

**ANGLIAN WATER SERVICES LTD.
Cottonvalley Water Recycling Centre
Odour Management Plan**

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This document must be reviewed at intervals not exceeding 12 months and has been produced in accordance with the Environment Agency's H4 Odour management guidance

Revision	Authors	Date of Issue	Comments
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Cottonvalley Odour Management Plan

1.0 Operation of Cottonvalley Water Recycling Centre (WRC)

Overview

- 1.1 COTVST serves a population equivalent of ca 314,000 which spans the catchment of Milton Keynes and surrounding villages. Trade effluent is accepted at this site. Treated effluent discharges either into the river Great Ouse or Ouzel.
- 1.2 An annotated plan of COTVST is attached as Appendix 1
- 1.3 The main receptors for odour are within the immediate vicinity of Cottonvalley WRC and are located at the surrounding industrial estates, Junction 14 of the M1 motorway, Milton Keynes Coachway off J 14, Willen housing estate and Broughton housing estate.

Preliminary Treatment

- 1.4 The flow enters the site via a large deep chamber. There are three Archimedean screws. One pump runs to accommodate normal sewage inflow, the other two operate on an assist basis depending on rate of sewage inflow. Three pumps can run during storm conditions. This is a possible source of odour. See 2.1 and 2.2 of action plan.
- 1.5 Provision is made for tankers to discharge into the inlet area. There is an area which has been concreted to provide some fall for spillages to enter the incoming flow. However there is a possibility of the tanker contents flowing down the road. This would be collected eventually by the on-site drainage and returned to the inlet works. There is an Alpheus treatment plant onsite here which is a potential source of odour. See 2.3 of action plan.
- 1.6 There are three screens which remove gross solids (rag, plastics etc.). These solids are washed and compacted and the resultant compacted material contained in skips prior to removal from site.
- 1.7 The incoming flow is split into twin grit removal channels. These are large aerated rectangular channels where the grit is allowed to settle.

Submersible pumps pull from the bottom of the tanks and feed a single Detritor. Grit is removed from site in skips.

- 1.8 Flow from the Detritor returns via twin pipes.

Primary Treatment

- 1.9 Preliminary treated sewage is distributed between up to 8 rectangular primary settlement tanks, depending on the volume of sewage arriving at the site; suspended solids are removed intermittently under gravity for further treatment to prevent the build up of sludge in the tanks. Fat entering with the incoming sewage may float to the surface of the tanks, the tanks have a fat scraper system incorporated into their design, any sludge that floats to the surface is removed via this system. The tanks are a potential source of odour. See section 2.4 of the action plan.

Activated Sludge (Biological) Treatment

- 1.10 The settled sewage from the primary settlement tanks is then delivered by gravity to the activated sludge plant. This plant comprises 12 rectangular aerated tanks that biologically oxidise the pollutants remaining in the flow that is received from the primary tanks. Aeration is provided by adjacent blowers feeding air pipe work submerged in the tank and equipped with multiple diffusers. Mixed liquor from the aeration tank is also pumped through the main to inject a combined air and liquor into the tank by the nozzles to achieve a high efficiency transfer of oxygen. More conventional systems use floor-mounted diffusers only to provide the air. The high transfer of oxygen at the inlet of the aeration tank may potentially give rise to odours due to stripping of any residual septicity. See section 2.5 of the action plan.

Final Settlement

- 1.11 Mixed liquor from the aeration tanks is settled by gravity in 24 final settlement tanks (FSTs), separating the sludge from the liquor which

forms the final discharge to the lagoons. There is little potential for odours from this source.

- 1.12 Activated sludge is settled in the FSTs and is returned to the aeration tanks to treat more sewage. This is known as Returned Activated Sludge (RAS). RAS flows from the base of the final tanks and is discharged from a pipe that terminates as an open pipe (the RAS Bellmouth) in an adjacent chamber at ground level.

Surplus Activated Sludge

- 1.13 Surplus Activated Sludge (SAS) is produced due to the excess growth of the micro-organisms in the aeration tanks.

Sludge Treatment Processes

- 1.14 Cottonvalley WRC is also designated as a sludge treatment centre and imports sludge from other WRCs in the area for treatment in addition to treating the sludge produced by the on site plant.
- 1.15 SAS is pumped to two aquabelt sludge thickeners. These units thicken by separating the solid and liquid fraction and drawing off the liquid for re treatment. Thickened SAS is pumped to covered tanks at the sludge treatment centre. Tanks at the sludge treatment centre are covered and connected to odour control units.
- 1.16 Sludge from the primary tanks is pumped to covered tanks at the sludge treatment centre, also connected to odour control units.
- 1.17 Imported liquid sludge brought in by tankers discharges through strain presses (screens) to remove any rag or plastics, these are washed and compacted and the resultant compacted material contained in skips prior to removal from site. The liquid sludge is then pumped to a covered sludge import tank connected to an odour control unit from where it is pumped to centrifuges that dewater it prior to treatment in a thermal hydrolysis plant (THP).
- 1.18 Imported raw sludge cake is brought to site using vehicles which have sheets to cover the raw cake and discharged into an enclosed cake reception building before being transferred via closed pipes to the THP. There is an odour surfactant spray system inside the building which is

activated whenever a lorry is tipping cake. The cake discharge end of the building and the cake holding tank are connected to a dedicated odour control unit which operates 24/7.

