



FY 2024 Greenhouse gas emissions

GHD global emissions

→ **The Power of Commitment**

Executive summary

GHD Group Limited (“GHD”) conducted a greenhouse gas (“GHG”) inventory for the period from 1 July 2023 to 30 June 2024 (Financial Year 2024, “FY 2024” or “FY24”) across GHD operations covering Scope 1, 2 and 3 emissions. The reporting entity is GHD as the parent company of the GHD Group of Companies. GHD reports on behalf of the subsidiary companies owned or controlled by GHD which contribute to the annual consolidated revenue for the reporting period for GHD global operations.

This report is subject to and must be read in conjunction with the limitations set out in Section 8 and the assumptions, exemptions and qualifications contained throughout this report.

This document is and shall remain the property of GHD. The document may only be used for the purpose for which it was commissioned and in accordance with the Terms of Engagement for the commission. Unauthorised use of this document in any form whatsoever is prohibited.

Table of contents

Executive summary		2	6	Offsets	17
Introduction		4	7	Year to year comparison	18
1	Boundaries for reporting	5		GHG emissions performance	19
	Organisational boundary	5	8	Assumptions and limitations	21
	Time boundary	7	9	Data quality and uncertainty	22
2	Methodology	8	10	Assurance	24
3	Emissions overview	10		References	25
	Scope 1 and 2 emissions	10		Appendices	27
	Scope 3 emissions	11		Appendix A	27
	– Category 1 Purchased Goods and Services			– FY24 GHG emissions	
	– Category 2 Capital Goods			Appendix B	28
	– Category 3 Fuel and Energy Related Activities			– Offsets	
	– Category 5 Waste Generated in Operations			Appendix C	29
	– Category 6 Business Travel			– Calculation methodology	
	– Category 7 Employee Commuting			Appendix D	40
				– FY24 Uncertainty calculations and data source	
4	Exclusions	14		Appendix E	47
				– External auditor assurance statement	
5	FY24 emissions	15			

Introduction

GHD Group Limited (“GHD”) conducted a greenhouse gas (“GHG”) inventory covering its global operations for the period from 1 July 2023 to 30 June 2024 (Financial Year 2024 or “FY24”) The aim of this inventory was to identify and quantify GHG emissions that are attributed to GHD’s Scope 1, 2 and 3 emissions sources. Both location and market-based emissions were calculated. No direct GHG sequestration occurred; offsets were purchased to match Scope 1 and 2 market-based emissions.

The inventory was undertaken in accordance with The Greenhouse Gas Protocol, including:

- ➔ A Corporate Accounting and Reporting Standard, Revised Edition, WBCSD, WRI, 2004 (“GHG Protocol”).
- ➔ Corporate Value Chain (Scope 3) Accounting and Reporting Standard Supplement to the GHG Protocol Corporate Accounting and Reporting Standard WBCSD, WRI, 2011 (“Scope 3 Standard”).
- ➔ Appendix F to the GHG Protocol Corporate Standard Categorizing GHG Emissions Associated with Leased Assets June 2006, Version 1.0; and the GHG Protocol Scope 2 Guidance, An amendment to the GHG Protocol Corporate Standard, WBCSD, WRI, 2015.

The GHG Protocol accounting and reporting principles were followed to promote a true and fair representation of the Scope 1, 2 and 3 GHG emissions for GHD.

GHD committed to the Science-Based Targets initiative (SBTi) Net Zero Standard in April 2023 and currently has Net Zero “Committed” status; therefore, the SBTi Corporate Net-Zero Standard Version 1.2, SBTi, 2024 and accompanying Annex D: Reporting Guidance, was also considered in the inventory and report.

1 Boundaries for reporting

Organisational boundary

GHD is an employee owned, international professional services company providing leadership in engineering, project management, the environment, planning, architecture, construction and remediation. GHD Group Limited is the parent company of wholly owned or controlled operational subsidiaries. These subsidiaries operate within three GHD designated economic regions for internal management purposes, comprising Asia Pacific (APAC), North and South America and US Territories (Americas), and Europe, Middle East and Africa (EMEA). Within these three economic regions, GHD internally recognizes 23 ‘business regions’. In FY24 there was an annual average of 11,512 full-time equivalent (“FTE”) GHD employees globally.

11,512

FTE GHD employees globally (average)

The operational boundary for GHD’s Scope 1 and 2 inventories includes operationally controlled offices, laboratories, warehouses and storage facilities. The majority of operating locations are leased, with less than 3% owned. Overall, 171 operating locations globally are included in the FY 24 GHG Scope 1, 2 and 3 inventory (97 Americas; 65 APAC; 9 EMEA). The operational boundary also includes GHD’s operationally controlled fleet vehicles, owned and leased equipment and all owned and operated IT servers. The Operational Control¹ approach was chosen to consolidate emissions across GHD based upon a consideration of GHD’s operating model² and with reference to the approach adopted by peer companies in GHD’s industry sector.³

171

operating locations globally included in FY 24 GHD Scope 1, 2 and 3

Minimum boundary requirements were followed for Scope 3 categories as set out in the Scope 3 Standard, Table 5.4, except where a category was not relevant and/or significant and where exclusions are noted. Optional areas included in the boundary were Category 6 hotels, Category 7 teleworking (work from home) and Category 6 and 7 fuel transport related emissions on a well-to-wheel (“WTW”) basis for minimum boundary items in these categories.

As a global professional services company, GHD’s sources of other indirect (Scope 3) emissions include:

- Purchased Goods and Services (Category 1)
- Capital Goods (Category 2)
- Fuel- and Energy-Related Activities (Category 3)
- Waste Generated in Operations (Category 5)
- Business Travel (Category 6)
- Employee Commuting (Category 7).

1 Operational Control is described in section 3 of the GHG Protocol (GHG Protocol 2004). The basis of the Operational Control approach is that a company has the authority to fully introduce its operating policies and procedures at the operational level.

2 In accordance with the guidance of Chapter 3 of the GHG Protocol (GHG Protocol 2004) GHD subsidiaries have the full authority to introduce and implement their operating policies at their operations.

3 GHD reviewed 12 peers’ inventories and all 12 adopted the operational control approach.

At this time, any emissions associated with Upstream and Downstream Transportation and Distribution (Categories 4 and 9) are included under Purchased Goods and Services (Category 1) as they cannot be split into upstream or downstream and/or from the goods and services total spend.

Downstream categories are either accounted elsewhere or are not relevant. GHD is a professional services company; therefore, emissions related to its services, within the reporting boundary, are captured in Scope 1, 2 or other Scope 3 categories reported. As such, categories 10–12, relating to the Processing, Sale or End-of-Life Treatment of Sold Products are not relevant. GHD is not a property management company and does not hold significant assets for leasing. Any Leasing of Owned Properties (Category 13) is incidental and not relevant or significant (<0.1% emissions) to GHD’s scope of business. GHD does not franchise its business (Category 14). GHD is not a financial institution, and investments are not a significant portion of revenue (Category 15). Scope 3 category descriptions are summarised in Table 1.





Time boundary

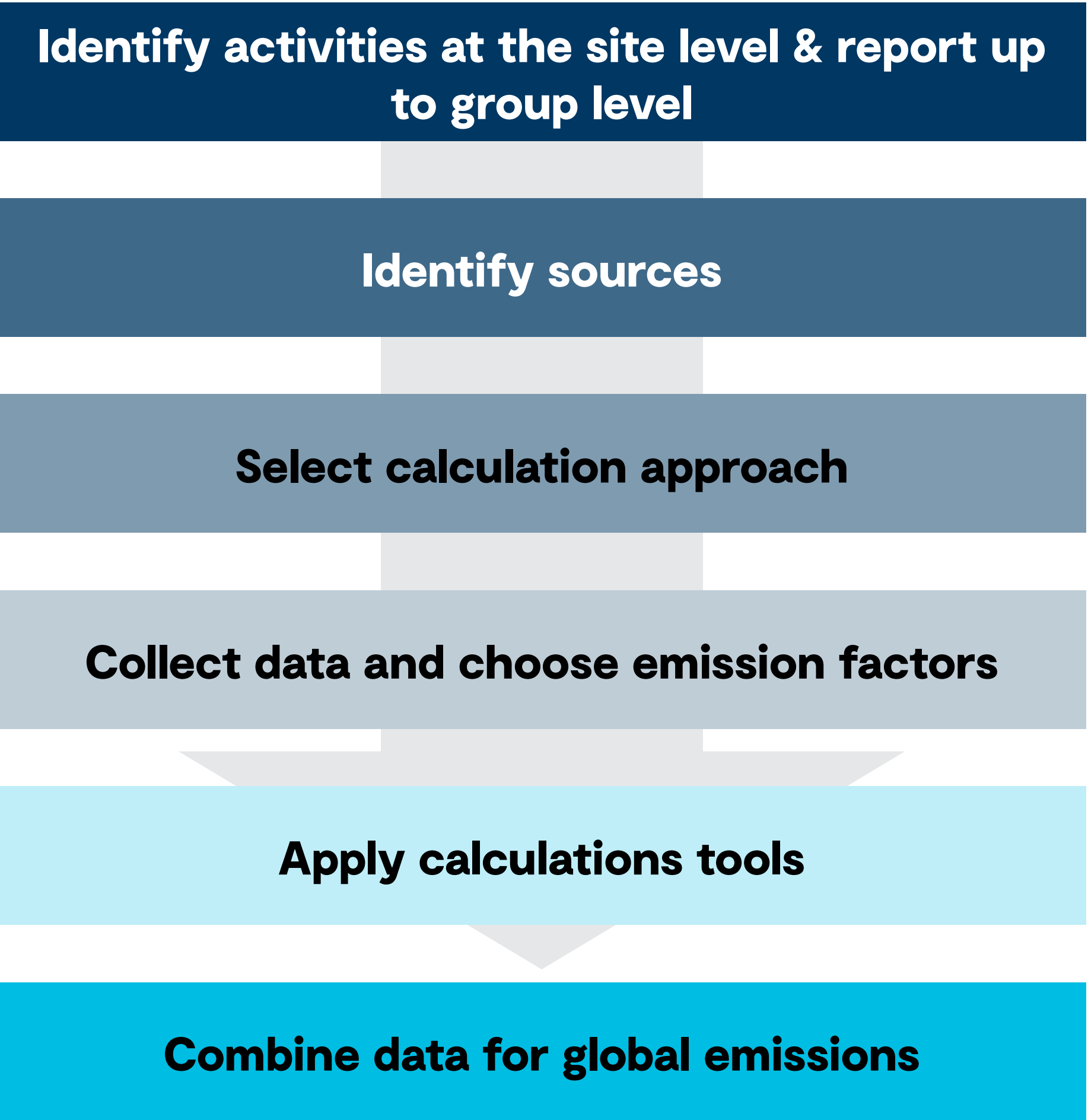
Financial Year 2024 (FY24) reporting was undertaken for the period from 1 July 2023 to 30 June 2024. Where there was a change in operational control during the financial year, emissions accounting started on the day GHD took operational control and ended when GHD no longer had operational control.

Where possible, data was collected for this date range; however, due to differences in vendor invoicing periods or data capture dates, not all data aligns with the start and end of the financial year. In most situations a particular date such as purchase, delivery or receipt date was used. In some data sets, pro-rating is effected to ensure a full year is captured.

Scope 3 Categories 1, 2 and all well to tank (“WTT”) calculations applied to categories 3, 6 and 7, use upstream emission factors that can be representative of data collected years prior to publication. Wastes in operations, Category 5, is based on emission factors for the total expected emissions from the waste and disposal type, noting that waste breaks down over time, or may be processed at a different date than disposal and those emissions could occur in future years, but are accounted for in this reported financial year. Specific time boundaries and/or adjustments used for inventory items are tabled in Appendix C.

