Wales & West Gas Networks (Holdings) Limited

Greenhouse Gas Emissions Report 2025

(Including the Data Assurance Statement)

For the year ended 31 March 2025

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Directors' Statement on Wales & West Gas Networks (Holdings) Limited's Greenhouse Gas Emissions Report for the year ended 31 March 2025

As the Directors of Wales & West Gas Networks (Holdings) Limited we confirm that we are solely responsible for the preparation of the Greenhouse Gas Emissions Report for the year ended 31 March 2025 including this Directors' Statement and for reporting Greenhouse Gas Emissions in accordance with the reporting criteria set out on pages 7 to 34.

We confirm, to the best of our knowledge and belief, that we have:

- designed, implemented and maintained internal controls and processes over information relevant to the measurement, evaluation and preparation of the sustainability linked loan metrics that is free from material misstatement, whether due to fraud or error;
- established objective reporting criteria for preparing and presenting the sustainability linked loan metrics, including clear definition of the entity's organisational boundaries, and applied them consistently;
- presented information, including the reporting criteria, in a manner that provides relevant, complete, reliable, unbiased/neutral, comparable and understandable information;
- reported the environmental sustainability data in accordance with the reporting criteria.

Neil Henson

Chief Finance Officer

For and behalf of the Board of Directors of Wales & West Gas Networks (Holdings) Limited

27 August 2025

GHG emissions for the period 1 April 2024 to 31 March 2025

Total Scope 1 greenhouse gas emissions (tCO2e)	349,045 Ⓐ
Total Scope 2 greenhouse gas emissions - Location Based (tCO2e)	917Ⓐ
Total Scope 2 greenhouse gas emissions - Market Based (tCO2e)	526Ⓐ
Total Scope 3 greenhouse gas emissions (tCO2e)	13,267Ⓐ

Independent Limited Assurance Report to the Directors of Wales & West Gas Networks (Holdings) Limited on GHG Emissions

Our limited assurance conclusion

Based on the procedures we have performed, as described under the "Summary of work performed"' and the "Areas of Assurance Focus" sections below, and the evidence we have obtained, nothing has come to our attention that causes us to believe that the information marked with the symbol Ⓐ in Wales & West Gas Networks (Holdings) Limited ("WWGNH")'s Greenhouse Gas Emissions Report for the year ended 31 March 2025 (the "Report") and summarised below (together, the "Subject Matter Information"), has not been prepared, in all material respects, in accordance with WWGNH's Reporting Criteria (the "Reporting Criteria") set out on pages 7 to 34 of the Report.

What we were engaged to assure

The Subject Matter Information needs to be read and understood together with the Reporting Criteria which WWGNH's Directors are solely responsible for selecting and applying. The Subject Matter Information and the Reporting Criteria are as set out below:

Subject Matter Information	***Reporting Criteria***
Total Scope 1 greenhouse gas emissions	Pages 7 to 34 of the Report
Total Scope 2 greenhouse gas emissions – Location-Based	
Total Scope 2 greenhouse gas emissions – Market-Based	
Total Scope 3 greenhouse gas emissions	

The scope of our work did not extend to information in respect of earlier periods or to any other information included in, or linked from, the Report.

Our work

Professional standards applied

We performed a limited assurance engagement in accordance with International Standard on Assurance Engagements 3000 (Revised) 'Assurance Engagements other than Audits or Reviews of Historical Financial Information' and, in respect of the greenhouse gas (GHG) emissions, in accordance with International Standard on Assurance Engagements 3410 'Assurance Engagements on Greenhouse Gas Statements', issued by the International Auditing and Assurance Standards Board.

Our independence and quality control

We have complied with the Institute of Chartered Accountants in England and Wales Code of Ethics, which includes independence and other requirements founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour, that are at least as demanding as the applicable provisions of the International Code of Ethics for Professional Accountants (including International Independence Standards) issued by the International Ethics Standards Board for Accountants (IESBA Code).

We apply International Standard on Quality Management (UK) 1 and accordingly maintain a comprehensive system of quality management including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Summary of work performed

We performed a limited assurance engagement. Because the level of assurance obtained in a limited assurance can vary, we give more detail about the procedures performed, so that the intended users of the Subject Matter Information can understand the nature, timing and extent of procedures we performed as context for our conclusion. These procedures performed vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

In performing our assurance procedures, which were based on our professional judgement, we performed the following:

- evaluated the suitability in the circumstances of WWGNH's use of the Reporting Criteria as the basis for preparing the Subject Matter Information including the associated reporting boundaries;
- through inquiries, obtained an understanding of WWGNH's control environment, processes and systems relevant to the preparation of the Subject Matter Information. Our procedures did not include evaluating the suitability of design, obtaining evidence about their implementation or testing operating effectiveness of particular control activities;
- evaluated whether WWGNH's methods for developing estimates are appropriate and had been consistently applied, noting that our procedures did not involve testing the data on which the estimates are based or separately developing our own estimates against which to evaluate WWGNH's estimates;
- compared year on year movements and obtained explanations from management for significant differences we identified;
- performed limited substantive testing of the Subject Matter Information, which is aggregated centrally by WWU. Testing involved agreeing arithmetical accuracy of calculations, and agreeing data points to or from source information to check that the underlying subject matter had been appropriately evaluated or measured, recorded, collated and reported; and
- evaluated the disclosures in, and overall presentation of, the Subject Matter Information.

