Wessex Water Services

Accident prevention and management plan for IED Permitted Sites

Contents

1.0	Introduction	2
2.0	Plan Detail	2
3.0	Plan Review	2
4.0	Recording, Investigating, and Responding to accidents	3
5.0	Emergency Contacts	4
6.0	Online security risks	5
7.0	Site specific	5
7.1	Poole BC (11795)	5
7.2	Trowbridge BC (11799)	6
7.3	Berry Hill BC (13018)	7
7.4	Taunton BC (11798)	8
7.5	Avonmouth BC (11800)	9
Revisi	on history	9
Appen	ndix 1 – Breakdown of the risks and mitigations	10
Appen	ndix 2 – Wessex Water Risk Management Tables	15
Appen	ndix 3: Poole BC Sensitive Receptors	17
Appen	ndix 4: Trowbridge BC Sensitive Receptors	18
Appen	ndix 5: Berry Hill BC Sensitive Receptors	19
Appen	ndix 6: Taunton BC Sensitive Receptors	20
Appen	ndix 7: Avonmouth BC Sensitive Receptors	22

1.0 Introduction

For waste environmental permits, there is an Environment Agency requirement for an accident prevention and management plan, for dealing with any incidents or events that could result in pollution, as a part of a written management system. Develop a management system: environmental permits-GOV.UK (www.gov.uk). As a part of the Industrial Emissions Directive (IED) implementation for digesters in the water industry; the five digestion Bioresources Centres (BC) within the Wessex Water will each receive an installation environmental permit. All of the BCs are covered by this document OPSP275.

The four BCs covered are:

Site Name	Wessex Water Site ID	IED permit date
Berry Hill BC	13018	October 2021
Poole BC	11795	April 2021
Taunton BC	11798	January 2022
Trowbridge BC	11799	July 2021
Avonmouth BC	11800	October 2022

Table 1: list of Bioresources Centres (BCs) covered by this Accident Management Plan

Please note: this document OPSP275 will be developed as each site is incorporated in line with the application timeline during 2021 and 2022.

Sections 2 to 5 and Appendixes 1 to 2 are general sections and apply to all BCs. Section 6 is separated into site specific sections, and contains details of individual site plans, DSEAR zones, spill kit locations, and lists of substances present at the BC.

2.0 Plan Detail

This plan identifies potential accidents, for example equipment breakdowns, enforced shutdowns, fires, vandalism, flooding, or any other incident which causes an unexpected change to normal operations, such as bad weather, and the measures taken to reduce impact.

This plan only covers the sludge treatment installation permit assets at the relevant BC and does not extend into the adjoining Water Recycling Centres (WRC) and other waste activities on each site.

A breakdown of the risks and mitigations in place is in Appendix 1.

Appendix 1 uses Wessex Waters <u>Risk Management Process (AMP002</u>). Appendix 2 refers to AMP002 and details the probability/likelihood tables (Table 1) and environmental (Table 4) which are used to provide the ratings given in Appendix 1.

3.0 Plan Review

This plan will be reviewed as a minimum:

- every 5 years as per Wessex Water review policy
- in event of a new capital scheme at the sites affecting the parts of the IED process.
- following a major or significant accident or incident.

At the time of writing of this plan, the next minimum date for review will be 01/07/2026.

4.0 Recording, Investigating, and Responding to accidents

Your accident plan must also say how you will record, investigate and respond to accidents or breaches of your permit.

Recording

- Health and Safety accidents are recorded through either the phone or desktop app
 - Health and safety observation/incident reporting application (sharepoint.com)
- Pollution incidents are recorded through the pollution register app either via laptop or a mobile phone power app application. A customer service record (RAPID) is also required to be raised. Access to various functions are based on permission levels, but as a minimum all staff are able to view the pollution register and RAPID entries. Different groups of staff will also be able edit and update records.
 - Pollution Register
 - Customer Service (RAPID) call 0345 600 4 600
- All Engineering & Sustainable Delivery (E&SD) Incidents must be notified by using <u>QF107</u> (Incident Reporting Form) in line with the Emergency Pollution Incident Response procedure (<u>QP024</u>).
- Incidents requiring Environmental support, notify via instructions:
 - Incidents affecting the Environment, pollution reporting & support (sharepoint.com)
- Security breach and incident reporting form (sharepoint.com)
- EA notification form (Schedule 5) (EPF002)

Responding

The overarching <u>GENG012 Management of an Incident in Operations</u> is designed to complement the knowledge and experience possessed by operational staff and can be used as a framework. This document provides advice and guidance at any level. All operational staff who may involved in an accident or incident should familiarise themselves with GENG012.

