surface of coping stones - good seal.

Digester 10 - in use - seal level approx. 1ft below surface of coping stones.

Digester 11 - in use - seal level approx. 1ft below surface of coping stones - seal weak and bubbling.

Digester 12 - in use - seal level approx. 1ft below coping stones - good seal.

Digester 13 - in use - seal level approx. 1ft below coping stones - good seal.

Digester 14 - out of use.

Digester 15 - out of use.

Digester 16 - out of use.

Digester 17 - in use - seal level approx. 1ft below coping stones - seal crusty.

Digester 18 - in use - seal level approx. 2ft below coping stones - seal weak and slightly bubbling.

Digester 19 - in use - seal level approx. 1ft below coping stones - good seal.

Digester 20 - in use - seal level approx. 1ft below coping stones - good seal.

No odour in the area observed at times of inspection.

GENERAL

Sludge Screening House

All doors closed at time of inspection however aware that on previous visits these doors have been left open to avoid condensation build up – TW advised that doors being left open to create air flow is a Management decision to improve internal working environment for staff - odour monitors deployed in vicinity to determine whether local odours increase as a consequence. No odours observed.

Imported Sludge

Estimated average of 10 imports daily for preceding seven days. (Low Sludge stocks).

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 jets and hoses were in operation and no excessive build-up of algae.

Skips

No Skips present at the screening House- All clear.

1 12yd Skip with general waste – Blue Tarpaulin covered
1 Large bulk loaders (open carriers) were present at the East side grit House- These was uncovered and empty (used for general waste).
There was one 6yrd skip which also had a tarpaulin cover.

No odour detected.

No Skips present at the West Side gritting house - All clear.

East Side Raw Sludge Screen House

Doors closed at time of inspection.

West side primary settlement tanks (PST)

Rectangular PSTs – No issues noticed at time of inspection

Circular PST's 9, 10, 11 & 12 all in use and all hoses were in operation. TW had introduced a trial of odour control "mistors" on Tank 10 – pipe installed around tank top tail with nozzle sprays at regular intervals which could be utilised to create a plume of deodoriser (same as current mobile units on site) – intention are to roll this out to all "odorous areas" on site if proves effective during trial period – initial testing has proven successful to date – trial ongoing. At time of inspection these mistors were not in operation. No Odours observed.

Pasteurisation Plant

Pasteurisation plant had five streams that were out of service - All remaining pasteurisation plant in service and fully operational.

West Side Aeration Lanes (Old)

Battery C aeration feed channel approximately 90% clear of any obstruction- effluent is flowing with ease NO rags or build up noticed. Kelvac (Contractors) on site at time of inspection.

New Works (West Side)

Feed Channel for Aeration Lanes 21-24 free flowing no obstructions or odours. Kelvac on site at time of inspection.

The “Fluffy” coverage (obscured internal dividing walls within tank) that had been observed on previous visits had lightened in texture revealing the dividing walls within the tank. There were no concerning odours around this area.

Odour Control Unit (OCU) performance monitoring – (20th June 2019)

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.05 0.05 0.06 Ave: 0.05	Unknown	Unknown
Main pumping station outlet	0.00 0.00	0.2	Yes

	0.00 Ave: 0.00		
East OCU	0.00 0.00 0.00 Ave: 0.00	0.05	Yes
West inlet OCU	0.00 0.00 0.00 Ave: 0.00	0.05	Yes
Sludge reception inlet	No data	Unknown	Unknown
Sludge reception outlet	No data	0.8	Yes
Thickening plant inlet	No data	Unknown	Unknown
Thickening plant outlet	0.00 0.00 0.00 Ave: 0.00	0.6	Yes
Transfer PS inlet	No Data	Unknown	Unknown
Transfer PS outlet	0.01 0.01 0.02 Ave: 0.01	0.6	Yes
New West inlet (OCU 11)	0.03 0.03 0.02 Ave: 0.02	0.5	Yes
OCU 12 (Pasteurisation Plant)	0.00 0.00 0.00 Ave: 0.00	0.5	Yes



London Borough of Hounslow

Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: Thursday 13 th June 2019	
Attendees: Mr L Phillips (London Borough of Hounslow) and Mr Waleed (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A was empty and clean. Slight grit build up at rear of tank near hoppers. Hoppers 1, 2 and 3 all full and require draining. No odour detected.</p> <p>Tank 1B was empty and clean. All hoppers full and required draining no odour detected during visit.</p> <p>Tank 2A was empty and clean. All hoppers were full and required draining.</p> <p>Tank 2B was empty and clean. All hoppers had been drained to lowest point.</p> <p>Tank 3A was in use, tank flushing and all amajets were in operation.</p> <p>Tank 3B was in use, tank flushing and all amajets were in operation.</p> <p>Tanks 4A, 4B, 5A & 5B which are covered and odour controlled were all empty. Unable to gauge condition as lighting system still not working.</p>	<div style="border: 1px solid black; padding: 10px;"><p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p></div>

Tank 6A was in use, tank flushing and all amajets were in operation.

Tank 6B was in use, tank flushing and all amajets were in operation.

Tank 7A was empty, however tank required flushing due to sludge in the rear end of the tank near the hoppers. All hoppers had drained to lowest point.

Tank 7B was in use, tank flushing and all amajets were in operation

Tank 8A was empty and clean. All hoppers full and required draining.

Tank 8B was empty and clean. All hoppers full and required draining

Feed Channel - The level of effluent in both feed channels was low along its entire length. However, there was thick scum and sludge on the surface along large sections of the channel.

I can confirm that the storm tank hoppers were much improved and Thames advised that a tanker crew had been employed to clear the hoppers of grit and sludge.

Complaints

The Council has received no complaints by telephone in the preceding week.

The Council received an Email complaint on 05^h June at 17:24 from resident in the Kneller Road area. However the complainant is not a resident of the London Borough of Hounslow and is outside of the catchment area. Checked the trends around the time of the complaint show no changes in the trends.

The Council received no complaints by email from MRAG.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection: Thursday 13th June 2019 at 11:48.

Monitor 1	0.006	ppm	11:48
Monitor 2	0.003	ppm	11:48
Monitor 3	0.000	ppm	11:48
Monitor 4	0.005	ppm	11:49
Monitor 5	0.004	ppm	11:50
Monitor 6	0.004	ppm	11:50
Monitor 7	0.005	ppm	11:50
Monitor 8	0.006	ppm	11:50
Monitor 9	0.000	ppm	11:50
Monitor 10	0.006	ppm	11:50
Monitor 11	0.005	ppm	11:50
Monitor 12	0.005	ppm	11:50
Monitor 13	0.004	ppm	11:50
Wind Speed	2.261	mph	11:50
Wind Direction	335.025	°	11:50

Odour Log (Thames) - Photocopies of log entries taken:

Thursday 06th June 2019

DAY SHIFT AM:

Temp: Warm.

Weather: Sunny W/ Patchy clouds

Odour Readings: All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint: OM2 spiked at 16:40 – 16:57 max 0.017ppm.

Operational issues / causes observed: Checked areas adjacent to monitors no odours found.

Actions Taken: Blank.

Time: Blank.

Observations / Customer Complaint: OM3 spiked at 08:12 – 08:25 15 mins duration max 0.021ppm.

Operational issues / causes observed: Blank.

Actions Taken: Blank.

NIGHT SHIFT PM

Temp: Cool.

Weather: Clear night.

Odour Readings: All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint: OM2 three spikes 0.027ppm
19:57 – 20:19 0.021ppm 20:42 – 21:02 0.023ppm 21:13 – 21:48 OM5
0.018PPM 19:22 – 19:36.

Operational issues / causes observed: No odour detected OCU'S
across site working normally.

Actions Taken: Blank.

Friday 07th June 2019**DAY SHIFT AM**

Temp: Cool.

Weather: Rain.

Odour Readings: All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint: OM5 spiked three times 08:22
– 08:51, 11:21 – 11:36, 11:51 – 12:05 max 0.037ppm.

Operational issues / causes observed: No odours found.

Actions Taken: Blank.

NIGHT SHIFT PM

Temp: Warm

Weather: Rain.

Odour Readings: All OMU's in use.

Time: 05:10.

Observations / Customer Complaint: OM5 0.017 – 17:21 – 17:36
0.017 3:37 – 03:57.

Operational issues / causes observed: No odour identified.

Actions Taken: Blank.

Time: Blank.

Observations / Customer Complaint: OM2 0.023 – 18:01 – 18:21
0.020 01:33 – 01:44 0.024 04:30 – 04:50.

Operational issues / causes observed: Area checked no issues.

Actions Taken: Blank.

Saturday 8th June 2019

DAY SHIFT AM

Temp: Warm.

Weather: Sunny w/ Patchy Clouds.

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 PM

Temp: Cool.

Weather: Overcast 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.

Sunday 9th June 2019**DAY SHIFT AM**

Temp: Warm.

Weather: Rain w/ Sunny spells.

Odour Readings: All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint: OM2 spiked at 15:00 – 15:17 max 0.021ppm and 15:27 – 15:49 max 0.033ppm. OM8 spiked at 16:06 – 16:22 max 0.019ppm.

Operational issues / causes observed: No odour issues found at east inlet.

Actions Taken: Blank.

NIGHT SHIFT PM

Temp: Cool.

Weather: Overcast night.

Odour Readings: All OMU's in operation.

Time: 05:20.

Observations / Customer Complaint: No odour issues.

Operational issues / causes observed: Blank.

Actions Taken. Blank.

Monday 10th June 2019

DAY SHIFT AM

Temp.: Cool.

Weather: Rain.

Odour Readings: All OMU's in operation.

Time: 17:40.

Observations / Customer Complaint: Blank.

Operational issues / causes observed. No odour issues.

Actions Taken: Blank.

NIGHT SHIFT PM

Temp: Cool.

Weather. Rain.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. No odour issues.

Operational issues / causes observed. Blank.

Actions Taken. Blank.

Tuesday 11th June 2019

DAY SHIFT AM:

Temp: Warm.

Weather: Sunny W/ Patchy clouds.

Odour Readings: All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint: OM5 0.022 5:51 – 06:08.

Operational issues / causes observed: No odour identified.

Actions Taken: Blank.

NIGHT SHIFT PM:

Temp: Warm.

Weather: Overcast night.

Odour Readings: All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint: Blank.

Operational issues / causes observed: No odour issues found or reported.

Actions Taken: Returning storm tanks.

Wednesday 12th June 2019

DAY SHIFT AM

Temp: Cool.

Weather: Rain W/ Sunny spells.

Odour Readings: All OMU's in operation.

Time: 17:20.

Observations / Customer Complaint: OM5 0.022 7:37 – 07:52 0.021
8:07 – 08:22.

Operational issues / causes observed: No odour Identified.

Action Taken: Blank.

NIGHT SHIFT

Temp: Cool.

Weather: Rain.

Odour Readings: All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint: Blank.

Operational issues / causes observed: No odour issues found or reported.

Actions Taken: Returning storm tanks.

Sludge Dip Records

Date	West PSTs	West PSTs	West PSTs	West Total	East PSTs	Grand Total
	1	2	3			
	All units in m ³					
OMP limit	500					
07/06/2019	0	0	183	183	456	639
10/06/2019	0	0	183	183	456	639
12/06/2019	0	206	305	511	966	1477

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

No imports due to pump not working.

No.5 Pumping Station

The doors and windows of No.5 pumping station were all open at the time of the inspection. Thames advised works are being undertaken inside and venting of the building was required for staff safety.

Raw Sludge Screening House

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

Digesters 1-4 – Out of use (permanent).

Thames advised of a long term project currently initiated to bring these

As LBH note, this has not been required in the last week.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester.
The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

units back into service that will require significant investment.

Digester 5 - In use – weak sloppy seal – no evidence of recent spill.

Digester 6 - In use – weak sloppy seal – no evidence of recent spill.

Digester 7 - In use – weak sloppy seal – no evidence of recent spill.

Digester 8 - In use – weak sloppy seal – no evidence of recent spill.

Digester 9 - In use – weak sloppy seal – no evidence of recent spill.

Digester 10 - In use – seal level approx. 1ft below surface of coping stones.

Digester 11 - In use – weak sloppy seal – no evidence of recent spill.

Digester 12 - In use – weak sloppy seal – no evidence of recent spill.

Digester 13 - Out of use – empty and clean.

Digester 14 - Out of use – empty and clean.

Digester 15 - Out of use – empty and clean.

Digester 16 - Out of use – empty and clean.

Digester 17 - In use – weak sloppy seal – no evidence of recent spill.

Digester 18 - In use – weak sloppy seal – no evidence of recent spill.

Digester 19 - In use – weak sloppy seal – no evidence of recent spill.

Digester 20 - In use – weak sloppy seal – no evidence of recent spill.

There was evidence of anti-foaming agent in use and TW advised that this is applied daily to all of the digesters that are operational.

The area in and around all digesters has improved and I can confirm no evidence of recent or historical sludge spills. Thames advised they have been actively undertaking regular clean-ups of this area of the works.

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 no issues to report on.

Skips

x2 Skips present at the screening House empty.

x1 16 yard skip present at the East side grit House general waste inside.

No odour detected.

On the West side x2 16yd skip empty.

East Side Screen House

One pair of doors to the building were open at the time of the inspection. TW advised all screens were in operation and the doors were open due to staff undertaking daily checks of the screens.

Return Activated Sludge Channel

The nearside RAS channel was slightly clogged around 25% in the mid-section of both lanes.

West side primary settlement tanks (PST)

Tanker cleans out the channel on a weekly basis

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

Circular PSTs 9, 10, 11 & 12 all to in operation at the time of the inspection, and all had fat free surfaces.

Pasteurisation Plant

The pasteurisation plant is in service. TW advised 6 streams were currently out of service.

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 had visible scum across the top surface However I can confirm that there has been a big improvement in comparison to the previous weeks inspection.

Most of the sprinklers appeared to be in operation.

The mixed liquor feed channel serving E-Battery was partially clogged with rag and other floating debris by lanes 25. Tanker onsite during visit.

No odour was noticeable.

TW advised a tanker crew are regularly on site undertaking clearance of any clogged areas.

New Inlet Works (West Side)

No issues appeared evident at the new inlet works.

Odour Control Unit (OCU) performance monitoring: 11/06/2019

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.00 0.00 0.00	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00	0.2	Yes
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	Blank	Unknown	Unknown
Sludge reception outlet	0.00 0.00 0.00	0.8	Yes
Thickening plant inlet	Blank	Unknown	Unknown
Thickening plant outlet	0.00 0.00 0.00	0.6	Yes
Transfer PS inlet	Blank	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00 0.01	0.6	Yes
New West inlet (OCU 11)	0.00 0.00 0.00	0.5	Yes
Pasteurisation (OCU 12)	0.00 0.00 0.00	0.5	Yes



Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: 5 th June 2019	
Attendees: Mr Steven Maunders and Mr Channi Varsani (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A – Tank empty - approximately 40% of tank covered by dried grit and sludge – requires flushing/hosing to remove - Hopper 1 approx. 20% full. Hoppers 2 & 3 drained down to bottom.</p> <p>Tank 1B – Tank empty and flushed - approximately 10% of tank covered by dried grit – requires further flushing – Hoppers 1, 2 & 3 approx. 20% full - require draining/over-pumping.</p> <p>Tank 2A – Tank empty and flushed clean – Hopper 1 approx. 20% full. Hoppers 2 & 3 full to brim and require draining/over-pumping.</p> <p>Tank 2B – Tank empty and flushed - approximately 25% of tank covered by dried grit – requires further flushing – Hoppers 1 & 2 approx. 70% full - requires draining/over-pumping. Hoppers 3 drained down to bottom.</p> <p>Tank 3A – Tank empty and flushed clean – Hoppers 1, 2 & 3 approx. 25% full – requires draining/over-pumping.</p> <p>Tank 3B – Tank empty – approx. 50% of tank covered by dried grit and</p>	<div style="border: 1px solid black; padding: 10px;"> <p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p> </div>

sludge – requires flushing/hosing to remove – Hoppers 1, 2 & 3 drained down to bottom.

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 – Tank empty and flushed - approximately 10% of tank covered by dried grit – requires further flushing - Hopper 1 approximately 10% full - requires draining/over-pumping. Hoppers 2 & 3 drained down to bottom.

Tank 6B – Tank empty and flushed - approximately 20% of tank covered by grit and sludge – requires further flushing/hosing to remove. – Hoppers 1, 2 & 3 approximately 10% full - requires draining/over-pumping.

Tank 7A – Tank empty – approx. 50% of tank covered by grit and sludge – requires further flushing/hosing to remove – Hoppers 1 & 2 full – requires draining/over-pumping. Hopper 3 drained down to bottom.

Tank 7B – Tank in process of being returned – Hoppers 1, 2 & 3 full.

Tank 8A – Tank empty – approx. 25% of tank covered by dried grit and sludge – requires further flushing/hosing to remove – Hopper 1 approx. 50% full, Hoppers 2 & 3 full – requires draining/over-pumping.

Tank 8B – Tank empty – approx. 15% of tank covered by dried grit and sludge – requires further flushing/hosing to remove – Hoppers 1, 2 & 3 approximately 50% full – requires draining/over-pumping.

Feed Channel - The level of effluent in both feed channels was low – no local odours.

Complaints

The Council directly received no complaints by telephone in the preceding week.

The Council directly received no complaints by email in the preceding week.

The Council received no complaints by email from MRAG.

Thames Water controller advised that they had received no direct complaints in the preceding week.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection:

Monitor 1	0.005	ppm	14:00
Monitor 2	0.005	ppm	14:00
Monitor 3	0.007	ppm	14:00
Monitor 4	0.006	ppm	14:00
Monitor 5	0.004	ppm	14:00
Monitor 6	0.005	ppm	14:00
Monitor 7	0.007	ppm	14:00
Monitor 8	0.006	ppm	14:00
Monitor 9	0.003	ppm	14:00
Monitor 10	0.007	ppm	14:00
Monitor 11	0.006	ppm	14:00
Monitor 12	0.005	ppm	14:00
Monitor 13	0.004	ppm	14:00
Wind Speed	7.3	mph	
Wind Direction	247°		

Odour Log (Thames)

Thursday 30th May 2019

AM – Cool – Cloudy with Sunny spells.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: "No odour issues".

Actions: None noted.

PM – Cool – Clear Night.

All OMU's in use.

Observations/Complaints: "OM5 = 0.036 @20:50 – 21:06. OM9 = 0.029 @01:13-01:28."

Operational Issues/Causes: "Picking up odours from PAS."

Actions: None noted.

Friday 31st May 2019

AM – Warm – Sunny with patchy clouds.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: "No odour issues".

Actions: None noted.

PM – Cool – Clear Night.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: "No odour issues."

Actions: None noted.

Saturday 1st June 2019

AM – Warm – Sunny.

All OMU's in use.

Observations/Complaints: "OM5 0.021ppm 15:36-15:51, OM2 0.064ppm 12:28-13:06, 0.039ppm 13:40-14:04."

Operational Issues/Causes: "Odour Monitor 5 no odour identified. East inlet skip area hosed down."

Actions: None noted.

PM – Warm – Clear Night.

All OMU's in use.

Observations/Complaints: "OM8 0.053ppm 03:37, OM9 0.066ppm 03:42 till end of shift."

Operational Issues/Causes: "Area checked. No obvious odour found."

Actions: None noted.

Sunday 2nd June 2019

AM – Hot – Sunny.

All OMU's in use.

Observations/Complaints: "OM2 0.035ppm 13:13-13:33, OM5 0.015ppm 16:37-16:51."

Operational Issues/Causes: "No odour identified."

Actions: None noted.

PM – Cool – Clear Night.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: No odour issues."

Actions: None noted.

Monday 3rd June 2019

AM – Warm – Sunny with Patchy Clouds.

All OMU's in use.

Observations/Complaints: "OM5 spike under 15 mins. OM3 0.018 @ 15:10-15:25."

Operational Issues/Causes: "No odour identified."

Actions: None noted.

PM – Cool – Overcast Night.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: "No odour issues."

Actions: None noted.

Tuesday 4th June 2019

AM – Warm – Rain with Sunny spells.

All OMU's in use.

Observations/Complaints: "OM5 0.025 @ 14:36-14:52."

Operational Issues/Causes: "No odour identified."

Actions: None noted.

PM – Cool – Clear Night.

All OMU's in use.

Observations/Complaints: "OM5 0.018ppm 03:22-03:36, 0.030ppm 21:36-21:52. OM2 0.024ppm 00:14-00:30, 0.023ppm 23:27-00:03, 0.023ppm 22:29-22:49."

Operational Issues/Causes: "Area checked no odour issues. East

inlet skip area hosed down. Screen House doors confirmed closed.”

Actions: None noted.

Wednesday 5th June 2019

AM – Warm – Sunny with patch clouds.

All OMU's in use.

Observations/Complaints: “OM3, 5 & 8 spiked but less than 15 mins.

OM8 0.016 11:53-12:08.

Operational Issues/Causes: “PAS stream 10 drained down today.

Area smelt.”

Actions: None noted.

PM – Cool – Clear Night.

All OMU's in use.

Observations/Complaints: “OM5 two spikes 0.025ppm 21:51–22:07,

0.18ppm 00:07-00:36.”

Operational Issues/Causes: “Occasional odour detected from PAS.

No sludge spills from either reactors or heat exchangers.”

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					
29/05/19	0	0	244	244	304	548
30/05/19	78	206	244	528	456	984
04/06/19	0	206	183	389	456	845 (785 TW figure)

The sludge stock levels for the West side circular primary settlement tank 1 were **compliant** with the OMP trigger level (500m³) for all of the dates for which data has been provided.

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.

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. Long term project currently initiated to bring these units back into service – will require significant investment.

Digester 5 - in use – seal level approx. 2ft below coping stones - seal weak and bubbling.

Digester 6 - in use – seal level approx. 2ft below coping stones - seal weak and bubbling.

As LBH note, this has not been required in the last week.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester.
The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

Digester 7 - in use – seal level approx. 3ft below coping stones – seal weak and bubbling - Ongoing spitting/spill – tank “gurgling” - requires anti-foam and clean-up – Bell height high – requires draw down of biogas.

Digester 8- in use – seal level approx. 3ft below coping stones - seal weak and bubbling.

Digester 9 - in use – seal level approx. 3ft below coping stones - seal weak and bubbling.

Digester 10 - in use – seal level approx. 3ft below coping stones - seal weak and bubbling.

Digester 11 - in use – seal level approx. 2ft below surface of coping stones – seal weak and bubbling.

Digester 12 - in use – seal level approx. 2ft below coping stones - seal weak and bubbling.

Digester 13 in use – seal level approx. 1ft below surface of coping stones – seal weak and bubbling – evidence of recent spill accumulated under adjacent cabling ducting – requires anti-foam and clean-up. Exacerbated by issue with “restricted valve”.

Digester 14 - out of use – empty and clean – contractor on site undertaking maintenance.

Digester 15 - out of use – empty and clean – contractor on site undertaking maintenance.

Digester 16 - out of use – empty and clean – contractor on site undertaking maintenance.

Digester 17 - in use – seal level approx. 3ft below coping stones - seal weak and bubbling.

Digester 18 - in use – seal level approx. 3ft below coping stones – seal weak and bubbling.

Digester 19 - in use – seal level approx. 3ft below coping stones – seal weak and bubbling.

Digester 20 - in use – seal level approx. 3ft below coping stones – seal weak and bubbling.

GENERAL

Sludge Screening House

All doors closed at time of inspection.

Imported Sludge

No imports daily for 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). Green Algae on 100% of surface of Tanks 73 & 74.

Skips

1x large enclosed skip and 1x 20 yard open skip & 1x (8 yard) open general waste skips (covered with tarpaulin) located in Service Road by Storm Water Tanks.

1x partially filled small grit slips by Sludge Screening House.

1x large enclosed grit/rag skips located by PST's 9-12 – elevated at one end to drain liquid from within as exceed safe carriage weight for vehicles – advised that management of fluids draining from within requires improvement as currently ponding within areas of broken hard-standing where currently located.

Skips containing rag and grit are routinely covered. General waste and empty skips which are not odorous may be uncovered.

Pasteurisation Plant

Pasteurisation plant currently six streams out of service (number unspecified).

East Side Raw Sludge Screen House

Doors closed at time of inspection

West side primary settlement tanks (PST)

Rectangular PSTs – no issues

Circular PST's 9, 10, 11 & 12 all in use. Tank 11 has fat across 50% of surface.

West Side Aeration Lanes (Old)

Battery C aeration feed channel approximately 75% obstructed in one channel – requires jetting.

New Works (West Side)

Feed Channel for Aeration Lanes 21-24 completely clear.

“Fluffy” coverage across surface broken down significantly since previous visit - internal dividing walls within tank now visible. Quantity of sanitary items by-passing screener reduced.

**Odour Control Unit (OCU) performance monitoring – (03/06/19) –
(dated 03/09/19 on TW sheet)**

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.00 0.00 0.00	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00	0.2	Yes
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	No data	Unknown	Unknown
Sludge reception outlet	No data	0.8	Yes
Thickening plant inlet	No data	Unknown	Unknown
Thickening plant outlet	0.01 0.01 0.01	0.6	Yes
Transfer PS inlet	No data	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00	0.6	Yes
New West inlet (OCU 11)	0.00 0.00 0.00	0.5	Yes
OCU 12 (Pasteurisation Plant)	0.02 0.01 0.00	0.5	Yes



Mogden Sewage Treatment Works

TW Site Inspection

<p>Date of inspection: Wednesday 29th May 2019 (10:30am)</p>	
<p>Attendees: Mr I Inman & Mr T Blackford (London Borough of Hounslow) and Mr C Varsani (Thames Water)</p>	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A was empty but had dry crust across 25% of the tanks surface. Hopper 1 was 25% full, hoppers 2 & 3 were both <25% full.</p> <p>Tank 1B was empty and clean. Hoppers 1, 2 & 3 were all less <25% full.</p> <p>Tank 2A was empty and clean. Hopper 1 was <25% full, hoppers 2 & 3 were both full and required draining down. TW advised the valves on hoppers 2 & 3 were both jammed and both hoppers were due to be overpumped by a tanker tomorrow,</p> <p>Tank 2B was empty and clean. Hoppers 1, 2 & 3 were all full and required draining down. TW advised the valves on all three hoppers were jammed but were due to be overpumped by a tanker tomorrow,</p> <p>Tank 3A was empty and clean. Hopper 1 was 25% full, hopper 2 was 50% full and hopper 3 was <25% full, hoppers 1 & 3 required draining down.</p>	<div style="border: 1px solid black; padding: 10px;"> <p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p> </div>

Tank 3B was empty and clean but had dry crust across 25% of the tanks surface. Hoppers 1 & 3 were both <25% full, hopper 2 was >30% full and required draining down.

Tanks 4A, 4B, 5A & 5B All tanks are covered and odour controlled. Unable to gauge condition as lighting system still not working.

Tank 6A was empty and clean. Hoppers 1, 2 & 3 were <25% full.

Tank 6B was empty and clean. Hoppers 1, 2 & 3 were all were >30% full and required draining down.

Tank 7A was empty and clean but had patchy areas of dry grit across the tanks surface. Hoppers 1, 2 & 3 (shallow hoppers) were all full of grit and black sludge that required cleaning.

Tank 7B was relatively empty and clean but had large patchy areas of dry grit across the tanks surface at the hopper end. Hoppers 1, 2 & 3 (shallow hoppers) were all full of grit and black sludge that required cleaning.

Tank 8A was empty and clean. Hopper 1 was full and hoppers 2 & 3 were both 75% full of black liquid. At the time of the inspection hopper 1 was being overpumped into the storm channel.

Tank 8B was empty and clean. Hopper 1 was full and hoppers 2 & 3 were both 75% full, all hoppers required draining down.

Feed Channel - The level of effluent in both feed channels was low along its entire length. However, there was thick scum and sludge on the surface along large sections of the channel.

Thames advised of planned works to replace all of the hopper valves to prevent back flow of effluent, Scheduled to begin towards the end of April and lasting approx 3 months.

Complaints

The Council has received no complaints by telephone in the preceding

week.

The Council received an Email complaint on 21st May at 16:26 from a Varsity Drive, Twickenham (ref: 984163).
The historic odour monitoring trends showed no spikes around the time of the complaint.

The Council received no complaints by email from MRAG.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection: Wednesday 29th May 2019 at 11:39.

Monitor 1	0.006	ppm	11:39
Monitor 2	0.006	ppm	11:39
Monitor 3	0.000	ppm	11:39
Monitor 4	0.004	ppm	11:39
Monitor 5	0.004	ppm	11:39
Monitor 6	0.005	ppm	11:39
Monitor 7	0.006	ppm	11:39
Monitor 8	0.006	ppm	11:39
Monitor 9	0.005	ppm	11:39
Monitor 10	0.007	ppm	11:39
Monitor 11	0.006	ppm	11:39
Monitor 12	0.006	ppm	11:39
Monitor 13	0.004	ppm	11:39
Wind Speed	3.704	mph	11:39
Wind Direction	211.336	°	11:39

Odour Log (Thames)

Thursday 23rd May 2019

DAY SHIFT

Temp. Warm.

Weather. Sunny with.

Odour Readings. All OMU's in operation.

Time: 17:30..

Observations / Customer Complaint. OM2 = 0.021ppm @ 15:50-16:15.

Operational issues / causes observed. No odour found.

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 spikes.

Customer complaint of H2S in neighbourhood. No location information recorded.

Operational issues / causes observed. No significant odours found. Normal odours from PAS and storm tank channels.

Actions Taken. Site survey completed.

Friday 24th May 2019

DAY SHIFT

Temp. Warm.

Weather. Sunny.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. No odour spikes.

Operational issues / causes observed. Email system down over Bank holiday.

Actions Taken. Reported to management.

NIGHT SHIFT

Temp. Warm.

Weather. Clear night.

Odour Readings. All OMU's in use.

Time: 05:30.

Observations / Customer Complaint. No odour spikes.

Operational issues / causes observed. Email system down over Bank holiday.

Actions Taken. Blank.

Saturday 25th May 2019

DAY SHIFT

Temp. Warm.

Weather. Sunny.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. No odour spikes.

Operational issues / causes observed. Email system down over Bank holiday.

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 spikes.

Operational issues / causes observed. Email system down over Bank holiday.

Actions taken. Blank.

Sunday 26th May 2019

DAY SHIFT

Temp. Warm.

Weather. Sunny w/patchy clouds.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. No odour spikes.

Operational issues / causes observed. Email system down over Bank holiday.

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 spikes.

Operational issues / causes observed. Email system down over Bank holiday.

Actions Taken. Blank.

Monday 27th May 2019

DAY SHIFT

Temp. Cool.

Weather. Cloudy w/sunny spells.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. No odour spikes.

Operational issues / causes observed. Email system down over Bank holiday.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Cold.

Weather. Overcast night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. No odour spikes.

Operational issues / causes observed. Email system down over Bank holiday.

Actions Taken. Blank.

Tuesday 28th May 2019

DAY SHIFT

Temp. Cool.

