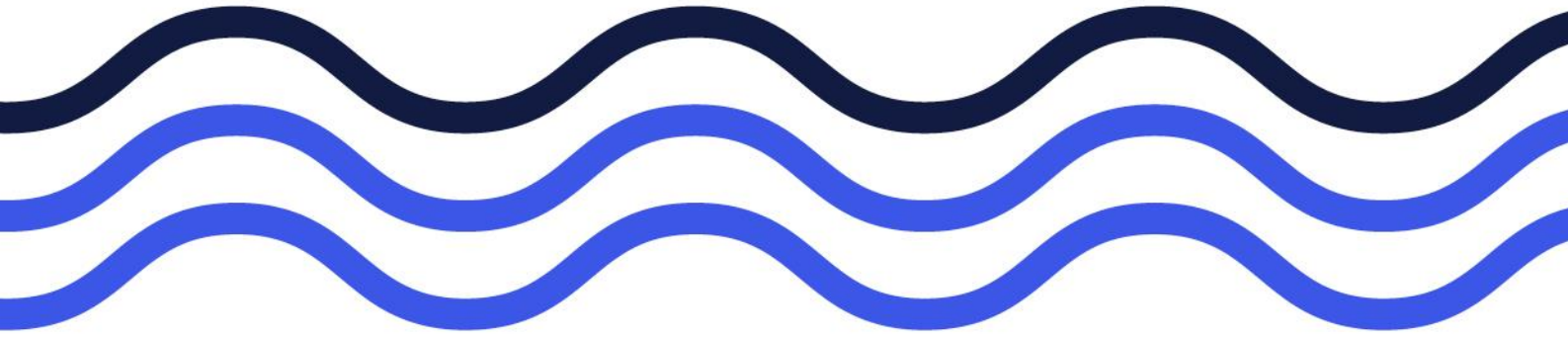
# Sandall Sludge Treatment Facility: Accident Management Plan



YorkshireWater

**Document Control**

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| **Review Period:** | Every 4 years or sooner in the event of changes that may impact this plan, including (but not limited to):<br>• Changes to site activities, equipment or management / operational procedures.<br>• An accident or incident on this site, or other similar sites (whether or not these are YW sites) that prompts a review of accident risks, preventive controls and emergency responses measures. |

**Document Approval**

| **Name** | **Name** |
|---|---|
| David Shaw<br>Policy and Assurance | |
| **Document Owner (Author)** | **Document Approval Manager (Tier 3)** |

**Document Revision History**

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| **1** | 1/2/2024 | David Shaw | Hazel Morgan | New document |

**Business areas affected by this document**
This applies to colleagues that are operating or managing Sandall STF.

## 1. Introduction

In accordance with the Environmental Permit for Sandall Sludge Treatment Facility (STF) (permit reference: EPR/ DP3492ZX), this document presents the Accident Management Plan for the permitted facility.

This plan is established to identify, evaluate and prepare for potential incidents or events that could result in:

- Pollution; and / or
- not being able to comply with permit conditions.

This plan for accident prevention and management follows relevant Environment Agency guidance and includes the following sections:

- Overview of management controls (Section 2)
- Identification of relevant sensitive receptors (Section 3).
- Identification of potentially polluting substances held on site (Section 4).
- Identification potential accidents and incidents and assessment of the overall risk posed by these hazards (Section 5).
- The overall risk of each of the hazard is identified on the basis of the likelihood of the event occurring and the environmental consequence of that event, taking account of:
    - Preventive controls in place; and
    - Actions to be taken in the event of the accident / incident occurring.
- Summary of actions to be taken following an accident or incident occurring, including measures to record, investigate and respond to the incident (Section 6).
- List of emergency contacts (Section 7).

## 2. Overview of relevant management controls and procedures

YW has an established EMS, which is certified to the ISO 14001 standard. The EMS forms part of a wider corporate Integrated Management System (IMS) which also incorporates quality management, health and safety management, asset management, organisational resilience and business continuity requirements. The management system follows an asset life cycle approach, from design through to decommissioning. Corporate level management system processes are in place, which are supplemented by site-specific documented procedures and processes.

YW has developed processes to identify, respond to and control emergency situations that may cause adverse environmental consequences. Spill kits are readily accessible at locations where there is a risk of spillage (e.g. delivery, storage and areas of use). Spill control toolbox talks are provided to staff. This includes information about how to prevent and control pollution incidents from accidental spills of oils, fuels, sludge and chemicals.

Contingency plans help minimise potential environmental impacts; this includes emergencies arising from breakdowns, enforced shutdowns, abnormal circumstances such as flooding as well as major fire and spill/loss of containment events.

The YW Business Continuity Plan is in place to define and prioritise critical business functions, details the immediate response requirements for a critical incident and details strategies and actions to be taken to ensure business continuity. All Bioresources sites, including Sandall STF, have the capability of remote monitoring and remote operation of key functions. A security guard is present on site 12 hours per day Monday to Friday and CCTV security cameras are located across the site with monitoring provided 24/7 by the YW Service Delivery Centre. All buildings are alarmed and high-risk equipment is provided with secondary fencing for added security.

## 3. Sensitive receptors

A summary of sensitive receptors relevant to Sandall STF is provided in Table 1 below.

**Table 1: Raw Materials Associated with the Facility and their Potential to Pollute**

| Receptor type | Receptor description and distance |
|---|---|
| Residential housing | • North: Nearest residential property located approximately 100 m to the northeast.<br>• East: Nearest residential property located approximately 500 m<br>• South: Nearest residential property located approximately 200 m<br>• West: Nearest residential property located approximately >1 km. |
| Public amenity areas | Allotments are located adjacent to the west of the installation boundary. The River Don (Wheatley Cut) is located approximately 200 m to the north of the installation boundary. Sandall Park is located approximately 350 m to the south east of the installation boundary at its nearest point. |
| Schools | There are 13 schools within approximately 2 km of the site. The nearest of these is approximately 500 m to the east. |
| Hospitals / healthcare facilities | There is one hospital located approximately 1.7 km to the south west of the installation boundary and one health centre / pharmacy located approximately 1.4 km to the south west of the installation boundary. |
| Industrial/commercial sites | There are multiple industrial / commercial sites located within close proximity of the installation. This includes commercial premises located on land approximately 15 m to the south. |
| Habitat sites – statutory designations | Sandall Beat SSSI and LNR is located approximately 1.9 km to the south east of the installation boundary.<br>Hatfield Moor SAC is located approximately 8.3 km east and Thorne and Hatfield moors SPA is located approximately 8.4 km east of the installation boundary. |
| Habitat sites – non statutory designations | There are a number of other designated habitat sites within 2 km of the installation boundary. These include:<br>• Wheatley Park and Old Don Oxbows Local Wildlife Site (LWS), part of which directly adjoins the site to the north.<br>• Arksey Ings LWS 310 m to the north. |