It references associated documents

- GENG010 Integrated Emergency Management Manual
- GENG016 Emergency planning arrangements

And includes: trigger points for the formation of an incident management team; data collection, communications to the public and third parties such as EA and DWI. Plus also the stand down trigger and debrief sessions (<u>GENG008</u>).

Environmental

- Pollution Response guidance (OPSG165)
- CMP018 Major oil/fuel pollution incident response (sharepoint.com)
- Sites with oil and chemical spill kits available (Production and Waste) (ROCG019).pdf (sharepoint.com)
- CMP002 Pollution of a designated bathing beach, recreational water, or shellfish water (sharepoint.com)
- CMP004 Response to Chemical Ingress into sewer or WRC

- Site General
 - CMP005 Inundation of a WRC or SPS by a major flood event (sharepoint.com)
 - CMP006 Response to major failure of bulk storage tanks on wastewater sites (sharepoint.com)
 - CMP016 Extra-ordinary failure of critical plan at a water recycling centre (sharepoint.com)
- Investigating and Reviewing
 - Operations investigate and review any accidents or incidents and make changes to management systems and other documentation such as maintenance schedules accordingly. Other departments such as health & safety, compliance & regulation and mechanical-electrical are to be involved as required. <u>GENG808 Debrief Guidance and Procedures</u> is available to assist in effective debriefs to identify good practice and areas for improvement.

5.0 Emergency Contacts

Your accident plan must also include:

- a list of emergency contacts and how to reach them
 - The Wessex Water Business Continuity policy regarding key external contacts is GENG001:
 - GENG001 (Key External Contacts for Use With CMPs and LEPs) (sharepoint.com)
 - GENG001 details contact details for neighbouring utilities, environmental regulators and environmental support and public health.
 - Plus, divisional sets of contacts for local authorities, hospitals, police, amenity users.
 - Oil clean up contractors, mobile centrifuge contractors, tankering contractors
 - For incidents affecting the environment, see Source page
 - See <u>Incidents affecting the Environment, pollution reporting & support</u> (sharepoint.com)
 - A copy of the key information is contained in the table below, but refer to the Source webpage for the master information.

Body	When to Contact	Contact Information
Internal (WW)	For any accident/pollution, requiring a response or ecological survey	environmental.incident@wessexwater.co.uk
Internal OHES (WW)	Out of hours ecological survey	OHES 0333 600 2424 and email: Response@ohes.co.uk copy in environmental.incident@wessexwater.co.uk and the Regional Pollution Manager
Internal (WW)	Non-urgent environmental queries	environmental@wessexwater.co.uk
Environment Agency	Any pollution incident to watercourse.	0800 80 70 60 (24hrs) AND

	Incidents resulting in fish/eel death. Breach of environmental permit conditions. Land pollution suspected to be CICS¹ Category 1 or 2. Air pollution suspected to CICS category 1 or 2.	EA Notification form (Schedule 5) (EPRF002)
Natural England	For incidents affecting (or for works within) Sites of Special Scientific Interest (SSSI), Special Areas of Conservation (SAC), Special Protection Areas (SPA) and/or legally protected species (such as Great Crested Newts, Water Voles, Badgers, Bats) You should ensure any works to deal with the incident cause as little damage to the special features as possible.	Inform Natural England as soon as possible (and within 24 hours) by email to: protectedsites@naturalengland.org.uk Main Contact Number - 0300 060 6000

Table 2: Key environmental agencies to notify in event of an accident affecting the environment

6.0 Online security risks

There is an <u>information security management manual</u> which provides guidance for Wessex Water to demonstrate compliance with the <u>Information Security Policy</u>. Wessex Water's Information Security Management System (ISMS) is accredited to ISO27001:2013.