- 1.19 Following thermal hydrolysis the sludge then goes through anaerobic digesters and post digestion is discharged into an open topped tank.
- 1.20 Digested sludge is dewatered into treated sludge cake. The treated sludge cake is then suitable for application to agricultural land.
- 1.21 Intermittent odours due to sludge discharges from tankers and also odour from sludge storage may be experienced. See section 2.6 and 2.7.

Centrifuges

- 1.22 The centrate produced from the centrifugation of the sludges is a potential source of odours. See section 2.8 of the action plan for controls implemented.

Storm Tanks

- 1.23 The storm tanks intermittently fill during heavy rain and are a potential source of odour if settled sludge is retained on the tank floor. See section 2.9 of the action plan.

Annual Inspection

- 1.24 The six pressure vessels and foul gas equipment of the Cambi THP are inspected annually as a legal requirement. Odour control measures for this operation are shown in section 2.9.1 of the action plan.

Odour Modelling

The frequency of wind direction and the distance to the nearest properties are key factors in determining likely odour impacts.

Odour modelling has been commissioned for this site as part of the IED permit application – refer to this for more information (Cotton Valley Odour Modelling Report). Wind rose and information generated for the bio-aerosol risk assessment have been used to determine the direction of any potential odours released from the site (Cotton Valley Bioaerosol Risk Assessment).

The model was run using the meteorological 2018 to 2020 years to test the variability of the odour concentration results among the different years.

On any future odour modeling report this is how the odour offensiveness will be categorised. In the odour modelling report these contour lines are shown for the odour concentrations of 1.5, 3, 5, and 10 OUE/m³. The significance of these odour concentrations is explained below:

- 1 OUE/m³ is the level of odour detection under laboratory conditions.
- 3 OUE/m³ is the level of odour detection in open environment. Complaints are unlikely to occur and exposure below this level are unlikely to constitute significant pollution.
- 5 OUE/m³ is when odour becomes detectable & recognisable. Complaints may occur and de-pending on the sensitivity of the locality and nature of the odour.
- 10 OUE/m³ is when odour becomes distinct and intrusive. Complaints are highly likely and odour exposure at these levels represents an actionable nuisance.

An odour concentration of 1.5 Odour Units Per Cubic Metre (OU/m³) has been taken as the benchmark level at which nuisance and potential loss of amenity would be anticipated. This assessment criterion for the protection of public nuisance/amenity is in line the Environment Agency (EA) H4 Planning Guidance, including septic effluent and sludge in amongst a range of substances categorised as most offensive and for which a low detection threshold should be taken into consideration.

Sensitive receptors

Receptors sensitive to odour include users of the adjacent land, which may vary in their sensitivity to odour. The level of sensitivity will be defined using the Institute of Air Quality Management guidance²

- High sensitivity receptors e.g. residential dwellings, hospitals, schools/education and tourist/cultural.
 - users can reasonably expect enjoyment of a high level of amenity; and
 - people would reasonably be expected to be present here continuously, or at least regularly for extended periods, as part of the normal pattern of use of the land.
- Medium sensitivity receptor e.g. places of work, commercial/retail premises and playing/recreation fields.
 - users would expect to enjoy a reasonable level of amenity, but wouldn't reasonably expect to enjoy the same level of amenity as in their home; or
 - people wouldn't reasonably be expected to be present here continuously or regularly for extended periods as part of the normal pattern of use of the land.

- Low sensitivity receptor e.g. industrial use, farms, footpaths and roads.
 - the enjoyment of amenity would not reasonably be expected; or
 - there is transient exposure, where the people would reasonably be expected to be present only for limited periods of time as part of the normal pattern of use of the land.

The magnitude of risk relates to:

- Frequency: How often an individual is exposed to odour
- Intensity: The individual’s perception of the strength of the odour
- Duration: The overall duration that individuals are exposed to an odour over time
- Odour unpleasantness: Odour unpleasantness describes the character of an odour as it relates to the ‘hedonic tone’ (which may be pleasant, neutral or unpleasant) at a given odour concentration/ intensity. This can be measured in the laboratory as the hedonic tone, and when measured by the standard method and expressed on a standard nine-point scale it is termed the hedonic score.
- Location/Receptor sensitivity: The type of land use and nature of human activities in the vicinity of an odour source. Tolerance and expectation of the receptor. The ‘Location’ factor can be considered to encompass the receptor characteristics, receptor sensitivity, and socio-economic factors.

