GREENHOUSE GAS EMISSIONS INVENTORY AND MANAGEMENT REPORT

Carbon Reduce programme

Prepared in accordance with ISO 14064-1:2018 and the Technical Requirements of the Programme

Integrated Water Services Limited

Prepared by (lead author): Cat Henderson

Dated: 10 January 2025

Verification status: Reasonable

Measurement period: 01 April 2023 to 31 March 2024

Base year period: 01 April 2012 to 31 March 2015

Approved for release by:

Cat Henderson

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AVAILABILITY

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REPORT STRUCTURE

The Inventory Summary contains a high-level summary of this year's results and from year 2 onwards a brief comparison to historical inventories.

Chapter 1, the Emissions Inventory Report, includes the inventory details and forms the measure step of the organisation's application for Programme certification. The inventory is a complete and accurate quantification of the amount of GHG emissions and removals that can be directly attributed to the organisation's operations within the declared boundary and scope for the specified reporting period. The inventory has been prepared in accordance with the requirements of the Programme[1], which is based on the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (2004) and ISO 14064-1:2018 Specification with Guidance at the Organization Level for Quantification and Reporting of Greenhouse Gas

[1] Programme refers to the Toitū carbonreduce and the Toitū net carbonzero programmes.

Emissions and Removals[2]. Where relevant, the inventory is aligned with industry or sector best practice for emissions measurement and reporting.

Chapter 2, the reduction plan and progress report, forms the manage step part of the organisation's application for Programme certification.

See Appendix 1 and the related Spreadsheet for detailed emissions inventory results, including a breakdown of emissions by source and sink, emissions by greenhouse gas type, and non-biogenic and bio-genic emissions. Appendix 1 also contains detailed context on the inventory boundaries, inclusions and exclusions, calculation methodology, liabilities, and supplementary results.

This overall report provides emissions information that is of interest to most users but must be read in conjunction with the inventory workbook for covering all of the requirements of ISO 14064-1:2018.

[2] Throughout this document 'GHG Protocol' means the *GHG Protocol Corporate Accounting and Reporting Standard* and 'ISO 14064-1:2018' means the international standard *Specification with Guidance at the Organizational Level for Quantification and Reporting of Greenhouse Gas Emissions and Removals*.

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EXECUTIVE SUMMARY

This is the annual greenhouse gas (GHG) emissions inventory and management report for Integrated Water Services Limited covering the measurement period 01 April 2023 to 31 March 2024.[3]

This is the annual greenhouse gas (GHG) emissions inventory and management report for Integrated Water Services (M&E) Limited covering the measurement period 01 April 2021 to 31 March 2022. This is the annual greenhouse gas (GHG) emissions inventory and management report for Integrated Water Services (M&E) Limited covering the measurement period April 2021 - March 2022, against an average baseline year of April 2013 to March 2015

Table 1: Inventory summary

Category (ISO 14064-1:2018)	**Scopes (ISO 14064-1:2006)**	**2014**	**2023**	**2024**
Category 1: Direct emissions (tCO_2e)	Scope 1	1,314.04	497.83	642.77
Category 2: Indirect emissions from imported energy (location-based method*) (tCO_2e)	Scope 2	248.32	61.21	41.28
Category 3: Indirect emissions from transportation (tCO_2e)	Scope 3	0.00	0.00	0.00
Category 4: Indirect emissions from products used by organisation (tCO_2e)		51.29	5.52	3.59
Category 5: Indirect emissions associated with the use of products from the organisation (tCO_2e)		0.00	0.00	0.00
Category 6: Indirect emissions from other sources (tCO_2e)		0.00	0.00	0.00
Total direct emissions (tCO_2e)		**1,314.04**	**497.83**	**642.77**
Total indirect emissions* (tCO_2e)		**299.61**	**66.73**	**44.87**
Total gross emissions* (tCO_2e)		**1,613.65**	**564.56**	**687.64**
Category 1 direct removals (tCO_2e)		0.00	0.00	0.00
Purchased emission reductions (tCO_2e)		0.00	0.00	0.00
Total net emissions (tCO_2e)		**1,613.65**	**564.56**	**687.64**

*Emissions are reported using a location-based methodology.

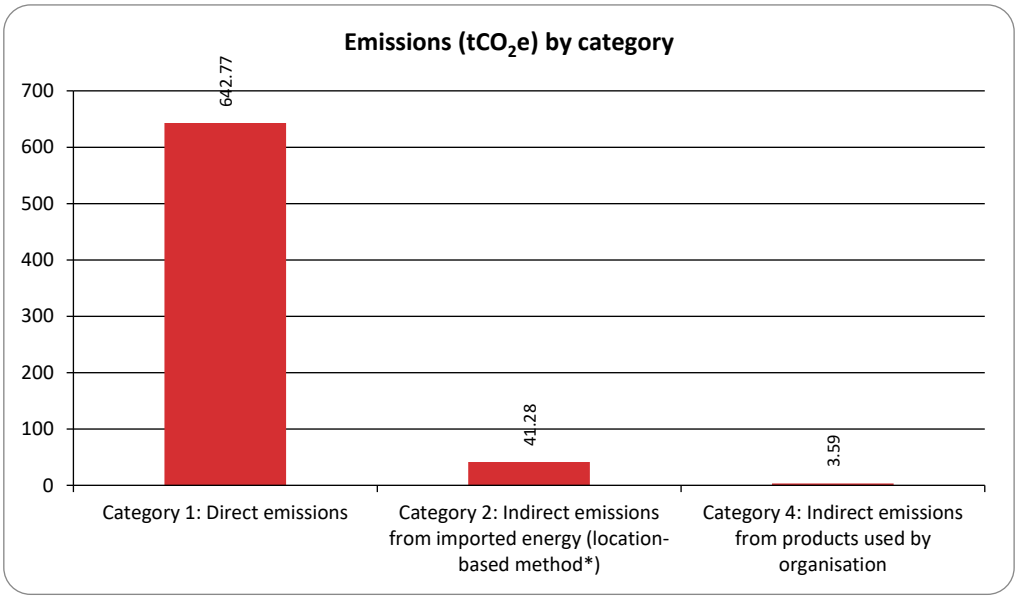

Figure 1: Emissions (tCO_2e) by Category for this measurement period

[3] Throughout this document "emissions" means "GHG emissions". Unless otherwise stated, emissions are reported as tonnes of carbon dioxide equivalent (tCO_2e).

