Ashford STC

Incident Management Plan

November 2023
Final Draft for Review

Revision Tracking

Revision	Date	Author	Review	Approve
9.0	14.11.23	PG		

from Southern Water

1 Site Details

ASHFORD WASTEWATER TREATMENT WORKS INCIDENT MANAGEMENT PLAN	
Company Name	Southern Water Services Limited
Company Address	Southern House, Yeoman Road, Durrington, West Sussex, BN13 3NX
Site Address	Ashford WTW Canterbury Road Ashford Kent TN24 9QB
Site NGR	TQ 0202 4325
What 3 Words location	///empire.reform.orders
Site Activities	Treatment of wastewater to produce final effluent (discharged to River) and sludge treatment centre (STC). Reception and treatment of domestic tinkered waste (Cess) and liquid sludge.
Number of Staff	12 Operators onsite and up to 3 Office staff. There is also a training/meeting room onsite that is used often.
Surrounding Area	Residential
Plan Date	Nov 2023
Version Number	5
Plan Author	Paul Goring
Plan Authorised By	Colin Leavers
Review Date	Nov 23
Date of Next Review	Nov 24
Objective of Incident Management Plan	To compile all information needed on site to manage an Incident and minimise the impact upon the environment
External Plan Consultees	Police
	Fire Service
	Local Council
	Environment Agency
Distribution List	Site
	Duty Manager Control Centre
	Head of Health and Safety, Security and Wellbeing
	EMS Manager
	Fire Service
	Environment Agency
	Police
	Ambulance Service

2 Useful Internal & External telephone numbers contact list.

EXTERNAL CONTACTS		
Contact	**Office Hours**	**Out of Hours**
Emergency Services (Fire/ Police/ Ambulance)	999 / non-emergency 101	999 / non-emergency 101
Local Police	999	999
Local Hospital	William Harvey Hospital Kennington Road Willesborough Ashford TN24 0LZ	999
EA Incident Hotline	0800 80 70 60	0800 80 70 60
EA Local Contact	Katie Trevillion-Bell 03708 506506	0800 80 70 60
Local Authority Emergency Planning Department	Emergency Planning Duty Officer (24 hr) Kent Resilience Team / Kent County Council 03000 414 999	03000 414 999
Borough Council	Ashford Borough Council 01233 629911	Out of Hours 01233 616320
Water Company	Duty Manager, Control Centre 01903 272095	Duty Manager, Control Centre 01903 272095
Gas Company	0800 111 999	0800 111 999
Electricity Company	UK Power Networks 08433 102243	UK Power Networks 08433 102243
Framework Waste Contractor	MTS 01634 250326	MTS 01634 250326
Specialist Spill Clean Up Contractor	MTS 01634 250326 Cappagh Browne 0330 3031279	MTS 01634 250326 Cappagh Browne 0330 3031279
INTERNAL CONTACTS		
Names and Position of Staff trained to activate and coordinate Plan	Duty Manager, Control Centre 01903 272095 Site Manager Colin Leavers 07880 132395	Duty Manager, Control Centre 01903 272095
CEO	Lawrence Gosden 01903 272393 Number withheld	Duty Manager, Control Centre 01903 272095
Site Manager	Colin Leavers 07880132395	Duty Manager, Control Centre 01903 272095
Environmental Management System Manager	Adam Glenister 07788 18352	Duty Manager, Control Centre 01903 272095
Head of Health and Safety, Security and Wellbeing	Sally Ford 07840 718058	Duty Manager, Control Centre 01903 272095
Framework Contractors	Duty Manager Control Centre 01903 272095	Duty Manager, Control Centre 01903 272095
Escalation of Incidents to RCC.	Duty Manager Control Centre 01903 272095	Duty Manager, Control Centre 01903 272095

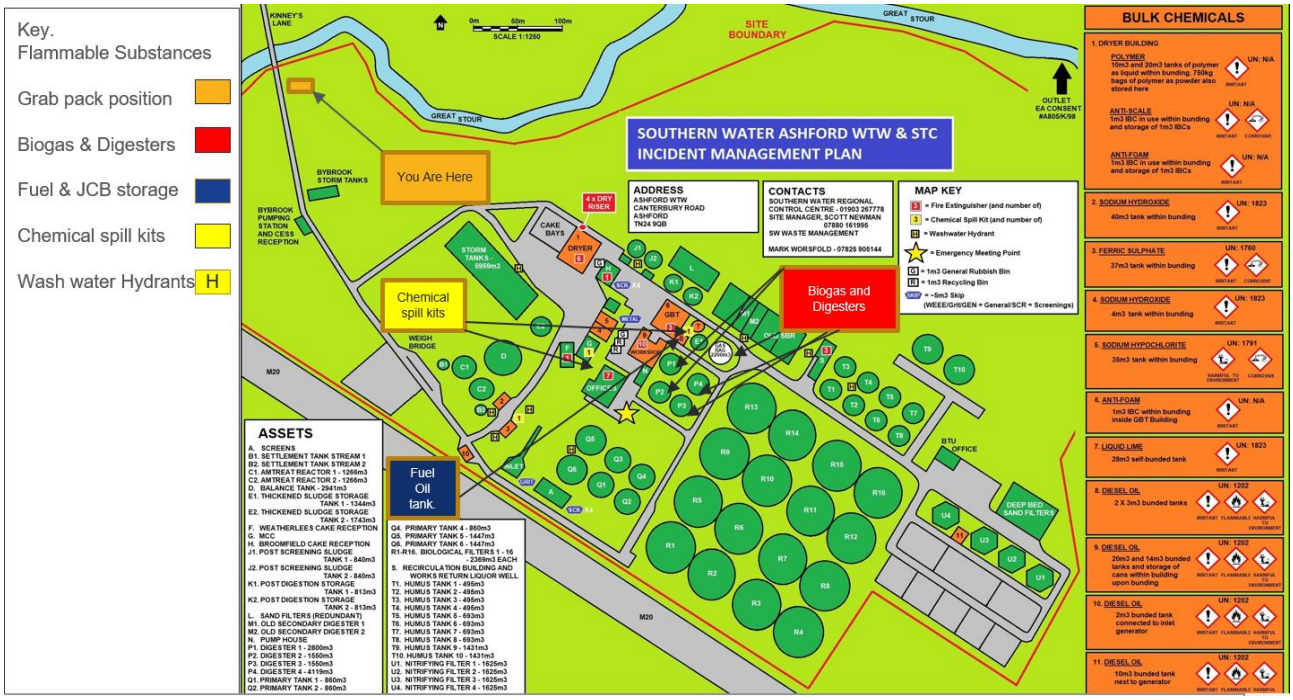
EXTERNAL CONTACTS		
Contact	**Office Hours**	**Out of Hours**
Emergency Services (Fire/ Police/ Ambulance)	999 / non-emergency 101	999 / non-emergency 101
Local Police	999	999
Local Hospital	William Harvey Hospital Kennington Road Willesborough Ashford TN24 0LZ	999
EA Incident Hotline	0800 80 70 60	0800 80 70 60
EA Local Contact	Katie Trevillion-Bell 03708 506506	0800 80 70 60
Local Authority Emergency Planning Department	Emergency Planning Duty Officer (24 hr) Kent Resilience Team / Kent County Council 03000 414 999	03000 414 999
Borough Council	Ashford Borough Council 01233 629911	Out of Hours 01233 616320
Water Company	Duty Manager, Control Centre 01903 272095	Duty Manager, Control Centre 01903 272095
Gas Company	0800 111 999	0800 111 999
Electricity Company	UK Power Networks 08433 102243	UK Power Networks 08433 102243
Framework Waste Contractor	MTS 01634 250326	MTS 01634 250326
Specialist Spill Clean Up Contractor	MTS 01634 250326 Cappagh Browne 0330 3031279	MTS 01634 250326 Cappagh Browne 0330 3031279
INTERNAL CONTACTS		
Names and Position of Staff trained to activate and coordinate Plan	Duty Manager, Control Centre 01903 272095 Site Manager Colin Leavers 07880 132395	Duty Manager, Control Centre 01903 272095
CEO	Lawrence Gosden 01903 272393 Number withheld	Duty Manager, Control Centre 01903 272095
Site Manager	Colin Leavers 07880132395	Duty Manager, Control Centre 01903 272095
Environmental Management System Manager	Adam Glenister 07788 18352	Duty Manager, Control Centre 01903 272095
Head of Health and Safety, Security and Wellbeing	Sally Ford 07840 718058	Duty Manager, Control Centre 01903 272095
Framework Contractors	Duty Manager Control Centre 01903 272095	Duty Manager, Control Centre 01903 272095
Escalation of Incidents to RCC.	Duty Manager Control Centre 01903 272095	Duty Manager, Control Centre 01903 272095

3 Site Overview & Storage of Chemicals and flammable substances:

Indigenous sewer grit and screenings are collected in separate skips and removed offsite by road vehicle and transported to a suitably permitted facility. Hazardous materials are used and stored onsite for the treatment process. Diesel is stored onsite at several locations in appropriately bunded tanks for use by generators in the event of a power failure.

For details outlining the maximum storage capacity of any chemicals on site are listed below the site Map.

Ashford IMP map.



List of Waste Inventory normally stored on site.

WASTE INVENTORY (See EMS 480)					
Trade Name/ Substance	Solid/liquid/ gas/powder	UN Number	Max Stored on Site	Location Marked on Site Plan	Type of Containment
Wastewater	Liquid	N/A	5959m3	7x Storm Tank	Tanks
Wastewater	Liquid	N/A	2532m3	2x Amtreat reactor tanks	Tanks
Wastewater	Liquid	N/A	2941m3	Balance tank	Tank
Sludge	Liquid	N/A	3067ms	2x Thickened Sludge Storage Tanks	Tanks
Sludge	Liquid	N/A	2320m3	2x Post Screening Sludge Tanks	Tanks

Sludge	Liquid	N/A	1626m3	2x Post Digestion Sludge Tank	Tanks
Sludge	Liquid	N/A	10019m3	4x Digesters	Tanks
Wastewater	Liquid	N/A	6334m3	6x Primary Settlement Tanks	Tank
Wastewater	Liquid	N/A	37904m3	16x Biological Filters	Tanks
Wastewater	Liquid	N/A	7614m3	10x Humus Tanks	Tanks
Wastewater	Liquid	N/A	6500m3	4x Nitrifying Filters	Tanks
Wastewater	Liquid	N/A	<6000m3	Cake Bays	Bays

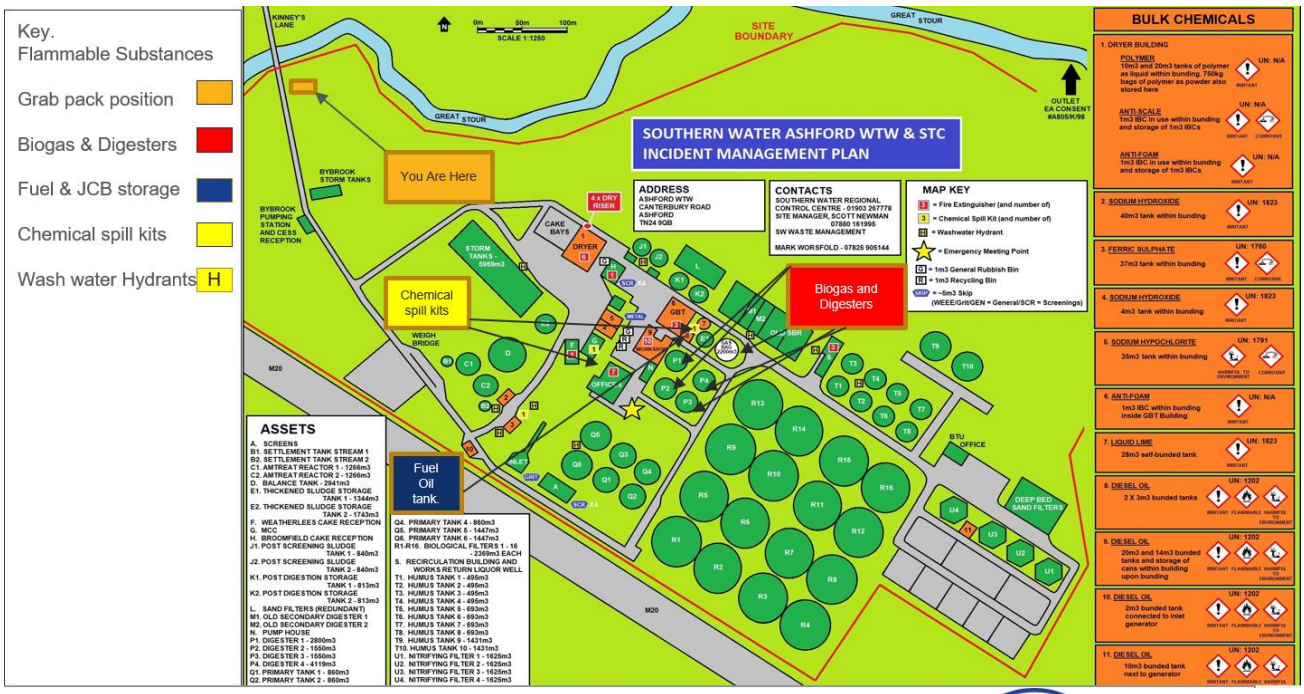
4 List of Chemical Inventory Normally stored on site.

