



Gas To Grid

Safety, Health, Environment, Quality & Competence (SHEQC) Management System Manual

1 Scope

The environmental permits authorising Wessex Water Enterprises Ltd (WWEL) to operate both [Bristol \(PP3734LK\)](#) and [Trowbridge \(HB3602TR\)](#) Gas To Grid Facility has established a SHEQC (Safety, Health, Environment, Quality & Competence) Management System that meets the requirements of ISO14001 (environmental), ISO9001 (quality), ISO45001 (occupational health and safety) and CMS (Competence Management System).

This manual provides an overview of the Management System - its purpose is as follows:

- To explain the scope of the certified management system.
- To outline the policies, procedures, and resources implemented by the business to ensure conformance with the legal and other obligations.
- To describe the company organisation, the structure of the management system and the interaction of the processes involved in the management system for continual improvement of SHEQC performance.
- To act as a signposting document to provide all employees with a clear understanding of the management system and the importance of adhering to the policies and procedures of the company.

4 Context Of The Organization

Wessex Water Enterprises Ltd (WWEL) is part of the Wessex Water Limited Group of companies. The arrangement is defined in a service level agreement and lease between the two companies.

We use GENeco as a brand within Wessex Water Enterprises Ltd.

The Gas to Grid Facilities (GTG) produce enriched biomethane by cleaning and upgrading methane-rich biogas produced from the anaerobic digestion of waste. Biomethane is used as a renewably sourced and sustainable substitute for natural gas in our local distribution network. We supply the national grid with enough gas to supply thousands of local homes and ensure our sewage treatment works is energy self-sufficient.

The facility is authorized with The Environment Agency as an installation under the Environmental Permitting Regulations.

4.1 Understanding The Organisation And Its Context

WWEL determines external and internal issues that are relevant to its purpose and that affect its ability to achieve its intended outcomes of the SHEQC Management System. Such issues can be defined in [WWE SWOT & PESTLE Analysis \(GENWMP196\)](#).

4.2 Understanding The Needs And Expectations Of Interested Parties

WWEL shall determine the interested parties that are relevant to its SHEQC management system and understand the needs & expectations of its stakeholders through the following documents:

Area	Document	Covers
Determination of stakeholders	Stakeholder Management Plan	Identifies, positions, and analyses our stakeholders.

The relevant needs and expectations of workers and other stakeholders	SHEQC Policy (IMS025) SHEQC Objectives (IMS002)	Lists our safety, health, environmental quality and competence policy and objectives that aims to meet the requirements of stakeholders, employees and site users.
Which of those needs and expectations are, or could become, legal requirements and other requirements	Legal Register (GENWMG225) Customer Requirements (GENWMG175)	Captures legal and other requirements. Legal updates provided by a consultancy on a bi-monthly basis, the same company also review the legal register on an annual basis. Includes a column specifying which have become compliance obligations.

Stakeholder management Plan

Stakeholder identification - Lists stakeholders either internal or external to the organisation. WWEL have recorded this in the table below:

Those with a (*) next to the title identifies which relate to environmental permitting and our Competence Management System.

Customers * "The company that pays the bill" <ul style="list-style-type: none"> - Prospective & past customers - Waste Producers (including local authorities) - Brokers - Waste management companies self-employed / employed drivers / office admin / salespeople / managers 	Key Suppliers – internal (WWEL) <ul style="list-style-type: none"> - Logistics - Finance - Technical - Regs & Systems - Capital - Health and safety - Process management 	Key suppliers – external <ul style="list-style-type: none"> - EMI * - Materials * - Legal * - Occupational health - Outputs treatment solution (farmers/AD facilities/ EfW) * - Environmental consultancies *
Competitors / Similar service providers <ul style="list-style-type: none"> - AD Facilities - Compost & aggregate wash facilities - Other treatment facilities able to accept EWC code - Waste management companies 	Key suppliers – Internal (WWSL & Other) <ul style="list-style-type: none"> - Procurement * - Fleet * - EM&I * - Legal * - Turnbull * - HR, L&D, OHS * - Health and safety - Statutory group - Fleet and Plant * 	Regulators <ul style="list-style-type: none"> - APHA - EA * - OFGEM - Local Authority (odour/planning) * - HSE - OFWAT
Media & Social Media users <ul style="list-style-type: none"> - Industry press - Internet & intranet - Twitter / LinkedIn / Facebook users and groups. 	Local community * <ul style="list-style-type: none"> - (See Bristol STW Location and Sensitive Receptors (GENWMG190)) - Wider community - Interest Groups 	Certification <ul style="list-style-type: none"> - LRQA * - ISO * - Organic Farmers and Growers - Renewable Energy Assurance Ltd (REAL)
Chartered Institutes <ul style="list-style-type: none"> - Chartered Institute of Waste Management - IChemE (institution of chemical engineers) 	Training Schemes/Bodies * <ul style="list-style-type: none"> - Fertiliser Advisers Certification and Training Scheme (FACTS) - WAMITAB / EU Skills Council - BASIS (Professional Register) - BETA (Biodiversity and Environmental Training for Advisors) - SOIL & WATER - IOSH / NEBOSH / NPORS / CSCS - BSI 	*Associations and groups * <ul style="list-style-type: none"> - REGEN SW - ADBA - The Organic Recycling Group (ORG) - REA

Stakeholder analysis – understanding the requirements of each stakeholder.

Customers

The Head of Renewable Energy & the Customer Account Manager establishes our understanding of customer requirements through face to face, telephone, email, [SWOT & PESTLE analysis \(GENWMP196\)](#) and survey communication channels. The [Customer Survey Procedure \(GENWMP197\)](#) explains our approach to surveys.

Knowledge captured through the above, is summarised in [Customer Requirements \(GENWMP175\)](#) which highlights the key requirements, the process in place to meet those requirements, how we monitor those needs, and which requirements are mandatory.

The Environment Agency (EA)

The activities included within the scope each operates under an Environmental Permit issued and regulated by the Environment Agency (EA). The environmental permit lists conditions with which the facility must comply, this includes the implementation and maintenance of a management system, monitoring and reporting requirements.