CHAPTER 1: EMISSIONS INVENTORY REPORT

1.1. INTRODUCTION

This report is the annual greenhouse gas (GHG) emissions inventory and management report for Integrated Water Services Limited.

This report is the annual greenhouse gas (GHG) emissions inventory and management report for Integrated Water Services (M&E) Limited.

The purpose of this report is to measure and manage our GHG emissions, which contributes to our overall company sustainability policy and corporate responsibility.

The inventory report and any GHG assertions are expected to be verified by a Programme-approved, third-party verifier. The level of assurance is reported in a separate Assurance Statement provided to the directors of the certification entity.

The inventory report and any GHG assertions are expected to be verified by a Programme-approved, third-party verifier. The level of assurance is reported in a separate Assurance Statement provided to the directors of the certification entity.

1.2. EMISSIONS INVENTORY RESULTS

Table 2: Emissions inventory summary for this measurement period

Measurement period: 01 April 2023 to 31 March 2024.

Category	Toitū carbon mandatory boundary (tCO_2e)	Additional emissions (tCO_2e)	Total emissions (tCO_2e)
Category 1: Direct emissions	642.77 Diesel retail station biofuel blend, Natural Gas, Petrol retail station biofuel blend	0.00	642.77
Category 2: Indirect emissions from imported energy (location-based method*)	41.28 Electricity UK (Generation) (2013 Methodology)	0.00	41.28
Category 3: Indirect emissions from transportation	0.00	0.00	0.00
Category 4: Indirect emissions from products used by organisation	3.59 Electricity UK (T&D losses) (2013 Methodology)	0.00	3.59
Category 5: Indirect emissions associated with the use of products from the organisation	0.00	0.00	0.00
Category 6: Indirect emissions from other sources	0.00	0.00	0.00
Total direct emissions	**642.77**	**0.00**	**642.77**
Total indirect emissions*	**44.87**	**0.00**	**44.87**
Total gross emissions*	**687.64**	**0.00**	**687.64**

Category	Toitū carbon mandatory boundary (tCO_2e)	Additional emissions (tCO_2e)	Total emissions (tCO_2e)
Category 1 direct removals	0.00	0.00	0.00
Purchased emission reductions	0.00	0.00	0.00
Total net emissions	**687.64**	**0.00**	**687.64**
Emissions intensity		**Mandatory emissions**	**Total emissions**
Operating revenue (gross tCO_2e / £Millions)		32.37	32.37

*Emissions are reported using a location-based methodology.