There are a number of receptors in relative close proximity to the site. The sensitive receptors of the site are identified in the Bioaerosol Risk Assessment (Cotton Valley Bioaerosol Risk Assessment)

Receptor	Nearest potential emission source to receptor	Process	Distance (m) from nearest potential emission source ^(a)	Direction of receptor from closest emission source
Sensitive receptors South of the Site (places of work, amenity areas)	PSTs	Water Recycling Centre	350	South
	Aeration lanes	Water Recycling Centre	340	South
	FSTs	Water Recycling Centre	345	South
	Anaerobic digesters (Digester 3)	Sludge Treatment Centre	210	South
	Pasteurisation Tank	Sludge Treatment Centre	270	South
	Centrifuge building	Sludge Treatment Centre	280	South
	Hydrolysis Tank	Sludge Treatment Centre	265	South
	Cambi Process	Sludge Treatment Centre	250	South
	Cake pad	Sludge Treatment Centre	535	South
	Cake storage	Sludge Treatment Centre	250	South
	Boiler	Biogas combustion	470	West
	CHPs	Biogas combustion	445	West
	Flare	Biogas combustion	200	West
Residential properties North of Site (residential)	PSTs	Water Recycling Centre	390	North West
	Aeration lanes	Water Recycling Centre	450	North West
	FSTs	Water Recycling Centre	540	North West
	Anaerobic digesters (Digester 3)	Sludge Treatment Centre	590	South East
	Pasteurisation Tank	Sludge Treatment Centre	630	South East
	Centrifuge building	Sludge Treatment Centre	660	South East

	Hydrolysis Tank	Sludge Treatment Centre	625	South East
	Cake pad	Sludge Treatment Centre	545	North West
	Cambi Process	Sludge Treatment Centre	620	South East
	Cake storage	Sludge Treatment Centre	635	South East
	Boilers	Biogas combustion	680	South East
	CHPs	Biogas combustion	710	South East
	Flare	Biogas combustion	670	South East
Amenity area south east of the Site (North west corner of Pipers Vale LNR)	PSTs	Water Recycling Centre	240	West
	Aeration lanes	Water Recycling Centre	320	West
	FSTs	Water Recycling Centre	410	West
	Anaerobic digesters (Digester 1)	Sludge Treatment Centre	430	West
	Pasteurisation Tank	Sludge Treatment Centre	500	West
	Centrifuge building	Sludge Treatment Centre	490	West
	Hydrolysis Tank	Sludge Treatment Centre	510	West
	Cambi Process	Sludge Treatment Centre	510	West
	Cake storage	Sludge Treatment Centre	485	West
	Boilers	Biogas combustion	450	West
	CHPs	Biogas combustion	400	West
	Flare	Biogas combustion	410	West

Note:

(a) Distance from source to receptor is rounded to the nearest 5m
Value in bold represents the nearest potential emission source for each process which is closest to a sensitive receptor

2.0 Sources of odour and control measures

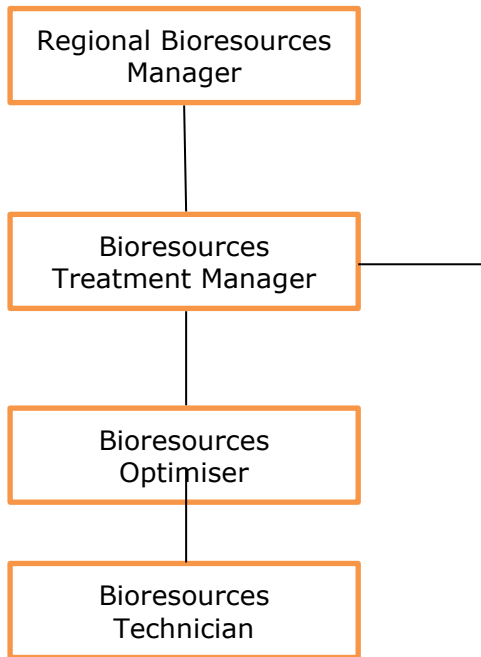
Section	Potential Odour Source	Current control measures	Future proposals	Date	Documents
2.1	<p>Inlet Sewer. This is an open channel at the STW and receives potentially septic flows from the head of the gravity. Archimedes screws lift and agitate the sewage as it is transferred into higher level channels</p>	<ul style="list-style-type: none"> • Spray "fogging" system over inlet sump • Extended to spray over downstream channels prior to the inlet screens • Site Odour surveys 			N/A
2.2	<p>Willen Road Pumping Station. Measurement indicates that odour from this source have been low. There is a potential for septic sewage pumped to COTVST from Willen Road pumping station.</p>	<ul style="list-style-type: none"> • Check for septicity 	<ul style="list-style-type: none"> • None 	Tests for septicity carried out in 2012 and 2013, none found.	N/A
2.3	<p>Alpheus treatment. (operates under a separate Permit) Intermittent odours from some discharges.</p>	<ul style="list-style-type: none"> • Alpheus sample every load received. • Dilute discharges. 	<ul style="list-style-type: none"> • 2 Yearly consent review 	N/A	N/A
2.4	<p>Primary Tanks. The surface of the primary tanks may be an odour source when the tanks are operating with high levels of retained sludge.</p>	<ul style="list-style-type: none"> • Automatic de-sludge of primary tanks. • Fat removal system to get rid of any floating fats. • Records kept of primary tank sludge depths • Site operators briefed to record sludge levels 			Primary Settlement Tank Sludge Depth Record Sheet