CHEMICAL PRODUCT INVENTORY (See relevant COSHH sheets)					
Trade Name/ Substance	Solid/liquid/ gas/powder	UN Number	Max Stored on Site	Location Marked on Site Plan	Type of Containment
Diesel Oil	Liquid	1202	20,000 l or 52m3 in tanks and <5m3 in containers	Next to GBT building: Two tanks next to workshop and attached storage hut: Next to the inlet: between NTF 3&4	Tanks and Containers
Polymer	Liquid and Powder	2923	20m3 as liquid and storage of up to 20x 1m3/750kg bags	Inside Dryer building	Powder inside bags. Liquid in tanks
Anti-Scale	Liquid	N/A	2m3	Inside dryer building	IBC
Anti-foam	Liquid	N/A	5m3	Inside GBT building. Inside dryer building.	IBC
Sodium Hydroxide	Liquid	1823	44m3	Next to the inlet. Next to Weatherlees cake reception.	IBC
Ferric Sulphate	Liquid	1760	37m3	Near the inlet (Primary). Near sand filters (secondary).	Tank
Sodium Hypochlorite	Liquid	1791	35m3	Next to Weatherlees cake reception.	Tank
Calcium Hydroxide/liquid lime	Liquid	N/A	28m3	Next to Gas bag.	Tank

6 List of Fire Extinguishers & Emergency spill kits on site.

POLLUTION PREVENTION EQUIPMENT INVENTORY (ON AND OFF-SITE RESOURCES) ILLUSTRATED ON HAM HILL IMP MAP			
Type	Location	Amount	Staff Contact
Fire Extinguishers	Inside Drier Building	6	Colin Leavers 07880132395
Fire Extinguishers	Inside Broomfield bank cake reception building	1	Colin Leavers 07880132395
Fire Extinguishers	Inside Weatherlees cake reception building	1	Colin Leavers 07880132395
Fire Extinguishers	Inside Office building	7	Colin Leavers 07880132395
Fire Extinguishers	Inside workshop	10	Colin Leavers 07880 132395
Fire Extinguishers	Inside GBT building	3	Colin Leavers 07880 132395
Fire Extinguishers	Inside Recirculation building	3	Colin Leavers 07880 132395
Emergency spill kit	Next to liquid lime tank	1	Colin Leavers 07880 132395
Emergency spill kit	Inside MCC next to Weatherlees cake reception	1	Colin Leavers 07880 132395
Emergency spill kit	Next to Ferric sulphate tank (primary).	1	Colin Leavers 07880 132395
Emergency spill kit	In building near ferric sulphate tank (secondary).	1	Colin Leavers 07880 132395

Map of Fire Hydrant / Potable water point (H).



7 When to use this Emergency plan.

This plan and procedures within it should be used to control any Incidents/Emergencies at the site. Depending on the severity and the nature of the incident some or all these procedures below will help by adding guidance.

7.1 Site emergency plans and Fire service Grab packs

Each IED site will have an emergency plan designed to give a first response instruction for a number of likely events, each site also has an emergency "Grab Pack" for use primarily by the Fire Brigade attending an incident on the site.

Each IED site also has a LDAR plan with activities designed to reduce and identify any risks from leaks from tanks, pipelines, and releases of biogas in an uncontrolled manner that could lead to a fire risk.

Further documentations are available on the following link Environmental Management System Manual (sharepoint.com) and listed in the table below

SUPPORTING EMERGENCY PROCEDURES	
When this Plan should be Activated	**EMS 260 Pollution Prevention (Standard)** **EMS 360 Pollution Prevention (Procedure)** **EMS 363 Procedure for Managing Oil Spills on Sites** **EMS 364 Lime Spill Management Procedure** **FEC 322 – Spillage Procedure**
When to contact Emergency Services	**IMP 217 and IMP 218 Team Roles – Objectives and Responsibilities Alternative Response Coordinator Role Booklet**
When to contact Utility Companies	
When to Contact Local Authority	
Staff Evacuation Procedure	**SIB 603 Risk Assessment and Safety Instructions for Fire Awareness**
Special methods for dealing with Substances that pose a particular environmental risk	**EMS 363 Procedure for Managing oil spills on sites** **EMS 364 Lime Spill Management Procedure**
Fire Fighting Strategy	**CCM 302 Procedure Following the Receipt of a Fire Alarm** **SIB 603 Risk Assessment and Safety Instructions for Fire Awareness**
Use of Spill Kits and other pollution control equipment	**EMS 234 Chemical and Oil storage** **EMS 360 Pollution Prevention Procedure**
Procedure for recovering spilled product and legal disposal of waste	**EMS 360 Pollution Prevention Procedure EMS 363 Procedure for Managing oil spills on sites**
Handling Media enquiries	**BCP 415 Guidance on Reporting Potential Media Interest**

The procedures listed below should be followed in the event of an incident, site specific plans should be coordinated using ***Ashford IMP Map*** and the equipment listed above.

7.2 Fire

- Use the Model Fire Emergency plan on the H&S notice Board and in the Grab Pack container., this Model Emergency plan outlines responsibilities for site staff and call out staff during events.
- Raise the Site Alarm - call 999 and raise the Alarm with the DM / RCC.
- SW rules are that we only fight fire to evacuate area or building.

- Attend the muster point and check register for any missing persons.
- If it's safe to do so, isolate any fuel sources.
- Make sure the Fire brigade first response team are handed the site Grab pack on arrival.
- Liaise with the Fire brigade on the area, mention if anyone is missing and confirm what is stored on site (e.g. chemicals, combustible materials, BIOGAS systems etc – Refer to Sections Above)
- Please see plan of Fire Hydrants / Final effluent / Potable water points for use if required. Map in Section above.

Useful SW documents

Incident	Southern Water Procedure to be Followed
Fires	FEC 322 Spillage Procedure EMS 360 Pollution Prevention Procedure EMS 362 Environmental Fire Risk Assessment Procedure EMS 363 (oil) Procedure for Managing Oil Spills on Sites EMS 382 Hazardous Waste Procedures EMS 480 Waste Descriptions Environmental Emergencies Poster (EMS) Site Chemical Risk Register SIB 603 Risk Assessment and Safety Instructions for Fire Awareness KFB Site Grab Pack.

7.3 Explosion

- Raise the Site Alarm - call 999 and raise the Alarm with the DM / RCC.
- Attend the muster point and check register for any missing persons.
- Make sure the Fire brigade first response team are handed the Grab pack on arrival.
- Liaise with the Fire brigade on the area, mention if anyone is missing and confirm what is stored on site (e.g. chemicals, combustible materials, BIOGAS systems etc – as per Sections above)
- Please see plan of Fire Hydrants / Final effluent / Potable water points for use if required. Map on page 6.

Useful SW documents

Incident	Southern Water Procedure to be Followed
Explosion	FEC 322 Spillage Procedure EMS 360 Pollution Prevention Procedure EMS 362 Environmental Fire Risk Assessment Procedure EMS 363 (oil) Procedure for Managing Oil Spills on Sites EMS 382 Hazardous Waste Procedures EMS 480 Waste Descriptions Environmental Emergencies Poster (EMS) Site Chemical Risk Register SIB 603 Risk Assessment and Safety Instructions for Fire Awareness KFB Grab pack

7.4 Pollution

- Use the Pollution 30 Minute Plan.
- Can we mitigate or stop the pollution event - use the 10-minute checks.
- If it is safe to do so, isolate the equipment to stop the pollution, the consequence of isolating any equipment needs to be considered.
- If not raise the Alarm with the FEC / Process scientist in hours and DM / RCC/ FEC out of hours.
- Liaise with the FPM/ Process scientist in hours & DM / RCC/ FEC out of hours to reduce the impact.

Useful SW documents

Incident	Southern Water Procedure to be Followed
Pollution	FEC 322 Spillage Procedure EMS 360 Pollution Prevention Procedure EMS 362 Environmental Fire Risk Assessment Procedure EMS 363 (oil) Procedure for Managing Oil Spills on Sites EMS 382 Hazardous Waste Procedures EMS 480 Waste Descriptions Environmental Emergencies Poster (EMS) Site Chemical Risk Register SIB 603 Risk Assessment and Safety Instructions for Fire Awareness Pollution 30 Minute Plan

7.5 Flooding

- Use the Pollution 30 Minute Plan.
- Raise the site Alarm – call 999 as soon as the site starts to flood and notify the DM / RCC.
- Attend the muster point and check register for any missing persons.
- If it's safe to do so try to understand why the site is flooding, this may be obvious like the river is overflowing – the river levels are controlled by the EA so it may be possible to be managed quickly.
- Make sure the Fire brigade/first response team are handed the KFB Grab pack on arrival.
- Liaise with the Fire brigade on the area, mention if anyone is missing and confirm what is stored on site (e.g. chemicals, combustible materials, BIOGAS systems etc – as per Sections above)

Useful SW documents

Incident	Southern Water Procedure to be Followed
Flooding	CAT 303 FEC 322 Spillage Procedure Pollution 30 Minute Plan

7.6 Road traffic accident impact or collision

- Raise the Site Alarm - call 999 and raise the Alarm with the DM / RCC.
- Keep the area isolated, do not move vehicles other than for freeing people.
- Barrier off area if the impact or accident is serious.
- Await instruction from the Fire Brigade or Police depending on the nature of the event.
- Please see plan of Fire Hydrants / Final effluent / Potable water points for use if required.
- Leaking tankers after event – Fuel or Chemicals- put out spill containment if safe to do so.

Useful SW documents

Incident	Southern Water Procedure to be Followed

Road traffic accident impact or collision.	FEC 322 Spillage Procedure EMS 360 Pollution Prevention Procedure EMS 381 Operational Waste Procedures EMS 480 Waste Descriptions Environmental Emergencies Poster (EMS) Pollution 30 Minute Plan

7.7 Collapse of a structure or building

- Raise the Alarm - call 999 and raise the Alarm with the DM / RCC.
- Attend the muster point and check register for any missing persons.
- Keep the area isolated, do not move debris other than for freeing people.
- Barrier off area if the collapse is serious.
- Await instruction from the Fire Brigade or Police depending on the nature of the event.
- Please see plan of Fire Hydrants / Final effluent / Potable water for use if required.