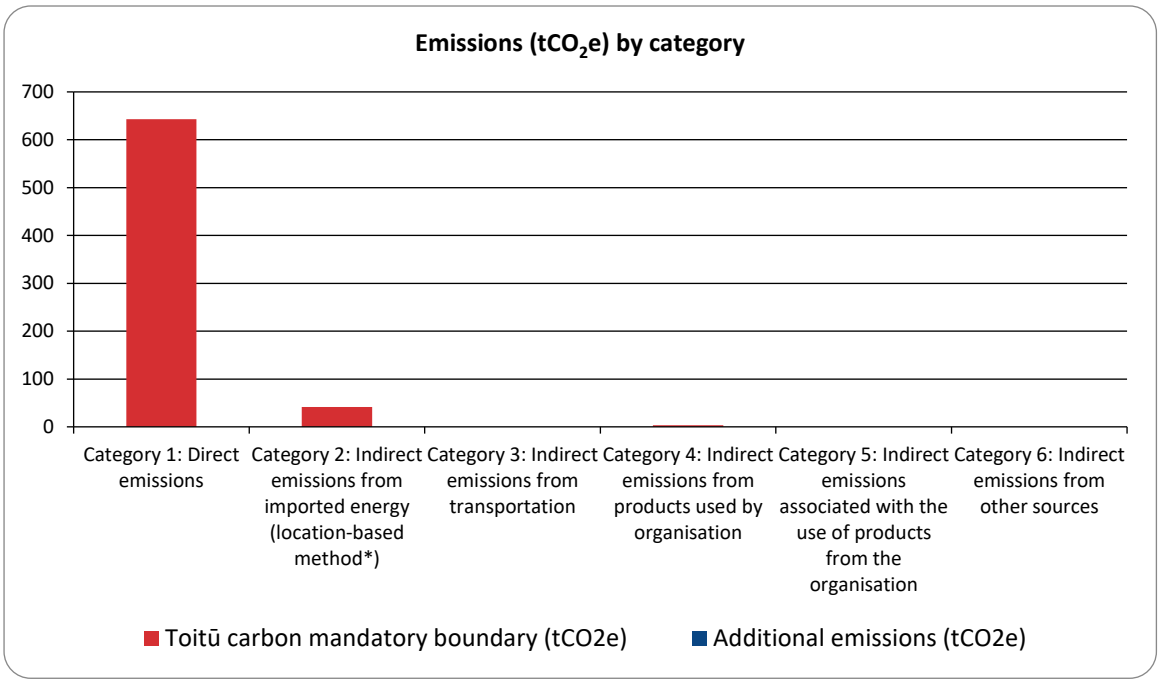

Figure 2: Emissions (tCO_2e) by category

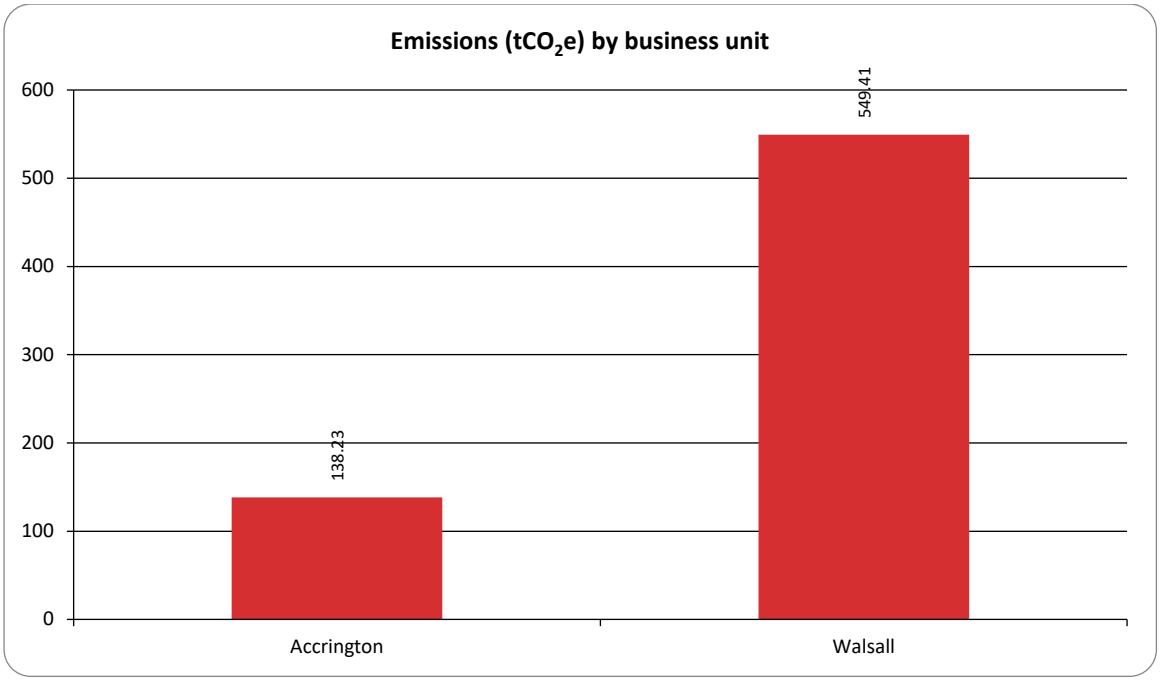

Figure 3: Emissions (tCO_2e) by business unit

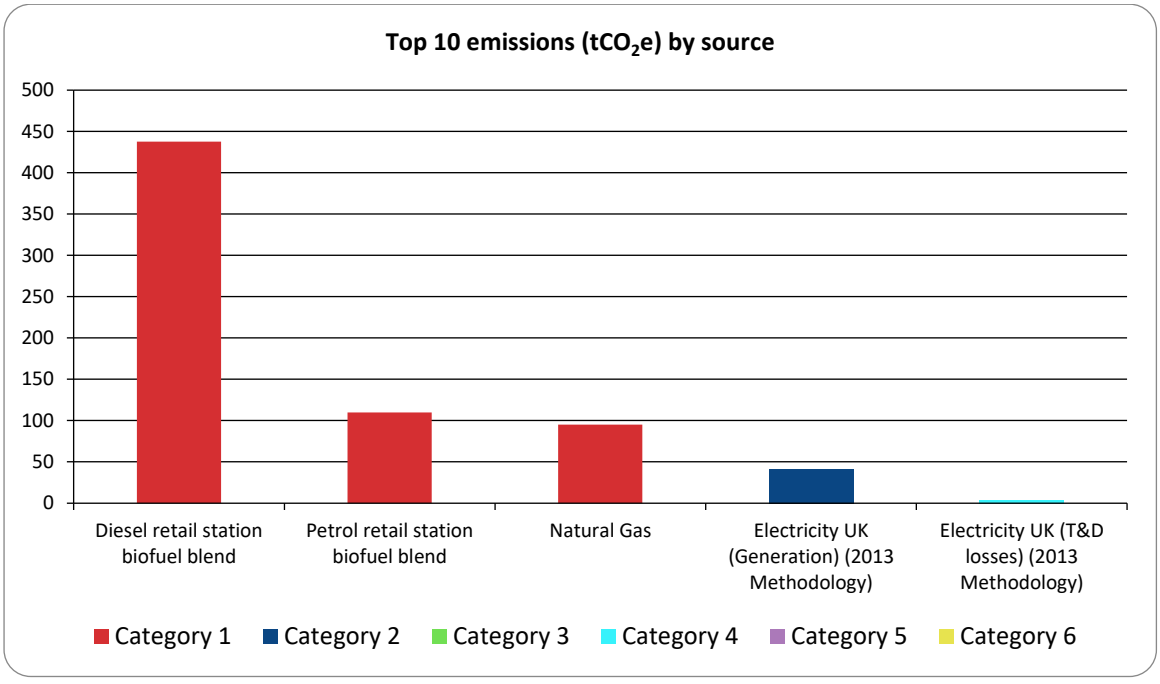

Figure 4: Top 10 emissions (tCO_2e) by source

1.3. ORGANISATIONAL CONTEXT

1.3.1. Organisation description

Integrated Water Services Limited (IWS) are part of South Staffordshire Infrastructure (SSI) group of companies whom are all part of South Staffordshire Plc. They provide specialist services in all aspects of abstraction, distribution, analysis & treatment, distribution network repair & maintenance, rehabilitation, alteration & extension and does this through two divisions as detailed below:

Mechanical & Electrical

IWS Limited provides a specialist service in all aspects of pump diagnostics, pump refurbishment, pumping project management, telemetry, chemical dosage and control. These services include environmental management, energy management, plant & infrastructure maintenance and emergency response. These services and cost efficient solutions for water, wastewater and environmental problems are provided 24 hours a day, 365 days of the year anywhere in the UK.

Commitment to certification

Climate change can have a significant impact on the water utilities sector in which Integrated Water Services Limited operates. If temperature continues to rise as predicted due to climate change, there will be a reduction in potable water as a resource. As this is the basis for nearly all Integrated Water Services Mechanical and Electrical activities any reduction would be detrimental to the business.

Integrated Water Services Limited is committed to emissions measurement, management and reduction. This is demonstrated through the company's internal objectives, environmental policy and commitment to fully understand the impact the company has on the environment.

GHG Reporting

This report will support the wider group (South Staffordshire Water) for Environmental & Social Governance reporting that is required by the shareholders, and to assist in clients tendering and pre-qualifications for contract awards.

Climate Change Impacts

Climate change will impact the nature of our business operations in various ways including but not limited to clean water supply assets at risk from sea level rises and extreme weather events. Our products and services will also need to be constantly reviewed to ensure resilience to the changing climate.