Wessex Waters information security is taken seriously and there is an ongoing programme of ensuring operational technology (OT) such as outstations, telemetry, and control systems on sites; is aligned with the NIS (Network and Information Systems) Regulations 2018.

This involves increased monitoring and improved response to potential cyber security incidents, plus increased segregation of OT networks and devices and addressing security risks present due to legacy OT equipment. Cyber safe training modules are available on iLearn and are being rolled out for all staff. Modules include: site security, social engineering, protection of physical devices and Phishing/Vishing.

7.0 Site specific

7.1 Poole BC (11795)

Appendix 3 details the sensitive receptors surrounding Poole BC.

Note that Poole Harbour is a SSSI, SPA, RAMSAR and a Shellfishery. There are also designated bathing waters within Poole Harbour area (Table 3).

Body	When to Contact	Contact No.
Marine	Where emergency works are	0300 123 1032 (Emergency Marine
Management	below Mean High Water Springs	Licence - 24hrs)
Organisation	(MHWS) they will require	,
	emergency Marine Licencing	

¹ CICS = Common Incident Classification Scheme

Body	When to Contact	Contact No.
BCP Council	Issues affecting Poole Harbour	environment@poole.gov.uk
		01202 261700
		Environmental services contact
		information - Services in Poole
CEFAS	Issues affecting shellfishery	08459335577
Coastguard	Significant or Major pollution to	0203 8172000
and Marine	Poole Harbour	MCA Head Office, Southampton
Offices		·

Table 3: Poole Harbour contacts

Responding

- LEP054 Loss of Poole STW Site Offices Response Plan (sharepoint.com)
- <u>LEP001 Response to pumping station or inlet works failure Poole STW 13242</u> (<u>sharepoint.com</u>)
- CMP017 Loss of UV site or major reduction in capacity (sharepoint.com)
- DSEAR zones are marked on site and recorded in a folder onsite which has detailed plans of all the zoned areas and is included within the induction plan.
- Every site visitor has to review the site induction checklist and sign their acceptance. Any updates require a re-read of the induction checklist.
- DSEAR zoning documents are available on Source <u>here</u>: this area in Source comprises reports, DSEAR summary, audits and drawings.
- Trowbridge drawings are <u>here</u>:
- Spill Kit use is governed by TBT055 Toolbox Talk Use of Spill Kits
 - Spill kits are located in
 - Poly make up room
 - Sludge tanker import area
 - Boiler house
- List of substances stored at site (Table 4):

Treated sludge and storm effluent are also stored at site as a part of the WRC sewage treatment process and are not referenced in this section.

List of substances stored at site:	Storage facilities
Polyelectrolyte (for sludge stability)	Garage, drum room, by centrifuge
Oil for boiler and CHP maintenance	Boiler house
Antifreeze	In containers in boiler house
Diesel	One tank and a fuel cube
Antifoam	Burst dosing kiosks

Table 4: list of substances stored at Poole BC.

Note: Poole WRC Site Plan for the whole WRC site is detailed in (<u>WRG006 Site Waste Plan Poole</u>).

7.2 Trowbridge BC (11799)

Appendix 4 details the sensitive receptors surrounding Trowbridge BC.

- Responding
 - Fire and Emergency Plan (HSF25-03) is available and includes DSEAR zones and ratings.

- DSEAR zones are marked on site and recorded in a folder onsite which has detailed plans of all the zoned areas and is included within the induction plan.
- Every site visitor has to review the site induction checklist and sign their acceptance. Any updates require a re-read of the induction checklist.
- DSEAR zoning documents are available on Source <u>here</u>: this area in Source comprises reports, DSEAR summary, audits and drawings.
- Trowbridge drawings are here:
- Spill Kit use is governed by TBT055 Toolbox Talk Use of Spill Kits
 - Spill kits are located in:
 - Garage
 - Belt press building
- List of substances stored at site (Table 5):

List of substances stored at site:	Storage facilities
Polyelectrolyte (for sludge stability)	Garage, GBT kiosk, belt press building
Oil for boiler	Boiler house
Antifreeze	In containers in boiler house
Diesel	Diesel tank adjacent to flare
Antifoam	Burst dosing kit adjacent to digestion plant
	and in garage.