Weather. Cloudy w/sunny spells..

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. No odour spikes.

Operational issues / causes observed. Email system down over Bank holiday.

Actions Taken: Blank

NIGHT SHIFT

Temp. Cool.

Weather. Overcast night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. 3 X spikes on OM2. All 0.015ppm at 00:18-00:37 / 01:28-01:46 / 04:38-04:57.

Operational issues / causes observed. Blank.

Actions Taken: Blank.

Wednesday 29th May 2019

DAY SHIFT

Temp. Cool.

Weather. Rainy w/sunny spells.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. No odour spikes.

Operational issues / causes observed. Blank.

Action Taken: Blank.

NIGHT SHIFT

Temp. Cool.

Weather. Overcast night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. Spike on OM2 0.015ppm at 20:58-21:16 (18 mins).

Operational issues / causes observed.

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 m ³					
OMP limit	500					
24/05/2019	59	450	0	509	152	661
26/05/2019	59	450	122	631	152	783
28/05/2019	0	206	0	206	304	510

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 15 imports of sludge over the last week. 5 on Friday 24th, 5 on Sunday 26th & 5 on Tuesday 28th May.

No.5 Pumping Station

The doors and windows of No.5 pumping station were all open at the time of the inspection. Thames advised works are being undertaken inside and venting of the building was required for staff safety.

Raw Sludge Screening House

The large roller shutter door of the Raw Sludge Screening building was half open at the time of the inspection due to a recent skip change.

Digesters

As LBH note, this has not been required in the last week.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester. The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

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.

Digesters 5, 6, 7, 8, 9, 10, 11 & 12 were all in use and had wet sloppy seals. However, only minimal amounts of gas appeared to be bubbling off.

Digester 13 was in use and had a fairly good dry seal.

Digesters 14, 15 & 16 were all out of service.

Digesters 17, 18, 19 & 20 were all in use and had wet sloppy seals. However, only minimal amounts of gas appeared to be bubbling off.

There was evidence of anti-foaming agent in use and TW advised that this is applied daily to all of the digesters that are operational.

The area around all digesters was much improved with no evidence of recent or historical sludge spills. Thames advised they have been actively undertaking regular clean-ups of this area of the works.

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 but green algae was evident across large areas of the tanks surfaces.

Skips

On the East side there was one 20yds open bulk carrier that contained general inert rubbish (wooden crates). Also present was one open 8yd skip that was covered with a tarpaulin which contained rag.

Skips containing rag and grit are routinely covered.
General waste and empty skips which are not odorous may be uncovered.

In the area next to STW 1A there was a large open topped skip, estimated to be approx 20yd, which contained old machinery and metal work.

On the West side there was one 40yd closed bulk carrier that were both full and draining liquid before being taken off site. Thames advised they would be removed today.

East Side Screen House

The doors to the screen house building were all closed at the time of the inspection. TW advised all screens were in operation.

Return Activated Sludge Channel

The nearside RAS channel (which runs in the ground between FST's 61-64 & 65-67) was clogged along <30% of the nearside channel in the mid-section.

Very small insects were clearly visible on top of crusty sections of the blockage. TW were advised this needed to be rectified to avoid potential insect problems.

West side primary settlement tanks (PST)

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

Circular PSTs 9, 10, 11 & 12 all appeared to be in operation at the time of the inspection, and all had fat free surfaces.

The new odour suppression system around the perimeter of PST-10 is currently out of operation due to a faulty water main.

Pasteurisation Plant

The pasteurisation plant is in service. TW advised 6 streams were currently out of service.

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 had patches of scum across their surfaces but were much improved. The tops of the internal dividing walls were clearly visible and liquid inside the tanks appeared free flowing. Nearly all of the sprinklers appeared to be in operation.

The mixed liquor feed channel serving E-Battery was cleared and free flowing along its entire length. TW advised a tanker crew is regularly on site undertaking clearance of any clogged areas.

New Inlet Works (West Side)

No issues appeared evident at the new inlet works.

Odour Control Unit (OCU) performance monitoring: 30/05/2019

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.00 0.00 0.00	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00	0.2	Yes
East OCU	0.00 0.00 0.00	0.05	Yes
West inlet OCU	0.00 0.00	0.05	Yes

	0.00		
Sludge reception inlet	Blank	Unknown	Unknown
Sludge reception outlet	0.00 0.00 0.00	0.8	Yes
Thickening plant inlet	Blank	O/S	O/S
Thickening plant outlet	Blank	O/S	O/S
Transfer PS inlet	Blank	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00	0.6	Yes
New West inlet (OCU 11)	0.00 0.00 0.00	0.5	Yes
Pasteurisation (OCU 12)	0.00 0.00 0.00	0.5	Yes



Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: 22 nd May 2019	
Attendees: Mr Steven Maunders and Mr Channi Varsani (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A – Tank empty - approximately 40% of tank covered by dried grit and sludge – requires flushing/hosing to remove - Hopper 1 approx. 20% full. Hoppers 2 & 3 drained down to bottom.</p> <p>Tank 1B – Tank empty and flushed - approximately 10% of tank covered by dried grit – requires further flushing – Hoppers 1, 2 & 3 drained down to bottom.</p> <p>Tank 2A – Tank empty and flushed clean – Hopper 1 approx. 20% full. Hoppers 2 & 3 full to brim and require draining/over-pumping.</p> <p>Tank 2B – Tank empty and flushed - approximately 25% of tank covered by dried grit – requires further flushing – Hopper 1 approx. 10% full. Hoppers 2 & 3 full to brim and require draining/over-pumping.</p> <p>Tank 3A – Tank empty and flushed clean – Hoppers 1 & 3 drained down to bottom, Hopper 2 approx. 50% full – requires draining/over-pumping.</p> <p>Tank 3B – Tank empty – approx. 50% of tank covered by dried grit and</p>	<div style="border: 1px solid black; padding: 10px;"> <p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p> </div>

sludge – requires flushing/hosing to remove – Hoppers 1, 2 & 3 drained down to bottom.

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 – Tank empty and flushed - approximately 10% of tank covered by dried grit – requires further flushing - Hopper 1 approximately 30% full - requires draining/over-pumping. Hoppers 2 & 3 drained down to bottom.

Tank 6B – Tank empty and flushed - approximately 20% of tank covered by grit and sludge – requires further flushing/hosing to remove. – Hoppers 1, 2 & 3 approximately 30% full - requires draining/over-pumping.

Tank 7A – Tank empty – approx. 50% of tank covered by grit and sludge – requires further flushing/hosing to remove – Hoppers 1 & 2 full – requires draining/over-pumping. Hopper 3 drained down to bottom.

Tank 7B – Tank empty – approx. 50% of tank covered by grit and sludge – requires further flushing/hosing to remove – Hoppers 1, 2 & 3 drained down to bottom.

Tank 8A – Tank backfilling from faulty valve – Hoppers 1, 2 & 3 full – requires draining/over-pumping.

Tank 8B – Tank empty – approx. 15% of tank covered by dried grit and sludge – requires further flushing/hosing to remove – Hoppers 1, 2 & 3 approximately 10% full – requires draining/over-pumping.

Feed Channel - The level of effluent in both feed channels was low – no local odours.

Complaints

The Council directly received no complaints by telephone in the preceding week.

The Council directly received no complaints by email in the preceding week.

The Council received no complaints by email from MRAG.

Thames Water controller advised that they had received no direct complaints in the preceding week.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection:

Monitor 1	0.003	ppm	14:00
Monitor 2	0.008	ppm	14:00
Monitor 3	0.000	ppm	14:00
Monitor 4	0.004	ppm	14:00
Monitor 5	0.000	ppm	14:00
Monitor 6	0.006	ppm	14:00
Monitor 7	0.007	ppm	14:00
Monitor 8	0.008	ppm	14:00
Monitor 9	0.005	ppm	14:00
Monitor 10	0.008	ppm	14:00
Monitor 11	0.006	ppm	14:00
Monitor 12	0.008	ppm	14:00
Monitor 13	0.004	ppm	14:00
Wind Speed	3.3	mph	
Wind Direction	199°		

Odour Log (Thames)

Thursday 16th May 2019

AM – Warm - Sunny.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: "No odour issues".

Actions: None noted.

PM – Cool – Overcast Night.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: "OM6 spiked at 20:08-21:06 Max 0.018".

Actions: "Checked area around Storm Tanks – no odours found".

Friday 17th May 2019

AM – Warm – Cloudy with Sunny spells.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: "No odour issues".

Actions: None noted.

PM – Cool – Clear Night.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: "No odour issues."

Actions: None noted.

Saturday 18th May 2019

AM – Warm – Sunny with patchy clouds.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: "OM2 spiked 0.027 12:59-13:17"

Actions: "Area investigated, No source found."

PM – Cool – Clear Night.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: "OM9 0.016ppm 22:05-23:04, 0.016ppm 00:35-00:50. OM3 0.016ppm max 23:39-23:53."

Actions: "Area checked. Unable to identify any source of odour. Digester bell height low at the time of the spikes. No spills or overflows in PAS/digester area."

Sunday 19th May 2019

AM – Warm – Sunny with patchy clouds.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: "No odour issues."

Actions: None noted.

PM – Cool – Clear Night.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: No odour issues."

Actions: None noted.

Monday 20th May 2019

AM – Cool – Sunny with Patchy Clouds.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: "OM7 spiked at 11:30-11:58, max 0.019ppm."

Actions: "No sources of odour found, storm tank hopper valves being worked on."

PM – Cool – Clear Night.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: None noted.

Actions: None noted.

Tuesday 21st May 2019

AM – Warm – Sunny.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: "No odour issues."

Actions: None noted.

PM – Warm – Clear Night.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: "OM7 0.021 21:28–22:20."

Actions: "Area investigated, no source found."

Wednesday 22nd May 2019

AM – Hot – Sunny.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: "No odour issues."

Actions: None noted.

PM – Warm – Clear Night.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: "OM5 0.021ppm 02:35–02:05, OM2 0.022 00:15-00:34 various spikes less than 15 mins. OM7 0.022 21:13-22:13."

Actions: "Area investigated, No source found."

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					
20/05/19	59	206	0	265	608	873
21/05/19	39	473	0	512	760	1272
22/05/19	0	534	0	534	1601	2135

The sludge stock levels for the West side circular primary settlement tank 1 were **compliant** with the OMP trigger level (500m³) for all of the dates for which data has been provided.

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.

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. Long term project currently initiated to bring these units back into service – will require significant investment.

Digester 5 - in use – seal level approx. 3ft below coping stones - seal weak and bubbling.

Digester 6 - in use – seal level approx. 2ft below coping stones - seal weak and bubbling.

Digester 7 - in use – seal level approx. 2ft below coping stones – seal weak and bubbling - Ongoing spitting/spill – tank “gurgling” - requires anti-foam and clean-up – Bell height high – requires draw down of

As LBH note, this has not been required in the last week.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester.
The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

biogas.

Digester 8- in use – seal level approx. 4ft below coping stones - seal weak and bubbling.

Digester 9 - in use – seal level approx. 2ft below coping stones - seal weak and bubbling.

Digester 10 - in use – seal level approx. 3ft below coping stones - seal weak and bubbling.

Digester 11 - in use – seal level approx. 18” below surface of coping stones – seal weak and bubbling – evidence of dried spill accumulated under adjacent cabling ducting – requires anti-foam and clean-up.

Digester 12 - in use – seal level approx. 2ft below coping stones - seal weak and bubbling.

Digester 13 in use – seal level approx. 6” below surface of coping stones – seal weak and bubbling – evidence of recent spill accumulated under adjacent cabling ducting – requires anti-foam and clean-up.

Digester 14 - out of use – empty and clean – contractor on site undertaking maintenance.

Digester 15 -- in use – good seal approx. 2ft below coping stones.

Digester 16 - out of use – empty and clean – contractor on site undertaking maintenance.

Digester 17 - in use – seal level approx. 3t below coping stones - seal weak and bubbling.

Digester 18 - in use – seal level approx. 2ft below coping stones – - seal weak and bubbling – evidence of prior dried spill - requires anti-foam and clean-up.

Digester 19 - in use – seal level approx. 2ft below coping stones – seal weak and bubbling – evidence of prior dried spill - requires anti-foam

and clean-up.

Digester 20 - in use – seal level approx. 4ft below coping stones – seal weak and bubbling.

GENERAL

Sludge Screening House

All doors closed at time of inspection.

Imported Sludge

Average of 10 imports daily for 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). Green Algae on 100% of surface of Tanks 73 & 74.

Skips

1x large enclosed skip and 1x 20 yard open skip & 1x (8 yard) open general waste skips (covered with tarpaulin) located in Service Road by Storm Water Tanks.

1x partially filled small grit slips by Sludge Screening House.

1x open skip in use for transfer materials from mobile screening plant located by Pasteurisation Plant.

1x large enclosed grit/rag skips located by PST's 9-12 – elevated at one end to drain liquid from within as exceed safe carriage weight for vehicles – advised that management of fluids draining from within requires improvement as currently ponding within areas of broken hard-

Skips containing rag and grit are routinely covered.
General waste and empty skips which are not odorous may be uncovered.

standing where currently located.

Pasteurisation Plant

Pasteurisation plant currently six streams out of service (number unspecified).

East Side Raw Sludge Screen House

Doors partially open at time of inspection – to provide ventilation for contractors on site working in structure.

West side primary settlement tanks (PST)

Rectangular PSTs – no issues

Circular PST's 9, 10, 11 & 12 all in use. Tank 12 has fat across 75% of surface.

West Side Aeration Lanes (Old)

Battery C aeration feed channel approximately 60% obstructed in one channel – requires jetting.

New Works (West Side)

Feed Channel for Aeration Lanes 21-24 completely clear.

“Fluffy” coverage across surface broken down significantly since previous visit - internal dividing walls within tank now visible. Still significant quantity of sanitary items by-passing screener.

Odour Control Unit (OCU) performance monitoring – (23/05/19)

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.00 0.00 0.00	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00	0.2	Yes
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	0.00 0.00 0.00	Unknown	Unknown
Sludge reception outlet	No data	0.8	Yes
Thickening plant inlet	No data	Unknown	Unknown
Thickening plant outlet	0.475 0.451 0.438	0.6	Yes
Transfer PS inlet	No data	Unknown	Unknown
Transfer PS outlet	No data	0.6	Yes
New West inlet (OCU 11)	0.00 0.00 0.00	0.5	Yes
OCU 12 (Pasteurisation Plant)	0.3 0.3 0.3	0.5	Yes



Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: Friday 17 th May 2019	
Attendees: Mr L Phillips (London Borough of Hounslow) and Mr C Varsani (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A was empty and clean. Slight grit build up at rear of tank near hoppers. All hoppers drained to lowest point.</p> <p>Tank 1B was empty and clean. All hoppers were all drained down to lowest point.</p> <p>Tank 2A was empty and clean. All hoppers were full and required draining.</p> <p>Tank 2B was empty and clean. All hoppers were full and required draining.</p> <p>Tank 3A was empty and clean slight grit build up at rear end of tank near hoppers. All hoppers were all drained down to lowest point.</p> <p>Tank 3B was empty and clean except for a large area of dry crust at the hopper end of the tank. All hoppers were all drained down to lowest point.</p> <p>Tanks 4A, 4B, 5A & 5B which are covered and odour controlled were</p>	<div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: 80%;"> <p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p> </div>

all empty. Unable to gauge condition as lighting system still not working.

Tank 6A was in use tank flushing all amajets in operation.

Tank 6B was empty and clean. All hoppers drained down to lowest point.

Tank 7A was empty and clean. Slight grit build up at the end of tank near the hoppers. All hoppers full and required draining.

Tank 7B was empty and clean. Slight grit build up at the end of tank near the hoppers. All hoppers full and required draining.

Tank 8A was empty and clean. All hoppers full and required draining.

Tank 8B was empty and clean. All hoppers full and required draining

Feed Channel - The level of effluent in both feed channels was low along its entire length. However, there was thick scum and sludge on the surface along large sections of the channel.

Overall the storm tank hoppers were much improved and Thames advised that a tanker crew had been employed to clear the hoppers of grit and sludge.

Complaints

The Council has received no complaints by telephone in the preceding week.

The Council received no complaints by email.

The Council received no complaints by email from MRAG.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection: Friday 17th May 2019 at 09:18.

Monitor 1	0.003	ppm	09:18
Monitor 2	0.008	ppm	09:18
Monitor 3	0.000	ppm	09:18
Monitor 4	0.003	ppm	09:19
Monitor 5	0.006	ppm	09:19
Monitor 6	0.006	ppm	09:19
Monitor 7	0.006	ppm	09:19
Monitor 8	0.007	ppm	10:08
Monitor 9	0.009	ppm	10:08
Monitor 10	0.008	ppm	10:08
Monitor 11	0.006	ppm	10:08
Monitor 12	0.007	ppm	10:08
Monitor 13	0.004	ppm	10:08
Wind Speed	2.899	mph	10:08
Wind Direction	335.597	°	10:08

Odour Log (Thames)

Thursday 09th May 2019

DAY SHIFT AM:

Temp: Warm.

Weather: Rain w/ Sunny Spells

Odour Readings: All OMU's in operation.

Time: 17:45.

Observations / Customer Complaint: OM8 one spike 0.015ppm.
Less than 15 minutes.

Operational issues / causes observed: Blank.

Actions Taken: Blank.

NIGHT SHIFT PM:

Temp: Cool.

Weather: Rain.

Odour Readings: All OMU's in operation.

Time: Blank.

Observations / Customer Complaint: OM5 01:27-02:27 0.018ppm.

Operational issues / causes observed: Area checked no obvious odours found.

Actions Taken: East inlet area checked. Confirmed screen house doors are closed. No odour identified.

Operational issues / causes observed: OM5 0.023ppm 05:08-end of shift.

Actions Taken: Blank.

Friday 10th May 2019

DAY SHIFT AM:

Temp: Warm.

Weather: Cloudy w/ Sunny Spells.

Odour Readings: All OMU's in operation.

Time: 05:30

Observations / Customer Complaint: OM8 0.022ppm 13.22-13.37.

Operational issues / causes observed: Area checked. No odour detected.

Actions Taken: Blank.

NIGHT SHIFT PM:

Temp: Warm

Weather: Sunny w/ Patchy Clouds.

Odour Readings: All OMU's in use.

Time: Blank.

Observations / Customer Complaint: Blank.

Operational issues / causes observed: Blank.

Actions Taken: Blank.

Saturday 11th May 2019

DAY SHIFT AM:

Temp: Warm.

Weather: Sunny w/ Patchy Clouds.

Odour Readings: All OMU's in operation.

Time: Blank.

Observations / Customer Complaint: Blank.

Operational issues / causes observed: Network upgrade. No data.

Actions Taken: Blank.

NIGHT SHIFT PM:

Temp: Warm.

Weather: Sunny w/ Patchy Clouds

Odour Readings: All OMU's in operation.

Time: Blank.

Observations / Customer Complaint: Blank.

Operational issues / causes observed: Network upgrade. No data.

Actions taken: Blank.

Sunday 12th May 2019

DAY SHIFT AM:

Temp: Warm.

Weather: Sunny w/patchy clouds.

Odour Readings: All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint: Blank.

Operational issues / causes observed: No issues.

Actions Taken: Blank.

NIGHT SHIFT PM:

Temp: Cool.

Weather: Clear night.

Odour Readings: All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint: OM3 – 0.021 at 05.09 – to end of shift. No wind.

Operational issues / causes observed: Area checked. No odour detected.

Actions Taken. Blank.

Monday 13th May 2019

DAY SHIFT AM:

Temp.: Warm.

Weather: Sunny.

Odour Readings: All OMU's in operation.

Time: 17:40.

Observations / Customer Complaint: OM3 0.020ppm 06.53-07.09.

Operational issues / causes observed. No odour issues.

Actions Taken: Blank.

NIGHT SHIFT PM:

Temp: Cool.

Weather. Clear night

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. om2 -0.016 @01.49 - 02.06,
om3-0,021@05.09 - 05.30

Operational issues / causes observed. No issues.

Actions Taken. Blank.

Tuesday 14th May 2019

DAY SHIFT AM:

Temp: Warm.

Weather: Sunny.

Odour Readings: All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint: Blank.

Operational issues / causes observed: No odour issues. Nothing of
note on trends.

Actions Taken: Blank.

NIGHT SHIFT PM:

Temp: Cool.

Weather: Overcast night.

Odour Readings: All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint: Blank.

Operational issues / causes observed: OM3 spiked at 0510-0522
<15 mins duration max 0.021.

Actions Taken: Blank.

Wednesday 15th May 2019

DAY SHIFT AM:

Temp: Warm.

Weather: Sunny.

Odour Readings: All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint: Blank.

Operational issues / causes observed: No odour issues.

Action Taken: Blank.

NIGHT SHIFT:

Temp: Cool.

Weather: Overcast night.

Odour Readings: All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint: Blank.

Operational issues / causes observed: OM3 spiked at 2324-2337 but <15 mins max 0.015ppm, OM3 spiked at 0010-0023 <15 mins max 0.015ppm, OM3 spiked at 0330-0510 max 0.021 ppm

Actions Taken: Checked area no obvious sources of odour found.

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					
10/05/2019	0	1491	244	1735	4235	5970
12/05/2019	78	1284	328	1690	2418	4108
14/05/2019	39	1097	473	1609	1416	3025

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

Estimated average of 10 imports daily for preceding seven days.

No.5 Pumping Station

The doors and windows of No.5 pumping station were all open at the time of the inspection. Thames advised works are being undertaken inside and venting of the building was required for staff safety.

Raw Sludge Screening House

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

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 - In use –weak sloppy seal – no evidence of recent

As LBH note, this has not been required in the last week.

spill.

Digester 6 - In use –weak sloppy seal – no evidence of recent spill.

Digester 7 - In use –weak sloppy seal - Ongoing spitting/spill – requires anti-foam and clean-up.

Digester 8 – In use –weak sloppy seal – no evidence of recent spill.

Digester 9 - In use –weak sloppy seal – no evidence of recent spill.

Digester 10 – in use – seal level approx. 1ft below surface of coping stones.

Digester 11 - In use –weak sloppy seal – no evidence of recent spill.

Digester 12 - In use –weak sloppy seal – no evidence of recent spill.

Digester 13 - In use –weak sloppy seal – no evidence of recent spill.

Digester 14 - out of use – empty and clean.

Digester 15 - out of use – empty and clean.

Digester 16 - out of use – empty and clean.

Digester 17 - In use –weak sloppy seal – no evidence of recent spill.

Digester 18 - In use –weak sloppy seal – no evidence of recent spill.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester.

The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

Digester 19 - In use –weak sloppy seal – no evidence of recent spill.

Digester 20 - In use –weak sloppy seal – no evidence of recent spill.

There was evidence of anti-foaming agent in use and TW advised that this is applied daily to all of the digesters that are operational.

The area around all digesters was much improved with no evidence of recent or historical sludge spills. Thames advised they have been actively undertaking regular clean-ups of this area of the works.

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 but green algae and brown sludge was evident across large areas of the tanks surfaces.

Skips

No Skips present at the screening House- All clear.

No Skips present at the East side grit House- All clear.

No odour detected.

On the West side x2 16yd skip empty.

East Side Screen House

One pair of doors to the building were open at the time of the

inspection. TW advised all screens were in operation and the doors were open due to staff undertaking daily checks of the screens.

Return Activated Sludge Channel

The nearside RAS channel was slightly clogged around 25% in the mid-section of both lanes.

West side primary settlement tanks (PST)

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

Circular PSTs 9, 10, 11 & 12 all to in operation at the time of the inspection, and all had fat free surfaces.

Pasteurisation Plant

The pasteurisation plant is in service. TW advised 6 streams were currently out of service.

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 had visible scum across the top surface However I can confirm that there has been a big improvement in comparison to the previous weeks inspection.

Most of the sprinklers appeared to be in operation.

The mixed liquor feed channel serving E-Battery was partially clogged with rag and other floating debris by lanes 25. Tanker onsite during visit.

No odour was noticeable.

TW advised a tanker crew are regularly on site undertaking clearance of any clogged areas.

New Inlet Works (West Side)

No issues appeared evident at the new inlet works.

Odour Control Unit (OCU) performance monitoring: 01/05/2019

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.00 0.00 0.00	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00	0.2	Yes
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	Blank	Unknown	Unknown
Sludge reception outlet	0.00 0.00 0.00	0.8	Yes
Thickening plant inlet	Blank	Unknown	Unknown
Thickening plant outlet	0.00 0.00 0.00	0.6	Yes
Transfer PS inlet	Blank	Unknown	Unknown
Transfer PS outlet	0.00 0.00	0.6	Yes

	0.00			
New West inlet (OCU 11)	0.00 0.00 0.00	0.5	Yes	
Pasteurisation (OCU 12)	0.00 0.00 0.00	0.5	Yes	



Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: 9 th May 2019 (12:00)	
Attendees: Mr Zaheer Kadri (LBH), Mrs C Gilzean (LBH) with Mr Channi Varsani (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A was empty and had dry residue on the tank floor at the hopper end. Hopper 1, 2, and 3 had all been drained down.</p> <p>Tank 1B was empty and had dry residue on the tank floor at the hopper end. Hopper 1, 2, and 3 had all been drained down.</p> <p>Tank 2A was 30% full of effluent due to recent rain fall. Tanks were returning and all Amajets in operation.</p> <p>Tank 2B was 30% full of effluent due to recent rain fall. Tanks were returning and all Amajets in operation.</p> <p>Tank 3A was empty and had dry residue on the tank floor at the hopper end. Hopper's 1 and 2 were empty however hopper 3 needed draining down.</p> <p>Tank 3B was empty and had dry residue on the tank floor at the hopper end. Hopper 1, 2, and 3 all needed draining down.</p> <p>Tanks 4A, 4B, 5A & 5B which are covered and odour controlled were</p>	<div style="border: 1px solid black; padding: 10px;"> <p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p> </div>

all empty - unable to gauge condition as lighting system still not working.

Tank 6A was 50% full of effluent due to recent rain fall. Tanks were returning and all Amajets in operation.

Tank 6B was 50% full of effluent due to recent rain fall. Tanks were returning and all Amajets in operation.

Tank 7A was 50% full of effluent due to recent rain fall. Tanks were returning and all Amajets in operation.

Tank 7B was 50% full of effluent due to recent rain fall. Tanks were returning and all Amajets in operation.

Tank 8A was 30% full of effluent due to recent rain fall. Tanks were returning and all Amajets in operation.

Tank 8B was 30% full of effluent due to recent rain fall. Tanks were returning and all Amajets in operation.

Amajets- No reports of any faults with amajets. All in working order.

Feed Channel - The level of effluent in both feed channels was low – almost bottomed out in places. Dark and murky throughout the channel– no local odours rags, fats or solids. .

Complaints

The Council received one (1) complaint by telephone in the preceding week.

On the 7th of May 2019 at approx 18:18 a telephone call was received via the Mogden Duty line from the Weavers Close area of Isleworth TW7 6ET regarding alleged odour nuisance from TWSW. The complainant was contacted by the Duty Officer at approx 18:18 who confirmed that the odour was still lingering in the air. Subsequently a visit was made at approx 19:08 and a subjective assessment of the

odour in the area made. One assessment was taken outside the complainants property and the other on Oak Lane TW7. At both points there was no signs of any excessive odours.

On the day of inspection the Trends for the odour incident were inspected and Odour Monitor 2 at the time of incident measured at 0.010ppm. No reason was given for the spike however it is possible the odour stemmed from the screening house. The odour logs for the evening also confirmed a spike in the trends however no reason was noted by TW. Our Ref for this complaint is logged as 983693.

The Council received NO complaints by email in the preceding week.

The Council received no complaints by email from MRAG.

Thames Water controller advised that they had received no direct complaints in the preceding week.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection:

Monitor 1	0.005	ppm	12:15
Monitor 2	0.005	ppm	12:15
Monitor 3	0.000	ppm	12:15
Monitor 4	0.003	ppm	12:15
Monitor 5	0.004	ppm	12:15
Monitor 6	0.004	ppm	12:15
Monitor 7	0.006	ppm	12:15
Monitor 8	0.007	ppm	12:15
Monitor 9	0.005	ppm	12:15
Monitor 10	0.006	ppm	12:15
Monitor 11	0.007	ppm	12:15
Monitor 12	0.007	ppm	12:15

Monitor 13	0.006	ppm	12:15
Wind Speed	4.086	mph	12:15
Wind Direction	250.619	Deg	12:15

Odour Log (Thames) - Photocopies of log entries taken:

Thursday 2nd May 2019:

AM – Warm / Sunny.

All OMU's in use.

Time: 17:31.

Observations/Complaints: No issues.

Operational Issues/Causes: No issues.

Actions: None noted.

PM – Cool / Overcast night.

All OMU's in use.

Time: 05:30.

Observations/Complaints:

OM4 spiked at 2238-2251 <15 mins duration max 0.015ppm, OM8

spiked at 1852-1904 <15 mins duration max 0.016ppm.

Operational Issues/Causes: No issues.

Actions: None noted.

Friday 3rd May 2019:

AM – Warm / Cloudy with sunny spells.

All OMU's in use.

Time: 17:30.

Observations/Complaints: No issues.

Operational Issues/Causes: No issues.

Actions: None noted.

PM – Cool / Overcast night.

All OMU's in use.

Time: 05:30

Observations/Complaints: OM3 0.022ppm 05:08-05:23.

Operational Issues/Causes: None noted.

Actions: None noted.

Saturday 4th May 2019:

AM – Warm / Rain with sunny spells.

All OMU's in use.

Time: 05:30.

Observations/Complaints: Blank.

Operational Issues/Causes: No odour issues.

Actions: None noted.

PM – Cool clear night.

All OMU's in use.

Time: 17:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: None noted.

Actions: None Noted.

Sunday 5th May 2019:

AM – Warm / Sunny with patchy clouds.

All OMU's in use.

Time: 17:30.

Observations/Complaints: None.

Operational Issues/Causes: No obvious source identified.

Actions: None Noted.

PM – Cool clear night.

All OMU's in use.

Time: 05:30.

Observations/Complaints: None.

Operational Issues/Causes: None.

Actions: None noted.

Monday 6th May 2019:

AM – Warm / Sunny with patchy clouds.

All OMU's in use.

Time: 17:30.

Observations/Complaints: OM3 - 0.022ppm @ 05:08 - ongoing.

Operational Issues/Causes: area checked-no obvious source found.

Actions: Reported.

PM – Cool clear night.

All OMU's in use.

Time: 05:30.

Observations/Complaints: OM8 - 0.022ppm @ 13.06-13.21.

Operational Issues/Causes: area checked - no obvious source found.

Actions: None noted.

Tuesday 7th May 2019:

AM – Cool / Sunny with patchy clouds.

All OMU's in use.

Time: 17:30.

Observations/Complaints: OM2 0.015ppm @ 16.43 - 1700.

Operational Issues/Causes: No odours found.

Actions: none noted.

PM – Cool / Rain.