Parent Company Targets

South Staffordshire Water have committed to Net Zero by 2050. Integrated Water Services (M&E) Limited will work towards these targets and will continue to improve carbon reduction.

1.3.2. Statement of intent

This inventory forms part of the organisation's commitment to gain Toitū Carbon Reduce certification. The intended uses of this inventory are:

Intended use and users

Intended users of this report include, but are not limited to:

- Our customers / clients

- Our shareholders

- General public

- UK wide environment conscious interested parties

1.3.3. Person responsible

Cat Henderson is responsible for overall emission inventory measurement and reduction performance, as well as reporting results to top management. Cat Henderson has the authority to represent top management and has financial authority to authorise budget for the Programme, including Management projects and any Mitigation objectives.

State any other people/entities Programme

Libby Doyle

Cat Henderson, Head of QUENSH and Compliance Systems, is responsible for overall emissions reduction performance as well as reporting to top management.

Top management commitment

Top level management commitment will be demonstrated through the signing of the environmental policy and environmental objectives. Carbon management will also be reported quarterly at both monthly management meetings and the Safety Health and Environmental committee.

Management involvement

Annual reporting will be presented to our Board and our shareholders.

The Leadership Group provides resources and budget for collection and processing of data and inventory report development.

1.3.4. Reporting period

Base year measurement period: 01 April 2012 to 31 March 2015

The average base year period was selected because it represents the first period we had access to a materially complete set of data records for forming the inventory.

Measurement period of this report: 01 April 2023 to 31 March 2024

Measurement period of this report: 01 April 2023 to 31 March 2024. Reporting will be done annually. Financial reporting cycles are used in line with business reporting. Alignment to financial reporting year.

Base year measurement period: 01 April 2013 to 31 March 2014.

1.3.5. Organisational boundary and consolidation approach

An operational control consolidation approach was used to account for emissions.[4]

Organisational boundaries were set with reference to the methodology described in the GHG Protocol and ISO 14064-1:2018 standards.

Justification of consolidation approach

Organisational boundaries were set with reference to the methodology described in the GHG Protocol and ISO 14064-1:2018 standards.

Justification of consolidation approach:

This consolidation approach because it aligns to our intended uses. In particular, it is considered to be most effective at reflecting our carbon risk exposure our departments.

Organisational structure

Figure 5 shows what has been included in the context of the overall structure.

[4]control: the organisation accounts for all GHG emissions and/or removals from facilities over which it has financial or operational control. equity share: the organisation accounts for its portion of GHG emissions and/or removals from respective facilities.

Figure 5: Organisational structure

Table 3. Brief description of business units, sites and locations included in this emissions inventory

Company/Business unit/Facility	Physical location	Description
Altham	Barnfield Way, Altham Business Park, Altham, BB5 5YT	IWS M&E at Altham provides a specialist service in all aspects of welding and fabrication of components / structures required for pump installation or refurbishment, pumping project management and site installation or repair works. These services include environmental management, energy management, plant & infrastructure maintenance and emergency response. These services and cost efficient solutions for water, wastewater and environmental problems are provided 24 hours a day, 365 days of the year anywhere in the UK.
Walsall Head Office	Green Lane, Walsall, West Midlands, WS2 7PD	IWS M&E at Walsall provides a specialist design, engineering workshop and site installation service in all aspects of pump diagnostics, pump refurbishment, pumping project management, telemetry, chemical dosage and control. These services include environmental management, energy management, plant & infrastructure maintenance and emergency response. These services and cost efficient solutions for water, wastewater and environmental problems are provided 24 hours a day, 365 days of the year anywhere in the UK.

1.3.6. Excluded business units

IWS Water Hygiene is excluded from the inventory.

CHAPTER 2: EMISSIONS MANAGEMENT AND REDUCTION REPORT

2.1. EMISSIONS REDUCTION RESULTS

IWS M&E has successfully managed a progressive reduction in emissions targets over an 8-year period culminating with the CEMARS Gold Status awarded in November 2021.

Table 4: Comparison of historical GHG inventories

Category	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Category 1: Direct emissions (tCO_2e)	1,314.04	1,737.50	1,337.97	1,132.12	859.49	809.35	711.39	625.38	386.91	497.83	642.77
Category 2: Indirect emissions from imported energy (location-based method*) (tCO_2e)	248.32	294.59	262.78	225.75	177.96	51.59	42.61	37.45	32.17	61.21	41.28
Category 3: Indirect emissions from transportation (tCO_2e)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Category 4: Indirect emissions from products used by organisation (tCO_2e)	51.29	47.91	35.47	20.57	16.33	4.39	3.63	3.24	2.87	5.52	3.59
Category 5: Indirect emissions associated with the use of products from the organisation (tCO_2e)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Category 6: Indirect emissions from other sources (tCO_2e)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total direct emissions (tCO_2e)	**1,314.04**	**1,737.50**	**1,337.97**	**1,132.12**	**859.49**	**809.35**	**711.39**	**625.38**	**386.91**	**497.83**	**642.77**
Total indirect emissions* (tCO_2e)	**299.61**	**342.49**	**298.26**	**246.31**	**194.29**	**55.99**	**46.24**	**40.69**	**35.04**	**66.73**	**44.87**
Total gross emissions* (tCO_2e)	**1,613.65**	**2,079.99**	**1,636.23**	**1,378.44**	**1,053.78**	**865.33**	**757.64**	**666.07**	**421.96**	**564.56**	**687.64**
Category 1 direct removals (tCO_2e)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Purchased emission reductions (tCO_2e)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total net emissions (tCO_2e)	**1,613.65**	**2,079.99**	**1,636.23**	**1,378.44**	**1,053.78**	**865.33**	**757.64**	**666.07**	**421.96**	**564.56**	**687.64**
Emissions intensity											
Operating revenue (gross tCO_2e / £Millions)	0.00	0.00	0.00	49.54	33.28	32.59	35.91	38.02	25.27	25.98	32.37
Operating revenue (gross mandatory tCO_2e / £Millions)	0.00	0.00	0.00	49.54	33.28	32.59	35.91	38.02	25.27	25.98	32.37

*Emissions are reported using a location-based methodology.