| | |
|---|---|
| | • Bentley Common LWS 760 m to the north west<br>• Bentley Ings LWS 295 m to the north.<br>• Shaw Lane Hedgerows LWS 690 m to the south east.<br>• Bentley Bank LWS 700 m to the north east.<br>• Dodge Dike Pond LWS 1.3 km to the south east.<br>• Shaw Lane Pond LWS 910 m to the south east.<br>• Wheatley Golf Course LWS 840 m - 1 km to the south east.<br>• Pilkington's Burgy Banks LWS 850 m to the north east.<br>• Long Sandall Ings LWS 1 km to the north east.<br>• Shaw Wood LWS and ancient woodland (AW) is located approximately 1.4 km to the south east.<br>• Hagg Wood LWS and AW 1.2 km to the south east.<br>• Pot Hill LWS 1.7 km to the south east.<br>• Heather Wood LWS 1.4 km to the south |
| Ground / groundwater | Underlying groundwater classed as a Secondary A aquifer within superficial deposits and a Principal aquifer within bedrock geology; groundwater vulnerability is classed as High; the installation is located within a Zone III Source Protection Zone and is located within the Lower Don Nitrate Vulnerable Zone. |
| Surface water | The historical course of the River Don (an oxbow lake feature) is present directly to the north of the installation boundary. The Wheatley Cut (a section of the River Don) is located beyond this approximately 200 m to the north and a further channel of the River Don is located beyond this. A lake, within Sandall Park is located approximately 410 m to the south east, at its closest point.<br>There is likely to be hydraulic continuity between underlying groundwater and the surface water features. |
| Atmosphere | Local, regional and global atmosphere. |

## 4. Inventory of potentially polluting materials

In assessing potential accidents and incidents consideration has been given to the potentially polluting substances held on site, including review of their properties, toxicity and the volume stored. 0 details the raw materials stored on site, 0 details the sludge, sludge cake and process liquors stored on site and 0 details the waste materials stored on site.

**Table 2: Raw Materials Associated with the Facility and their Potential to Pollute**

| Substance (Contaminants) | Use | State | Storage Arrangements | Toxicity/ Fate/ Mobility |
|---|---|---|---|---|
| Polymer (powder) | Diluted coagulant used for thickening undigested sludge and to assist in the dewatering process for digested sludge | Solid | 750 kg bags in dedicated hopper room within drum thickener building and centrifuge building. The powder is mixed and diluted, in an 'ageing' tank prior to transfer to a stock tank (c. 3 $m^3$ capacity each) before being introduced to the sludge at the thickeners and centrifuge via pumps and dosing pipework. | Polluting to soil, groundwater and watercourses in the event of a spillage/loss |
| Antifoam | Digester antifoaming agent | Liquid | Storage of small containers (20 litres) on hardstanding within a building in the digester compound, applied via separate dosing unit with a 0.25 $m^3$ tank and associated pipework. | Polluting to soil, groundwater and watercourses in the event of a spillage/loss |
| Water treatment chemicals | Boiler treatment | Liquid and solid | Brought to site by contractors for periodic maintenance. Limited storage on site within digester compound (on hardstanding in a bunded area). | Polluting to soil, groundwater and watercourses in the event of a spillage/loss |
| Glycol | Antifreeze for use in CHP equipment | Liquid | | |
| Biogas | Generated within the AD | Gas | Transferred from AD to a gas holder (c. 540 $m^3$ capacity) for use in the CHPs and/or boilers or to the flare. | Volatile and unlikely to pollute watercourses or land in the event of escape |
| Lubricating oil | For use in CHP and other equipment | Liquid | Small intermediary containers (20 litre) stored within designated areas on hardstanding. | Polluting to soil, groundwater and watercourses in the event of a spillage/loss |
| Diesel | Fuelling of off-road vehicles | Liquid | Integrally bunded steel tank, 1,300 litre capacity, located on hardstanding within the building north of the cake pad. | |

**Table 3: Bulk Storage of Sludge, Sludge Cake and Process Liquors and their Potential to Pollute**

| Material | Nature of material | Storage Arrangements | Nominal capacity ($m^3$) |
|---|---|---|---|
| Raw sludge (un-thickened) | Liquid | Incoming underground and overground pipes from WwTW | - |
| | | Sludge import tank, steel construction, covered, c. 2021 | 213 |
| | | SAS chamber, concrete construction, below ground level | 60 |
| Screened sludge / SAS | Liquid | Sludge feed to thickener tanks via sub-surface concrete sump in above ground and below ground pipework | - |
| | | Thickener feed tanks, No. 1 and No.2, steel construction, covered, c. 2008 | 2 x 390 |
| | | Sludge feed to drum thickeners via above ground and below ground pipework | - |
| | | Drum thickeners and associated mixing / feed pipework | - |
| | | SAS feed to gravity belt thickeners via below ground and above ground pipework | - |
| | | Gravity belt thickeners and associated mixing / feed pipework | - |
| Thickened sludge | Liquid | Thickened sludge feed from drum thickeners to digester feed tank (below ground) | - |
| | | Thickened sludge feed from gravity belt thickeners to digester feed tanks (below ground) | - |
| | | Digester feed tank, steel construction, covered, c. 2009 | 412 |
| Sludge within digesters | Liquid | Sludge feed to digesters (below ground) | - |
| | | Digesters x 2, steel, covered, constructed c. 2013 (replacing older digesters at the same location). | 2 x 1,730 |
| Digested sludge | Liquid | Sludge feed to centrifuge feed tanks via below ground pipeline | - |
| | | Centrifuge feed tank, steel, uncovered, construction c. 1995 | 320 |
| | | Consolidation tanks, concrete, partially below ground, (used for temporary storage in the event of maintenance or failure of the downstream dewatering centrifuge), c. 1990 | 2 x 800 |

| Material | Nature of material | Storage Arrangements | Nominal capacity ($m^3$) |
|---|---|---|---|
| | | Sludge feed to centrifuges (below ground) | - |
| Thickening / dewatering liquor | Liquid | Liquor return from drum thickeners (via liquor sump) to WwTW (below ground) | - |
| | | Liquor return from centrifuges (via liquor sump) to WwTW (below ground) | - |
| Cake | Solid | Concrete pad<br>Cake volumes are managed in line with HACCP requirements, having regard to good housekeeping to minimise drag out and maximise containment on engineered surfaces. | (max. capacity) 8,000 tonnes |
| Run-off from concrete pad | Liquid | Return pipework (to WwTW) | - |
| Condensate | Hazardous | Return pipework (to WwTW) | Treated in the WwTW |

**Table 4: Process Wastes and Potential to Pollute**

| Waste Type | Nature of material | Storage Arrangements | Storage and Disposal Method |
|---|---|---|---|
| Sludge screenings | Non-hazardous | Stored within skips on hardstanding at sludge import, prior to collection by approved waste contractors | Collected by approved waste contractor for off-site disposal |
| Waste oil | Hazardous | Stored in small containers (<50 litres) within bunded areas/containers before removal by maintenance contractors | Collected by approved waste contractor for off-site disposal |
| General waste | Non-hazardous | Dedicated skips and smaller containers, located at designated points within the installation | Collected by approved waste contractor for off-site disposal |
| Metals | Non-hazardous | Stored within a skip in designated area prior to removal | Collected by approved waste contractor for off-site disposal |
| Oil contaminated absorbents | Hazardous | Dedicated containers (20 litre drums) within designated area prior to removal | Collected by approved waste contractor for off-site disposal |
| Oil filters | Hazardous | Dedicated container (20 litre drum) within designated area prior to removal | Collected by approved waste contractor for off-site disposal |
| Antifreeze | Hazardous | Removed from site when servicing requires (in small containers (<50 litres)) | Collected by approved waste contractor for off-site disposal |

## 5. Accident Management Plan

The potential for accidental releases resulting from the activities proposed in this variation application are identified and assessed in Table 5 below. This includes a summary of measures in place to manage / reduce accident risks. The risk assessment methodology is provided below.