Materiality

We are required to plan and perform our work to address the areas where we have identified that a material misstatement of the Subject Matter Information is likely to arise. We set certain quantitative thresholds for materiality. These, together with qualitative considerations, helped us to determine the nature, timing and extent of our procedures in support of our conclusion. We believe that it is important that the intended users have the information they need to understand the concept and the level of materiality to place our conclusion in context. Based on our professional judgement, we determined materiality for the Subject Matter Information as follows:

Overall materiality	Materiality may differ depending upon the nature of the Subject Matter Information. We apply professional judgement to consider the most appropriate materiality benchmark for each aspect of the Subject Matter Information, having considered how the intended users may use the information. Materiality has been set as follows: • 5% of Total Scope 1 greenhouse gas emissions; • 5% of Total Scope 2 greenhouse gas emissions - Location Based; • 5% of Total Scope 2 greenhouse gas emissions - Market Based; and • 5% of Total Scope 3 greenhouse gas emissions.

We also agreed to report to the Directors misstatements ("reportable misstatements") identified during our work at a level below overall materiality, as well as misstatements below that lower level that in our view warranted reporting for qualitative reasons. The Directors are responsible for deciding whether adjustments should be made to the Subject Matter Information in respect of those items.

Areas of Assurance Focus

The Areas of Assurance Focus are those areas of our work that, in our professional judgement, require additional procedures. In the case of limited assurance, that means our procedures may be towards the upper end of those that might be expected for limited assurance. These areas were identified as part of our risk assessment and result of the assurance procedures performed, and include those areas of significant risk, areas that involved significant judgement or other areas where significant assurance effort was needed. This approach provides transparency about where we deemed it necessary to perform extra work. However, this does not imply - for limited assurance - the same level of assurance as would have been obtained under a reasonable assurance engagement.

We considered the following areas to be an Area of Assurance Focus and discussed this with WWGNH's management.

Shrinkage calculation	
Nature of the issue	Shrinkage is a calculation of the difference between the volume of gas injected into a gas distribution network and the volume delivered to customers, and is a material component of WWGNH's Scope 1 emissions. The volume of gas (m^3) calculated as Shrinkage by WWGNH is converted to tCO_2e with Shrinkage being made up of the following elements: • leakage (the most significant component, representing gas escaping from the transportation network); • a distribution company's own use of gas; and • the illegal theft of gas. The shrinkage calculation and methodology is complex, has various inputs, contains manual calculations and data processing, and incorporates a number of estimates, in particular in relation to components where no direct or actual measurement (such as metering) is available, which increase the risk of material misstatement, and as a result we have determined this to be an area of assurance focus.
How our work addressed the areas of assurance focus	To address the risk of inaccurately calculating shrinking emissions, we have performed the following procedures: • Obtained an understanding of how each individual input into the shrinkage calculation was derived, and where relevant, assessed the estimates included in the calculation. • Used this understanding to assess the significant inputs to the calculation to design our assurance approach. These included: average system pressure, average governor pressure, live mains data, throughput, customer number, gas quality, and Above Ground Installations (AGIs). • Tested the accuracy and existence of each input of the shrinkage calculation on an individual basis, obtaining evidence to support elements of the calculation on a sample basis. • Tested completeness of each input, as required, of the shrinkage calculation on a sample basis. • Tested that the overall shrinkage calculation has been performed in accordance with the industry approved methodology as defined in WWGNH's Reporting Criteria, and that this has been applied consistently. • Tested the conversion of gas shrinkage measured in m3 to tCO_2e.
Element(s) of the Subject Matter Information most significantly impacted	Total Scope 1 greenhouse gas emissions

Challenges of non-financial information

The absence of a significant body of established practice upon which to draw to evaluate and measure non-financial information allows for different, but acceptable, evaluation and measurement techniques that can affect comparability between entities, and over time.

Non-financial information is subject to more inherent limitations than financial information, given the characteristics of the underlying subject matter and the methods used for measuring or evaluating it. The precision of different measurement techniques may also vary.

In addition, where reporting the "Total Scope 2 greenhouse gas emissions - Market Based" figure using only renewable electricity sources, the reported figure relies on electricity suppliers supplying renewable electricity backed by Renewable Energy Certificates ('RECs'), there is an inherent risk as to whether the third-party electricity supplier will purchase and retire sufficient number of RECs to cover all of the energy supplied to its customers who have purchased the energy through renewable tariffs in the reporting period, over which the customer has no oversight. The uncertainties and limitations are laid out in more detail in the reporting criteria.

Reporting on Other Information

The other information comprises all of the information in the Report other than the Subject Matter Information and our assurance report. The Directors are responsible for the other information. As explained above, our conclusion does not extend to the other information and, accordingly, we do not express any form of assurance thereon. In connection with our assurance of the Subject Matter Information, our responsibility is to read the other information. In doing so, we consider whether the other information is materially inconsistent with the Subject Matter Information or our knowledge obtained during the assurance engagement, or otherwise appears to contain a material misstatement of fact. If we identify an apparent material inconsistency or material misstatement of fact, we are required to perform procedures to conclude whether there is a material misstatement of the Subject Matter Information or a material misstatement of the other information, and to take appropriate actions in the circumstances.

Responsibilities of the Directors

The Directors of WWGNH are responsible for:

- determining appropriate reporting topics and selecting or establishing suitable criteria for measuring or evaluating the underlying subject matter;
- ensuring that those criteria are relevant and appropriate to WWGNH and the intended users of the Report;
- the preparation of the Subject Matter Information in accordance with the Reporting Criteria including designing, implementing and maintaining systems, processes and internal controls over the evaluation or measurement of the underlying subject matter to result in Subject Matter Information that is free from material misstatement, whether due to fraud or error;
- documenting and retaining underlying data and records to support the Subject Matter Information;
- producing the Report that provides a balanced reflection of WWGNH performance in this area and discloses, with supporting rationale, matters relevant to the intended users of the Report; and
- producing a statement of Directors' responsibility.