All OMU's in use.

Time: 05:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

Wednesday 8th May 2019:

AM – Cool / Rain.

All OMU's in use.

Time: 17:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

PM – Cold / Rain.

All OMU's in use.

Time: 05:30.

Observations/Complaints: No odours reported.

Operational Issues/Causes: None found or reported.

Actions: None noted.

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					
05/05/19	20	909	0	929	2081	3010
07/05/19	0	909	61	970	1088	2058
08/05/19	0	1097	183	1280	1592	2872

The sludge stock levels for the West side circular primary settlement tank 1 were **compliant** with the OMP trigger level (500m³) for all of the dates for which data has been provided.

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.

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. Long term project currently initiated to bring these units back into service – will require significant investment.

Digester 5 - in use – seal level approx. 1ft below coping stones – good seal – evidence of recent spill – requires anti-foam and clean-up.

Digester 6 - in use – good seal level approx. 1ft below coping stones.

Digester 7 - in use – seal level approx. 1ft below coping stones. Seal was weak and bubbling.

As LBH note, this has not been required in the last week.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester.

The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

Digester 8 – in use – good seal level approx 1ft below coping stones.

Digester 9 - in use – seal level approx. 1ft below surface of coping stones – good seal.

Digester 10 – in use – seal level approx. 1ft below surface of coping stones.

Digester 11 - in use – seal level approx. 1ft below surface of coping stones – seal weak and bubbling.

Digester 12 - in use – seal level approx. 1ft below coping stones – good seal.

Digester 13 - in use – seal level approx. 1ft below coping stones – good seal.

Digester 14 - out of use.

Digester 15 - out of use.

Digester 16 - out of use.

Digester 17 - in use – seal level approx. 1ft below coping stones – seal crusty.

Digester 18 - in use – seal level approx. 2ft below coping stones – seal weak and slightly bubbling.

Digester 19 - in use – seal level approx. 1ft below coping stones – good seal.

Digester 20 - in use – seal level approx. 1ft below coping stones – good seal.

No odour in the area observed at times of inspection

GENERAL

Sludge Screening House

All doors closed at time of inspection however aware that on previous visits these doors have been left open to avoid condensation build up – TW advised that doors being left open to create air flow is a Management decision to improve internal working environment for staff – odour monitors deployed in vicinity to determine whether local odours increase as a consequence. No odours observed.

Imported Sludge

Estimated average of 10 imports daily for 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). All jets and hoses were in operation and no excessive build-up of algae.

Skips

No Skips present at the screening House- All clear.

2 Large bulk loaders (open carriers) were present at the East side grit House- These were uncovered and empty (used for general waste).

There was one 6yrd skip which had a tarpaulin cover.

No odour detected.

No Skips present at the West Side gritting house. - All clear.

Skips containing rag and grit are routinely covered.
General waste and empty skips which are not odorous may be uncovered.

East Side Raw Sludge Screen House

Doors closed at time of inspection.

West side primary settlement tanks (PST)

Rectangular PSTs – No issues noticed at time of inspection

Circular PST's 9, 10, 11 & 12 all in use and all hoses were in operation. TW had introduced a trial of odour control "mistors" on Tank 10 – pipe installed around tank top tail with nozzle sprays at regular intervals which could be utilised to create a plume of deodoriser (same as current mobile units on site) – intention are to roll this out to all "odorous areas" on site if proves effective during trial period – initial testing has proven successful to date – trial ongoing. At time of inspection these mistors were not in operation. No Odours observed.

Pasteurisation Plant

Pasteurisation plant had six streams that were out of service. - All remaining pasteurisation plant in service and fully operational.

West Side Aeration Lanes (Old)

Battery C aeration feed channel approximately 90% clear of any obstruction - effluent is flowing with ease, no rags or build up noticed. Kelvac (Contractors) on site at time of inspection.

New Works (West Side)

Feed Channel for Aeration Lanes 21-24 free flowing no obstructions or odours. Kelvac on site at time of inspection.

The "Fluffy" coverage (obscured internal dividing walls within tank) that had been observed on previous visits had lightened in texture revealing

the dividing walls within the tank. There were no concerning odours around this area.

Odour Control Unit (OCU) performance monitoring – (8th May 2019)

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.00 0.00 0.00	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00	0.2	Yes
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	No data	Unknown	Unknown
Sludge reception outlet	No data	0.8	Yes
Thickening plant inlet	No data	Unknown	Unknown
Thickening plant outlet	0.00 0.00 0.00	0.6	Yes
Transfer PS inlet	No data	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00	0.6	Yes
New West inlet (OCU 11)	0.00 0.00 0.00	0.5	Yes
OCU 12 (Pasteurisation Plant)	0.00 0.00 0.00	0.5	Yes



Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: Friday 3 rd May 2019	
Attendees: Mr I Inman (London Borough of Hounslow) and Mr C Varsani (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A was empty but had dry crust across 25% of the tanks surface. Hopper 1 was less than <25% full, hoppers 2 & 3 were both drained down to their bottom level.</p> <p>Tank 1B was empty and clean. Hoppers 1, 2 & 3 were all drained down to their bottom level.</p> <p>Tank 2A was empty and clean except for large area of dry grit on the right hand side of the tanks surface. Hoppers 1, 2 & 3 were all drained down to their bottom level.</p> <p>Tank 2B was empty and clean except for a large area of dry grit on the left hand side of the tanks surface. Hoppers 1, 2 & 3 were all drained down to their bottom level.</p> <p>Tank 3A was empty and clean. Hoppers 1, 2 & 3 were all drained down to their bottom level.</p> <p>Tank 3B was empty and clean except for a large area of dry crust at the hopper end of the tank. Hoppers 1, 2 & 3 were all drained down to</p>	<div style="border: 1px solid black; padding: 10px;"> <p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p> </div>

their bottom level.

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 was empty and clean. Hoppers 1, 2 & 3 were all drained down to their bottom level.

Tank 6B was empty and clean. Hoppers 1 & 2 were both approx 25% full and hopper 3 was approx 30% full. All required draining down.

Tank 7A was empty and clean but had patchy areas of dry grit across the tanks surface. Hoppers 1, 2 & 3 (shallow hoppers) had all recently been cleared of grit and only had a shallow amount of final effluent in them.

Tank 7B was empty and clean but had patchy areas of dry grit across the tanks surface. Hoppers 1, 2 & 3 (shallow hoppers) had all recently been cleared of grit.

Tank 8A was empty and clean. Hoppers 1 & 2 were approx >30% full and hopper 3 was less than <25% full, all required further draining down.

Tank 8B was empty and clean. Hoppers 1, 2 & 3 were all drained down to their bottom level.

Feed Channel - The level of effluent in both feed channels was low along its entire length. However, there was thick scum and sludge on the surface along large sections of the channel.

Thames advised of planned works to replace all of the hopper valves to prevent back flow of effluent, Scheduled to begin towards the end of April and lasting approx 3 months.

Overall the storm tank hoppers were much improved and Thames advised that a tanker crew had been employed to clear the hoppers of grit and sludge.

Complaints

The Council has received no complaints by telephone in the preceding week.

The Council received an Email complaint on 27th April at 13:54 from an undisclosed location in Bankside Close, Isleworth (ref: 983344). However, the complainant failed to provide full contact details (full address or telephone number).

Details in the Thames Odour Log 'around' the time of the complaint show some excessive odour spikes were recorded on site.

The Council received no complaints by email from MRAG.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection: Friday 3rd May 2019 at 10:08.

Monitor 1	0.004	ppm	10:08
Monitor 2	0.006	ppm	10:08
Monitor 3	0.000	ppm	10:08
Monitor 4	0.010	ppm	10:08
Monitor 5	0.004	ppm	10:08
Monitor 6	0.005	ppm	10:08
Monitor 7	0.005	ppm	10:08
Monitor 8	0.011	ppm	10:08
Monitor 9	0.004	ppm	10:08
Monitor 10	0.005	ppm	10:08
Monitor 11	0.005	ppm	10:08
Monitor 12	0.000	ppm	10:08
Monitor 13	0.005	ppm	10:08
Wind Speed	2.789	mph	10:08
Wind Direction	335.593	°	10:08

Odour Log (Thames)

Thursday 25th April 2019

DAY SHIFT

Temp. Warm.

Weather. Sunny with patchy clouds.

Odour Readings. All OMU's in operation.

Time: Blank.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. No odour issues.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Cool.

Weather. Clear night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. OM2 five odour spikes less than 15 minutes. Two spikes over 15 minutes. 0.016ppm 20:05-20:22. 0.023ppm 01:27-01:43.

Actions Taken. East inlet area checked. Confirmed screen house doors are closed. No odour identified.

Operational issues / causes observed. OM5 0.023ppm 05:08-end of shift.

Actions Taken. No odour identified. OCU11 chemical dosing out of range.

Friday 26th April 2019

DAY SHIFT

Temp. Warm.

Weather. Sunny w/patchy clouds.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. OM2 spiked at 09:00 for 17 mins max 0.027ppm.

Actions Taken. No obvious source of odour found in vicinity of OM No.2.

NIGHT SHIFT

Temp. Cool.
Weather. Rain.
Odour Readings. All OMU's in use.
Time: 05:30.
Observations / Customer Complaint. Blank.
Operational issues / causes observed. No odour issues
Actions Taken. Blank.

Saturday 27th April 2019

DAY SHIFT

Temp. Cool.
Weather. Cloudy.
Odour Readings. All OMU's in operation.
Time: 17:30.
Observations / Customer Complaint. Blank.
Operational issues / causes observed. OM3 spiked at 07:08-08:21 and 08:38-08:51 <15 mins duration max 0.023ppm.
OM8 spiked at 13:36-13:49 and 14:07-14:21, 15 mins duration max 0.019ppm.
Actions Taken. Blank.

NIGHT SHIFT

Temp. Cool.
Weather. Overcast Night.
Odour Readings. All OMU's in operation.
Time: 05:30.
Observations / Customer Complaint. Blank.
Operational issues / causes observed. OM10 spiked to 0.018ppm 01:56-02:54.
Actions taken. Area checked no obvious odours found.

Sunday 28th April 2019

DAY SHIFT

Temp. Warm.
Weather. Sunny w/patchy clouds.
Odour Readings. All OMU's in operation.
Time: 17:30.
Observations / Customer Complaint. Blank.
Operational issues / causes observed. OM4 spiked at 07:52-08:03

<15 mins duration, max 0.017ppm. OM8 spiked at 07:52-08:03, 15 mins duration, max 0.020ppm.

Actions Taken. PAS stream No.2 overflowing, coil leak therefore taken out of service.

NIGHT SHIFT

Temp. Cool.

Weather. Overcast night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. No odour issues.

Actions Taken. Blank.

Monday 29th April 2019

DAY SHIFT

Temp. Warm.

Weather. Sunny.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. OM3 0.022ppm 05:07-06:37.

OM2 0.021ppm 13:34-13:58, 0.024ppm 12:13-12:30.

Actions Taken. Area checked no obvious odours found.

NIGHT SHIFT

Temp. Cold.

Weather. Overcast night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. OM3 spiked at 05:08, current time max 0.025ppm, OM4 spiked at 19:37-20:35 max 0.016ppm.

Actions Taken. Area in vicinity of OM3 checked no odours found.

Tuesday 30th April 2019

DAY SHIFT

Temp. Warm.

Weather. Sunny.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. OM2 0.030ppm 06:33-07:01.

OM3 0.025ppm 05:07-05:52, 0.022ppm 06:08-06:22.

Actions Taken: Area checked no obvious odours found.

NIGHT SHIFT

Temp. Cool.

Weather. Overcast night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. OM2 spiked at 22:40-23:02 & 23:42-00:13, max 0.025ppm.

OM3 spiked at 05:08-05:21 <15 mins duration, max 0.020ppm.

Actions Taken: No obvious sources of odour found on checking areas.

Wednesday 1st May 2019

DAY SHIFT

Temp. Warm.

Weather. Sunny.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. OM8 spiked 0.027ppm 16:22-16:37.

Action Taken: Area checked no obvious odour source found.

NIGHT SHIFT

Temp. Cool.

Weather. Overcast night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. OM7 spiked at 20:40-21:39, max 0.021ppm. OM8 spiked 23:35-23:51, 00:06-00:22, 02:23-02:35 and 02:53-03:05 max 0.019ppm.

Actions Taken: No odours found, storm tanks and channel empty.

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					
26/04/2019	88	1781	183	2052	304	3356
29/04/2019	0	1097	183	1280	2090	3370
30/04/2019	59	909	122	1090	632	1722

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 30 imports of sludge over the last week.
10 on Friday 26th, 10 on Monday 29th & 10 on Tuesday 30th April.

No.5 Pumping Station

The doors and windows of No.5 pumping station were all open at the time of the inspection. Thames advised works are being undertaken inside and venting of the building was required for staff safety.

Raw Sludge Screening House

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

Digesters 1-4 – Out of use (permanent).

As LBH note, this has not been required in the last week.

Thames advised of a long term project currently initiated to bring these units back into service that will require significant investment.

Digesters 5, 6, 7, 8, 9, 10, 11 & 12 were all in use and had wet sloppy seals. However, only minimal amounts of gas appeared to be bubbling off.

Digester 13 was in use and had a fairly good dry seal.

Digester 14 was out of service.

Digester 15 was in use and had a good dry seal.

Digester 16 was out of service.

Digesters 17, 18, 19 & 20 were all in use and had wet sloppy seals. However, only minimal amounts of gas appeared to be bubbling off.

There was evidence of anti-foaming agent in use and TW advised that this is applied daily to all of the digesters that are operational.

The area around all digesters was much improved with no evidence of recent or historical sludge spills. Thames advised they have been actively undertaking regular clean-ups of this area of the works.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester.

The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

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 but green algae and brown sludge was evident across large areas of the tanks surfaces.

Skips

On the East side there was one 20yds open bulk carrier that contained general inert rubbish. Also present was one open 8yd skip that contained greenery and foliage which had been removed from FST's 71-78. No odour was evident.

In the area next to STW 1A there was a large closed skip, estimated to be approx 20yd, which again contained general inert rubbish.

On the access road leading to the digesters there was one 12yds skip that contained a large amount of general inert rubbish that was not odourous.

On the West side there was two 40yd closed bulk carriers that were both full and draining liquid before being taken off site. Thames advised they would be removed today.

East Side Screen House

One pair of doors to the building were open at the time of the inspection. TW advised all screens were in operation and the doors were open due to staff undertaking daily checks of the screens.

Return Activated Sludge Channel

The nearside RAS channel (which runs in the ground between FST's 61-64 & 65-67) was clogged along approx 25% in the mid-section of both lanes.

West side primary settlement tanks (PST)

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

Circular PSTs 9, 10, 11 & 12 all appeared to be in operation at the time of the inspection, and all had fat free surfaces.

The new odour suppression system around the perimeter of PST-10 is currently out of operation.

Skips containing rag and grit are routinely covered. General waste and empty skips which are not odorous may be uncovered.

Pasteurisation Plant

The pasteurisation plant is in service. TW advised 6 streams were currently out of service.

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 had scum across their surfaces but appeared improved when compared to the previous weeks inspection. The tops of the internal dividing walls were clearly visible and liquid inside the tanks appeared free flowing.

Nearly all of the sprinklers appeared to be in operation.

The mixed liquor feed channel serving E-Battery was partially clogged with rag and other floating debris by lanes 25.

No odour was noticeable.

TW advised a tanker crew are regularly on site undertaking clearance of any clogged areas.

New Inlet Works (West Side)

No issues appeared evident at the new inlet works.

Odour Control Unit (OCU) performance monitoring: 01/05/2019

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.00 0.00	Unknown	Unknown

	0.00		
Main pumping station outlet	0.00 0.00 0.00	0.2	Yes
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	Blank	Unknown	Unknown
Sludge reception outlet	0.00 0.00 0.00	0.8	Yes
Thickening plant inlet	Blank	Unknown	Unknown
Thickening plant outlet	0.00 0.00 0.00	0.6	Yes
Transfer PS inlet	Blank	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00	0.6	Yes
New West inlet (OCU 11)	Out of service	0.5	Yes
Pasteurisation (OCU 12)	0.00 0.00 0.00	0.5	Yes



Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: 25 th April 2019	
Attendees: Mr Steven Maunders and Mr Peter Hutchins (London Borough of Hounslow) and Mr Channi Varsani (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A – Tank empty - approximately 40% of tank covered by dried grit and sludge – requires flushing/hosing to remove - Hoppers 1, 2 & 3 approx. 10% full.</p> <p>Tank 1B – Tank empty and flushed - approximately 10% of tank covered by dried grit – requires further flushing – Hoppers 1, 2 & 3 drained down to bottom.</p> <p>Tank 2A – Tank empty and flushed clean – Hoppers 1, 2 & 3, drained down to bottom</p> <p>Tank 2B – Tank empty and flushed clean – Hoppers 1, 2 & 3, drained down to bottom.</p> <p>Tank 3A – Tank empty and flushed clean – Hoppers 1, 2 & 3 drained down to bottom.</p> <p>Tank 3B – Tank empty – approx. 50% of tank covered by dried grit and sludge – requires flushing/hosing to remove – Hopper 1 approx. 85% full - requires draining/over-pumping, Hoppers 2 & 3 drained down to</p>	<div style="border: 1px solid black; padding: 10px;"> <p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p> </div>

bottom.

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 – Tank empty and flushed clean. Hoppers 1 & 3 drained down to bottom, Hopper 2 approximately 50% full - requires draining/over-pumping.

Tank 6B – Tank empty and flushed - approximately 20% of tank covered by grit and sludge – requires further flushing/hosing to remove. – Hoppers 1, 2 & 3 approximately 30% full - requires draining/over-pumping.

Tank 7A – Tank empty – approx. 60% of tank covered by grit and sludge – requires further flushing/hosing to remove – Hoppers 1 & 2 full – requires draining/over-pumping. Hopper 3 drained down to bottom.

Tank 7B – Tank empty – approx. 50% of tank covered by grit and sludge – requires further flushing/hosing to remove – Hoppers 1, 2 & 3 full – requires draining/over-pumping.

Tank 8A – Tank empty – approx. 25% of tank covered by dried grit and sludge – requires further flushing/hosing to remove – Hoppers 1, 2 & 3 approximately 30% full – requires draining/over-pumping.

Tank 8B – Tank empty – approx. 25% of tank covered by dried grit and sludge – requires further flushing/hosing to remove – Hoppers 1, 2 & 3 approximately 10% full – requires draining/over-pumping.

Feed Channel - The level of effluent in both feed channels was low – no local odours.

Complaints

The Council directly received no complaints by telephone in the preceding week.

The Council directly received no complaints by email in the preceding week.

The Council received no complaints by email from MRAG.

Thames Water controller advised that they had received no direct complaints in the preceding week.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection:

Monitor 1	0.006	ppm	13:21
Monitor 2	0.008	ppm	13:21
Monitor 3	0.000	ppm	13:21
Monitor 4	0.004	ppm	13:21
Monitor 5	0.004	ppm	13:21
Monitor 6	0.007	ppm	13:21
Monitor 7	0.009	ppm	13:21
Monitor 8	0.008	ppm	13:21
Monitor 9	0.005	ppm	13:21
Monitor 10	0.007	ppm	13:21
Monitor 11	0.005	ppm	13:21
Monitor 12	0.009	ppm	13:21
Monitor 13	0.007	ppm	13:21
Wind Speed	13	mph	
Wind Direction	184°		

Odour Log (Thames):

Thursday 18th April 2019:

AM – Warm - Sunny.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: None noted.

Actions: "No odour issues. Nothing of note on Trends".

PM – No observations noted.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: None noted.

Actions: None noted.

Friday 19th April 2019:

AM – Warm - Sunny.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: None noted.

Actions: "No odour issues. Nothing of note on Trends".

PM – Cool – Clear Night.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: "No odour issues".

Actions: None noted.

Saturday 20th April 2019:

AM – Hot – Sunny.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: None noted.

Actions: "No odour issues".

PM – Cool – Clear Night.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: "OM4 spiked to 0.04ppm max 01:20 – 02:20, OM8 spiked to 0.033ppm max 01:20 – 02:50, OM6 spiked to 0.03ppm max 03:47 – 04:47".

Actions: "Area checked. No obvious odours found".

Sunday 21st April 2019:

AM – Hot – Sunny.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: None noted.

Actions: "No odour issues".

PM – Cool – Clear Night.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: "OM5 spiked to 0.025ppm 01:21 – 02:21".

Actions: "Areas checked no obvious odours found".

Monday 22nd April 2019:

AM – Warm – Sunny with Patchy Clouds.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: "OM2 spiked @ 13:50. Max 0.023 for less than 15 min's. OM8 spiked @ 15:50. Max 0.016 for less than 15 min's".

Actions: "Area checked and found to be OK, no other actions taken.

PM – Cool – Clear Night.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: "OM10 spiked to max 0.02ppm 01:25 – 02:55. OM9 spiked to max 0.017ppm 02:03 – 03:02".

Actions: "Area around monitors checked, no obvious odours detected".

Tuesday 23rd April 2019:

AM – Warm – Sunny with Patchy Clouds.

All OMU's in use.

Observations/Complaints: "No odour issues".

Operational Issues/Causes: None noted.

Actions: None noted.

PM – Cool – Clear Night.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: "OM8 0.020ppm 20:37 – 21:37, OM7 0.021ppm 21:40 – 22:40, OM3 0.021ppm 23:52 – 00:07".

Actions: "Area investigated for odour. No odour detected".

Wednesday 24th April 2019:

AM – Warm – Sunny with Patchy Clouds.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: "No odour issues".

Actions: None noted.

PM – Cool – Clear Night.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: "OM2 0.021ppm 22:37 – 22:59, 0.023ppm 01:38 – 01:58".

Actions: "East Inlet Area checked. Confirmed Screen House doors closed. No odour found".

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					
21/04/19	20	1303	516	1839	1929	3768
22/04/19	20	1303	516	1839	1929	3768

The sludge stock levels for the West side circular primary settlement tank 1 were **compliant** with the OMP trigger level (500m³) for all of the dates for which data has been provided.

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.

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. Long term project currently initiated to bring these units back into service – will require significant investment.

Digester 5 - in use – seal level approx. 2ft below coping stones - seal weak and bubbling – evidence of prior dried spill - requires anti-foam and clean-up.

Digester 6 - in use – seal level approx. 2ft below coping stones - seal weak and bubbling – evidence of prior dried spill - requires anti-foam and clean-up.

Digester 7 - in use – seal level approx. 3ft below coping stones – seal

As LBH note, this has not been required in the last week

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester. The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

weak and bubbling - Ongoing spitting/spill – tank “gurgling” - requires anti-foam and clean-up – Bell height high – requires draw down of biogas.

Digester 8- in use – seal level approx. 3ft below coping stones - seal weak and bubbling.

Digester 9 - in use – seal level approx. 3ft below coping stones - seal weak and bubbling.

Digester 10 - in use – seal level approx. 5ft below coping stones - seal weak and bubbling.

Digester 11 - in use – seal level approx. 3ft below surface of coping stones – seal weak and bubbling – evidence of dried spill accumulated under adjacent cabling ducting – requires anti-foam and clean-up.

Digester 12 - in use – seal level approx. 4ft below coping stones - seal weak and bubbling.

Digester 13 - in use – seal level approx. 4ft below coping stones – seal weak and bubbling.

Digester 14 - out of use – empty and clean – contractor on site undertaking maintenance.

Digester 15 - out of use – empty and clean – contractor on site undertaking maintenance

Digester 16 - out of use – empty and clean – contractor on site undertaking maintenance.

Digester 17 - in use – seal level approx. 3ft below coping stones - seal weak and bubbling.

Digester 18 - in use – seal level approx. 1ft below coping stones – seal weak and bubbling – evidence of prior dried spill - requires anti-foam and clean-up.

Digester 19 - in use – seal level approx. 1ft below coping stones – seal

weak and bubbling.

Digester 20 - in use – seal level approx. 1ft below coping stones – seal weak and bubbling.

GENERAL

Sludge Screening House

All doors closed at time of inspection.

Imported Sludge

Average of 10 imports daily for 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). Green Algae on 100% of surface of Tanks 73 & 74.

Skips

1x large enclosed skip and 1x 20 yard open skip & 1x (8 yard) open general waste skips located in Service Road by Storm Water Tanks.

1x partially filled small grit slips by Sludge Screening House.

1x open skip in use for transfer materials from mobile screening plant located by Pasteurisation Plant.

1x large enclosed grit/rag skips located by PST's 9-12 – elevated at one end to drain liquid from within as exceed safe carriage weight for vehicles – advised that management of fluids draining from within requires improvement as currently ponding within areas of broken hard-standing where currently located.

Skips containing rag and grit are routinely covered.
General waste and empty skips which are not odorous may be uncovered.

Pasteurisation Plant

Pasteurisation plant 1/7/8/9 currently out of service - All remaining pasteurisation plant in service and fully operational.

East Side Raw Sludge Screen House

Doors open at time of inspection.

West side primary settlement tanks (PST)

Rectangular PSTs – no issues

Circular PST's 9, 10, 11 & 12 all in use.

West Side Aeration Lanes (Old)

Battery C aeration feed channel approximately 40% obstructed in one channel – requires jetting.

New Works (West Side)

Feed Channel for Aeration Lanes 21-24 completely obstructed – jetting required.

“Fluffy” coverage across surface broken down significantly since previous visit - internal dividing walls within tank now visible.

Odour Control Unit (OCU) performance monitoring – (24/04/19)

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.00	Unknown	Unknown

	0.00 0.00		
Main pumping station outlet	0.06 0.06 0.05	0.2	Yes
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	No data	Unknown	Unknown
Sludge reception outlet	0.00 0.00 0.00	0.8	Yes
Thickening plant inlet	No data	Unknown	Unknown
Thickening plant outlet	0.00 0.00 0.00	0.6	Yes
Transfer PS inlet	No Data	Unknown	Unknown
Transfer PS outlet	0.01 0.01 0.01	0.6	Yes
New West inlet (OCU 11)	0.00 0.00 0.00	0.5	Yes
OCU 12 (Pasteurisation Plant)	0.00 0.00 0.00	0.5	Yes



Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: 18th April 2019	
Attendees: Mr L. Phillips. (LBH) with Mr Channi Varsani (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A was empty but slight grit build up at the end of the hoppers. Hoppers 1, 2 & 3 require draining.</p> <p>Tank 1B was empty & clean. Hoppers 1, 2 & 3 require draining.</p> <p>Tank 2A was empty & clean. Hoppers 1, 2 & 3 require draining.</p> <p>Tank 2B was empty & clean. Slight grit build up in all hoppers.</p> <p>Tank 3A was empty & clean. Hoppers 1, 2 & 3 require draining.</p> <p>Tank 3B was empty & clean. Hoppers 1 & 3 drained to lowest point, hopper 2 requires draining.</p> <p>Tanks 4A, 4B, 5A & 5B which are covered and odour controlled were all empty - unable to gauge condition as lighting system still not working.</p> <p>Tank 6A was empty with some grit in rear of tank near hoppers. Hoppers 2 & 3 were all full and needed draining down. Hopper 1 had</p>	<div style="border: 1px solid black; padding: 10px; width: fit-content; margin: auto;"> <p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p> </div>

been drained to lowest point.

Tank 6B was empty & clean with some residual grit. Hoppers 1, 2 & 3 required draining.

Tank 7A was empty & clean. Slight grit build up by hoppers. Hoppers 1 & 2 require draining, hopper 3 drained to its lowest point.

Tank 7B was empty & clean. All hoppers drained down to lowest point.

Tank 8A was empty & clean. Hoppers 1, 2 & 3 were all empty.

Tank 8B was empty & clean. Hoppers 1, 2 & 3 were all empty.

Amajets. No reports of any faults with amajets. All in working order.

Feed Channel - The level of effluent in both feed channels was low – almost bottomed out in places. Dark and murky throughout the channel– no local odours.

Complaints

The Council received no complaints by telephone in the preceding week.

The Council received no complaint by email in the preceding week.

The Council received no complaints by email from MRAG.

Thames Water controller advised that they had received no direct complaints in the preceding week.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection:

Monitor 1	0.006	ppm	11:47
Monitor 2	0.007	ppm	11:48
Monitor 3	0.000	ppm	11:48
Monitor 4	0.005	ppm	11:48
Monitor 5	0.004	ppm	11:48
Monitor 6	0.007	ppm	11:48
Monitor 7	0.007	ppm	11:48
Monitor 8	0.007	ppm	11:48
Monitor 9	0.006	ppm	11:48
Monitor 10	0.007	ppm	11:49
Monitor 11	0.007	ppm	11:49
Monitor 12	0.008	ppm	11:49
Monitor 13	0.006	ppm	11:49
Wind Speed	9.897	mph	11:49
Wind Direction	98.195	Deg	11:49

Odour Log (Thames) - Photocopies of log entries taken:

Thursday 11th April 2019:

AM

Temp: Warm.

Weather: Sunny W/patchy clouds.

All OMU's in use.

Time: Left black.

Observations/Complaints: None noted.

Operational Issues/Causes: None noted.

Actions: None noted.

PM

Temp: Cold.

Weather: Clear Night.

All OMU's in use.

Time: 05:30.

Observations/Complaints: None noted.

Operational Issues/Causes: OM3 0.024 max 04:36 – ongoing. OM8 0.022 19:49–20:51.

Actions: Spillage in pas area early morning. No source discovered.

Friday 12th April 2019:

AM

Temp: Cool.

Weather: Sunny W/patchy clouds.

All OMU's in use.

Time: 17:30.

Observations/Complaints: OM3 spiked to 0.023ppm (stopped spiking at 06:21).

Operational Issues/Causes: no obvious source found.

Actions: None noted.

PM

Temp: Cool.

Weather: Clear night.

All OMU's in use.

Time: No time noted left blank.

Observations/Complaints: None noted left blank.

Operational Issues/Causes: None noted left blank.

Actions: None noted left blank.

Saturday 13th April 2019:

AM

Temp: Cool.

Weather: Sunny W/patchy clouds.

All OMU's in use.

Time: 17:30.

Observations/Complaints: None noted left blank.

Operational Issues/Causes: OM3 0.027 MAX 05:05–06:36. OM3 0.021 max 06:51–07:21.

Actions: No obvious source found.

PM

Temp: Cold.

Weather: Clear night.

All OMU's in use.

Time: 05:30.

Observations/Complaints: None noted left blank.

Operational Issues/Causes: OM3 spiked at 05:05–05:19 max

0.021ppm but less than 15 minutes duration.

Actions: None Noted.

Sunday 14th April 2019:

AM

Temp: Cool.

Weather: Cloudy W/sunny spells.

All OMU's in use.

Time: 17:30.

Observations/Complaints: None noted left blank.

Operational Issues/Causes: OM3 0.023 max 06:06–06:21.

Actions: No obvious source found.

PM

Temp: Cool.

Weather: Overcast night.

All OMU's in use.

Time: 05:00.

Observations/Complaints: None noted.

Operational Issues/Causes: No odour issues found or reported.