Useful SW documents

Incident	Southern Water Procedure to be Followed
Collapse of a Structure or Building.	FEC 322 Spillage Procedure EMS 360 Pollution Prevention Procedure EMS 381 Operational Waste Procedures EMS 480 Waste Descriptions Environmental Emergencies Poster (EMS) Pollution 30 Minute Plan

7.8 Spill transferring wastes

- Use the Pollution 30 Minute Plan.
- Stop the transfer if safe to do so and isolate if possible - complete Personnel Risk Assessment first.
- Contain the spill if safe to do so use Spill kits if small amounts, cover drains if possible
- Need to understand what has been spilt and where it has gone (i.e. to ground, to the site drains etc.)
- Report the incident to the FPM/DM/RCC.
- Discuss the impact of the spill with the FPM /Process Scientist/DM.

Useful SW documents

Incident	Southern Water Procedure to be Followed
Spill transferring wastes	FEC 322 Spillage Procedure EMS 360 Pollution Prevention Procedure EMS 381 Operational Waste Procedures EMS 480 Waste Descriptions Environmental Emergencies Poster (EMS) Pollution 30 Minute Plan

7.9 Spills transferring chemicals

- Use the Pollution 30 Minute Plan.
- Stop the transfer if safe to do so and isolate if possible - complete Personnel Risk Assessment first.
- Contain the spill if safe to do so, use Spill kits if small amounts, cover drains if possible
- Need to understand what has been spilt and where it has gone (i.e. to ground, to the site drains etc.)
- Report the incident to the FPM/DM/RCC.
- Discuss the impact of the spill with the FPM /Process Scientist/DM.

Useful SW documents

Incident	Southern Water Procedure to be Followed
Spill transferring chemicals	FEC 322 Spillage Procedure EMS 234 Chemical and Oil Storage EMS 381 Operational Waste Procedures EMS 382 Hazardous Waste Procedures EMS 361 Chemical Risk Assessment Procedure Site Chemical Risk Register Pollution 30 Minute Plan

7.10 Overfilling vessels

- Stop the transfer if safe to do so and isolate if possible - complete Personnel Risk Assessment first.
- Use the Pollution 30 Minute Plan.
- Contain the spill if safe to do so, use Spill kits if small amounts, cover drains if possible
- Need to understand what has been spilt and where it has gone (i.e. to ground to the site drains etc.)
- Report the incident to the FPM/DM/RCC.
- Discuss the impact of the spill with the FPM /Process Scientist/DM.

Useful SW documents

Incident	Southern Water Procedure to be Followed
Overfilling vessels	FEC 322 Spillage Procedure FEC 320 Process Related Incidents EMS 260 Pollution Prevention (Standard) EMS 234 Chemical and Oil Storage EMS 360 Pollution Prevention Procedure EMS 363 Procedure for Managing Oil Spills on Sites EMS 382 Hazardous Waste Procedures EMS 480 Waste Descriptions Site Chemical Risk Register Pollution 30 Minute Plan

7.11 Plant and equipment failures

- Stop the transfer or process if safe to do so and isolate if possible - complete Personnel Risk Assessment first.
- Use the Pollution 30 Minute Plan.
- Contain the spill if safe to do so, use Spill kits if small amounts, cover drains if possible
- Need to understand what has been spilt and where it has gone, including Biogas releases (i.e. release to ground, to the site drains or the atmosphere etc.)
- Report the incident to the FPM/DM/RCC.
- Discuss the impact of the spill with the FPM /Process Scientist/DM.

Useful SW documents

Incident	Southern Water Procedure to be Followed
Plant and equipment failures	FEC 322 Spillage Procedure FEC 320 Process Related Incidents EMS 260 Pollution Prevention Standard EMS 360 Pollution Prevention Procedure EMS 363 Procedure for Managing Oil Spills on Sites EMS 382 Hazardous Waste Procedures

	EMS 480 Waste Descriptions Pollution 30 Minute Plan

7.12 Containment failure

- Stop the transfer or process if safe to do so by isolation - complete a personal Risk Assessment first.
- Use the Pollution 30 Minute Plan.
- Contain the spill if safe to do so, use Spill kits if small amounts, cover drains if possible
- Need to understand what has been spilt and where it has gone, including Biogas releases (i.e. release to ground, to the site drains or the atmosphere etc.)
- Report the incident to the FPM/DM/RCC.
- Discuss the impact of the spill with the FPM /Process Scientist/DM.

Useful SW documents

Incident	Southern Water Procedure to be Followed
Containment failure	FEC 322 Spillage Procedure EMS 234 Chemical and Oil Storage EMS 260 Pollution Prevention (Standard) EMS 360 Pollution Prevention Procedure EMS 363 Procedure for Managing Oil Spills on Sites EMS 381 Operational Waste Procedures EMS 382 Hazardous Waste Procedures Pollution 30 Minute Plan

7.13 Failure to contain firewater.

- Use the Pollution 30 Minute Plan.
- Contain the firewater if it is possible to do so, use Spill kits if small amounts, cover drains if possible
- Need to understand what amount has been spilt and where it has gone (e.g. site return WPS, to ground, to the site drains). Can it be contained and disposed off offsite?
- Report the incident to the FPM/DM/RCC.
- Discuss the impact of the spill with the FPM /Process Scientist/DM. – PS to risk assess impact.

Useful SW documents

Incident	Southern Water Procedure to be Followed
Failure to contain firewater	FEC 322 Spillage Procedure EMS 360 Pollution Prevention Procedure EMS 362 Environmental Fire Risk Assessment Procedure EMS 381 Operational Waste Procedures EMS 382 Hazardous Waste Procedures EMS 480 Waste Descriptions Environmental Emergencies Poster (EMS) Pollution 30 Minute plan

7.14 Incorrect connection leading to releases to drains and other systems

- Use the Pollution 30 Minute Plan.
- Contain the spillage or if it is possible to do so, use Spill kits if small amounts, cover drains if possible
- Need to understand what amount has been spilt and where it has gone, is it in the site return WPS, has the release been to ground to the site drains. Can it be contained and disposed off offsite?
- Report the incident to the FPM/DM/RCC.

- Discuss the impact of the spill with the FPM /Process Scientist/DM. – PS to Risk Assessment & impact.

Useful SW documents

Incident	Southern Water Procedure to be Followed
Incorrect connection to drains and other systems	FEC 322 Spillage Procedure EMS 360 Pollution Prevention Procedure EMS 365 Discharges Procedure Environmental Emergencies Poster (EMS) Pollution 30 Minute plan

7.15 Incompatible substances coming into contact

- Use the Pollution 30 Minute Plan.
- Keep upwind of any potential fumes.
- Raise the Site Alarm - call 999 if any fire or fumes are being generated, raise the Alarm with the DM / RCC.
- Discuss the impact of the spill with the FPM /Process Scientist/DM.
- Contain the solution if it is possible to do so, use Spill kits if small amounts, cover drains if possible
- Need to understand what amount has been spilt and where it has gone (e.g. released to site return WPS, to ground, to the site drains). Can it be contained and disposed off offsite?
- Check the site COSHH register for both or all the components for likely reactions.

Useful SW documents

Incident	Southern Water Procedure to be Followed
Incompatible substances coming into contact & Unwanted/ runaway reactions	FEC 322 Spillage Procedure EMS 234 Chemical and Oil Storage EMS 360 Pollution Prevention Procedure EMS 361 Chemical Risk Assessment (Procedure) EMS 461 Chemical Risk Assessment (Form) EMS 480 Waste Descriptions Site Chemical Risk Register Pollution 30 Minute plan

7.16 Emission of effluent or Biogas before composition checked

- Use the Pollution 30 Minute Plan.
- Remember this Emission may be a release of Biogas to Atmosphere. (We are Not able to sample biogas).
- Sample the effluent if it is safe to do so and notify the FPM/ Process scientist of results.
- Discuss the impact of the spill with the FPM /Process Scientist/DM for next steps.
- Report the incident to the DM/RCC/ SW Pollution team for Info.
- Stop the transfer if safe to do so and isolate if possible - complete Personnel Risk Assessment first.
- Contain the release if safe to do so, if there are spare containment tanks utilise these via discussion with Incident team.
- Stop the process, use site spill kits if small amounts have been spilt, cover drains if possible.
- Need to understand what has been released and where it has gone (e.g. to ground, to the site drains etc.)

Useful SW documents

Incident	Southern Water Procedure to be Followed
Emission of effluent or Biogas before composition checked	FEC 322 Spillage Procedure EMS 265 Discharges (Standard) EMS 365 Discharges (Procedure)

	Pollution 30 Minute plan

7.17 Theft & Vandalism

- Use the Pollution 30 Minute Plan if the vandalism has affected the process.
- Remember pollution Emission may be a release of Biogas to Atmosphere or poor effluent quality or a release from a process or fuel storage vessel to land or a water course.
- Discuss the impact of the theft or vandalism with the FPM /Process Scientist/DM.
- Report the incident to the DM/RCC/ SW Pollution team for inclusion in the morning 24-hour report.
- Make a thorough inspection of the SCADA and a walk of the site if we have had intruders or vandalism on the site as changes may have been made to the process.
- Report any thefts or Vandalism to the police and ask for a crime reference number.

Useful SW documents

Incident	Southern Water Procedure to be Followed
Vandalism	FEC 307 Reporting of Unauthorised Access, Including Loss, Theft and Vandalism Environmental Emergencies Poster (EMS) Pollution 30 Minute plan

8 Reporting

8.1 Incident Management Reporting

- Make your manager aware of any incidents, they will use the Rule of Two for reporting of all accidents & Incidents.
- Use the pollution teams phone number to raise any pollution events on 07557152385.
- Follow the Pollution 30 Minute plan when dealing with any pollution events.
- Remember that emission may be a released of Biogas to Atmosphere, which is a pollution event.
- If you see anything that you regard as unsafe – make the area safe (if it's safe to do so) and raise it as a hazard.
- Contact the Site FPM in hours or Duty manager if you believe the situation requires an incident response, this will then allow the FPM or duty manager to escalate to a Green, Amber or Red incident and be managed appropriately.

8.2 Hazard & Near Miss reporting

- If you see anything that you regard as unsafe – make the area safe (if safe to do so) and raise it as a Hazard or Near Miss.
- Contact the Site FPM in hours or Duty manager if you believe the situation requires an incident response, this will then allow the FPM or duty manager to escalate to a Green, Amber or Red incident.
- Make your colleagues aware of any Hazards you have identified.
- Raise a job for corrective action to eliminate or mitigate the hazard.

9 Site Contingency plans

The Ashford Site specific contingency plan is available on the site notice board or electronically by following this link - Operational Continuity Templates - WWAG (southernwater.co.uk).
Print a copy for the site and store with the Incident Management Plan and KFB Grab Pack.

10 Prevention Measures

10.1 Ashford Hill Fire Prevention Plan

A site-specific Fire Prevention Plan is available for Ashford to reduce the risk of fire and explosion. Please see the site-specific Fire prevention plan for full details of corrective measures.

10.2 Fire and explosion preventative measures (all types of plants)

Examples of good preventative measures:

10.2.1 Housekeeping

Managing good housekeeping on site. – This is covered by our Site standards checks and FPM audits EMS 418 Environmental Management site check form for wastewater.

The Ashford site is included in the gold, silver and bronze site standards awards, this system is awarded for site standards including housekeeping standards, this ensures the site is kept clean and tidy and is audited by the FPM of the site and senior managers and will ensure we don't get build ups of dust and fluff around the site.

10.2.2 Control of flammable materials

The storage of flammable materials should always be in Flammable cupboards to prevent the risk of fire, we use systems to help control our risks such as DSEAR risk assessments.

Ex rated equipment is used in DSEAR zoned areas along with good EX Signage and locked gates and compounds stop untrained personnel accessing Gas safe areas.

In the Control of Flammable materials, we provide a 6m Gap between the storage of flammable materials and any ignition sources reducing the likelihood of fires.

We prevent self-combustion by preventing the uncontrolled decomposition and self-heating of stored waste by managing and monitoring temperature and moisture – we don't really store waste other than pallets and both General waste and Recyclable waste that are in Bins and Skips that are changed frequently to reduce fire risk.

