Environmental Management Plan

Site Name	Cliff Quay
Site Address	Raeburn Road South Ipswich IP3 0ET
Short Code / Ref No.	CLQYST
Catchment	Norfolk & Suffolk

This is a controlled template and should not be altered unless authorised.

The content of this document should be reviewed and signed off by the relevant managers on an annual basis and audited on a biennial basis by the business unit auditors. [C] [A]

Name	Signature	Position	Created / Reviewed	Date
John Hooper		Treatment Manager – STC & CHP	25.4.2013	
John Stobbart		Manager - Compost	25.4.2013	
Tim Watson		Process optimiser	25.4.2013	
John Hooper, Tim Watson, Tim Blackmore		TM ATM TSM	06/03/14	
Joe Thompson		Treatment Manager STC & CHP	29/06/15 Reviewed	
J Hooper		Site Manager	Reviewed	19/10/16
Richard Cope		Assistant Treatment Manager	Updated	16/03/17
Richard Cope		Assistant Treatment Manager	Updated	24/04/17
Richard Cope		Assistant Treatment Manager	Updated	14/02/18
Richard Cope		ATM	Updated	26/09/18
J Hooper		Treatment Manager – STC & CHP	Reviewed	18/12/19
M Hinson		Assistant treatment manager	Reviewed	10/02/2021
Richard Dunn		Treatment Manager	Reviewed	01/12/2023

Contents

1. Introduction

This document has been designed to cover the Plan, Do, Check, Act methodology used in all Management Systems.

PDCA is the founding principle of this document and therefore the references throughout are in relation to these definitions:

P – Plan – what is the situation, what do we need to achieve and how are we to achieve it?
D – Do – what are the controls in place to ensure that we do our everyday actions without impacting the environment in this area?
C – Check – how do we check that these controls are working and how do we report when they are not?
A – Act – what is the escalation process/review process when things are checked and seen to be not performing?

The key focus of this document is to identify existing processes and controls that cover environmental risk and identifying and addressing those areas that are not adequately covered. Therefore all processes and controls referred to in this document should be adhered to and this document's controls regarded in the same vein for site specific controls.

2. Site Information

2.1.Site Description [P]

Cliff Quay STW sits in about 30 Acres to the South East of the town of Ipswich. We have industrial units to are East, West and North the nearest urban housing is 700meters to the North of the works.
Site Consists of

- 3 administration building with office based staff
- An M+E team
- A collection team
- RTS lorry base
- RTS Bio solids plant

To the north of the site is 6 primary tanks to the south are 3 final settlement tanks and to the South West is the compost plant.

Cliff quay imports liquid sludge from other sewage treatment works the plan imports volume to cliff quay is 2600cubic meters per week. Maximum import volume is slit out as 400m3 per day 6 days per week with Saturday as highlighted as 200m3