Actions: None noted.

Monday 15th April 2019 4th March 2019:

AM

Temp: Warm.

Weather: Cloudy W/ sunny spells.

All OMU's in use.

Time: 17:30.

Observations/Complaints: None noted left blank.

Operational Issues/Causes: No odour issues.

Actions: None noted left blank.

PM

Temp: Cool.

Weather: Overcast night.

All OMU's in use.

Time: 05:00.

Observations/Complaints: None noted.

Operational Issues/Causes: Area: Monitor No:3 spiking at 04:00 present time max 0.027ppm.

Actions: Investigated area around this monitor no odour sources found.

Tuesday 16th April 2019:

AM

Temp: Warm.

Weather: Cloudy W/ Sunny spells.

All OMU's in use.

Time: 17:30.

Observations/Complaints: None noted left blank.

Operational Issues/Causes: No odour issues.

Actions: None noted left blank.

PM

Temp: Cool.

Weather: Clear night.

All OMU's in use.

Time: 05:30.

Observations/Complaints: None noted left blank.

Operational Issues/Causes: OM11 – 0.020 at 20:12 – 20:49.

Actions: No obvious sources found.

Wednesday 17th April 2019:

AM

Temp: Warm.

Weather: Cloudy W/ Sunny spells.

All OMU's in use.

Time: 17:30.

Observations/Complaints: None noted left blank.

Operational Issues/Causes: No odour issues.

Actions: None noted left blank.

PM

Temp: Cool.

Weather: Clear night.

All OMU's in use.

Time: 05:30.

Observations/Complaints: None noted left blank.

Operational Issues/Causes: OM7 0.025ppm at 20:41–21:39, OM12 0.018ppm at 01:38–02:36.

Actions: No obvious source found.

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					
12/04/2019	909	59	394	1362	2081	3443
13/04/2019	59	1303	394	1756	1753	3509
14/04/2019	59	1303	516	1878	1753	3631

The sludge stock levels for the West side circular primary settlement tank 1 were **compliant** with the OMP trigger level (500m³) for all of the dates for which data has been provided.

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.

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. Long term project currently initiated to bring these units back into service - will require significant investment.

Digester 5 - In use - weak sloppy seal - no evidence of recent spill.

Digester 6 - In use - weak sloppy seal - no evidence of recent spill.

Digester 7 - In use - weak sloppy seal - Ongoing spitting/spill – requires anti-foam and clean-up.

LBH notified.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester. The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

Digester 8 - In use - weak sloppy seal - no evidence of recent spill.

Digester 9 - In use - weak sloppy seal - no evidence of recent spill.

Digester 10 - In use - seal level approx. 1ft below surface of coping stones.

Digester 11 - In use - weak sloppy seal - no evidence of recent spill.

Digester 12 - In use - weak sloppy seal - no evidence of recent spill.

Digester 13 - In use - weak sloppy seal - no evidence of recent spill.

Digester 14 - Out of use - empty and clean.

Digester 15 - Out of use - empty and clean.

Digester 16 - Out of use - empty and clean.

Digester 17 - In use - weak sloppy seal - no evidence of recent spill.

Digester 18 - In use - weak sloppy seal - no evidence of recent spill.

Digester 19 - In use - weak sloppy seal - no evidence of recent spill.

Digester 20 - In use - weak sloppy seal - no evidence of recent spill.

No Odours in the area observed at times of inspection

GENERAL

Sludge Screening House

All doors closed at time of inspection. No odours observed.

Imported Sludge

Estimated average of 10 imports daily for 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). All jets and hoses were in operation and no excessive build-up of algae.

Skips

No Skips present at the screening House- All clear.
No Skips present at the East side grit House- All clear.
No odour detected.

East Side Raw Sludge Screen House

Doors closed at time of inspection.

West side primary settlement tanks (PST)

Rectangular PSTs – no issues

Circular PST's 9, 10, 11 & 12 all in use. Currently installing trial of odour control "mistors" on Tank 10 – pipe installed around tank top tail with nozzle sprays at regular intervals which can be utilised to create a plume of deodoriser (same as current mobile units on site) – intention to roll this out to all "odorous areas" on site if proves effective during trial period – initial testing has proven successful to date – trial ongoing. At time of inspection these mistors were not in operation. No Odours observed.

Pasteurisation Plant

Pasteurisation plant 1/4/8/9 currently out of service - All remaining pasteurisation plant in service and fully operational.

West Side Aeration Lanes (Old)

Battery C aeration feed channel clear of any obstruction- effluent is flowing with ease NO rags or build up noticed. Contractors on site at time of inspection.

New Works (West Side)

Feed Channel for Aeration Lanes 21-24 free flowing no obstructions or odours. Contractors on site at time of inspection.

Slight “Fluffy” coverage across surface returned across 100% of tank - thickened up so as to obscure internal dividing walls within tank.

Odour Control Unit (OCU) performance monitoring - (15th April 2019)

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.04 0.04 0.04 0.04	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00 0.00	0.2	Yes
East OCU	0.00 0.00 0.00 0.00	0.05	Yes
West inlet OCU	No data	0.05	Yes
Sludge reception inlet	No data	Unknown	Unknown
Sludge reception outlet	No data	0.8	Yes
Thickening plant inlet	No data	Unknown	Unknown

Thickening plant outlet	0.00 0.00 0.00 0.00	0.6	Yes	
Transfer PS inlet	No Data	Unknown	Unknown	
Transfer PS outlet	0.04 0.04 0.04 0.04	0.6	Yes	
New West inlet (OCU 11)	0.00 0.00 0.00	0.5	Yes	
OCU 12 (Pasteurisation Plant)	0.00 0.00 0.00	0.5	Yes	



Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: 11th April 2019	
Attendees: Mr Zaheer Kadri (LBH) with Mr Channi Varsani (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A was empty and had dry residue on the tank floor at the hopper end. Hopper 1, 2, and 3 needed draining down.</p> <p>Tank 1B was empty and had dry residue on the tank floor at the hopper end. Hopper 1 was full and needed draining down. Hoppers 2 and 3 were empty.</p> <p>Tank 2A was empty and had dry residue on the tank floor at the hopper end. Hopper 1, 2, and 3 were empty.</p> <p>Tank 2B was empty and had dry residue on the tank floor at the hopper end. Hopper 1, 2, and 3 all needed draining down.</p> <p>Tank 3A was empty and had dry residue on the tank floor at the hopper end. Hopper 1, 2, and 3 were all empty.</p> <p>Tank 3B was empty and had dry residue on the tank floor at the hopper end. Hopper 1, 2, and 3 were all empty.</p> <p>Tanks 4A, 4B, 5A & 5B which are covered and odour controlled were</p>	<div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: 80%;"> <p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p> </div>

all empty - unable to gauge condition as lighting system still not working.

Tank 6A was empty with some residual grit. Hoppers 1, 2 & 3 were all full and needed draining down.

Tank 6B was empty with some residual grit. Hoppers 1, 2 & 3 were all empty.

Tank 7A was empty. Hoppers 1, 2 & 3 (shallow hoppers) all needed draining down.

Tank 7B was empty. Hoppers 1, 2 & 3 (shallow hoppers) all needed draining down.

Tank 8A was empty and hoppers 1, 2 & 3 were all empty.

Tank 8B was empty and hoppers 1, 2 & 3 were all empty

Amajets- No reports of any faults with amajets. All in working order.

Feed Channel - The level of effluent in both feed channels was low – almost bottomed out in places. Dark and murky throughout the channel– no local odours.

Complaints

The Council received no complaints by telephone in the preceding week.

The Council received one complaint by email in the preceding week.

On the 9th of April 2019 at approx 18:37 an email was received by the Council from the Arnold Crescent area of Isleworth TW7. The Duty Officer was unable to corresponded with the complainant as no contact details were left in the email. Our Ref for this complaint is logged as 982729.

The Council received no complaints by email from MRAG.

Thames Water controller advised that they had received no direct complaints in the preceding week.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection:

Monitor 1	0.007	ppm	12:12
Monitor 2	0.010	ppm	12:12
Monitor 3	0.000	ppm	12:12
Monitor 4	0.007	ppm	12:12
Monitor 5	0.003	ppm	12:12
Monitor 6	0.007	ppm	12:12
Monitor 7	0.009	ppm	12:12
Monitor 8	0.008	ppm	12:12
Monitor 9	0.000	ppm	12:12
Monitor 10	0.006	ppm	12:12
Monitor 11	0.008	ppm	12:12
Monitor 12	0.009	ppm	12:12
Monitor 13	0.009	ppm	12:12
Wind Speed	8.797	mph	12:12
Wind Direction	98.195	Deg	12:12

Odour Log (Thames) - Photocopies of log entries taken:

Thursday 4th April 2019:

AM – Cool / Sunny with patchy clouds.

All OMU's in use.

Time: 17:30.

Observations/Complaints: OM2 spiked to 0.018ppm at 08:36.
OM8 spiked to 0.017ppm at 8:20 to 09:19.
OM3 spiked to 0.027ppm MAX at 05:06 to 07:06.
and again to 0.022ppm at 07:21-08:05.

Operational Issues/Causes: No obvious source identified.

Actions: None noted.

PM – Cool clear night.

All OMU's in use.

Time: 05:30.

Observations/Complaints: OM No.2 stopped trending at 04:35, OM No.3 spiked at 05:07- current time max 0.023ppm, OM No.8 spiked at 20:35 to 2134 max 0.020ppm.

Operational Issues/Causes: OM No.2 reported and checked other areas mentioned. Odour on OM NO.8 appeared to be coming from Pasteurisation but has now stopped.

Actions: None noted.

Friday 5th April 2019:

AM – Cool Cloudy with sunny spells.

All OMU's in use.

Time: 17:30.

Observations/Complaints: OM3 spiked to 0.023ppm (stopped spiking at 06:21)

Operational Issues/Causes: no obvious source found

Actions: None noted.

PM – cool clear night

All OMU's in use.

Time: 05:30

Observations/Complaints:

OM5 spiked to 0.021ppm at 19.09 to 20.09

Operational Issues/Causes:

Area checked. Unable to identify source of odour.

Actions: None noted.

Saturday 6th April 2019

AM – Cool sunny with patchy clouds

All OMU's in use.

Time: 05:30.

Observations/Complaints: OM3 spiked to 0.022ppm at 05:06 to 05:51.

Operational Issues/Causes: No obvious source identified.

Actions: None noted.

PM – Cool clear night.

All OMU's in use.

Time: 17:30.

Observations/Complaints: OM10 0.016ppm 21.23-21.37.

Operational Issues/Causes: Digester bell height high. Flarestack tripping.

Actions: None Noted.

Sunday 7th April 2019:

AM – Cool- cloudy with sunny spells.

All OMU's in use.

Time: 17:30.

Observations/Complaints: OM3 spiked at 0.024ppm max at 05:06 to 05:50.

Operational Issues/Causes: No obvious source identified.

Actions: None Noted.

PM – Cool clear night.

All OMU's in use.

Time: 05:30.

Observations/Complaints: OM10 spiked to 0.015ppm at 01.24 to 01.38 and again to 0.016ppm at 04.37-end of shift.

Operational Issues/Causes: Area checked no odour detected. Digester bell height low 24meters.

Actions: None noted.

Monday 8th April 2019 4th March 2019:

AM – Cool rain with sunny spells.

All OMU's in use.

Time: 17:30.

Observations/Complaints: OM NO.8 Spiked at 10:50 to 11:19 max

0.026 ppm.

Operational Issues/Causes: Pasteurised sludge odour detected in air around river crossing.

Actions: Reported.

PM – Cool with rain.

All OMU's in use.

Time: 05:30.

Observations/Complaints: OM5 spiked to 0.019ppm at 21.23 to 22.23

OM8 spiked to 0.015ppm at 21.51 to 22.49.

Operational Issues/Causes: Area checked. PAS area odour detected. Sludge imports being received overnight.

Actions: None noted.

Tuesday 9th April 2019:

AM – Warm Cloudy with sunny spells.

All OMU's in use.

Time: 17:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: none noted.

Actions: none noted.

PM – Cold clear night.

All OMU's in use.

Time: 05:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

Wednesday 10th April 2019:

AM – Warm, Sunny with patchy clouds.

All OMU's in use.

Time: 17:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

PM – Cold clear night.

All OMU's in use.

Time: 06:00.

Observations/Complaints: OM2 Breaks in trends?

OM7 spiked to 0.019ppm at 21:39 to 22:38.

OM8 spiked to 0.019ppm at 21:05 to 22:05.

Operational Issues/Causes: None found or reported.

Actions: None noted.

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					
08/04/19	20	1491	394	1905	3572	5477
09/04/19	0	1491	642	2133	2755	4888
10/04/19	20	1181	581	1782	4228	6010

The sludge stock levels for the West side circular primary settlement tank 1 were **compliant** with the OMP trigger level (500m³) for all of the dates for which data has been provided.

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.

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. Long term project currently initiated to bring these units back into service – will require significant investment.

Digester 5 - in use – seal level approx. 1ft below coping stones – good seal – evidence of recent spill – requires anti-foam and clean-up.

Digester 6 - in use – good seal level approx. 1ft below coping stones.

Digester 7 - in use – seal level approx. 2ft below coping stones – seal weak and bubbling - Ongoing spitting/spill – requires anti-foam and clean-up.

As LBH note, this has not been required in the last week.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester.

The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

Digester 8 – in use –good seal level approx. 1ft below coping stones.

Digester 9 - in use – seal level approx. 1ft below surface of coping stones – good seal.

Digester 10 – in use – seal level approx. 1ft below surface of coping stones.

Digester 11 - in use – seal level approx. 1ft below surface of coping stones – seal weak and bubbling.

Digester 12 - in use – seal level approx. 1ft below coping stones – good seal.

Digester 13 - in use – seal level approx. 1ft below coping stones – good seal.

Digester 14 - out of use – empty and clean.

Digester 15 - out of use – empty and clean.

Digester 16 - out of use – empty and clean.

Digester 17 - in use – seal level approx. 1ft below coping stones – seal crusty.

Digester 18 - in use – seal level approx. 2ft below coping stones – seal weak and slightly bubbling.

Digester 19 - in use – seal level approx. 1ft below coping stones – good seal.

Digester 20 - in use – seal level approx. 1ft below coping stones – good seal.

No Odours in the area observed at times of inspection

GENERAL

Sludge Screening House

All doors closed at time of inspection however aware that on previous visits these doors have been left open to avoid condensation build up – TW advised that doors being left open to create air flow is a Management decision to improve internal working environment for staff – odour monitors deployed in vicinity to determine whether local odours increase as a consequence. No odours observed.

Imported Sludge

Estimated average of 10 imports daily for 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). All jets and hoses were in operation and no excessive build-up of algae.

Skips

No Skips present at the screening House- All clear.
No Skips present at the East side grit House- All clear.
No odour detected.

East Side Raw Sludge Screen House

Doors closed at time of inspection.

West side primary settlement tanks (PST)

Rectangular PSTs – no issues

Circular PST's 9, 10, 11 & 12 all in use. Currently installing trial of

odour control “mistors” on Tank 10 – pipe installed around tank top tail with nozzle sprays at regular intervals which can be utilised to create a plume of deodoriser (same as current mobile units on site) – intention to roll this out to all “odorous areas” on site if proves effective during trial period – initial testing has proven successful to date – trial ongoing. At time of inspection these mistors were not in operation. No Odours observed.

Pasteurisation Plant

Pasteurisation plant 1/4/8/9 currently out of service - All remaining pasteurisation plant in service and fully operational.

West Side Aeration Lanes (Old)

Battery C aeration feed channel approximately 90% clear of any obstruction- effluent is flowing with ease NO rags or build up noticed. Kelvac (Contractors) on site at time of inspection.

New Works (West Side)

Feed Channel for Aeration Lanes 21-24 free flowing no obstructions or odours. Kelvac on site at time of inspection.

“Fluffy” coverage across surface returned across 100% of tank – thickened up so as to obscure internal dividing walls within tank.

Odour Control Unit (OCU) performance monitoring – (5th March 2019)

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.03 0.03 0.04	Unknown	Unknown

Main pumping station outlet	0.02 0.02 0.02	0.2	Yes
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	No data	Unknown	Unknown
Sludge reception outlet	No data	0.8	Yes
Thickening plant inlet	No data	Unknown	Unknown
Thickening plant outlet	0.00 0.00 0.00	0.6	Yes
Transfer PS inlet	No Data	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00	0.6	Yes
New West inlet (OCU 11)	0.00 0.00 0.00	0.5	Yes
OCU 12 (Pasteurisation Plant)	0.00 0.00 0.00	0.5	Yes



Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: Thursday 4 th April 2019	
Attendees: Mr I Inman & Mr A Matthews (London Borough of Hounslow) and Mr C Varsani (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A was empty but had sludge across 25% of the tanks surface. Hoppers 1, 2 & 3 were all 50% full and required draining down.</p> <p>Tank 1B was empty and clean. Hoppers 1, 2 & 3 were all full, partly overflowing, and required draining down.</p> <p>Tank 2A was empty and clean. Hoppers 1, 2 & 3 were all approx 25% full and required drained down.</p> <p>Tank 2B was empty and clean. Hoppers 1, 2 & 3 were all approx 75% full and required draining down.</p> <p>Tank 3A was empty and clean. Hoppers 1, 2 & 3 were all approx 25% full and required draining down.</p> <p>Tank 3B was empty but had grit across the centre of the tank and along the left side of the tanks surface. Hoppers 1, 2 & 3 were all 33% full and required draining down.</p> <p>Tanks 4A, 4B, 5A & 5B which are covered and odour controlled were</p>	<div style="border: 1px solid black; padding: 10px;"> <p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p> </div>

all empty. Unable to gauge condition as lighting system still not working.

Tank 6A was empty but had grit across the left side of the tank surface. Hopper 1 was approx 50% full, hopper 2 was completely full & hopper 3 was approx 70% full, all required draining down.

Tank 6B was empty but had grit across the centre of the tank and along the left side of the tank surface. Hoppers 1 & 2 were 25% full & hopper 3 was 75% full, all required draining down.

Tank 7A had grit and sludge across large areas of the tanks surface (approx 50%) and appeared filthy. Hoppers 1, 2 & 3 (shallow hoppers) all contained large quantities of grit & sludge and required cleaning.

Tank 7B had grit and sludge across large areas of the tanks surface (approx 30%) and appeared filthy. Hoppers 1, 2 & 3 (shallow hoppers) all contained large quantities of grit & sludge and required cleaning.

Tank 8A was empty and clean. Hoppers 1, 2 & 3 were all full (overflowing) and required draining down.

Tank 8B was empty and clean. Hoppers 1 & 2 were both full and required draining down, hopper 3 was <25% full. Hopper 2 was in the process of being overpumped at the time of the inspection (Hopper 3 having just been overpumped).

Feed Channel - The level of effluent in both feed channels was low along its entire length. However, there was thick scum and sludge on the surface along large parts of the channel that was noticeably odourous.

Thames advised of planned works to replace all of the hopper valves to prevent back flow of effluent, Scheduled to begin towards the end of April and lasting approx 3 months.

Complaints

The Council received 1 complaints by telephone in the preceding week.

Tanker cleans out the channel on a weekly basis

On 2nd April a complaint was received from a non-Hounslow resident (from Cole Park Road, Twickenham) at 16:25.

In response to the complaint the duty officer telephoned the complainant and advised an officer would visit the area as soon as possible.

The Council received an Email complaint on 26th March at 20:46. However, the complainant failed to provide contact details (name, address or telephone number), despite being responded to by email and asked to do so.

The historic odour trends on the date of the complaint showed a spike on OM7 of 0.022ppm between 19:34-19:50, then a further spike of 0.025ppm between 20:50-21:05.

OM8 had a slight spike of 0.017ppm between 19:15-20:20.

OM3 had a slight spike of 0.015ppm between 20:20-20:35.

The Council received no complaints by email from MRAG.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection: Thursday 4th April 2019 at 13:33.

Monitor 1	0.006	ppm	13:33
Monitor 2	0.009	ppm	13:33
Monitor 3	0.000	ppm	13:33
Monitor 4	0.005	ppm	13:33
Monitor 5	0.007	ppm	13:33
Monitor 6	0.007	ppm	13:33
Monitor 7	0.009	ppm	13:33
Monitor 8	0.008	ppm	13:33
Monitor 9	0.006	ppm	13:33
Monitor 10	0.008	ppm	13:33
Monitor 11	0.005	ppm	13:33
Monitor 12	0.008	ppm	13:33
Monitor 13	0.007	ppm	13:33

Wind Speed	10	mph	13:33
Wind Direction	194	°	13:33

Odour Log (Thames)

Thursday 28th March 2019

DAY SHIFT

Temp. Warm.

Weather. Sunny with patchy clouds.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. OM8 0.019 06:47-07:48.

Actions Taken. No obvious source discovered.

NIGHT SHIFT

Temp. Cool.

Weather. Overcast night.

Odour Readings. All OMU's in operation.

Time: 05:15.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. No odour issues.

Actions Taken. Blank.

Friday 29th March 2019

DAY SHIFT

Temp. Warm.

Weather. Sunny.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. No odour issues.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Cool.

Weather. Cloudy.

Odour Readings. All OMU's in use.

Time: 05:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. No odour issues

Actions Taken. Blank.

Saturday 30th March 2019

DAY SHIFT

Temp. Warm.

Weather. Sunny.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. OM12 0.017 07:50-08:50.

OM8 0.016 12:04-12:19. 0.018 16:04-16:19.

Actions Taken. No obvious source discovered.

NIGHT SHIFT

Temp. Cool.

Weather. Clear Night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. OM8 0.018 @ 19:21-20:19.

PAS areas smelly.

Actions taken. Blank.

Sunday 31st March 2019

DAY SHIFT

Temp. Warm.

Weather. Sunny w/patchy clouds.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. No odour issues.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Cool.

Weather. Clear night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. OM3 0.025 @ 05:06-end of shift.

Actions Taken. Blank.

Monday 1st April 2019

DAY SHIFT

Temp. Warm.

Weather. Sunny with patchy clouds.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. OM3 0.025ppm 06:00-07:36.

Actions Taken. No odour detected.

NIGHT SHIFT

Temp. Cold.

Weather. Clear night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. OM3 0.025 @ 05:06-end of shift.

Actions Taken. Blank.

Tuesday 2nd April 2019

DAY SHIFT

Temp. Cool.

Weather. Sunny with patchy clouds.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. OM4 0.021ppm 12:06-12:21.
OM8 0.019ppm 14:04-14:19.

Actions Taken: Occasional strong smell of odour from PAS area.

NIGHT SHIFT

Temp. Cool.

Weather. Clear night.

Odour Readings. All OMU's in operation.
Time: 05:30.
Observations / Customer Complaint. Blank.
Operational issues / causes observed. No odour issues.
Actions Taken: Blank.

Wednesday 3rd April 2019

DAY SHIFT

Temp. Warm.

Weather. Sunny w/patchy clouds.

Odour Readings. All OMU's in operation.

Time: Blank.

Observations / Customer Complaint. No odour issues.

Operational issues / causes observed. Blank.

NIGHT SHIFT

Temp. Cool.

Weather. Clear night.

Odour Readings. All OMU's in operation.

Time: 05:15.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. No odour issues.

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 m ³						
OMP limit	500					
30/03/2019	39	1272 *1322	455	1766	3418	5184 *5234
01/04/2019	0	1448	642	2090	3226	5316
02/04/2019	20	1842	581	2423	4236	6679

30/03/2019: Incorrect amount entered for West PST's 2 (*1322 entered, should be 1272; resulting in Grand Total *5234 being incorrect, should be 5184).

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 30 imports of sludge over the last week.
10 on Saturday 30th, 10 on Monday 1st & 10 on Tuesday 2nd April.

Raw Sludge Screening House

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

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

As LBH note, this has not been required in the last week.

Thames advised of a long term project currently initiated to bring these units back into service that will require significant investment.

Digesters 5 & 6 were both in use and had wet sloppy seals. There was evidence that both digesters had been spitting and a sludge spill between the digesters that had not been cleaning up.

Digesters 7 & 8 were both in use and had a wet sloppy seals. It was noted that the bell heights on both digesters were very high.

Digester 9 was in use and had a very wet seal, although little gas appeared to be bubbling off.

Digester 10 was in use and had a very wet seal, although little gas appeared to be bubbling off. There was evidence of a sludge spill around 25% of the perimeter

Digesters 11 & 12 were both in use and had very wet seals, however little gas appeared to be bubbling off.

Digesters 13 & 14 were both all out of service.

Digester 15 was in use and had a good dry seal.

Digester 16 was out of service.

Digester 17 was in use but had a very wet seal, although little gas appeared to be bubbling off. There was also evidence of a sludge spill that had not been cleaned up.

Digester 18 was in use and sludge was starting to spill over the coping stones.

Digester 19 was in use but had a very wet seal, although little gas appeared to be bubbling off. There was also evidence of a sludge spill that had not been cleaned up.

Digester 20 was in use but had a very wet seal, although little gas appeared to be bubbling off.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester.

The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

There was evidence of anti-foaming agent in use and TW advised that this is applied daily to all of the digesters that are operational.

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 20yds open bulk carrier that was empty. Also present was one closed 14yd skip.

In the area next to STW 1A there was one 8yd & one 14yd skip that were both full of general non-inert rubbish. There was also a large closed skip, estimated to be approx 20yd, which again contained general non-inert rubbish.

On the access road leading to the digesters there was one 12yds skip that contained a large amount of rag and was partly covered with a tarpaulin, it was noted that the skip was odorous.

On the West side there was two 40yd closed bulk carriers that were both full and draining liquid before being removed off site.

East Side Screen House

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

Around the PAS area (noticeable by the drum thickening building) strong offensive odour was present. TW advised there had also been a poly spill.

Skips containing rag and grit are routinely covered. General waste and empty skips which are not odorous may be uncovered.

Return Activated Sludge Channel

The nearside RAS channel (which runs in the ground between FST's 61-64 & 65-67) was clogged along approx 25% its length.

West side primary settlement tanks (PST)

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

Circular PSTs 9, 10 & 11 were in operation at the time of the inspection, all had fat free surfaces.

PST 12 was in the process of being drained down before being taken out of service.

The new odour suppression system around the perimeter of PST-10 is currently out of operation.

Pasteurisation Plant

The pasteurisation plant is in service. TW advised 4 streams (1, 4, 7 & 9) were currently out of service.

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 had thick scum across their surfaces that appeared to be bubbling and spitting and was thick enough to almost obscure all of the internal dividing walls.

Nearly all of the sprinklers appeared to be in operation.

The mixed liquor feed channel serving E-Battery was clogged with rag

and other floating debris from lanes 25-24 and then lane 21.
 No odour was noticeable.
 TW advised a tanker crew are regularly on site undertaking clearance of any clogged areas.

Tanker cleans out the channel on a weekly basis

New Inlet Works (West Side)

No issues appeared evident at the new inlet works.

Odour Control Unit (OCU) performance monitoring: 04/04/2019

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.00 0.00 0.00	Unknown	Unknown
Main pumping station outlet	0.02 0.00 0.00	0.2	Yes
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	Blank	Unknown	Unknown
Sludge reception outlet	0.00 0.00 0.00	0.8	Yes
Thickening plant inlet	Blank	Unknown	Unknown
Thickening plant outlet	0.00 0.00 0.00	0.6	Yes
Transfer PS inlet	Blank	Unknown	Unknown
Transfer PS outlet	0.00 0.00	0.6	Yes

	0.00			
New West inlet (OCU 11)	0.00 0.00 0.00	0.5	Yes	
OCU 12 (Pasteurisation Plant)	0.00 0.00 0.00	0.5	Yes	



Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: 28 th March 2019	
Attendees: Mr Steven Maunders and Mr Manzoor Hussein (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A – Tank empty and flushed – recently returned - approximately 40% of tank covered by grit and sludge – requires further flushing - Hoppers 1, 2 & 3 approx. 50% full requires draining/over-pumping.</p> <p>Tank 1B – Tank empty and flushed - approximately 10% of tank covered by grit – requires further flushing – Hoppers 1, 2 & 3 full to brim - requires draining/over-pumping.</p> <p>Tank 2A – Tank empty and flushed clean – Hoppers 1, 2 & 3, approx. 25% full - requires draining/over-pumping.</p> <p>Tank 2B – Tank recently returned – approx. 10% of tank covered by grit and sludge – requires further flushing - Hoppers 1, 2 & 3 approximately 75% full - requires draining/over-pumping.</p> <p>Tank 3A – Tank empty and flushed clean – Hoppers 1, 2 & 3 approx. 20% full.</p> <p>Tank 3B – Tank recently returned – approx. 60% of tank covered by grit and sludge – requires further flushing – Hoppers 1, 2 & 3</p>	<div style="border: 1px solid black; padding: 10px;"> <p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p> </div>

approximately 75% full - requires draining/over-pumping.

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 – Tank empty and flushed - approximately 10% of tank covered by grit and sludge – requires further flushing. – Hoppers 1, 2 & 3 approximately 20% full - requires draining/over-pumping.

Tank 6B – Tank empty and flushed - approximately 20% of tank covered by grit and sludge – requires further flushing. – Hoppers 1, 2 & 3 full to brim - requires draining/over-pumping.

Tank 7A – Tank recently returned – approx. 75% of tank covered by grit and sludge – requires further flushing – Hoppers 1, 2 & 3 full – requires draining/over-pumping.

Tank 7B – Tank recently returned – approx. 40% of tank covered by grit and sludge – requires further flushing – Hoppers 1, 2 & 3 full – requires draining/over-pumping.

Tank 8A – Tank recently returned – approx. 75% of tank covered by grit and sludge – requires further flushing – Hoppers 1, 2 & 3 full – requires draining/over-pumping.

Tank 8B – Tank recently returned – approx. 25% of tank covered by grit and sludge – requires further flushing – Hoppers 1, 2 & 3 full – requires draining/over-pumping.

Feed Channel - The level of effluent in both feed channels was low – almost bottomed out – no local odours.

Complaints

The Council directly received no complaints by telephone in the preceding week.

The Council directly received no complaints by email in the preceding week.

The Council received no complaints by email from MRAG.

Thames Water controller advised that they had received no direct complaints in the preceding week.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection:

Monitor 1	0.007	ppm	14:25
Monitor 2	0.007	ppm	14:25
Monitor 3	0.000	ppm	14:25
Monitor 4	0.007	ppm	14:25
Monitor 5	0.007	ppm	14:25
Monitor 6	0.007	ppm	14:25
Monitor 7	0.009	ppm	14:25
Monitor 8	0.008	ppm	14:25
Monitor 9	0.007	ppm	14:25
Monitor 10	0.007	ppm	14:25
Monitor 11	0.007	ppm	14:25
Monitor 12	0.007	ppm	14:25
Monitor 13	0.005	ppm	14:25
Wind Speed	3	mph	
Wind Direction	56°		

Odour Log (Thames):

Thursday 21st March 2019:

AM – Warm - Cloudy with Sunny Spells.