		<ul style="list-style-type: none"> • Refurbishment of phase 2 tank scraper mechanism in 2014 • Monthly Site Odour survey 			
2.5	Activated Sludge (AS) Plant. Potential odour from stripping residual septicity at head of AS plant.	<ul style="list-style-type: none"> • Maintain minimum loading on AS plant • Ensure belt presses are both operational. Spares held as far as practicable • Monthly Site Odour survey 	<ul style="list-style-type: none"> • Mixed liquors maintained at site operating limits determined by Scientist and Manager • Site operators briefed to act immediately on high liquor levels. • Site operators to increase priority of M/E work required. 	Weekly	Site logbook
2.6	Sludge Import Facility (liquid and cake). Potential odour release from tankers when unloading and storage of liquid sludge prior to treatment.	<ul style="list-style-type: none"> • Keep liquid sludge import tank at a low level. • Odour control unit on liquid sludge tanks • Raw cake reception building has a dedicated odour control system and surfactant sprays • Contractors employed to clean up any cake spillages as needed • Monthly Site Odour surveys 		Cake reception building on line in 2017	N/A
2.7	Cambi thermal hydrolysis plant.	<ul style="list-style-type: none"> • Odour eradicated by injecting gases into sludge 		Winter 2013	N/A

	Very high and noxious concentrations of hydrogen sulphide in exhaust gas.	<ul style="list-style-type: none"> • Additional odour abatement equipment used during Annual shut-down (see 2.9.1) • Monthly Site Odour surveys 	<ul style="list-style-type: none"> • Second Thermographic study undertaken to check for any leaks 		
2.8	Raw and Digested Centrifuges. Potential odour release during operation and from centrate produced during dewatering process.	<ul style="list-style-type: none"> • Sealed manhole covers installed on centrate line • Monthly Site Odour surveys 		September 2013	N/A
2.9	Storm Tanks. Potential for odour generation when emptied.	<ul style="list-style-type: none"> • Monthly Site Odour survey 	<ul style="list-style-type: none"> • Investigate option of automating storm flows 	2013/2014	N/A
2.9.1	THP Annual Inspection	<ul style="list-style-type: none"> • Stop sludge imports to STC • Clean pressurised vessels prior to inspection, vessels cleaned with water (flushed). • Installation of mobile odour control unit for duration of inspection • Drain down reactor/foul gas cylinder contents via tanker/sealed pipe work and not to open drain on site • Raw cake not stored on site (on exception basis max of couple of <u>covered</u> skips) • Cleaning for the cake reception point as needed 	<ul style="list-style-type: none"> • Ongoing review • External Inspection methodology • Extension of inspection period to 2 yearly • Assessed on daily basis. 	Annually	N/A

3.0 Site Management Responsibilities

Cottonvalley WRC Management Structure



Procedures for Reporting Faults

3.1 Cottonvalley WRC is managed by a site based Treatment Manager and a staff of Process Controllers and one Process Optimiser (Bio Resources Technicians). Bio Resources Technicians are employed specifically to operate the sludge treatment plant on a fixed shift basis.

- 3.2 Cottonvalley WRC also incorporates a Sludge Treatment Centre operating under a HACCP plan (held by the Treatment Manager). This plan includes emergency provision in the event of plant breakdown. For the purposes of odour abatement, the key provision in the plan is that a proportion of sludge will be diverted to other sites for treatment if indigenous sludge treatment is compromised. This situation includes the following:
- Build up of sludge in the primary tanks (Recorded on primary sludge tank depth record sheet)
 - Mixed liquor levels are in excess of target levels. (Recorded on mixed liquor record sheet)
 - Partial diversion of imported sludge per day to other sites to facilitate Mixed Liquor processing reductions in line with this plan.
 - Temporary sludge processing equipment may be hired in from time to time. Anglian Water has a purchase agreement with Contractors who can supply suitable equipment at short notice. Provision has been made on site to dose feed sludge to such equipment to control any additional odours as required.