**Table 5: Potential accidental releases and associated risk**

| What harm can be caused and who can be harmed | | | Managing the risk | Assessing the risk (after preventative controls) | | |
|---|---|---|---|---|---|---|
| **Hazard** | **Receptor** | **Pathway** | **Risk management** | **Probability of exposure** | **Environmental Consequence** | **What is the overall risk?** |
| **What has the potential to cause harm?** | **What is at risk? What do I wish to protect?** | **How can the hazard get to the receptor?** | **What measures will you take to reduce the risk? If it occurs – who is responsible for what?** | **How likely is this contact?** | **What is the harm that can be caused?** | **What is the risk that still remains?** |
| **Site Wide - general** | | | | | | |
| Flooding leading to damage to site processes and/or mobilisation of polluting materials | Ground / groundwater / surface waters | Floodwaters / overland runoff / infiltration / drainage systems | **Preventative controls**<br>• Flood risk review undertaken. Core STF assets, including sludge tanks and digesters are located within a flood zone. The flood map shows that the majority of the installation is in Flood Zone 3, with an annual probability of flooding greater than 1 in 100 years (High probability).<br>• Vulnerable Asset Protection Plan specifically details flooding actions including how river levels should be monitored and what actions are required.<br>**In the event of an incident/accident**<br>• Initiate site emergency plan. | Unlikely | Medium | Moderate / Low risk |

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| **Hazard** | **Receptor** | **Pathway** | **Risk management** | **Probability of exposure** | **Environmental Consequence** | **What is the overall risk?** |
| **What has the potential to cause harm?** | **What is at risk? What do I wish to protect?** | **How can the hazard get to the receptor?** | **What measures will you take to reduce the risk? If it occurs – who is responsible for what?** | **How likely is this contact?** | **What is the harm that can be caused?** | **What is the risk that still remains?** |
| | | | • Remove mobile fuel/ chemical sources away from flood risk, if appropriate and safe to do so. | | | |
| Flooding due to drain blockages and / or excessive rainfall causing localised on-site surface water flooding leading to damage to site processes and / or mobilisation of polluting materials | Ground / groundwater / surface waters | Floodwaters / overland runoff / infiltration / drainage systems | **Preventative controls**<br>• Drains are monitored for blockages and cleaned as required.<br>• Materials are stored in appropriately sealed containers (preferably bulk or semi-bulk), or proprietary secondary containment cabinets, such that the risk of contents being mobilised or containers being washed away in a flood event is low.<br>• Vulnerable Asset Protection Plan specifically details flooding actions.<br>• Planned maintenance / inspection of site drainage systems.<br>**In the event of an incident/accident**<br>• Initiate site emergency plan.<br>• Remove mobile fuel / chemical sources away from flood risk, if appropriate and safe to do so. | Unlikely | Medium | Moderate / Low risk |

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| **What has the potential to cause harm?** | **What is at risk? What do I wish to protect?** | **How can the hazard get to the receptor?** | **What measures will you take to reduce the risk? If it occurs – who is responsible for what?** | **How likely is this contact?** | **What is the harm that can be caused?** | **What is the risk that still remains?** |
| Fire leading to damage to site processes and / or release of polluting materials. | Nearby human receptors<br>Local air quality and global climate impacts<br>Ground / groundwater / surface waters | Air<br>Overland runoff / infiltration / drainage systems | **Preventative controls**<br>• Regular maintenance of equipment; LDAR programme in place.<br>• Fire alarms are fitted in CHP / boiler rooms.<br>• DSEAR assessment has been completed for site and only appropriate ATEX rated equipment may be used in high-risk areas.<br>• Access controls in place for digester compound and portable gas monitor use required when inside compound.<br>• Site does not treat combustible wastes. Sludge is wet.<br>• Gas slam shut valves on biogas feeds to the CHP / and biogas / natural gas feed to the boiler.<br>• Gas and fire detection in the boiler / CHP rooms, and other key AD plant areas.<br>• Lightning protection provided for biogas storage.<br>**In the event of an incident/accident**<br>• Follow site emergency procedure.<br>• Hydrants connected to a final effluent supply can be used by the fire service. | Highly unlikely | Severe | Moderate / Low risk |

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| | | | • Excess biogas created by the site will be burnt through the flare. | | | |
| Failure to contain firewater following fire / explosion event leading to localised on site surface water flooding leading to damage to site processes and / or mobilisation of polluting materials | Ground / groundwater / surface waters | Floodwaters / overland runoff / infiltration / drainage systems | **Preventative controls**<br>• Site drainage collects and returns surface / yard water to WwTW for treatment.<br>• Site drainage systems, hardstanding, sumps, storm tanks etc will minimise flow of firewater to receptors.<br>**In the event of an incident/accident**<br>• Initiate site emergency procedure. | Highly unlikely | Medium | Low risk |
| Excessively low temperatures leading to blockages or damage to pipework, valves or equipment and unplanned release | Nearby human receptors<br>Local air quality and global climate impacts | Air<br>Overland runoff / infiltration / drainage systems | **Preventative controls**<br>• 'Winterisation' procedures.<br>• Bunding provided to environmentally critical plant and equipment.<br>• Current YW technical standards include trace heating for vulnerable pipework.<br>**In the event of an incident/accident** | Unlikely | Medium | Moderate / Low risk |

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| of gas with fire / explosions risks and/or release of potentially polluting liquids | Ground / groundwater / surface waters | | • Isolate systems as appropriate and initiate fire, spill and emergency response procedures, cleaning up spill and disposal of wastes appropriately.<br>• Carry out repairs (as required). | | | |
| Generalised or localised power failure leading to failure of pumps / control systems and escape of sludge and/or biogas | Nearby human receptors<br>Local air quality and global climate impacts<br>Ground / groundwater / surface waters | Air<br>Overland runoff / infiltration / drainage systems | **Preventative controls**<br>• Process for recovering from power failure has been planned and recorded.<br>• In the event of power failure, sludge transfers will stop but this will not affect security of containment e.g., tanks will not overflow.<br>**In the event of an incident/accident**<br>• Halt sludge imports to site.<br>• Confirm backup power supply is online.<br>• Confirm that all systems are operating normally. | Unlikely | Medium | Moderate / Low risk |
| Vandalism / site security failure leading to | Nearby human receptors | Air<br>Overland runoff / | **Preventative controls** | Highly unlikely | Medium | Low risk |