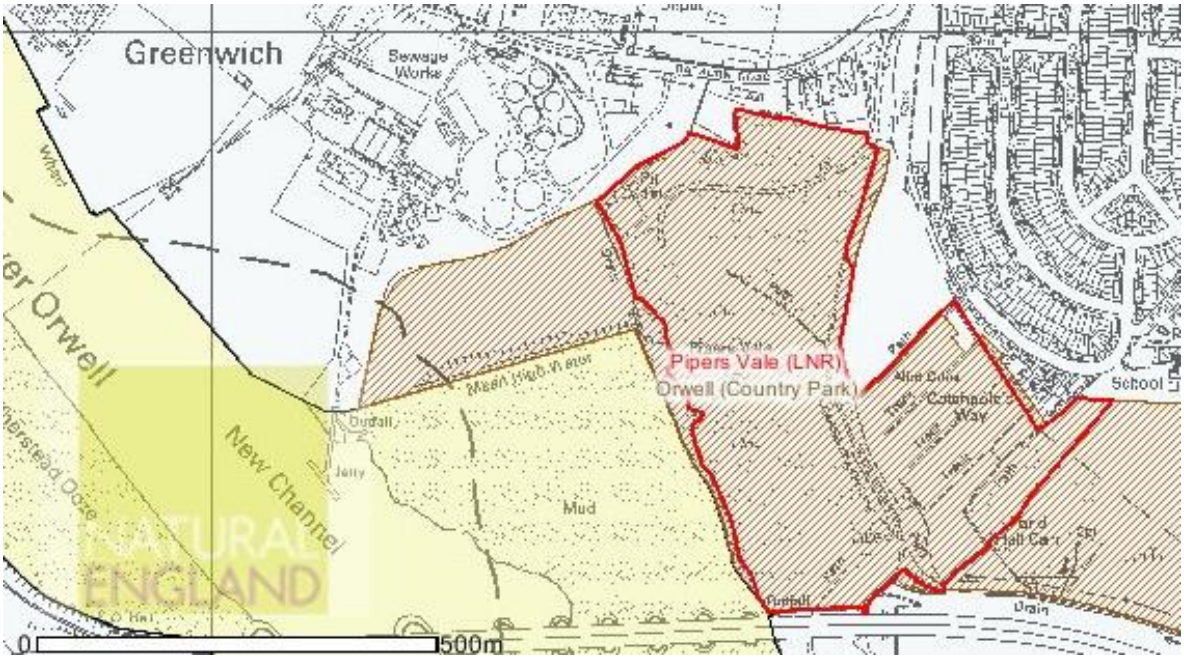
Sludge is imported and treated under tight control cover by other plans gas produced during this process will then be used in the CHP this plan will look at the environmental impacts of these activates.

2.2.Site location [P]

The site is located next to the River Orwell (tidal section) and on the edge of the Town of Ipswich. The image below shows the location of the site in context with its surroundings.

The site is bounded by:
- Woodland Orwell Country Park
- River Orwell (tidal part)
- Residential Properties
- Educational (junior School)
- Industrial

Designated sites in the vicinity of the site are:
- Orwell Country Park (non-green flag country park)
- Pipers Vale (Local Nature Reserve) – this is a section of the Country Park
- Orwell Estuary – Site of Special Scientific Interest (SSSI)



2.3. Permits / Permissions / Licences **[D]**

This table highlights the permits, exemptions and licences that relate to the sites operation and its impact on the environment:

Ref No.	**Description**	**Regulation**	**Location held**
100311	Sludge Treatment permit	EPR – Waste	central folders and hard copy in site office
CP3938HL	Combined Heating Power permit	EPR – Waste	Central folders and hard copy in site office
AEETS12128C	Discharge permit	EPR – Water	Central folders
NXH845	Hazardous Waste Registration	EPR-waste	No longer required
EAWML 100311	Sludge Treatment	ERP-waste	Central folders and hard copy in site office
MWRP RPS 007	Cess and septic	EPR-Waste	Site closed

The conditions relating to these permits are held within the permits and summarised in section 5

3. Contact information

Position	Name	Phone	Email
Catchment service (customer support)	Victoria Skipp	01206 289367	vskipp@anglianwater.co.uk
Collection Manager	Bud Gale	-	bgale@anglianwater.co.uk
Head of sludge Treatment	Peter Joyce	-	pJoyce2@anglianwater.co.uk

3.1. Operational Contacts [P] [D]

STC/WwTW Site Manager	Richard Dunn	07809300893	rdunn@anglianwater.co.uk
CHP manager	Matt Butler		mbutter3@anglianwater.co.uk
OMC (Operations Management Centre)	Duty Manager of the Day	03457 145145	http://anglianwater.custhelp.com/app/ask/session/
CHP "in hours", CHP "out of hours"	Tim Orsborne Duty Manager	03457 145145	
Catchment service (customer support	Victoria Skipp	01206 289367	vskipp@anglianwater.co.uk

3.2. Emergency Contacts [P] [D]

OMC (Operations Management Centre)	Duty Manager of the Day	03457 145145	http://anglianwater.custhelp.com/app/ask/session/

3.3. Third Party Contacts [P] [D]

Biosolids Manager	Simon Black	-	sblack@anglianwater.co.uk
Main EA contact / Alternative Environment Agency Contact / Out of hours EA contact	Sophie Tumber	**020847 48369**	sophie.tumber@environment-agency.gov.uk
Ipswich Borough Council Environmental Health Officer Contact / Alternative Ipswich Borough Council Contact	Caroline Talbot/ Environment Health General Contact	01473 433116	Caroline.talbot@ipswich.gov.uk / environmentalhealth@ipswich.gov.uk

4. Risks and mitigations

4.1. Risk Identification [P]

An Environmental Risk Assessment was completed as part of the generation of this plan and can be as an independent document on SharePoint.