2 Methodology

Figure 1. Steps for identifying and calculating GHG emissions (based on GHG protocol adapted by GHD)



GHD undertook a six-step process to complete the FY24 inventory (Figure 1). The first step was to identify activities at a site level. This was done through an activity disclosure exercise, completed in respect of occupied sites which asked a range of questions to inform control, emission sources, use of sources, renewable energy use, and equipment and appliances located at the site. This helped to identify sources of direct and indirect emissions, together with any data gaps for the second step.

System invoices, usage reports, spend data and lease management information were reviewed for data attributes, consistency and quality. For each type of data collected pertaining to GHD office and operational activities (e.g., fuel and electricity use, distance travelled, etc.), the data was categorised into appropriate emissions categories. Based on the data available in the categories, calculations and coinciding activity emission factors were chosen to complete the third and fourth steps. Even where usage was estimated, a documented emissions factor was still applied.

Data collection was undertaken utilising GHD group resources and local systems or via specific documents. GHD obtained the best available data quality⁴ through consultation with internal and external stakeholders including finance, real estate managers, fleet managers, lessors, regional carbon champions, travel management team, vendors, office/ facilities managers, equipment managers, lab managers, site occupants, project managers and fuel card companies. Activity data was quantified through calculations using a variety of data types including spend, invoice, duration, distance, fuel, gas, electricity, floor area, vendor direct, financial, employee data, survey and audit. Further description of

the calculation methods undertaken in the fifth step is contained in Appendix C. Only external server/cloud supplier emission data and rideshare data were used as supplied, without further calculation.

GHD utilizes the Green Project Technologies platform (Green Project Platform) for Scope 1, 2 and 3 calculations for the fifth and sixth steps. Emission factors and corresponding global warming potential (GWP) are applied in the Green Project Platform to calculate CO₂e totals. All emissions were calculated using GWP values from AR5 (IPCC Fifth Assessment Report) except for the GHG Protocol for refrigerant

R134a that was extracted from AR4 (IPCC, 2007). Emission factors applied through Green Project and inventory item methodology are discussed in Appendix C. All emission factors were totalled in CO₂e. Individual GHG components and totals are in Appendix A. Scope 1 fleet and equipment fuel, natural gas at offices, Scope 2 electricity and Scope 3 business travel from vehicles calculated CO₂e from N₂O (nitrous oxide) and CH₄ (methane) separately, where applicable to the emission factors used. Scope 1 refrigerants from HCs (hydrocarbons) / HFCs (hydrofluorocarbons), are also totalled in Appendix A.

4 Data quality is determined by the qualitative confidence interval from the GHG Protocol Uncertainty Tool, 2017. Data was collected based on a confidence interval of no higher than +/- 30%, with data types selected based on the best available data with the lowest confidence interval (lowest number is the best quality).

3 Emissions overview

9,793 tCO₂e

Total location-based Scope 1 and 2 emissions

7,947 tCO₂e

Total market-based Scope 1 and 2 emissions

145,720 tCO₂e

Total Scope 3 emissions

The FY24 GHG global inventory includes Scope 1, 2 and 3 emissions sources. Both location and market-based emissions were calculated. Location-based Scope 1 and 2 emissions total 9,793 metric tonnes (tonnes or “t”) of carbon dioxide equivalent (CO₂e) and Scope 3 total 145,720 t CO₂e. Scope 1 and 2 market-based emissions, which accounts for purchased renewable energy (RE) total 7,947t CO₂e. Activities included in the inventory are discussed in “Scope 1 and 2 emissions” on page 10 and “Scope 3 emissions” on page 11, exclusions in Section 4 and totals by Scope and Category are found in Table 2.

No direct GHG sequestration occurred. A total of 7,947t of retired CO₂e offsets have been applied to match FY24 Scope 1 and 2 market-based totals with a resulting zero tonne balance (Table 4).

Offset details, including remaining retired credits carried over for future emissions or scopes are provided in Appendix B.

Scope 1 and 2 emissions

As a global professional services company, GHD’s sources of direct emissions (Scope 1) includes fugitive refrigerant and fire suppression gases, stationary natural gas use at GHD’s operationally controlled locations and fuel use for fleet and equipment (leased or owned). Indirect emissions resulting from the use of purchased electricity, recorded electric vehicle (EV) recharge and Information Technology (“IT”) Servers form GHD’s Scope 2 emissions.

Scope 1 direct emissions from facility natural gas use are mostly associated with heating but may also include other smaller onsite uses (e.g., laboratory equipment use). Fugitive emission refrigerants are found in onsite domestic and commercial refrigerators/freezers/ice makers and GHD owned air conditioning (“A/C”) equipment. There were no GHD owned A/C systems (such as floor or window units) identified in leased premises. Of the seven greenhouse gases included in the GHG inventory, no sulphur

hexafluoride (SF₆) or nitrogen trifluoride (NF₃) use was identified.

Scope 2 indirect GHG emissions are predominantly from electricity use at GHD operationally controlled locations. A/C cooling was included in general site electricity usage, except for instances in which GHD has been separately billed for A/C use, then usage billed in kilowatt hours (“kWh”) was added to site electricity. Electricity use recorded through fuel cards, for the purpose of recharging electric vehicles (“EV”) is included. GHD owned data servers’ electricity use is also included in Scope 2 emissions.

Scope 2 market-based emissions accounts for renewable energy purchased through contractual arrangements either directly with the utility company for 100% renewable energy or a bulk purchase of verified renewable energy certificates being retired for the amounts contracted.

Platform

1

Scope 3 emissions

GHD followed the Scope 3 Standard (GHG Protocol 2011) guidance for reviewing the 15 Scope 3 categories in terms of their relevance, completeness, consistency, transparency and accuracy for inclusion in GHD’s Scope 3 inventory (Table 1). As indicated in Section 1 of this report, the six categories reported in GHD’s Scope 3 inventory are as follows:

- **Category 1:** Purchased Goods and Services (including Categories 4 and 9 – see next page)
- **Category 2:** Capital Goods
- **Category 3:** Fuel- and Energy-Related Activities (not included in Scope 1 and 2)
- **Category 5:** Waste Generated in Operations
- **Category 6:** Business Travel
- **Category 7:** Employee Commuting

Although not reported separately, any relevant upstream transportation and distribution (Category 4) and downstream transportation and distribution (Category 9) are captured as part of Category 1 reporting. Scope 3 emissions source description for each Category is included in Table 1.

GHD’s methodologies for the calculation of each of these Scope 3 categories have been documented in Appendix C.



Category 1: Purchased Goods and Services

Purchased Goods and Services (Scope 3, Category 1) is mostly extracted from the Finance Enterprise Resource Planning (ERP) system using general ledger spend data, except for external servers/cloud storage where supplier specific data was provided (0.25% of total Category 1 Goods and Services emissions). Spend data for Category 1 purchased goods and services, includes but is not limited to purchases for office supplies, IT equipment, field equipment, office furniture and appliances, lab equipment and supplies, food and beverage, personal protective equipment (PPE)/ health and safety equipment, copying and printing, repair and maintenance, shipping/postal, legal services, trades, subscriptions/ memberships, training, insurances, charity/grants, subconsultants and subcontractors.



Category 2: Capital Goods

Capital Goods (Scope 3 Category 2) are defined by capital expenditures during the inventory period. All Capital Goods are determined by spend based upon amounts capitalised to GHD’s fixed asset register. Capital Goods purchased by GHD during the reporting period, include, but are not limited to, office fit out and furnishings, appliances and equipment, office/ professional machinery and equipment, computers and electronics, software, motor vehicles, telecommunications, tools and field equipment.



Category 3: Fuel and Energy Related Activities

Scope 3, Category 3, Fuel- and Energy-Related activities (not included in Scope 1 and 2; Scope 3 Category 3) accounts the emissions associated with Production and Distribution of Fuels used by GHD (Scope 1) and the distribution losses associated with supply of electricity to GHD offices or for vehicle charging (Scope 2).



Category 5: Waste Generated in Operations

Waste Services for Waste Generated in Operations (Scope 3, Category 5) are predominantly provided by either the lessor or local government services, with little or no reliable documentation available for offices; therefore, office waste was determined by an annual waste survey with 46.8% of GHD operationally controlled sites completing the waste survey. GHD laboratories had sufficient waste documentation from the supplier and were calculated through invoices. IT waste was also accounted from reports direct from the supplier. A total of 35.4% of Category 5 was calculated based on supplier documentation.

46.8%

GHD offices waste surveyed

35.4%

Data direct from waste vendors



Category 6: Business Travel

Business Travel (Scope 3 Category 6) includes rentals cars, hotels, flights, rideshare and “other travel”. Taxis, trains, ferries, are included in “other travel” spend. Supplier data made up 8.7 % of Category 6 Business Travel. Optional emissions included hotels and upstream production and distribution (well to wheel) accounting for 9.9% and 12.4% respectively of the Scope 3 Category 6 total.



Category 7: Employee Commuting

Employee Commuting (Scope 3 Category 7) data was based on an internal commuting survey distributed to all GHD employees during FY24. The purpose of the survey was to capture data related not only to how GHD employees are commuting to work, but also how often they are working from home, capturing both the required commute to work data and optional work from home data. The survey completion rate was 39.1% of GHD employees.

Table 1. Scope 3 Categories

Category name		Emissions source description
Upstream	1. Purchased Goods and Services	Includes all goods and services procured during the inventory period except those not applicable or excluded. Excluded is <0.02% (estimated) of total Scope 3 emissions.
	2. Capital Goods	All expenditures for capital goods purchased during the reporting period, excluding internal transfer of capital goods.
Upstream	3. Fuel and Energy Related Activities (not included in Scope 1 or Scope 2)	Emissions associated with fuel and electricity use in Scope 1 and 2, such as production and distribution of fuel, gas and transmission losses from electricity.
	4. Upstream Transportation and Distribution	Unable to split upstream and downstream. Included in Purchased Goods and Services (Category 1).
	5. Waste Generated in Operations	Waste from GHD operational controlled areas.
	6. Business Travel	Flights, hotel/accommodation, rental car and other travel.
	7. Employee Commuting	GHD employee emissions associated with commuting to their principal place of work, by principal transport type; and working from home emissions.
	8. Upstream Leased Assets	Excluded, remaining leased asset emissions not captured in Scope 1 and 2 are not significant < 0.1 % (estimated) of total Scope 3 emissions.
Downstream	9. Downstream Transportation and Distribution	Unable to split upstream and downstream. Included in Category 1- Purchased goods and services.
	10.Processing of Sold Products	Not relevant
	11. Use of Sold Products	Not relevant
	12.End of Life Treatment of Sold Products	Not relevant
	13.Down Stream Leased Assets	Excluded, leased asset emissions not captured in Scope 1 and 2 are not significant < 0.1 % (estimated) of total Scope 3 emissions.
	14.Franchises	Not relevant
	15.Investments	Not relevant

4 Exclusions

As a professional services business, the majority of GHD’s revenue is derived from delivering client projects. Consistent with the Operational Control approach, emissions related to client sites, client equipment, project offices and project fleet are not included as the operations and activities are determined by the client and/or controlled by client policies.

The following additional items have been excluded when determining Scope 1 and 2 emissions based on GHD not having Operational Control of the given item:

- ➔ Temporary storage-only facilities;
- ➔ Parking and outdoor storage areas;
- ➔ Share or co-work workspaces;
- ➔ A/C cooling energy, where kWh was not directly billed; and
- ➔ Hired/Rented equipment fuel (unless refuelled by a fuel card).

Emissions identified as double counting due to the lessor, client or other party reporting the emissions publicly or through regulatory reporting, have also been excluded.

In Scope 3 accounting, some items or categories were excluded due to relevance and/or insignificance. This included:

- ➔ Water usage at GHD operating locations and associated wastewater (<0.02% of total Scope 3);
- ➔ Upstream Leased Assets (<0.1% of total Scope 3);
- ➔ Downstream Leased Assets (<0.1% of total Scope 3); and
- ➔ Investments.