Table 5: List of substances stored at Trowbridge BC

Note: Trowbridge WRC Site Plan for the whole WRC site is detailed in (<u>WRG001 Site Waste Plan Trowbridge</u>).

7.3 Berry Hill BC (13018)

Appendix 5 details the sensitive receptors surrounding Berry Hill BC.

- Responding
 - DSEAR zones are marked on site and recorded in a folder onsite which has detailed plans of all the zoned areas and is included within the induction plan.
 - Every site visitor has to review the site induction checklist and sign their acceptance. Any updates require a re-read of the induction checklist.
 - DSEAR zoning documents are available on Source <u>here</u>: this area in Source comprises reports, DSEAR summary, audits and drawings.
 - Berry Hill drawings are here:
- Spill Kit use is governed by TBT055 Toolbox Talk Use of Spill Kits
 - Spill kits are located in:
 - CHP building
 - Oil tank next to CHP building
 - Centre of site close to Digester 4
- List of substances stored at site (Table 6):

List of substances stored at site:	Storage facilities
Polyelectrolyte (for sludge stability)	SAS GBT building and Centrifuge Poly kiosk
Oil for boilers	Boiler house

OWNER: DIVISIONAL WATER RECYCLING MANAGER

Antifreeze	In containers in boiler house
Diesel tanks	One diesel tank next to CHP building, and
	one adjacent to DEMON plant
Antifoam	Stored by individual digesters and spare
	antifoam is stored in garage close to grit and
	screenings area.
Wood chips	On grit and screenings pad
Water softener	Boiler House

Table 6: List of substances stored at Berry Hill BC

7.4 Taunton BC (11798)

Appendix 6 details the sensitive receptors surrounding Taunton BC.

Responding

- DSEAR zones are marked on site and recorded in a folder onsite which has detailed plans of all the zoned areas and is included within the induction plan.
- Every site visitor has to review the site induction checklist and sign their acceptance. Any updates require a re-read of the induction checklist.
- DSEAR zoning documents are available on Source <u>here</u>: this area in Source comprises reports, DSEAR summary, audits and drawings.
- Taunton drawings are <u>here</u>:
- Spill Kit use is governed by TBT055 Toolbox Talk Use of Spill Kits
 - Spill kits are located in:
 - A) One by the LTC kiosk
 - B) One in centrifuge kiosk
 - C) One in GBT poly makeup
 - D) Located at the inlet in storage cabins
 - E) One next to the lime plant
 - F) Two in the Victorian building
- List of Substances stored at site (Table 7)

List of substances stored at site:	Storage facilities
Powder Polyelectrolyte (for sludge stability)	GBT kiosk (25kg bags)
	Centrifuge kiosk (750 kg bags)
	Spare poly is stored in the Victorian building
	onsite
Propane for boiler fuel	Three tanks by strainpress surrounded by
	fence.
Antifreeze	On a bunded area next to CHP technician
	cabin
Diesel tanks	Opposite CHPs in bunded area
Antifoam	IBC stored on a bund next to centrifuges
	Spare antifoam IBCs are stored in the
	Victorian building
Oil	25L drums in stored in bund in Victorian
	building

Table 7: List of substances stored at Taunton BC

Note: Taunton WRC Site Plan for the whole WRC site is detailed in (<u>WRG004 Site Waste Plan Taunton</u>).

7.5 Avonmouth BC (11800)

Appendix 6 details the sensitive receptors surrounding Avonmouth BC.