The site has also completed a 'Sludge Treatment Centre Operational and Contingency plan' which can be found on Hawk.

4.2. Risk Mitigation [P] [D]

The following section addresses some of the risks identified in the risk assessment process.

4.2.1. Noise and Vibration

- Assets were built to WIMES which is the water industry standard. There is no documented issue with regards to noise at the site as the current operations have not caused any noise related complaints.

- During normal operations equipment is routinely checked for any increase in noise or vibration, and maintenance jobs raised and carried out where this is the case using the POSMAINT system and recorded on app for pumps and mechanic plants. Since there have been no noise related complaints and noise and vibration impacts are considered to be appropriately mitigated, a separate Noise Impact Assessment and Noise Management Plan are also not considered to be required.

- If a complaint is made with respect to noise or vibration the Treatment Manager will assess the cause of the complaint and will report the findings. If the noise or vibration leading to the complaint has been caused by a continuing operation, additional noise or vibration surveys may be required to confirm the degree of impact upon the receptor. The Treatment Manager will make any recommendations for further noise or vibration control to the Management Team and shall inform the Environment Agency of the complaint as soon as it is practicable to do so.

4.2.2. Spill control

Cliff Quay Odour Plan

- All IBC have been stored as requested by the EA
- All IBC in use stored on portable bunds
- All fuel keep in bunded fuel tanks
- Spill kits on site next to fuel tanks for plant on site, main blower building, chemical storage compound and IBC area.
- Polymer spill control with polymer kill stored in chemical compound.
- Sewage spill are contain by the site drainage returning back to the main high lift pumping station on site.

4.2.3. Reporting an incident

Cliff Quay Odour Plan

- Reports of all spills that my effect the environment or effect odour or compliance will go through the local manger during office hours and through the OMC duty manager after hours but all incidents will be log on the OMC duty log.
- CHP alarms will go to control or the direct number for Edina

4.2.4. Odour event

Cliff Quay Odour Plan

- The Site and OMC Manager will advise the EA and EHO, as well as each other, of any abnormal operation or maintenance work which is likely to result in increased odour emissions. Emissions and the potential for odour nuisance will be minimised through positive odour control measures and planning of maintenance activities.

4.2.5. Damage to a habitat

- Cliff quay STW - no tree or hedge works during the bird breeding season from 1st March to 31st July unless absence is confirmed by a suitably qualified ecologist. Consideration should be given to birds, such as wood pigeon, that will nest outside of this period. It is an offence to destroy the nest of any wild bird under the Wildlife and Countryside Act 1981 (as amended).

- All sites with water courses – otters have now spread extensively and we are finding them on most rivers when looking. This should be a consideration for works within ~5m of a water course. We own a section of land outside the operational fence to the East of the STW that is part of Orwell Country Park.

- The Orwell Estuary SSSI includes our outfall and jetty.

4.2.6 Extreme weather and flood risk

In the event of high wind and associated power loss to Cliff Quay, the site has electrical generation from two generators that are able to fully run the site.

For extreme cold and snowfall we have contracts set up to ensure site access and associated gritting services. For our plant/assets we follow the AW maintenance standards for 'frost protection' whereby plant and associated pipe work is insulated for added protection. We also store portable heating equipment.

Cliff Quay has a Flood Emergency Response Plan. This is held by the AW Business resilience team. This document is held on the AW SharePoint system.

5. Permit conditions

The permits in place require a number of things to be completed and limits to be met.