5 FY24 emissions

Based on the FY24 inventory, total CO₂e for Scope 1 and 2 FY24 was 9,793 tonnes location-based emissions, with market-based emissions totalling 7,947 tonnes. Scope 3 Emissions totalled 145,720 tonnes.

9,793 tCO₂e

Total location-based Scope 1 and 2 emissions

7,947 tCO₂e

Total market-based Scope 1 and 2 emissions

145,720 tCO₂e

Total Scope 3 emissions

A Accounting for renewable energy purchases

B Categories 4 and 9 are included in Category 1, Unable to separate upstream and downstream, unable to separate shipping included in costs of goods.

C Category 9 is also covered in Category 2, unable to separate upstream and downstream, unable to separate shipping included in costs of goods.

D To align with SBTi reporting requirements this FY23 total was recalculated (unverified) to include upstream well-to-tank emissions. Please see Section 7 of this report for more details.

Table 2. Financial Year 2024 and previous FY 23, Scope 1, 2 and 3 Global GHG emissions totals

	FY23 (Base Year) tCO ₂ e	FY24 tCO ₂ e
Scope 1 emissions (location-based)	4,833.89	4,523.0
Scope 2 emissions (location-based)	5,297.46	5,270.1
Scope 2 emissions (market-based ^A)	4,991.30	3,424.5
Scope 3, Category 1: Purchased Goods and Services ^B	109,615.3	106,964.6
Scope 3, Category 2: Capital Goods ^C	6,650.1	6,221.1
Scope 3, Category 3: Fuel and Energy Related Activities	2,568.3	2,556.5
Scope 3, Category 5: Waste Generated in Operations	781.1	521.9
Scope 3, Category 6: Business Travel	14,161.2 ^D	16,126.9
Scope 3, Category 7: Employee Commuting		
→ Commute to Work	8,445.5 ^D	8,186.3
→ Work from Home	5,374.2	5,142.7
Total Scope 3	147,595.8 ^D	145,720.1
Scope 1, 2 market-based, Scope 3 (all categories)	157,421.0 ^D	153,667.6

Figure 2. Financial Year 2024 Scope 1, 2 and 3 Global GHG emissions totals Chart

Total Scope 1, 2 and 3 FY24 emissions (tCO₂e)

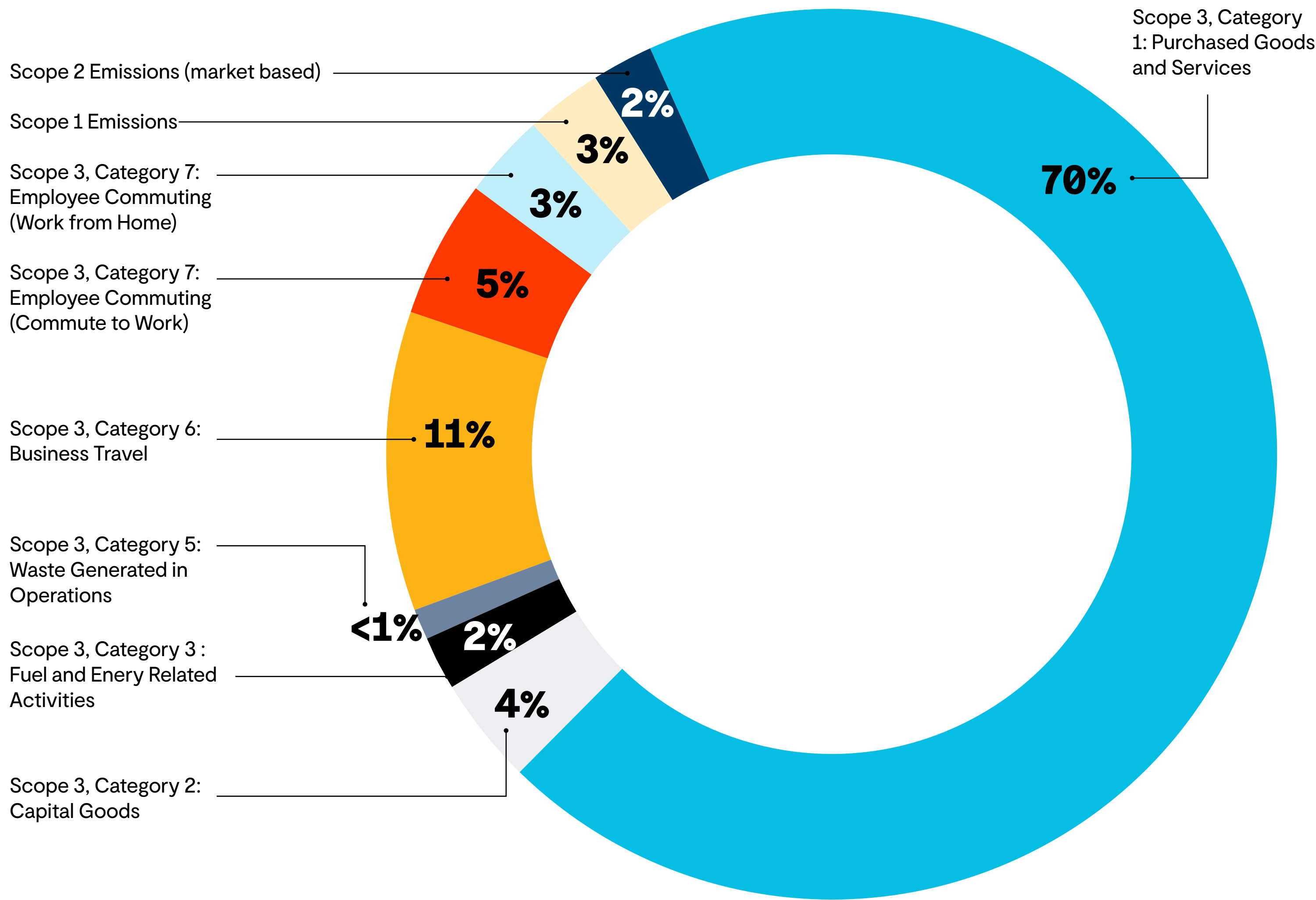


Table 3. Ratio indicators

Scope 1, 2 and 3 emissions (market-based)	FY23	FY24
Tonnes CO ₂ e per FTE	14.64	13.35
Kilograms CO ₂ e per \$AUD Revenue	0.0588	0.0532

As a professional services and consulting company based upon human capital, an intensity metric of tonnes CO₂e per FTE is considered appropriate. This metric may be used as a consistent year to year measure and will (i) enable performance evaluation over time, (ii) recognition of business changes along with other metrics (i.e., market fluctuations), and (iii) provision of Scope 1, 2 and 3 emissions estimates to clients regarding our services. Emissions per Australian Dollar of revenue has also been added as an additional emissions ratio that can be informative to GHD and its clients.

6 Offsets

Carbon offsets were applied to match FY24 Scope 1 and 2 (market-based) totals resulting in a balance of zero metric tonnes. Offsets applied, retirements and any remaining retired offsets carried over for next Financial Year are recorded in Appendix B.

Table 4. Offsets applied FY24

	CO ₂ e metric tonnes
FY24 Scope 1 and 2 (market-based) emissions	7,947.5
FY24 offsets applied	7,947.5
Balance (FY24 Scope 1 and 2, market-based emissions – Offsets)	0.0

All offsets are verified. Offsets purchased are nature-based and considered social benefits and sequestration where possible. Offset choices take into consideration risks of leakage, and social and environmental risks. GHD considers it important that new projects are also supported; this was the purpose of the purchase of Canopy Blue kelp credits, which invests in research of carbon sequestration from sea kelp, while being backed by a verified wind carbon credit. Carbon credits were retired upon purchase to prevent resale or double counting.

The offsets purchased support the following United Nations Sustainable Development Goals (UN SDGs):

Figure 3. United Nations Sustainable Development Goals



7 Year to year comparison

The previous reporting year (FY23) is GHD’s base year, therefore any year-to-year changes are also a comparison to the base year. GHD has aligned its base year recalculation to SBTi Standards (SBTi Corporate Net-Zero Standard, 2024), at a significance of 5%. The base year data will be recalculated where one of the following situations occurs:

- ➔ Total emissions change by 5% or more from base year due to adjustments in data source, calculation method, company activities, acquisition or divestment; or
- ➔ If inventory changes are required due to applicable regulatory or standard requirements.

Note that ongoing market and business changes are considered through changes in intensity CO₂e per FTE metrics, CO₂e ratios to emission sources (i.e., floor area, fleet size etc.) and reductions in line with reduction measures.

Two base year recalculations occurred this reporting year. A requirement in the SBTi Net Zero standard (March 2024) is that all transport-related emissions across all sectors for well to wheel (well to wake – for aviation) basis must be

reported, which impacts Category 6 Business Travel and Category 7 Employee Commuting. FY23 base year travel data along with FY24 totals now include this emissions source to be compliant with the SBTi standard. The recalculations resulting from this SBTi requirement can be seen in the below table; note that the FY23 base year Scope 3 emissions data was externally verified to a limited level of assurance; however, these revised emission totals are not.

Other changes occurred between FY23 reporting and FY24 that did not require base year recalculation and include:

Update of several emission factors to align their sources and to ensure most current values are being used as follows:

- ➔ MoE 2018 to International Renewable Energy Agency Country Profiles (2023)
- ➔ DEWA 2022 to International Renewable Energy Agency Country Profiles (2023)
- ➔ IFI to International Renewable Energy Agency Country Profiles (2023)

Table 5. Recalculation of base year

	Verified FY23 total	WTW emissions (unverified)	Revised FY23 total
tCO ₂ e			
Scope 3 Category 6	12,312.3	+1,848.9	14,161.2
Scope 3 Category 7	12,170.3	+1,649.4	13,819.7
Scope 1, 2 market-based, Scope 3 (all categories)	153,922.7	+3,498.3	157,421.0

Fire Extinguishers were not included in FY23 reporting due to data availability and general assumption that fire extinguishers were mostly dry powder with no GHG emissions. In FY24 fire extinguisher data from invoices was captured, confirming the assumption that the majority of GHD purchased fire extinguishers are dry powder with only 137.9 kgs CO₂e loss being identified.

Waste Data for GHD laboratories changed from survey sourced data to invoice sourced data, where available (additional details provided in Appendix C).

Travel data from spend data was added to travel booking system data when spend data was not reasonably similar in amount to booking data in quality checks.

GHG emissions performance

44%

Renewable energy purchased in FY24

100%

Business regions have emission action plans

GHD committed to the Science-Based Targets initiative (SBTi) Net Zero Standard in April 2023 and currently has Net Zero “Committed” status. During the commitment period, short- and long-term science-based targets will be set based on the information accounted from a Scope 1, 2 and 3 base year. Until Net-Zero targets are validated by SBTi, the following Scope 1 and 2 targets were set and are being tracked:

→ 20% by the end of FY24 and 100% by end of FY25 of purchased power to be sourced from renewable energy for offices that have purchasing control and access to renewable energy. Where not possible, Renewable Energy Certificates (“RECs”) will be required in countries where they are available. GHD procured renewable energy directly from utility companies and through RECs through contractual instruments, accounting for 44.1% of the global total of directly purchased electricity during FY24, exceeding the set target.

→ 100% of GHD’s 23 business regions to have an emissions action plan in place by end of 2023. These are live documents, responding to GHG emission data and availability of carbon reduction options in the business region. These are regionally appropriate initiatives for emissions reductions documented and tracked by Regional Decarbonisation Champions (i.e., reductions through fleet, behaviour change, efficient office fit outs, lighting, changing appliances, etc.). Actions from these plans will continue to be completed and updated, including the addition of new actions.