Our responsibilities

We are responsible for:

- planning and performing the engagement to obtain limited assurance about whether the Subject Matter Information is free from material misstatement, whether due to fraud or error;
- forming an independent conclusion, based on the procedures we have performed and the evidence we have obtained; and
- reporting our conclusion to the Directors of WWGNH.

Use of our report

Our report, including our conclusion, has been prepared solely for the Directors of WWGNH in accordance with the agreement between us dated 24 April 2025, as amended on 26 August 2025 (the "agreement"). To the fullest extent permitted by law, we do not accept or assume responsibility or liability to anyone other than the Board of Directors and WWGNH for our work or our report except where terms are expressly agreed between us in writing.

PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP
Chartered Accountants
East Midlands
27 August 2025

WWGNH Results : Streamlined Energy and Carbon Reporting

The carbon and energy reporting criteria is set within an operational control organisational boundary, of which 100% is UK based. Our report reflects the carbon emissions across all our work streams and the geography within which we operate. It includes occupied buildings whether owned by the Group or leased from third parties and operational installations where gas and electricity is used. The report also continues to include Scope 3 emissions associated with primary business activities and suppliers.

	Note	Year ended 31 March 2025* (TCO2e)	Year ended 31 March 2024* (TCO2e)
Scope 1, Stationary Combustion	1	**311**	205
Scope 1, Fugitive Emissions including Shrinkage (gas leakage, own use gas and theft of gas)	2,3	**337,012**	348,949
Scope 1, Mobile Combustion		**11,722**	11,582
Total Scope 1 Emissions		**349,045** (A)	360,736
Scope 2, Emissions from purchased electricity – Market Based		**526** (A)	-
Scope 2, Emissions from purchased electricity – Location Based		**917** (A)	889
Total Gross Emissions (Scope 1 and 2) – Market Based		**349,571**	360,736
Total Gross Emissions (Scope 1 and 2) – Location Based		**349,962**	361,625
Total Gross Energy Consumption (Scope 1 and 2) (kWh)		**342,352,914**	361,604,917
Carbon (Scope 1 and 2 in tonnes CO_2e)/ £m turnover	4	**634**	641
Carbon (Scope 1 and 2 in tonnes CO_2e)/ GWh gas throughput of the network	4	**6.6**	7.3
Scope 3 – Purchased goods and services, including polyethylene and metal pipe, reinstatement materials, pipe helicopters services		**4,080**	4,614
Scope 3 – Capital goods, including plastic and metal pipe and IT purchases		**4,519**	4,168
Scope 3 – Fuel and energy related activities, not included in scope 1		**3,099**	3,076
Scope 3 – Scope 3 waste generated in operations, including excavated spoil, office, and depot waste		**227**	246
Scope 3 – Business Travel		**241**	391
Scope 3 – Employee Commuting		**1,101**	952
Total Gross Emissions (Scope 3)		**13,267** (A)	13,447
Total Gross Emissions (Scope 1, 2 and 3) – Market Based		**362,838**	374,183
Total Gross Emissions (Scope 1, 2 and 3) – Location Based		**363,229**	375,072
Renewable energy generated (kWh)		**102,434**	121,374
Total Net Energy Consumption (Scope 1, 2) (kWh)		**342,330,285**	361,579,504
Carbon Offsets, including business travel and helicopter services	5	**2,205**	2,405
Total Net Emissions – Market Based (Scope 1, 2 and 3)		**360,633**	371,783

* - Data provided here is in line with annual business carbon footprint reporting to Ofgem using Defra 2024 conversion factors. Conversion factors are updated annually.

Our Reporting Methodology (GHG Emissions) 2024-25

27th August 2025

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Overview

This document outlines WWU's non-financial reporting boundaries and methods for greenhouse gas (GHG) performance disclosures in its annual sustainability reports. It covers the general reporting scope, boundaries, and methods for environmental performance metrics related to GHG emissions. Variations to the general methods are referenced in the specific sections for each environmental performance metric.

WWU continuously strives to improve its GHG performance metrics and ensure reporting aligns with the latest national and internationally recognised standards and criteria. Between the previous and current regulatory reporting periods, there has been one framework update and one methodology update, detailed in the specific sections for each metric.

The Reporting Cycle

As a regulated business, WWU reports to the regulator Ofgem on an annual basis as well as complying with the UK government's Streamlined Energy and Carbon Reporting (SECR) policy.

Annually the company provides SECR data in its Non-Financial Sustainability Statement (NFSIS) as part of its financial report and provides Scope 1 to 3 emissions data to Ofgem in its Regulatory Reporting Pack. As a condition of its licence from Ofgem, it also publishes a breakdown of emissions data in its Annual Environmental Report.

This is a public report aimed at a general readership. There are three principal emission metrics that are part of the licence condition issued by Ofgem on a five-yearly price control cycle. The regulatory year 2024-25 is part of the RIIO-GD2 price control and the metrics reported relate to targets set in the Environmental Action Plan and agreed with Ofgem for RIIO-GD2.