Requirements are summarised in [Environmental Monitoring Programme \(GENWMP151\)](#)

Local Community

Sensitive receptors identified in document [Bristol STW Location and Sensitive Receptors \(GENWMP190\)](#)

Management of Change

Change	Environment Agency	Operational Teams	Customers
Mailing addresses	Yes	Yes	Yes
Person or contact details of the person responsible for implementing and maintaining the certification scheme procedures and complying with the scheme requirements			
Any other details relevant to the certification scheme			
Any change that could be construed as having an impact on certification and the quality of materials produced			
The EA require that compliance with the environmental permit, procedures and management system are checked when the following changes are planned; (a) when changes are made to site, operations, or equipment that affect the activities covered by the permit, (b) when you apply to vary the permit, (c) after an accident, complaint or breach of your permit, (c) if you encounter a new environmental problem or issue and have implemented new control measures to control it. A record of the changes to the management system must be kept.	Yes		
Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit: (a) the Environment Agency shall be notified at least 14 days before making the change; and (b) the notification shall contain a description of the proposed change in operation.	Yes		
Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the HACCP controls		Yes	
Where change affects level of risk or new hazards are present.		Yes	
Operating hours	Yes	Yes	Yes
Legal or regulatory changes		Yes	

Process Safety management of change documents include:

- [Management of Change Proposal Summary \(Cover sheet\).url](#)
- [Management of Change - Group 2 Project Checklist.url](#)
- [Management of Change Group 3 Project Checklist.url](#)
- [Change Proposal Feedback Sheet.url](#)
- [Management of Change \(Engineering\).pdf.url](#)



Communicating information - Expectations are established and agreed to for the manner in which communications are managed between Stakeholders - who receives communications, when, how, and to what level of detail. Protocols may be established, including security and confidentiality classifications.

Please read in conjunction with the communication section of this manual and the [Communication Plan \(GENWMP242\)](#).

Regulators

EA notification and reporting: The Environmental permit outlines the procedure for information and reporting to the Environment Agency.

WWE shall communicate with the relevant regulators on the status of its SHEQC management system.

EA notification and reporting: [Environmental Accident Management Plan \(GENWMP1755\)](#) and [Emergency Pollution Incident Response Procedure \(GENWMP183\)](#) outlines the procedure for information and reporting to the Environment Agency. Compliance assurance meetings checks that this is being fulfilled.

Stakeholder Management

The SHEQC Policy is available to assist the team in the implementation of the Stakeholder management.

The document WWEL [SHEQC Objectives \(IMS002\)](#) outlines the targets to maintain and improve WWEL's position in the marketplace. As Stakeholders are a key element in achieving the objectives, IMS002 will include objectives relating to Stakeholder

On an operational level, the following written documents are available to facilitate the team in Stakeholder management:

Site User Induction:

[Avonmouth Site Rules \(BIOP001\)](#)

[Site Rules Trowbridge.url](#)

[Bristol STW Visitors Map \(GENWVG155\)](#)

4.3 Scope & Exclusions

The scope of this management system is...

Competence management and operation of the GENeco waste treatment facilities including logistics support services, waste reception, pre-treatment, treatment processes, production of gas by anaerobic digestion and outputs including biogas, waste resources and fertilizer products.

Operation of the GENeco renewable energy combined heat and power (CHP) and gas to grid (G2G) facilities, producing electricity, heat and gas for onsite use or to export to the national grid network.

Operation of the standby generators support service.

Sewage sludge and food waste is treated and pumped into a series of anaerobic digesters. The waste is heated to 32 - 42°C and kept in the digesters for 12 to 18 days. During this time, micro-organisms break down the biodegradable material in the absence of oxygen to produce methane rich biogas. At this point, the biogas contains around 60% methane.

The biogas produced from the digesters then enters the gas to grid plant. The first stage upgrades the biogas to biomethane (~98%; 1.5% nitrogen).

A bioscrubber removes gaseous impurities, such as carbon dioxide and hydrogen sulphide. Meanwhile the carbon filters produce virtually odour free emissions to the air.

A small volume of propane is injected into the biomethane. This enriches the gas to natural gas quality and calorific value.

The end product, enriched biomethane, is analysed and undergoes strict quality controls before being fed into the local gas distribution network.

Exclusions:

The GTG Facility is located within the curtilage of Bristol Water Recycling centre. Some of our people are based in GENeco offices elsewhere on the same site. These teams manage business development, customer relationship management, billing, systems, leadership, and compliance. All activities located on the site (not discussed above) are excluded from the scope of the certification.

Outsourced Processes:

An ‘outsourced process’ is a process that WWEL needs for its SHEQC management system and which it chooses to have performed by an external party. The following services are provided by parties outside of WWEL.

- a) Wessex Water Scientific Centre provides WWEL with an analytical service. The service is UKAS Accredited to ISO/IEC 17025:2005
- b) All engineering and construction work is contracted to external project teams such as turnbull or Engineering and Sustainable Development (ES&D), which is part of Wessex Water Group Limited. Any such work is outside of the scope of this SHEQC Management System. Note: ES&D is certified to ISO9001:2015, 14001 and 45001.
- c) Services metering: Meters are planned to calculate any payment due for services provided to WWEL by Wessex Water Services Ltd. These meters will be procured, managed, and maintained by Wessex Water Services Ltd
 - i. Final effluent usage
 - ii. Electricity
 - iii. Mains Water
 - iv. Effluent (centrate) treatment
 - v. Gas generation (renewable energy)
- d) Electrical, Mechanical & Instrumentation (EMI) Service are provided by WWSL, with a recharge to WWEL for any work completed.
- e) Corporate central support including finance, human resources, information systems, procurement, facilities management, statutory inspections, regulatory, legal, health and safety and fleet are provided by Wessex Water Services Ltd.
- f) Information Support – certified to ISO/IEC 27001 Information Security Management Certificate no. IS597

4.4 SHEQC Management System

WWEL has established, implemented, maintained, and continually improves this Safety, Health, Environment, Quality, and competence (SHEQC) Management System, including the processes needed and its interactions, in accordance with the requirements of our subscribed standards and permit in order to achieve the intended outcomes and enhance SHEQC performance.

It also details arrangements made to minimise the risk of pollution from the activities covered by the permit. The responsibility of ensuring permit compliance falls to the Renewable Energy Manager and the GTG Lead Engineer.