Between FY23 and FY24, Scope 1 emissions decreased by 7%. This is predominantly due to decreases in emissions in GHD fleet. The decreases in GHD fleet emissions are the combination of decreased fleet size (over 5% reduction), particularly in the Americas, additions of hybrid and electric vehicles and an overall reduction in fuel use.

Between FY23 and FY24, Scope 2 location- and market-based emissions decreased by 0.5% and 31.4%, respectively. A net decrease in electricity use (-3.1%) was observed at a site level between reporting periods.

While some actions did occur to reduce demand at an office level, the main contributor to the decrease was GHD’s initiative to reduce and consolidate its number of operational control offices from 180 to 171 between reporting periods (a 5% decrease).

The more substantial year to year Scope 2 emissions decrease is in market-based emissions due to GHDs increased renewable energy purchases. During FY24, GHD maintained contractual agreements for 100% purchased power sourced from renewable energy for 22 operationally controlled properties in APAC and entered into five new contractual agreements for GHD operationally controlled properties in the Americas. During FY24, GHD also purchased and retired 6,140 MWh of RECs within North America (Canada and the USA).

A decrease in waste tonnage overall was noted and does align with waste reduction initiatives GHD offices are taking through regional emissions action plans. Some reductions may have also been the result of fewer workers in the office as reflected in increased business travel during FY24. Overall, these waste emission estimates can be susceptible to fluctuations due to surveys being a visual snapshot of waste generation and varying participation rates (see assumptions and limitations in Appendix C).

From FY23 to FY24, Scope 3, Category 6 (Business Travel) emissions increased by 13.9%. In Category 6, travel, including associated upstream emissions, accounted for 90.1% of total emissions, with hotels (optional) at 9.9%, accounting for the balance. This year-to-year increase in emissions is directly proportional to the increase in

travel distances between the periods, at an increase of 13.4%. Hotel nights/spend also increased significantly year-to-year, at an increase of 81.5% due to increased travel and hotel spend being added to this year’s inventory to account for bookings made outside of the travel system. Further to the above, increased business travel may also be a direct cause for the observable FY23 to FY24 emissions decreases related to commuting to work and working from home (Scope 3, Category 7) of 3.1% and 4.3%. It is likely that with the increased business travel to client and work sites, there would be fewer GHD workers commuting to work or working from home, which correlates with a 10% decrease in GHD commuting distances and a 2.4% decrease in working days from home.



Scope 3 Category 6 Business Travel emissions (FY23 - FY24)



Commuting to work emissions



Working from home emissions

8 Assumptions and limitations

In addition to the assumptions and limitations discussed in Appendix C and noting the “Exclusions” on page 14, there were broader assumptions and limitations.

General assumptions about leased properties are that GHD has some level of operational control whether or not utility information is provided by the utility company or lessor. This operational control results from control to implement health and safety procedures, leasing practices, office fit-outs, usage control, energy choice, direct purchase and/or appliance control (i.e., water heaters) for all leased premises that were not in an exclusion type. There may be exceptions where the lessor has or reports to

have operational control (i.e., emissions reporting) that were not identified during this inventory. Also assumed is that A/C maintenance is the responsibility of the lessor. A/C units at GHD owned sites, including where GHD is the lessor were included in fugitive emissions.

Other general assumptions are based on policies to use GHD systems. Fleet and equipment fuel cards are expected to be used for fleet vehicles and equipment. Airline travel is booked through the travel booking system. A small but statistically insignificant level of purchasing for these items occurred outside of these systems.

9 Data quality and uncertainty

GHG Protocol accounting and reporting principles were followed to promote a true and fair representation of the greenhouse gas emissions for the company globally. The five principles of relevance, consistency, completeness, accuracy and transparency were followed when collecting, reviewing and calculating data.

Several steps were taken to improve and facilitate sound data quality in the areas of inventory boundary, data management, data review, data processing and emissions calculations. Efforts were made to fill data gaps and improve data availability and quality during the inventory period, including updating GHD systems to improve data capture and data stakeholder engagement.

GHD estimated uncertainty in its inventory qualitatively and quantitatively through the GHG Protocol “Measurement and Estimation Uncertainty of GHG Emissions” calculation tool (GHG Protocol, March 2017), which measures uncertainties associated with an

inventory’s activity data and emission factors. The indirect measure aggregation method was used. As the Scope 1 and 2 and the Scope 3 data and emissions are verified to different levels of assurance, the uncertainty analyses were conducted separately.

For the Scope 1 and 2 emissions, based on the results from the tool, the majority of the data was ranked ‘Good’ at 84.6%. 4.8% of data was ranked ‘Fair’ and 10.6% of data ranked ‘Poor’. GHD notes that between FY23 and FY24, the data uncertainty has decreased overall, with decreases in the magnitude of ‘Poor’ and ‘Fair’ ranked data and overall increases in ‘Good’ ranked data. This is a result of GHD continued improvement activities, including the reduction of estimated data in utility and fleet datasets.

Based on the results from the tool, 49.4% of Scope 3 data was ‘Good’, 23.2% of data was ‘Fair’ and 27.5% of data was ‘Poor’. Data ranked Poor was due to uncertainty related to subconsultant and subcontractor by spend data and

associated emission factors used. With time, the proportion of ‘Good’ data within the Scope 3 emissions dataset is expected to increase, as data gaps are addressed. Overall, as with the Scope 1 and 2 emissions, between FY23 and FY24 there was a net decrease in emission uncertainty in Scope 3. This is again the result of GHD continued improvement activities, such as refinement of waste data reporting, which now includes the use of waste invoicing data instead of visual survey based method for GHD laboratories and additional suppliers providing travel related data.

Scope 1 and 2 emissions data quality

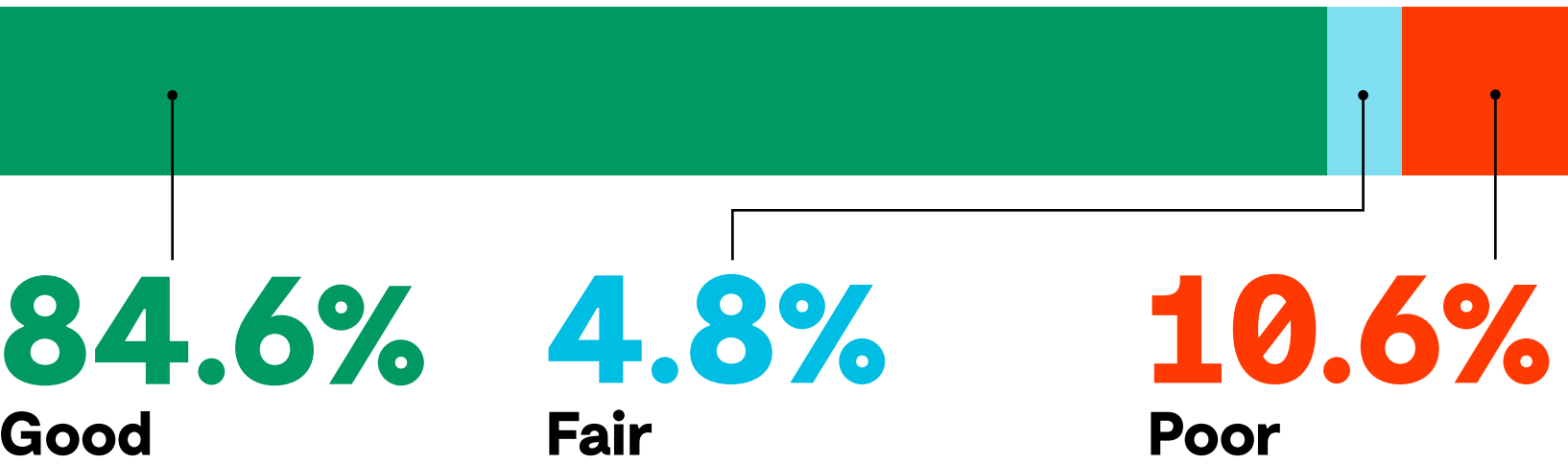


Table 6. Year to year data quality comparison

Data ranking	FY23 Scope 1 and 2	FY24 Scope 1 and 2	FY23 Scope 3	FY24 Scope 3
Good	81.0%	84.6%	45.6%	49.4%
Fair	7.4%	4.8%	23.7%	23.2%
Poor	11.5%	10.6%	30.7%	27.5%

Data source categories were recorded quarterly and to the extent possible, GHD categorized the data used in the inventory and assigned relative percentage uncertainty weightings for each category in terms of the activity data and the emission factors used. Given the numerous individual location factors multiplied by the various data source types, an average emissions factor was calculated from total emissions for each type of data source. Appendix D is a summary of the entries into this calculation tool and the rationale for the various weightings provided. The percentage of each type of data source in total Scope 1, 2 and 3 emissions are also represented.

There are still areas to improve the inventory, including data gaps where missing data was estimated and segregation of spend data is limited, which resulted in a “Poor” rating. Spend data for subcontractor and subconsultant types contributed to the majority of the Poor rating. To improve data quality ratings and help reduce estimations to as low as reasonably practicable in future inventories actions are being undertaken in the following areas:

- ➔ Lessor engagement to improve utility data
- ➔ Supplier engagement for direct from supplier emissions data
- ➔ Improved reporting systems and
- ➔ Refinement of goods and services through internal and external stakeholder engagement.

10 Assurance



This report is externally audited for assurance on a reasonable level of assurance and 5% materiality by LRQA Limited for the verification of location and market-based data for FY24 using ISO14046-3 and the GHG Protocol for Scopes 1 and 2 and limited level of assurance by professional judgement materiality for Scope 3. See Appendix E for the LRQA Independent Assurance Statement.

References

CBECS 2018. United States Energy Information Administration. 2018 Commercial Buildings Energy Consumption Survey. [Energy Information Administration \(EIA\)- Commercial Buildings Energy Consumption Survey \(CBECS\) Data](#)

DCCEEW 2024. Department of Climate Change, Energy, the Environment and Water. Australian National Greenhouse Accounts Factors:2024.

DCCEEW 2022. Department of Climate Change, Energy, the Environment and Water. Commercial Building Baseline Study, 2022.

DEFRA 2024. Department for Environment Food &Rural Affairs; Department for Energy Security and Net Zero. UK Government GHG Conversion Factors for Company Reporting (Full Set) 2024, Version 1.0.

DoEP 2021. Department of Energy, Republic of the Philippines. Department of Energy Key Energy Statistics, 2021.

ECCC 2024. Environment and Climate Change Canada, 2024. National Inventory Report 1990–2022: Greenhouse Gas Sources and Sinks in Canada, Parts 2 and 3.

Exiobase Ignite, V.3 2023. Norwegian University of Science and Technology (NTNU), Netherlands Organization for Applied Scientific Research (TNO), The Sustainable Europe Research Institute (SERI), Universiteit Leiden, the research group “Sustainable Resource Use” at the Institute for Ecological Economics at Vienna University of Economics and Business (WU) and 2.-0 LCA Consultants.

FY23 GHG Report: FY 2023 Greenhouse Gas Emissions – GHD Global Emissions, GHD, 2023. [Available online: https://info.ghd.com/FY23_Emissions_Report]

GHG Protocol 2004: A Corporate Accounting and Reporting Standard Revised Edition, WBCSD, WRI, 2004.

GHG Protocol 2011: Corporate Value Chain (Scope 3) Standard 2011: Supplement to the GHG Protocol Corporate Accounting and Reporting Standard, GHG Protocol 2011

GHG Protocol Amendment 2013: Required Greenhouse Gases in inventories. Accounting and Reporting Standard Amendment, WBCSD, WRI, Feb 2013.

GHG Protocol Appendix F 2006. Appendix F to the GHG Protocol Corporate Standard Categorizing GHG Emissions Associated with Leased Assets June 2006, Version 1.0.

GHG Protocol Scope 2 Guidance 2015. GHG Protocol Scope 2 Guidance An amendment to the GHG Protocol Corporate Standard, WBCSD, WRI, 2015.