These are:

- Licensee's long-term greenhouse gas reduction ambition, to reduce Greenhouse Gas (GHG) emissions excluding shrinkage by 37.5% by 2035 (aligned with a science-based methodology of limiting warming to well-below two degrees centigrade)
- Annual change in licensee's business carbon footprint excluding losses/shrinkage in comparison to its end of RIIO-GD2 target
- Annual change in total shrinkage (GD2 target: reduce gas loss to atmosphere by 10% by 2026)

Data Governance

Emissions data is an important component of the company's Environmental Social Governance (ESG) data suite. Scopes 1 to 3 are reported to the Executive team monthly via the Business Performance Delivery Committee. Annual emissions summaries are received and approved by the ESG Management Committee in the form of the Annual Environmental Report (AER) and the annual Sustainability Report following internal assurance (DAG – see below). The latter is a voluntary disclosure and is not part of the Ofgem licence obligation. In the coming years however, we expect the Sustainability Report to become an important addendum to corporate financial reporting fulfilling obligations under the UK's adoption of the International Sustainability Standards Board (ISSB) reporting framework. ESG data including scope 1 and 2 emissions performance is presented three times a year to the ESG Board Committee.

The Sustainability and Environment team manage emissions data on a weekly basis compiling the monthly reports for the Executive. This team also compiles the AER, the SECR and ESG scorecards.

Internal assurance of data prior to release is provided by the Data Assurance Guidance (DAG) process. This is a system of documented data preparation, handover and checks up to and including Executive level, in line with our licence Standard Special Condition A55 – Data assurance requirements. It is underpinned by methodology statements for each metric and governed by a Regulatory Reporting Policy. Risk assessments of each metric determine the number of review stages. For lowest risk metrics there are six core levels of review.

Emissions data are checked through 6 levels:

1. Data Preparer (Environment Analyst) submits data table of converted emissions metrics after receiving primary data with handover forms from relevant parts of the business.
2. Corporate Environment Lead reviews with Preparer and completes/signs second person review form.
3. Sustainability & Environment Manager reviews the data table and signs off.
4. Compliance Officer signs off.
5. Executive member signs off.
6. Regulation Team sign off.

Emissions data is processed through DAG for RRP and then is re-assessed via DAG in the context of the Annual Environmental Report. The SECR table is populated with data from the DAG-approved RRP submission.

Scope of Reporting

Unless otherwise stated, all environmental reporting in WWU's annual sustainability reports include activities over which WWU has operational control[1].

WWU prepares its GHG performance reporting using principles from non-financial reporting guidance, specifically the UK Government's environmental reporting guidelines (BEIS, March 2019), the Greenhouse Gas Protocol[2], and ISO 14064-1:2018[3]. Where relevant, the inventory aligns with industry or sector best practice for emissions measurement and reporting.

WWU's GHG reporting metrics cover the following activities: stationary combustion, fugitive emissions (including shrinkage – gas leakage, own use gas, and theft of gas), mobile combustion, purchased electricity (location and market-based), purchased goods & services, capital goods, fuel & energy-related activities, waste generation, business travel, employee commuting and homeworking, solar generation, and carbon offsets. Table 1 describes these metrics in more detail.

[1] There are two methods that are described in the UK Government Environmental Reporting guidelines (March 2019), Greenhouse Gas Protocol and ISO14064-1:2018 standards: the equity share and control (financial or operational) approaches. WWU uses an operational control consolidation approach.

[2] Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (revised edition) developed by the World Resources Institute and the World Business Council for Sustainable Development (2004

[3] ISO 14064-1:2018 Specification and guidance for quantifying and reporting greenhouse gas (GHG) emissions and removals at the organisation level.

Restatement Policy

We recognise that restating historical data may be necessary to ensure our reporting remains accurate, consistent and relevant. Reasons for restatement may include structural changes in our operations, improvements in data accuracy and calculation methodologies, and material changes to relevant policies or non-financial reporting. To determine the need for restatement, we examine both qualitative and quantitative impacts, applying an appropriate materiality threshold. Any restatements made for specific indicators will be clearly outlined. We do not currently have a formal restatement policy but discuss and approve changes above a 10% variance to the total emissions of each Scope at an Executive and Board level.

Assurance

All our annual sustainability reporting metrics are subject to our internal quality control review and approval processes. Additionally, we have commissioned PricewaterhouseCoopers LLP (PWC) to provide independent limited assurance (ISAE 3000 (Revised) and 3410) on the metrics submitted for compliance with the SECR requirements. PwC's Assurance Report 2024/25 can be found on our website.

Carbon Calculation Methodology

WWU calculates its carbon emissions by collecting primary data in source units such as kilowatt-hours (kWh), litres (L), kilograms (kg), and miles (mi). These consumption figures are then converted into carbon emissions using relevant carbon conversion factors. Our carbon footprint is calculated in accordance with the internationally recognised standards of the Greenhouse Gas Protocol, published by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD).

Emissions Factors

Emission factors are updated annually, utilising the most recent factors published by the UK Department for Environment, Food and Rural Affairs (Defra). For the 2024/25 reporting period, the 2024 Defra factors were applied, as per the Defra guidance.

In instances where source data units cannot be directly converted into carbon emissions an appropriate and reliable metric is used to translate the source data into a convertible unit. For example, excavation areas in square metres (m2) can be converted into cubic metres (m^3) by applying the typical depth of a specific job type. This cubic metre volume can then be translated into metric tonnes for specific material types, which are subsequently converted into carbon emissions using relevant Defra factors.

Table 1: Scope of Wales & West Utilities' Scope 1-3 emissions sources

This table describes the components of each Scope and the primary units the components are recorded in prior to conversion to tonnes of carbon dioxide equivalent.