10.2.3 Permits

Southern water uses written systems such as a Permit to Work (PTW) to provide a safe system of work including Hot Works Permit system and we work to DSEAR risk assessments and use EX rated equipment in Zoned areas to prevent unsafe situations arising during site operations, repair, and maintenance tasks.

We use trained competent Technicians to carryout maintenance work; on Biogas systems we use contractors that are Gas safe trained, and they produce Risk assessments and Method statements for their work.

The hot works are carried out under a PTW system, with Risk assessment and Method statements as part of a safe system of works. This includes checking for combustible materials, gas checks and measures to take after the Hot work is completed (e.g. one-hour fire watch).

10.2.4 Access to information

All the operational team have access to a Tablet and can access the safety documentation from the tablet.

The Emergency grab pack is available in a sealed container at the entrance to the site so would be assessable in an emergency event.

10.2.5 Plant maintenance

We maintain plant in a good state through a preventive maintenance programme and a control and testing programme with our Asset Maintenance team and a clear approved list of Maintenance tasks. We also have a list of Operational SOPs for operational staff to complete, to ensure equipment is fit for use – Relevant work orders will then be placed of the back of these SOP findings.

10.2.6 Risk of Vehicle impact

Some specific areas where risk is more significant are barriered off.

The speed limit on all sites is 15 MPH and a one-way system is in place at Ashford to reduce the likelihood of a vehicle impact.

10.2.7 SCO, CPAC procedures and Shift hand overs.

We have a comprehensive hand over logbook on the SW sites, this details Plant Out Of Action and any issues from a compliance perspective and is used as a daily hand over to the following shift, a Control of Processes and Compliance system and a Safe Control of Operations system is used when maintaining plant or taking kit offline for maintenance, training is provided on these systems for both operational and maintenance staff.

10.2.8 DSEAR Risk & Zonal areas.

We use DSEAR risk assessment to control working in high-risk areas where explosive atmospheres could exist, we have clear Zonal drawings on the site safety notice board along with secure fenced locked areas around the Biogas bag storage area and the Flare stack area, with appropriate Gas safe signage.

EX rated equipment is used in these areas, we maintain equipment using Gas Safe trained contractors, all our staff that work in these areas are trained in Biogas awareness and DSEAR awareness.

10.2.9 Alarm Management

We have a few levels of Alarm management controls. The Alarm severity settings are checked and set appropriately for the correct level. All alarms will generate a warning banner on the SCADA system alerting operators to a problem.

If the operators fail to respond we also have a Regional Control Centre who also monitors alarms and will phone the site operators if the alarm is at a level 5 or above. They will also respond with an out of hours standby operator when the site is unmanned.

10.2.10 Maintaining control in an emergency

Southern water maintains plant control in an emergency by using a combination of the following measures:

- Alarms & a system of escalation if not responded to the original alarm.
- Process trips and interlocks to stop safety critical equipment – slam shut valves etc.
- We have automatic systems based on microprocessor control and valve control via SCADA.
- We use automated tank level readings such as ultrasonic gauges, high level warnings, process interlocks and process parameters to stop feed pumps on high level etc.

- We store Biogas in the Biogas bag and use a flare to manage biogas in AD systems.
- High pressure relief valves are also installed to regulate Digester over pressure.

10.2.11 Critical Safety Equipment

All critical safety equipment is maintained appropriately via a Gas safe contractor or trained Asset Maintenance staff. The flares are maintained by a Gas Safe contractor and are serviced at 6 monthly intervals as are the boilers and CHP. Yearly inspections and maintenance are carried out on Digesters (outer permitter) and Biogas bags.

10.2.12 Health Surveillance for Staff

All SW operational on-site staff are issued with a personal blackline Gas monitor which records and alerts operators in the workplace to instant (short-term exposure) high levels of harmful gases (e.g. H2S) and exposure from a shift point of view (long-term exposure). These are designed to alarm out at levels below the Health and Safety Executive (HSE) guidelines and regulations.

The Operational front line site operators also have a yearly health check by a service provider.

10.2.13 Control of Smoking on site

Smoking is only allowed in designated safe areas with signage and a butt bin to collect discarded smoking materials.

Vapour use and storage – designated area only same rules as cigarettes and matches.

10.2.14 Arson risks, Security & Control of entry onto site

With flammable or combustible materials on site, there is always a risk of arson. This risk is controlled by secure perimeter fencing and an electric gate at the main entrance of the Ashford site, plus a locked gate policy that is adhered too.

We have intruder alarms that are set for buildings out of hours.

We also have CCTV cameras on site as a deterrent to any unauthorised visitors.

10.3 Additional fire prevention and explosion preventative measures (AD plants only)

The following measures only apply to AD plants:

10.3.1 DSEAR Risk & Zonal areas

We use DSEAR risk assessment to control working in high-risk areas where explosive atmospheres could exist, we have clear Zonal drawings on the site safety notice board along with secure fenced locked areas around the Biogas bag storage area and the Flare stack area, with appropriate Gas safe signage.

EX rated equipment is used in these areas, we maintain equipment using Gas Safe trained contractors, all our staff that work in these areas are trained in Biogas awareness and DSEAR awareness.

If a DSEAR risk assessment has identified potential explosion hazards you must make sure the design and planning of your plant includes appropriate structural, technical, and organisational fire protection measures.

DSEAR zones are available in Appendix A on page 22.

10.3.2 Fire Risk assessment

A fire risk assessment has been conducted by a qualified person on the Ashford site, this is reviewed and amended when there are any changes to site conditions or following a period of 1 year, records should be kept for 6 years.

10.3.3 Biogas Digestion process.

The Anaerobic Digestion process is managed by controlling KPI's on process control on a SCADA control system, we have DSEAR risk assessments in place, we have 12 monthly service agreements in place around the Biogas system, we also conduct 6 monthly inspections on the Boilers and CHP systems.

Signage and Rules, Fencing and locked gate policy around DSEAR areas, Lightning protection.

Trained staff with both Biogas awareness and DSEAR training.

The Biogas storage bag has Lightning conductors fitted in accordance with BS EN 62305-2.

11 Control of Major Accident Hazard (COMAH) Regulations 2015

We must consider whether the Control of Major Accident Hazard (COMAH) Regulations 2015 apply to our activities, for example, the quantity of flammable gas (biogas) in combination with any other dangerous substances stored on site. The current calculation for Ashford (XX%) suggest this site is below the lower-tier threshold and is therefore not under COMAH regulations.

This calculation is to be updated and checked if there are plans to introduce new fuel, chemical or gas storage on site.

12 Other useful documents

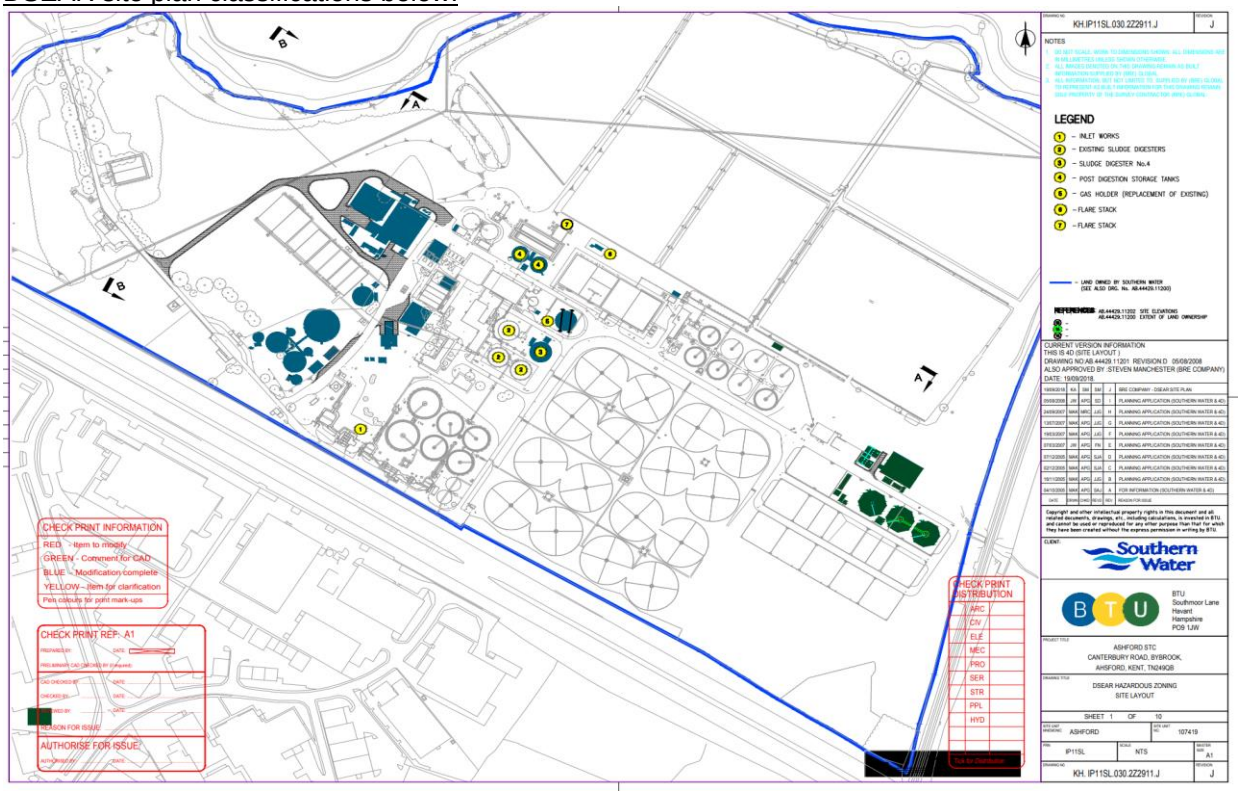
Each IED site will have a Fire Prevention plan designed to reduce the risk of Fire and Explosion.

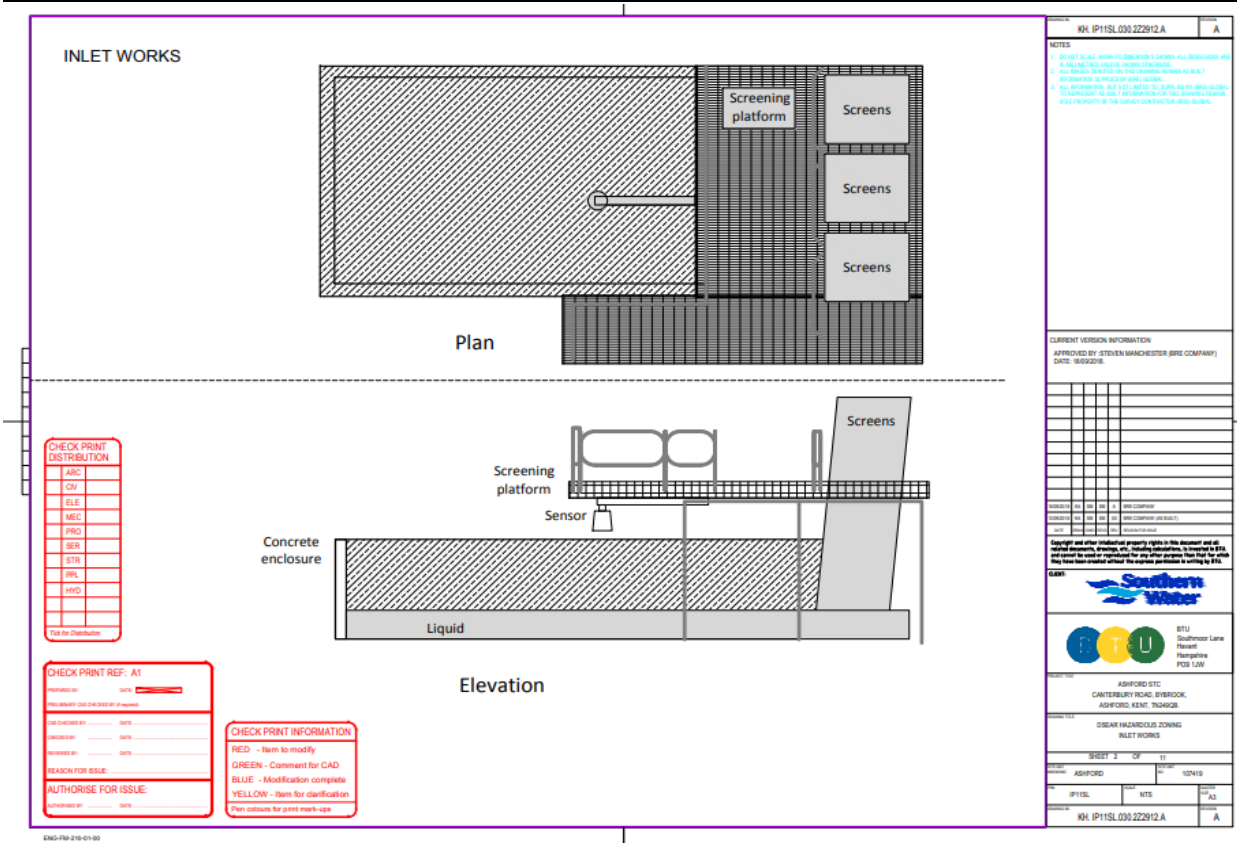
Each IED site also has an emergency "Grab Pack" for use primarily by the Fire Brigade attending an incident on the site.