All OMU's in use.

Observations/Complaints: “No odour issues”.

Operational Issues/Causes: None noted.

Actions: None noted.

PM – Cool - Clear Night.

All OMU's in use.

Observations/Complaints: “No odour issues”.

Operational Issues/Causes: “OM1 not trending”.

Actions: None noted.

Friday 22nd March 2019:

AM – Cool - Cloudy with Sunny Spells.

All OMU's in use.

Observations/Complaints: “No odour issues”.

Operational Issues/Causes: None noted.

Actions: None noted.

PM – Cool – Clear Night.

All OMU's in use.

Observations/Complaints: “OM5 0.018 19:52-20:08, OM5 0.023 @ 22:36-22:51, OM3 0.035 @ 22:54-end of shift, 0.025 20:37-21:08, 0.018 01:07-01:23, 0.016 01:54-02:08”.

Operational Issues/Causes: “Unable to identify source”.

Actions: “Spillages around PAS 10-11 heat exchangers, Spillages around Digesters foaming. Areas hosed down”.

Saturday 23rd March 2019:

AM – Warm – Cloudy with Sunny Spells.

All OMU's in use.

Observations/Complaints: “No odour issues”.

Operational Issues/Causes: None noted.

Actions: None noted.

PM – Cold – Clear Night.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: "OM3 0.024 descending gradually 04:05 - ? , OM5 0.019 00:38 – 00:53, OM10 0.023 01:20 – 02:20".
Actions: "Possible malfunction, No obvious source identified".

Sunday 24th March 2019:

AM – Warm – Sunny with Patchy Clouds.

All OMU's in use.

Observations/Complaints: "No odour issues".

Operational Issues/Causes: None noted.

Actions: None noted.

PM – Cool – Clear Night.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: "OM8 0.020 02:50 – 03:04, OM8 0.019 20:05 – 21:03".

Actions: "No obvious source identified".

Monday 25th March 2019:

AM – Warm – Sunny with Patchy Clouds.

All OMU's in use.

Observations/Complaints: "No odour issues".

Operational Issues/Causes: None noted.

Actions: None noted.

PM – Cold – Clear Night.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: "OM7 0.022 19:22 – 20:22, OM3 0.026 & descending 04:04 – ongoing. OM4 0.017 00:49 – 01:03".

Actions: "No obvious source identified in area".

Tuesday 26th March 2019:

AM – Warm – Sunny with Patchy Clouds.

All OMU's in use.

Observations/Complaints: "No odour issues".

Operational Issues/Causes: None noted.

Actions: None noted.

PM – Cool – Overcast night.

All OMU's in use.

Observations/Complaints: "No odour issues".

Operational Issues/Causes: None noted.

Actions: None noted.

Wednesday 27th March 2019:

AM – Cool – Sunny with Patchy Clouds.

All OMU's in use.

Observations/Complaints: "No odour issues".

Operational Issues/Causes: None noted.

Actions: None noted.

PM – Cool – Overcast Night.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: "OM3 0.024 max 23:50 – 01:05".

Actions: "Area checked no obvious odours detected".

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					
21/03/19	127	2774	1097	3998	2405 (TW figure 2455)	6403 (TW figure 6453)
25/03/19	728*	267	534	1529	2746	4275
27/03/19	435	1885	394	2714	3940	6654

*There is an apparent exceedance of OMP levels as detailed above for 25/03/19 and for which notification was provided by TW by email on 28/03/19.

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. Long term project currently initiated to bring these units back into service – will require significant investment.

Digester 5 - in use – seal level approx. 1ft below coping stones - seal weak and bubbling – ongoing spill – requires anti-foam and clean-up – Bell height high – requires draw down of biogas.

Digester 6 - in use – seal level approx. 2ft below coping stones - seal weak and bubbling – ongoing spill – requires anti-foam and clean-up – Bell height high – requires draw down of biogas.

Digester 7 - in use – seal level approx. 2ft below coping stones – seal weak and bubbling - Ongoing spitting/spill – tank “gurgling” - requires anti-foam and clean-up – Bell height high – requires draw down of biogas.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester.

The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

Digester 8- in use – seal level approx. 3ft below coping stones - seal weak and bubbling – ongoing spill – requires anti-foam and clean-up – Bell height high – requires draw down of biogas.

Digester 9 - in use – seal level approx. 2ft below coping stones - seal weak and bubbling – ongoing spill – requires anti-foam and clean-up – Bell height high – requires draw down of biogas.

Digester 10 - in use – seal level approx. 4ft below coping stones - seal weak and bubbling – ongoing spill – requires anti-foam and clean-up – Bell height high – requires draw down of biogas.

Digester 11 - in use – seal level approx. 3ft below surface of coping stones – seal weak and bubbling – evidence of recent spill accumulated under adjacent cabling ducting – requires anti-foam and clean-up.

Digester 12 - in use – seal level approx. 2ft below coping stones - seal weak and bubbling – ongoing spill – requires anti-foam and clean-up.

Digester 13 - in use – seal level approx. 8ft below coping stones – good seal – evidence of prior dried spill – requires clean-up.

Digester 14 - out of use – empty and clean – contractor on site undertaking maintenance.

Digester 15 - out of use – empty and clean – contractor on site undertaking maintenance.

Digester 16 - out of use – empty and clean – contractor on site undertaking maintenance.

Digester 17 - in use – seal level approx. 5ft below coping stones - seal weak and bubbling – ongoing spill – requires anti-foam and clean-up.

Digester 18 - in use – seal level approx. 2ft below coping stones – good seal – evidence of prior dried spill - requires anti-foam and clean-up.

Digester 19 - in use – seal level approx. 3ft below coping stones – seal weak and bubbling – evidence of prior dried spill - requires anti-foam and clean-up.

Digester 20 - in use – seal level approx. 2ft below coping stones – seal weak and bubbling.

GENERAL

Sludge Screening House

All doors closed at time of inspection.

Imported Sludge

No imports for 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). Green Algae on 100% of surface of Tanks 73 & 74.

Skips

1x large enclosed skip and 1x 20 yard open skip & 1x (8 yard) open general waste skips located in Service Road by Storm Water Tanks.

1x partially filled small grit slips by Sludge Screening House.

1x open skip in use for transfer materials from mobile screening plant located by Pasteurisation Plant.

1x large enclosed grit/rag skips located by PST's 9-12 – elevated at one end to drain liquid from within as exceed safe carriage weight for vehicles – advised that management of fluids draining from within

Skips containing rag and grit are routinely covered.
General waste and empty skips which are not odorous may be uncovered.

requires improvement as currently ponding within areas of broken hard-standing where currently located.

Pasteurisation Plant

Pasteurisation plant 1/4/8/9 currently out of service - All remaining pasteurisation plant in service and fully operational.

East Side Raw Sludge Screen House

Doors closed at time of inspection.

West side primary settlement tanks (PST)

Rectangular PSTs – no issues

Circular PST's 9, 10, 11 & 12 all in use.

West Side Aeration Lanes (Old)

Battery C aeration feed channel approximately 50% obstructed in one channel – requires jetting.

New Works (West Side)

Feed Channel for Aeration Lanes 21-24 completely obstructed – jetting required.

“Fluffy” coverage across surface returned across 100% of tank – thickened up so as to obscure internal dividing walls within tank.

Tanker cleans out the channel on a weekly basis

Odour Control Unit (OCU) performance monitoring – (26/03/19)

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.00 0.02 0.03	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00	0.2	Yes
East OCU	0.00 0.00 0.00	0.05	Yes
West inlet OCU	Out of Service	0.05	Yes
Sludge reception inlet	No data	Unknown	Unknown
Sludge reception outlet	No data	0.8	Yes
Thickening plant inlet	No data	Unknown	Unknown
Thickening plant outlet	0.00 0.00 0.00	0.6	Yes
Transfer PS inlet	No Data	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00	0.6	Yes
New West inlet (OCU 11)	0.00 0.00 0.00	0.5	Yes
OCU 12 (Pasteurisation Plant)	0.00 0.00 0.00	0.5	Yes



Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: 21 st March 2019	
Attendees: Mr Andrew Devine and Mr Manzoor Hussein (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A – Tank empty and flushed, approximately 20% of tank covered by grit and sludge – requires further flushing - Hopper 1 approx. ¼ full - Hoppers 2 & 3 approx. 2/3 full requires draining/over-pumping. A slight odour was noted around this tank.</p> <p>Tank 1B – Tank empty and flushed. Hoppers 1, 2 & 3 full to brim and flowing back into tank, requires draining/over-pumping.</p> <p>Tank 2A – Tank empty and flushed clean but some scum and grit remaining in tank – Hoppers 1, 2 & 3, approx. 10% full - requires draining/over-pumping.</p> <p>Tank 2B – Tank recently returned – approx. 10% of tank covered by grit and sludge – requires further flushing - Hoppers 1, 2 & 3 full - requires draining/over-pumping.</p> <p>Tank 3A – Tank empty and flushed clean – Hoppers 1, 2 & 3 drained down to bottom level but still requires further over pumping.</p> <p>Tank 3B – Tank recently returned – approx. 50% of tank covered by</p>	<div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: 80%;"> <p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p> </div>

grit and sludge – requires further flushing – Hoppers 1, 2 & 3 approximately ½ full and require over pumping. A slight odour was noted in the vicinity of this tank.

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 – Tank returning, amajets 1, 2 and 3 all working.

Tank 6B – Tank empty and flushed. Hoppers 1 & 3 full and require draining/over-pumping. Hopper 2 2/3 full, a scum was noted on the suffice of the hoppers. All require further over pumping.

Tank 7A – Tank recently returned – approx. 25% of tank covered by grit and sludge – requires further flushing – Hoppers 1, 2 & 3 full – requires draining/over-pumping.

Tank 7B – Tank recently returned – approx. 25% of tank covered by grit and sludge – requires further flushing – Hoppers 1, 2 & 3 full – requires draining/over-pumping.

Tank 8A – Tank empty and clean. Hopper 1 was full, hoppers 2 and 3 were approximately 2/3 full. The water in the hoppers was noted to be black in colour.

Tank 8B – Tank empty and clean. Hoppers 1, 2 and 3 were approximately 2/3 full and a scum was noted on the surface.

Feed Channel - The level of effluent in both feed channels was low – almost bottomed out.

Complaints

The Council directly received one complaints by telephone in the preceding week.

The Council directly received no complaints by email in the preceding week.

The Council received no complaints by email from MRAG.

Thames Water controller advised that they had received no direct complaints in the preceding week (although this contradicts Odour Log).

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection:

Monitor 1	0.000	ppm	13:16
Monitor 2	0.006	ppm	13:16
Monitor 3	0.000	ppm	13:16
Monitor 4	0.007	ppm	13:16
Monitor 5	0.009	ppm	13:16
Monitor 6	0.005	ppm	13:16
Monitor 7	0.005	ppm	13:16
Monitor 8	0.006	ppm	13:16
Monitor 9	0.005	ppm	13:16
Monitor 10	0.006	ppm	13:16
Monitor 11	0.005	ppm	13:16
Monitor 12	0.006	ppm	13:16
Monitor 13	0.005	ppm	13:16
Wind Speed	7.9	mph	13:16
Wind Direction	246°		13:16

Odour Log (Thames) - Photocopies of log entries taken:

Thursday 14th March 2019:

AM – Cold. Rain w/ Sunny Spells

All OMU's in use.

Observations/Complaints: None.

Operational Issues/Causes: "No odour spikes on trends. Pas still smelly".

Actions: None noted.

PM – Cool. Rain.

All OMU's in use.

Observations/Complaints: None

Operational Issues/Causes: "No odour issues overnight."

Actions: None noted.

Friday 15th March 2019:

AM – Cool. Cloudy w/ Sunny Spells

All OMU's in use.

Observations/Complaints: None.

Operational Issues/Causes: "No odour issues found or reported. OM2 has stopped trending since 4pm".

Actions: "Reported".

PM – Cool, Clear Night.

All OMU's in use.

Observations/Complaints: "OM5 0.020ppm 21.53-22.08 0.020ppm 23.37-23.53".

Operational Issues/Causes: "Stong odour from PAS area on occasions".

Actions: None noted.

Saturday 16th March 2019:

AM – Cool, Cloudy.

All OMU's in use.

Observations/Complaints: None Noted.

Operational Issues/Causes: "No odour issues found or reported. OM1 not trending. OM2 trend lost 9:30-15:00".

Actions: None noted.

PM – Cool, rain.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: "No odour issues".

Actions: None noted.

Sunday 17th March 2019:

AM – Cool, Rain w/ Sunny Spells.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: “No odour issues found or reported”.

Actions: None noted.

PM – Cool, Clear Night.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: “OM3 peaked to 0.021 from 04:05 to 04:34”.

Actions: Area checked around E battery PST's and inlets no obvious odours found.

Monday 18th March 2019:

AM – Cool, Sunny w/ Patchy Clouds.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: “OM1 not trending, OM8 0.016 16:34-16:44”.

Actions: “West OCU out of service, issue with drive belts. No obvious source found”.

PM – Cool, Clear Night.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: “OM3 peaked to 0.022 from 03:19 to 03:49”.

Actions: “Area checked nothing suspicious found”.

Tuesday 19^h March 2019:

AM – Cool, Rain w/ Sunny Spell

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: “OM1 not trending, OM5 0.017ppm 7:23-7:37, OM6 13:03-13:19 OM8 0.022ppm 13:19-13:34”.

Actions: “Area checked, no obvious source found”.

PM – Cool, overcast night.

All OMU's in use.

Observations/Complaints: None noted.
Operational Issues/Causes: "OM1 not trending. OM8 spiked at 0050 but <15 mins duration max 0.024ppm".
Actions: None noted.

Wednesday 20th March 2019:

AM – Cool, Cloudy w/ Sunny Spells.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: "OM1 not trending.No odour issues".

Actions: "Spillage near Pas 8 due to coil. Digested sludge spillage on road near gas compressors".

PM – Cool, Overcast Night.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: "OM5 Spiked at 1935-2036 max 0.035ppm, OM7 2153-2248".

Actions: "PAS 8 Spill being cleaned up".

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					
18/03/19	0	1842	581	2423	3419	5842
19/03/19	0	1364	642	2006	4572	6578
20/03/19	0	1884	642	2526	4089	6615

*The Thames Water Log sheet recorded this value as 1636, however when checking the numbers recorded for each tank the above total was calculated (1842).

The sludge stock levels for the West side circular primary settlement tank 1 were **compliant** with the OMP trigger level (500m³) for all of the dates for which data has been provided.

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.

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. Long term project currently initiated to bring these units back into service - will require significant investment.

Digester 5 - in use - seal level approx. 1ft below coping stones - seal weak and bubbling - evidence of recent spill - requires anti-foam and clean-up.

Digester 6 - in use - seal level approx. 2ft below coping stones - seal

As LBH note, this has not been required in the last week.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester.
The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

weak and bubbling - evidence of large scale recent spill - requires anti-foam and clean-up.

Digester 7 - in use - seal level approx. 2ft below coping stones - seal weak and bubbling - evidence of historic spill - requires anti-foam and clean-up.

Digester 8 – in use – seal level approx. 3ft below coping stones – seal weak and bubbling – evidence of historic spill – requires anti-foam and clean-up.

Digester 9 - in use - seal level approx. 1ft below surface of coping stones - evidence of historic spill - requires anti-foam and clean-up.

Digester 10 - in use - seal level approx. 2ft below surface of coping stones - evidence of historic spill - requires anti-foam and clean-up.

Digester 11 - in use - seal level approx. 2ft below surface of coping stones - seal weak and bubbling - evidence of recent spill accumulated under adjacent cabling ducting - requires anti-foam and clean-up.

Digester 12 - in use - seal level approx. 2ft below coping stones - seal weak and bubbling.

Digester 13 - in use - seal level approx. Good seal.

Digester 14 - out of use - empty and clean - contractor on site undertaking maintenance.

Digester 15 - out of use - empty and clean - contractor on site undertaking maintenance

Digester 16 - out of use - empty and clean - contractor on site undertaking maintenance.

Digester 17 - in use - seal level approx. 3ft below coping stones - seal weak and bubbling.

Digester 18 - in use - seal level approx. 3ft below coping stones - seal weak and bubbling - evidence of historic spill, requires anti-foam and

clean-up.

Digester 19 - in use - seal level approx. 2ft below coping stones - good seal.

Digester 20 - in use - seal level approx. 2ft below coping stones - seal weak and bubbling.

GENERAL

Sludge Screening House

All doors closed at time of inspection.

Imported Sludge

Estimated average of five imports daily for 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).

Skips

1x 20 yard open skip & 2x (8 yard) open uncovered general waste skips located in at the east side grit skips.

1x large enclosed skip and 1x 20 yard open skip & 2x (8 yard) open uncovered general waste skips located in Service Road by Storm Water Tanks.

1x partially filled small grit slips by Sludge Screening House.

1x open skip in use for transfer materials from mobile screening plant

Skips containing rag and grit are routinely covered.
General waste and empty skips which are not odorous may be uncovered.

located by Pasteurisation Plant.

1x large open empty uncovered skip.

Pasteurisation Plant

Pasteurisation plant 1/4/9 currently out of service - All remaining pasteurisation plant in service and fully operational.

East Side Raw Sludge Screen House

Doors closed at time of inspection.

West side primary settlement tanks (PST)

Rectangular PSTs – no issues

Circular PST's 9, 10, 11 all in use. Circular PST 12 out of use due to a wier problem.

West Side Aeration Lanes (Old)

No issues

New Works (West Side)

Feed Channel for Aeration Lanes 21-24 clear and unobstructed – jetting crew just finished working on area.

“Fluffy” coverage across surface returned across 100% of tank – thickened up so as to obscure internal dividing walls within tank.

Odour Control Unit (OCU) performance monitoring - (18/02/19)

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.00 0.00 0.00	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00	0.2	Yes
East OCU	0.00 0.00 0.00	0.05	Yes
West inlet OCU	No data	0.05	Yes
Sludge reception inlet	No data	Unknown	Unknown
Sludge reception outlet	No data	0.8	Yes
Thickening plant inlet	No data	Unknown	Unknown
Thickening plant outlet	0.06 0.05 0.06	0.6	Yes
Transfer PS inlet	No Data	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00	0.6	Yes
New West inlet (OCU 11)	0.00 0.00 0.00	0.5	Yes
OCU 12 (Pasteurisation Plant)	0.00 0.00 0.00	0.5	Yes



Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: 14 th March 2019	
Attendees: Mr L. Phillips and Mr Manzoor Hussein (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A – Tank full, amajets 1 and 2 in use. No odour detected.</p> <p>Tank 1B – Tank full, all amajets in use. No odour detected.</p> <p>Tank 2A – Tank full, amajets not in use. No odour detected.</p> <p>Tank 2B – Tank full, amajets not in use. No odour detected.</p> <p>Tank 3A – Tank full, all amajets in use. No odour detected.</p> <p>Tank 3B – Tank full, all amajets in use. No odour detected.</p> <p>Tanks 4A, 4B, 5A & 5B which are covered and odour controlled were all empty - unable to gauge condition as lighting system still not working.</p> <p>Tank 6A – Tank full, all amajets in use. No odour detected.</p> <p>Tank 6B – Tank full, all amajets in use. No odour detected.</p>	<div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: 80%;"> <p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p> </div>

Tank 7A – Tank full, amajets not in use. No odour detected.

Tank 7B – Tank full, amajets not in use. No odour detected.

Tank 8A – Tank full, amajets not in use. No odour detected.

Tank 8B – Tank full, amajets not in use. No odour detected.

Feed Channel - The level of effluent in both feed channels was low – almost bottomed out.

Complaints

The Council directly received one complaint by telephone in the preceding week.

The Council received a complaint from a resident of Mogden Lane on 14th March 2019 at approximately 11:03 complaining of odour from Mogden over the last hour. However the call was received while the Duty Officer was conducting the inspection. This Complaint will be picked up and checked in next week's inspection.

The Council directly received no complaints by email in the preceding week.

The Council received no complaints by email from MRAG.

Thames Water controller advised that they had received no direct complaints in the preceding week (although this contradicts Odour Log).

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection:

Monitor 1	0.000	ppm	13:02
Monitor 2	0.010	ppm	13:01
Monitor 3	0.000	ppm	13:02
Monitor 4	0.009	ppm	13:02
Monitor 5	0.009	ppm	13:02
Monitor 6	0.007	ppm	13:03
Monitor 7	0.010	ppm	13:03
Monitor 8	0.009	ppm	13:03
Monitor 9	0.007	ppm	13:03
Monitor 10	0.009	ppm	13:03
Monitor 11	0.008	ppm	13:03
Monitor 12	0.009	ppm	13:03
Monitor 13	0.008	ppm	13:03
Wind Speed	18.5	mph	13:03
Wind Direction	244°		13:03

Odour Log (Thames) - Photocopies of log entries taken:

Thursday 07th March 2019:

AM

Temp: Cool.

Weather: Sunny W/ Patchy clouds.

All OMU's in use.

Time: 17:45.

Observations/Complaints: None noted.

Operational Issues/Causes: No odour issues onsite. Nothing of note on trends.

Actions: None noted.

PM

Temp: Cool.

Weather: Rain.

Time: 05:30.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: OM5 0.022 at 04:51-05:30, OM8 0.015 at 18:49-19:47, OM8 0.019 at 21:19-22:17. PAS area smelly.

Actions: None noted.

Friday 08th March 2019:

AM

Temp: Cool.

Weather: Rain W / sunny spells.

All OMU's in use.

Time: 17:30

Observations/Complaints: None noted.

Operational Issues/Causes: OM5 0.019ppm 07:23–07:38, 0.035ppm
08:51–9:08.

Actions: No action required unable to identify source of odour.

PM

Temp: Cool.

Weather: Overcast night.

All OMU's in use.

Time: 05:30.

Observations/Complaints: None noted.

Operational Issues/Causes: No odour issues.

Actions: None noted.

Saturday 09th March 2019:

AM

Temp: Cold.

Weather: Rain W/ sunny spells.

All OMU's in use.

Time: 17:30.

Observations/Complaints: None noted.

Operational Issues/Causes: OM8 0.023ppm 16:02–16:18.

Actions: No odour identified.

PM

Temp: Cool.

Weather: Rain.

All OMU's in use.

Time: 05:30.

Observations/Complaints: None noted.

Operational Issues/Causes: No odour issues.

Actions: None noted.

Sunday 10th March 2019:

AM

Temp: Cool.

Weather: Rain.

All OMU's in use.

Time: 17:30.

Observations/Complaints: None noted.

Operational Issues/Causes: OM5 0.018ppm 07:07-07:22, OM6 0.050ppm 12:32-12:48.

Actions: Occasionally strong smell/odour from PAS. No spills over overflows identified.

PM

Temp: Cold.

Weather: Rain.

All OMU's in use.

Time: 05:30.

Observations/Complaints: None noted.

Operational Issues/Causes: OM7 spiked to max of 0.019 from 00:35 - 01:36.

Actions: No obvious odours found but storm tanks full weiring to river.

Monday 11th March 2019:

AM

Temp: Warm.

Weather: Sunny w/ Patchy Clouds.

All OMU's in use.

Time: 17:30

Observations/Complaints: None noted.

Operational Issues/Causes: OM8 0.018ppm 11:34-11:48, 0.025ppm 14:47-15:04, 0.029ppm 16:33-16:49.

Actions: Occasionally strong smell/odour from PAS. No spills over overflows identified.

PM

Temp: Cool.

Weather: Overcast.

All OMU's in use.

Time: 05:30.

Observations/Complaints: None noted.
Operational Issues/Causes: OM5 0.018 20:23-20:37. OM5 0.023 18:22-19:22.
Actions: Unable to identify source of odour.

Tuesday 12^h March 2019:

AM

Temp: Cool,
Weather: Cloudy.
All OMU's in use.
Time:17:30.

Observations/Complaints: None noted.
Operational Issues/Causes: OM5 spiked at 08:08-08:21 max 0.018ppm but <15 mins duration.
Actions: None noted.

PM

Temp: Cool,
Weather: Clear night.
All OMU's in use.
Time: 05:30
Observations/Complaints: None noted.
Operational Issues/Causes: OM3 & OM5 both spike once each. Both spikes less than 15 minutes.
Actions: No odour detected.

Wednesday 13th March 2019:

AM

Temp: Cool,
Weather: Cloudy.
All OMU's in use.
Time:17:30.
Observations/Complaints: None noted.
Operational Issues/Causes: No odour issues.
Actions: None noted.

PM

Temp: Cool,
Weather: Rain W / Sunny Spells.
All OMU's in use.

Time:05:30.

Observations/Complaints: None noted.

Operational Issues/Causes: OM8 0.037ppm 18:18–19:18.

Actions: Odour from PAS area detected. Source of odour not identified.

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					
08/03/19	214	1842	183	2239	6383	8622
10/03/19	20	1570	122	1712	936	2648
11/03/19	215	1303	183	1701	2889	4590

The sludge stock levels for the West side circular primary settlement tank 1 were **compliant** with the OMP trigger level (500m³) for all of the dates for which data has been provided.

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.

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. Long term project currently initiated to bring these units back into service - will require significant investment.

Digester 5 - In use – weak sloppy seal – no evidence of recent spill.

Digester 6 - In use – weak sloppy seal – no evidence of recent spill.

Digester 7 - In use – weak sloppy seal – no evidence of recent spill.

Digester 8 – In use – weak sloppy seal – no evidence of recent spill.

Digester 9 - In use – weak sloppy seal – no evidence of recent spill.

As LBH note, this has not been required in the last week.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester.
The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

Digester 10 - In use – weak sloppy seal – no evidence of recent spill.

Digester 11 - In use – weak sloppy seal – no evidence of recent spill.

Digester 12 - In use – weak sloppy seal – no evidence of recent spill.

Digester 13 - In use – weak sloppy seal – no evidence of recent spill.

Digester 14 - Out of use - empty and clean - contractor on site undertaking maintenance.

Digester 15 - Out of use - empty and clean - contractor on site undertaking maintenance.

Digester 16 - Out of use - empty and clean - contractor on site undertaking maintenance.

Digester 17 - In use –weak sloppy seal – no evidence of recent spill.

Digester 18 - In use –weak sloppy seal – no evidence of recent spill.

Digester 19 - In use –weak sloppy seal – no evidence of recent spill.

Digester 20 - In use –weak sloppy seal – no evidence of recent spill.

GENERAL

Sludge Screening House

All doors closed at time of inspection.

Imported Sludge

Estimated average of three imports daily for 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).

Skips

1x 20 yard skip empty. 1x 8 yard covered general waste skips located in at the east side grit skips.

1x 16 yard empty west side skips.

1x large open empty uncovered skip.

Pasteurisation Plant

Pasteurisation plant 1/4/9 currently out of service - All remaining pasteurisation plant in service and fully operational.

East Side Raw Sludge Screen House

Doors closed at time of inspection.

West side primary settlement tanks (PST)

Rectangular PSTs – no issues

Circular PST's 9, 10, 11 all in use. Circular PST 12 out of use due to a weir problem.

West Side Aeration Lanes (Old)

No issues

New Works (West Side)

Feed Channel for Aeration Lanes 21-24 clear and unobstructed – jetting crew just finished working on area.

“Fluffy” coverage across surface returned across 100% of tank – thickened up so as to obscure internal dividing walls within tank.

Odour Control Unit (OCU) performance monitoring - (12/03/19)

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.03 0.02 0.02 0.02	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00 0.00	0.2	Yes
East OCU	0.00 0.00 0.00 0.00	0.05	Yes
West inlet OCU	0.00 0.00 0.00 0.00	0.05	Yes
Sludge reception inlet	No data	Unknown	Unknown
Sludge reception outlet	No data	0.8	Yes
Thickening plant inlet	No data	Unknown	Unknown
Thickening plant outlet	0.00 0.00 0.00 0.00	0.6	Yes
Transfer PS inlet	No Data	Unknown	Unknown
Transfer PS outlet	0.03 0.03	0.6	Yes

	0.03 0.03			
New West inlet (OCU 11)	0.00 0.00 0.00 0.00	0.5	Yes	
OCU 12 (Pasteurisation Plant)	0.01 0.02 0.02 0.01	0.5	Yes	



Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: 28 th February 2019	
Attendees: Mr I Inman (London Borough of Hounslow) and Mr C Varsani (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A was empty but had recently been returned with evidence of sludge across the tanks surface. Hoppers 1, 2 & 3 were all <25% full and required draining down.</p> <p>Tank 1B was empty and clean. Hoppers 1, 2 & 3 were all full, partly overflowing, and required draining down.</p> <p>Tank 2A was empty and clean. Hoppers 1, 2 & 3 were all approx 25% full and required drained down.</p> <p>Tank 2B was empty and clean. Hoppers 1, 2 & 3 were all over approx 40% full and required draining down.</p> <p>Tank 3A was empty and clean. Hoppers 1, 2 & 3 were all approx 25% full and required draining down.</p> <p>Tank 3B was empty but had grit across large areas of the tanks surface. Hoppers 1, 2 & 3 were all <25% full and required draining down.</p>	<div style="border: 1px solid black; padding: 10px; width: fit-content; margin: auto;"> <p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p> </div>

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 was returning and was less than <25% full. All three Amajets were in operation.

Tank 6B was empty and clean. Hoppers 1, 2 & 3 were all <25% full and required draining down.

Tank 7A had grit and sludge across large areas of the tanks surface. Hoppers 1, 2 & 3 (shallow hoppers) all contained large quantities of grit & sludge and required cleaning.

Tank 7B had grit and sludge across large areas of the tanks surface. Hoppers 1, 2 & 3 (shallow hoppers) all contained large quantities of grit & sludge and required cleaning.

Tank 8A was returning and was less than <15% full. Only Amajet 1 was in operation.

Tank 8B had just been returned and had sludge and grit across the tanks surface. Hoppers 1, 2 & 3 were all full and required draining down.

Feed Channel - The level of effluent in both feed channels was low along its entire length. However, there was thick scum and sludge on the surface along large parts of the channel that was noticeably odourous.

Complaints

The Council received no complaints by telephone in the preceding week.

The Council received no complaints by email in the preceding week.

The Council received no complaints by email from MRAG.

Tanker cleans out the channel on a weekly basis

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection: Thursday 24th January 2019 at 12:47.

Monitor 1	0.006	ppm	13:45
Monitor 2	0.000	ppm	13:45
Monitor 3	0.000	ppm	13:45
Monitor 4	0.005	ppm	13:45
Monitor 5	0.005	ppm	13:45
Monitor 6	0.000	ppm	13:45
Monitor 7	0.007	ppm	13:45
Monitor 8	0.009	ppm	13:45
Monitor 9	0.003	ppm	13:45
Monitor 10	0.000	ppm	13:45
Monitor 11	0.000	ppm	13:45
Monitor 12	0.000	ppm	13:45
Monitor 13	0.000	ppm	13:45
Wind Speed	13.495	mph	13:45
Wind Direction	244.097	°	13:45

Odour Log (Thames)

Thursday 21st February 2019

DAY SHIFT

Temp. Cool.