Processes have been captured in the following documents:

Site infrastructure plans

Purpose (EA Requirement)	Trowbridge	Avonmouth
Entrances and exits that can be used by emergency services	Trowbridge Biomethane Plant EA Permit – Location Plan.pdf E7590 7102a	Avonmouth – Layout Plans
Trade effluent or sewage effluent treatment plants	Not applicable. Not TE or SETP. Effluent discharges via site drains.	N/A
Land that you believe is contaminated, e.g. areas of your site that have previously been used for industrial purposes	N/A.	N/A
Effluent discharge points	N/A. No discharge to sewer. Discharge to drain.	N/A
Points designed to control pollution, e.g. inspection or monitoring points	Trowbridge Biomethane Plant – Plant Layout and General Arrangements.pdf E7590 7103a Trowbridge site boundary and emissions points D14219-WWSL.pdf	Pollution control Avonmouth GTG

Purpose (EA Requirement)	Reference	
EA require a site plan drawn to scale highlighting where activities take place covered by the permit.	Trowbridge Biomethane Plant EA Permit – Location Plan.pdf E7590 7102a Trowbridge site boundary and emissions points D14219-WWSL.pdf	Drawing - Installation Boundary and point source emissions.pdf
buildings, and other main constructions, like treatment plants, incinerators, storage silos and security fences	Trowbridge Biomethane Plant EA Permit – Location Plan.pdf E7590 7102a	Biogas System Drawing
storage facilities for hazardous materials like oil and fuel tanks, chemical stores, waste materials	Drawing to be provided in future version	Propane Storage - Avonmouth Propane Plans - Avonmouth
location of items for use in accidents and emergencies, like absorbants for chemical spills	Trowbridge Biomethane Plant – Plant Layout and General Arrangements.pdf E7590 7103a	Clean up Plant

Purpose (EA requirement)	Reference	
Vulnerable locations areas particularly vulnerable to pollution that are on or near to your site, e.g.: rivers or streams, groundwater used for drinking water, residential, commercial or industrial premises, areas where wildlife is vulnerable or protected	Trowbridge Biomethane Plant – Plant Layout and General Arrangements.pdf E7590 7103a	N/A
Drainage Your plan must show your foul and combined drainage facilities marked in red and your surface water drainage, facilities marked in blue. It must also show: <ul style="list-style-type: none"> the direction of flow of the water in the drain the location of discharge points to the sewer, watercourse or soakaway the location of manhole covers and drains the location of stop and diverter valves and interceptors 	Trowbridge Biomethane Plant – Mains Power and Drainage E7590 7105a Trowbridge Biomethane Plant – EA Permit Existing Drainage E7590 7106a	Drainage Avonmouth
Water, gas, electricity Your plan must show the location of mains water, gas and electricity supplies on your site, including: <ul style="list-style-type: none"> the mains water stop tap gas and electric isolating valves and switches the routes for gas, electricity and water supplies around your site, i.e. electric wiring and gas and water pipes must be labelled on the plan 	Trowbridge Site Services Trowbridge Services Supply	Avonmouth Services

Site operations

This section breaks down the operations that will be carried out on the site during start up, normal operation and shut down, into a list of activities and processes.

Operations:	Avonmouth:	Trowbridge:
Site condition	Site condition report - Avonmouth	Ground Investigation - Trowbridge
Process Flow	Process flow diagram Avonmouth	Trowbridge Process Flow
Propane deliveries	Propane Deliveries - Avonmouth Propane Delivery – Traffic Management Plan	Waiting for info
Contractors list	Contractors List	

Leak Detection	Avonmouth - Copy of Avonmouth WRC Ongoing Feb 2024.xls Trowbridge - Trowbridge Leak Detection TRTP551.url
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Site and equipment maintenance plan

Maintenance regimes to be carried out in accordance to the manufacturer’s recommendations. Planned preventative maintenance - daily/weekly/monthly in accordance with the operations and maintenance manuals:

O&M Manual:	Avonmouth:	Trowbridge:
Grid Entry Unit	Grid Entry Unit - Avonmouth	Grid Entry Unit – Trowbridge
Malmberg plant	Malmberg Plant - Avonmouth	Malmberg Plant – Trowbridge
Flare Stack	Flare Stack – Avonmouth	Flare Stack - Trowbridge
Pre-Treatment Plant	Pre-treatment – Avonmouth	Pre-Treatment Trowbridge
Propane Tanks	Flogas - Avonmouth	Waiting for drawings

Reactive maintenance is minimised by ensuring planned preventative maintenance is performed as per manufacturers guidance. All works documented in [GTG site log – Onenote](#).

Service reports provided by third party contractors upon completion of any work, All calibration certificates are retained electronically and stored within SharePoint.

Contingency plans

The plan for how WWEL will minimise the impact on the environment of any; breakdowns, enforced shutdowns and any other changes in normal operations, for example due to extreme weather is documented within:

- [Business Resilience Policy .url](#)
- [Business Continuity Arrangement for widespread loss of power.url](#)
- [Business continuity arrangement for loss of a critical supplier.url](#)
- [BUSINESS CONTINUITY INCIDENT RESPONSE PLAN.url](#)

Accident prevention and management plan

The plan for WWEL to deal with any incidents or events with risk to pollution can be found [here](#)

Online security: protect your business

Our online security controls ensure WWEL does not cause unnecessary pollution.

Contact information for the public

Please see attached the notice boards for GTG operations at Avonmouth and Trowbridge.

A changing climate

The WWEL Environmental Accident Management Plans (EAMP) and Contingency Plans will include risks posed by climate change and actions to be taken in an event influenced by climate change e.g. flooding or extreme weather (higher temperatures, storms etc.). In addition, WW have a climate change adaption plan which sets out how WW will adapt to climate related hazards; looks at what level of risk each poses and details what adaptation options are in place or are proposed.

5 Leadership

5.1 Leadership And Commitment

5.1.1 General

Top management shall demonstrate leadership and commitment to the development, implementation, and improvement of the SHEQC management system through ensuring that our commitments to the standards which we are certified are fulfilled.

Managing Director

The Managing Director has ultimate responsibility for all Safety, Health, Environmental, Quality & Competence management issues. They shall ensure the availability of adequate resources, including time to establish, maintain and continually improve the SHEQC Management System of WWEL.



Head of Renewable Energy

The Head of Renewable Energy is responsible for ensuring the successful day-to-day execution of the Business Plan and implementation of the policy, processes and systems described in this manual. The roles and responsibilities include:

- Taking overall responsibility and accountability for the prevention of work-related injury and ill health, as well as the provision of safety and health workplaces and activities.
- Ensuring that the SHEQC Management system (incl. policy and objectives) are established, implemented, and maintained in accordance with the various Standards and the strategic direction of the organization.
- Ensuring the integration of the SHEQC management system requirements into WWEL processes
- Ensuring adequate resources needed to establish, implement, maintain, and improve the SHEQC Management System are provided.
- Communicating the importance of effective SHEQC management and of conforming to the SHEQC management system requirement
- The promotion of the use of the process approach and risk-based thinking to ensure the SHEQC Management System achieves its intended outcomes.
- Direction and support are provided to allow all persons to contribute to the effectiveness of the SHEQC Management System
- Ensuring and promoting for continual improvement.
- Supporting other relevant management roles to demonstrate their leadership as it applies to their areas of responsibility
- Developing, leading, and promoting a culture in the organization that supports the intended outcomes of the SHEQC Management System.
- To establish processes that ensure that our people are protected from reprisals when reporting incidents, hazards, risks, and opportunities.
- To establish processes for the consultation and participation of our people and support the establishment and functioning of health & safety committees.
- Supporting the establishment and functioning of health and safety committees.