Identifying Maintenance & Inspection Needs

- 3.3 Responsibility for the routine operational maintenance and monitoring of all odour abatement equipment falls to all Bio Resources Technicians onsite. Responsibility for other parts of the plant that might impact on odour is allocated in a similar way.
- 3.4 Equipment is maintained by site staff in accordance with supplier's instructions. Additional maintenance beyond the scope of site staff is scheduled as part of the Cottonvalley maintenance plan and instructions are passed to maintenance staff via the Work Management System. WMS is a computer based scheduling system that deploys work directly to Bio Resources Technicians through books and records jobs completed onto a central SAP system.

Complaints Procedure

Receipt of Complaint

- 3.5 Complaints relating to Cottonvalley WRC are directed to AWS via any of the following:

Customer call into the AWS Operational Management Centre (OMC) on 03457 145145 (24hr emergency contact)

Cottonvalley Operations contacted direct by customer by telephone, mail or verbally at property

Customer reports odour complaint via the AWS mailbox; mailbox is titled customerservices@anglianwater.co.uk

Action taken to resolve complaint

- 3.6 The complaint is logged in the AWS SAP database; this system holds records of all customer jobs/complaints received by the company and allows a history of actions taken. The Treatment Manager at Cottonvalley takes on the complaint. AWS will respond to the complaint in writing within 10 working days as defined in the levels of service set by OFWAT:

Complaints are regularly monitored by the Treatment Manager and compared to actions being undertaken on the site or in the local sewerage network.

4.0 Odour Critical Plant Operation and Management

Operation and maintenance of odour control units

4.1 Cambi foul gas system

All odours from Cambi are re-injected into the sludge which is then broken down in the digesters.

Bio Resources technicians carry out routine maintenance on pumps and controls. Faults are reported to in house maintenance staff via the Create & Triage system. For urgent job requests ring 0345 070 3447, for non-urgent jobs e mail OMC_Triage_-

[_Water_Recycling_Work_Requests@anglianwater.co.uk](mailto:Water_Recycling_Work_Requests@anglianwater.co.uk)

4.2 Bioresources Technicians check plant Monday-Sunday (inclusive). They inform the Treatment Manager, Optimiser or OMC Duty Manager of any issues that may cause odour problems. Odour related issues are all logged in the STC log book daily.

4.3 The operational team are required to record in the site diary and site log book any plant breakdowns or spillages that may give rise to odour problems.

4.4 The Bioresources Technicians will raise an M&E job if necessary to facilitate repairs. For urgent job requests ring 0345 070 3447, for non-urgent jobs e mail OMC_Triage_-
[_Water_Recycling_Work_Requests@anglianwater.co.uk](mailto:Water_Recycling_Work_Requests@anglianwater.co.uk)

Maintenance and monitoring requirements in relation to the odour control system to be undertaken at the site including daily/weekly/monthly/annual checks and servicing (links to log books and check sheets to be included)

Emission Point Type	Parameter	Monitoring Frequency	Monitoring standard or method
Channelled emission to air (biofilter and scrubbing system)	Ammonia	Once every 6 months or more frequent if stated in the permit.	Emissions of pollutants into the environment through any kind of duct pipe stack etc. As per design and manufacturer's specifications EN ISO 21877
	H ₂ S		CEN TS 13649 for sampling NIOSH 6013 for analysis
	Odour concentration		BS EN 13725
	Efficiency checks	Annual	Annual report detailing the removal efficiency of all abatement systems and planned maintenance including media health air flow distribution and emissions removal efficiency BS EN 13275
	Media moisture and gas flow temperature	Daily	Recorded using a moisture meter and temp probe
	Gas stream flow	Continuous	As per design and manufacturer's specifications
	Surface condition	Daily	Visual assessment
	Thatching and compaction	Weekly	Back pressure

5.0 Site Operative Training

Staff Training				
Job Role	Number of Staff	Training Completed	Future Training	Start Date
Treatment Manager	1	LTO WAMITAB, Unit 4 TMNH		N/A
Bioresources Optimiser	1	ALTO, LTO & NVQ 2 in sewage treatment WAMITAB, Unit 4 TMNH	N/A.	N/A
		Minimum production qualifications for sewage pumping, primary treatment, secondary treatment.	N/A	N/A
		Manufacturers training in OCU plant operation.	As required	
Bioresources Technician	N/A	Minimum production qualifications for sewerage pumping, primary treatment, secondary treatment. LTO		

6.0 Spillage Management Procedures

- 6.1 All Bio Resource Technicians at Cottonvalley WRC have a responsibility to maintain good housekeeping and clean up spillages at the earliest opportunity to prevent unnecessary odour. Anglian Water has an in house tankering team - RES who can provide additional clean up

services at short notice. Works technicians have been given specific authority for out of hours contact.

Key areas at risk from spillage and control measures.

Sludge reception area.

Tanker drivers instructed to clean up spillages after every load. Hose supplied.

Centrate pumping station well.

Sealed covers.