Reports to the Environment Agency required by the permits are:

Type	Responsible	Detail	Frequency
Waste Returns	R Dunn	Tonnage waste	Quarterly
CHP report	R Dunn	Units	Annual
CHP Emissions	R Dunn	Units	Annual

Other conditions include the limits set by the regulator. These include import and emissions limited as detailed below:

- 250000 tonnes annual import threshold (waste streams permitted listed later in the plan) at Sludge Treatment Centre
- The maximum storage capacity of the site will be 75,000 tonnes
- Emissions sampling
    - 500mg/m^3 NO_x
    - 1400mg/m^3 CO
    - Total VOC 1000mg/m3
- Improvement conditions
    - See the CHP permit for details, hard copy in office or on SharePoint.

6. Specific Plans

Each site has a comprehensive library of documents that support the efficient and successful operation of the site. This plan is not going to detail those plans but direct the reader to the locations of the plans.

6.1.1. Odour

An odour plan for the site can be found at:
Cliff Quay Odour Plan

6.1.2. Gas

A gas plan for the site can be found at:

Cliff Quay Gas Plan

6.1.3. Contingency

A Sludge Treatment Centre Operational and Contingency plan has been withdrawn

6.1.4 Site Closure

A site closure plan can be view on central folders.

6.1.5 CHP

All the lubricants for the CHPs are held within the contained unit. This incorporates a spill bund. Antifreeze is stored outside on a bund. Sill Kits are also located within that area. The Operating and Maintaining of the CHPs is managed by EDINA. This is a fully inclusive contract with AW. The area of responsibility is both CHP engines and plant within the kiosks

6.1.6 Asset/plant maintenance

Asset maintenance plans have been set up on the Anglian Water Work Management System through SAP. This based upon the policies and standards for the maintenance and the routine operational plans for Cliff Quay. Actual work orders are deployed to the technical staff automatically to complete and record.

6.1.7 Breakdown procedures/plans

AWS has a telemetry system linked to Cliff Quay to inform through an alarm events of a failure/breakdown. This is monitored in Lincoln from the OMC. The response to this is risk based and we have 24hr/365day cover for these eventualities. This is done using our own technical teams as well has having a number of partners available through various contracts and levels of service.

Most of the installed plant is on a Duty/Standby set up and we hold critical spares at strategically placed central logistic centres in the AW region. We also have the ability through our contract partners to hire specific equipment in to site to mitigate any issues.

6.1.8 Shutdown and start up procedures

The CHP kiosk and the Steam Boiler house have Fire Alarm and Gas alarm systems that automatically shut the plant down in the event of an emergency. Once these go into alarm status they require a manual intervention to be reset and start safely.

The Steam Boiler is also monitored 24/7. We have a hard wired link to Lincoln OMC with a 'PM5' panel where we can shut down the plant remotely in the event of an alarm in the boiler house on site. This will also need to have a manual intervention from Lincoln and site to allow a safe start up.

As part of the Cliff Quay Flood Emergency Response Plan a section in that plan identifies the correct process to shut down equipment safely. This process applies for any emergency event as required.

In the event of the CHP failing, the flare stack will automatically operate as the Gas holder volume increases and reaches the 90% start up level.

7. Site Management [D]

This section looks at the management of site to minimise impact to the environment.

7.1 Training

Anglian Water utilise the Licence to Operate approach to all technical and management staff at Cliff Quay. This involved full training in operating and maintaining equipment / plant with on-going assessment for competence. Records of all training are held individually through the AW work management system – SAP.

All staff are notified of any new or procedural changes within the business through the Business Systems team briefings. These are all recorded and signed for as acceptance and delivered on a monthly frequency.

The sludge Technicians on site are trained as Boiler attendants a suitably steam trained

The TM (Richard Dunn) holds Waste Management certification for Cliff Quay.

All the process operatives are trained in pollution prevention and assessment.

7.2 Waste Management

Waste management is a highly regulated activity and as a site we have regulatory obligations with regards importing and treating waste as well as the standard Duty of Care obligations. This section looks at those obligations.