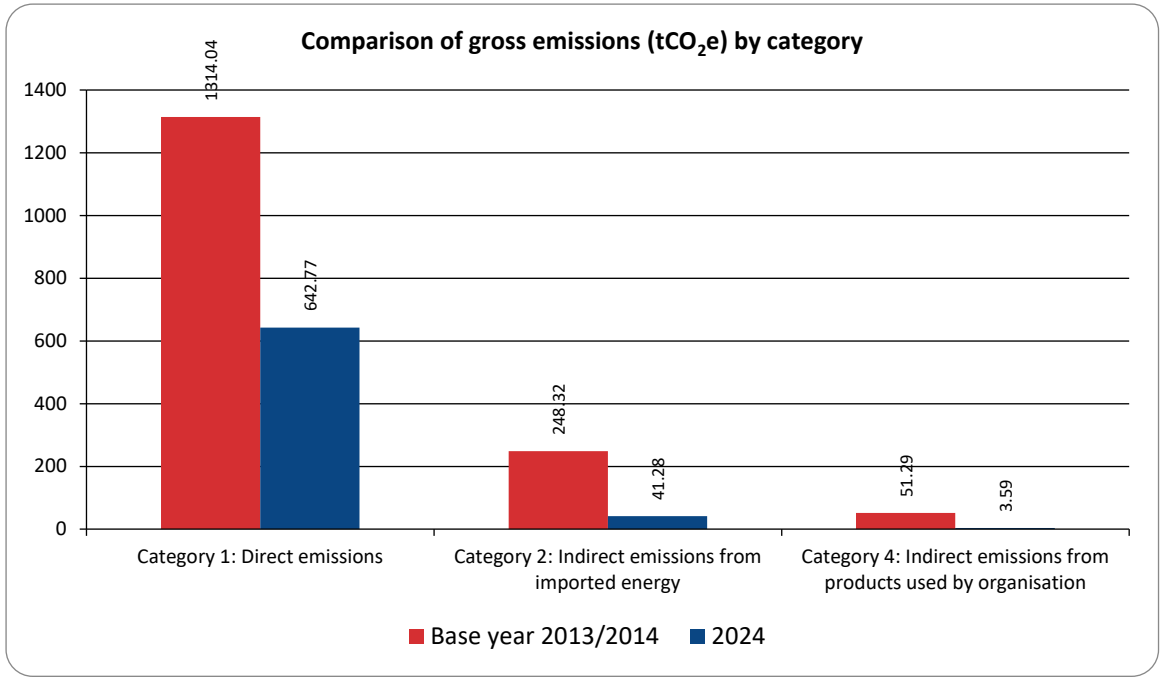

Figure 6: Comparison of gross emissions (tCO_2e) by category between the reporting periods

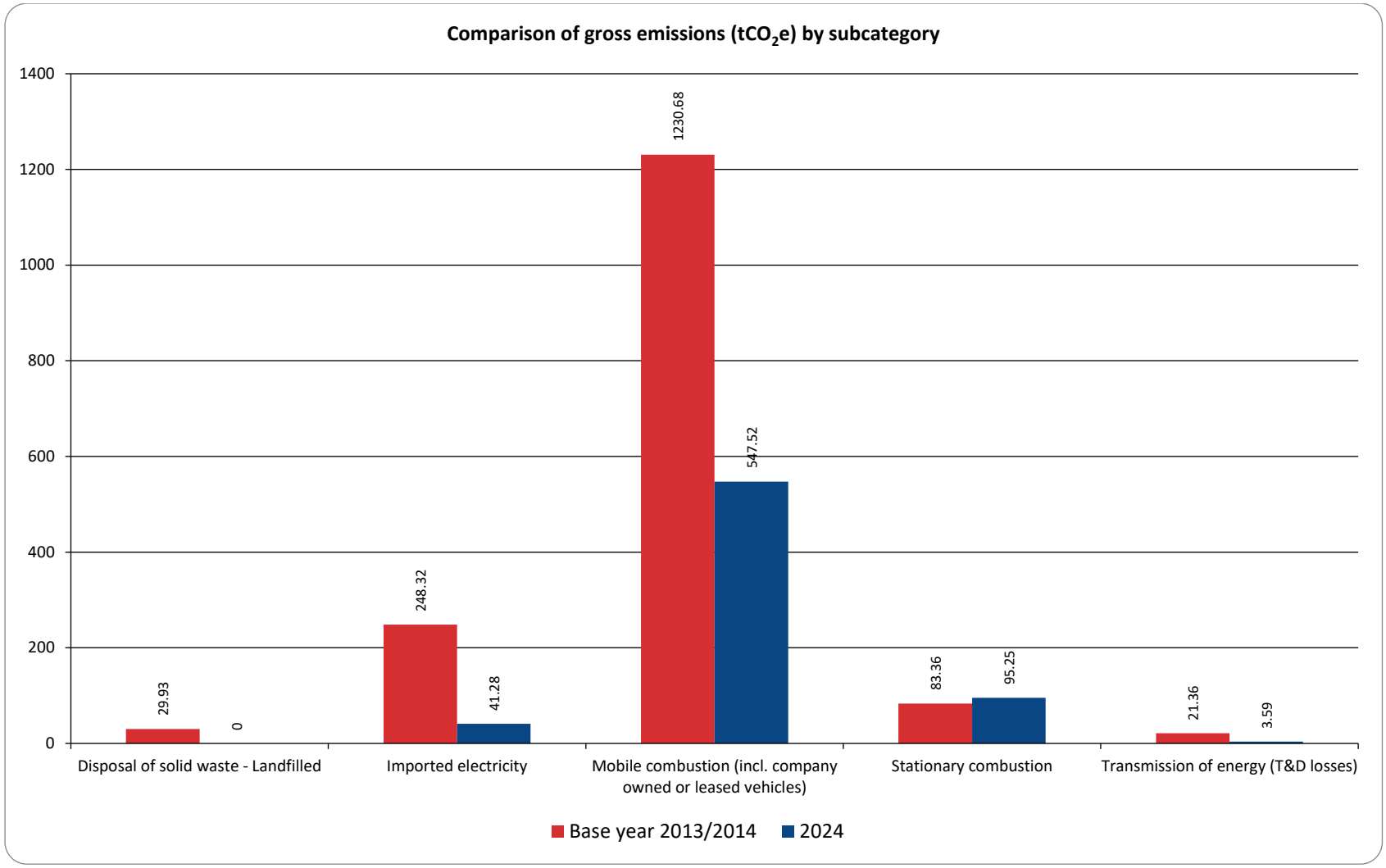

Figure 7: Comparison of gross emissions (tCO_2e) by subcategory between the reporting periods