5.1.2 Customer focus

Top Management demonstrate leadership and commitment to customer focus by ensuring that:

- a) Customer and applicable statutory and regulatory requirements are determined, understood and consistently met through;
 - Monitoring change, membership of associations and institutes, reviewing consultations & publications and captured in BUR's.
 - Communication, regular conversations, meetings & surveys with customers, captured in minutes, feedback spreadsheets & Salesforce,
 - The management system regularly updated to reflect current practise.
- b) The risks and opportunities that can affect services and the ability to enhance customer satisfaction are determined and addressed; Risks and opportunities are established through processes as detailed in section 6.1 Actions to address risk and opportunities of this manual.
- c) The focus on enhancing customer satisfaction - through team awareness, regular communication with customers (Stakeholder Management Plan), checking understanding through regular surveys.

The documents associated with customer focus are:

[Customer Survey Procedure \(GENWMP197\)](#)
[WWE Legal Register \(GENWVG225\)](#)
[Customer Requirements \(GENWVG175\)](#)
[Stakeholder Management Plan – GTG & CHP \(IMS0\)](#)

5.2 SHEQC Policy

Wessex Water Enterprises Ltd operates under a Safety, Health, Environmental, Quality & Competence (SHEQC) Policy.

[GENeco SHEQC Policy – IMS025](#)

The policy is available to the WWEL team via SharePoint, displayed in reception for site users to view and on the WWEL “GENeco” website to enable access to external parties.



The policy is briefed to teams via regular team meetings, generally after each review which aims to be every 12 months.

5.3 Roles, Responsibilities And Authorities

Roles, responsibilities, and authorities will be assigned, communicated and understood at all levels of WWEL and maintained as documented information. Our people shall assume responsibility for the aspects of the management system over which they have control.

WWEL do this through [job profiles](#), processes, and document custodianship. WWEL place a strong focus on the promotion and support of worker involvement in actively managing health and safety and psychological risks.

This will include ensuring that the management system conforms with the requirements of the ISO standards and legal regulations, and reporting on the performance of the management system to the WWEL leadership team.

[TeamR&C - Learning and Development Policy](#) details commitments, roles, and responsibilities regarding our people's learning and development.

The [onboarding template](#) details steps for our new starters.

The iLearn system captures training needs by role and any renewal or refresher needs. The system issues reminders when training is due and links to the training where available online. The systems will also capture records. [iLearn Employee User Guide](#) is available for our people to help navigate around the system.

As part of its learning and development policy, Wessex Water Enterprises offers to sponsor employees to attend external training and complete professional qualifications providing it is appropriate to the needs of the business. Where applicable [Wessex Water Enterprises Learning Contract - Template will be applied.](#)

5.4 Consultation And Participation Of Our People

Several processes are in place for consulting and encouraging the participation of our people at all levels and functions, in the development, planning, implementation, performance evaluation and actions for improving the SHEQC management system, health & safety and psychological risk. Examples include:

- Report any issues, positive observations and recommend related solutions through the health and safety app ENGAGE
- Network groups - including The People's Council, working parents, culture inclusion and diversity etc
- Tea break Q&As with the leaders
- Team meetings and 1-2-1's – minutes recorded incl. where our people have participated
- WWEL Health, Safety and Wellbeing Group
- Mental health first aiders
- I-Say surveys
- Involvement in site inspections and the internal and external audit programme
- The corrective action procedure
- Contribute articles to The BUZZ

6 Planning

6.1 Actions To Address Risks And Opportunities

6.1.1 General

Risks

WWEL will determine the risks that need to be addressed to give assurance that we will prevent and reduce undesired effects, our policy and objectives can be achieved and that our Management system can achieve the intended outcomes and achieve continual improvement. To do this, WWEL will take into account stakeholder requirements, SWOT & PESTLE, analysis, incidents, feedback and audit results.

6.1.2 Hazard identification and assessment of risks and opportunities

The [WWE Risk and Opportunities register \(IMS024\)](#) has been developed and maintained to document high level risks, opportunities and their consequences for existing activities. Leaders are asked to review the register on a quarterly basis as per diary commitments.

The Health and Safety Arrangements [HSA24 - Risk Assessment](#) defines the process for risk assessments, it applies to all WWEL operations, appointed contractors and external consultants working on behalf of the company. It outlines the responsibility to identify the hazards in the workplace or work activity and the opportunities for improvement.

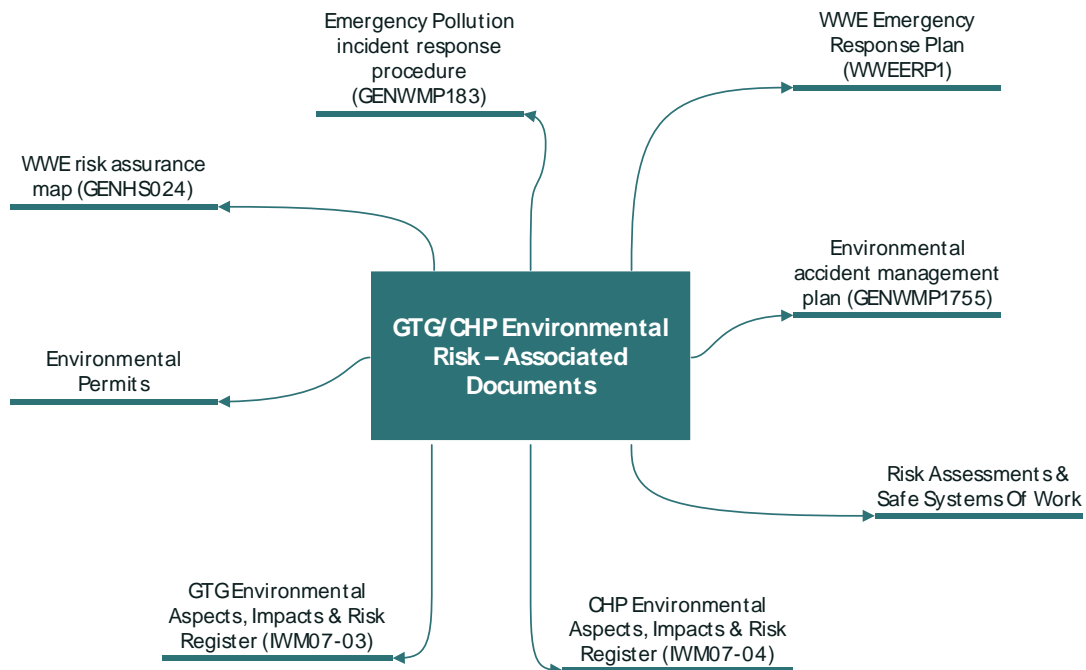
GTG Risk assessments include:

- | | |
|---|--|
| G2G Risk Assessment - Change Of Gas Filters.docx | G2G Risk Assessment - Operating Gas Purging Rig.docx |
| G2G Risk Assessment - Compressor maintainance.docx | G2G Risk Assessment - Removal of Demister.docx |
| G2G Risk Assessment - Compressor Purging (no3).docx | G2G Risk Assessment -Drier media change.docx |
| G2G Risk Assessment - Compressor Purging.docx | G2G Risk Assessment- First aid.docx |
| G2G Risk Assessment - Drier media change.docx | G2G Risk Assessment -General site activities.docx |
| G2G Risk Assessment - Gas bag NRV removal.docx | G2G Risk Assessment -Sanding Water room floor.docx |
| G2G Risk Assessment - General Site Activities.docx | G2G Risk Assessment- Visual checks.docx |
| GRA - Asbestos contained within electrical equipment.docx | |

[Lightning Risk Assessment Report - Gas to Grid and Flare stack - DP0449 Avonmouth WRC.pdf](#)

[Lightning Risk Assessment Report - Gas to Grid Flues - DP0449 Avonmouth WRC .pdf](#)

Environmental operational risks and risk controls are considered through the [Environmental Aspects and Impacts Procedure \(IMS008\)](#) and captured in:



Opportunities

The [Innovation Register](#) captures business opportunities in new activities. The capital programme includes projects with investment needs supported by a budget and business case. Leaders attend meetings to provide updates. The frequency will depend on business need.

Opportunities are improvements that can be made to SHEQC performance that increases intended results, enhances desirable effects, reduces undesirable effects or achieves improvements. Some examples of working practise that encourage the identification of opportunities include:

- Capital investment planning process



- Participation of teams in minuted meetings (team meetings, OHS incident reviews)
- ENGAGE reporting app.
- Root cause analysis of SHEQC incidents
- Implementation of audit programme
- Process reviews
- Waste management strategy

6.1.2.2 Assessment of OH&S risks and other risks to the OH&S management system

The process for assessing health and safety and other risks from the identified hazards, while taking into account the effectiveness of existing controls can be found documented within the [WWE Risk assurance map \(GENHS024\)](#)

6.1.3 SHEQC Compliance obligations - Legal and other requirements

The [Legal Register \(GENWMMG225\)](#) is maintained to record legal requirements and identify the standards and best practice that we have chosen to comply with. WWEL has applied these obligations across all areas of its work, regularly checking that we are meeting these obligations and continually improving.

6.1.4 Planning Action

Actions to address the risks and opportunities are captured in the [WWE Risk and Opportunities register \(IMS024\)](#).

Actions to address legal and other requirements are communicated through various channels and can be captured in meeting minutes and the [Improvement Log](#).

Actions to prepare for, and respond to emergency situations, integrate, and implement these actions into the SHEQC management system and evaluate the effectiveness of these actions are communicated through various channels and can be captured in meeting minutes and the [Improvement Log](#).

Evaluation of action effectiveness is monitored through the internal audit programme.

6.2 SHEQC Objectives And Planning To Achieve Them

The [GENeco SHEQC Objectives \(IMS002\)](#) derive from the SHEQC Policy and business strategies and will be measurable.

Plans for achieving the objectives and targets have been established at all levels of the organisation.

The SHEQC Objectives includes timescales and how objectives and targets will be achieved along with those people responsible for achieving them.

Those responsible for achieving individual targets will ensure that progress is monitored and continually reviewed. They will be monitored, communicated, and updated as appropriate.

7 Support

7.1 Resources

WWEL will be adequately resourced to implement and maintain the management system through the Head of Renewable Energy regularly reviewing the workstack; compliance, operational control, financial performance, maintenance of the management system, including ability to close non-conformances, and propose change where necessary for approval by the Managing Director.

7.2 Competence



All of our people are made aware of their role and responsibilities and will be provided with training appropriate to the activities performed. Training needs and requirements are continually monitored and evaluated to ensure that levels of competence remain appropriate for the tasks assigned.

Our people, contractors and visitors to site receive an induction, including information on our environmental permit, SHEQC management system, ISO standards, policy and site rules and asked questions to verify their understanding of the information communicated. This area is under development.

Documents used for documenting training and competence include:

[Provision of Technical Competence \(GENWVG35A\).xlsx](#)

[Onboarding Template](#)

[iLearn](#)

7.3 Awareness

To allow people to raise concerns, we have a whistle blowing policy which is available to all team members – [Raising a concern](#).

With any health and safety concerns, we encourage our team to raise and address any concerns – [Health and Safety](#) through the H&S app ENGAGE.

Permission granted is a procedure we follow that empowers our people to stop any work they deem to be unsafe without the fear of reprisal.



WWEL will ensure that persons doing work under its control are aware of:

- The SHEQC Policy
- The SHEQC objectives
- Significant environmental aspects and related or environmental impacts associated with their work
- Incidents, hazards risks and actions determined that are relevant to them
- Their contribution to the effectiveness of the SHEQC management system, including the benefits of enhanced SHEQC performance
- The implications of not conforming with the SHEQC management system, including not fulfilling the organisations compliance obligations.
- Their ability to remove themselves from work situations that they consider present an imminent or serious danger to themselves and the arrangements for protecting them from undue consequences for doing so (Permission granted)

For employees, this will be achieved through implementation of the [onboarding template](#), associated RA's and an active involvement in development and management of the system where possible.

For other persons, through the site Induction and control of contractors process (HSF14-01)

[Avonmouth WRC STC Colleague and Visitor Management process \(OPSP333\)](#) identifies the procedure for persons visiting the Avonmouth site and [GENeco, How to find us – Visitors map \(GENHS020\)](#) can also be sent out prior to travel to site.

7.4 Communication

7.4.1 General

WWEL have committed to managing health & safety and psychological risks, promoting the wellbeing of our people at work and informing our people and other interested parties what is expected from them and what they can expect from the company.

A [Communication Plan \(GENWMP242\)](#) has been established for implementing, documenting, and responding to relevant communications from external parties, and for internal communication between the various functions of the organisation.