Scope	Emission	Category	Units	Source	Description
Scope 1	Fugitive Emissions	Shrinkage	multiple	Multiple sources, both internal and external	Gas which is emitted from the transportation network, comprising of leakage, theft of gas and own use gas
	Energy Consumption	Purchased Gas	kWh	Utility energy broker	Natural gas consumed for heating
	Refrigerants	Refrigerant Gas	kg	Facilities – F-gas Log	Gas lost from air conditioning units
	Transport	Fleet	Litres	Fuel card system	Fuel purchased for WWU owned vehicles and WWU owned equipment using fuel cards
			Litres	Logistics partner invoices	Fuel drawings by HGV fleet
		Company Cars	Miles	Expense claim system	Mileage expenses claimed for company cars
	Solar	Renewable Energy Generated	kWh	Energy management contractor	Electricity generated from solar installations on WWU buildings and consumed
Scope 2	Electricity Consumption	Purchased Electricity	kWh	Utility energy broker	Electricity purchased from the grid for use at WWU sites
Scope 3	Purchased Goods & Services	Helicopters	Litres	SAP	Litres of fuel used by helicopters for pipe surveys
		Reinstatement Materials	Metric tonnes	Reinstatement	Volumes of materials used by WWU for reinstatement

			m^2	PMO	Volumes of materials used by contractors working on behalf of WWU for reinstatement
	Capital Goods	PE Pipe & Fittings	tCO_2e	Pipe manufacturers	Emissions generated through production of PE Pipe and Fittings
		Copper & Steel Pipe	tCO_2e	Insight Spend Analysis Dashboard	Emissions generated through production of Copper & Steel pipe
		IT (Purchased Equipment)	kg	IT	Purchases of various IT equipment
	Fuel & Energy Related Activities	WTT & T&D Losses – Energy Consumption	kWh	Utility broker	WTT and T&D losses associated with energy consumption (gas & electricity) and fuel (direct commercial & company cars)
		WTT – Fuel	Litres / Miles	Key Fuels / Logistics / Expense claims	
	Waste Generated in Ops	Spoil Waste	Tonnes	Reinstatement	Spoil waste from operational activities sent to Landfill / Recycled
		Office & Depot	Tonnes	Waste contractors	Non-operational waste collected by waste contractors for Office & Depots
				PE Pipe	Unusable PE pipe collected by contractor to be recycled
				Metal	Scrap metal waste collected by contractor
		IT (Disposal)	kg	IT	Disposal of various IT equipment
		Water	m^3	Utility broker	Water consumed at offices and depots

	Business Travel	Private Vehicles	Miles	Expense claim system	Mileage expenses claimed for private vehicles
		Rail / Air / Hotel / Hire Car	Miles / Nights	Travel booking contractor	Use of public transport (and hire cars) and hotel stays booked by WWU employees for work purposes
	Employee Commuting	Commuting	Miles	Internal Survey	Non-operational miles travelled in company and personal vehicles
		Homeworking	kWh		Energy use associated with working from home
	Carbon Offsetting	Carbon Offsetting HGVs, Air and Rail travel	tCO_2e	Certified off-setting company	WWU commitment to offset Air and Rail emissions annually. Following Covid and a change to hybrid working, increased the commitment to include another unavoidable emission - our HGV fleet

Scope 1 – Direct Emissions

Scope 1 emissions are direct emissions from company-owned and controlled resources.

Shrinkage	
Description	Gas which is emitted or used from the transportation network, comprising of leakage, theft of gas and own use gas (OUG). There is a standardised mathematical model overseen by the Joint Office of Gas Transporters and approved by Ofgem. It is used by all gas distribution networks to calculate shrinkage. Any changes to this model can only be made following consultation with other Distribution Networks

	(DNs), Shippers, any other interested parties, and must be approved by Ofgem. Further information can be found here: Shrinkage Forum | Joint Office of Gas Transporters - Gas Governance Each gas distribution network puts its own data into the standardised model. Embedded formulae produce an output. Each year the model is reviewed. A history of the review process is available here: Shrinkage and Leakage Model Review Consultations | Joint Office of Gas Transporters - Gas Governance Leakage is comprised of leaks from low pressure mains and services, medium pressure mains, above ground installations, venting, and interference damage. OUG is a combusted gas used by Gas Transporters in operating and maintaining the Distribution System (also known as Operational Usage). Under the current Uniform Network Code (UNC) Shrinkage regime, OUG is treated as a consolidated quantity which is estimated by applying a fixed OUG factor 0.0113% to the annual gas throughput. Theft of gas is a combusted gas that is stolen upstream of the Emergency Control Valve (ECV). Under the current regime, TOG is treated as a consolidated quantity which is estimate by applying a fixed TOG factor 0.02% to the annual gas throughput.
Source Units	Provided for conversion as Gigawatt-hours (GWh)
Data Collection	Between April and May of each year, large volumes of data are obtained from the wider business which is used for completing these models. This annual process ensures that ongoing change is captured in each year's return. Requested data includes:- 1. Average District Governors Pressure data from pressure loggers and spreadsheets containing fixed or seasonal operating pressures settings for sites. 2. Throughput data from Xoserve, cost of gas (p/kWh), Prior Year cost adjustment and Shrinkage cost. 3. District and Service Governors data from the Asset Repository and GIS systems. 4. NTS Offtakes and LTS PRS data from asset repository and GIS systems. 5. Interference Damage >500kg data from the HSE team spreadsheet log. 6. Interference Damage <500kg data for both Mains & Services from the Asset Repository system.