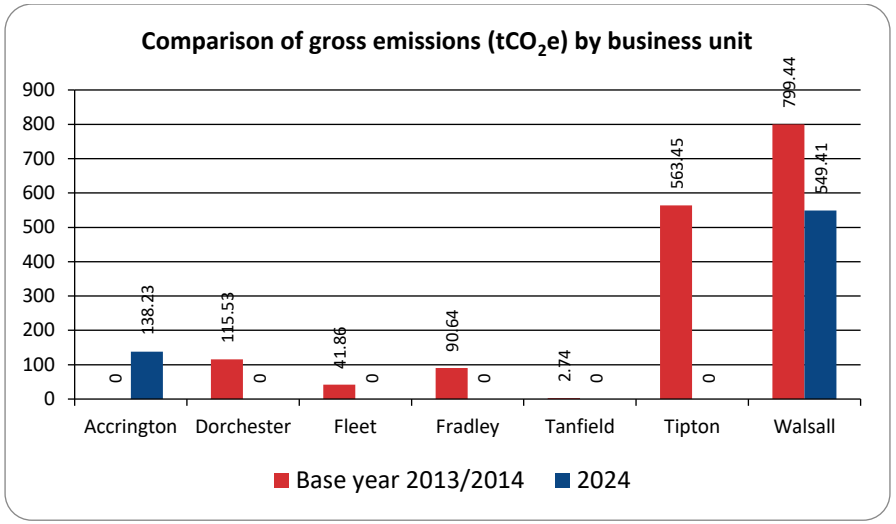

Figure 8: Comparison of gross emissions (tCO_2e) by business unit between the reporting periods

Table 5. Performance against plan

Target name	Baseline period	Target date	Type of target (intensity or absolute)	Current performance (tCO_2e)	Current performance (%)	Comments
Scopes 1, 2 and 3	21/22	24/25	Absolute	687.64	3.24	

Table 6. Summary of emissions reduction performance

Emissions Reduction - Absolute metric	5-year Rolling Average vs. Base Year
tCO_2e absolute	-63.60
Reduction Performance - Intensity metric	**5-year Rolling Average vs. Base Year**
tCO_2e intensity	-26.21

2.2. SIGNIFICANT EMISSIONS SOURCES

Significant sources

The Emissions Management and Reduction Plan will specifically target Integrated Water Services top emissions sources which are transport fuel emissions and office energy use. The business only has a limited influence over office energy use at the Walsall office as this is controlled by South Staffordshire Water.

The top emissions source of transport fuel for our vehicle fleet of commercial vans and passenger cars is due to the company's operational activities being site based through England and Wales.

Areas where there are liabilities are through people making unnecessary journeys, not car sharing where practicable or driving vehicles in an uneconomical manner.

Data quality is poor is relation to energy use in the Walsall office where Energy Consumption Guide 19 is normally used.

Activities responsible for generating significant emissions

Generating Sources:

Electrical usage originates from Altham and Walsall's heating, lighting, ventilation office environment plus the workshop facilities at both locations. Equipment includes engineering materials processing equipment such as lathes, pneumatic powered tooling, milling machines and electric arc welding equipment.

Influences over the activities

Generating Sources:

Natural gas sources include office and workshop powered heating systems from boilers and Ambirads.

Significant sources that cannot be influenced

N/A

2.3. EMISSIONS REDUCTION TARGETS

The organisation is committed to managing and reducing its emissions in accordance with the Programme requirements. Table 7 provides details of the emission reduction targets to be implemented. These are ‘SMART’ targets (specific, measurable, achievable, realistic, and time-constrained).

The organisation is committed to managing and reducing its emissions in accordance with the Programme requirements. This is a ‘SMART’ target (specific, measurable, achievable, realistic, time-constrained).

Integrated Water Services is aiming for an absolute emissions reduction target of 15% by 2024/25 compared to 2020/21. This will specifically focus on transport fuel.

Table 7. Emission reduction targets

Target name	Baseline period	Target date	Type of target (intensity or absolute)	Categories covered	Target	KPI	Responsibility	Rationale
Reduce total category 1 and 2 emissions in compliance (work towards group target of Net Zero 2050)	2013 - 2016 average	2050	Absolute	Category 1 and 2 combined	Target plan is 15% reduction in Scope 1 & 2 emissions by 2025 on a 21/22 baseline	Absolute	IWS and SSW Facilities	Following early years initial 'quick win' reduction projects disclosed within the report, a more long term considered approach with rationale around vehicle emission reductions as primary focus. Alignment with Fleet Services vehicle electrification strategy is vital to attain this

2.4. EMISSIONS REDUCTION PROJECTS

In order to achieve the reduction targets identified in Table 7, specific projects have been identified to achieve these targets, and are detailed in Table 8 below.

Table 8. Projects to reduce emissions

Objective	Project	Responsibility	Completion date	Potential co-benefits	Potential unintended consequences	Actions to minimise unintended consequence
Scope 1 reduction of transport fuel i.e. diesel consumption.	Commercial vehicle fleet - conversion from ICE to electrically powered vehicles	Fleet Services	31/12/2025	Air quality improvement, particulate reduction and vehicle servicing and maintenance, reduction of used oil recycling.	Environmentally friendly recycling of redundant commercial vehicles.	Recycling partnership with manufacturers primarily VW Automotive Group.

Table 9 highlights emission sources that have been identified for improving source the data quality in future inventories.

Table 9. Projects to improve data quality

Emissions source	Actions to improve data quality	Responsibility	Completion date
Gas and electric supplies to Walsall	Influence and implement sub-metering for both energy supplies at Green Lane facility	IWS and SSW Facilities	30/04/2026

2.5. STAFF ENGAGEMENT

All staff will have annual updates through safety briefings to inform them of the company's commitment to carbon reduction, the importance of carbon reduction and how the company has performed over the last year.