Weather. Sunny with patchy clouds.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. OM5 04:56-06:05 0.040 max
& 17:06-17:35 0.022 max.

OM3 04:08-08:22 0.034 max.

Actions Taken. No source found.

NIGHT SHIFT

Temp. Cool.
Weather. Overcast night.
Odour Readings. All OMU's in operation.
Time: 05:30.
Observations / Customer Complaint. OM3 spiked through the night, area checked no odours found.
Operational issues / causes observed. Blank.
Actions Taken. Blank.

Friday 22nd February 2019

DAY SHIFT

Temp. Cool.
Weather. Sunny with patchy clouds.
Odour Readings. All OMU's in operation.
Time: 17:30.
Observations / Customer Complaint. OM3 04:11-07:23 slowly tapering down overtime.
Operational issues / causes observed. No source found.
Actions Taken. Blank.

NIGHT SHIFT

Temp. Cold.
Weather. Overcast night.
Odour Readings. All OMU's in use.
Time: 05:30.
Observations / Customer Complaint. OM3 spiking throughout whole shift. Peaked at 0.038ppm.
Operational issues / causes observed. Area investigated. No odour detected in the area. Monitor 3 may require calibration. OCU11 running and not discharging odour.
Actions Taken. Blank.

Saturday 23rd February 2019

DAY SHIFT

Temp. Warm.
Weather. Sunny.
Odour Readings. All OMU's in operation.
Time: 17:30.
Observations / Customer Complaint. OM3 04:11-10:24 0.037 and

tapering down slowly.

Operational issues / causes observed. No source found.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Cold.

Weather. Clear Night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. OM5 0.028ppm 18:52-19:37,
0.018ppm 22:07-23:06.

OM9 0.019ppm 23:25-23:40, 0.016ppm 00:09-00:25.

OM4 0.024ppm 00:31-00:48.

OM2 0.025ppm 19:09-19:56.

Operational issues / causes observed. Various odour spikes from across site. Strong smell from PAS on occasions. No spills found and no heat exchange or reactors spilling.

OCU's operational across site.

No odour detected around east inlet.

Actions taken. Blank.

Sunday 24th February 2019

DAY SHIFT

Temp. Cool.

Weather. Sunny w/patchy clouds.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM4 0.019 06:18-06:32.

OM3 03:00-11:40 0.042 and dropping.

Operational issues / causes observed. All OCU's working, no odour source found.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Cold.

Weather. Clear night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. OM5 0.017ppm 19:52-20:51.

OM3 multiple spikes throughout shift.

OM10 0.020ppm 03:16-03:33.

Operational issues / causes observed. No odour identified.

Monitor 3 might need calibrating.

Digester bells high at time of spike. Waste gas burner on.

Actions Taken. Blank.

Monday 25th February 2019

DAY SHIFT

Temp. Warm.

Weather. Sunny with patchy clouds.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM3 spiking at start of shift until midday, max 0.045ppm.

Operational issues / causes observed. Odour in the air but unable to pin point location.

Actions Taken. Logged.

NIGHT SHIFT

Temp. Cold.

Weather. Clear night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. OM7 0.024ppm 19:18-20:18, 0.022ppm 02:49-03:04.

OM10 0.053ppm 23:32-00:01.

OM9 0.029ppm 00:25-01:55.

OM5 0.028ppm 02:36-03:36.

OM4 0.027ppm 02:47-03:17.

Operational issues / causes observed. Area investigated. Strong smell of odour from PAS. PAS stream 1 sludge spill from heat exchanger overflow. Overflow pipework venting odour. Area being hosed/washed down.

Actions Taken. Blank.

Tuesday 26th February 2019

DAY SHIFT

Temp. Warm.

Weather. Sunny with patchy clouds.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM3 spiking at start of shift until midday, max 0.036ppm..

Operational issues / causes observed. No odours found.

Actions Taken: Blank.

NIGHT SHIFT

Temp. Cool.

Weather. Overcast night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. OM3 spiking entire shift.

OM5 0.024 04:51-05:07.

OM13 0.024 18:42-18:57.

OM10 0.022 02:02-03:02

Operational issues / causes observed. Unable to locate any source.

Digester bells high at time of spike. Waste gas burner on.

Actions Taken: Blank.

Wednesday 27th February 2019

DAY SHIFT

Temp. Blank.

Weather. Blank.

Odour Readings. All OMU's in operation.

Time: Blank.

Observations / Customer Complaint. Blank.

Operational issues / causes observed. Blank.

NIGHT SHIFT

Temp. Cool.

Weather. Clear night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. OM5 multiple spikes over course of shift.

OM3 0.022 04:03-04:32.

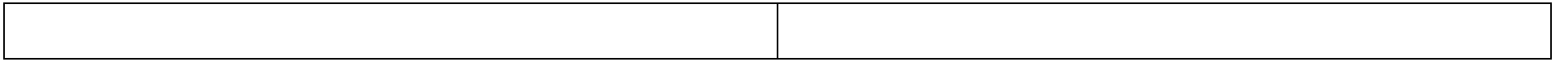
OM2 0.027 19:47- spiked.

OM7 0.020 18:35-18:49.

OM8 0.034 18:17-18:33.

Operational issues / causes observed. No sources found.

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 m ³					
OMP limit	500					
23/02/2019	176	2818	122	3116	3563	6679
25/02/2019	205	2339	0	2544	4084	6628
26/02/2019	0	2296	122	2418	3419	5837

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 9 imports of sludge over the last week.
3 on Thursday 21st, 3 on Tuesday 26th & 3 on Wednesday 27th February.

Raw Sludge Screening House

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

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

Thames advised of a long term project currently initiated to bring these units back into service that will require significant investment.

Digesters 5 & 6 were both in use and had wet sloppy seals. There was

As LBH note, this has not been required in the last week.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester.
The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

evidence that both digesters had been spitting and historic sludge spills that had not been cleaning up.

Digester 7 was in use but had a wet sloppy seal. Although little gas appeared to be bubbling off it was noted that the bell height was very high. There was evidence of an historic sludge spill between digesters 5 & 7 that had not been cleaned up.

Digesters 8, 9, 10 & 11 were all in use but had a very wet seals, although little gas appeared to be bubbling off. It was noted that there was evidence that all four digesters had been spitting as well as historic sludge spills around all four that had not been cleaned up.

Digester 12 was in use and had very wet seals, however little gas appeared to be bubbling off.

Digester 13 was out of service but was due to be bought back on-line within the next 7 days.

Digesters 14, 15 & 16 were all out of service, although digester 15 was filled with sludge.

Digesters 17, 18 & 19 were all in use but had very wet seals, although little gas appeared to be bubbling off.

Digester 20 was in use and had a fairly dry seal.

There was evidence of anti-foaming agent in use and TW advised that this is applied daily to all of the digesters that are operational.

TW also confirmed that the recent problem with one of the anti-foam pumps was likely to have been the cause of a number of spilt sludge incidents, however this has now been rectified.

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 20yds open bulk carrier that contained a small amount of non-inert general rubbish.
Also present was one closed 14yd skip and two 8yd skips that both contained general non-inert rubbish.

In the area next to STW 1A there was one 8yd & one 14yd skip that were both full of general non-inert rubbish. There was also a large closed skip, estimated to be approx 20yd, which again contained general non-inert rubbish.

On the access road leading to the digesters there was one 12yds skip that contained a large amount of rag and was partly covered with a tarpaulin, it was noted that the skip was odorous.

On the West side there was two 40yd closed bulk carriers that were both empty.

East Side Screen House

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

Return Activated Sludge Channel

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

West side primary settlement tanks (PST)

Rectangular PSTs are now covered and odour controlled. TW advised

Skips containing rag and grit are routinely covered. General waste and empty skips which are not odorous may be uncovered.

no issues.

Circular PSTs 9, 10, 11 & 12 were all in operation at the time of the inspection, all had fat free surfaces.

The new odour suppression system around the perimeter of PST-10 is currently out of operation.

Pasteurisation Plant

The pasteurisation plant is in service. TW advised 4 streams were currently out of operation.

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 had thick scum across their surfaces that appeared to be bubbling and spitting and was thick enough to almost obscure all of the internal dividing walls.

Nearly all of the sprinklers appeared to be in operation.

The entire length of the mixed liquor feed channel serving E-Battery was free flowing and much improved.

No odour was noticeable.

TW advised a tanker crew are regularly on site undertaking clearance of any clogged areas.

New Inlet Works (West Side)

No issues appeared evident at the new inlet works.

Odour Control Unit (OCU) performance monitoring: 27/02/2019

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.01 0.01 0.01	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00	0.2	Yes
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	Blank	Unknown	Unknown
Sludge reception outlet	Blank	0.8	Yes
Thickening plant inlet	Blank	Unknown	Unknown
Thickening plant outlet	0.00 0.00 0.00	0.6	Yes
Transfer PS inlet	Blank	Unknown	Unknown
Transfer PS outlet	0.03 0.02 0.03	0.6	Yes
New West inlet (OCU 11)	0.0 0.0 0.0	0.5	Yes
OCU 12 (Pasteurisation Plant)	0.0 0.0 0.0	0.5	Yes



Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: 21 st February 2019	
Attendees: Mr Steven Maunders and Mr Manzoor Hussein (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A – Tank empty and flushed – recently returned - approximately 40% of tank covered by grit and sludge – requires further flushing - Hopper 1 approx. 60% full - Hoppers 2 & 3 approx. 80% full requires draining/over-pumping.</p> <p>Tank 1B – Tank empty and flushed - approximately 10% of tank covered by grit – requires further flushing – Hoppers 1, 2 & 3 full to brim - requires draining/over-pumping.</p> <p>Tank 2A – Tank empty and flushed clean – Hoppers 1, 2 & 3, approx. 25% full - requires draining/over-pumping.</p> <p>Tank 2B – Tank recently returned – approx. 10% of tank covered by grit and sludge – requires further flushing - Hoppers 1, 2 & 3 approximately 50% full - requires draining/over-pumping.</p> <p>Tank 3A – Tank empty and flushed clean – Hopper 1 approx. 25% full – requires draining/over-pumping. Hoppers 2 & 3 drained down to bottom level.</p>	<div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: 80%;"> <p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p> </div>

Tank 3B – Tank recently returned – approx. 75% of tank covered by grit and sludge – requires further flushing – Hoppers 1, 2 & 3 drained down to bottom level.

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 – Tank approx. 25% full – in process of being returned – all Amajets in operation.

Tank 6B – Tank empty and flushed - approximately 20% of tank covered by grit and sludge – requires further flushing. – Hoppers 1, 2 & 3 full to brim - requires draining/over-pumping.

Tank 7A – Tank recently returned – approx. 75% of tank covered by grit and sludge – requires further flushing – Hoppers 1, 2 & 3 full – requires draining/over-pumping.

Tank 7B – Tank recently returned – approx. 60% of tank covered by grit and sludge – requires further flushing – Hoppers 1, 2 & 3 full – requires draining/over-pumping.

Tank 8A – Tank approx. 25% full – awaiting return.

Tank 8B – Tank approx. 25% full – awaiting return.

Feed Channel - The level of effluent in both feed channels was low – almost bottomed out – no local odours.

Complaints

The Council directly received no complaints by telephone in the preceding week.

The Council directly received no complaints by email in the preceding week.

The Council received no complaints by email from MRAG.

Thames Water controller advised that they had received no direct complaints in the preceding week (although this contradicts Odour Log).

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection:

Monitor 1	0.008	ppm	13:16
Monitor 2	0.007	ppm	13:16
Monitor 3	0.000	ppm	13:16
Monitor 4	0.006	ppm	13:16
Monitor 5	0.006	ppm	13:16
Monitor 6	0.000	ppm	13:16
Monitor 7	0.007	ppm	13:16
Monitor 8	0.008	ppm	13:16
Monitor 9	0.005	ppm	13:16
Monitor 10	0.007	ppm	13:16
Monitor 11	0.008	ppm	13:16
Monitor 12	0.005	ppm	13:16
Monitor 13	0.010	ppm	13:16
Wind Speed	3.5	mph	13:16
Wind Direction	210°		13:16

Odour Log (Thames) - Photocopies of log entries taken:

Thursday 14th February 2019:

AM – Cool – Sunny.

All OMU's in use.

Observations/Complaints: "OMS 3 Showing odours at end of shift."
Operational Issues/Causes: "Area checked no odours found". None noted.

Actions: None noted.

PM – Freezing – Clear Night.

All OMU's in use.

Observations/Complaints: "OM3 spiking through the night."

Operational Issues/Causes: "No obvious odours."

Actions: None noted.

Friday 15th February 2019:

AM – Warm - Sunny.

All OMU's in use.

Observations/Complaints: "OM3 showing odours 08:30-12:30."

Operational Issues/Causes: "Area checked."

Actions: None noted.

PM – Cold – Clear Night.

All OMU's in use.

Observations/Complaints: "OM1 0.024 @ 19:35-20:04, OM5 0.023 @ 22:36-22:51, OM3 0.035 @ 22:54-end of shift, OM5 0.025 @ 03:51-04:06, OM1 0.02 @ 00:44-01:01, OM8 0.019 @ 22:03-22:56, OM9 0.015 @ 00:11-01:07."

Operational Issues/Causes: "Area checked."

Actions: None noted.

Saturday 16th February 2019:

AM – Cool – Cloudy.

All OMU's in use.

Observations/Complaints: "No obvious odours."

Operational Issues/Causes: "OCU 11."

Actions: None noted.

PM – Cold – Clear Night.

All OMU's in use.

Observations/Complaints: "OMS 3 showing odours at end of shift."

Operational Issues/Causes: None noted.

Actions: None noted.

Sunday 17th February 2019:

AM – Warm - Sunny.

All OMU's in use.

Observations/Complaints: "Spike on OM 5."

Operational Issues/Causes: "PAS smelling."

Actions: "Area around PAS checked and hose in drain."

PM – Cold – Clear Night.

All OMU's in use.

Observations/Complaints: "OM 5 = 0.016 @ 21:52 – 22:52, OM 3 = 0.033 @ 04:10- end of shift."

Operational Issues/Causes: "PAS smelling – bottom road."

Actions: None noted.

Monday 18th February 2019:

AM – Cool – Rain w/Sunny spells.

All OMU's in use.

Observations/Complaints: "No odour issue."

Operational Issues/Causes: None noted.

Actions: None noted.

PM – Cold – Clear Night.

All OMU's in use.

Observations/Complaints: "OM 5 Spiking often. OM 3 = 0.021 @ 04:10 – end of shift. OM 7 = 0.015 @ 22:50 – 23:48."

Operational Issues/Causes: "OM 5 is picking up odours from PAS stream. OM 3 picking up odours from West Inlet. Aram investigated area – no odour detected."

Actions: None noted.

Tuesday 19^h February 2019:

AM – Cool – Sunny w/patchy clouds

All OMU's in use.

Observations/Complaints: "OM3 0.022ppm spiking throughout the whole shift."

Operational Issues/Causes: "No odour detected."

Actions: None noted.

PM – Cool – Clear night.

All OMU's in use.

Observations/Complaints: "Mon No.3 spiked 04:10 – now max

0.034ppm. OM No.2 spiked multiple times between 21:00-23:00 max 0.024ppm and 02:17 – 12:30 but 15 mins duration max 0.024ppm.”

Operational Issues/Causes: “No odour issues found or reported.”

Actions: None noted.

Wednesday 20th February 2019:

AM – Cool – Sunny w/patchy Clouds.

All OMU's in use.

Observations/Complaints: “OM 5 one spike 0.015ppm < 15 minutes.”

Operational Issues/Causes: “No odour issues on site.”

Actions: None noted.

PM – Cool – Overcast Night.

All OMU's in use.

Observations/Complaints: “Mon No.3 spiked at 01:20 and 04:10 – now max 0.032ppm. Monitor No.5 multiple spikes throughout shift.”

Operational Issues/Causes: “Thickening sludge odour in the air.”

Actions: “PAS tech 1 checking around PAS plant etc.”

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					
14/02/19	0	1781	61	1842	3891	5733
15/02/19	0	1842	61	1903	5160	7063
18/02/19	640 *	2216	679	3535	4564	8099
20/02/19 (1)	223	3548	661	4432	7729	12161
20/02/19 (2)	0	3233	328	3561	4378	7939

*There is an apparent exceedance of OMP levels as detailed above for 18/02/19 and for which notification was provided by TW(email 20/02/19) – however it has subsequently been determined that this is an error and the anomaly occurred as a consequence of “operator error” when the measurements were being undertaken by a new member of staff::

“The issue with the sludge stocks was that we noted higher than average readings on a couple of days and could not understand why we had any sludge levels in the round PST tanks when it’s almost always zero due to the constant attention given to these tanks. So we had a second lot of sludge dips done on the same day. It transpired that there was an error in the readings which we put down to new staff who had recently started. Clearly a training issue which we identified before further dips are taken. In conclusion there was no sludge in the round PST tanks known as West PSTs1 in the paperwork I sent off to you.”

Two further records were supplied for 20/02/19 and these are detailed in the table above.

Digesters

LBH notified.

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. Long term project currently initiated to bring these units back into service – will require significant investment.

Digester 5 - in use – seal level approx. 1ft below coping stones - seal weak and bubbling – evidence of recent spill – requires anti-foam and clean-up.

Digester 6 - in use – seal level approx. 2ft below coping stones – seal weak and bubbling – evidence of recent spill – requires anti-foam and clean-up.

Digester 7 - in use – seal level approx. 2ft below coping stones – seal weak and bubbling - Ongoing spitting/spill – requires anti-foam and clean-up – Bell height high – requires draw down of biogas.

Digester 8 – in use – seal level approx. 3ft below coping stones – seal weak and bubbling – evidence of recent spill – requires anti-foam and clean-up.

Digester 9 - in use – seal level approx. 1ft below surface of coping stones – seal weak and bubbling.

Digester 10 – in use – seal level approx. 2ft below surface of coping stones – seal weak and bubbling.

Digester 11 - in use – seal level approx. 2ft below surface of coping stones – seal weak and bubbling – evidence of recent spill accumulated under adjacent cabling ducting – requires anti-foam and clean-up.

Digester 12 - in use – seal level approx. 2ft below coping stones – seal weak and bubbling.

Digester 13 - in use – seal level approx. 7th below coping stones - tank bubbling vigorously - being “seeded” following recent maintenance.

Digester 14 - out of use – empty and clean – contractor on site undertaking maintenance.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester.

The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use

Digester 15 - out of use – empty and clean – contractor on site undertaking maintenance

Digester 16 - out of use – empty and clean – contractor on site undertaking maintenance.

Digester 17 - in use – seal level approx. 3ft below coping stones – seal weak and bubbling.

Digester 18 - in use – seal level approx. 3ft below coping stones – seal weak and bubbling – evidence of recent spill accumulated under adjacent cabling ducting – requires anti-foam and clean-up.

Digester 19 - in use – seal level approx. 2ft below coping stones – good seal.

Digester 20 - in use – seal level approx. 2ft below coping stones – seal weak and bubbling.

GENERAL

Sludge Screening House

All doors closed at time of inspection.

Imported Sludge

Estimated average of eight imports daily for 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). Green Algae on 100% of surface of Tanks 73 & 74.

Skips

1x large enclosed skip and 1x 20 yard open skip & 2x (8 yard) open general waste skips located in Service Road by Storm Water Tanks.

1x partially filled small grit slips by Sludge Screening House.

1x open skip in use for transfer materials from mobile screening plant located by Pasteurisation Plant.

1x large enclosed grit/rag skips located by PST's 9-12 – elevated at one end to drain liquid from within as exceed safe carriage weight for vehicles – advised that management of fluids draining from within requires improvement as currently ponding within areas of broken hard-standing where currently located.

Pasteurisation Plant

Pasteurisation plant 4/7/9 currently out of service - All remaining pasteurisation plant in service and fully operational.

East Side Raw Sludge Screen House

Doors closed at time of inspection.

West side primary settlement tanks (PST)

Rectangular PSTs – no issues

Circular PST's 9, 10, 11 & 12 all in use.

West Side Aeration Lanes (Old)

Battery C aeration feed channel approximately 25% obstructed in one channel – requires jetting.

Skips containing rag and grit are routinely covered. General waste and empty skips which are not odorous may be uncovered.

Tanker cleans out the channel on a weekly basis

New Works (West Side)

Feed Channel for Aeration Lanes 21-24 clear and unobstructed – jetting crew just finished working on area.

“Fluffy” coverage across surface returned across 100% of tank – thickened up so as to obscure internal dividing walls within tank.

Odour Control Unit (OCU) performance monitoring – (18/02/19)

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.03 0.02 0.02	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00	0.2	Yes
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	No data	Unknown	Unknown
Sludge reception outlet	No data	0.8	Yes
Thickening plant inlet	No data	Unknown	Unknown
Thickening plant outlet	0.00 0.00 0.00	0.6	Yes
Transfer PS inlet	No Data	Unknown	Unknown
Transfer PS outlet	0.00 0.01 0.00	0.6	Yes
New West inlet (OCU 11)	0.00	0.5	Yes

	0.00 0.00			
OCU 12 (Pasteurisation Plant)	0.00 0.00 0.00	0.5	Yes	



Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: 14 th February 2019	
Attendees: Mr Andrew Devine and Mr Manzoor Hussein (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A and 1B – Tanks approximately 50% full and returning. Amajets 1, 2 and 3 working in both tanks.</p> <p>Tank 2A – Tank empty and flushed clean – Hoppers 1, 2 & 3, approx. 10% full - requires draining/over-pumping. Some localised odour noted around tank.</p> <p>Tank 2B – Tank empty and flushed clean – Hoppers 1, 2 & 3 approximately 50% full - requires draining/over-pumping.</p> <p>Tank 3A – Tank empty and flushed clean – Hoppers 1, 2 & 3, approx. 10% full - requires draining/over-pumping.</p> <p>Tank 3B – Sludge and grit covering some of the tank. Hoppers 1, 2 & 3, approx. 10% full with sludge on the surface - requires draining/over-pumping.</p> <p>Tanks 4A, 4B, 5A & 5B which are covered and odour controlled were all empty - unable to gauge condition as lighting system still not working.</p>	<div style="border: 1px solid black; padding: 10px; width: fit-content; margin: auto;"> <p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p> </div>

Tank 6A – Tank approximately 10% full and returning. Amajets 1, 2 and 3 working.

Tank 6B – Some sludge and grit in tank – requires further flushing. – Hoppers 1, 2 and 3 full - requires draining/over-pumping.

Tank 7A and 7B – Tanks recently returned – approx. 40% of tank covered by grit and sludge – requires further flushing – Hoppers 1, 2 & 3 full – requires draining/over-pumping.

Tank 8A and 8B – Tanks approximately 50% full and returning. Amajets 1, 2 and 3 working in both tanks.

Feed Channel - The level of effluent in both feed channels was low – almost bottomed out – no local odours.

Complaints

The Council directly received no complaints by telephone in the preceding week.

The Council directly received no complaints by email in the preceding week.

The Council received no complaints by email from MRAG.

Thames Water controller advised that they had received no direct complaints in the preceding week.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection:

Monitor 1	0.006	ppm	12:26
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Monitor 2	0.008	ppm	12:26
Monitor 3	0.005	ppm	12:26
Monitor 4	0.007	ppm	12:26
Monitor 5	0.008	ppm	12:26
Monitor 6	0.000	ppm	12:26
Monitor 7	0.007	ppm	12:26
Monitor 8	0.007	ppm	12:26
Monitor 9	0.007	ppm	12:26
Monitor 10	0.007	ppm	12:26
Monitor 11	0.008	ppm	12:26
Monitor 12	0.005	ppm	12:26
Monitor 13	0.009	ppm	12:26
Wind Speed	4	mph	12:26
Wind Direction	187°		12:26

Odour Log (Thames) - Photocopies of log entries taken:

Thursday 7th February 2019:

AM – Cold – Rain w/ Sunny Spells.

All OMU's in use.

Observations/Complaints: No odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

PM – Cool – Cloudy

All OMU's in use.

Observations/Complaints: "OM5 spiked at 19:35-20:05 max 0.016ppm, 21:05-22:05 max 0.016ppm, 23:35-23:50 max 0.027ppm."

Operational Issues/Causes: "None noted."

Actions: Area checked no obvious signs of odour found.

Friday 8th February 2019:

AM – Cool - Rain.

All OMU's in use.

Observations/Complaints: No odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

PM – Cool - Rain.

All OMU's in use.

Observations/Complaints: "OM5 - 0.025ppm @ 20.07 - 21.19, OM3 - 0.022ppm @ 04.10 - 05.30."

Operational Issues/Causes: "OCU11 chemical dosing not in range. No odour issues overnight."

Actions: Area checked no obvious signs of odour found.

Saturday 9th February 2019:

AM – Cool – Cloudy w/ Sunny Spells.

All OMU's in use.

Observations/Complaints: "No odour issues."

Operational Issues/Causes: "None noted."

Actions: None noted.

PM – Cool – Rain.

All OMU's in use.

Observations/Complaints: "OM3 one spike 0.027ppm 04.09-0600."

Operational Issues/Causes: "No odour detected in area. OCU11 running ok. No odour from stack."

Actions: None noted.

Sunday 10th February 2019:

AM – Cool – Rain w/ Sunny Spells.

All OMU's in use.

Observations/Complaints: "OM8 0.017ppm 15.02-15.16."

Operational Issues/Causes: "Spike less than 15 minutes."

Actions: None noted.

PM – Cool – Clear Night.

All OMU's in use.

Observations/Complaints: "OM5 0.022ppm 23.21-23.36 0.021ppm 00.51-01.06. OM3 0.020ppm 04.09-04.38."

Operational Issues/Causes: "Area checked no odour identified. Both spike 15 minutes long. No odour identified."

Actions: None noted.

Monday 11th February 2019:

AM – Cool – Cloudy.

All OMU's in use.

Observations/Complaints: "om8- 0.021 @08.30-09.01."

Operational Issues/Causes: "OCU 11 not performing."

Actions: "Sludge imports and pas area."

PM – Cold – Clear Night.

All OMU's in use.

Observations/Complaints: "OM5 0.077ppm 22.35-23.06 0.041ppm 04.21-04.51. OM3 0.036ppm 20.23-23.40. OM1 0.030ppm 02.44-03.09."

Operational Issues/Causes: "No odour detected. Ocu11 and east ocu running with no odour being discharged from stack. Monitor 1 spiked when amajets on storm tanks were started in manual.."

Actions: None noted.

Tuesday 12^h February 2019:

AM – Cool – Cloudy.

All OMU's in use.

Observations/Complaints: "OM5 = 0.041ppm - 06.36-06.51."

Operational Issues/Causes: "tanker imports."

Actions: "None noted."

PM – Cool – Overcast Night.

All OMU's in use.

Observations/Complaints: "OM5 18:06-18:35 @0.016ppm OM3 22:10-0:53 @0.029ppm 04:10-end of shift @max 0.029ppm "

Operational Issues/Causes: "None noted."

Actions: None noted.

Wednesday 13th January 2019:

AM – Cool – Sunny w/ Patchy Clouds.

All OMU's in use.

Observations/Complaints: "OM3 - 0.026ppm at 6am to 08.39."

Operational Issues/Causes: "investigated no odours found."

Actions: None noted.

PM – Cold – Clear Night.

All OMU's in use.

Observations/Complaints: "OM3 max @0.028ppm from 03:40 till end of shift."

Operational Issues/Causes: "No obvious odours found."

Actions: None noted.

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					
09/02/19	0	722	0	722	632	1354
12/02/19	39	2029	0	2068	2266	4334
13/02/19	0	1842	183	2025	2418	4443

The sludge stock levels for the West side circular primary settlement tank 1 were **compliant** with the OMP trigger level (500m³) for all of the dates for which data has been provided.

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.

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. Long term project currently initiated to bring these units back into service – will require significant investment.

Digester 5 - in use – seal level approx. 2t below coping stones – weak seal – evidence of recent spill – requires anti-foam and clean-up.

Digester 6 - in use – seal level approx. 2t below coping stones – weak seal – evidence of recent spill – requires anti-foam and clean-up.

Digester 7 - in use – seal level approx. 2ft below coping stones – seal weak and bubbling - Ongoing spitting/spill – requires anti-foam and clean-up.

As LBH note, this has not been required in the last week.

Digester 8 – in use – seal level approx. 2t below coping stones – weak seal – evidence of recent spill – requires anti-foam and clean-up.

Digester 9 - in use – seal level approx. 2t below coping stones – weak seal – evidence of recent spill – requires anti-foam and clean-up.

Digester 10 – in use – seal level approx. 2t below coping stones – weak seal – evidence of recent spill – requires anti-foam and clean-up.

Digester 11 - in use – seal level approx. 2t below coping stones – weak seal – evidence of recent spill – requires anti-foam and clean-up.

Digester 12 - in use – seal level approx. 2t below coping stones – weak seal – evidence of recent spill – requires anti-foam and clean-up.

Digester 13 - out of use – empty and clean. Evidence of a historic large spill in this area.

Digester 14 - out of use – empty and clean. Evidence of a historic large spill in this area

Digester 15 - out of use – empty and clean. Evidence of a historic large spill in this area

Digester 16 - out of use – empty and clean. Evidence of a historic large spill in this area

Digester 17 - in use – seal level approx. 2t below coping stones – weak seal – evidence of recent spill – requires anti-foam and clean-up.

Digester 18 - in use – seal level approx. 2t below coping stones – weak seal – evidence of recent spill – requires anti-foam and clean-up.

Digester 19 - in use – seal level approx. 2ft below coping stones – good seal.

Digester 20 - in use – seal level approx. 2ft below coping stones – good seal.

Thames Water advised that the anti-foam dosing machined failed last night but that it has now been fixed. Thames Water advised that this failure lead to several spills from a number of the digesters. Thames Water had begun clearing up. While on site Thames Water stated that any remaining spills would be cleared that day.

GENERAL

Sludge Screening House

All doors open at time of inspection – TW advised that this is a Management decision to improve internal working environment for staff – odour monitors deployed in vicinity to determine whether local odours increase as a consequence.

Imported Sludge

There have been no imports for 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).

Skips

1x 16 yd open uncovered skip used for general waste and 2 x 6yd open uncovered general waste skips.

2x large enclosed skip containing waste metals and 2x large open general waste skip located in Service Road by Storm Water Tanks.

East Side Raw Sludge Screen House

Skips containing rag and grit are routinely covered. General waste and empty skips which are not odorous may be uncovered

Doors closed at time of inspection.

West side primary settlement tanks (PST)

Rectangular PSTs – no issues

Circular PST's 9, 10, 11 & 12 all in use. Currently installing trial of odour control “mistors” on Tank 10 – pipe installed around tank top tail with nozzle sprays at regular intervals which can be utilised to create a plume of deodoriser (same as current mobile units on site) – intention to roll this out to all “odorous areas” on site if proves effective during trial period – initial testing has proven successful to date – trial ongoing. At the time of the inspection the “mistors” were not working. Thames Water advised that they had identified the issue and were in the process of fixing it.