GHG Protocol Calculating Scope 3 2013. GHG Protocol Technical Guidance for Calculating Scope 3 Emissions (version 1.0): Supplement to the Corporate Value Chain (Scope 3) Accounting and Reporting Standard, WBCSD, WRI, 2013.

GHG Protocol Uncertainty Tool 2017 GHG Protocol Measurement and Estimation Uncertainty of GHG Emissions” calculation tool, March 2017.

Green Project Platform. Green Project Carbon accounting and reporting platform 2022. Green Project Technologies Inc. [web-based platform [Green Project | Automated ESG Management Platform \(greenprojecttech.com\)](https://greenprojecttech.com)]

Homeworking emissions Whitepaper 2020. EcoAct. Skillett, L; Ventress, L. in partnership with Lloyds Banking Group and Nat West Group.

Hotel Sustainability Benchmarking Index 2024. Cornell University. Ricaurte, E; Jagarajan, R. [Available online: <https://ecommons.cornell.edu/items/85eddae3-2b5b-41fb-88ad-75a0b53f8424>]

IPCC, 2007: Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, Pachauri, R.K and Reisinger, A. (eds.)]. IPCC, Geneva, Switzerland.

IRENA 2023. International Renewable Energy Agency, Country Profiles (2023).

NZ 2010. McDonagh, J., Property Group, Commerce Faculty, Lincoln University, New Zealand. Electricity Use Trends in New Zealand Office Buildings, 1990-2008, June 2010.

ND-NEED 2024. Department of Energy Security and Net Zero; Department for Business Energy and Industrial Strategy. Aug 2024. Non-domestic National Energy Efficiency Data – Framework (ND-NEED).

NRCan 2022. Natural Resources Canada. Comprehensive Energy Use Database–Commercial /Institutional Sector– Canada. [Database [Commercial/Institutional Sector – Canada | Natural Resources Canada \(nrcan.gc.ca\)](https://nrcan.gc.ca)]

NZMoE 2024. Ministry for the Environment, New Zealand Government, May 2024. Measuring emissions: A guide for organisations 2024 summary of emission factors.

SBTi Corporate Net-Zero Standard 2024. Science Based Targets, SBTi Corporate Net-Zero Standard V1.2 (sciencebasedtargets.org)

SBTi Corporate Near-Term Criteria 2024. Science Based Targets, [Corporate Near-term criteria V5.2 \(sciencebasedtargets.org\)](https://sciencebasedtargets.org)

USEPA 2016. ICF Inc for Untied States Environmental Protection Agency, Oct 2016. Accounting Tool for Support Federal Reporting of Hydrofluorocarbon Emissions.

USEPA 2014. United States Environmental Protection Agency, November 2014. Greenhouse Gas Inventory Guidance: Direct Fugitive Emissions from Refrigeration, Air Condition, Fire Suppression, and Industrial Gases.

USEPA 2024 EF Hub. United States Environmental Protection Agency, June 2024. Emission Factors for Greenhouse Gas Inventories.

US EPA 2023 Supply Chain GHG Emissions. Ingwersen, W. Supply Chain Greenhouse Gas Emission Factors v1.2 by NAICS-6. U.S. Environmental Protection Agency, Washington, DC, 2023. <https://doi.org/10.23719/1528686>

Appendices

Appendix A

→ FY24 GHG emissions

Table A.1. Emission totals by individual GHG component where accounted.

FY24 Global Scope 1, 2, & 3 Emissions							
Emission Type (Expressed as Tonnes CO ₂ e)	CO ₂	CH ₄	N ₂ O	HFCs/HCs	PFCs	SF ₆	Tonnes CO ₂ e Total
Scope 1 Mobile, Fleet, and Equipment Fuel	3,425.8	4.0	17.3				3,447.2
Scope 1 Natural Gas Usage	948.3 *	0.5 *	2.8 *				970.4
Scope 1 Fugitive and Refrigerants	0.007			105.5	N/A	N/A	105.5
Scope 2 Emissions (Location)	1,928.2 *	4.8 *	6.1 *				5,270.1
Scope 2 Emissions (Market)	816.9 *	2.0 *	2.6 *				3,424.5
Scope 3	18,664.2 **	12.5 **	98.3 **				145,720.1
Total Scope 1&2 Tonnes CO ₂ e for FY24 (Location-Based)	9,793.1						
Total Scope 1&2 Tonnes CO ₂ e for FY24 (Market-Based)	7,947.5						
Total Scope 1,2, &3 Tonnes CO ₂ e for FY24 (Location-Based)	155,513.2						
Total Scope 1,2, &3 Tonnes CO ₂ e for FY24 (Market-Based)	153,667.6						
Scope 1,2, &3 Tonnes CO ₂ e per FTE for FY24 (Market-Based)	13.3						

Note:
CO₂e totals are not intended to be sum of row values as some emissions are calculated as CO₂e only and individual breakdowns of CO₂, CH₄ and N₂O are not available for all locations.
CO₂e for values for CH₄ and N₂O based on IPCC Fifth Assessment Report, 2014 (AR5) GW Ps.
*Individual CO₂, CH₄ and N₂O for natural gas and electricity are for USA and Canada only, remainder of Americas, APAC and EMEA factors are in CO₂e.
**Individual CO₂, CH₄ and N₂O for business travel only, excluding hotel, miscellaneous travel expenditures and upstream travel-related emissions (Category 6) and commute to work emissions, excluding work from home and upstream travel-related emissions (Category 7).

Appendix B

→ Offsets

Table B.1. Emission totals by individual GHG component where accounted.

Project description	Project ID	Offset verification type	Registry	Date retired	Link to registry (serial number)	Vintage	Eligible quantity tCO ₂ e	Quantity. used for previous reporting periods	Quantity banked for future periods/ emissions	Quantity applied for this reporting period claim	% of total used
Evergreen REDD+ Project	VCS 2539	VER	Verra	27/06/2023	13020-467283655-467287654-VCS-VCU-262-VER-BR-14-2539-01012021-31072021-0	2021	4,000	4,000	0		100%
Farmers Edge Smart Carbon, Soil Carbon 6890-7848	6890-7848	VERRs	CPR	29/06/2023	6890-7848-000-016-996-525 to 6890-7848-000-016-998-024	2021	1,500	1,500	0		100%
Canopy Blue Kelp credits* stapled to VCU 370 wind power project	VCU370	VER	Verra	29/11/2022	9123-69894859-69897858-VCS-VCU-997-VER-IN-1-370-01012020-31032020-0	2020	3,000	3,000	0		100%
Green Trees ACRE (Advanced Carbon Restored Ecosystem)	ACR114	VER	ACR	27/06/2023	ACR-US-114-2020-1318-180001 to 181500	2020	1,500	1325.19	0	174.81	100 %
Blue Ridge Escarpment Improved Forest Management Removals	ACR590	VER	ACR	27/06/2023	ACR-US-590-2020-1533-591 to 2090	2020	1,500	0	0	1,500	100 %
Katingan REDD+ Forest Protection	VCS1477	VER	Verra	13/07/2023	12730-429955187-429959186-VCS-VCU-263-VER-ID-14-1477-01012020-31122020-0	2020	4,000	0	0	4,000	100 %
				10/08/2023	2730-429959237-429959832-VCS-VCU-263-VER-ID-14-1477-01012020-31122020-0		596.03	0	0	596.03	100 %
LTF/NICC & Mississippi Band of Choctaw Indians Forest Carbon Project	ACR716	VER	ACR	6/26/2024	ACR-US-716-2022-2330-1 to 4000	2022	4,000	0	2,148.53	1,851.47	46%
						Totals	20,096.03	0		7,947.5	

*Canopy Blue kelp credits are not verified carbon credits but are backed with a stapled credit with equal number of verified carbon credits

Appendix C

→ Calculation methodology

Table C.1. Calculation methodology

Time boundary	Calculation method	Assumptions, exclusions & limitations	Emission factors and GWP
Scope 1 – Gas utilities			
Where: – Single Month Invoice Supplied by utility provider: July invoice and subsequent eleven invoices (to the total of 12 months*) to completion of operational control for that site within FY24. – Multi- Month invoices supplied by utility provider: July invoice and subsequent multi month invoices included (to the total of 12 months*) to completion of operational control for that site within FY24. – Insufficient Utility data was provided: Pro rata calculation was made to the total of 12 months or 366 days to completion of operational control for that site within FY24. *Where a full 12 months of data was available from either monthly or multi-billed months, no adjustment was made to pro-rate usage to align to the exact financial year dates.	Natural gas usage was converted to CO2e from government published emission factors and GWP’s for applicable regions. Total methane (CH ₄) and nitrous oxide (N ₂ O) emissions were calculated where provided. If CH ₄ and N ₂ O were not already provided in CO2e, these emissions were multiplied by the documented GWP. Where it was identified through the activity disclosure that natural gas was used on site, but data was not available, previous year data was used if available, if not, emissions were calculated based on floor area.	May not include portable gas bottles for equipment which are insignificant to GHD operations	Americas, APAC: USEPA 2024 EF Hub ECCC 2024; CBECS 2018 (floor area); NRCan 2022 (floor area). APAC: DCCEEW 2022 (floor area). EMEA: DEFRA 2024, ND-NEED 2024 (floor area).

Time boundary	Calculation method	Assumptions, exclusions & limitations	Emission factors and GWP
Scope 1 - Fleet			
Based on fuel transaction dates and/or mileage data from 01 July to 30 June 2024.	Sourced from corporate fuel cards. Where no fuel purchasing data is available for GHD vehicles, vehicle mileage data was collected. For some factors, fuel and mileage data were both required for CO₂, CH₄ and N₂O calculations and/or CO₂e. GWP applied based on emission factor used. Incomplete vehicle mileage and/or fuel data was either prorated for the vehicles operational period during FY24 or estimated based on similar vehicle data	Equipment fuel may be charged on fleet fuel cards, and the fuel usage is unable to be separated from fleet vehicle use. Where fuel type is not the same as the vehicle type it is assumed and is consistent with equipment fuelling and not accounted with fleet. If vehicle operator did not use fuel card, usage was not accounted for in the Scope 1 inventory. Vehicles fuelled on a client or project site where a fuel card was not used, may also be missing or counted by the host site in their fuel usage.	Americas: USEPA 2024 EF Hub APAC/EMEA: DEFRA 2024
Scope 1 - Equipment			
Based on fuel transaction dates and/or mileage data from 01 July to 30 June 2024.	Where: – Fuel card data available: GHD equipment fuel data is sourced from corporate fuel cards. – Incomplete vehicle mileage and/or fuel data was either prorated for the vehicles operational period during FY24 or estimated based on available regional data. Fuel data is calculated out to CO₂, CH₄ and N₂O or CO₂e depending on applicable factors.	Equipment fuel may be charged on fleet fuel cards, and the fuel usage is unable to be separated from fleet vehicle use. Where fuel type is not the same as the vehicle type it is assumed and is consistent with equipment fuelling and not accounted with fleet. If field equipment operator did not use fuel card or was estimated in absence of a fuel card system, usage was not accounted for in the Scope 1 inventory. Equipment fuelled on a client or project site where a fuel card was not used, may also be missing or counted by the host site in their fuel usage.	Americas: USEPA 2024 EF Hub APAC/EMEA: DEFRA 2024



Time boundary	Calculation method	Assumptions, exclusions & limitations	Emission factors and GWP
Scope 1 - Refrigerants			
Fugitive emissions calculated for 366 days from 01 July 2023 -30 June 2024.	Where: The site reported the numbers of household and industrial refrigerators/freezers/icemaker appliances within an activity disclosure, exact count was used. The site did not report total appliance count: an average number was applied per facility from reported count. Green Project used published average refrigerant recharge data, guidance on leakage rates* during installation, operations and disposal of refrigerators, along with a percent likelihood a given unit was installed or retired in a reporting year. <i>Refrigerant Quantity and type x GWP=CO₂e</i> *Leakage rates were proportioned to operational days.	Refrigerator type was obtained from a sample survey of safely accessible appliance information plates. This sample informed a percentage distribution of refrigerant type which was applied to the total Refrigerator/Freezer appliance count in the inventory.	Global: DEFRA 2024 (HCs only) US EPA 2014 (HFCs/PFCs)

Time boundary	Calculation method	Assumptions, exclusions & limitations	Emission factors and GWP
Scope 1 - Fugitive AC			
Fugitive emissions calculated or estimated for 366 days from 01 July 2023 -30 June 2024.	Where: - AC unit information available: $AC\ unit\ size \times quantity \times GWP^*=CO_2e$ - AC information was incomplete: emissions were determined by the square footage of the premises *GWP for applicable refrigerant type within Green Project	Two of seven GHD sites were able to provide refrigerant type, number and size of A/C units. All other A/C emissions were estimated based on floor area of the GHD owned premise. GHD assumed operational control by A/C ownership.	Global: DEFRA 2024 (HCs only) US EPA 2014 (HFCs/PFCs) US EPA 2016 (floor area)
Scope 1 - Fugitive Fire Extinguishers			
Fire Extinguisher Invoices from 01 July 2023 - 30 June 2024.	$Fire\ Suppressant\ amount \times GWP^*= CO_2e$	Invoices confirm majority of fire extinguishers purchased are dry power, refillable and have gauges. When loss occurs, refill or disposal occurs, therefore fugitive emissions were captured when this was recorded.	US EPA 2014; GHG Protocol AR4.