8.0 Emergency Breakdown and Incident Response Planning

8.1 Odour Response Procedure for Cottonvalley WRC

Odour Critical Plant	Response to breakdown (callout raised by AWS Operational Management Centre on receipt of alarm)	Foreseeable consequences on odour if plant breaks down	Actions to reduce impact	Standby Plant/ Spares	Person Responsible
Inlet Screens 3 no.	For urgent job requests ring 0345 070 3447, for non-urgent jobs e mail OMC Triage - _Water_Recycling_Work_Requests@anglianwater.co.uk	Odour from debris deposits at inlet works	Restore screen operation. Clean up spillage. Standby equipment available.	Critical spares onsite	Site Operators
Activated Sludge Plant blowers 4 no.	For urgent job requests ring 0345 070 3447, for non-urgent jobs e mail OMC_Triage_- _Water_Recycling_Work_Requests@anglianwater.co.uk	Increase in odour and loss of process potentially	Re-set blowers	Standby plant, AS plant runs on 2	Site Operators

Odour Critical Plant	Response to breakdown (callout raised by AWS Operational Management Centre on receipt of alarm)	Foreseeable consequences on odour if plant breaks down	Actions to reduce impact	Standby Plant/ Spares	Person Responsible
		increasing septicity		blowers & 1 standby	
Aqua belts 2 no.	Run and checked by Sludge Techs (07:00-19:00) 7 days a week)	Build up of solids in primary tanks & activated sludge plant	Repair fault as soon as possible	Spare thickening belt kept on site Sludge thickened pump to be kept as spare	Site Operators
Digester Feed Pumps 3 no.	For urgent job requests ring 0345 070 3447, for non-urgent jobs e mail OMC Triage - _Water Recycling Work Requests@anglianwater.co.uk	Build up of solids in primary tanks & activated sludge plant	Re-set pump or run standby	Standby pump always available	Site Operators

Odour Critical Plant	Response to breakdown (callout raised by AWS Operational Management Centre on receipt of alarm)	Foreseeable consequences on odour if plant breaks down	Actions to reduce impact	Standby Plant/ Spares	Person Responsible
Pre CAMBI Centrifuge Feed Pumps 2 no.	For urgent job requests ring 0345 070 3447, for non-urgent jobs e mail OMC Triage - _Water Recycling Work Requests@anglianwater.co.uk	Build up of solids in primary tanks & activated sludge plant	Use standby feed pump	Standby pump available	Site Operators
Centrifuges no.2 (raw)	For urgent job requests ring 0345 070 3447, for non-urgent jobs e mail OMC Triage - 44 Water Recycling Work Requests@anglianwater.co.uk	Build up of solids in primary tanks & activated sludge plant	Use standby centrifuge-duty rotates	Standby unit available	Site Operators
Cambi Foul Gas unit 1 no.	For urgent job requests ring 0345 070 3447, for non-urgent jobs e mail OMC Triage - _Water Recycling Work Requests@anglianwater.co.uk	Immediate odour source	Put the gas through the bypass. Repair plant	Duty standby pump Process Sensors	Site operators

Odour Critical Plant	Response to breakdown (callout raised by AWS Operational Management Centre on receipt of alarm)	Foreseeable consequences on odour if plant breaks down	Actions to reduce impact	Standby Plant/ Spares	Person Responsible
Waste Gas Burner	For urgent job requests ring 0345 070 3447, for non-urgent jobs e mail OMC_Triage_-_Water_Recycling_Work_Requests@anglianwater.co.uk	Possible odour source (whessoe valves on the digesters)	Reset the plant. If unsuccessful, arrange for priority work for the contractor	No spares – units under service contract	Site operators