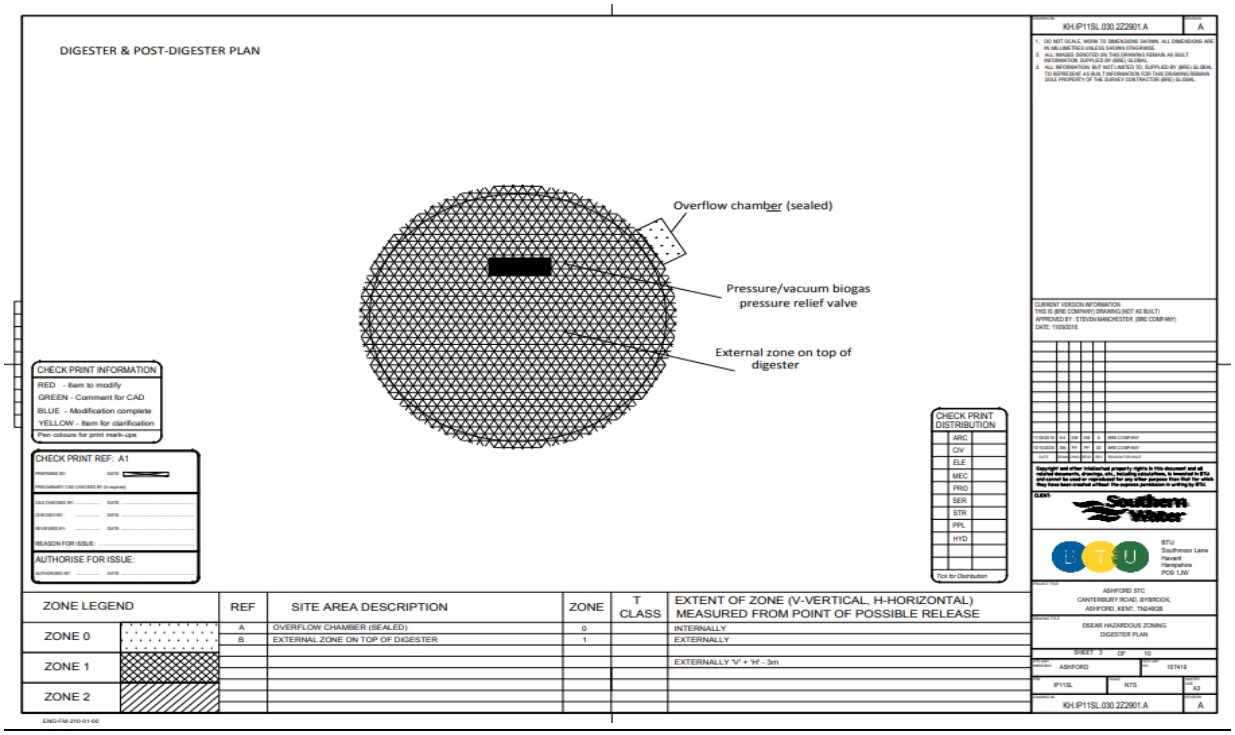
Each IED site also has a Leak Detection and Repair (LDAR) plan with activities designed to reduce and identify any risks from leaks from tanks, pipelines, and releases of biogas in an uncontrolled manner that could lead to a fire risk. –

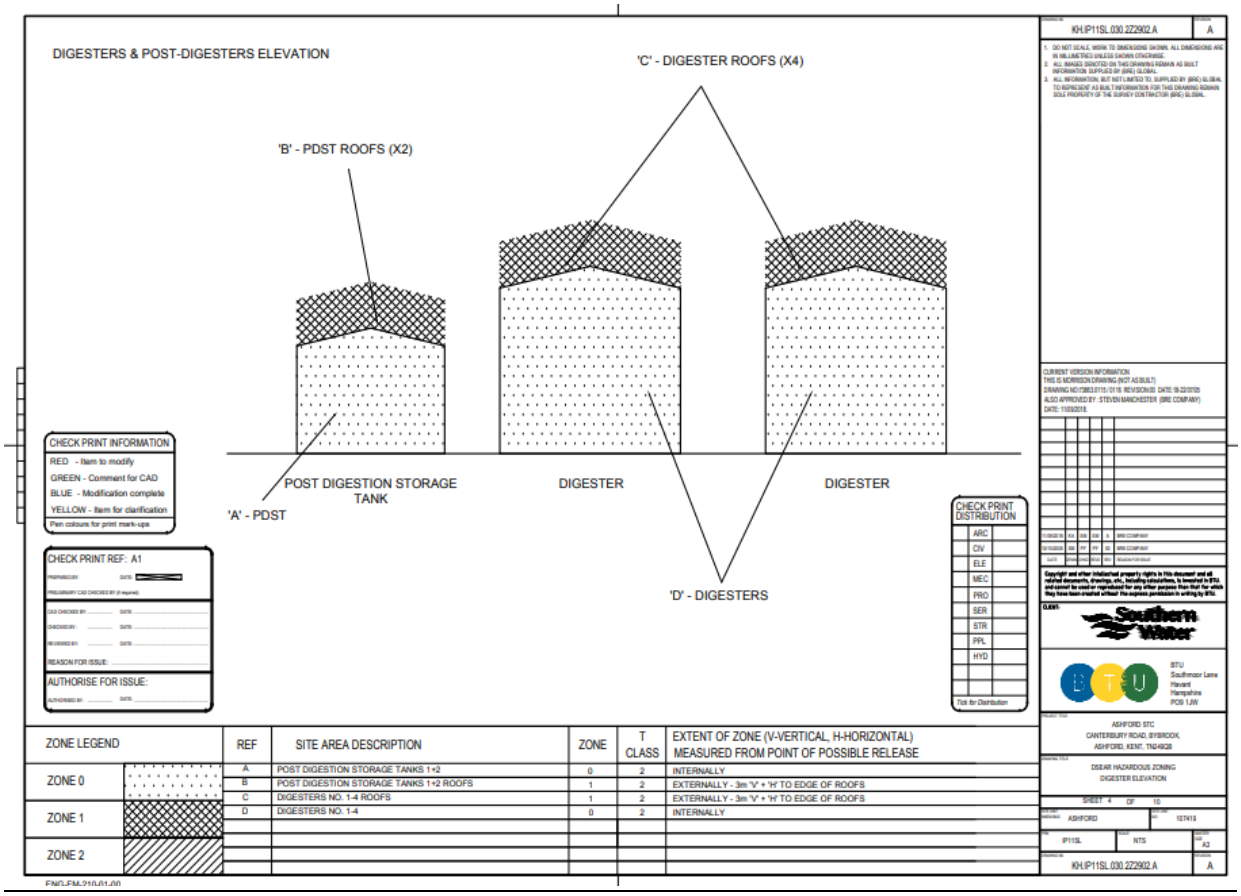
13 Appendix A – DSEAR Site Plans

DSEAR site plan classifications below.






DIGESTER & POST-DIGESTER PLAN
Overflow chamber (sealed)
Pressure/vacuum biogas pressure relief valve
External zone on top of digester
CHECK PRINT INFORMATION
RED - Item to modify
GREEN - Comment for CAD
BLUE - Modification complete
YELLOW - Item for clarification
Pen colours for print mark-ups
CHECK PRINT REF: A1
AUTHORISE FOR ISSUE:
REASON FOR ISSUE:
CHECK PRINT DISTRIBUTION
ARC
CIV
ELE
MEC
PRO
SER
STR
PPL
HYD
ZONE LEGEND
ZONE 0
ZONE 1
ZONE 2
REF
SITE AREA DESCRIPTION
ZONE
T CLASS
EXTENT OF ZONE (V-VERTICAL, H-HORIZONTAL) MEASURED FROM POINT OF POSSIBLE RELEASE
A
OVERFLOW CHAMBER (SEALED)
0
INTERNALLY
B
EXTERNAL ZONE ON TOP OF DIGESTER
1
EXTERNALLY
EXTERNALLY 'V' + 'H' - 3m
KH.IP11SL.030.222901.A
Southern Water
BTU
Southmoor Lane
Havant
Hampshire
PO9 1JW
ASHFORD STC
CANTERBURY ROAD, BYBROOK,
ASHFORD, KENT, TN24 8QB
DSEAR HAZARDOUS ZONING
DIGESTER PLAN
SHEET 3 OF 10
ASHFORD
IP11SL
NTS
A3
KH.IP11SL.030.222901.A
A



ZONE LEGEND	REF	SITE AREA DESCRIPTION	ZONE	T CLASS	EXTENT OF ZONE (V-VERTICAL, H-HORIZONTAL) MEASURED FROM POINT OF POSSIBLE RELEASE
ZONE 0	A	POST DIGESTION STORAGE TANKS 1+2	0	2	INTERNALLY
	B	POST DIGESTION STORAGE TANKS 1+2 ROOFS	1	2	EXTERNALLY - 3m 'V' + 'H' TO EDGE OF ROOFS
ZONE 1	C	DIGESTERS NO. 1-4 ROOFS	1	2	EXTERNALLY - 3m 'V' + 'H' TO EDGE OF ROOFS
	D	DIGESTERS NO. 1-4	0	2	INTERNALLY
ZONE 2					

bre

5.5.5 Post digestion storage 1

There are two post-digestion storage units at Ashford STC.

The post-digesters are allocated a Zone 0 internally and zone 1 externally surrounding the top of the post digestion.

Figure 3: Post-digestion storage tanks.

Hazards	Control measures	Likelihood	Severity	Risk rating
Naked flames	No smoking policy on site except in designated areas. Signs present.	1	2	2
Welding / cutting: sparks and hot surfaces	Permit to work required before maintenance works can be undertaken.	1	2	2
Sparks from mobile phones	Mobile phones are not allowed to be taken into zoned areas. Signs present	1	2	2
Lightning	Exposed zoned areas fitted with protection.	1	2	2
Electrostatic discharge	Earth bonding of equipment.	1	2	2
Sparks from equipment	Ex rated equipment must be used – see catalogued equipment.	1	2	2

The drawing illustrating the extent of the hazardous zoning around the digesters and post-digesters is included in section 5.5.1.

bre

5.5.2 Digester 2

Zone 0 internally and zone 1 externally surrounding the top of the digester. Any open hatches will have a zone 1 extending both horizontally and vertically, however the top of the digester is already allocated a zone 1 due to the presence of the wesso valves.