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| unplanned release of gas with fire / explosions risks and/or release of potentially polluting liquids (chemicals, oils, sludges) | Local air quality and global climate impacts<br>Ground / groundwater / surface waters | infiltration / drainage systems | • High level of security on site with 24 hr security monitoring, secure entry gate systems and locked cabs and control units.<br>• In addition to perimeter fencing around site, key digestion equipment sits within a separate fenced area.<br>• Storage containers bunded.<br>**In the event of an incident/accident**<br>• Isolate systems as appropriate and initiate fire, spill and emergency response procedures, cleaning up spill and disposal of wastes appropriately.<br>• Carry out repairs (as required).<br>• Review security measures on site. | | | |
| Cyber security incident which leads to unauthorised site access and unplanned release of gas with fire / explosions risks and/or release of | Nearby human receptors<br>Local air quality and global climate impacts | Air<br>Overland runoff / infiltration / drainage systems | **Preventative controls**<br>• YW operates an information security management system to provide cyber security protection and response.<br>• High level of security on site with 24 hr security monitoring, secure entry gate systems and locked cabs and control units.<br>• Storage containers bunded.<br>**In the event of an incident/accident** | Highly unlikely | Mild | Negligible risk |

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| potentially polluting liquids (chemicals, oils, sludges) | Ground / groundwater / surface waters | | • Isolate systems as appropriate and initiate fire, spill and emergency response procedures, cleaning up spill and disposal of wastes appropriately.<br>• Carry out repairs (as required).<br>• Review cyber security measures. | | | |
| Failure of chemical or oil containment due to deterioration of storage containers, pipework or valves leading to spillage | Ground / groundwater / surface waters | Overland runoff / infiltration / drainage systems | **Preventative controls**<br>• All oil storage and waste oil storage tanks are fully bunded (using either fixed or mobile bunds).<br>• Tank and pipework inspections undertaken as part of routine maintenance.<br>• Operational procedures for refilling oil and chemical storage tanks. Spill kit available at tanks.<br>• Any oil spilt around engines during maintenance will be cleaned up and disposed of appropriately.<br>**In the event of an incident/accident**<br>• Isolate systems as appropriate and initiate spill response procedure, cleaning up spill and disposal of wastes appropriately.<br>• Carry out repairs (as required).<br>• Review systems to prevent recurrence. | Unlikely | Medium | Moderate / Low risk |

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| Failure of chemical or oil containment during delivery | Ground / groundwater / surface waters | Overland runoff / infiltration / drainage systems | **Preventative controls**<br>• Delivery procedures inc. supervision by site staff, check on space available in receiving tank.<br>• Storage containers bunded.<br>• Site drainage collects and returns surface/yard water to WwTW for treatment.<br>**In the event of an incident/accident**<br>• Follow incident plan. | Unlikely | Medium | Moderate / Low risk |
| Vehicle impact leading to loss of pressurised gas and explosion / fire risk or loss of liquid containment (chemicals, oils, sludges) | Nearby human receptors<br>Contribution to local air pollution and global warming<br>Ground / groundwater / surface waters | Air<br>Overland runoff / infiltration / drainage systems | **Preventative controls**<br>• Site speed limits in place to reduce chance and consequence of collision.<br>• Tanker discharge point and access to this area are controlled by manned security point at main site entrance.<br>• Key areas include barriers to prevent collision with equipment.<br>• Key digestion assets including digestion tanks are set back from road and surrounded by a fence.<br>• Site drainage collects and returns surface / yard water to WwTW for treatment. | Highly unlikely | Medium | Low risk |

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| | | | **In the event of an incident/accident**<br>• Isolate systems as appropriate and initiate fire, spill and emergency response procedures, cleaning up spill and disposal of wastes appropriately.<br>• Carry out repairs (as required). | | | |
| Excessive noise from plant or equipment e.g., due to equipment deterioration or failure | Nearby human receptors | Air | **Preventative controls**<br>• Procurement controls mean plant are selected to comply with relevant noise limits.<br>• Regular maintenance completed to ensure equipment operates within normal noise parameters.<br>• Acoustic enclosures / controls on some noise generating plan (e.g. compressors).<br>**In the event of an incident/accident**<br>• Investigate cause and implement preventive measures, which may include system maintenance interventions. | Unlikely | Mild | Low risk |
| **Site wide - sludge pipework, tanks, valves** | | | | | | |

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| Spillage of sludge during transfer / handling activities | Ground / groundwater / surface waters | Overland runoff / infiltration / drainage systems | **Preventative controls**<br>• Staff training on system operation.<br>• Hardstanding in key/high risk areas.<br>• Site drainage collects and returns surface / yard water to WwTW for treatment.<br>**In the event of an incident/accident**<br>• Isolate systems as appropriate and initiate spill response procedure, cleaning up spill and disposal of wastes appropriately. | Unlikely | Medium | Moderate / Low risk |
| Failure (cracks, splitting) of underground pipework (e.g. fuel, chemicals, sludge, site drains) | Ground / groundwater / surface waters | Infiltration, lateral movement through groundwater | **Preventative controls**<br>• Existing underground pipework will be periodically surveyed using in-pipe crack detection technology.<br>• Where new pipework at the site has to be underground, the containment provision will be risk assessed and appropriate design specification implemented, which may include secondary containment and leak detection.<br>**In the event of an incident/accident**<br>• Damaged pipe will be isolated.<br>• Spill management procedure will be followed. | Unlikely | Medium | Moderate / Low risk |

| What harm can be caused and who can be harmed | | | Managing the risk | Assessing the risk (after preventative controls) | | |
|---|---|---|---|---|---|---|
| **Hazard** | **Receptor** | **Pathway** | **Risk management** | **Probability of exposure** | **Environmental Consequence** | **What is the overall risk?** |
| **What has the potential to cause harm?** | **What is at risk? What do I wish to protect?** | **How can the hazard get to the receptor?** | **What measures will you take to reduce the risk? If it occurs – who is responsible for what?** | **How likely is this contact?** | **What is the harm that can be caused?** | **What is the risk that still remains?** |
| | | | • Repairs to damaged pipework will be arranged. | | | |
| Minor failure of sludge storage tanks / digester tanks e.g., tank overtopping, pipework leaks | Ground / groundwater / surface waters | Overland runoff / infiltration / drainage systems | **Preventative controls**<br>• High level probes to prevent overtopping of tanks.<br>• Tanks also have emergency overspill facility connected to site drainage (discharged back to WwTW) as last line of defence.<br>• Trace heating is provided to tank level gauges to prevent freezing and reduce the risk of false readings.<br>• Site is monitored on a daily basis.<br>• Infrastructure maintenance and inspections.<br>• Protective measures as for sludge spillage.<br>• Site drainage collects and returns surface/yard water to WwTW for treatment.<br>**In the event of an incident/accident**<br>• Isolate systems as appropriate and initiate spill response procedure, cleaning up spill and disposal of wastes appropriately.<br>• Arrange repairs. | Unlikely | Medium | Moderate / Low risk |
| Major failure of digester or other | Ground / groundwater | Overland runoff / | **Preventative controls** | Highly unlikely | Severe | Moderate / Low risk |