	7. Services Replacement and Transfers data from the Asset Repository system. 8. Low Pressure and Medium Pressure Mains Asset length data from the Asset Repository system. 9. Customer Numbers from Xoserve data on meter points. 10. Actual Calorific Value data for each day for the reporting year from the National Gas Transmission data portal. The calculations performed and leakage rates used are summarised in the Shrinkage and Leakage Model Review Consultation Report (2020)[4] and Shrinkage and Leakage Model Review Final Report (2025)[5]. The final output of the model is provided by the Asset Management team to the Environment team is in a unit of Gigawatt-hours (GWh). Leakage is converted to tonnes of carbon equivalent using the conversion factor provided in Ofgem's Annual Environment Report Guidance document. OUG and TOG are multiplied by the DEFRA conversion factor for methane. [Environmental Reporting Guidance March 2021 (RIIO-2 Environmental Reporting Guidance v_1 final (ofgem.gov.uk)) – Defra factor for Natural Gas updated following discussion with other GDNs at ENA meeting].
Uncertainties	• Shrinkage calculations are by necessity a modelled estimate

[4] https://www.gasgovernance.co.uk/sites/default/files/2023-07/Shinkage%20Leakage%20Model%20Review%202020_Draft%20for%20Consultation_V1.pdf
[5] https://www.gasgovernance.co.uk/sites/default/files/related-files/2025-03/Shrinkage%20and%20Leakage%20Model%20Review%20Final%20Report%202025%20%2827%20March%202025%29.pdf

Purchased Gas	
Description	Natural gas consumed for heating
Source Units	Kilowatt-hours (kWh)
Data Collection	• Actual usage is as recorded by utility providers and taken from utility bills. The supplier bills a period that spans a month's end. The utility broker then calculates the average daily consumption and multiplies that by the number of days of the reporting period in question. • Large bills/credits are phased across relevant period using prior years' seasonal trends. • Any missing months are estimated by applying prior year's seasonal trend to latest actuals.
Uncertainties	• Not all sites are on half-hourly meters. Some are reliant on submitted actual meter readings and are often estimated for extensive periods before readings are taken. • When readings are taken and a balance is due (e.g. credits due following estimates that were too high, bill due following estimates that were too low), bills fall into the month they were received and are not phased to relevant months. A manual exercise is required to estimate the phasing for these bills / credits based on previous seasonal trends. • Energy consumption values for a limited number of locations estimated due to unavailable data, considered to be less than 0.5% of total business carbon footprint

Fleet	
Description	Fuel purchased for WWU owned vehicles and WWU owned equipment using fuels cards Fuel purchased and invoiced by CEVA Logistics team driving WWU owned vehicles
Source Units	Litres (L)
Data Collection	• Litres of fuel purchased using fuels cards exported from weekly invoices by Finance team. • Invoice data pivoted by fuel type, by transaction date (period). • Where the latest month only has partial invoice data, known actuals are used to extrapolate and estimate full month. • Litres of fuel purchased by CEVA Logistics drivers exported into 'Fuel Drawings' Excel file by CEVA Logistics Manager. • Separate CEVA report received each month. All fuel purchases are diesel.

Uncertainties	• Relies on the cashier at fuelling stations to enter accurate / useful information to the 'entered registration' field to determine whether fuel purchased is for plant or for vehicle. • Some manual work required by the Transport team for a percentage of fuels card transactions to determine best view of whether transactions are for plant or for vehicle.

Company Cars	
Description	Mileage expenses claimed for company cars
Source Units	Miles (Mi)
Data Collection	• Mileage expenses claimed by employees through Concur - the expenses system. • Report ran directly out of the system for all expense claims to date. • Data pivoted by fuel type (EV, PHEV, Hybrid, Petro, Diesel) for Company and Private vehicles, by period.
Uncertainties	We rely on employees to submit all claims accurately and in time

Refrigerant Gas	
Description	Gas lost from air conditioning units
Source Units	Kilograms (kg)
Data Collection	• Log is maintained and managed by Facilities Manager. • Estimated refrigerant gas leakage calculated for latest log using approved HM Government Environmental Reporting Guidance.
Uncertainties	• Does not include refrigerants from fridges, water coolers, or radiant heating systems.

Scope 2 Emissions

WWU reports its Scope 2 emissions using both location-based and market-based methods, in accordance with the Greenhouse Gas Protocol Scope 2 Guidance.

Location-based Method

Under the location-based method, grid average GHG emission factors are applied, using the most recent (2024) factors published by Defra.

Market-based Method

For the market-based method, emission factors are applied following the hierarchy outlined in Table 6.3 of the GHG Protocol Scope 2 Guidance:

- Energy attribute certificates or equivalent instruments (unbundled, bundled with electricity, conveyed in a contract for electricity, or delivered by a utility);
- Contracts for electricity, such as power purchase agreements (PPAs) and contracts from specified sources, where electricity attribute certificates do not exist or are not required for a usage claim.
- Supplier/Utility emission rates, such as standard product offer or a different product (e.g. a renewable energy product or tariff), and that are disclosed (preferably publicly) according to best available information.
- Residual mix (subnational or national) that uses energy production data and factors out voluntary purchases.
- Other grid-average emission factors (subnational or national) – see location-based data.

Calculation of Market-based Method

Our market-based emissions in the reporting period reflect a temporary transition in our electricity supply. During this time, WWU was on out-of-contract rates, categorised as a 'brown tariff', while our energy and sustainability advisors facilitated a switch to a new renewable energy supplier, Bryt Energy. Prior to the transition period we were on 100% green tariff with SSE and post the handover to Bryt we were on their Pure Certainty NHH 100% green tariff. Due to the out-of-contract status during this period, information regarding the specific tariff was limited. Consequently, the emissions associated with our electricity consumption for this duration have been calculated using the European Residual Mixes 2024 Association of Issuing Bodies conversion factor.

Scope 2 – Indirect Emissions

Scope 2 emissions are indirect emissions from the generation of purchased energy.