Responding

- DSEAR zones are marked on site and recorded in a folder onsite which has detailed plans of all the zoned areas and is included within the induction plan.
- Every site visitor has to review the site induction checklist and sign their acceptance. Any updates require a re-read of the induction checklist.
- DSEAR zoning documents are available on Source <u>here</u>: this area in Source comprises reports, DSEAR summary, audits and drawings.
- Avonmouth drawings are <u>here</u>:

Spill Kit use is governed by TBT055 Toolbox Talk - Use of Spill Kits

- Spill kits are located in:
- A) SAS thickening and blower building.
- B) In front of the Biodrier building (GTG grid entry side).
- C) By temporary SludgeTEK unit 12 and SST 2.
- D) Temporary lime plant (in between sedimentation tank 4 and the storm tanks).
- E) One by the LTC kiosk.
- F) Located at the inlet pumping station.
- List of substances stored at site (table 8)

List of substances stored at site:	Storage facilities
Powder Polyelectrolyte (Zeetag 8160)	Biodrier building / SAS thickener and blower building
Liquid Polyelectrolyte (Zeetag 8187)	Silo
Liquid Polyelectrolyte (Zeetag 9248FS)	SAS thickener and blower building
Antifreeze	WRC Generating station
Antifoam / Burst 5400	Biodrier building

Table 8: List of substances stored at Avonmouth BC

Revision history

Issue	Date	Description	Prepared by
1	March 2021	First Issue	Carolyn Dewhirst
2	July 2021	Second issue – review to include multiple sites. Document and owner (job) title change	
3	September 2021 Third issue – review to include Berry Hill BC, review of BAT 21, plus other revisions i.e. key contacts list		Carolyn Dewhirst
4	January 2022 Fourth issue – review to include Taunton BC		Carolyn Dewhirst
5	September 2022 Fifth issue – general review and inclusion of Avonmouth BC		Carolyn Dewhirst/ Shrirunga Bristowe

Appendix 1 – Breakdown of the risks and mitigations

Risk Likelihoods and Impacts are assessed using Wessex Water AMP002

Category	Likelihood of occurrence	Magnitude of Potential Impact	Risk rating prior to mitigation	Measures to minimise the impact if the accident does happen / Measures to avoid the accident happening	Residual risk following mitigation
Equipment breakdowns	Medium	High	High	 Regular maintenance of critical plant Monitoring on critical plant, linked to manned control room Established consequence management plans to deal with incident. Inhibits on tanks to prevent overfilling Tank level monitors Pump failure telemetry alarms CMP018 Major oil/fuel pollution incident response (sharepoint.com) Pollution Response guidance (OPSG165) Guidance on response to telemetry alarms (ROCP200) 	Low

Category	Likelihood of occurrence	Magnitude of Potential Impact	Risk rating prior to mitigation	Measures to minimise the impact if the accident does happen / Measures to avoid the accident happening	Residual risk following mitigation
Spillages / leaks / loss of containment / overfilling of tanks	Low	High Spillage and leakage could occur during fuel deliveries, vehicle refuelling (outside BC permit area), vehicle breakdowns/ accidents and or damage to tanks or bunds. Loss of containment could result in potentially polluting liquids (including oils) being discharged to drainage system or land outside permitted area.	High	 Monitoring linked to control room installed on key tanks Tanks are inspected regularly by site staff Spillages are all self-contained via drainage system Minor spills cleaning up immediately Established consequence management plans to deal with incident. TRTWG768 11795 Poole Best Tankering Practice TRTWG801 11799 Trowbridge Best Tankering Practice CMP018 Major oil/fuel pollution incident response (sharepoint.com) Pollution Response guidance (OPSG165) 	Medium
Fires	Low	High	High	 HSA25 Fire safety (sharepoint.com) Fire management for Operational sites (TBT059).pdf (sharepoint.com) ENVG008 Environmental Guidance Fire Emergencies (sharepoint.com) Response to telemetry alarm about fire (ROCP208) (sharepoint.com) 	Low
Staff Operations	Medium	Medium	Medium	 Tank level monitors Pump failure telemetry alarms Training and development via Operator passport <u>Treatment Operator Passport (TRTMAN059)</u> and onsite training. 	Low