| What harm can be caused and who can be harmed | | | Managing the risk | Assessing the risk (after preventative controls) | | |
|---|---|---|---|---|---|---|
| **Hazard** | **Receptor** | **Pathway** | **Risk management** | **Probability of exposure** | **Environmental Consequence** | **What is the overall risk?** |
| **What has the potential to cause harm?** | **What is at risk? What do I wish to protect?** | **How can the hazard get to the receptor?** | **What measures will you take to reduce the risk? If it occurs – who is responsible for what?** | **How likely is this contact?** | **What is the harm that can be caused?** | **What is the risk that still remains?** |
| sludge storage tank or associated pipework leading to large scale sludge loss / spillage | / surface waters | infiltration / drainage systems | • Design and construction of assets is governed by relevant YW technical standards to ensure it is fit for purpose.<br>• Infrastructure maintenance and inspections.<br>• Existing and planned bunding/secondary containment.<br>• Site drainage collects and returns surface/yard water to WwTW for treatment.<br>**In the event of an incident/accident**<br>• Cancel all sludge deliveries to site.<br>• Isolate systems as appropriate and initiate spill response procedure, cleaning up spill and disposal of wastes appropriately. | | | |
| **Biogas pipework, valves, vents** | | | | | | |
| Failure of biogas pipework, valves and biogas holder (corrosion, cracks, material defects etc) leading to **minor** release of | Nearby human receptors<br>Local air quality and global | Air | **Preventative controls**<br>• Design and construction of pipework is governed by relevant YW technical standards to ensure it is fit for purpose.<br>• Most biogas pipework operates at low pressures.<br>• Pipework/gas holders protected from excessive pressure by pressure relief valves. | Unlikely | Minor / negligible | Negligible risk |

| What harm can be caused and who can be harmed | | | Managing the risk | Assessing the risk (after preventative controls) | | |
|---|---|---|---|---|---|---|
| **Hazard** | **Receptor** | **Pathway** | **Risk management** | **Probability of exposure** | **Environmental Consequence** | **What is the overall risk?** |
| **What has the potential to cause harm?** | **What is at risk? What do I wish to protect?** | **How can the hazard get to the receptor?** | **What measures will you take to reduce the risk? If it occurs – who is responsible for what?** | **How likely is this contact?** | **What is the harm that can be caused?** | **What is the risk that still remains?** |
| biogas and slight fire / explosion risk | climate impacts | | • Pipework is above ground where possible to facilitate inspection and maintenance.<br>• Maintenance schedule defined as part of LDAR strategy at site.<br>• Requirements around use of ATEX rated equipment control risk of leak leading to fire/explosion.<br>**In the event of an incident/accident**<br>• Consider need to isolate pipework.<br>• Consider need to initiate emergency response procedures.<br>• Arrange repair to affected asset. | | | |
| Breakdown or other damage to on site gas consumers e.g. CHP / boilers leading to disposal of biogas without energy recovery | Nearby human receptors<br>Local air quality and global climate impacts | Air | **Preventative controls**<br>• Site is designed to minimise risk of uncontrolled release to air.<br>• Operational and maintenance controls in place to ensure reliability of equipment and minimise requirement to send biogas to flare.<br>• There is one CHP engine and two boilers with biogas firing capability, controlling requirement to flare.<br>**In the event of an incident/accident** | Unlikely | Mild | Low risk |

| What harm can be caused and who can be harmed | | | Managing the risk | Assessing the risk (after preventative controls) | | |
|---|---|---|---|---|---|---|
| **Hazard** | **Receptor** | **Pathway** | **Risk management** | **Probability of exposure** | **Environmental Consequence** | **What is the overall risk?** |
| **What has the potential to cause harm?** | **What is at risk? What do I wish to protect?** | **How can the hazard get to the receptor?** | **What measures will you take to reduce the risk? If it occurs – who is responsible for what?** | **How likely is this contact?** | **What is the harm that can be caused?** | **What is the risk that still remains?** |
| | | | • Any remaining capacity on on-site gas storage will fill.<br>• Once gas storage is full flare will operate, ensuring proper combustion of biogas.<br>• If flare fails, gas will vent through PRVs to prevent damage to site gas system. | | | |
| Failure of flare leading to release of unburnt biogas to atmosphere | Local air quality and global climate impacts | Air | **Preventative controls**.<br>• Operational and maintenance controls in place to minimise requirement to send biogas to flare.<br>• Flare has control system that ensures ignition e.g. flame detection.<br>• Maintenance programme in place to ensure that flare is always in good operational condition.<br>**In the event of an incident/accident**<br>• Raise urgent maintenance request for repairs to flare.<br>• If flare fails, valve will automatically shut down flow of gas to flare.<br>• Once all site gas containment is full, pressure will release through PRVs to prevent damage to equipment and uncontrolled release of biogas. | Unlikely | Mild | Low risk |

| What harm can be caused and who can be harmed | | | Managing the risk | Assessing the risk (after preventative controls) | | |
|---|---|---|---|---|---|---|
| **Hazard** | **Receptor** | **Pathway** | **Risk management** | **Probability of exposure** | **Environmental Consequence** | **What is the overall risk?** |
| **What has the potential to cause harm?** | **What is at risk? What do I wish to protect?** | **How can the hazard get to the receptor?** | **What measures will you take to reduce the risk? If it occurs – who is responsible for what?** | **How likely is this contact?** | **What is the harm that can be caused?** | **What is the risk that still remains?** |
| Incorrect setting or damage to emergency pressure relief valves leads to premature release of gas or valve fails to reseat after release leading to uncontrolled release of biogas to atmosphere | Local air quality and global climate impacts | Air | **Preventative controls**<br>• Inspection and maintenance of PRVs carried out on a routine basis to ensure they are set and operate correctly.<br>• Checks on PRVs part of normal operational routine.<br>• Over-pressure alarms in control system will alert site staff to incidents that could trigger PRV release.<br>**In the event of an incident/accident**<br>• Follow management procedures to ensure that the valves are re-seated/pressure setting adjusted rapidly and without putting staff at risk. | Unlikely | Minor / negligible | Negligible risk |
| Digester foaming blocks gas lines, leading to release of biogas and / or foam through PRVs | Local air quality and global climate impacts | Air | **Preventative controls**<br>• Feed rate to digesters is controlled to prevent organic overloading.<br>• Digester mixing is regularly assessed as part of operational checks to ensure that it is functioning effectively.<br>• Feedstock assessment ensures that composition and quality of feedstock is understood. | Unlikely | Mild | Low risk |