7.2.2 Identification of wastes [P]

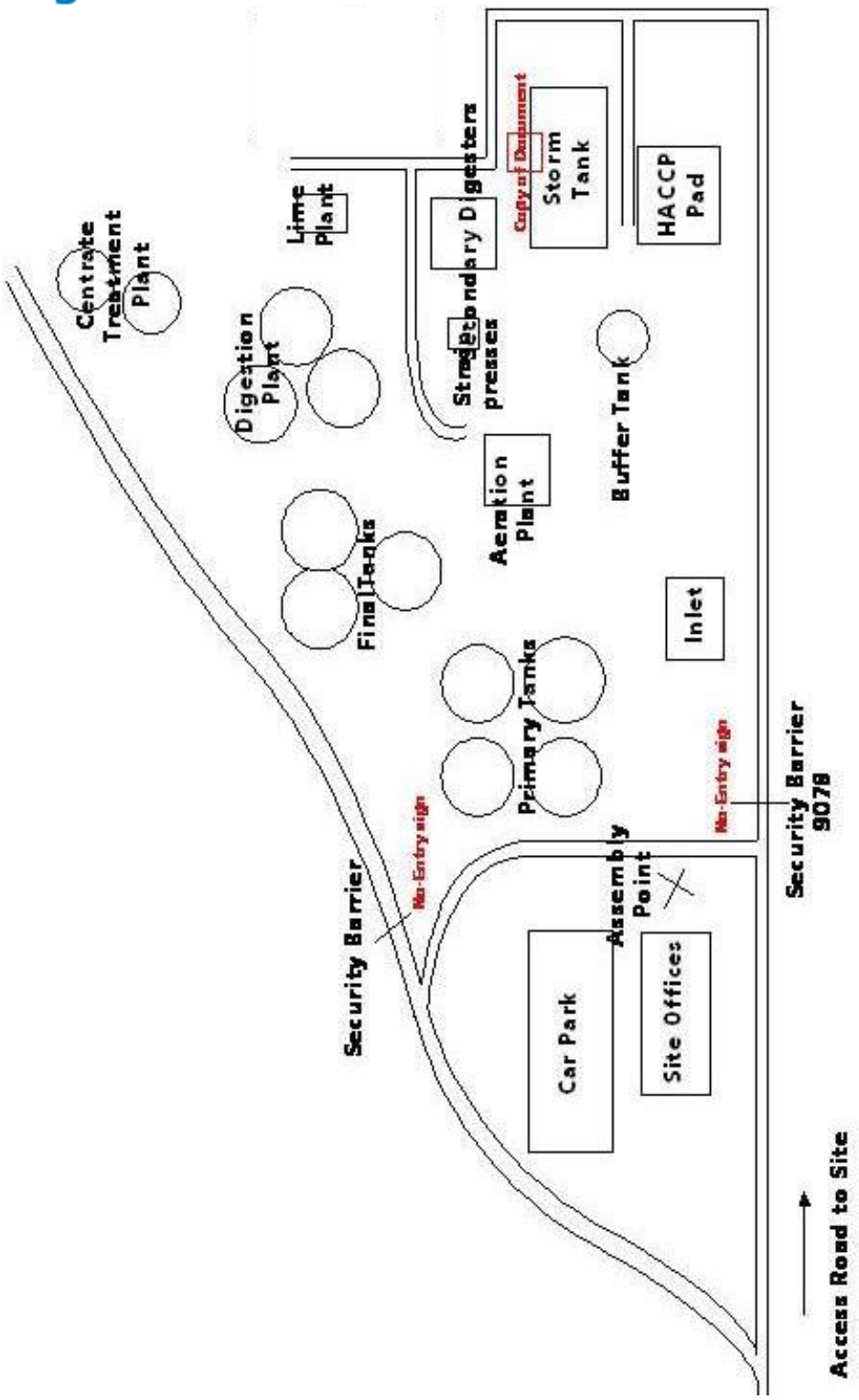
The activities on this site generate a wide range of wastes. Primarily though we generate:

EWC code	EWC Description	AW Description
19 08 05	*Sludges from treatment of urban waste water*	*Cake and Sludge*
20 03 01	Mixed municipal waste	General waste
20 01 01	Paper and cardboard	Paper and cardboard
20 03 06	Screenings	Grit and Rag
20 01 38	Wood other then that in 20 01 37	Pallets from site deliveries
20 01 40	Metal	Metal
16 01 07	Oil filters form vehicles	Oil Filters from CHP
13 02 06	Synthetic engine, gear and lubricating oils	Oil from CHP