Hazards	Control measures	Likelihood	Severity	Risk rating
Naked flames	No smoking policy on site except in designated areas. Signs present.	1	2	2
Welding / cutting: sparks & hot surfaces	Permit to work required before maintenance works can be undertaken.	1	2	2
Sparks from mobile phones	Mobile phones not allowed to be taken into zoned areas. Signs present.	1	2	2
Lightening	Exposed zoned areas fitted with protection.	1	2	2
Electrostatic discharge	Earth bonding of equipment.	1	2	2
Sparks from equipment	Ex rated equipment must be used – see catalogued equipment.	3	2	6

The drawing illustrating the extent of the hazardous zoning around the digesters and post-digesters is included in section 5.5.1.

bre

5.5.7 Polyelectrolyte

There are two polyelectrolyte dust hoppers / dispenser units on site.

Following Southern Water's MED 4004 April 2015[5], the receiving vessel is allocated a zone 21 classification internally and the external area is allocated a zone 22 classification .

Figure 4: Polyelectrolyte hopper 1.

Figure 5: Polyelectrolyte hopper 2.

Figure 6: Polyelectrolyte hopper 1, equipment.

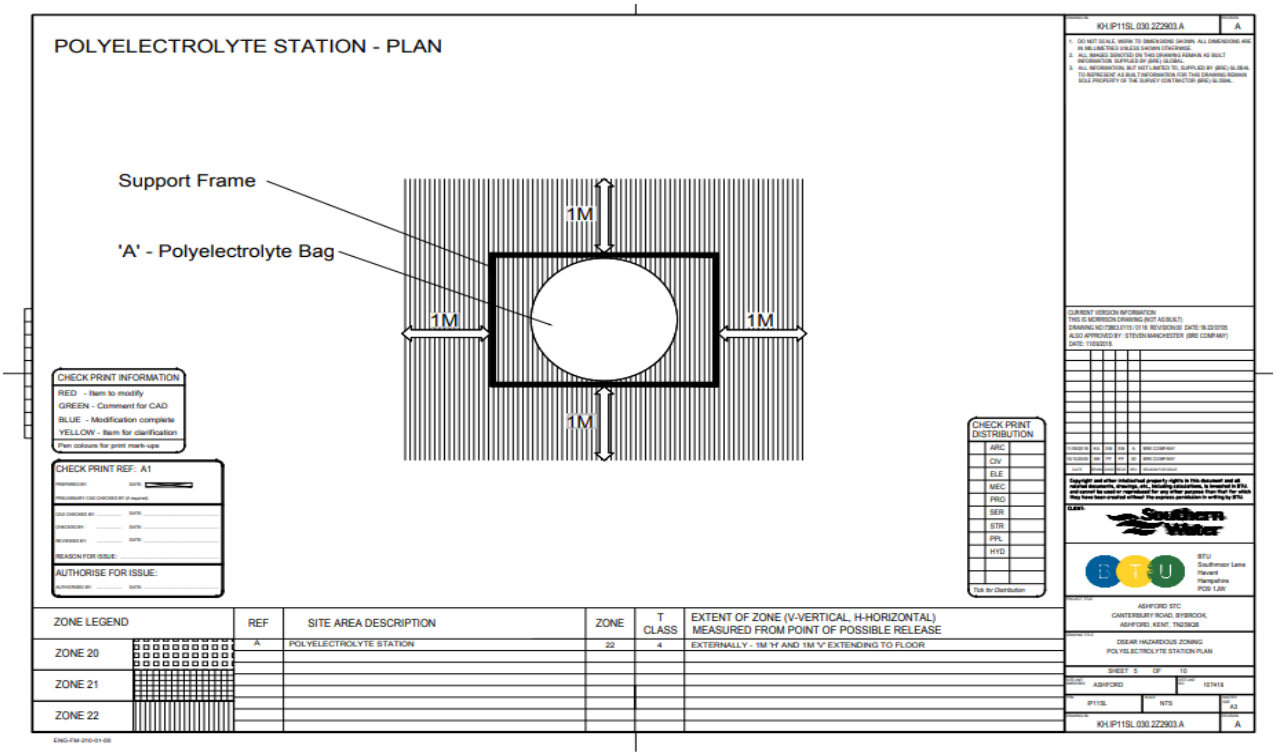
bre

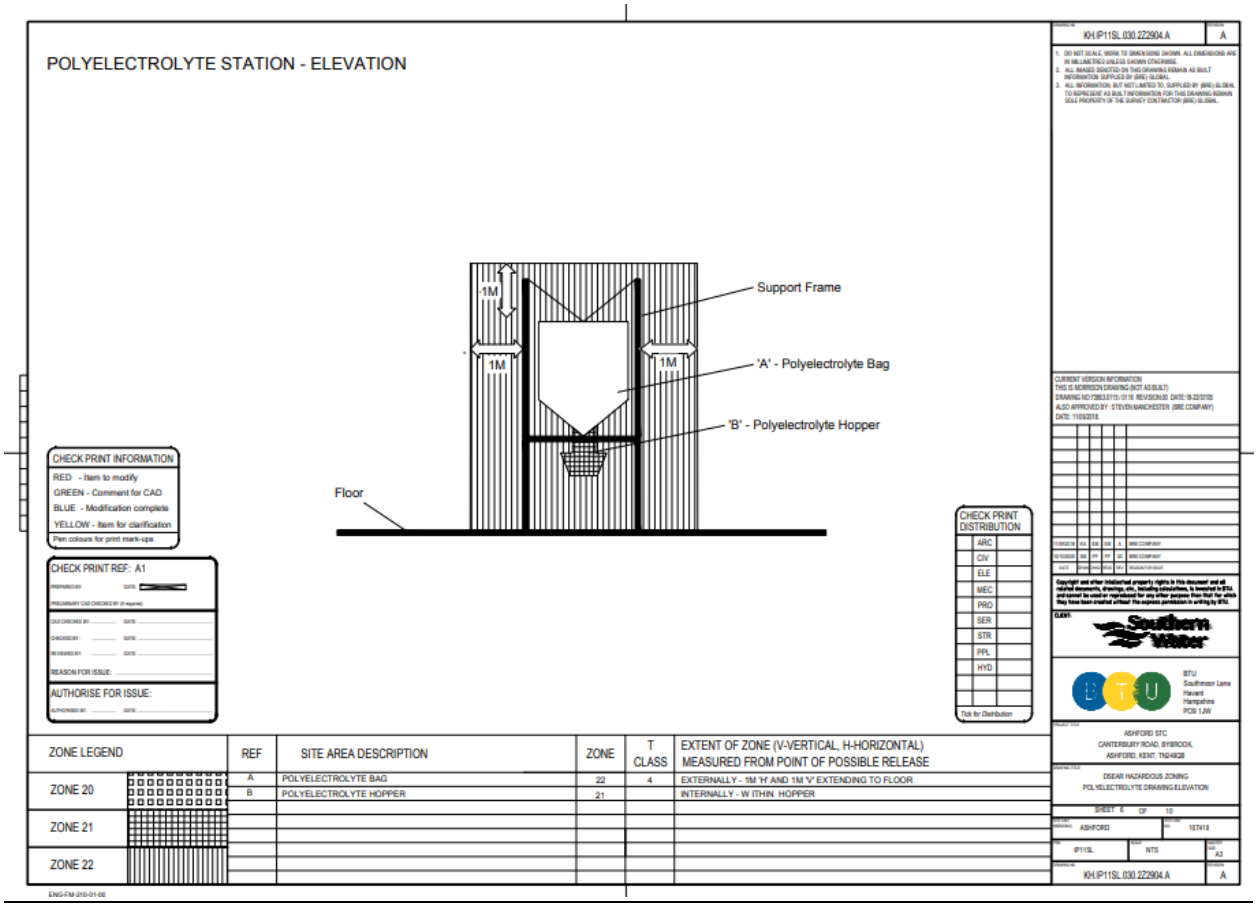
Polyelectrolyte hopper 1

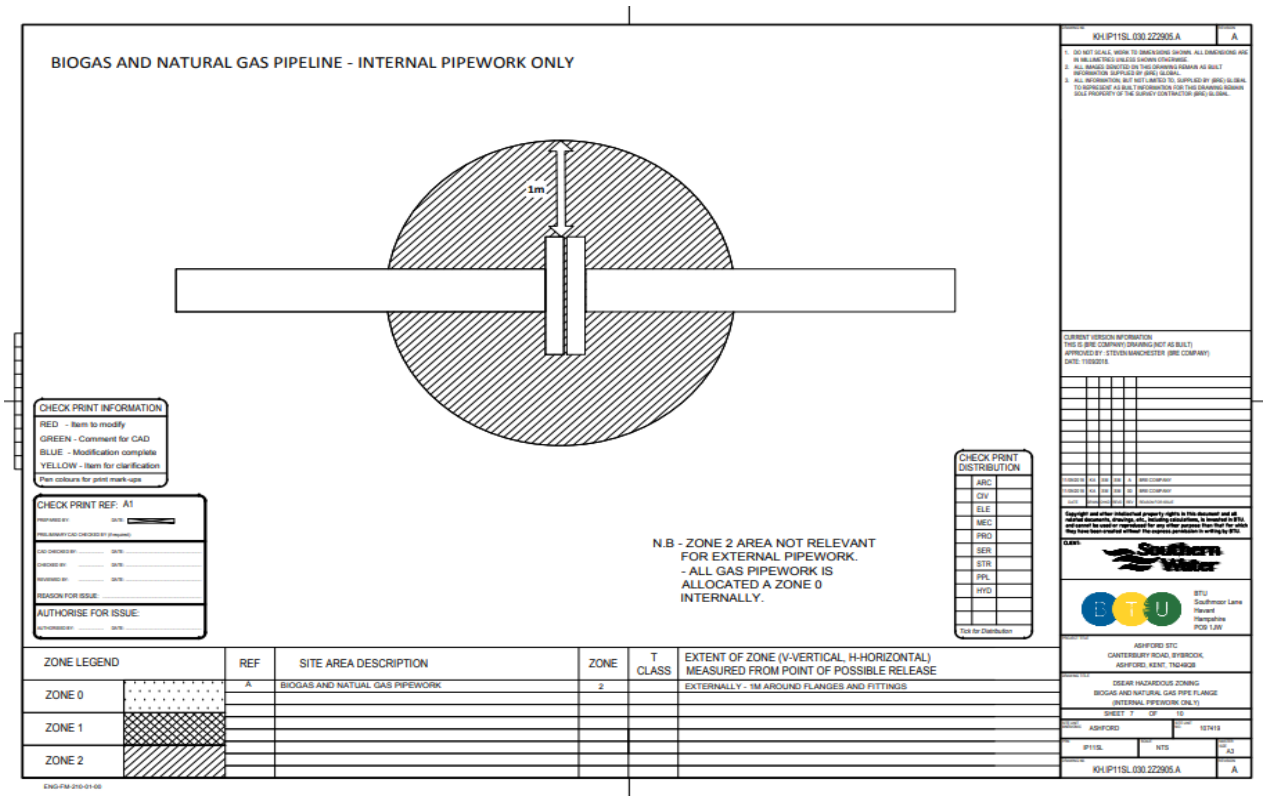
Hazards	Control measures	Likelihood	Severity	Risk rating
Naked flames	No smoking policy on site except in designated areas. Signs present.	1	2	2
Welding / cutting: sparks and hot surfaces	Permit to work required before maintenance works can be undertaken.	1	2	2
Sparks from mobile phones	Mobile phones are not allowed to be taken into zoned areas. Signs present	1	2	2
Lightning	Exposed zoned areas fitted with protection.	1	2	2
Electrostatic discharge	Earth bonding of equipment.	1	2	2
Sparks from equipment	Ex rated equipment or IP5x must be used as a minimum – see catalogued equipment.	1	2	2

Polyelectrolyte hopper 2 (dryer building)