Category	Likelihood of occurrence	Magnitude of Potential Impact	Risk rating prior to mitigation	Measures to minimise the impact if the accident does happen / Measures to avoid the accident happening	Residual risk following mitigation
Vandalism	Low	Medium Site could be subject to intentional vandalism by intruders, causing leaks or spills	Medium	 On site security measures (CCTV / security fencing / lockable gates) Repairs undertaken as required Requirement for visitors to sign in Incidents are reported to the police for their records Health & safety and security documentation - three yearly review plan (sharepoint.com) 	Low
Flooding	Low	Medium Site located within rivers and sea zone rating low risk ² . Medium Site located in high risk zone for surface water flooding ¹ .	High	 Established consequence management plans to deal with incident. CMP005 Inundation of a WRC or SPS by a major flood event (sharepoint.com) 	Medium

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² Environment Agency – <u>Long term flood risk - GOV.UK (flood-warning-information.service.gov.uk)</u>:

Category	Likelihood of occurrence	Magnitude of Potential Impact	Risk rating prior to mitigation	Measures to minimise the impact if the accident does happen / Measures to avoid the accident happening	Residual risk following mitigation
Other - Power supply loss	Low	High	High	 On site back-up generators Mobile back-up generators Liaison with power supply providers Regular maintenance of generators Telemetry for mains failure linked to manned control room Established consequence management plans to deal with incident. CMP014 (Significant Broad Area - Power Supply Failures) (sharepoint.com) Microsoft Word - BCIRP01 Widespread loss of power response plan (sharepoint.com) Response to telemetry alarm about electricity failure (ROCP203) 	Low
Containment of firewater	Low	Medium	Medium	 Firewater contained within WRC drainage system Volumes of firewater can be isolated in storm tanks or balance tanks to allow for: -Gradual feedback through the WRC for treatment -Removal by tanker for treatment at permitted site 	Low
Abatement systems failure such as OCUs or PRVs	Medium	Medium	Medium	 Regular inspection and maintenance of critical plant as recorded in site task sheets and fugitive emissions plans. Monitoring on critical plant, linked to manned control room Raise WAM jobs for prompt repair Involve the odour scientist in any remedial work 	Low

Category	Likelihood of occurrence	Magnitude of Potential Impact	Risk rating prior to mitigation	Measures to minimise the impact if the accident does happen / Measures to avoid the accident happening	Residual risk following mitigation
Vehicle Collisions	Medium	Medium	Medium	 Each BC has a traffic management plan, which includes site specific traffic routes through the BC. Additional measures in place: segregating routes for small vehicles from larger tankers and lorries. Speed bumps, speed restriction signs, one way systems are also used. Car parking areas are where possible kept away from areas where tankers and lorries for waste and deliveries take place. 	Low
Lightning strike	Low	High/Very High	Medium	 DS325 – Earthing, Bonding and Lightning protection. This document specifies requirements to reduce the risk of injury to living beings by electric shock; physical damage and failure of electrical and electronic systems. DS 341 Transformer Installations WIMES 3.02 (C) - Water Industry mechanical and electrical specification – lightning protection. Annual lightning protection assessments completed and available on Site Information File. 	Low

Appendix 2 – Wessex Water Risk Management Tables

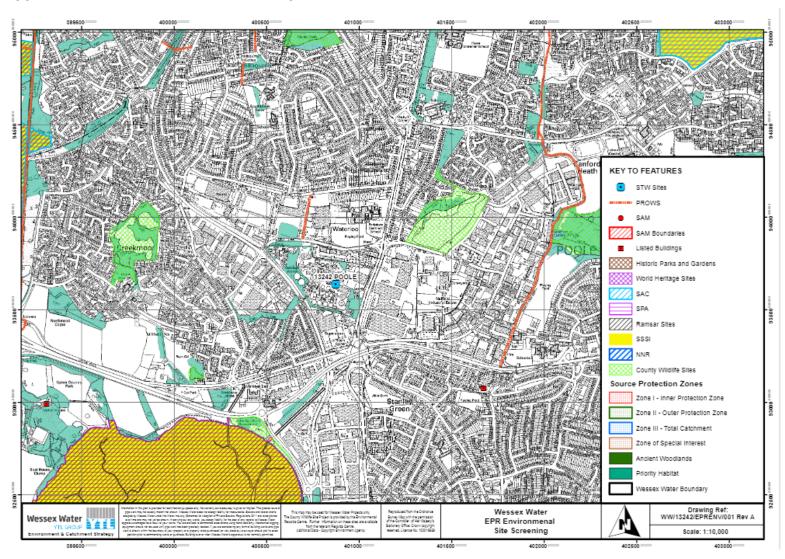
Table 1: Probability/ likelihood of occurrence