16 01 15	Antifreeze fluids other then those mentioned in 16 01 14	Antifreeze from CHP
16 06 02	Batteries Ni-cd	Batteries Ni-cd
13 02 06	Synthetic engine, gear and lubricating oil	CHP oil

7.2.3 Location of wastes

Waste storage on this site is part of our normal operations the diagram below highlights areas where wastes are stored in skips and other waste containers. The processes that treat waste are labelled.



KEY
Compost plant and M&E areas are not in the control of the site manager.

Skip areas are;

Blue skip for general waste
Black waste oil storage area
Yellow skip for paper and cardboard
Red for Screenings

7.2.4 Management of contractors exporting waste [D]

Anglian Water has 5 waste streams removed from this site.
These are managed and controlled in the following manner:

EWC Code	EWC Description	Carrier	Broker	Disposal Route
19 08 05	Sludge's from treatment urban waste water	Biosolids		Recycled to Land
19 08 01	Screenings	Biffa		Land fill
20 03 01	Mixed municipal waste	Biffa		Land fill
20 01 01	Paper and Cardboard	Biffa		Biffa waste Recycled
16 06 02	Batteries Ni-cd	Biffa		Recycled
16 01 07	Synthetic engine, gear and lubricating oil	Biffa		Recycled
20 01 40	Metal	Biffa		Recycled

Copies of the Waste Transfer Notes and Consignment Notes for these waste movements (skips and the like) for Biffa can be found at the WROL office in Cambridge. Wastes that are disposed of to land by WROL / CE and Biosolids have comprehensive records held by WROL / CE and Biosolids and can be obtained from the Biosolids office in Cambridge.

7.2.5 Management of importing waste

Waste is imported to this site as part of the waste operations.

This site does accept transfers of AW waste falling under the classifications (as stipulated in the Sludge Treatment Centre Permit);

19 08 01
19 08 05
19 08 09
19 09 02

19 09 03
19 09 06
20 03 04
20 03 06
20 03 99

Copies of the Waste Transfer Notes for the import of Cess and Septic are covered by the signing in process and with a sampling regime to ensure that the waste is the correct classification. These are held in the Ipswich office and sent monthly to RTS.

Wastes that are imported by WROL and Biosolids have comprehensive records held by WROL and Biosolids and can be obtained from The Biosolids office in Cambridge.

Wastes that are imported for the composting process are covered by waste transfer notes which are held in the compost office at Ipswich.

7.3 Biodiversity

Anglian Water has a 'duty' to have regard for the conservation of biodiversity in exercising its functions under the Natural Environment and Rural communities (NERC) Act 2006, in addition to maintaining compliance with various other pieces of environmental legislation. AW has identified priority species and habitats on its landholdings through the AW Biodiversity Action Plan (BAP) which brings us in line with Government strategy.

7.3.2 This Site [P]

The biodiversity on this site was surveyed on 28th November 2012.

Site operations should refer to "Biodiversity: Guidance for operations" leaflet – currently in production or contact Biodiversity Team.
A site specific management plan will be produced for site. Findings from the biodiversity surveys are held on the biodiversity database and will eventually be mapped on to overlays of each site.

This site was surveyed and the following species and areas of interest were identified:

- The outfall and jetty are situated within Orwell Estuary SSSI
- The operational site and land outside the fence under AW ownership is adjacent to Pipers Vale LNR.

7.3.3 Active biodiversity

All AW personnel are encouraged to act as the "eyes and ears" of the company and report any species that they see that has not previously been identified on the site. Any species records should be sent to biodiversity@anglianwater.co.uk. Here the surveys will be looked at and used to inform company decisions and so that the biodiversity team can provide support to the site.

7.3.4 Rules for biodiversity

There are some general rules which have been developed for operation on sites:
Do not drive on the grassed areas unless specifically authorised to do so.
Report all damage to trees and habitats caused on site.
Refer to "Biodiversity: Guidance for operations" leaflet for day to day activities.