As part of the company's on-going Environmental Awareness training, carbon management and the Carbon Reduce programme will be incorporated. For job roles, which require more specific environmental training; Ciria's IEMA approved Environmental Good Practice on Site course will be assessed to determine its effectiveness.

2.6. KEY PERFORMANCE INDICATORS

Integrated Water Services key performance indicator is tonnes CO_2e per £M gross turnover

2.7. MONITORING AND REPORTING

GHG emissions reductions will be monitored on an annual basis by the QUENSH Department. Transport fuel will be measured in litres, electricity and gas will be measured in kWh and waste in tonnes.

APPENDIX 1: DETAILED GREENHOUSE GAS INVENTORY

Additional inventory details are disclosed in the tables below, and further GHG emissions data is available on the accompanying spreadsheet to this report (Appendix1-Data Summary Integrated Water Services Limited.xls).

Table 10. Direct GHG emissions and removals, quantified separately for each applicable gas

Category	CO_2	CH_4	N_2O	NF_3	SF_6	HFC	PFC	Desflurane	Sevoflurane	Isoflurane	Emissions total (tCO_2e)
Stationary combustion	95.06	0.15	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	95.25
Mobile combustion (incl. company owned or leased vehicles)	541.00	0.47	6.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	547.52
Emissions - Industrial processes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Removals - Industrial processes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Leakage of refrigerants	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Treatment of waste	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fugitive Emissions	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Treatment of wastewater	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions - Land use, land-use change and forestry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Removals - Land use, land-use change and forestry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fertiliser use	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Addition of livestock waste to soils	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Addition of crop residue to soils	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Addition of lime to soils	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enteric fermentation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Open burning of organic matter	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity generated and consumed onsite	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Medical gases	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Exported electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total net emissions	636.07	0.62	6.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	642.77

Table 11. Non-biogenic, biogenic anthropogenic and biogenic non-anthropogenic CO_2 emissions and removals by category

Category	Anthropogenic biogenic CO_2 emissions	Anthropogenic biogenic (CH_4 and N_2O) emissions (tCO_2e)	Non-anthropogenic biogenic (tCO_2e)
Category 1: Direct emissions	31.68	6.51	0.00
Category 2: Indirect emissions from imported energy	0.00	0.00	0.00
Category 3: Indirect emissions from transportation	0.00	0.00	0.00
Category 4: Indirect emissions from products used by organisation	0.00	0.00	0.00
Category 5: Indirect emissions associated with the use of products from the organisation	0.00	0.00	0.00
Category 6: Indirect emissions from other sources	0.00	0.00	0.00
Total gross emissions	**31.68**	**6.51**	**0.00**

A1.1 REPORTING BOUNDARIES

A1.1.1 Emission source identification method and significance criteria

The GHG emissions sources included in this inventory are those required for Programme certification and were identified with reference to the methodology described in the GHG Protocol and ISO 14064-1:2018 standards as well as the Programme Technical Requirements.

Personal communications with local Finance team for fuel usage data and South Staffordshire Water Facilities team for electricity and gas consumption values.

Significance of emissions sources within the organisational boundaries has been considered in the design of this inventory. The significance criteria used comprise:

- All direct emissions sources that contribute more than 1% of total Category 1 and 2 emissions
- All indirect emissions sources that are required by the Programme

No changes to the significance criteria have been made since this inventory was initially developed in the base year.

A1.1.2 Included sources sinks and activity data management

As adapted from ISO 14064-1, the emissions sources deemed significant for inclusion in this inventory were classified into the following categories:

- **Direct GHG emissions (Category 1):** GHG emissions from sources that are owned or controlled by the company.
- **Indirect GHG emissions (Category 2):** GHG emissions from the generation of purchased electricity, heat and steam consumed by the company.
- **Indirect GHG emissions (Categories 3-6):** GHG emissions that occur as a consequence of the activities of the company but occur from sources not owned or controlled by the company.

Table 12 provides detail on the categories of emissions included in the GHG emissions inventory, an overview of how activity data were collected for each emissions source, and an explanation of any uncertainties or assumptions made based on the source of activity data. Detail on estimated numerical uncertainties are reported in Appendix 1.

Dedicated business information platforms of SharePoint and EasyBop for storage, retrieval and analysis activities.

Table 12. GHG emissions activity data collection methods and inherent uncertainties and assumptions

GHG emissions category	GHG emissions source or sink subcategory	Overview of activity data and evidence	Explanation of uncertainties or assumptions around your data and evidence	Use of default and average emissions factors	Pre-verified data
Category 1: Direct emissions and removals	Stationary combustion	Natural Gas	Assumption that supplier billing is correct and proportional allocation from SSW to several onsite businesses consuming natural gas.	DEFRA factors used	No
	Mobile combustion (incl. company owned or leased vehicles)	Diesel retail station biofuel blend, Petrol retail station biofuel blend	Assumption that fuel card supplier statements are accurate. Bunkered fuel data is based on a financial back calculation over a years period.	DEFRA factors used	Yes
Overall assessment of uncertainty for Category 1 emissions and removals		2%	Very low		
Category 2: Indirect emissions from imported energy	Imported electricity	Electricity UK (Generation) (2013 Methodology)	Assumption that supplier billing is correct and proportional allocation from SSW to several onsite businesses consuming electricity.	DEFRA factors used	No
Overall assessment of uncertainty for Category 2 emissions and removals		4%	Low		
Category 4: Indirect emissions from products used by organisation	Transmission of energy (T&D losses)	Electricity UK (T&D losses) (2013 Methodology)	Assumption that supplier billing is correct and proportional allocation from SSW to several onsite businesses consuming electricity.	DEFRA factors used	No
Overall assessment of uncertainty for Category 4 emissions and removals		4%	Low		

A1.1.3 Excluded emissions sources and sinks

Emissions sources in Table 13 have been identified and excluded from this inventory.