		Description	Likelihood
Very High	5	It is almost certain that the event will occur if the situation continues as it is	> 90%
High	4	is very likely that the event will occur if the situation continues as it	
Medium	3	It is foreseeable that circumstances may exist which result in the event occurring	40 - 60%
Low	2	It is unlikely that circumstances will combine to result in the event occurring	10 - 40%
Very Low	1	It is most unlikely that the event will occur it would require exceptional conditions	< 10%

Table 4: Environmental

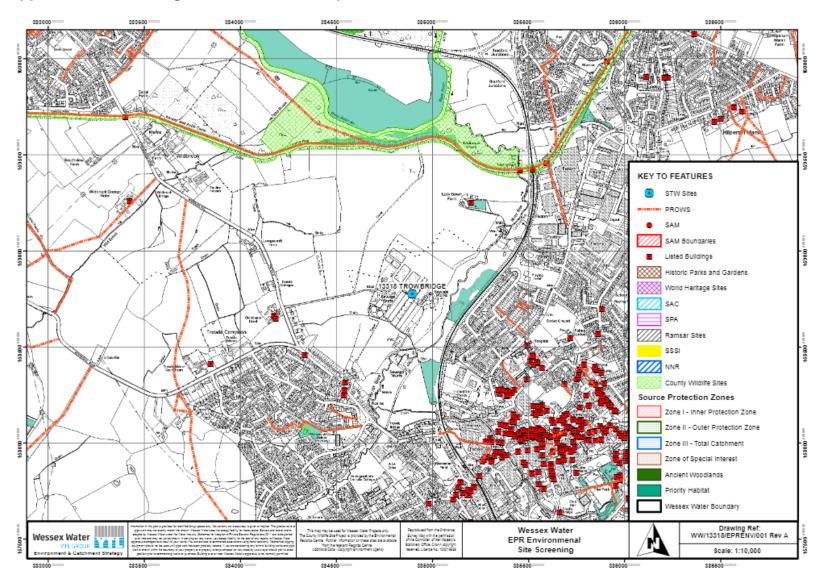
Very High	5	Extreme environmental incident, resulting in irreversible or long-term widespread harm to environment; resulting in > 1 Cat 1 pollution incident	
High	4	Major environmental incident resulting in significant impact requiring management by external authorities (EA,DWI) and high level of resources for response and remedy; resulting in 1 Cat 1 pollution incident	
Medium	3	Moderate environmental impact requiring management response to aid recovery -reportable to authorities (e.g. fuel tank spillage); resulting in 1 or more Cat 2 pollution incident	
Low	2	Local impact requiring management response, but from which there is natural recovery (e.g. recovery of fly-tip waste, silt into spawning river); resulting in 1 or more Cat 3 pollution incidents	
Very Low	1	Minimal environmental impact (e.g. minor oil drips); resulting in 1 or more Cat 4 pollution incidents	

Appendix 3: Poole BC Sensitive Receptors



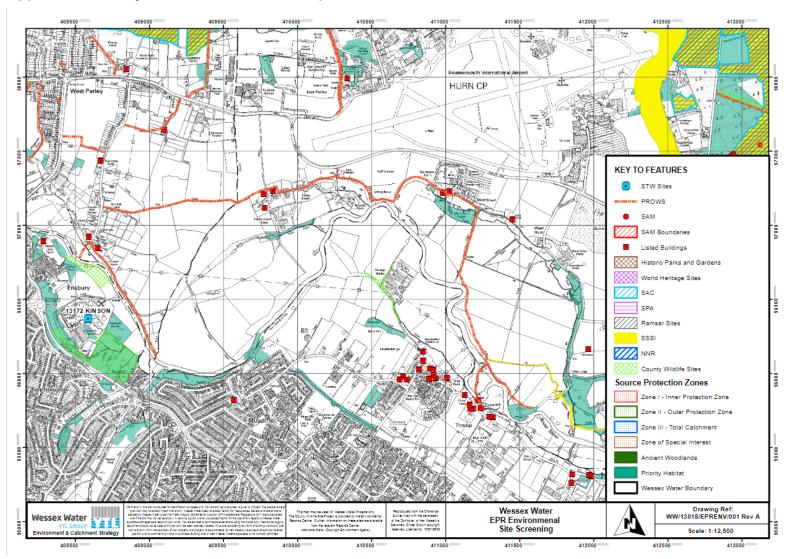
Page 17 of 21 Uncontrolled in printed format