Anglian Water IED Permitting
Climate Change Risk Assessment

Cliff Quay STC

7. Climate Change Risk Assessment

7.1.Risk Assessment

This section of the report identifies potential climate impacts to the site, arising from the changing climate variables identified by the Environment Agency in the template worksheet.

The Environment Agency templates identifies, for each river basin, the projected change in the following seven climate variables between now and the 2050s:

Summer daily maximum temperature;

Winter daily maximum temperature;

Peak rainfall intensity (biggest rainfall events);

Average winter rainfall;

Sea level;

Average summer rainfall;

Peak flow in watercourses.

The change values given are for the 2050s time period, consistent with a 4ºC rise in global mean temperature by the end of the century (a so-called 4ºC scenario). They are based on the UK Met Office climate projections 2009 (UKCP09)[1]. Overall the climate projections indicate hotter, drier summers and warmer, wetter winters, together with an increase in storm events.

Based on the potential changing climate variables, key impacts to the site and its operation have been identified. For a wastewater treatment plant, impacts commonly identified include potential increases in odour issues associated with future warmer summer temperatures, and potential increase in the risk of fluvial or surface flooding due to changes in precipitation regime.

Following the Environment Agency guidance, once all the potential climate impacts for a site have been identified, the Likelihood and Severity of each climate impact identified for an individual site is scored, following Environment Agency scoring guidance. The combination of Likelihood and Severity provides the Risk rating for each climate impact. (Risk = Likelihood x Severity). Where the risk rating for a climate impact is greater than 5, mitigation measures are identified to reduce the effect of the climate impact should it occur, and the residual likelihood and severity of the climate impact are re-rated after mitigation to ensure the residual risk is at an acceptable level.

The scoring criteria for severity and likelihood of impact, as set out by the Environment Agency guidance, are below:

Severity of impact:

severe impact: short-term, acute impact to operations resulting in permanent compliance breach(es)

medium impact: short-term, acute impact to operations resulting in multiple temporary compliance breaches

mild impact: short-term, acute impact to operations resulting in single temporary compliance breach

minor impact: short or long-term impact resulting in additional measures for compliance

Likelihood of impact:

highly likely: event appears very likely in the short term and almost inevitable over the long term, or there is evidence of the event already happening

likely: it is probable that an event will occur, or circumstances are such that the event is not inevitable, but possible in the short term and likely over the long term

low likelihood: circumstances are such that an event could occur, but it is not certain even in the long term that an event would occur and it is less likely in the short term

unlikely: circumstances are such that it is improbable the event would occur even in the long term

Risk score calculation

	Severe impact (score= 4)	Medium impact (score = 3)	Mild impact (score = 2)	Minor impact (score = 1)
Highly likely (score = 4)	16	12	8	4
Likely (score = 3)	12	9	6	3
Low likelihood (score = 2)	8	6	4	2
Unlikely (score = 1)	4	3	2	1

Risk categories

12 to 16: high

8 to 9: moderate to high

to 6: moderate to low

1 to 3: low

7.2.Mitigation measures

Mitigation measures are identified, tailored to each identified climate impact. Some are specific actions which follow methods already in place at the site today – for e.g. implementing additional odour control measures if higher summer temperatures have been identified as potentially leading to increased odour issues in future.

In some instances, mitigation measures are not solely physical actions, they can include for example, increased monitoring, or carrying out regular reviews of existing site flood plans and ensuring these are updated in line with any new Environment Agency guidance. Mitigation actions identified should be proportionate to the risk identified.