Purchased Electricity	
Description	Electricity purchased from the grid for use at WWU sites
Source Units	Kilowatt-hours (kWh)
Data Collection	• Actual and estimated usage is as recorded by utility providers and taken from utility bills. • Large bills/credits are phased across relevant period using prior years' seasonal trends. • Known missing sites are estimated using available data for sites of similar size & occupancy. • Any missing months are estimated by applying prior year's seasonal trend to latest actuals.

Uncertainties	• Not all sites are on half-hourly meters. Some are reliant on submitted actual meter readings and are often estimated for extensive periods before readings are taken. • When readings are taken and a balance is due (e.g. credits due following estimates that were too high, bill due following estimates that were too low), bills fall into the month they were received and are not phased to relevant months. A manual exercise is required to phase these bills / credits based on previous seasonal trends. • Not all sites are captured in the report. Some sites are not sub-metered and therefore, may be paid via service charges or separate invoices to the landowner. Estimates are added for known missing sites (material sites) but some smaller sites may also be missing. • Energy consumption values for a limited number of locations estimated due to unavailable data, considered to be less than 0.5% of total business carbon footprint

Scope 3 – All other indirect emissions in the value chain

Scope 3 emissions are not owned or controlled by the reporting company, but they are a consequence of the company's activities

Helicopters	
Description	Litres of fuel used by helicopters for pipe surveys
Source Units	Litres (L)

Data Collection	• Invoices for helicopter surveys pulled from SAP. • Invoice details dates of surveys, total km travelled, and litres per km. • Invoice details used to calculate total litres of fuel.
Uncertainties	• Converts distance travelled and litres per km information (detailed on the invoice) to determine litres used - best estimate.

Reinstatement Materials (WWU)	
Description	Volumes of materials used by WWU for reinstatement
Source Units	Metric tonnes
Data Collection	• Volumes of materials used by WWU for all work completed in the month recorded in metric tonnes, broken out by Type 1 Virgin & Recycled, Dust Virgin & Recycled, Concrete, Soil and Tarmac. Unit weights are then multiplied by the DEFRA conversion factor for the material category. • Each monthly report is for year-to-date, and all months are updated in the working file in case of any late invoices impacting previously reported months.
Uncertainties	N/A

Reinstatement Materials (Contractors)	
Description	Volumes of materials used by contractors working on behalf of WWU for reinstatement
Source Units	Square metres (m^2)
Data Collection	• Volumes of materials used by each contractor for each job type recorded in m^2. • Data converted to m^3 (using applied depth of each job type) and then into metric tonnes (using conversion factors from a number of online sources for different material types - documented within the working file) before converting into emissions using Defra factors. • Each monthly report is for year-to-date, and all months are updated in the working file in case of any late invoices impacting previously reported months.

Uncertainties	• Some best estimates required to determine average depth of certain jobs. Data is provided as an area (m^2) reinstated. We then apply an 'assumed depth' - either based on detail in the job type (using deepest measurement as worst case scenario) or best estimate - to calculate a volume (m^3) reinstated, before converting that into metric tonnes and then into emissions.

PE Pipe & Fittings	
Description	Emissions generated through production of PE Pipe and Fittings
Source Units	Tonnes of CO_2 equivalent (tCO_2e)
Data Collection	• Volumes of pipe and fittings manufactured for WWU orders recorded in metric tonnes. • Suppliers also provide tCO_2e associated with WWU orders, calculated on a company level and apportioned to WWU orders. Each supplier has a slightly different approach. • Supplier 1 calculates total pipe and fittings manufactured in a year, and total emissions reported in a year, to obtain an intensity metric of emissions per metric tonne. That metric is then applied to all orders for the year that follows before updating the metric at the end of the next reported year. • Supplier 2 converts metric tonnes into emissions using Inventory of Carbon & Energy - Hammond & Jones - University of Bath, and an intensity metric associated with pipe delivery. • Supplier 3 converts metric tonnes into emissions by parts produced, material required for the order, natural resources required for manufacturing specific parts, and freight distance per customer, per order.
Uncertainties	N/A

Copper & Steel Pipe	
Description	Emissions generated through production of Copper & Steel pipe
Source Units	Metres (m), Millimetres (mm)
Data Collection	• Report of POs raised in the year exported from SAP. • Filters applied to material groups and product descriptions to identify purchases of Copper & Steel pipe. • Manual checks completed to ensure all POs have invoices receipted, and all invoices are associated with Copper & Steel pipe. • Length, diameter, thickness of pipe and pipe material used to calculate weight (kg) before converting into emissions using ICE factors.
Uncertainties	• Manual exercise to filter all POs raised in a year to identify those associated with Copper & Steel pipe. Some fields are manually entered and therefore, filtering relies on quality of product description / no spelling errors.

IT (Purchased Equipment & Disposals)	
Description	Purchases and Disposals of various IT equipment
Source Units	No. of units, Kilograms (kg)
Data Collection	• Purchases report exported from SAP by IT. • Donations captured in Excel spreadsheet. • Third party WEEE disposal certificates provided for Disposals. • Qty and weights captured from disposal certificates and / or account dashboard - weights converted into emissions. • Weights from disposals used to calculate average weight category of purchases where known weights are unavailable, e.g. from Google search of specific items - weights converted into emissions.
Uncertainties	• Having to use known weights of disposals to calculate an average weight per unit of each equipment type, where known weights are unavailable, to estimate weight of IT purchases.