Hazards	Control measures	Likelihood	Severity	Risk rating
Naked flames	No smoking policy on site except in designated areas. Signs present.	1	2	2
Welding / cutting: sparks and hot surfaces	Permit to work required before maintenance works can be undertaken.	1	2	2
Sparks from mobile phones	Mobile phones are not allowed to be taken into zoned areas. Signs present	1	2	2
Lightning	Exposed zoned areas fitted with protection.	1	2	2
Electrostatic discharge	Earth bonding of equipment.	1	2	2
Sparks from equipment	Ex rated equipment or IP5x must be used as a minimum – see catalogued equipment.	2	2	4




POLYELECTROLYTE STATION - ELEVATION
1M
1M
1M
Support Frame
'A' - Polyelectrolyte Bag
'B' - Polyelectrolyte Hopper
Floor
CHECK PRINT INFORMATION
RED - Item to modify
GREEN - Comment for CAD
BLUE - Modification complete
YELLOW - Item for clarification
Pen colours for print mark-ups
CHECK PRINT REF: A1
AUTHORISE FOR ISSUE:
CHECK PRINT DISTRIBUTION
ARC
CIV
ELE
MEC
PRO
SER
STR
PPL
HYD
Tick for Distribution
ZONE LEGEND
ZONE 20
ZONE 21
ZONE 22
REF
SITE AREA DESCRIPTION
ZONE
T CLASS
EXTENT OF ZONE (V-VERTICAL, H-HORIZONTAL) MEASURED FROM POINT OF POSSIBLE RELEASE
A
POLYELECTROLYTE BAG
22
4
EXTERNALLY - 1M 'H' AND 1M 'V' EXTENDING TO FLOOR
B
POLYELECTROLYTE HOPPER
21
INTERNALLY - W ITHIN HOPPER
KHJP11SL 030 222904.A
A
Southern Water
BTU
Southmoor Lane
Havant
Hampshire
PO9 1JW
ASHFORD STC
CANTERBURY ROAD, BYBROOK,
ASHFORD, KENT, TN24 8QB
DSEAR HAZARDOUS ZONING
POLYELECTROLYTE DRAWING ELEVATION
SHEET 6 OF 10
ASHFORD
107413
IP11SL
NTS
A3
KHJP11SL 030 222904.A
A


BIOGAS AND NATURAL GAS PIPELINE - INTERNAL PIPEWORK ONLY
1m
CHECK PRINT INFORMATION
RED - Item to modify
GREEN - Comment for CAD
BLUE - Modification complete
YELLOW - Item for clarification
Pen colours for print mark-ups
CHECK PRINT REF: A1
AUTHORISE FOR ISSUE:
CHECK PRINT DISTRIBUTION
ARC
CIV
ELE
MEC
PRO
SER
STR
PPL
HYD
Tick for Distribution
N.B - ZONE 2 AREA NOT RELEVANT FOR EXTERNAL PIPEWORK.
- ALL GAS PIPEWORK IS ALLOCATED A ZONE 0 INTERNALLY.
ZONE LEGEND
ZONE 0
ZONE 1
ZONE 2
REF
SITE AREA DESCRIPTION
ZONE
T CLASS
EXTENT OF ZONE (V-VERTICAL, H-HORIZONTAL) MEASURED FROM POINT OF POSSIBLE RELEASE
A
BIOGAS AND NATUAL GAS PIPEWORK
2
EXTERNALLY - 1M AROUND FLANGES AND FITTINGS
KHJP11SL 030 222905.A
A
Southern Water
BTU
Southmoor Lane
Havant
Hampshire
PO9 1JW
ASHFORD STC
CANTERBURY ROAD, BYBROOK,
ASHFORD, KENT, TN24 8QB
DSEAR HAZARDOUS ZONING
BIOGAS AND NATURAL GAS PIPE FLANGE (INTERNAL PIPEWORK ONLY)
SHEET 7 OF 10
ASHFORD
107413
IP11SL
NTS
A3
KHJP11SL 030 222905.A
A

bre

5.6.2 Gas storage area

5.6.2.1 Double membrane gas bag

A zone 0 was allocated inside inner membrane, zone 1 in outer membrane and zone 2 around PRVs extending 3m. This agrees with Southern Water's MED 4004 April 2015[3].

It should be noted that the condensate filters next to the CHP plant were located inside the gas bag compound.

Figure 8: Double membrane gas bag.

Hazards	Control measures	Likelihood	Severity	Risk rating
Naked flames	No smoking policy on site except in designated areas. Signs present.	1	2	2
Welding / cutting: sparks and hot surfaces	Permit to work required before maintenance works can be undertaken.	1	2	2
Sparks from mobile phones	Mobile phones are not allowed to be taken into zoned areas. Signs present	1	2	2
Lightning	Exposed zoned areas fitted with protection.	1	2	2
Electrostatic discharge	Earth bonding of equipment.	1	2	2
Sparks from equipment	Ex rated equipment must be used – see catalogued equipment.	1	2	2

bre

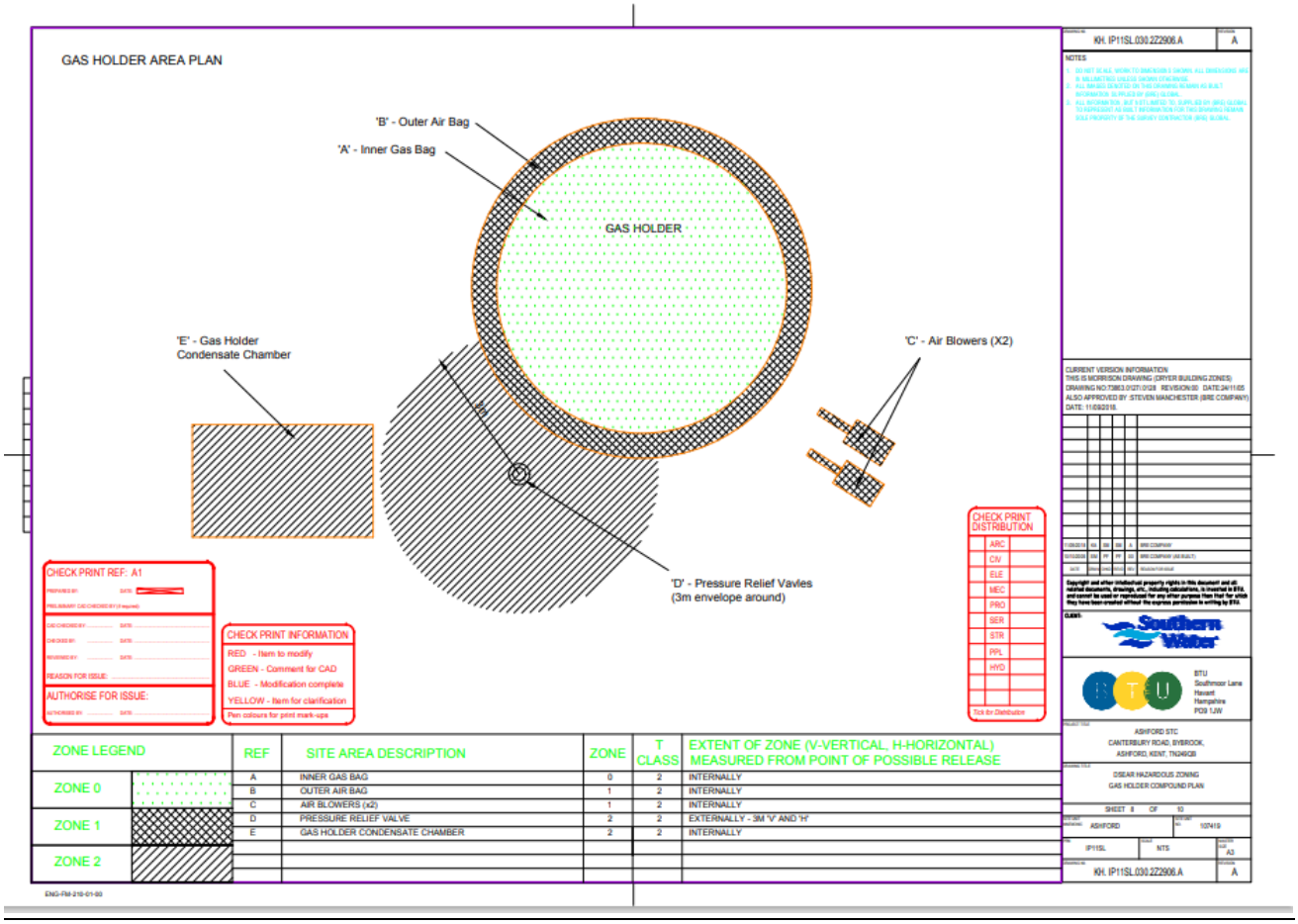
5.6.2.2 Gas condensate pit

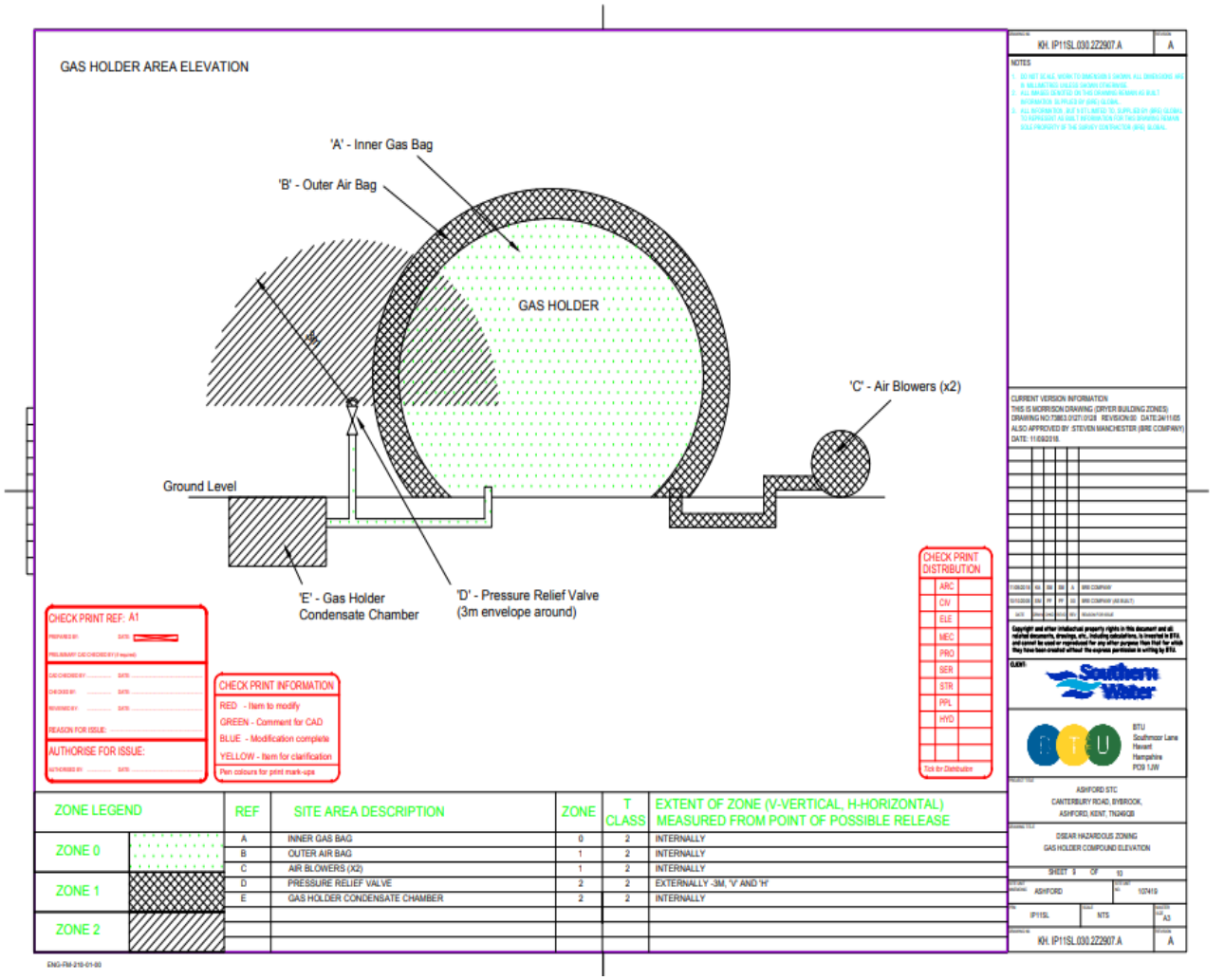
The gas condensate pit in the gas bag compound was below a grid and therefore open to atmosphere.