Time boundary	Calculation method	Assumptions, exclusions & limitations	Emission factors and GWP
Scope 2 - Purchased Electricity			
Where: – Single Month Invoice Supplied by utility provider: July invoice and subsequent eleven invoices (to the total of 12 months*) to completion of operational control for that site within FY24. – Multi- Month invoices supplied by utility provider: July invoice and subsequent multi month invoices included (to the total of 12 months*) to completion of operational control for that site within FY24. – Insufficient Utility data was provided: Pro rata calculation was made to the total of 12 months or 366 days to completion of operational control for that site within FY24. *Where a full 12 months of data was available from either monthly or multi-billed months, no adjustment was made to pro-rate usage to align to the exact financial year dates.	Where: – Electricity data available: <i>Invoiced kWh x Local grid factor*=CO₂e metric tonnes</i> *Where a government published grid factor was not available in the Green Project platform, the International Renewable Energy Agency Country Profiles (2023) were used. – Where electricity data was not available: · Previous year data was used if available. · If not, emissions were calculated based on floor area. Server electricity (kWh) of owned sites not captured in office electricity, was determined by an average of normal and max electricity draw provided by the manufacturer, with emissions being calculated as other location-based kWh data. Electric vehicle recharge was also recorded in kWh and calculated based on the location’s electricity emission’s factor.	All operating sites are assumed to have electricity. Location based emissions do not include onsite renewable energy (i.e., roof top solar) as this cannot currently be measured at sites where this occurs. Electricity imported from the grid is accounted for in both location and market-based emissions where on site renewables are available. Only sites that provided a contractual agreement with utility companies for renewable energy purchases were accounted for in market-based accounting. Renewable energy purchases may be unbundled but must be contractually backed by an equal number of Renewable Energy Certificates (RECs) being surrendered or retired to the contracted percentage of renewable energy. Market-based electricity is based on RECs purchased and retired through contractual agreements	Americas: USEPA 2024 EF Hub; ECCC 2024; IRENA 2023. CBECS 2018 (floor area); NRCan 2022 (floor area). APAC: DCCEEW 2024; NZMoE 2024; DoEP 2021; IRENA 2023. DCCEEW 2022 (floor area); NZ 2010 (floor area). EMEA: DEFRA 2024; IRENA 2023. ND-NEED 2024 (floor area).

Time boundary	Calculation method	Assumptions, exclusions & limitations	Emission factors and GWP
Scope 3 - Category 1: Purchased Goods and Services			
Finance data for 366 days from 01 July 2023 - 30 June 2024	Spend data by category is extracted from finance system. Spend categories are mapped to spend emission data units available in the emission factor data sets used. <i>Spend Amount* x Emission Factor**=CO₂e</i> * Local currency (i.e. \$/£). ** Per unit of currency spent	Ability to split out specific costs with a corresponding emission factor is limited by the varying levels of granularity within financial and management accounting. Where specific emissions factors could not be matched, a general emission factor that closest represents the emission type is applied and can be subjective. USEPA emissions factors did not include the margin factors. GHD goods and services spend cannot currently be separated from those made by GHD acting as an agent on behalf of a client to procure goods and services. This likely results in overreporting of some spend categories, such as subcontractors. Spend data includes the conversion of currencies and the adjustment of emission factors from the data year to the reporting year, accounting for inflation.	Americas - USEPA Supply Chain Greenhouse Gas Emission Factors without margins (v.1.2, April 2023) by NAICS EMEA and APAC: ExioBase Ignite V.3 2023
Scope 3 - Category 2: Capital Goods			
Capital Expenditure Data for 366 days from 01 July 2023 - 30 June 2024.	Capital goods are determined by spend based upon amounts capitalised to GHD's fixed asset register. <i>Spend Amount* x Emission Factor**=CO₂e</i> * Local currency (i.e. \$/£). ** Per unit of currency spent	Due to granularity of spend account description and available coinciding emission factor, a general emission factor that closest to representing the account type is applied and can be subjective. Spend data includes the conversion of currencies and the adjustment of emission factors from the data year to the reporting year, accounting for inflation.	Americas - USEPA Supply Chain Greenhouse Gas Emission Factors without margins (v.1.2, April 2023) by NAICS EMEA and APAC: ExioBase Ignite V.3 2023

Time boundary	Calculation method	Assumptions, exclusions & limitations	Emission factors and GWP
Scope 3 - Category 3: Fuel and Energy Related Activities			
As Category 3 is based on Scope 1 and 2 data, time boundary is the same as reported for the Scope 1 (natural gas, fleet and equipment) and 2 (electricity) data.	The Category 3 inventory dually comprises (i) the emissions associated with all tanks to wheel (TTW) activities for owned stationary and mobile fuel combustion sources and (ii) the emissions associated with all well to tank (WTT) activities and transmission and distribution losses (T&D) for all purchased grid electricity consumption.	As Category 3 is based on Scope 1 and 2 data, limitations include those reported for the Scope 1 (natural gas, fleet and equipment) and 2 (electricity) data.	Americas- USEPA 2024 EF Hub; ECCC 2024; IRENA 2023, DEFRA 2024. APAC- DCCEEW 2024; NZMoE 2024; DoEP 2021; IRENA 2023, DEFRA 2024. EMEA- DEFRA 2024; IRENA 2023.
Scope 3 - Category 4: Upstream Transportation and Distribution			
Accounted by spend data in Scope 3, Category 1 and 2. Unable to separate upstream and downstream transportation and distribution from shipping included in costs of purchased goods.			

Time boundary	Calculation method	Assumptions, exclusions & limitations	Emission factors and GWP
Scope 3 - Category 5: Waste Generated in Operations			
Waste Surveys were conducted once during the FY24 period and extrapolated to one year. Waste invoice for the labs, accounting started with the invoice recording the first disposal event after 01 July 2023 usage and included the subsequent invoices until the end of the financial year 30 June 2024. IT Waste reports recorded disposal events between 01 July 2023 and 30 June 2024.	<i>(Supplier IT tonnes and waste type + Laboratory invoiced tonnes and waste type + Office waste tonnes from Survey) x Waste emission factor CO2e for waste type.</i> For GHD laboratory locations, where invoicing data was available, this was used to estimate waste generation. Where there was no or interpreted incomplete invoice data for a GHD laboratory, survey data was used to supplement and, where no invoice or survey data available, location data was backfilled using the survey lab data rolling weighted average per FTE value (FY23 and FY24 datasets combined). All other FY24 waste data was either based on invoices (IT waste), the waste survey (for regular offices) or backfilled using a GHD office (excluding lab locations) rolling weighted average per FTE value (FY23 and FY24 datasets combined).	There are limitations in the survey method as it is a snapshot in time extrapolated to a year of waste disposal and relies on visual volume estimates, rather than actual sorting and weighing. The susceptibility to fluctuations due to surveys being a snapshot and varying participation rates, are expected, with time, to even out using a combined weighted average for backfilling of data. Other initiatives such as surveying same GHD offices year to year are also expected to smooth out the data and reported waste totals from visual surveys (consistent metrics). Bathrooms were not included in the survey. Any waste from these facilities is not controlled by the lessor and are not significant Waste type descriptions varied for laboratory waste invoices and therefore in some cases knowledge of waste from GHD labs was applied to categorise the waste type. Some disposals from office refits may not be accounted for, although the refits themselves were accounted for in Scope 3, Categories 1 and/or 2.	Americas- USEPA 2024 EF Hub EMEA and APAC - DEFRA 2024

Time boundary	Calculation method	Assumptions, exclusions & limitations	Emission factors and GWP
Scope 3 - Category 6: Business Travel			
→ Rental car			
Rental car data is collected from the date of rental between 01 July 2023 and 30 June 2024.	Rental car data was collated using a hybrid method of supplier specific data and internal data from the travel and finance systems. Distance is either provided directly from the supplier or calculated based on rental days or spend data. <i>Total rental days x average distance per day by country = total distance or (total spend/ (average spend/ day)) x average distance per day by country = Total distance.</i> <i>Then to calculate emission Total distance x emission factor CO2e/unit of distance = Total tonnes CO₂e.</i> Calculation also includes upstream well-to-tank (WTT) emissions associated with the extraction, refining and transportation of raw fuels before they are used to power the transport mode.	Rental car data is collected from the date of rental and may exceed financial year or may not capture vehicles returned, that were rented prior to the financial year start. Supplier Data from rental car companies are checked for errors, where distance is not possible it is replaced with an estimation. Where mileage was not provided or was in error, total rental days was used to estimate distance travelled from available supplier distance/day averages in a given country <i>Total rental days x Average distance per day by country = Total distance.</i> Where only costs were provided Total costs for rental car/ estimated costs per day recorded from invoices x Average km per day recorded = Total kilometres travelled. Spend data includes the conversion of currencies.	Americas- USEPA 2024 EF Hub; DEFRA 2024 APAC and EMEA- DEFRA 2024
Scope 3 - Category 6: Business Travel			
→ Flights			
Flight data is collected from the date of travel between 01 July 2023 and 30 June 2024.	Distance data from the travel system is organised by flight type and class of travel. Emission factors are then applied to get total CO₂e tonnes. Calculation also includes upstream well-to-tank (WTT) emissions associated with the extraction, refining and transportation of raw fuels before they are used to power the transport mode.	It is assumed all flights are booked or recorded through the booking system.	Americas- USEPA 2024 EF Hub; DEFRA 2024 (GWP with radiative forcing) APAC and EMEA- DEFRA 2024 (GWP with radiative forcing)