WWEL aims to be a place where everyone enjoys working and feels they are treated fairly and given every opportunity to further their career. The network group, Culture Inclusion and Diversity (CID) promotes diversity and encourages our people to participate in conversations that feeds back to the wider community on matters that may affect communication and what must be implemented to achieve positive change.

The [Stakeholder Management Plan](#) Documents our interested parties to whom we need to communicate to. [GENeco SHEQC Policy \(IMS025\)](#) documents our commitment from top management to core values relating to SHEQC, particularly health & safety and psychological risk.

When planning for communication, WWE shall:

- Consider its compliance obligations
- Consider consistency and reliability of information shared.
 - Same team controlling internal communications and oversight of management system
 - Communication across R&C controlled by Communications Manager.

7.4.2 Internal communication

The following channels support communication, consultation and encourage participation with all our people on matters relating to improvement of the SHEQC system and evaluate of effectiveness.

- The Buzz monthly newsletter – formal communication
- Weekly team huddle and Monthly Team Meetings – minutes produced
- WWE Leaders Health, Safety and Wellbeing Meetings
- Our people at all levels within the organisation are motivated and empowered to identify and report any observations and suggest through the Health & Safety App, ENGAGE,
- Incident and improvement Root Cause Analysis.
- Objectives – Team involved in development of site-based objectives
- Team involved in development and maintenance of risk assessments

7.4.3 External communication

WWEL shall externally communicate information relevant to the SHEQC management system, in accordance with the stakeholder management plan and and taking into account legal requirements and other requirements.

A procedure has been implemented to ensure that customer requirements are defined and met at the various stages within WWEL's processes and services. Customer feedback exercises, see [GENWMP197 – Customer Survey Procedure](#) and reviews of supplier performance are routinely undertaken to gather data for analysis to assist with continual improvement.

Customer complaints are given the highest priority and appropriate actions are undertaken by the appropriate personnel to quickly resolve. See [GENWMP172 – GENeco Complaints Procedure](#) for further information.

7.5 Documented information

7.5.1 General

This SHEQC manual signposts to documented information that is maintained to conform with the standards in the scope and environmental permit requirements.

7.5.2 Creating and updating

When creating and updating documented information, WWEL ensures appropriate:

- Identification and description (e.g., a title, date, author, and reference no.)
- Format (e.g., language, software version, graphics) and media (e.g., paper, and electronic)
- Review and approval for suitability and adequacy

The arrangement is captured in the procedure [Document Update and Control \(GENWMP67\)](#). A formatted template has been made available for this purpose [SHEQ Document Style Guide Template \(GENWMP65A\)](#).

7.5.3 Control of documented information

All documentation and records used as part of the SHEQC Management System is subject to control and is administered and maintained in accordance with [Document update and control Procedure \(GENWMP67\)](#). This procedure describes the approval and issue of documents, how changes are made, and revision levels identified. Current versions of relevant documents and other data are available in the SHEQC Library and the GTG Library in SharePoint.

8 Operation

8.1 Operational planning and control

Documented procedures, work instructions and safe systems of work have been developed and implemented to control activities, SHEQC risks, and emergency situations. Appropriate employees are given training, instruction and competency checks.

The [Health & Safety arrangements](#) that WWEL follow are listed below:

HSA04	Noise at work	HSA28	Preventing injury due to sharp objects
HSA40	Arrangements for use of mobile phones	HSA17	Prohibition notice procedures
HSA06	Authorisation of contractors to work on restricted operations	HSA13	Protection of visitors
HSA39	Carriage of dangerous goods by road	HSA03	Provision and use of safety equipment
HSA22	Confined spaces	HSA23	Reporting and marking of unsafe equipment
HSA21	Construction (design and management)	HSA02	Reporting of health and safety incidents
HSA14	Control of contractors	HSA48	Respiratory protection at work
HSA44	Hand arm vibration	HSA24	Risk assessment
HSA19	Control of substances hazardous to health	HSA08	Safety inspections
HSA20	Display screen equipment	HSA29	Safe use of final effluent
HSA30	Electrical safety	HSA11	Stress at work
HSA07	Excavations	HSA46	Whole body vibration
HSA25	Fire safety	HSA36	Work equipment
HSA05	First aid	HSA26	Working at heights
HSA31	Hazardous areas	HSA41	Working on contaminated sites
HSA12	Manual handling	HSA45	Control of Legionella and water hygiene. (legionella assessment is in the site information file for record sheets, method statements, risk assessment & action plan should an outbreak of legionnaires occur, or a positive legionella test result be found)
HSA43	Management and control of working hours	HSA27	Lone working
HSA35	Lifting operations and lifting equipment	HSUPDT	Health and safety welfare organisation roles and responsibilities
HSA15	High pressure water jetting	HSA47	Health and safety inspectors
HSA01	Health and safety policy	HSA18	Health protection when working with sewage

Gas to Grid assess all hazardous or potentially hazardous COSHH items. These can be found in the COSHH file in the office on site or on Sharepoint [WWE - COSHH Assessments - All Documents \(sharepoint.com\)](#)

Other site wide procedures WWEL follow include:

- [Noise and vibration \(ENVS120/12\)](#)
- [Odour management plan \(BIOMAN002\)](#)
- [Drivers Handbook](#)
- [Trowbridge Traffic management plan \(OPSP269\)](#)
- [Avonmouth Traffic Management Plan \(BIOP008\)](#)

In addition, we have several Human Resources employee policies and guidelines in place relating to Occupational health:

[Occupational Health Advice](#)

- [Health and Wellbeing Programme](#)
- [Alcohol and drugs Policy](#)
- [Sickness Absence](#)
- [Bullying and Harassment](#)
- [Raising a concern](#)

Documents specifically created to control hazards associated with GTG activities include standard operating procedures, daily checks and permits to work.

Our permit to work system helps to properly manage a wide range of activities carried out by our team or third parties. [Permit to work SOP \(GENSOP127\)](#) identifies which hazards shall be controlled by a permit to work certificate and the requirements that need to be in place to manage a permit effectively.