Based on Southern Water's MED 4004 April 2015,[3] zone 2 internally.

Equipment in condensate traps were not catalogued as BRE aren't contracted to work in confined spaces.

Hazards	Control measures	Likelihood	Severity	Risk rating
Naked flames	No smoking policy on site except in designated areas. Signs present.	1	2	2
Welding / cutting: sparks and hot surfaces	Permit to work required before maintenance works can be undertaken.	1	2	2
Sparks from mobile phones	Mobile phones are not allowed to be taken into zoned areas. Signs present	1	2	2
Lightning	Exposed zoned areas fitted with protection.	1	2	2
Electrostatic discharge	Earth bonding of equipment.	1	2	2
Sparks from equipment	Ex rated equipment must be used – see catalogued equipment.	n/a	n/a	n/a


GAS HOLDER AREA PLAN
'B' - Outer Air Bag
'A' - Inner Gas Bag
GAS HOLDER
'E' - Gas Holder
Condensate Chamber
'C' - Air Blowers (X2)
'D' - Pressure Relief Vavles
(3m envelope around)
CHECK PRINT REF: A1
AUTHORISE FOR ISSUE:
CHECK PRINT INFORMATION
RED - Item to modify
GREEN - Comment for CAD
BLUE - Modification complete
YELLOW - Item for clarification
CHECK PRINT DISTRIBUTION
ARC
CIV
ELE
MEC
PRO
SER
STR
PPL
HYD
ZONE LEGEND
ZONE 0
ZONE 1
ZONE 2
REF
SITE AREA DESCRIPTION
ZONE
T CLASS
EXTENT OF ZONE (V-VERTICAL, H-HORIZONTAL) MEASURED FROM POINT OF POSSIBLE RELEASE
A INNER GAS BAG 0 2 INTERNALLY
B OUTER AIR BAG 1 2 INTERNALLY
C AIR BLOWERS (x2) 1 2 INTERNALLY
D PRESSURE RELIEF VALVE 2 2 EXTERNALLY - 3M 'V' AND 'H'
E GAS HOLDER CONDENSATE CHAMBER 2 2 INTERNALLY
NOTES
Southern Water
BTU
Southmoor Lane
Havant
Hampshire
PO9 1JW
ASHFORD STC
CANTERBURY ROAD, BYBROOK,
ASHFORD, KENT, TN246GB
DSEAR HAZARDOUS ZONING
GAS HOLDER COMPOUND PLAN
SHEET 8 OF 10
ASHFORD
IP11SL
NTS
A3
KH. IP11SL.030.222906.A
A


GAS HOLDER AREA ELEVATION
'A' - Inner Gas Bag
'B' - Outer Air Bag
GAS HOLDER
'C' - Air Blowers (x2)
Ground Level
'E' - Gas Holder Condensate Chamber
'D' - Pressure Relief Valve (3m envelope around)
CHECK PRINT REF: A1
AUTHORISE FOR ISSUE:
CHECK PRINT INFORMATION
RED - Item to modify
GREEN - Comment for CAD
BLUE - Modification complete
YELLOW - Item for clarification
CHECK PRINT DISTRIBUTION
ARC
CIV
ELE
MEC
PRO
SER
STR
PPL
HYD
ZONE LEGEND
ZONE 0
ZONE 1
ZONE 2
REF
SITE AREA DESCRIPTION
ZONE
T CLASS
EXTENT OF ZONE (V-VERTICAL, H-HORIZONTAL) MEASURED FROM POINT OF POSSIBLE RELEASE
A INNER GAS BAG 0 2 INTERNALLY
B OUTER AIR BAG 1 2 INTERNALLY
C AIR BLOWERS (X2) 1 2 INTERNALLY
D PRESSURE RELIEF VALVE 2 2 EXTERNALLY -3M, 'V' AND 'H'
E GAS HOLDER CONDENSATE CHAMBER 2 2 INTERNALLY
KH. IP11SL.030.222907.A
NOTES
CURRENT VERSION INFORMATION
Southern Water
BTU
ASHFORD STC
CANTERBURY ROAD, BYBROOK,
ASHFORD, KENT, TN240GB
DSEAR HAZARDOUS ZONING
GAS HOLDER COMPOUND ELEVATION
SHEET 9 OF 10
ASHFORD
IP11SL
NTS
A3
KH. IP11SL.030.222907.A

bre

5.6.3 CHP

The CHP plant was not in use during the site visit and is not allocated a zoned area. The CHP plant appeared to be identical to those at Budds Farm and Millbrook therefore the air flow through the CHP plant is sufficient to ensure a flammable atmosphere is highly unlikely to develop. This zone is based on continual operation of the ventilation system.

The biogas area, near the CHP is not classified according to Southern Water's MED 4004 April 2015,[3].

5.6.4 Flare stack area

There are two flare stack compounds at Ashford STC. According to Southern Water's MED 4004 April 2015,[3] the flare stack area is unclassified.

BRE concludes the area should be unclassified, however internally the pipework will be allocated a zone 0 classification.

The equipment in the flare stack area was catalogued to determine Ex certification.

Figure 9: Flare stack.

bre

5.7 Diesel storage

There are five diesel storage tanks on site at Ashford STC.

According to guidance given in the "Energy Institute: Model code of safe practice Part 15 – Area classification code for installation handling flammable fluids"[4] the diesel tanks were allocated a zone 1 internally above the liquid level.

All tanks appear to be double skinned and therefore no hazardous area classification exists outside the tanks.

Figure 10: Diesel tank, next to tertiary treatment.

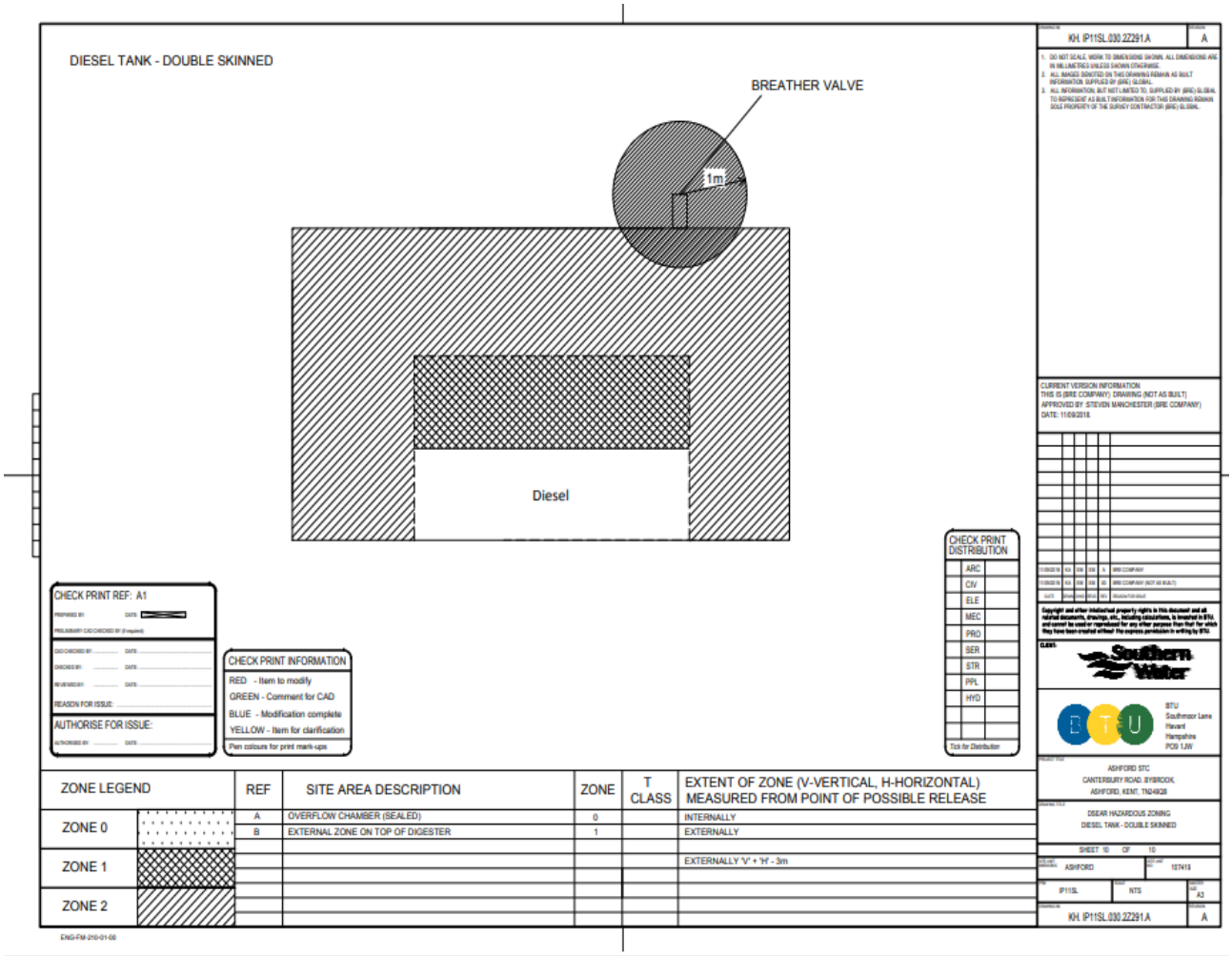
Figure 11: Diesel tank, combined with generator.

Figure 12: Diesel tanks.

Figure 13: Diesel tank, next to inletworks.

bre

Hazards	Control measures	Likelihood	Severity	Risk rating
Naked flames	No smoking policy on site except in designated areas. Signs present.	1	2	2
Welding / cutting: sparks and hot surfaces	Permit to work required before maintenance works can be undertaken.	1	2	2
Sparks from mobile phones	Mobile phones are not allowed to be taken into zoned areas. Signs present	1	2	2
Lightning	Exposed zoned areas fitted with protection.	1	2	2
Electrostatic discharge	Earth bonding of equipment.	1	2	2
Sparks from equipment	Ex rated equipment must be used – see catalogued equipment.	n/a	n/a	n/a


DIESEL TANK - DOUBLE SKINNED
BREATHER VALVE
1m
Diesel
KH IP11SL.030.22291.A
A
CHECK PRINT REF: A1
CHECK PRINT INFORMATION
RED - Item to modify
GREEN - Comment for CAD
BLUE - Modification complete
YELLOW - Item for clarification
Pen colours for print mark-ups
AUTHORISE FOR ISSUE:
REASON FOR ISSUE:
CHECK PRINT DISTRIBUTION
ARC
CIV
ELE
MEC
PRO
SER
STR
PPL
HYD
Tick for Distribution
ZONE LEGEND
ZONE 0
ZONE 1
ZONE 2
REF
SITE AREA DESCRIPTION
ZONE
T CLASS
EXTENT OF ZONE (V-VERTICAL, H-HORIZONTAL) MEASURED FROM POINT OF POSSIBLE RELEASE
A
OVERFLOW CHAMBER (SEALED)
0
INTERNALLY
B
EXTERNAL ZONE ON TOP OF DIGESTER
1
EXTERNALLY
EXTERNALLY 'V' + 'H' - 3m
Southern Water
BTU
Southmoor Lane
Havant
Hampshire
PO9 1JW
ASHFORD STC
CANTERBURY ROAD, BYBROOK,
ASHFORD, KENT, TN24 8QB
DSEAR HAZARDOUS ZONING
DIESEL TANK - DOUBLE SKINNED
SHEET 10 OF 10
ASHFORD
IP11SL
NTS
A3
KH IP11SL.030.22291.A
A