Time boundary	Calculation method	Assumptions, exclusions & limitations	Emission factors and GWP
Scope 3 - Category 6: Business Travel			
→ Other travel			
Spend data between 01 July 2023 to 30 June 2024, Supplier data collected from the date of travel between 01 July 2023 and 30 June 2024.	Other travel was collated using a hybrid method of supplier specific data and spend data from the finance systems. <i>Direct from supplier mileage from ground transport x type of travel utilised emission factor = tonnes CO₂e.</i> <i>Spend data x emission factor for travel by spend= tonnes CO₂e.</i> Calculation also includes upstream well-to-tank (WTT) emissions associated with the extraction, refining and transportation of raw fuels before they are used to power the transport mode.	Hybrid/electric designator for ground travel type split half mileage for hybrid vehicle, half mileage for electric. Carpool mileage was divided by two as it is assumed at least one other person shared the travel. Other travel spend data mostly relates to transport such as taxis, rideshare, trains and ferries; however, it may also contain miscellaneous travel expenses. Spend data includes the conversion of currencies.	DEFRA 2023; USEPA Supply Chain Greenhouse Gas Emission Factors without margins (v.1.2, April 2023) by NAICS; ExioBase Ignite V.3 2023
Scope 3 - Category 6: Business Travel			
→ Hotels			
Hotel check- in dates between 01 July 2023 and 30 June 2024. Spend data between 01 July 2023 to 30 June 2024,	Hotel data was collated using data from the travel system and internal conference data in number of nights, and finance system by spend. <i>Total Number nights by city, state and/or country, x emission factor= total tonnes CO₂e or</i> <i>total spend/ (average GHD spend/night by country) x emission factor = total tonnes.</i>	Where only spend data was available, nights are estimated from average GHD spend per night in that country. Spend data includes the conversion of currencies. Location preference for emission calculations was city, then state, then country. If a location was unavailable default is the attending employees country. Spend data includes the conversion of currencies.	Americas, APAC, EMEA- Cornell Hotel Sustainability Benchmarking Index 2024

Time boundary	Calculation method	Assumptions, exclusions & limitations	Emission factors and GWP
Scope 3 - Category 7: Employee Commuting			
→ Commute to work			
Commuting and Work from combined survey was completed once during the FY24 period.	Number of days commute to work and primary mode of transportation was recorded, sorted by region, then prorated to the total number of GHD FTE employees FY24. Emission factor for travel type was applied to distance travel. <i>Distance travelled by mode of transport x emission factor.</i> Calculation also includes upstream well-to-tank (WTT) emissions associated with the extraction, refining and transportation of raw fuels before they are used to power the transport mode.	Where the employee selected “other” as their mode of transportation, a travel Category was determined based on interpretation of employee responses to follow up questions in the survey; where no appropriate response was provided by the employee to determine the “other” mode of transportation, the response was classified as using an internal combustion engine (ICE) vehicle, to be conservative in the calculation estimates.	Americas: USEPA 2024 EF Hub DEFRA 2024 APAC and EMEA: DEFRA 2024
→ Work from home			
Commuting and Work from Home combined survey was completed once during the FY24 period.	Average number of days an employee worked from home was collected and sorted by region and then prorated to the total number of FY24 GHD FTE employees. Total workdays use average work from home factors and <i>calculated electricity x grid factor.</i>	The work from home factors are based on regions in the US and UK and NZ. To apply emission factors to other countries, similar regional climates were matched.	Americas- Homeworking Emissions Whitepaper, EcoAct (2020; Whitepaper), USEPA 2024 EF Hub APAC- Homeworking Emissions Whitepaper, EcoAct Whitepaper (2020); NZMoE 2024; DCCEEW 2024 EMEA- Homeworking Emissions Whitepaper, EcoAct Whitepaper (2020); DEFRA 2024; IRENA 2023
Scope 3 - Category 9: Downstream Transportation and Distribution			
Accounted by spend data in Scope 3, Category 1 and 2. Unable to separate upstream and downstream transportation and distribution from shipping included in costs of purchased goods.			

Appendix D

→ FY24 Uncertainty calculations and data source

Table D.1. Scope 1 and 2 emissions

Data source description	Uncertainty of activity data (confidence interval expressed in ± percent)	Uncertainty of emission factor (confidence interval expressed in ± percent)	Certainty ranking (calculator-assigned)	% Total Scope 1 and 2 emissions (0.00% indicates <0.01%)	Ranking rationale
Scope 1 - NG - All Data Available	+/- 5.0%	+/- 5.0%	Good	5.98%	The data is good quality (invoicing) with minor uncertainty associated with transcription of data to accounting system and dated ranges. No issue observed with emission factor use as majority are region-specific, but a minimum of 5% assigned.
Scope 1 - NG - Estimated Using Other Data	+/- 15.0%	+/- 5.0%	Fair	0.52%	No specific usage data available but other information, such as \$ spend or previous year data is available to estimate use, resulting in a medium data uncertainty. No issue observed with emission factor use as majority are region-specific, but a minimum of 5% assigned.
Scope 1 - NG - All Estimate Based on Floor Area	+/- 30.0%	+/- 5.0%	Poor	3.41%	No data is available, the most region-specific energy intensity values applied to offices missing data based on office floor area, resulting in a higher data uncertainty. No issue observed with emission factor use as majority are region-specific, but a minimum of 5% assigned.
Scope 1 - Fleet where fuel card data available (Americas)	+/- 5.0%	+/- 5.0%	Good	29.74%	The fuel data is good quality (direct electronic monitoring). Some uncertainty associated with date range. No issue observed with emission factor use as majority are fuel and vehicle-type specific (though generalized to gasoline or diesel), but a minimum of 5% assigned.

Uncertainty rankings based on “Measurement and Estimation Uncertainty of GHG Emissions” calculation tool (GHG Protocol)

Data source description	Uncertainty of activity data (confidence interval expressed in ± percent)	Uncertainty of emission factor (confidence interval expressed in ± percent)	Certainty ranking (calculator-assigned)	% Total Scope 1 and 2 emissions (0.00% indicates <0.01%)	Ranking rationale
Scope 1 - Fleet where mileage known (APAC&EMEA)	+/- 5.0%	+/- 5.0%	Good	2.69%	There is minor uncertainty associated with transcription of mileage data by operators in records and at the pump. No issue observed with emission factor use as majority are fuel and vehicle-type specific (though generalized to gasoline or diesel), some fleet fuel cards for vehicles may have been used for equipment.
Scope 1 - Equipment (fuel cards)	+/- 15.0%	+/- 10.0%	Fair	2.77%	The fuel data is good quality (direct electronic monitoring). some uncertainty that the fuel was used for equipment and whether equipment is always filled up using fuel cards. Moderate issue observed with emission factor use as emission factors generalize gasoline use to small 2-stroke engine use and diesel use to construction/mining equipment (US EPA emission factor classifications).
Scope 1 - Fugitive Emissions (refrigerants)	+/- 30.0%	+/- 10.0%	Poor	1.08%	Some refrigerant use data is available through a survey for refrigerators but not all offices participated. Number of refrigerators declared by the majority of offices with others having the average applied. High-level estimates were made regarding GHD refrigerant use owned A/C units. Moderate issue observed with emission factor use as, although refrigerant use in types of units are fairly well known (and the corresponding global warming potential factor), the refrigerant use is still estimated.
Scope 1 - Fugitive Emissions (fire suppression)	+/- 30.0%	+/- 10.0%	Poor	0.00%	High-level estimates were made regarding GHD fire suppression fugitive emissions from owned fire extinguishers. Moderate issue observed with emission factor use.

Uncertainty rankings based on “Measurement and Estimation Uncertainty of GHG Emissions” calculation tool (GHG Protocol)

Data source description	Uncertainty of activity data (confidence interval expressed in ± percent)	Uncertainty of emission factor (confidence interval expressed in ± percent)	Certainty ranking (calculator-assigned)	% Total Scope 1 and 2 emissions (0.00% indicates <0.01%)	Ranking rationale
Scope 2-All Data Available Utility Bill	+/- 5.0%	+/- 5.0%	Good	23.17%	The data is good quality (invoicing) with minor uncertainty associated with transcription of data to accounting system and invoice date range. No issue observed with emission factor use as majority are region-specific, but a minimum of 5% assigned.
Scope 2-All Data Available Lessor	+/- 5.0%	+/- 5.0%	Good	17.27%	The data is good quality (invoicing from lessor) with minor uncertainty associated with transcription of data to accounting system. No issue observed with emission factor use as majority are region-specific, but a minimum of 5% assigned.
Scope 2-Utility bill usage history used number available in graph or by meter read.	+/- 5.0%	+/- 5.0%	Good	0.01%	The data is good quality with meter read with minor uncertainty associated with transcription of data from visual meter read and date range. No issue observed with emission factor use as majority are region-specific, but a minimum of 5% assigned .
Scope 2-Previous Year data for same month/months	+/- 10.0%	+/- 5.0%	Good	5.21%	The data is good quality (invoicing) but from previous year; higher uncertainty associated with uncertainty in electricity use between years. Minor uncertainty due to invoice date range. No issue observed with emission factor use as majority are region-specific, but a minimum of 5% assigned.
Scope 2-Available days extrapolated out to total number of operational days.	+/- 15.0%	+/- 5.0%	Fair	1.20%	The data that is available is good quality (invoicing) but is prorated, introducing a greater uncertainty in this data set. No issue observed with emission factor use as majority are region-specific, but a minimum of 5% assigned. No uncertainty with date range as it is extrapolated to number of operating days.

Uncertainty rankings based on “Measurement and Estimation Uncertainty of GHG Emissions” calculation tool (GHG Protocol)

Data source description	Uncertainty of activity data (confidence interval expressed in ± percent)	Uncertainty of emission factor (confidence interval expressed in ± percent)	Certainty ranking (calculator-assigned)	% Total Scope 1 and 2 emissions (0.00% indicates <0.01%)	Ranking rationale
Scope 2-Charge amount divided by site utility costs per unit	+/- 10.0%	+/- 5.0%	Good	0.52%	The data that is available is good quality (invoicing) but introduces an uncertainty in price per kWh averages, price change, and additional fees, although measures were taken to try to identify and remove the latter. Minor uncertainty with invoice date range. No issue observed with emission factor use as majority are region-specific, but a minimum of 5% assigned.
Scope 2- All Estimate based on floor area	+/- 30.0%	+/- 5.0%	Poor	6.17%	No data is available, the most region-specific energy intensity values applied to offices missing data based on office floor area, resulting in a higher data uncertainty. No issue observed with emission factor use as majority are region-specific, but a minimum of 5% assigned. No date range uncertainty.
Scope 2 - Servers - Estimates	+/- 15.0%	+/- 10.0%	Fair	0.26%	No kWh use data is available, high-level estimates were made regarding kWh use per GHD server, using manufacturer average usage data for equipment, resulting in a higher data uncertainty. Moderate issue observed with emission factor use as, although majority are region-specific, a portion of the estimates are based on country averages, for a higher emission factor uncertainty.
Scope 2 - NZ Electric Vehicles	+/- 10.0%	+/- 5.0%	Good	0.00%	The fuel (as kWh vehicle charging) data is good quality (direct electronic card monitoring); however, some of the electricity may be double counted if charged at a GHD site increasing the uncertainty. No issue observed with emission factor use as it is region-specific, but a minimum of 5% assigned.