Appendix 4: Trowbridge BC Sensitive Receptors



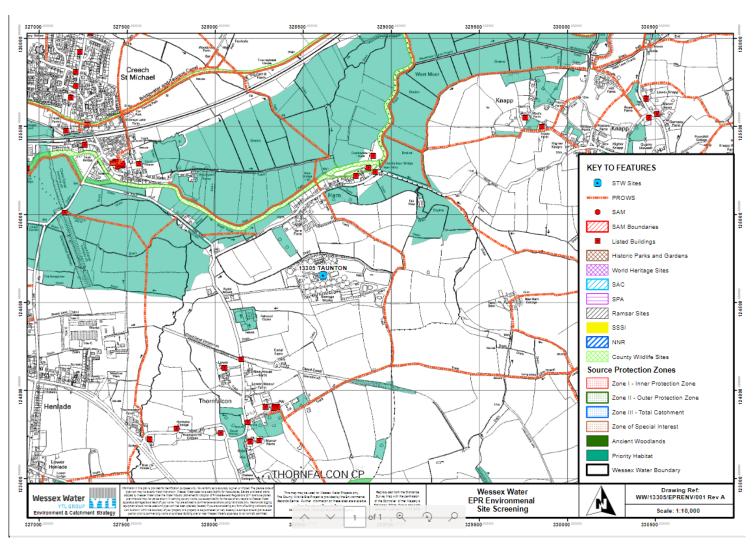
Page 18 of 21 Uncontrolled in printed format

Appendix 5: Berry Hill BC Sensitive Receptors



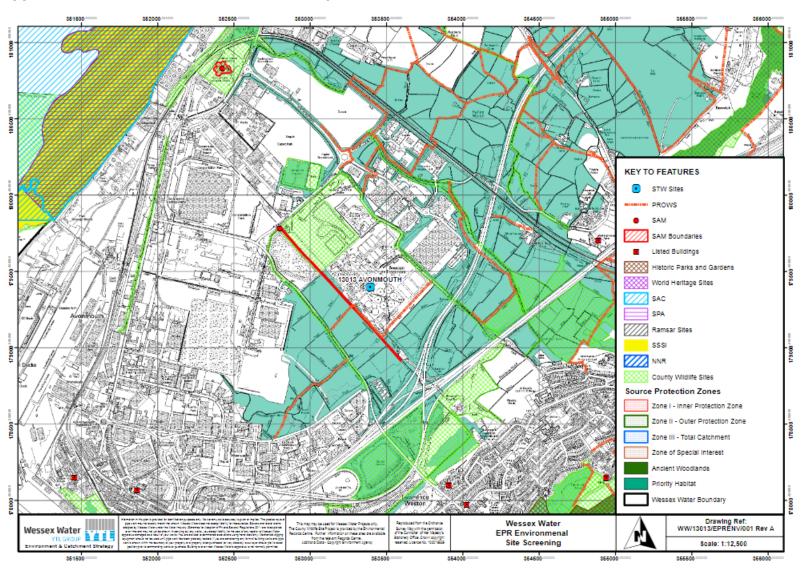
Page 19 of 21 Uncontrolled in printed format

Appendix 6: Taunton BC Sensitive Receptors



Page 20 of 21 Uncontrolled in printed format

Appendix 7 Avonmouth BC Sensitive Receptors



Page 21 of 21 Uncontrolled in printed format