- [Pre-Check Control Document \(BIOF131\)](#)
- [Permit-to-work procedure \(OPSP310\)](#)
- [Permit-to-work monitoring checklist \(OPSF069\)](#)
- [All other permit-to-work documents \(Sharepoint\)](#)

Gas to Grid RAMS	
GTGRA002 - Rev 1.0 - General Blower Maintenance.docx	G2GWP011 - Rev.1.0 - Blower Vibration Mount Replacement.docx
GTGRA004 - Rev 1.0 - General Compressor Maintenance.docx	G2GWP013 Rev 1.0 - Cleaning Bio-Trickling Boll Filter.docx
GTGRA003 - Rev 1.0 - Change Of Gas Filters.docx	GTGWP001 - Rev 1.0 - Inspection of Belt Transmission.docx
G2GRA005 – General Bio-Trickling Filter Maintenance.docx	GTGIP004 - Rev 1.0 - Process Pipework MPR Skid Isolation Schedule - No Purge.docx
GTGRA001 - Rev 1.1 - General Site Activities.docx	GTGIP005 - Rev 1.0 - Compressor 1 Isolation Schedule - No Purge.docx
GTGWP002 - Rev 1.0 - Inspection of Vibration Damper.docx	GTGIP001 - Rev 1.0 - Blower 1 Isolation Schedule - No Purge.docx
GTGWP003 - Rev 1.0 - Blower Hose Maintenance.docx	G2GIP006 - Rev. 1.0 - Boll-Filter Isolation Schedule.docx
GTGWP004 - Rev 1.0 - Blower Maintenance Oil Change.docx	GTGIP002 - Rev 1.0 - Blower 2 Isolation Schedule - No Purge.docx
GTGWP005 - Rev 1.0 - Recirculation Filter Change.docx	GTGIP003 - Rev 1.0 - Process Pipework MPR Skid Isolation Schedule - No Purge.docx
GTGWP006 - Rev 1.0 - Product Gas Filter Change.docx	G2G Approved Work Procedure - Blower Maintenance Front Page.docx
GTGWP012- Rev 1.0 - Product Gas Filter housing Change.docx	

Control of change

WWEL will control planned changes and review the consequences of unintended changes, as per the [change planning procedure \(GENWMP249\)](#), taking action to mitigate any adverse effects, as necessary. A structured approach is in place for any capital investment changes via Turnbull processes and procedures.

Process Safety management of change documents include:

- [Management of Change Proposal Summary \(Cover sheet\).url](#)
- [Management of Change - Group 2 Project Checklist.url](#)
- [Management of Change Group 3 Project Checklist.url](#)
- [Change Proposal Feedback Sheet.url](#)
- [Management of Change \(Engineering\) \(PMS-12-01-P\)](#)

8.2 Emergency Planning

WWEL shall establish, implement, and maintain the processes needed to prepare for and respond to potential emergency situations including:

- [Fire Procedure – Avonmouth](#)
- [Fire Procedure – Trowbridge](#)
- [GTG Emergency Response Plan Avonmouth \(WWEERP5\)](#)
- [Major Emergency Safety Advice – Severnside Sirens](#)
- [Site Closure Plan](#)
- [Environmental Aspects, Impacts & Risk Register - GTG \(IWM07-3\)](#)

- [Emergency action plan Flowgas \(GENWMP318\)](#)
- [Emergency pollution incident and accident form \(GENWMP183\)](#)
- [GTG Emergency Response Schedule.docx](#)

Our sites include high risk DSEAR zones, the below link takes you to our source DSEAR landing page, detailing the processes and procedures that we follow.

[DSEAR/Process Safety \(sharepoint.com\)](#)

Bio digestion sites DSEAR Documents can be found here [Operation & Maintenance - DSEAR - Biodigester Sites \(sharepoint.com\)](#)
[DSEAR Trowbridge](#)
[DSEAR Avonmouth](#)

9 Performance evaluation

9.1 Monitoring, measurement, analysis, and evaluation

9.1.1 General

Monitoring, measurement, analysis and evaluation of key activities and data is in place to monitor the effectiveness of processes, and to assist with continual improvement. Information is documented, operational controls implemented and conformance with the SHEQC objectives pursued and continually reviewed.

Any equipment is identified and calibrated at prescribed intervals against internationally or nationally known standards. Appropriate calibration records are maintained to document these results.

The business monitors, measures, analyses, and evaluates its SHEQC performance through the following channels (not exhaustive):

What	Methodology	Criteria	When	Where output records stored
Environmental Monitoring				
Monitoring of permit compliance (operational team)	- Permit Huddles - CAR Reports	- Working through permit conditions. - EA report on permit compliance	- Monthly - Anytime they visit	- SharePoint / Audit / permit huddles - SharePoint / Compliance Obligations
Gas Monitoring	PGM's used while on site	As Per WWTBT511`	Monthly	Statutory team
Gas Analysis	3 rd party sampling (scienco)	Network entry agreement contract	Monthly	GTG Sharepoint
Environmental incidents	Incident reporting form	Not defined	Ongoing	Compliance obligations Library SharePoint
Pest control	Visual checks and traps set up by trained employees	Not defined. Wherever an increase in pest have been reported	Ad-hoc	N/A
Odour Monitoring	Sniff tests	As per site odour management plan	Monthly	Compliance obligations library Sharepoint
Process Monitoring				
ISO10723 Gas Chromatograph Validation	Precise Gas Chromat validation.	OFGEM/WWU requirement	Annually	GTG Records Sharepoint - effectech
Pressure systems safety regulations inspections	Visual and working inspections on vessels and instruments	Insurance inspector WSOE	1 year 3 years 5 years 6 years	GTG Records Sharepoint - PSSR
Flow metering report (ME2)	Flow check performed by Emerson	OFGEM/WWU requirement	Annually	GTG Records Sharepoint – ME2
RHI Sustainability report	Independent auditor checks meters and data validity.	OFGEM requirements for RHI payments.	Annually	RHI sustainability audits Avonmouth RHI Audits Trowbridge
RO Sustainability report	Independent auditor checks meters and data validity.	OFGEM requirements for RO payments. (mainly for CHP use of biogas).	Annually	RO Audits

Calibration of Gas Monitors	Procedure & Toolbox talk training.	TOOLBOX TALK – Portable Gas Monitor (PGM)	Every 6 Months	Statutory team / Leaders Reports
H&S Inspections	H&S Team ENGAGE App.	ENGAGE inspection template	Ad-Hoc	ENGAGE App.
Maintenance Inspections	Daily, 2-Weekly, Monthly inspections		Daily, weekly, monthly	GTG Filing cabinet.
Occupational Health	Health surveillance / Hearing test	GTG Equipment /processes	Annually	With Occ Health team
OHS incident reporting	ENGAGE H&S app.	Not defined	Ongoing	ENGAGE App.
Audit Programme	Management System Audit Procedure (GENWMP168) Audit template	Criteria defined in audit template (GENWMP168) / ISO Standards	Defined in Management System Audit Programme (IMS003) .	Audit library
Gas Exports	Amulet, Total Gas&Power Trading Platform	Not defined.	Daily	Live on Amulet, Total Gas&Power

Monitoring, measurement, analysis, and improvement processes will also be implemented to demonstrate conformity and potential improvement of the management systems. Further details are given in the [Corrective and Preventative Action Procedure \(GENWMP188\)](#).