Pasteurisation Plant

Pasteurisation plant 4/7/9 currently out of service - All remaining pasteurisation plant in service and fully operational.

West Side Aeration Lanes (Old)

Battery C aeration feed channel approximately 25% obstructed in one channel – requires jetting.

New Works (West Side)

Feed Channel for Aeration Lanes 21-24 partly obstructed. Tanker on site during inspection cleaning out the feed channel.

“Fluffy” coverage across surface returned across 100% of tank – thickened up so as to obscure internal dividing walls within tank.

Odour Control Unit (OCU) performance monitoring – (12/02/19)

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	No Data	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00	0.2	Yes
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	No data	Unknown	Unknown
Sludge reception outlet	No data	0.8	Yes
Thickening plant inlet	No data		Unknown
Thickening plant outlet	0.00 0.00 0.00	0.6	Yes
Transfer PS inlet	No Data	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00	0.6	Yes
New West inlet (OCU 11)	0.00 0.00 0.00	0.5	Yes
OCU 12 (Pasteurisation Plant)	0.00 0.00 0.00	0.5	Yes



Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: Thursday 7 th of February 2019	
Attendees: Mr L Phillips (LB Hounslow) and Mr Manzoor Hussain (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A – Tank Full Amajets not in use. No odour detected.</p> <p>Tank 1B – Tank Full Amajets not in use. No odour detected.</p> <p>Tank 2A – Tank Full Amajets not in use. No odour detected.</p> <p>Tank 2B – Tank Full Amajets not in use. No odour detected.</p> <p>Tank 3A – Tank Full Amajets not in use. No odour detected.</p> <p>Tank 3B – Tank Full Amajets not in use. No odour detected.</p> <p>Tanks 4A, 4B, 5A & 5B which are covered and odour controlled were all empty - unable to gauge condition as lighting system still not working.</p> <p>Tank 6A – Tank Full Amajets not in use. No odour detected.</p> <p>Tank 6B – Tank Full Amajets not in use. No odour detected.</p>	<div style="border: 1px solid black; padding: 10px; width: fit-content; margin: auto;"> <p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p> </div>

Tank 7A – Tank Full Amajets in use. No odour detected.

Tank 7B – Tank Full Amajets in use. No odour detected.

Tank 8A – Tank Full Amajets not in use. No odour detected.

Tank 8B – Tank Full Amajets not in use. No odour detected.

Feed Channel - The level of effluent in both feed channels was low – almost bottomed out – no local odours.

Complaints

The Council directly received no complaints by telephone in the preceding week.

The Council directly received no complaints by email in the preceding week.

The Council received no complaints by email from MRAG.

Thames Water controller advised that they had received no direct complaints in the preceding week.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection:

Monitor 1	0.009	ppm	12:15
Monitor 2	0.006	ppm	12:15
Monitor 3	0.005	ppm	12:17
Monitor 4	0.008	ppm	12:17
Monitor 5	0.007	ppm	12:17
Monitor 6	0.005	ppm	12:17

Monitor 7	0.010	ppm	12:17
Monitor 8	0.006	ppm	12:17
Monitor 9	0.005	ppm	12:17
Monitor 10	0.008	ppm	12:17
Monitor 11	0.007	ppm	12:17
Monitor 12	0.005	ppm	12:17
Monitor 13	0.010	ppm	12:17
Wind Speed	-	mph	12:17
Wind Direction	-		12:17

Odour Log (Thames) - Photocopies of log entries taken:

Thursday 31st January 2019:

AM:

Temp- Cold.

Weather: Sunny.

All OMU's in use.

Time: 17:30.

Observations/Complaints:

om3-0.015 @08.23 - 08.38, om2 - 0.015 @08.54 - 10.22,om3 0.029 @15.53-18.00

Operational Issues/Causes: OM2 - imports. OM3

Actions: None noted.

PM:

Temp: Cold.

Weather: Clear Night.

All OMU's in use.

Time: 06:00.

Observations/Complaints: OM13 one spike 0.017ppm.

Operational Issues/Causes: Spike less than 15 minutes. No odour issues on site. Spreadsheet locked out/ No complaints received.

Actions: None noted.

Friday 1st February 2019:

AM:

Temp: Cold.

Weather: Rain.

All OMU's in use.

Time: 17:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

PM:

Temp: Freezing.

Weather: Rain.

All OMU's in use.

Time: 05:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

Saturday 2nd February 2019:

AM:

Temp: Cold.

Weather: Rain.

All OMU's in use.

Time: 17:30.

Observations/Complaints: OM4 Spiked 1648-1746, max 0.016 ppm.

Operational Issues/Causes: No odours found in vicinity of monitor.

Actions: None noted.

PM:

Temp: Freezing.

Weather: Overcast night.

All OMU's in use.

Time: 05:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: None noted.

Actions: None noted.

Sunday 3rd February 2019:

AM:

Temp: Cold.

Weather: Cloudy.

All OMU's in use.

Time: 17:30

Observations/Complaints: OM5 spiked 1220-1232 but <15mins duration max 0.026 ppm, OM5 spiked 1550-1605 max 0.026ppm, OM5 Spiked 1621-1635<15 mins duration max 0.030.

Operational Issues/Causes: Smell of thickened sludge in the air, noted there are a few sludge spills around PAS stream pumps. These pumps need to be repaired.

Actions: Reported.

PM:

Temp :Cold

Weather: Clear night

All OMU's in use.

Time: 05:30.

Observations/Complaints: OM3 showing 0.027 @04:10.

Operational Issues/Causes: Area checked all ok.

Actions: None noted.

Monday 4th February 2019:

AM:

Temp: Cool

Weather: Rain.

All OMU's in use.

Time: 17:30

Observations/Complaints: OM5 - 0.024 - 13.07 - 13.20.

Operational Issues/Causes: None noted.

Actions: None noted

PM :

Temp: Cold.

Freezing – Rain.

All OMU's in use.

Time: 05:30.

Observations/Complaints: om3 @ 00:00- 0.03ppm. Still high @ 0600

Operational Issues/Causes: None noted.

Actions: None noted.

Tuesday 5TH February 2019:

AM:

Temp: Cool.

Weather: Cloudy.

All OMU's in use.

Time: 17:30.

Observations/Complaints: No odour issues.

Operational Issues/Causes: none noted.

Actions: none noted.

PM:

Temp: Cool.

Weather: Rain.

All OMU's in use.

Time: 05:30.

Observations/Complaints: OM5 Spiked at 0255--03350 max 0.033 & OM3 Spiked 0400-0600 max 0.028ppm.

Operational Issues/Causes: None noted.

Actions: Investigated areas but no odour issues found.

Wednesday 6th February 2019:

AM:

Temp: Cool.

Weather: Cloudy.

All OMU's in use.

Time: 17:30.

Observations/Complaints: om5 - 0.033 @08.51-09.06.

Operational Issues/Causes: No odours found in vicinity of monitor.

Actions: None noted.

PM:

Temp: Cool.

Weather: Rain.

All OMU's in use.

Time: 05:30

Observations/Complaints: OM3 Spiking at 0410-0523 max 0.024 ppm, OM 11 spiking at 0324-0423, max 0.021.

Operational Issues/Causes: No odours found.

Actions: None noted.

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					
01/02/19	135	1949	825	2909	1416	4325
04/02/19	322	1490	0	1812	1416	3228
05/02/19	214	2168	0	2382	2450	4832

The sludge stock levels for the West side circular primary settlement tank 1 were **compliant** with the OMP trigger level (500m³) for all of the dates for which data has been provided.

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.

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. Long term project currently initiated to bring these units back into service – will require significant investment.

Digester 5 - In use – weak sloppy seal – no evidence of recent spill.

Digester 6 - In use – weak sloppy seal no evidence of recent spill.

Digester 7 - In use – weak sloppy seal – no evidence of recent spill

Digester 8 - In use – weak sloppy seal – no evidence of recent spill.

Digester 9 - In use –weak sloppy seal – no evidence of recent spill.

As LBH note, this has not been required in the last week.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester.
The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use

Digester 10 - In use – weak sloppy seal – no evidence of recent spill
Digester 11 - In use – weak sloppy seal – no evidence of recent spill.
Digester 12 - In use – weak sloppy seal – no evidence of recent spill.
Digester 13 - out of use – empty and clean.
Digester 14 - out of use – empty and clean.
Digester 15 - out of use – empty and clean.
Digester 16 - out of use – empty and clean.
Digester 17 - In use – weak sloppy seal – no evidence of recent spill.
Digester 18 - In use – weak sloppy seal – no evidence of recent spill.
Digester 19 - In use – weak sloppy seal – no evidence of recent spill.
Digester 20 - In use – weak sloppy seal – no evidence of recent spill.

GENERAL

Sludge Screening House

All doors closed at time of inspection however aware that on previous visits these doors have been left open to avoid condensation build up – TW advised that doors being left open to create air flow is a Management decision to improve internal working environment for staff – odour monitors deployed in vicinity to determine whether local odours increase as a consequence.

Imported Sludge

Estimated average of ten imports daily for 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).

Skips

No Skips present at the screening House- All clear

1x 16yard skip at the East side grit house which was empty. No odour detected.

East Side Raw Sludge Screen House

Doors closed at time of inspection.

West side primary settlement tanks (PST)

Rectangular PSTs – no issues

Pasteurisation Plant

Pasteurisation plant 4/7/9 currently out of service - All remaining pasteurisation plant in service and fully operational.

West Side Aeration Lanes (Old)

Battery C aeration feed channel approximately 25% obstructed in one channel – requires jetting. Kelvac vehicle on site at time of inspection.

New Works (West Side)

Feed Channel for Aeration Lanes 21-24 obstructed partly however Kelvac tanker working on lane during time of inspection.

“Fluffy” coverage across surface returned across 100% of tank – thickened up so as to obscure internal dividing walls within tank.

Odour Control Unit (OCU) performance monitoring – (06/02/19)

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.01 0.01 0.01 AV 0.01	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00 AV 0.01	0.2	Yes
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	No data	Unknown	Unknown
Sludge reception outlet	No data	0.8	Yes
Thickening plant inlet	No data	Unknown	Unknown
Thickening plant outlet	0.00 0.00 0.00	0.6	Yes
Transfer PS inlet	No Data	Unknown	Unknown
Transfer PS outlet	0.04 0.04 0.04 Av 0.04	0.6	Yes
New West inlet (OCU 11)	0.01	0.5	Yes

	0.01 0.01 AV 0.01			
OCU 12 (Pasteurisation Plant)	0.00 0.00 0.00 AV 0.00	0.5	Yes	



Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: 31st of January 2019	
Attendees: Mr Zaheer Kadri and Mr Manzoor Hussain (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A – Tank empty and flushed – Hopper 1, 2 & 3 needed draining down however at time of inspection the layers had frozen over due to cold and icy temperatures – Once thawed these requires draining/over-pumping.</p> <p>Tank 1B – Tank empty and flushed – Hopper 1, 2 & 3 needed draining down however at time of inspection the layers had frozen over due to cold and icy temperatures – These hoppers require draining/over-pumping.</p> <p>Tank 2A – Tank empty and flushed clean – Hoppers 1, 2 & 3, had all been drained down and clear of effluent.</p> <p>Tank 2B – Tank empty and flushed – Hopper 1, 2 & 3 needed draining down however at time of inspection the top layer of effluent had frozen over due to cold and icy temperatures – These hoppers require draining/over-pumping.</p> <p>Tank 3A – Tank empty and flushed clean – Hoppers 1, 2 & 3, had all been drained down and clear of effluent. Tank empty and flushed clean</p>	<div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: 80%;"> <p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p> </div>

Tank 3B – Tank empty and flushed – Hopper 1, 2 & 3 needed draining down however at time of inspection the top layer of effluent had frozen over due to cold and icy temperatures – These hoppers require draining/over-pumping.

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 – Tank empty and flushed cleaned – Hoppers 1, 2 and 3 full – requires draining/over-pumping.

Tank 6B – Tank empty and flushed - approximately 10% of tank covered by grit and sludge – requires further flushing. – Hoppers 1 & 2 approx. 50% full - requires draining/over-pumping – Hopper 3 drained down to bottom level.

Tank 7A – Tank recently returned – Hopper end of the tank covered by grit and sludge – requires further flushing – Hoppers 1, 2 & 3 full – requires draining/over-pumping. Some icy patches on top layer

Tank 7B – Tank was widely covered with frozen effluent at 10% high. All hoppers were full and also frozen over. Hoppers 1, 2 & 3 full – requires draining/over-pumping.

Tank 8A – Tank was widely covered with frozen effluent at 10% high. All hoppers were full and also frozen over. Hoppers 1, 2 & 3 full – requires draining/over-pumping.

Tank 8B – Tank empty and flushed - approximately 5% of tank covered by grit and sludge – requires further flushing. Hoppers 1, 2 & 3 full. - requires draining/over-pumping.

Feed Channel - The level of effluent in both feed channels was low – almost bottomed out – no local odours.

Complaints

The Council directly received no complaints by telephone in the preceding week.

The Council directly received no complaints by email in the preceding week.

The Council received no complaints by email from MRAG.

Thames Water controller advised that they had received no direct complaints in the preceding week.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection:

Monitor 1	0.009	ppm	10:34
Monitor 2	0.014	ppm	10:34
Monitor 3	0.011	ppm	10:34
Monitor 4	0.010	ppm	10:34
Monitor 5	0.009	ppm	10:34
Monitor 6	0.000	ppm	10:34
Monitor 7	0.009	ppm	10:34
Monitor 8	0.009	ppm	10:34
Monitor 9	0.009	ppm	10:34
Monitor 10	0.010	ppm	10:34
Monitor 11	0.000	ppm	10:34
Monitor 12	0.005	ppm	10:34
Monitor 13	0.014	ppm	10:34
Wind Speed	-	mph	10:34
Wind Direction	-		10:34

Odour Log (Thames) - Photocopies of log entries taken:

Thursday 24th January 2019:

AM – Cold – Cloudy with sunny spells.

All OMU's in use.

Time: 17:30

Observations/Complaints:

OM5 had 4 spikes throughout the shift.

0.029ppm 08:04-08:21

0.026ppm 09:50-10:06

0.027ppm 11:34-11:51

0.052ppm 15:04-15:21

Operational Issues/Causes:

Odours detected from PAS area, No sludge spills or heat exchanges.

OCU12 running normally with 0.2ppb from stack. Multiple sludge imports received on site throughout the day.

Actions: None noted.

PM – Temp/Weather not recorded

All OMU's in use.

Time: None noted

Observations/Complaints: None

Operational Issues/Causes: Spreadsheet locked out/ No complaints received

Actions: None noted.

Friday 25th January 2019:

AM – None noted.

All OMU's in use.

Time: None noted

Observations/Complaints: None noted.

Operational Issues/Causes: Spreadsheet locked out/ No complaints received

Actions: None noted.

PM – None noted.

All OMU's in use.

Time: None noted

Observations/Complaints:

Operational Issues/Causes: Spreadsheet locked out/ No complaints received

Actions: None noted.

Saturday 26th January 2019:

AM – None noted.

All OMU's in use.

Time: None noted

Observations/Complaints: None noted

Operational Issues/Causes: Spreadsheet locked out/ No complaints received

Actions: None noted.

PM - None noted.

All OMU's in use.

Time: None noted

Observations/Complaints: None noted

Operational Issues/Causes: None noted

Actions: None noted.

Sunday 27th January 2019:

AM – Weather/Temp not recorded

All OMU's in use.

Time: None noted

Observations/Complaints: None recorded

Operational Issues/Causes: Spreadsheet locked out/ No complaints received

Actions: None noted.

PM – Weather/Temp not recorded Cool

All OMU's in use.

Time: None noted

Observations/Complaints: None noted

Operational Issues/Causes: Spreadsheet locked out/ No complaints received

Actions: None noted.

Monday 28th January 2019:

AM – Cold and Sunny

All OMU's in use.

Time: 17:30

Observations/Complaints: OM8 - spiked to 0.019 @ 08:01-09:00

Operational Issues/Causes: Sludge imports

Actions: None noted

PM – Freezing – clear night

All OMU's in use.

Time: 05:30

Observations/Complaints: No odour issues

Operational Issues/Causes: none noted

Actions: None noted.

Tuesday 29th January 2019:

AM – Freezing – Sunny.

All OMU's in use.

Time: 17:30

Observations/Complaints: No odour issues

Operational Issues/Causes: none noted

Actions: none noted

PM – Freezing - overcast night.

All OMU's in use.

Time: 05:30

Observations/Complaints: No odour issues

Operational Issues/Causes: None noted

Actions: None noted.

Wednesday 30th January 2019:

AM – Freezing – Sunny

All OMU's in use.

Time: 17:30

Observations/Complaints: OM8 spiked (less than 15 minute duration)

Operational Issues/Causes: Works on OCU11

Actions: None noted.

PM – Freezing – Clear Night.

All OMU's in use.

Time: 06:00

Observations/Complaints: OM spiked to 0.025ppm @ 18:23-21:08
and OM5 spiked 6 times overnight max peak 0.036ppm

Operational Issues/Causes: works on OCU11 and area investigated
for odours – no odours detected – sludge imports during the night

Actions: None noted.

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					
25/01/19	0	1176	0	1176	2409	3585
26/01/19	39	1630	0	1669	3554	5223
29/01/19	0	656	0	656	2939	3595

The sludge stock levels for the West side circular primary settlement tank 1 were **compliant** with the OMP trigger level (500m³) for all of the dates for which data has been provided.

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.

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. Long term project currently initiated to bring these units back into service – will require significant investment.

Digester 5 - in use – seal level approx. 2ft below coping stones – good seal – evidence of recent spill – requires anti-foam and clean-up.

Digester 6 - in use – good seal level approx. 2ft below coping stones

Digester 7 - in use – seal level approx. 2ft below coping stones – seal weak and bubbling - Ongoing spitting/spill – requires anti-foam and clean-up

As LBH note, this has not been required in the last week.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester.
The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

Digester 8 – in use –good seal level approx. 1ft below coping stones.

Digester 9 - in use – seal level approx. 1ft below surface of coping stones – good seal.

Digester 10 – in use – seal level approx. 1ft below surface of coping stones – seal weak and bubbling

Digester 11 - in use – seal level approx. 1ft below surface of coping stones – seal weak and bubbling

Digester 12 - in use – seal level approx. 1ft below coping stones – good seal

Digester 13 - out of use – empty and clean.

Digester 14 - out of use – empty and clean.

Digester 15 -- out of use – empty and clean.

Digester 16 - out of use – empty and clean.

Digester 17 - in use – seal level approx. 3ft below coping stones – seal weak and bubbling.

Digester 18 -- in use – seal level approx. 2ft below coping stones – seal weak and bubbling.

Digester 19 - in use – seal level approx. 1ft below coping stones – seal weak and bubbling.

Digester 20 - in use – seal level approx. 3ft below coping stones – good seal.

GENERAL

Sludge Screening House

All doors closed at time of inspection however aware that on previous visits these doors have been left open to avoid condensation build up – TW advised that doors being left open to create air flow is a Management decision to improve internal working environment for staff – odour monitors deployed in vicinity to determine whether local odours increase as a consequence.

Imported Sludge

Estimated average of ten imports daily for 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). Green Algae on 100% of surface of Tanks 73 & 74.

Skips

No Skips present at the screening House- All clear

2 x 12yard skips at the East side grit house which were empty with one large Biffa enclosed skip. No odour detected

East Side Raw Sludge Screen House

Doors closed at time of inspection.

West side primary settlement tanks (PST)

Rectangular PSTs – no issues

Circular PST's 9, 10, 11 & 12 all in use. Currently installing trial of odour control "mistlers" on Tank 10 – pipe installed around tank top tail with nozzle sprays at regular intervals which can be utilised to create a plume of deodoriser (same as current mobile units on site) – intention

to roll this out to all “odorous areas” on site if proves effective during trial period – initial testing has proven successful to date – trial ongoing. At time of inspection these misters were not in operation.

Pasteurisation Plant

Pasteurisation plant 4/7/9 currently out of service - All remaining pasteurisation plant in service and fully operational.

West Side Aeration Lanes (Old)

Battery C aeration feed channel approximately 25% obstructed in one channel – requires jetting. Kelvac vehicle on site at time of inspection.

New Works (West Side)

Feed Channel for Aeration Lanes 21-24 obstructed partly but then free flowing – this may require jetting. Kelvac on site at time of inspection.

“Fluffy” coverage across surface returned across 100% of tank – thickened up so as to obscure internal dividing walls within tank.

Tanker cleans out the channel on a weekly basis

Odour Control Unit (OCU) performance monitoring – (29/01/19)

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.08 0.08 0.07	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00	0.2	Yes
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	No data	Unknown	Unknown
Sludge reception outlet	No data	0.8	Yes
Thickening plant inlet	No data	Unknown	Unknown
Thickening plant outlet	0.04 0.05 0.03	0.6	Yes
Transfer PS inlet	No Data	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00	0.6	Yes
New West inlet (OCU 11)	Not in service	0.5	Yes
OCU 12 (Pasteurisation Plant)	0.04 0.04 0.03	0.5	Yes



Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: 24 th January 2019	
Attendees: Mr I Inman (London Borough of Hounslow) and Mr M Hussain (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A was empty and clean. Hoppers 1, 2 & 3 were all over 50% full and required draining down.</p> <p>Tank 1B was empty and clean. Hoppers 1, 2 & 3 were all over 70% full and required draining down.</p> <p>Tank 2A was empty and clean. Hoppers 1 & 2 were 30% full and required drained down, hopper 3 was drained down to its bottom level.</p> <p>Tank 2B was empty and clean. Hoppers 1, 2 & 3 were all over 70% full and required draining down.</p> <p>Tank 3A was empty and clean. Hoppers 1, 2 & 3 were all 50% full and required draining down.</p> <p>Tank 3B was empty and clean. Hoppers 1, 2 & 3 were all over 30% full and required draining down.</p> <p>Tanks 4A, 4B, 5A & 5B which are covered and odour controlled were all empty. Unable to gauge condition as lighting system still not</p>	<div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: 80%;"> <p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p> </div>

working.

Tank 6A was empty and clean. Hoppers 1, 2 & 3 were all full and required draining down.

Tank 6B was empty and clean. Hoppers 1, 2 & 3 were all approx 30% full and required draining down.

Tank 7A had grit and sludge across 50% of the tanks surface. Hoppers 1, 2 & 3 (shallow hoppers) all contained large quantities of grit & sludge and required cleaning.

Tank 7B had grit and sludge across 25% of the tanks surface. Hoppers 1, 2 & 3 (shallow hoppers) all contained large quantities of grit and required cleaning.

Tank 8A was empty and clean. Hoppers 1, 2 & 3 were all full and required draining down.

Tank 8B was empty and clean. Hoppers 1, 2 & 3 were all full and required draining down.

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

Complaints

The Council received no complaints by telephone in the preceding week.

The Council received no complaints by email in the preceding week.

The Council received no complaints by email from MRAG.

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection: Thursday 24th January 2019 at 12:47.

Monitor 1	0.007	ppm	12:47
Monitor 2	0.008	ppm	12:47
Monitor 3	0.008	ppm	12:47
Monitor 4	0.008	ppm	12:47
Monitor 5	0.008	ppm	12:47
Monitor 6	0.000	ppm	12:47
Monitor 7	0.006	ppm	12:47
Monitor 8	0.007	ppm	12:47
Monitor 9	0.007	ppm	12:47
Monitor 10	0.007	ppm	12:47
Monitor 11	0.008	ppm	12:47
Monitor 12	0.005	ppm	12:47
Monitor 13	0.009	ppm	12:47
Wind Speed	Not displayed	0mph	12:47
Wind Direction	Not displayed	°	12:47

Odour Log (Thames)

Thursday 17th January 2019

DAY SHIFT

Temp. Cold.

Weather. Cloudy.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM4 0.019 @ 16:15-16:30.
OM8 0.066 @ 16:14-16:30.

Operational issues / causes observed. OM4 spiked due to sludge imports. OM8 spiking from PAS vessels.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Freezing.

Weather. Clear Night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. OM3 spiking through night.

Operational issues / causes observed. OCU11 issues.

Actions Taken. Blank.

Friday 18th January 2019

DAY SHIFT

Temp. Cold.

Weather. Sunny with patchy clouds.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM3 spiking through night

Operational issues / causes observed. OCU11 issues.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Cold.

Weather. Clear night.

Odour Readings. All OMU's in use.

Time: 05:30.

Observations / Customer Complaint. OM3 spiking throughout night,
max 0.66ppm.

Operational issues / causes observed. OCU11 issues.

Actions Taken. Blank.

Saturday 19th January 2019

DAY SHIFT

Temp. Cold.

Weather. Cloudy.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM3 spiking throughout night,
max 0.39ppm.

Operational issues / causes observed. OCU11 issues.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Cold.

Weather. Clear Night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. OM3 spiking on and off throughout shift, max 0.020ppm.

Operational issues / causes observed. OCU11 issues.

Actions taken. Blank.

Sunday 20th January 2019

DAY SHIFT

Temp. Cold.

Weather. Sunny w/patchy clouds.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM3 spiking throughout night, max 0.33ppm.

Operational issues / causes observed. OCU11 issues.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Cold.

Weather. Clear night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. OM3 spiking 23:00-23:30 max 0.020ppm. OM5 spiking 05:00-06:00 max 0.035ppm.

Operational issues / causes observed. OCU11 issues.

Actions Taken. Blank.

Monday 21st January 2019

DAY SHIFT

Temp. Cold.

Weather. Cloudy w/sunny spells.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM3.

Operational issues / causes observed. OCU11 issues.

Actions Taken. Blank.

NIGHT SHIFT

Temp. Cold.

Weather. Clear night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. OM3 spiking throughout night, max 0.24ppm, OM8 spiked at 04:14 but 15 mins duration max 0.016ppm.

Operational issues / causes observed. OCU11 issues.

Actions Taken. Blank.

Tuesday 22nd January 2019

DAY SHIFT

Temp. Cold.

Weather. Cloudy.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM3 spiking.

Operational issues / causes observed. OCU11.

Actions Taken: Blank.

NIGHT SHIFT

Temp. Freezing.

Weather. Clear night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. OM3 0.020 – 2 spikes for 1 hour each. OM4 0.026 @ 23:31-23:47.

Operational issues / causes observed. OM4 spiking due to sludge imports. OM8 spiking from PAS vessels. OCU11

Actions Taken: Blank.

Wednesday 23rd January 2019

DAY SHIFT

Temp. Cold.

Weather. Blank.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. No odour issues.

Operational issues / causes observed. Blank.

NIGHT SHIFT

Temp. Freezing.

Weather. Clear night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. OM2 0.015 @ 20:53-21:08.

Operational issues / causes observed. CESS imports.

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 m ³						
OMP limit	500					
19/01/2019	235	2961	0	3196	1929	5125
20/01/2019	0	2192	0	2192	1777	3969
22/01/2019	0	1818	122	1940	1777	3717

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 3 imports of sludge over the last week, of approx 11 imports daily.

Raw Sludge Screening House

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

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

Thames advised of a long term project currently initiated to bring these units back into service that will require significant investment.

Digester 5 was in use and had a good dry seal. However there was evidence of a sludge spill that required cleaning up.

As LBH note, this has not been required in the last week.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester.
The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

Digester 6 was in use but had a wet sloppy seal.

Digester 7 was in use but had a wet sloppy seal. Although little gas appeared to be bubbling off it was noted that the bell height was very high.

Digesters 8, 9 & 10 were all in use but had a very wet seals, although little gas appeared to be bubbling off. It was noted that there was evidence of sludge spills between all three digesters that required cleaning up.

Digesters 11 & 12 were both in use and had very wet seals, however little gas appeared to be bubbling off. It was also noted that there was evidence of sludge spills between the digesters that required cleaning up.

Digesters 13, 14, 15 & 16 were all out of service, although digester 15 was filled with sludge.

Digesters 17, 18 & 19 were all in use but had very wet seals, although little gas appeared to be bubbling off.

Digester 20 was in use and had a good dry seal.

There was evidence of anti-foaming agent in use and TW advised that this is applied daily to all of the digesters that are operational.

TW also confirmed that the recent problem with one of the anti-foam pumps was likely to have been the cause of a number of spilt sludge incidents, however this has now been rectified.

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. It was noted that green algae covered the entire surface of tanks 73 & 74.

Skips

On the East side there was one 20yds open bulk carrier that was uncovered but only contained a small amount of non-inert general rubbish. Also present was one closed 14yd skip and were two 8yd skips that were all empty

In the area next to STW 1A there was one 8yd & one 12yd skip that both contained general non-inert rubbish. There was also a large open skip, estimated to be approx 20yd, which again contained general non-inert rubbish.

On the access road leading to the digesters there was one 12yds skip that contained a small amount of rag and was partly covered with a tarpaulin, it was noted that the waste was not-odorous.

On the West side there was 40yd closed bulk carrier that was empty.

East Side Screen House

Three sets of doors of the building were open at the time of the inspection.

TW advised all screens were in operation and their policy is now to leave these doors open.

When questioned about this policy at the time of the inspection TW advised that this is a Management decision to improve internal working environment for staff.

Return Activated Sludge Channel

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

Skips containing rag and grit are routinely covered. General waste and empty skips which are not odorous may be uncovered.

The doors are kept open during maintenance work as a health and safety.

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, all had fat free surfaces.

The new odour suppression system around the perimeter of PST-10 is currently out of operation.

Pasteurisation Plant

The pasteurisation plant is in service. TW advised streams 4, 7 & 9 were currently out of operation.

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 had thick scum across their surfaces that appeared to be bubbling and spitting and was thick enough to obscure all of the internal dividing walls.

None of the sprinklers appeared to be in operation.

The mixed liquor feed channel serving aeration lane 21 (E Battery) were free flowing. However, the feed channel serving lanes 22-25 were completely clogged with debris and had a thick surface covering.

A tanker crew was on site at the time of the inspection trying to clear the build-up.

No odour was noticeable.

TW advised a tanker crew are regularly on site undertaking clearance of any clogged areas.

New Inlet Works (West Side)

No issues appeared evident at the new inlet works.