Operator Name: Anglian Water

Permit reference number: EPR/LP3499SY and EPR/RP3435GB

7.3.Risk assessment worksheet for the 2050s

As the final score was above 10, this document has been included in the permit application and has been fed into the environmental management plan

Potential changing climate variable	A Impact	B Likelihood	C Severity	D Risk (B x C)	E Mitigation (what will you do to mitigate this risk)	F Likelihood (after mitigation)	G Severity (after mitigation)	H Residual risk (F x G)
1. Summer daily maximum temperature may be around 7°C higher compared to average summer temperatures now.	a) Increase in odour due to high temperatures. b) The CHP unit at the site has a maximum operating temperature of 40ºC. With a projected increase in daily maximum temperatures of up to 7ºC compared to present day, 40ºC temperatures will still be reached rarely, if at all, hence this is classed as low likelihood event. c) Potential increase in risk of biogas or AD explosion due to higher temperatures.	a) b) 2 c) 1	a) 3 b) 2 c) 4	a) 9 b) 4 c) 4	a 1) Implement additional odour control measures. a 2) Introduce additional water to the system. b) none required. b 2) Boiler house has auto cut off above 40ºC to safeguard against high temperatures b 2) CHPs have auto shut down if risk of overheating.	a) 2 b) -	a) 2 b) -	b) 4 b) -
2. Winter daily maximum temperature could be 4°C more than the current average, with the potential for more extreme temperatures, both warmer and colder than present.	Colder temperatures than those experienced at present may impact as follows: a) Generators/boilers do not like starting below -15ºC. b) Whesso valves can freeze at temperatures below -5ºC. These are both low likelihood events.	a) 2 b) 2	a) 2 b) 2	a) 4 b) 4	a) None required. b) None required.	-	-	-

3. The biggest rainfall events are up to 20% more intense than current extremes (peak rainfall intensity) *.	a) Site wastewater treatment capacity exceeded due to incoming flows – risks direct discharges to the watercourses if stormwater storage is exceeded. b) Low risk of surface flooding on the site as on a hill.	a)2 b)2	a) 3 b) 2	a) 6 b) 4	a)1) Ensure screening in place for any wastewater. overtopping the stormwater storage (i.e. screening on the outfall). a)2) Alternatively increasing the stormwater storage capacity could be another option. b) Site emergency plan and site management to be kept up to date with any new data on flood risk from Environment Agency (new flood risk will be available as knowledge of future climate change progresses). b) None needed	a)1 b) -	a)2 b) -	a)2 c) -
4. Average winter rainfall may increase by 35% on today's averages.	As above, the same risks arise 1)Site wastewater treatment capacity exceeded due to incoming flows - risk of direct discharges to the watercourses if stormwater storage is exceeded. b) Risk of surface flooding on the site. Very low risk of surface water flooding form sea level as shown on gov.uk's flooding risk calculator.	a)3 b)3	a) 3 b) 2	a) 9 b) 6	a)1) Ensure screening in place for any wastewater overtopping the stormwater storage (i.e. screening on the inlet screens). A) 2) Storm tanks TPS to carry excess water away from works a) 2) Alternatively increasing the stormwater storage capacity could be another option. b) Site emergency	a) 2 b) 2	a) 2 b) 2	a) 4 b) 4

					plan to be kept up to date with any new data on flood risk from Environment Agency (new flood risk will be available as knowledge of future climate change progresses).			
5. Sea level could be as much as 0.6m higher compared to today's level *.	Site is on land at risk of flooding from sea level as shown on gov.uk's flooding risk calculator.	8	3	6	1) Ensure flood plan for site follows EA guidance. 2) Include provision of sump pump to keep site clear of surface flood water. 3) Ensure diesel generators are at sufficient height to ensure they are not at risk of flooding	2	2	4
6. Drier summers, potentially up to 39% less rain than now.	a) Increase in odour issues due to higher temperatures. b) Site uses potable water for several processes (for poly make up, heat exchange, eye bath and safety showers. Also wash down hoses near digestors and liming plant). If drought is severe enough to interrupt potable water supply, site operations will be disrupted / could be affected.	a) 3 b) 1	a) 3 b) 4	a) 9 b) 4	a) 1) Implement additional odour control measures. a) 2) Introduce additional water to the systems. b) No mitigation required as very low risk. Score under 5. However, water could be supplied to site using bowsers. Potable water is assessed by water regs team. No potable water = boilers turn off = turn off stc	a) 2	a) 2	a) 4

7. At its peak, the flow in watercourses could be 35% more than now, and at its lowest it could be 80% less than now.	None beyond those already covered above under 3,4 (for higher flow), and 6 (reduced flow in watercourses).