WTT & T&D Losses – Energy Consumption & WTT – Fuel	
Description	WTT and T&D losses associated with energy consumption (gas & electricity) and fuel (direct commercial & company cars)
Source Units	Kilowatt-hours (kWh), Litres (L), Miles (Mi)
Data Collection	Uses data received for Purchased Gas, Fleet, and Company Cars and applies different Defra factors.
Uncertainties	N/A

Spoil Waste	
Description	Spoil waste from operational activities sent to Landfill / Recycled
Source Units	Metric tonnes
Data Collection	• Volumes of spoil waste from operational activities recorded in metric tonnes each month, broken out by fate of waste (Landfill / Recycled). • Each monthly report is for year-to-date and all months are updated in the working file in case of any late invoices impacting previously reported months.
Uncertainties	N/A

Office & Depot Waste	
Description	Non-operational waste collected by contractors for Office & Depots
Source Units	Metric tonnes

Data Collection	We currently collect data from three contractors and convert final figures for waste by type into tCO2e by multiplying aggregate volume of waste type by its DEFRA conversion factor. The preparation of data prior to multiplying by the DEFRA conversion factor takes place as follows: Contractor 1 • Weight of different waste streams recorded by site each month - recorded as an estimated weight or an actual weight. • Lookups summarise waste into Recycling / RDF / Incineration / Landfill / Hazardous. • Average of previous months taken to estimate until actuals come in. Contractor 2 • Weight of total waste collected recorded by site each month. • Vendor calculated average fate of waste to be 33% RDF, 67% Recycled. • Average of previous months taken to estimate until actuals come in. Contractor 3 • Weight of different waste streams recorded each month. • Average of previous months taken to estimate until actuals come in.
Uncertainties	Contractor 2: Calculation of RDF / Recycled split is an average calculation. In reality, the fate of waste could fluctuate month-on-month, but the calculated split remains the same all year round.

Office & Depot (PE Waste)	
Description	Unusable PE pipe collected by contractor to be recycled
Source Units	Metric tonnes
Data Collection	• Weight of pipe & fittings sales recorded each month, along with weight of pipe recycled. • Average of previous months taken to estimate until actuals come in. • Unit weight multiplies by DEFRA conversion factor for 'average plastic'
Uncertainties	N/A

Office & Depot (Metal)	
Description	Scrap metal waste collected by contractor
Source Units	Metric tonnes
Data Collection	• Weight of total waste recorded by site each month. • Average of previous months taken to estimate until actuals come in.
Uncertainties	N/A

Water	
Description	Water consumed at offices and depots
Source Units	Cubic metres (m^3)
Data Collection	• Actual usage is as recorded by utility providers and taken from utility bills. • Any missing months are estimated by applying prior year's seasonal trend to latest actuals.
Uncertainties	• Some sites are reliant on submitted actual meter readings and are often estimated for extensive periods before readings are taken. • When readings are taken and a balance is due (e.g. credits due following estimates that were too high, bill due following estimates that were too low), bills fall into the month they were received and are not phased to relevant months. A manual exercise is required to phase these bills / credits based on previous seasonal trends. • Our energy and sustainability advisors are not contracted to manage our water meters, therefore, there are no third-party verifications of our water bills.

Private Vehicles	
Description	Mileage expenses claimed for private vehicles
Source Units	Miles (Mi)
Data Collection	• Mileage expenses claimed by employees through Concur - the expenses system. • Report ran directly out of the system for all expense claims to date. • Data pivoted by fuel type (EV, PHEV, Hybrid, Petro, Diesel) for Company and Private vehicles, by period.
Uncertainties	N/A

Rail / Air / Hotel / Hire Car	
Description	Use of public transport (and hire cars) and hotel stays booked by WWU employees for work purposes
Source Units	Miles (Mi), Nights (No.)
Data Collection	• Travel reports from third party travel management company (TMC). • Mileage for hire cars recorded by TMC.
Uncertainties	• Hire Car mileage is not recorded by TMC. We are reliant on the individual hire car users to keep a record of their own mileage usage. • Hire Car vehicle details are not provided – we are having to assume 'average car' conversion factors which would effectively capture the average car emissions for every hire, even if it was an EV.

Commuting & Homeworking	
Description	Non-operational miles travelled in company and personal vehicles
Source Units	Miles (Mi), Kilowatt-hours (kWh)
Data Collection	• Survey issued to business capturing commuting distance, days per week commuting to work / working from home, commuting method (including fuel type where appropriate), home utility supply (renewable / not renewable), and homeworking setup (additional monitors / others working from home in same household) - all broken out by quarters of the year to capture changing situations throughout the year. • Data from survey summarised into miles driven and FTE hours working from home.
Uncertainties	• Recorded data is extrapolated to estimate emissions for any population that has not completed the survey.

Out of Scope

Carbon Offsetting HGVs, Air and Rail travel	
Description	WWU commitment to offset Air and Rail emissions annually. Following Covid and a change to hybrid working, increased the commitment to include another unavoidable emission - our HGV fleet
Source Units	Tonnes of CO_2 equivalent (tCO_2e)
Data Collection	• Total emissions associated with Air, Rail and HGV fleet calculated for the regulatory year. • Third party - Carbon Footprint Ltd - provide a proposal of project options for WWU to select to offset our annual emissions. • Projects cover a variety of renewable energy options (wind, solar, hydro, etc.) in a number of different countries, with a variety of accreditations, for a range of prices. • Proposal is presented to Senior Management to determine best course of action - credits paid for via offset broker - WWU issued with a certificate.
Uncertainties	N/A

Baseline

As previously mentioned in ‘The Reporting Cycle’, we have a long-term greenhouse gas reduction ambition to reduce GHG emissions excluding shrinkage by 37.5% by 2035. This ambition is set against a baseline of 2020/21.

We will consider restating our baseline in accordance with our restatement policy (as above), requests from the regulator Ofgem for RIIO-GD3, or as methodology and factors evolve to give us a more accurate picture of our impact.