Table 13. GHG emissions sources excluded from the inventory

Business unit	GHG emissions source or sink	GHG emissions category	Reason for exclusion
IWS Limited	Water and Waste Water	Cat 4	*De minimis*
IWS Limited	HFC Gases	Cat 1	*De minimis*
IWS Limited	Waste Disposal	Cat 4	*De minimis*
IWS Limited	Business Travel	Cat 3	*De minimis*
IWS Limited	Freight	Cat 3	*De minimis*

A1.2 QUANTIFIED INVENTORY OF EMISSIONS AND REMOVALS

A1.2.1 Calculation methodology

A calculation methodology has been used for quantifying the emissions inventory based on the following calculation approach, unless otherwise stated below:

Emissions = activity data x emissions factor

The quantification approach(es) has not changed since the previous measurement period

All emissions were calculated using Toitū emanage with emissions factors and Global Warming Potentials provided by the Programme (see Appendix 1 - data summary.xls). Global Warming Potentials (GWP) from the IPCC fifth assessment report (AR5) are the preferred GWP conversion[5].

There are systems and procedures in place that will ensure applied quantification methodologies will continue in future GHG emissions inventories.

A1.2.2 Supplementary results

Holdings and transactions in GHG-related financial or contractual instruments such as permits, allowances, verified offsets or other purchased emissions reductions from eligible schemes recognised by the Programme are reported separately here.

A1.2.2.1 CARBON CREDITS AND OFFSETS

No carbon credits have been purchased for this reporting period.

Reason for purchase

N/A

A1.2.2.2 DOUBLE COUNTING AND DOUBLE OFFSETTING

There are various definitions of double counting or double offsetting. For this report, it refers to:

- Parts of the organisation have been prior offset.
- The same emissions sources have been reported (and offset) in both an organisational inventory and product footprint.

[5] If emission factors have been derived from recognised publications approved by the programme, which still use earlier GWPs, the emission factors have not been altered from as published.

- Emissions have been included and potentially offset in the GHG emissions inventories of two different organisations, e.g. a company and one of its suppliers/contractors. This is particularly relevant to indirect (Categories 2 and 3) emissions sources.
- Programme approved 'pre-offset' products or services that contribute to the organisation inventory
- The organisation generates renewable electricity, uses or exports the electricity and claims the carbon benefits.
- Emissions reductions are counted as removals in an organisation's GHG emissions inventory and are counted or used as offsets/carbon credits by another organisation.

Double counting / double offsetting has not been included in this inventory.

Details

N/A

APPENDIX 2: SIGNIFICANCE CRITERIA USED

Table 14. Significance criteria used for identifying inclusion of indirect emissions

Emission source	Magnitude	Level of influence	Risk or opportunity	Sector specific guidance	Outsourced	Employee engagement	Intended Use and Users	Include in inventory?
Electricity Transmission and Distribution	Low	Low	No	No	Yes	No	Yes	Yes

APPENDIX 3: CERTIFICATION MARK USE

Website

APPENDIX 4: REFERENCES

International Organization for Standardization, 2018. ISO 14064-1:2018. Greenhouse gases – Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals. ISO: Geneva, Switzerland.

World Resources Institute and World Business Council for Sustainable Development, 2004 (revised). The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard. WBCSD: Geneva, Switzerland.

World Resources Institute and World Business Council for Sustainable Development, 2015 (revised). The Greenhouse Gas Protocol: Scope 2 Guidance. An amendment to the GHG Protocol Corporate Standard. WBCSD: Geneva, Switzerland.

APPENDIX 5: REPORTING INDEX

This report template aligns with ISO 14064-1:2018 and meet Toitū Carbon Reduce programme Organisation Technical Requirements. The following table cross references the requirements against the relevant section(s) of this report.

Section of this report	ISO 14064-1:2018 clause	Organisational Technical Requirement rule
Cover page	9.3.1 b, c, r 9.3.2 d,	TR8.2, TR8.3
Availability	9.2 g	
Chapter 1: Emissions Inventory Report		
1.1. Introduction	9.3.2 a	
1.2. Emissions inventory results	9.3.1 f, h, j 9.3.3	TR4.14, TR4.16, TR4.17
1.3. Organisational context	9.3.1 a	
1.3.1. Organisation description	9.3.1 a	
1.3.2. Statement of intent		TR4.2
1.3.3. Person responsible	9.3.1 b	
1.3.4. Reporting period	9.3.1 l	TR5.1, TR5.8
1.3.5. Organisational boundary and consolidation approach	9.3.1.d	TR4.3, TR4.5, TR4.7, TR4.11
1.3.6. Excluded business units		
Chapter 2: Emissions Management and Reduction Report		
2.1. Emissions reduction results	9.3.1 f, h, j, k 9.3.2 j, k	TR4.14, TR6.18
2.2. Significant emissions sources		
2.3. Emissions reduction targets		TR6.1, TR6.2, TR6.4, TR6.6, TR6.8,
2.4. Emissions reduction projects	9.3.2 b	TR6.8, TR6.11, TR6.12, TR6.13, TR6.14, TR6.15
2.5. Staff engagement		TR6.1, TR6.9
2.6. Key performance indicators		TR6.19

Section of this report	ISO 14064-1:2018 clause	Organisational Technical Requirement rule
2.7. Monitoring and reporting	9.3.2 h	TR6.2
Appendix 1: Detailed greenhouse gas inventory	9.3.1 f, g	TR4.9, TR4.15
A1.1 Reporting boundaries		
A1.1.1 Emission source identification method and significance criteria	9.3.1 e	TR4.12, TR4.13
A1.1.2 Included emissions sources and activity data collection	9.3.1 p, q 9.3.2 i	TR5.4, TR5.6, TR5.17, TR5.18,
A1.1.3 Excluded emissions sources and sinks	9.3.1 i	TR5.21, TR5.22, TR5.23
A1.2 Quantified inventory of emissions and removals		
A1.2.1 Calculation methodology	9.3.1 m, n, o, t	
A1.2.2 Historical recalculations		
A1.2.3 GHG Storage and Liabilities		
A1.2.3.1 GHG stocks held on site		TR4.18
A1.2.3.2 Land-use liabilities	9.3.3.	TR4.19
A1.2.4 Supplementary results		
A1.2.4.1 Carbon credits and offsets	9.3.3.3	
A1.2.4.2 Purchased or developed reduction or removal enhancement projects	9.3.2 c	
A1.2.4.3 Double counting and double offsetting		
Appendix 2: Significance criteria used	9.3.1.e	TR4.12
Appendix 3: Certification mark use		TR3.6
Appendix 4: References		
Appendix 5: Reporting index		