| What harm can be caused and who can be harmed | | | Managing the risk | Assessing the risk (after preventative controls) | | |
|---|---|---|---|---|---|---|
| **Hazard** | **Receptor** | **Pathway** | **Risk management** | **Probability of exposure** | **Environmental Consequence** | **What is the overall risk?** |
| **What has the potential to cause harm?** | **What is at risk? What do I wish to protect?** | **How can the hazard get to the receptor?** | **What measures will you take to reduce the risk? If it occurs – who is responsible for what?** | **How likely is this contact?** | **What is the harm that can be caused?** | **What is the risk that still remains?** |
| | | | • Final effluent spray / anti-foam system is fitted to digesters to control foaming.<br>**In the event of an incident/accident**<br>• Follow site procedures for dealing with foaming.<br>• Investigate cause and implement preventive measures.<br>• Ensure that PRVs are not blocked with foam and operating correctly to protect tanks.<br>• Ensure PRVs reseat once pressure in headspace returns to normal levels. | | | |
| Digester grit build-up, leading to reduced working volumes and inefficient digestion, leading to wear on mixing and heating equipment, including pump and pipe | Nearby human receptors<br>Ground / groundwater / surface waters | Overland runoff / infiltration / drainage systems | **Preventative controls**<br>• Digester mixing is regularly assessed as part of operational checks to ensure that it is functioning effectively.<br>• Digester clean up required approximately every 10 years by trained professionals.<br>**In the event of an incident/accident**<br>• Clear up any spills and blockages. Ensure all valves are operating correctly.<br>• Ensure mixers and pumps are operating correctly. | Unlikely | Medium | Moderate / Low risk |

| What harm can be caused and who can be harmed | | | Managing the risk | Assessing the risk (after preventative controls) | | |
|---|---|---|---|---|---|---|
| **Hazard** | **Receptor** | **Pathway** | **Risk management** | **Probability of exposure** | **Environmental Consequence** | **What is the overall risk?** |
| **What has the potential to cause harm?** | **What is at risk? What do I wish to protect?** | **How can the hazard get to the receptor?** | **What measures will you take to reduce the risk? If it occurs – who is responsible for what?** | **How likely is this contact?** | **What is the harm that can be caused?** | **What is the risk that still remains?** |
| blockages (which may lead to sludge spillages). | | | | | | |
| Spillage / loss of containment of liquids | Ground / groundwater / surface waters | Overland runoff / infiltration / drainage systems | **Preventative controls**<br>• Checks on condensate traps and valves are part of regular operational routine.<br>• Condensate runs to site drainage for treatment.<br>• Digester operation is controlled to minimise risk of foaming, which could lead to blockages on condensate system.<br>**In the event of an incident/accident**<br>• Clear up any spills.<br>• Ensure all valves are operating correctly. | Unlikely | Medium | Moderate / Low risk |
| **Sludge treatment processes** | | | | | | |
| Import of sludge which does not meet waste acceptance criteria leading to disruption to | Nearby human receptors<br>Ground / groundwater | Spread to land as part of disposal | **Preventative controls**<br>• YW control all sites supplying sludge to the STF. Only YW sewage waste is imported to Sandall STF, this has a consistent composition and comes from carefully controlled treatment processes. | Unlikely | Medium | Moderate / Low risk |

| What harm can be caused and who can be harmed | | | Managing the risk | Assessing the risk (after preventative controls) | | |
|---|---|---|---|---|---|---|
| **Hazard** | **Receptor** | **Pathway** | **Risk management** | **Probability of exposure** | **Environmental Consequence** | **What is the overall risk?** |
| **What has the potential to cause harm?** | **What is at risk? What do I wish to protect?** | **How can the hazard get to the receptor?** | **What measures will you take to reduce the risk? If it occurs – who is responsible for what?** | **How likely is this contact?** | **What is the harm that can be caused?** | **What is the risk that still remains?** |
| sludge treatment processes and potential for increased odour releases and accidental sludge spillages | / surface waters | | • JRP- WaSP system records the dry solids, volume and origin of every import brought to site.<br>• Site operators and tanker drivers are trained to identify problem sludges and divert them to alternative sites for treatment.<br>**In the event of an incident/accident**<br>• Digester health will be investigated to understand cause of problem and best route to resolution.<br>• Digestate being removed from digesters will be subject to enhanced monitoring to ensure that there is no environmental risk. Note this is also a HACCP requirement.<br>• Where relevant the Environment Agency will be alerted that a problem has occurred.<br>• The root cause of the problem will be investigated and procedures updated in order to minimise reoccurrence. | | | |
| Failure / blockage of sludge screening facility leading to | Ground<br>Air | Overland runoff / infiltration / | **Preventative controls**<br>• Design and construction controls ensure equipment is correctly specified for task. | Likely | Minor / negligible | Low risk |

| What harm can be caused and who can be harmed | | | Managing the risk | Assessing the risk (after preventative controls) | | |
|---|---|---|---|---|---|---|
| **Hazard** | **Receptor** | **Pathway** | **Risk management** | **Probability of exposure** | **Environmental Consequence** | **What is the overall risk?** |
| **What has the potential to cause harm?** | **What is at risk? What do I wish to protect?** | **How can the hazard get to the receptor?** | **What measures will you take to reduce the risk? If it occurs – who is responsible for what?** | **How likely is this contact?** | **What is the harm that can be caused?** | **What is the risk that still remains?** |
| spillage and excess odour emissions | | drainage systems<br>Odour to air | • Maintenance to ensure reliable operation of equipment.<br>• Imports are from YW sites which gives control over content.<br>• Hardstanding around import facility prevents spills travelling to land.<br>• Site drainage will collect spills and return to WwTW for treatment.<br>**In the event of an incident/accident**<br>• Stop imports.<br>• Clean up spill.<br>• Unblock screens. | | | |
| Sludge contamination leading to inhibition of microbial activity / process disruption, insufficient digestion and | Ground<br>Local air quality and global climate impacts | Spread to land as part of disposal<br>Air | **Preventative controls**<br>• Management controls to identify potentially problematic sludges at source.<br>• All sludge imports are from YW sites where sludge characteristics are considered stable.<br>• Contamination levels would need to be very severe to significantly impact digestion processes due to the very large digester volume.<br>**In the event of an incident/accident** | Highly Unlikely | Medium | Low risk |