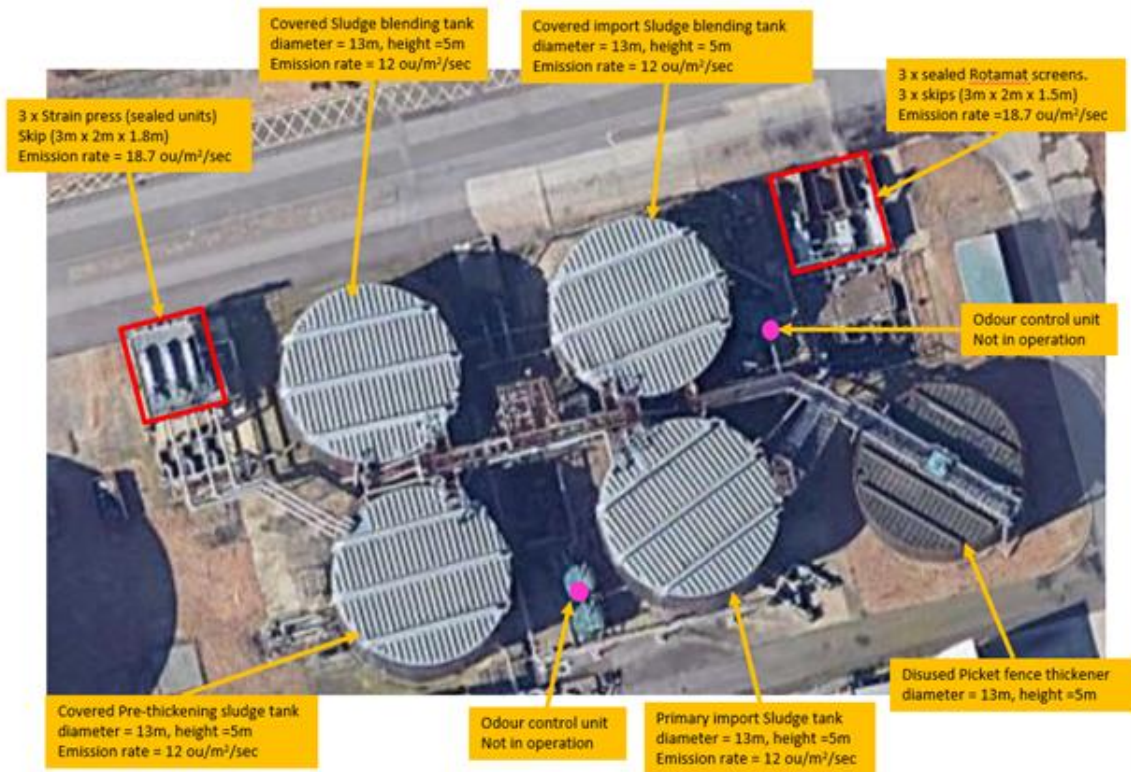
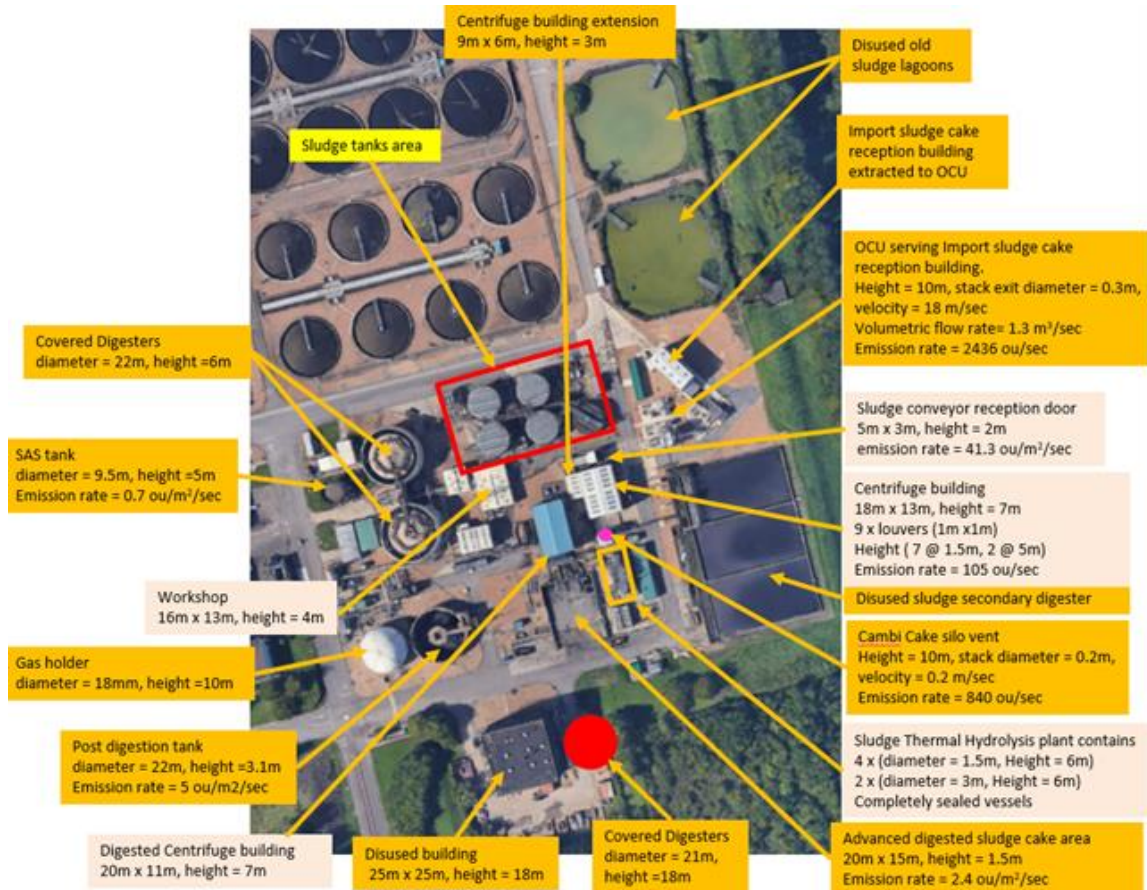
This document is for daily use and reference by Cottonvalley Site Operators