9.1.2 Evaluation of compliance

The evaluation of both SHEQC and Environmental compliance is planned through audits in [Management System Audit Programme](#), typically annually or more depending on risk and need. Reports are stored within the Audit Library in SharePoint. When correct action is identified is needed, findings will be logged on our internal improvement log in SharePoint.

9.2 Internal audit

9.2.1 General

Internal Audits are carried out in accordance with the [Management System Audit Procedure \(GENWMP168\)](#) by appropriately trained and independent people.

9.2.2 Internal audit programme

The [Management System Audit Programme \(IMS003\)](#) details systematic audits planned to monitor conformance with standards to which WWEL is certified or follows. Audit Reports will be produced for each audit and stored in the Audit SharePoint Library. Action is then to be taken via the improvement log to record and resolve any non-conformances that have been identified.

9.3 Management Review

Top Management with support and advice provided by appropriate people, conducts a management review in accordance with the [Management review procedure \(IMS012\)](#) at least once annually to ensure the continuing suitability, adequacy, and effectiveness of our SHEQC Management System.

10 Improvement

10.1 General

WWEL will determine and select opportunities for improvement and implement any necessary actions to meet customer requirements, enhance customer satisfaction and achieve the intended outcomes of the SHEQC Management system.

These shall include:

- improving products and services to meet requirements as well as address future needs and expectations
- Correcting, preventing, or reducing undesired effects

- Improving the performance and effectiveness of the management system

10.2 Non-conformity and corrective action

The [Corrective and preventative action procedure \(GENWMP188\)](#) details the process to correct a non-conformance and prevent recurrence. Any non-conformity will be analysed to develop corrective actions that eliminate cause and prevent recurrence, including requirements for:

- Reviewing non-conformities, including customer complaints.
- Determining the cause of non-conformities.
- Evaluating the need for action to prevent re-occurrence.
- Determining and implementing action needed.
- Recording results of action taken.
- Reviewing corrective action implemented.

Records of corrective actions are reviewed as part of the Leaders weekly huddle. Engage and the Management Review process to establish if any trends can be identified. Any changes to the management system found necessary are implemented, verified, and recorded as appropriate.

10.3 Continual improvement

The effectiveness of the Management System is continually improved through the review of the [GENeco SHEQC policy \(IMS025\)](#) and the [GENeco SHEQC Objectives \(IMS002\)](#), the analysis of audit results, corrective and preventive actions, customer feedback and associated data.

Improvement suggestions can also be documented by any of our people in the GENeco Improvement Log. Improvement actions are also reviewed and documented as an output of the Management Review.

If the SHEQC Objectives have been reached and can be maintained, then the targets are stretched to ensure that the company meets its objective of continual improvement and performance growth.

10.4 List of Operational Reords

Paperwork	Description/Information	Electronic file location	Person responsible for record	Current copy at Avonmouth in	Min Storage Period
Malmberg Daily Check Sheet	BUP Daily maintenance checks and reporting of faults	N/a	G2G Lead Engineer	Geneco Office	5 Years
Malmberg Two weekly Check Sheet	BUP Two-weekly maintenance checks and reporting of faults	N/a	G2G Lead Engineer	Geneco Office	5 Years
Malmberg Monthly	BUP Monthly maintenance checks and reporting of faults	N/a	G2G Lead Engineer	Geneco Office	5 Years
GEU Weekly Check Sheet	GEU weekly maintenance checks	N/a	G2G Lead Engineer	Geneco Office	5 Years
Waste Transfer Notes	WTN from 3 rd party hauliers	F:\Geneco Filing\1 GENeco Avonmouth\Waste Transfer Notes & Consignment Notes	G2G Lead Engineer	Geneco Office	2 Years
Haz waste Consignment Notes		N/a	Technical Supervisor	Office	2 Years
Weekly and Monthly Meter Read Sheets	Various usage meters across the site recording information for fiscal reasons	N/a	G2G Lead Engineer	Geneco office	5 Years
PSSR Yearly Examination results GEU	GEU Certification from PSSR Inspector	F:\Geneco Filing\11 GENeco renewable energy\11.2 Gas to grid\E7560 - Avonmouth\PSSR	G2G Lead Engineer	Office	5 Years

Paperwork	Description/Information	Electronic file location	Person responsible for record	Current copy at Berry Hill in	Min Storage Period
Digester Record Sheets	Monthly record of feed & temp	GENeco Filing\2 GENeco Berry Hill\2.7 Site Info\Monitoring Sheets.xls	Technical Supervisor	Office	5 Years



Sampling Schedule	Samples Taken	GENeco Filing\2 GENeco Berry Hill\2.7 Site Info\ Berry Hill Sample schedule.xls	Technical Supervisor	By Sartorius - Digested Centrifuge MCC	2 Years
Berry Hill Sludge Imports	Tankered Import Log sheet	GENeco Filing\2 GENeco Berry Hill\2.7 Site Info\Sludge Imports Monitoring sheets Berry Hill.doc	Technical Supervisor	PS building	5 Years
Grit Imports to Dying Bed	Imports to grit drying Beds	GENeco Filing\2 GENeco Berry Hill\2.7 Site Info\ BH Grit & Screening Log sheet.doc	Technical Supervisor	Office Corridor	5 Years
Site Tick Sheets		Dave Phillips	Technical Supervisor	Office	2 Years
Digester Check Sheets	Heat Exchanger temp Checks Digested Sludge pH	Dave Phillips	Technical Supervisor	Office	2 Years
Tank test certificates	Tank test certificate	GENeco Filing\2 GENeco Berry Hill\2. Completed Records (Imports + site Attendance)\2.5.2.1 Tank tests	Technical Supervisor	Office	Life of asset

Revision History

Issue	Date	Prepared by	Comments
1	June 2023	H. Williams, M Dolan, C Laughton.	New Manual, prepared for ISO45001 Certification.
2	August 2023	H Williams	Defined who has the responsibility of permit requirements, added in process safety management of change doc Links.
3	October 2023	L Collett	Added 'list of operational records' to document
4	Jan 2024	T Phelps, James Bankovskis	Added RO and RHI Sustainability reports to section 9.1 Compliance and evaluation. To close action 231020234 raised at GTG Permit Huddle October 2023 "Gary to send info to Charlie to add to the manual information on Quarterly OFGEM inspection on biomethane".
5	Feb 2024	L Collet	Added Leak Detection link into document
6	April 2024	H Williams	Added links to emissions point, site boundary and leak detection for Trowbridge into section 4.4.