| What harm can be caused and who can be harmed | | | Managing the risk | Assessing the risk (after preventative controls) | | |
|---|---|---|---|---|---|---|
| **Hazard** | **Receptor** | **Pathway** | **Risk management** | **Probability of exposure** | **Environmental Consequence** | **What is the overall risk?** |
| **What has the potential to cause harm?** | **What is at risk? What do I wish to protect?** | **How can the hazard get to the receptor?** | **What measures will you take to reduce the risk? If it occurs – who is responsible for what?** | **How likely is this contact?** | **What is the harm that can be caused?** | **What is the risk that still remains?** |
| build-up of $H_2S$ and $CO_2$ | | | • Assess digester content to decide best route to normal digester health.<br>• Sample cake prior to export from site to confirm it is safe to spread to land.<br>• Review acceptance procedures. | | | |
| Excessive feeding of digester leads to reduced retention time and failure to meet pathogen kill requirements | Ground / groundwater / surface waters | Spread to land as part of disposal | **Preventative controls**<br>• Staff training<br>• Digesters have a maximum feed interlock ensuring that a set daily feed volume cannot be exceeded. This limit has been calculated to ensure digester stability and environmental safety.<br>• HACCP monitoring.<br>**In the event of an incident/accident**<br>• Turn off digester feed.<br>• Stop additional sludge imports until normal operational situation returns. | Highly Unlikely | Medium | Low risk |
| Failure of dewatering process leading to discharge to cake | Ground / groundwater / surface waters | Overland runoff / infiltration / drainage systems | **Preventative controls**<br>• Liquid runoff from sludge cake pad collected and directed to WwTW for treatment. System has large storage and handling capacity. | Highly unlikely | Medium | Low risk |

| What harm can be caused and who can be harmed | | | Managing the risk | Assessing the risk (after preventative controls) | | |
|---|---|---|---|---|---|---|
| **Hazard** | **Receptor** | **Pathway** | **Risk management** | **Probability of exposure** | **Environmental Consequence** | **What is the overall risk?** |
| **What has the potential to cause harm?** | **What is at risk? What do I wish to protect?** | **How can the hazard get to the receptor?** | **What measures will you take to reduce the risk? If it occurs – who is responsible for what?** | **How likely is this contact?** | **What is the harm that can be caused?** | **What is the risk that still remains?** |
| pad of cake with high water content | | | **In the event of an incident/accident**<br>• Switch off centrifuge and identify cause of problem. | | | |
| Temporary cessation of land spreading e.g., due to extreme weather conditions, leading to build up of digested sludge cake and potential for increased odour | Nearby human receptors | Air | **Preventative controls**<br>• Cake storage is on a pad, which under normal circumstances, has spare capacity.<br>• Additional storage is available at nearby Yorkshire Water sites.<br>**In the event of an incident/accident**<br>• Monitor available storage on cake pad and reduce/stop sludge imports as required.<br>• Divert sludge imports to alternative YW sites for storage. | Likely | Minor/negligible | Low risk |
| Very warm weather leading to increase in odour generation from sludge cake | Local air quality | Air | **Preventative controls**<br>• Under normal circumstances only digested sludge is stored on cake pad under standard operating conditions. This has less odour potential than untreated sludge.<br>• Only likely to happen during a prolonged period of an extreme weather event. | Likely | Minor/negligible | Low risk |

| What harm can be caused and who can be harmed | | | Managing the risk | Assessing the risk (after preventative controls) | | |
|---|---|---|---|---|---|---|
| **Hazard** | **Receptor** | **Pathway** | **Risk management** | **Probability of exposure** | **Environmental Consequence** | **What is the overall risk?** |
| **What has the potential to cause harm?** | **What is at risk? What do I wish to protect?** | **How can the hazard get to the receptor?** | **What measures will you take to reduce the risk? If it occurs – who is responsible for what?** | **How likely is this contact?** | **What is the harm that can be caused?** | **What is the risk that still remains?** |
| | | | **In the event of an incident/accident**<br>• Initial response would be to review operating times and avoid cake generation during problematic weather events, considering both temperature and wind.<br>• If this was not sufficient, YW would look to remove cake from site and store elsewhere. | | | |
| **Odour control unit** | | | | | | |
| Failure of components within extraction and treatment systems leading to release of partially treated or untreated odorous emissions to air | Nearby human receptors<br>Local air quality and global climate impacts | Air | **Preventative controls**<br>• Regular operational checks and process monitoring at OCU.<br>• Inspection and maintenance schedule to ensure reliability of extraction and treatment system.<br>**In the event of an incident/accident**<br>• Follow operational procedures to minimise generation of emissions until system is repaired. | Unlikely | Mild | Low risk |
| Failure of media within odour treatment system | Nearby human receptors | Air | **Preventative controls**<br>• Regular operational checks and process monitoring at OCU. | Unlikely | Mild | Low risk |

| What harm can be caused and who can be harmed | | | Managing the risk | Assessing the risk (after preventative controls) | | |
|---|---|---|---|---|---|---|
| **Hazard** | **Receptor** | **Pathway** | **Risk management** | **Probability of exposure** | **Environmental Consequence** | **What is the overall risk?** |
| **What has the potential to cause harm?** | **What is at risk? What do I wish to protect?** | **How can the hazard get to the receptor?** | **What measures will you take to reduce the risk? If it occurs – who is responsible for what?** | **How likely is this contact?** | **What is the harm that can be caused?** | **What is the risk that still remains?** |
| leading to release of partially treated or untreated, odorous emissions to air | Local air quality and global climate impacts | | • Inspection and maintenance schedule to ensure reliability of extraction and treatment system.<br>**In the event of an incident/accident**<br>• Follow operational procedures to minimise generation of emissions until system is repaired. | | | |
| Contamination of ground / groundwater following accidental spillage of exhausted odour control media | Ground / groundwater / surface waters | Overland runoff / infiltration / drainage systems | **Preventative controls**<br>• Operational controls in place for removal and disposal of exhausted media.<br>• Area surrounding odour control unit, including areas where maintenance activities are undertaken are covered by hardstanding and surface water drainage is connected to the head of the works.<br>• Only appropriately licenced operators used to remove waste from site.<br>**In the event of an incident/accident**<br>• Contain media to prevent pollution.<br>• Arrange clean up and safe disposal of media as soon as is practicable. | Unlikely | Minor / negligible | Negligible risk |
| **CHP, Boilers and other gas consumers** | | | | | | |

| What harm can be caused and who can be harmed | | | Managing the risk | Assessing the risk (after preventative controls) | | |
|---|---|---|---|---|---|---|
| **Hazard** | **Receptor** | **Pathway** | **Risk management** | **Probability of exposure** | **Environmental Consequence** | **What is the overall risk?** |
| **What has the potential to cause harm?** | **What is at risk? What do I wish to protect?** | **How can the hazard get to the receptor?** | **What measures will you take to reduce the risk? If it occurs – who is responsible for what?** | **How likely is this contact?** | **What is the harm that can be caused?** | **What is the risk that still remains?** |
| Excessive emissions to air from boilers and CHP e.g., due to equipment failure, poor performance or malfunction leading to incomplete or inefficient combustion | Nearby human receptors<br>Local air quality and global climate impacts | Air | **Preventative controls**<br>• Planned preventative maintenance in place for equipment to ensure assets continue to meet original specification on emissions.<br>• Site operational knowledge supported through contracts with specialist providers.<br>**In the event of an incident/accident**<br>• Investigate cause and implement preventive measures, which may include system maintenance interventions. | Unlikely | Mild | Low risk |

**Risk Assessment Methodology**

The risk assessment methodology employed for the accident management plan is summarised in Tables A to D below.