Odour Control Unit (OCU) performance monitoring: 24/01/2019

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	Blank Blank Blank	Unknown	Unknown
Main pumping station outlet	0.027 0.025 0.024	0.2	Yes
East OCU	0.004 0.004 0.003	0.05	Yes
West inlet OCU	0.004 0.003 0.003	0.05	Yes
Sludge reception inlet	Blank	Unknown	Unknown
Sludge reception outlet	0.003 0.00 0.003	0.8	Yes
Thickening plant inlet	Blank	Unknown	Unknown
Thickening plant outlet	1.4 1.3 1.3	0.6	Yes
Transfer PS inlet	Blank	Unknown	Unknown
Transfer PS outlet	0.013 0.012 0.012	0.6	Yes
New West inlet (OCU 11)	0.2 0.04 0.048	0.5	Yes
OCU 12 (Pasteurisation Plant)	1.2 1.1 1	0.5	Yes



Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: 17 th January 2019	
Attendees: Mr Steven Maunders and Mr Manzoor Hussein (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A – Tank empty and flushed – recently returned - approximately 25% of tank covered by grit and sludge – requires further flushing. Hoppers 2 & 3 drained down to bottom level & Hopper 1 60% full - requires draining/over-pumping.</p> <p>Tank 1B – Tank empty and flushed - approximately 10% of tank covered by grit – requires further flushing. Hoppers 1, 2 & 3 approximately 50% full - requires draining/over-pumping.</p> <p>Tank 2A – Tank empty and flushed clean. Hoppers 1, 2 & 3 approximately 75% full - requires draining/over-pumping.</p> <p>Tank 2B – Tank recently returned – approx. 20% of tank covered by grit and sludge – requires further flushing. Hoppers 1, 2 & 3 approximately 60% full - requires draining/over-pumping.</p> <p>Tank 3A – Tank empty and flushed clean. Hopper 1 approx. 20% full – requires draining/over-pumping. Hoppers 2 & 3 drained down to bottom level.</p>	<div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: 80%;"> <p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p> </div>

Tank 3B – Tank recently returned – approximately 50% of tank covered by grit and sludge – requires further flushing. Hopper 1 approximately 75% full – requires draining/over-pumping – Hoppers 2 & 3 drained down to bottom level.

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 – Tank empty and flushed clean. Hoppers 1 & 2 full – Hopper 3, 50 % full - requires draining/over-pumping.

Tank 6B – Tank empty and flushed - approximately 40% of tank covered by grit and sludge – requires further flushing. Hoppers 1 & 2 approximately 50% full - requires draining/over-pumping – Hopper 3 drained down to bottom level.

Tank 7A – Tank recently returned – approximately 60% of tank covered by grit and sludge – requires further flushing. Hoppers 1, 2 & 3 full – requires draining/over-pumping.

Tank 7B – Tank recently returned – approximately 50% of tank covered by grit and sludge – requires further flushing. Hoppers 1, 2 & 3 full – requires draining/over-pumping.

Tank 8A – Tank recently returned – approx. 40% of tank covered by grit and sludge – requires further flushing. Hoppers 1, 2 & 3 drained down to bottom level.

Tank 8B – Tank empty and flushed - approximately 5% of tank covered by grit and sludge – requires further flushing. Hoppers 1, 2 & 3 full - requires draining/over-pumping.

Feed Channel - The level of effluent in both feed channels was low – almost bottomed out – no local odours.

Complaints

The Council directly received no complaints by telephone in the

preceding week.

The Council directly received no complaints by email in the preceding week.

The Council received no complaints by email from MRAG.

Thames Water controller advised that they had received no direct complaints in the preceding week (although this contradicts Odour Log).

Odour Monitors

The odour readouts (H₂S) for all of the monitors, which were providing data at time of inspection:

Monitor 1	0.005	ppm	12:34
Monitor 2	0.008	ppm	12:34
Monitor 3	0.006	ppm	12:34
Monitor 4	0.006	ppm	12:34
Monitor 5	0.006	ppm	12:34
Monitor 6	0.005	ppm	12:34
Monitor 7	0.006	ppm	12:34
Monitor 8	0.006	ppm	12:34
Monitor 9	0.009	ppm	12:34
Monitor 10	0.007	ppm	12:34
Monitor 11	0.007	ppm	12:34
Monitor 12	0.006	ppm	12:34
Monitor 13	0.008	ppm	12:34
Wind Speed	4	mph	12:34
Wind Direction	68°		12:34

Odour Log (Thames) - Photocopies of log entries taken:

Thursday 10th January 2019:

AM – Cool – Cloudy.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: None noted.

Actions: None noted.

PM – Cool – Overcast Night.

All OMU's in use.

Observations/Complaints: "OM3 spiked throughout the night."

Operational Issues/Causes: "OCU 11."

Actions: None noted.

Friday 11th January 2019:

AM – None noted.

All OMU's in use.

Observations/Complaints: None noted.

Operational Issues/Causes: None noted.

Actions: None noted.

PM – Cold – Clear Night.

All OMU's in use.

Observations/Complaints: "OM3 multiple spikes/breaches throughout night shift. OM4 two spikes 0.016ppm & 0.015ppm. Both under 15 minutes."

Operational Issues/Causes: "OCU11 chemical dosing not in range.

No odour issues overnight."

Actions: None noted.

Saturday 12th January 2019:

AM – Cool – Cloudy.

All OMU's in use.

Observations/Complaints: "OM3 High all shift."

Operational Issues/Causes: "OCU 11."

Actions: None noted.

PM – Cold – Clear Night.

All OMU's in use.

Observations/Complaints: "OM3 Multiple spikes OM8 two spikes 0.020ppm 00.28-00.42 0.026 ppm 02.29-02.44."

Operational Issues/Causes: "OCU11 ongoing issues. Area investigated around monitor 8. No odour detected. First spike less than 15 minutes."

Actions: None noted.

Sunday 13th January 2019:

AM – Cool – Cloudy w/Sunny Spells.

All OMU's in use.

Observations/Complaints: "OM 3."

Operational Issues/Causes: "OCU11."

Actions: None noted.

PM – Cool – Clear Night.

All OMU's in use.

Observations/Complaints: "OM3 spikes throughout night shift. OM8 five spikes throughout shift. 4 under 15 minutes. One breach 0.049ppm 04.13-04.43."

Operational Issues/Causes: "OCU11 ongoing issues Odour detected around monitor 8 from PAS area. Unable to identify exact source of odour. No sludge spills in area and no signs of sludge overflow from heat exchangers or reactors. OCU 12 running normally. Low odour from stack 0.3ppb."

Actions: None noted.

Monday 14th January 2019:

AM – Cool – Sunny w/Patchy Clouds.

All OMU's in use.

Observations/Complaints: "OM3 Spiking throughout shift, max 0.028ppm. OM4 Spiking at 1645-1659 max 0.022, OM8 spiked multiple times during shift, max0.051 ppm."

Operational Issues/Causes: "OCU 11 not performing."

Actions: "Odour investigation carried out in Pasteurisation/thickening area."

PM – Cold – Clear Night.

All OMU's in use.

Observations/Complaints: "OM3 Spiking throughout shift, max 0.030ppm OM5 one spike peaked 0.037ppm. Less than 15 minutes."

Operational Issues/Causes: "OCU11 issues. No odour detected in area."

Actions: None noted.

Tuesday 15^h January 2019:

AM – Cool – Cloudy.

All OMU's in use.

Observations/Complaints: "OM3 Spiking all shift, max 0.33ppm, OM 5 spiked at 0747 but <15 mins duration max 0.026 ppm."

Operational Issues/Causes: "OCU 11 Not Performing."

Actions: "Reported."

PM – Warm – Cloudy.

All OMU's in use.

Observations/Complaints: "OM3 Showing odour 0.032 @ 02:00 onward".

Operational Issues/Causes: "OCU 11 issues."

Actions: None noted.

Wednesday 16th January 2019:

AM – Cold – Rain.

All OMU's in use.

Observations/Complaints: "OM3 Spiking all shift until 1600 max 0.026, OM8 spiking 1544-59 max 0.028."

Operational Issues/Causes: "OCU 11 issues."

Actions: None noted.

PM – Cold – Overcast Night.

All OMU's in use.

Observations/Complaints: "OM5 00.30 TILL 01:00 MAX 0.036."

Operational Issues/Causes: "Pas smelling."

Actions: None noted.

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					
14/01/19	135	1963	244	2342	3267	5609
15/01/19	88	1007	328	1423	2233	3656
16/01/19	59	1922	206	2187	2418	4605

The sludge stock levels for the West side circular primary settlement tank 1 were **compliant** with the OMP trigger level (500m³) for all of the dates for which data has been provided.

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.

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. Long term project currently initiated to bring these units back into service – will require significant investment.

Digester 5 - in use – seal level approx. 2ft below coping stones – good seal – evidence of recent spill – requires anti-foam and clean-up.

Digester 6 - in use – seal level approx. 2ft below coping stones – seal weak and bubbling.

Digester 7 - in use – seal level approx. 2ft below coping stones – seal weak and bubbling - Ongoing spitting/spill – requires anti-foam and clean-up – Bell height high – requires draw down of biogas.

As LBH note, this has not been required in the last week

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester.
The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

Digester 8 – in use – seal level approx. 2ft below coping stones – seal weak and bubbling – evidence of recent spill – requires anti-foam and clean-up.

Digester 9 - in use – seal level approx. 1ft below surface of coping stones – seal weak and bubbling. Ongoing spitting/spill – requires anti-foam and clean-up.

Digester 10 – in use – seal level approx. 1ft below surface of coping stones – seal weak and bubbling – evidence of recent spill – requires anti-foam and clean-up – Bell height high – requires draw down of biogas.

Digester 11 - in use – seal level approx. 1ft below surface of coping stones – seal weak and bubbling– evidence of recent spill – requires anti-foam and clean-up.

Digester 12 - in use – seal level approx. 1ft below coping stones – seal weak and bubbling.

Digester 13 - out of use – empty and clean – contractor on site undertaking maintenance.

Digester 14 - out of use – empty and clean – contractor on site undertaking maintenance.

Digester 15 - out of use – empty and clean – contractor on site undertaking maintenance

Digester 16 - out of use – empty and clean – contractor on site undertaking maintenance.

Digester 17 - in use – seal level approx. 3ft below coping stones – seal weak and bubbling.

Digester 18 - in use – seal level approx. 3ft below coping stones – seal weak and bubbling.

Digester 19 - in use – seal level approx. 2ft below coping stones – seal

weak and bubbling.

Digester 20 - in use – seal level approx. 3ft below coping stones – good seal.

GENERAL

Sludge Screening House

All doors open at time of inspection – TW advised that this is a Management decision to improve internal working environment for staff – odour monitors deployed in vicinity to determine whether local odours increase as a consequence.

The doors are kept open during maintenance work as a health and safety.

Imported Sludge

Estimated average of ten imports daily for 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). Green Algae on 100% of surface of Tanks 73 & 74.

Skips

1x large enclosed skip containing waste metals and 1x large open general waste skip located in Service Road by Storm Water Tanks.

1x partially filled small grit slips by Sludge Screening House.

1x open skip in use for transfer materials from mobile screening plant located by Pasteurisation Plant.

Skips containing rag and grit are routinely covered. General waste and empty skips which are not odorous may be uncovered.

2x large enclosed grit/rag skips located by PST's 9-12 – elevated at

one end to drain liquid from within as exceed safe carriage weight for vehicles – advised that management of fluids draining from within requires improvement as currently ponding within areas of broken hard-standing where currently located.

1x Enclose general waste skip in service road by Power House.

2x General waste skips in service road at rear of Sludge Screening House.

East Side Raw Sludge Screen House

Doors closed at time of inspection.

West side primary settlement tanks (PST)

Rectangular PSTs – no issues

Circular PST's 9, 10, 11 & 12 all in use. Currently installing trial of odour control “mistors” on Tank 10 – pipe installed around tank top tail with nozzle sprays at regular intervals which can be utilised to create a plume of deodoriser (same as current mobile units on site) – intention to roll this out to all “odorous areas” on site if proves effective during trial period – initial testing has proven successful to date – trial ongoing.

Pasteurisation Plant

Pasteurisation plant 4/7/9 currently out of service - All remaining pasteurisation plant in service and fully operational.

West Side Aeration Lanes (Old)

Battery C aeration feed channel approximately 25% obstructed in one channel – requires jetting.

Tanker cleans out the channel on a weekly basis

New Works (West Side)

Feed Channel for Aeration Lanes 21-24 obstructed and requires jetting.
 “Fluffy” coverage across surface returned across 100% of tank – thickened up so as to obscure internal dividing walls within tank.

Tanker cleans out the channel on a weekly basis

Odour Control Unit (OCU) performance monitoring – (15/01/19)

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.01 0.01 0.01	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.00	0.2	Yes
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	No data	Unknown	Unknown
Sludge reception outlet	No data	0.8	Yes
Thickening plant inlet	No data	Unknown	Unknown
Thickening plant outlet	0.00 0.00 0.00	0.6	Yes
Transfer PS inlet	No Data	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00	0.6	Yes
New West inlet (OCU 11)	0.00 0.00 0.00	0.5	Yes

OCU 12 (Pasteurisation Plant)	0.00 0.00 0.00	0.5	Yes	
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Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: 10th January 2019

Attendees: Mr Andrew Devine (London Borough of Hounslow) and Mr Waleed Janjua (Thames Water)

LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A & 1B were both empty and clean however spots of grit visible at Hopper end. Hoppers 1, 2 & 3 were drained down but required further overpumping.</p> <p>Tank 2A was empty and clean however areas near hopper end had areas covered by grit. Hoppers 1, 2 & 3 were all drained down but required further overpumping. A slight odour was noted in the vicinity of the tank.</p> <p>Tank 2B was empty and clean. Hoppers 1, 2 & 3 were approximately half full and required overpumping.</p> <p>Tank 3A & 3B were both empty and clean. Hoppers 1, 2 & 3 of both tanks had been drained down.</p> <p>Tanks 4A, 4B, 5A & 5B are covered and odour controlled. Unable to gauge condition as lighting system still not working.</p> <p>Tank 6A had some sludge and grit in the tank. Hoppers 1, 2 and 3 were all full and required overpumping.</p>	<div style="border: 1px solid black; padding: 10px;"> <p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p> </div>

Tank 6B had some sludge and grit in the tank. Hoppers 1, 2 and 3 were approximately 80% full and required overpumping.

Tank 7A & 7B were both empty but had dry grit on the surface of the tank at the hopper end. Hoppers 1, 2 & 3 (shallow hoppers) of tank 7A required draining down, however hoppers in tank 7B were drained down.

Tank 8A was being overpumped while on site. Hoppers 1, 2 and 3 were approximately 50% full. A slight odour was noted in the vicinity of this tank.

Tank 8B was empty and relatively clean. Hoppers 1 & 2 were full and hopper 3 was approximately 50% full. All hoppers required overpumping.

Feed Channel - The level of effluent in both feed channels was very dark in colour and at a low level along its entire length and bottomed out in places where grit and sludge 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 10th January 2019 at 12:57.

Monitor 1	0.006	ppm	12:57
Monitor 2	0.008	ppm	12:57
Monitor 3	0.027*	ppm	12:57
Monitor 4	0.008	ppm	12:57
Monitor 5	0.007	ppm	12:57
Monitor 6	0.005	ppm	12:57

Monitor 7	0.007	ppm	12:57
Monitor 8	0.008	ppm	12:57
Monitor 9	0.006	ppm	12:57
Monitor 10	0.006	ppm	12:57
Monitor 11	0.008	ppm	12:57
Monitor 12	0.007	ppm	12:57
Monitor 13	0.009	ppm	12:57
Wind Speed	4	mph	12:57
Wind Direction	68.00	DEG	12:57

*Exceedance of the 0.015ppm trigger level was noted on Odour Monitor 3 and this was raised with Thames Water. This exceedance above the trigger level was also noted on other days e.g. Monday 7/3/18 Odour Monitor 3 0.027ppm at 10:00 continuing to 15:00 where the level recorded fell to 0.023ppm then falling to 0.014ppm at 19:59. This was raised with Thames Water who advised they would investigate further. This is also recorded on Thames Water Odour Log.

Odour Log (Thames)

Thursday 3rd January 2019

AM

Temp. Cold.

Weather. Cloudy.

Odour Readings. All OMU's in operation.

Time: 17:30

Observations / Customer Complaints. Nil.

Operational issues / causes observed no issues

Actions Taken. Blank.

PM

Temp. Freezing

Weather. Clear night.

Odour Readings. All OMU's in operation.

Time: 05:30

Observations / Customer Complaint. OM3 high through whole shift.

Operational issues / causes observed. OCU11 on going issues.

Actions Taken. Blank

Friday 4th January 2019

AM

Temp. Cold

Weather. Cloudy w/ sunny spells.

Odour Readings. All OMU's in operation.

Time: 17:30

Observations / Customer Complaint. Nil

Operational issues / causes observed. No issues noted

Actions Taken. Blank

PM

Temp. Cold

Weather. Overcast night.

Odour Readings. All OMU's in use.

Time: 05:30

Observations / Customer Complaint. OM3 high through whole shift.

Operational issues / causes observed. OCU11 on going issues.

Actions Taken. Blank.

Saturday 5th January 2019

AM

Temp. Cold

Weather. Sunny w/ patchy clouds.

Odour Readings. All OMU's in operation.

Time: 17:30

Observations / Customer Complaint. OM3 Showing odours.

Operational issues / causes observed. OCU 11.

Actions Taken. Blank.

PM

Temp. Cold

Weather. Overcast night

Time: 05:30

Odour Readings. All OMU's in operation.

Observations / Customer Complaint. OM3 high through whole shift.

Om 8 = 0.017 @ 05.13 - 05.27.

Operational issues / causes observed. OCU11 on going issues

Actions taken. Blank.

Sunday 6th January 2019

AM

Temp. Cold

Weather. Cloudy w/ sunny spells.

Time: 17:30.

Odour Readings. All OMU's in operation.

Observations / Customer Complaint. OM3 All shift on and off.

Operational issues / causes observed. Blank

Actions Taken. Blank.

PM

Temp. Cold

Weather. Overcast Night.

Time: 07:12

Odour Readings. All OMU's in operation.

Observations / Customer Complaint. OM3 All shift on and off.

Operational issues / causes observed. OM3 All shift on and off.
Actions Taken. Blank.

Monday 7th January 2019

AM

Temp. Cold.

Weather. Cloudy w/ sunny spells.

Time: 18:00

Odour Readings. All OMU's in operation.

Observations / Customer Complaint. OM3 Spiking all shift.

Operational issues / causes observed. OCU 11 ongoing issues.

Actions Taken.

PM

Temp. Cold.

Weather. Overcast night

Time: 05:30.

Odour Readings. All OMU's in operation.

Observations / Customer Complaint. OM3 Spiking all shift. OM 8 @03.09 - 04.06.

Operational issues / causes observed. OCU 11 ongoing issues.

Actions Taken. Blank.

Tuesday 8th January 2019

AM

Temp. Cool

Weather. Cloudy w/ Sunny Spells.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM3 high throughout whole shift. OM8 one spike peaked at 0.022ppm 05:43 - 06:15.

Operational issues / causes observed. OCU 11 issues. No odour identified.

Actions Taken: Blank.

PM

Temp. Cold.

Weather. Clear Night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. Nothing to report.

Operational issues / causes observed. Blank.

Actions Taken: Blank.

Wednesday 9th January 2019

AM

Temp. Cold.

Weather. Cloudy w/ Sunny Spells.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM3 spiked from 13.43 till the end of shift. Peaked @0.034ppm.

Operational issues / causes observed. OCU 11 on going issues.

Actions taken: Blank.

PM

Temp. Cold

Weather. Clear night.

Odour Readings. All OMU's in operation.

Time: 05:00.

Observations / Customer Complaint. OM3 carried on till 20:15

Operational issues / causes observed. OCU 11

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 m ³					
OMP limit	500					
03/01/19	0	1964	122	2086	2266	4352
04/01/19	0	1921	267	2188	3235	5423
07/01/19	135	1588	0	1723	2233	3956

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 10 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.

Digester 6 was in use and had a wet seal. There was evidence of a

As LBH note, this has not been required in the last week.

The appearance of the seals can vary from tank to tank but has no bearing on their ability to contain the biogas within the digester.

The area around the digesters is constantly monitored, washed down routinely. Anti-foaming system is in use.

very large spill which needs cleaning. Due to uneven ground surface puddles had formed around Digester 6 due to previous rain fall. Thames Water advised this would be actioned while on site.

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

Digester 9 was in use and had a wet seal. No evidence of any spillage.

Digester 10 was in use and had a wet seal. No evidence of any spillage.

Digester 11 was in use and had a wet seal. There was evidence of an historic spill which was dry and crusty in texture around the coping stone (crusty- needs a sweep).

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

Digesters 13 & 14 were both out of service.

Digester 15 was in use and had good seal. No evidence of any spillage.

Digester 16 was out of service.

Digester 17 was in use and had a dry crusty seal. No evidence of any spillage.

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

Digester 19 was in use and had a wet seal. No evidence of any spillage.

Digester 20 was in use and had a dry crusty seal. No evidence of any 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 20 yd open bulk carrier that was empty.

One 16yd skip that was empty and uncovered.

One 6yd skip that was empty and uncovered.

On the West side there were No skips present.

East Side Screen House

All doors were open slightly at the time of the inspection. TW advised all screens are in operation. The doors were open due to condensation. Thames Water advised that they are monitoring any potential odour using a portable Jerome and have set up a odour suppression unit in the area.

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 were in use but the foam covering the surface of the tanks had returned.

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: 08/01/2019

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.000 0.000 0.000	Unknown	Unknown
Main pumping station outlet	0.00 0.01 0.01	0.2	Yes
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	0.00 0.00 0.00	0.6	Yes
New West inlet (OCU 11)	0.03 0.03 0.04	0.5	Yes
OCU 12 (Pasteurisation Plant)	0.00 0.00 0.00	0.5	Yes



Mogden Sewage Treatment Works

TW Site Inspection

Date of inspection: 2 nd January 2019	
Attendees: Mr L Phillips (London Borough of Hounslow) and Mr Manzoor (Thames Water)	
LB Hounslow Observation	Thames Water Action / Response
<p><u>Storm Water Storage Tanks (SWST)</u></p> <p>Tank 1A was in use empty and clean however slight grit visible at the end of the tank (Hopper end) All hoppers drained down to lowest point. No odour issues to address.</p> <p>Tank 1B was in use empty and clean however signs of slight grit visible at end of the tank (Hopper end) All hoppers were drained down to the lowest point.</p> <p>Tank 2A was in use empty and clean however slight grit built up at the end of the tank (Hopper end) All Hoppers were all drained down to lowest point. No odour was detected.</p> <p>Tank 2B was in use empty and clean. Hopper 1, was full and required draining. Hoppers 2 & 3 were approximately half full and also required draining.</p> <p>Tank 3A was in use empty and clean. All hoppers full and required draining.</p> <p>Tank 3B was in use empty and clean. All hoppers drained down to</p>	<div style="border: 1px solid black; padding: 10px;"> <p>As per section 3.2 of the odour management plan and the East Side Storm Water Tanks and Hoppers Management Plan; every effort is made to ensure the storm tanks and hoppers are cleaned as soon as possible after use. To this end, the storm tanks are inspected at least twice a day and the condition of the hoppers / tanks is noted and prioritised for draining and/or cleaning.</p> </div>

lowest point no odour issues.

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

Tank 6A was in use however tank was returning during inspection.

Tank 6B Had some sludge and grit in the tank. Hoppers 1, 2 and 3 were approximately 80% full and required overpumping.

Tank 7A was in use empty and clean slight grit at the end of tank (Hopper end). All hoppers drained down to lowest point.

Tank 7B was in use empty and clean slight grit at the end of tank (Hopper end). All hoppers drained down to lowest point.

Tank 8A 50% full of effluent and being flushed. All Amajets in operation.

Tank 8B 50% full of effluent and being flushed. All Amajets in operation.

Feed Channel - The level of effluent in both feed channels was very dark in colour and at a low level along its entire length and bottomed out in places where grit and sludge 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 2nd January 2019 at 12:32.

Monitor 1	0.006	ppm	12:32
Monitor 2	0.009	ppm	12:32
Monitor 3	0.010	ppm	12:32
Monitor 4	0.006	ppm	12:32
Monitor 5	0.008	ppm	12:33
Monitor 6	0.005	ppm	12:33
Monitor 7	0.008	ppm	12:33
Monitor 8	0.007	ppm	12:34
Monitor 9	0.006	ppm	12:34
Monitor 10	0.007	ppm	12:34
Monitor 11	0.007	ppm	12:35
Monitor 12	0.006	ppm	12:35
Monitor 13	0.009	ppm	12:35
Wind Speed	7.000	mph	12:36
Wind Direction	319.000	DEG	12:36

Odour Log (Thames)

Thursday 27th December 2018

AM

Temp. Cold.

Weather. Cloudy.

Odour Readings. All OMU's in operation.

Time: 15:13

Observations / Customer Complaints. OM3 peak to max 0.030 PPM at 15:13. Lasted until 16:57.

Operational issues / causes observed OCU number 11 issues.

Actions Taken. Blank.

PM

Temp. Cool

Weather. Overcast/ Night

Odour Readings. All OMU's in operation.

Time: 05:30

Observations / Customer Complaint. OM3 spiked 03:14 – current time max 0.022.

Operational issues / causes observed. OCU11 issues.

Actions Taken. Blank.

Observations / Customer Complaint. OM5 spiked at 19:47 – 20:00 less than 15 mins duration max 0.025 ppm, OM5 spiked 23:17 – 23:30 less than 15 minutes duration max 0.022 ppm.

Operational issues / causes observed. No odours found when investigated.

Actions Taken. Blank.

Friday 28th December 2018

AM

Temp. Cool.

Weather. Cloudy W/ sunny spells.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM3 spiked at 03:00 until 08:30 max 0.023.

Operational issues / causes observed. OCU 11 issues.

Actions Taken. Blank.

PM

Temp. Cool.

Weather. Overcast night.

Odour Readings. All OMU's in use.

Time: 05:30

Observations / Customer Complaint. OM3 spiked at 19:12 till end of shift - max 0.26ppm. OM5 – 0.02 at 22:17 – 23:16, OM5 – 0.035 at 23:32 – 01:00.

Operational issues / causes observed. OCU11 on going issues.

Actions Taken. Blank.

Saturday 29th December 2018

AM

Temp. Cool.

Weather. Cloudy w/ Sunny spells.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM3 stayed high until 13:15 max 0.024 at start of shift.

Operational issues / causes observed. OCU 11 issues.

Actions Taken. Blank.

PM

Temp. Cool.

Weather. Clear night.

Time: 05:30

Odour Readings. All OMU's in operation.

Observations / Customer Complaint. OM3 high 0.022 at 03:15.

Operational issues / causes observed. OCU11 issues.

Actions taken. Blank.

Sunday 30th December 2018

AM

Temp. Cool.

Weather. Sunny W/ Patchy clouds.

Time: 17:30.

Odour Readings. All OMU's in operation.

Observations / Customer Complaint. OM3 stayed high from beginning of shift. Till 12:14 0.023.

Operational issues / causes observed. OCU 11 issues.

Actions Taken. Blank.

PM

Temp. Cool.

Weather. Overcast Night.

Time: 05:30.

Odour Readings. All OMU's in operation.

Observations / Customer Complaint. OM3 spiked at 22:40 current time max 0.023 PPM.

Operational issues / causes observed. OCU 11 issues.

Actions Taken. Blank.

Monday 31st December 2018

AM

Temp. Cool.

Weather. Cloudy.

Time: 17:30

Odour Readings. All OMU's in operation.

Observations / Customer Complaint. OM3 – 0.025 from 6am to 10am OM8 small spike under 15 minutes.

Operational issues / causes observed. OCU 11 – all pumps failed inhibited.

Actions Taken. Blank.

PM

Temp. Cool.

Weather. Clear Night.

Time: 05:45.

Odour Readings. All OMU's in operation.

Observations / Customer Complaint. OM3 spiked all night at 0.029 ppm. OM8 one spike 0.019 ppm 22:57 – 23:14.

Operational issues / causes observed. OCU 11 chemically dosing out of range. Area checked around monitor 8 no odour issues found.

Actions Taken. Blank.

Tuesday 1st January 2019

AM

Temp. Cool.

Weather. Cloudy.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM3 – 0.029 at 16:29 – 18:00.

Operational issues / causes observed. OCU 11- All pumps failed or inhibited.

Actions Taken: Blank.

PM

Temp. Cool.

Weather. Clear Night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. OM3 high from start of shift to 21:57 max 0.026.

Operational issues / causes observed. OCU 11 issues.

Actions Taken: Blank.

Wednesday 2nd January 2019

AM

Temp. Cool.

Weather. Cloudy.

Odour Readings. All OMU's in operation.

Time: 17:30.

Observations / Customer Complaint. OM3 – 0.022 at 06:29 – 06:43.

Operational issues / causes observed. OCU 11- All pumps failed or inhibited.

Actions taken: Blank.

PM

Temp. Cold.

Weather. Overcast night.

Odour Readings. All OMU's in operation.

Time: 05:30.

Observations / Customer Complaint. OM3 spiking through shift.

Operational issues / causes observed. OCU 11 issues.

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 m ³						
OMP limit	500					
29/12/2018	293	703	328	1324	2409	3733
31/12/2018	205	1299	305	1809	2746	4555
01/01/2019	205	1777	183	2165	2233	4398

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 10 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 weak wet seal. There was no evidence of spillage.

As LBH note, this has not been required in the last week.

Digester 6: was in use and had a wet seal. There was evidence of a spill which needs cleaning. Thames Water advised this would be actioned while on site.

Digester 7: was in use but had a weak wet seal. There was no evidence of spillage.

Digester 8: was in use but had a weak wet seal. There was no evidence of spillage.

Digester 9: was in use and had a wet seal. No evidence of any spillage.

Digester 10: was in use and had a wet seal. No evidence of any spillage.

Digester 11: was in use but had a weak wet seal. There was no evidence of spillage.

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

Digesters 13: out of service.

Digester 14: out of service.

Digester 15: was in use but had a weak wet seal. There was no evidence of spillage.

Digester 16: was out of service.

Digester 17: was in use but had a weak wet seal. There was no evidence of spillage.

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

Digester 19: was in use and had a wet seal. No evidence of any spillage.

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

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 20 yd open bulk carrier that was empty.

One 16yd skip that was empty and uncovered.

One 6yd skip that was empty and uncovered.

On the West side one 16yd skip that was empty and uncovered.

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East Side Screen House

All doors were open slightly at the time of the inspection. TW advised all screens are in operation. The doors were open due to condensation. Thames Water advised that they are monitoring any potential odour using a portable Jerome and have set up a odour suppression unit in the area.

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 were in use but the foam covering the surface of the tanks had returned.

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)

Tanker cleans out the channel on a weekly basis

No issues appeared evident at the new inlet works.

Odour Control Unit (OCU) performance monitoring: 31/12/2019

Plant	Reading (ppm)	Action Level (ppm)	Compliant
Main pumping station inlet	0.00 0.02 0.01 AV 0.01	Unknown	Unknown
Main pumping station outlet	0.00 0.00 0.02 AV 0.02	0.2	Yes
East OCU	0.00 0.00 0.00 AV 0.00	0.05	Yes
West inlet OCU	0.00 0.00 0.00 AV 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 AV 0.00	0.6	Yes
Transfer PS inlet	-	Unknown	Unknown
Transfer PS outlet	0.00 0.00 0.00 AV 0.00	0.6	Yes
New West inlet (OCU 11)	0.05 0.04	0.5	Yes

	0.05 AV 0.04			
OCU 12 (Pasteurisation Plant)	0.00 0.00 0.00 AV 0.00	0.5	Yes	