RESPONSE CODES: A0-within 1 hour, A1-within 4 hours, A2-within 1 day, A3-next day, A4-next 2 days

Appendix 1: Cottonvalley Odour Abatement Notices – Communication Information Details

AW Bioresources Treatment Manager	Tony Moutrie	07764986894
AW Bioresources Assistant Treatment Manager	James Grace	07801674651
Bioresources Optimiser	Richard Goulding	07764 164948
OMC Duty Manager	N/A	0345 070 3446
EHO Environmental Protection Team Leader	David Parrish	07931 911792 01908 252449 01908 252100

Appendix 3: Cotton Valley STC – Details of the buildings, covered tanks, and odour sources in STC permit area.



Appendix 4 Windroses

Figure 3: 2018 wind rose for Bedford Meteorological Station

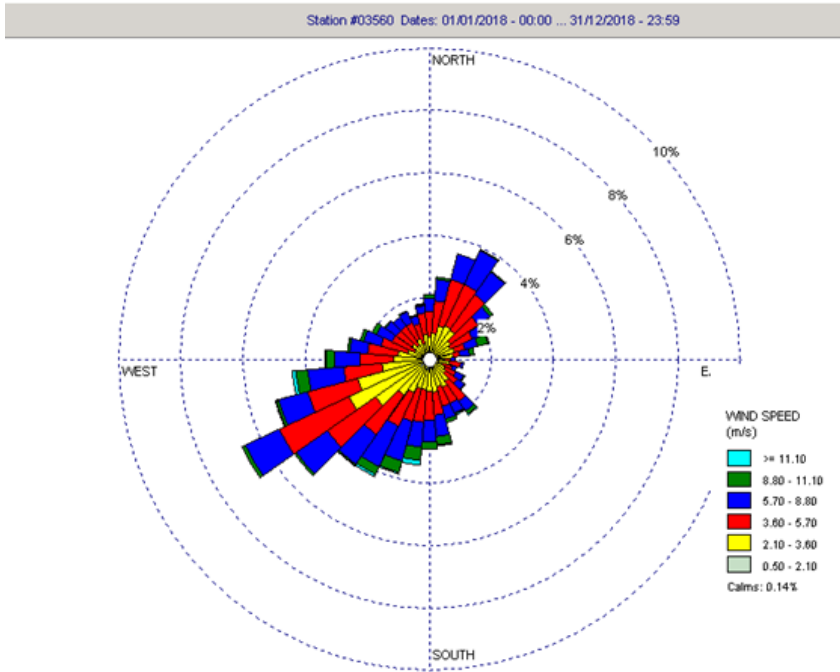


Figure 4: 2019 wind rose for Bedford Meteorological Station

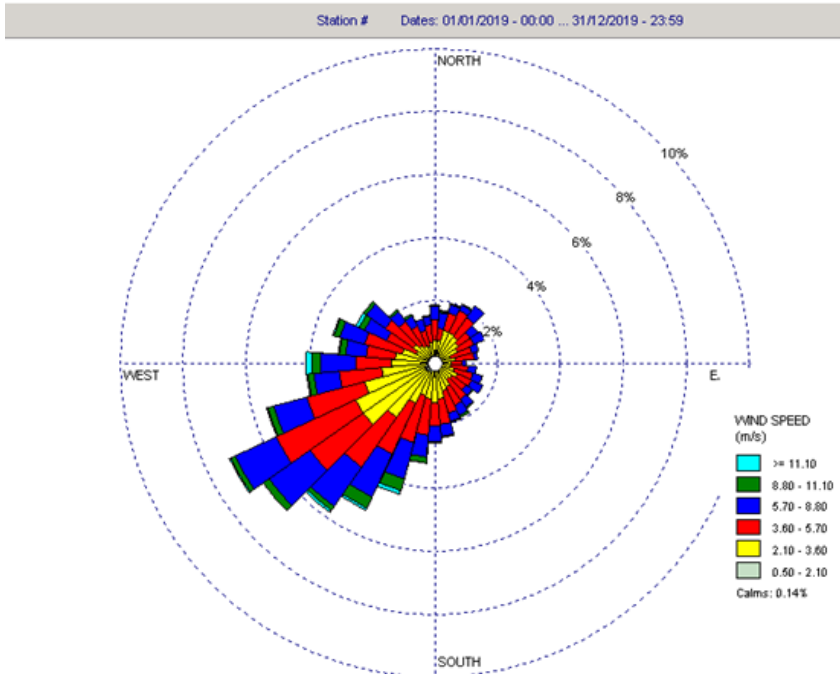


Figure 5: 2020 wind rose for Bedford Meteorological Station