The overall risk rating for each of the identified risk scenarios is determined on the basis of the probability of the scenario occurring (the probability/likelihood score) and the environmental consequence(s) if the scenario were to occur (the consequence score). The probability and consequence categories used in this methodology are provided in Tables A and B below.

**Table A: Classification of Consequences**

| Classification | Definition |
|---|---|
| Severe | • Acute risks to human health<br>• Short-term risk of pollution of sensitive water resource (e.g. major spillage into controlled waters)<br>• Impact on controlled waters e.g. large-scale pollution or very high levels of contamination<br>• Catastrophic damage to buildings or property (e.g. explosion causing building collapse)<br>• Ecological system effects – irreversible adverse changes to a protected location. Immediate risks |
| Medium | • Chronic risks to human health<br>• Pollution of sensitive water resources (e.g. leaching of contaminants into controlled waters)<br>• Ecological system effects – substantial adverse changes to a protected location<br>• Significant damage to buildings, structures and services (e.g. damage rendering a building unsafe to occupy, such as foundation damage) |
| Mild | • Non-permanent health effects to human health<br>• Pollution of non-sensitive water resources (e.g. pollution of non-classified groundwater)<br>• Damage to buildings, structures and services (e.g. damage rendering a building unsafe to occupy, such as foundation damage)<br>• Substantial damage to non-sensitive environments (unprotected ecosystems e.g. crops) |
| Minor/Negligible | • Non-permanent health effects to human health (easily prevented by appropriate use of PPE)<br>• Minor pollution to non-sensitive water resources<br>• Minor damage to non-sensitive environments (unprotected ecosystems e.g. crops)<br>• Easily repairable effects of damage to buildings, structures, services or the environment (e.g. discoloration of concrete, loss of plants in a landscaping scene) |

**Table B: Classification of probability / Likelihood**

| Classification | Definition |
|---|---|
| High Likelihood | An event is very likely to occur in the short term, and is almost inevitable over the long term OR there is evidence at the receptor of harm or pollution |
| Likely | It is probable that an event will occur. It is not inevitable, but possible in the short term and likely over the long term |
| Unlikely | Circumstances are possible under which an event could occur. It is by no means certain that even over a longer period such an event would take place, and less likely in the short term |
| Highly Unlikely | Probability is so low that it is close to zero; It is improbable that an event would occur even in the very long term |

Table C below provides the matrix used to identify the overall risk category using these consequence and probability categories.

**Table C: Risk Matrix and Terminology Used for Risk Assessments**

| | | Consequence | | | |
|---|---|---|---|---|---|
| | | **Severe** | **Medium** | **Mild** | **Minor/Negligible** |
| **Probability (Likelihood)** | **High Likelihood** | Very high risk | High risk | Moderate risk | Moderate/Low risk |
| | **Likely** | High risk | Moderate risk | Moderate/Low risk | Low risk |
| | **Unlikely** | Moderate risk | Moderate/Low risk | Low risk | Negligible risk |
| | **Highly Unlikely** | Moderate/Low risk | Low risk | Negligible risk | Negligible risk |

The overall risk categories are described in Table D below.

**Table D: Description of Risk Categories**

| Term | Description |
|---|---|
| Very high risk | Severe harm to a receptor may already be occurring OR a high likelihood that severe harm will arise to a receptor, unless immediate remedial action works / mitigation measures are undertaken. |
| High risk | Harm is likely to arise to a receptor, and is likely to be severe, unless appropriate remedial actions / mitigation measures are undertaken. |

| | |
|---|---|
| | Remedial works may be required in the short term, but likely to be required over the long term. |
| Moderate risk | Possible that harm could arise to a receptor but low likelihood that such harm would be severe. Harm is likely to be medium. Some remedial works may be required in the long term. |
| Moderate / low risk | Possible that harm could arise to a receptor, but where a combination of likelihood and consequence results in a risk that is above low, but is not of sufficient concern to be classified as medium. It can be driven by cases where there is an acute risk which carries a severe consequence, but where the exposure is unlikely. |
| Low risk | Possible that harm could arise to a receptor. Such harm would at worse normally be mild. |
| Negligible risk | Low likelihood that harm could arise to a receptor. Such harm unlikely to be any worse than mild. |

## 6. Accident and Incident Response

Accidents and Incidents are managed in accordance with the Incident Management policy and procedures and Emergency Planning manual.

YW utilises the Nintex app to report, record, manage and assess incidents and accidents. This is available on phones and handheld devices of YW staff and provides an auditable record for every incident. Relevant forms used to record accidents are available electronically via this system.

In the event of a significant incident a root cause analysis is conducted. Actions are identified, reported, recorded and communicated to prevent reoccurrence.

Complaints are typically received by YW central Customer Services team, where all complaints are logged on the ICE system. Complaints relevant to Sandall STF are passed on to the Site Manager for further investigation. The Site Manager is responsible for ensuring that any complaint is investigated and, if found to be justified, that work is undertaken to resolve the issue, including liaising with the relevant regulatory bodies where appropriate. The Customer Service Team ensure an appropriate response to the complainant in a timely manner including, if and as appropriate, detailing the reason behind the issue and the actions taken to resolve the matter.

All complaints information is recorded on the ICE system in order that this can be monitored, reviewed and analysed.

If an incident with potentially significant environmental consequences occurs, YW will notify the Environment Agency without delay, and in accordance with the procedures and requirements specified in the site environmental permit.

## 7. Emergency contacts

| Area | Contact |
|---|---|
| Sandall STF Contacts | Site Manager: Adam Broughton<br><br>Site Optimiser: John Bullivant |
| Doncaster Council | 01302 736000 |
| Environment Agency | 0800 807060 |

## 8. Definitions

| Definitions of Terms Used: | |
|---|---|
| **Yorkshire Water** | Yorkshire Water is used in this document to refer to Yorkshire Water Services Limited and all other subsidiary companies within Kelda Holdings. |
| **Anaerobic Digestion** | AD is used to refer to anaerobic digestion. The process which imported waste is subject to at this sewage treatment facility. |
| **CHP** | Combined Heat and Power |

## 9. Compliance with this document

Colleagues shall comply with the requirements of this document, in line with the company Conduct Policy.

## 10. Assurance

Regular monitoring of compliance with these requirements shall be undertaken by the assurance providers documented as part of the Assurance Framework.

Any sampling that is undertaken will be taken in accordance with sampling procedures as documented in the internal guidance document Operator Self-Monitoring, which can be found on the Integrated Management System. Samples must be tested at a UKAS accredited laboratory.

## 11. Related Documents

N/A