Uncertainty rankings based on “Measurement and Estimation Uncertainty of GHG Emissions” calculation tool (GHG Protocol)

Table D.2. Scope 3 Emissions

Data source description	Uncertainty of activity data (confidence interval expressed in ± percent)	Uncertainty of emission factor (confidence interval expressed in ± percent)	Certainty ranking (calculator-assigned)	% Total Scope 3 emissions (0.00% indicates <0.01%)	Ranking rationale
Category 1 – Americas Subconsultants	+/- 20.0%	+/- 25.4%	Poor	1.76%	Data uncertainty due to low resolution on whether subcontractor or subconsultant goods and services are on a GHD to GHD service basis or GHD for client service basis. Americas uncertainty of emission factors due to broad characterizations for subcontractor and subconsultant (financial classifications very limited); range of cost-based emission factors relative to generalized factor applied for selected work code classifications represents average uncertainty. Lower resolution on APAC/EMEA emission factors in ExioBase (v.3) for subcontractors (construction work chosen as best-fit) and as no range available based on work classification, a minimum 5% applied for emission factor uncertainty.
Category 1 – Americas Subcontractors	+/- 40.0%	+/- 6.3%	Poor	15.07%	
Category 1 – Americas Other PG&S	+/- 5.0%	+/- 5.0%	Good	8.81%	
Category 1 – APAC Subconsultants	+/- 20.0%	+/- 10.0%	Fair	12.22%	
Category 1 – APAC Subcontractors	+/- 40.0%	+/- 10.0%	Poor	10.53%	
Category 1 – APAC Other PG&S	+/- 5.0%	+/- 10.0%	Good	23.24%	
Category 1 – EMEA Subconsultants	+/- 20.0%	+/- 10.0%	Fair	0.82%	Lower data and emission factor uncertainty due to greater levels of financial detail related to purchased goods and services making it easier to determine relevance for inclusion in the reporting (other than subcontractors and subconsultants).
Category 1 – EMEA Subcontractors	+/- 40.0%	+/- 10.0%	Poor	0.09%	
Category 1 – EMEA Other PG&S	+/- 5.0%	+/- 10.0%	Good	0.86%	
Category 2 – Americas Capital Goods	+/- 7.0%	+/- 5.0%	Good	1.22%	Lower data and emission factor uncertainty due to greater levels of financial detail related to purchased capital goods making it easier to determine relevance for inclusion in the reporting.
Category 2 – APAC Capital Goods	+/- 7.0%	+/- 5.0%	Good	2.81%	
Category 2 – EMEA Capital Goods	+/- 7.0%	+/- 7.0%	Good	0.23%	

Uncertainty rankings based on “Measurement and Estimation Uncertainty of GHG Emissions” calculation tool (GHG Protocol)

Data source description	Uncertainty of activity data (confidence interval expressed in ± percent)	Uncertainty of emission factor confidence interval expressed in ± percent)	Certainty ranking (calculator-assigned)	% Total Scope 3 emissions (0.00% indicates <0.01%)	Ranking rationale
Category 3 – Electricity Use	+/- 8.7%	+/- 7.0%	Good	1.06%	Energy use data uncertainty based on a weighted average of the Scope 1 and 2 uncertainty data calculations. Low emission factor uncertainty due to limitations on available production/distribution factors for fuels and distribution losses for electricity use.
Category 3 – Natural Gas Use	+/- 14.1%	+/- 5.0%	Good	0.12%	
Category 3 – Fuel Use	+/- 5.9%	+/- 5.0%	Good	0.53%	
Category 3 – Fuel Use (estimated from mileage)	+/- 5.0%	+/- 5.0%	Good	0.05%	
Category 5 – Waste Generation	+/- 25.0%	+/- 15.0%	Fair	0.36%	High waste generation data uncertainty (estimated) based data collection method (visual surveys), assumptions regarding waste density, and as over 50% of dataset is backfilled. Increase in data certainty using available waste invoices from 70% labs, IT waste data is also directly sourced from supplier. Further, invoices now account for over 1/3 of total reported waste. Some emission factor uncertainty due to limitations on available disposal factors for waste, improvement could be made on other sources of specific waste emissions data. Subsequent surveys will help to inform uncertainty.
Category 6 – Business Travel – Hotels	+/- 10.0%	+/- 5.0%	Good	0.79%	Data from hotel travel predominantly from the company's travel management system which captures supplier data at booking point, though an uncertainty assigned to this data of 10% for bookings outside the system , where it was evident bookings occurred outside the travel management system, hotel night stay was estimated based on spend data, increasing data uncertainty.
Category 6 – Business Travel – Hotels (Estimated)	+/- 15.0%	+/- 5.0%	Fair	0.30%	
Category 6 – Business Travel – Air	+/- 5.0%	+/- 5.0%	Good	5.64%	Data from air travel predominantly from the company's travel management system which captures supplier data at booking point, uncertainty assigned to this data of 10% for any possible bookings outside of the system.

Uncertainty rankings based on “Measurement and Estimation Uncertainty of GHG Emissions” calculation tool (GHG Protocol)

Data source description	Uncertainty of activity data (confidence interval expressed in ± percent)	Uncertainty of emission factor confidence interval expressed in ± percent)	Certainty ranking (calculator-assigned)	% Total Scope 3 emissions (0.00% indicates <0.01%)	Ranking rationale
Category 6 – Business Travel – Rental Car distance	+/- 5.0%	+/- 5.0%	Good	0.97%	Most For car rental data, some mileage data estimated on mixed data based on rental days/ spend /average travel per day from limited known data, increasing this data uncertainty. Low emission factor uncertainty due to limitations on available business travel factors.
Category 6 – Business Travel – Rental Car mixed	+/- 15.0%	+/- 5.0%	Fair	0.09%	
Category 6 – Business Travel – Misc. Spend (USD)	+/- 15.0%	+/- 10.0%	Fair	0.10%	Total spend data for miscellaneous travel expenses, unable to separate transport such as taxi, rail, ferry, etc. combined with other travel expenses not accounted in PG &S. Accounted for as expenses related to all other travel arrangement and reservation services in Americas, and supporting and auxiliary transport services EMEA and APAC.
Category 6 – Business Travel – Misc. Spend (AUD)	+/- 15.0%	+/- 5.0%	Fair	0.13%	
Category 6 – Business Travel – Misc. Spend (GBP)	+/- 15.0%	+/- 5.0%	Fair	0.03%	
Category 6 Uber travel	+/- 5.0%	+/- 5.0%	Good	0.01%	Data from vendor, minor uncertainty (5%) related to vehicle type and number of passengers.
Category 6 Reimbursed Mileage	+/- 10.0%	+/- 5.0%	Good	1.67%	Based on expense reports, mileage not always confirmed resulting in an uncertainty of 10%
Category 6 Upstream emissions from travel	+/- 6.9%	+/- 5.0%	Good	1.34%	Data uncertainty based on weighted average from group. Low emission factor uncertainty due to limitations on available business travel factors.
Category 7 – Employee Commute	+/- 15.0%	+/- 10.0%	Fair	5.74%	Survey from 39% participation prorated to FTE, reduces certainty around data, emission factors for work from home limited in choice, but does not fit all geographic regions. Commute emission factor data higher certainty as similar to business commute.
Category 7 – Work from Home	+/- 15.0%	+/- 10.0%	Fair	3.41%	

Uncertainty rankings based on “Measurement and Estimation Uncertainty of GHG Emissions” calculation tool (GHG Protocol)

Appendix E

→ External auditor assurance statement



LRQA GROUP LIMITED Independent Assurance Statement

Relating to GHD Group Limited’s GHG Emissions Report for Fiscal Year 2024

This Assurance Statement has been prepared for GHD Group Limited in accordance with our contract.

Terms of engagement

LRQA GROUP LIMITED was commissioned by GHD Group Limited [hereafter referred to as GHD Group] to provide independent assurance on GHD’s GHG Emission Report on its FY 2024 Greenhouse Gas Emissions, [hereafter referred to as “the Report”] for the fiscal year 2024 (from 01st July 2023 to 30th June 2024). The assurance level for the Scope 1 and Scope 2 sources of GHG emissions is Reasonable level of assurance with 5% materiality and for the scope 3 sources, the assurance level is limited level with materiality of LRQA’s professional judgement using LRQA’s verification procedure / ISO 14084-Part 3 for greenhouse gas emissions.

GHD Group’s geographical boundary includes its Head Office operations located at Sydney, New South Wales and other sites located in Americas, APAC and EMEA economic regions. Our assurance engagement covered GHD Group’s operations and activities that provides civil engineering consultancy, planning, design and architectural advisory services using an ‘Operational Control’ approach and specifically covered the following

- Verifying conformance with:
 - World Resources Institute / World Business Council for Sustainable Development Greenhouse Gas Protocol: A corporate accounting and reporting standard, revised edition [otherwise referred to as the WRI/WBCSD Protocol] for the GHG data¹ read along with Technical Guidance for Calculating Scope 3 Emissions.
- Evaluating the accuracy and reliability of GHG Emissions data covering the following categories:
 - Scope 1 Emissions
 - Scope 2 Emissions- Location based and Market based emission calculations
 - Scope 3 Emissions related to GHG Protocol: Category 1- Purchased goods and services²; Category 2- Capital goods; Category 3- Fuel- and energy-related activities; Category 5- Waste generated in operations; Category 6- Business travel; Category 7- Employee commuting

Our Assurance engagement included the data and information of GHD Group’s customers, suppliers, contractors and any third-party mentioned in the report; however, the source of data was not assessed.

Management Responsibility

GHD Group management was responsible for preparing the report and conformity with the GHG Protocol and for maintaining effective internal controls over the systems from which the report is derived. LRQA’s responsibility was to carry out an assurance engagement on the Report in accordance with our contract with GHD Group. LRQA GROUP LIMITED disclaims any liability or responsibility to others as explained in the end footnote.

Ultimately, the report has been approved by, and remains the responsibility of GHD Group.

¹ <http://www.ghgprotocol.org/>

² The Category 1 data includes the data for “Category 4- Upstream Transportation & Distribution” and “Category 8- Downstream Transportation and Distribution”.

Page 1 of 4



LRQA’s approach

Our verification has been conducted in accordance with ISO 14084-3:2019, ‘Specification with guidance for verification and validation of greenhouse gas statements’ to provide limited assurance that GHG data as presented in the Report have been prepared in conformance with WRI/WBCSD GHG Protocol.

To form our conclusions the assurance engagement was undertaken as a sampling exercise and covered the following activities:

- Remotely interviewed relevant staff of the organization responsible for managing GHG emissions data and records and assumptions used in the calculations;
- Remotely verified activity data -on a sampling basis at an aggregated level for Scope 3 emissions and at source level for Scope 1 and Scope 2 emissions;
- Remotely verified the conversion factors from UK Government GHG Conversion Factors for Company Reporting, 2024 and emission factors from USEPA 2024 Emission Factors for Greenhouse Gas Inventories; Australian National Greenhouse Accounts Factors [DCCEEW FY 2024]; USEPA Direct Fugitive Emissions from Refrigeration, Air Conditioning, Fire Suppression, and Industrial Gases, 2014 for Scope 1 emissions;
- Remotely verified country-based emission factors for Scope 2 emissions on a sampling basis with reference to International Renewable Energy Agency Country Profiles [2023], 2024 eGRID Mix [2022 data] and the country-based emission factors published by Canada National Inventory Report 2024 [Part 3 Annex 13, 2022 Data], New Zealand Ministry for the Environment Purchased Electricity and Key Energy Statistics [Philippine Department of Energy];
- Remotely verified emission factors for Scope 3 emissions from USEPA Supply Chain Greenhouse Gas Emission Factors v1.2 by NAICS-8, April 2023 [2023, Without Margins] and ExioBase Ignite V3.

Level of Assurance & Materiality

In accordance with our contract agreement, the assurance was conducted at a reasonable level for Scope 1 and 2 at a materiality of 5% and at a limited level of assurance for Scope 3 Categories 1 to 7 and 9 using professional judgement materiality. The opinion expressed in this Assurance Statement has been accordingly formed.

Note: The extent of evidence-gathering for a Reasonable assurance engagement is more than for a Limited assurance engagement. Limited assurance engagements focus on aggregated data rather than physically checking source data at sites. Consequently, the level of assurance obtained in a Reasonable assurance engagement is higher than the assurance that would have been obtained had a Limited assurance engagement been performed.

LRQA’s Opinion

Based on LRQA’s approach, we believe that GHD Group has in all material respects, for the GHG emissions for Scope 1 and scope 2 disclosed in the Report as summarized in Table 1 have been verified to have been correctly stated.

Based on LRQA’s approach, nothing has come to our attention that would cause us to believe that GHD Group has not, in all material respects, for the GHG emissions for scope 3 disclosed in the report as summarized in Table 1, met the requirements of the criteria listed above and disclosed accurate and reliable performance data and information.

Page 2 of 4



Table 1: Summary of GHD Key data for GHG emissions data for Fiscal Year 2024

GHG Emission Categories	tCO ₂ e
Scope 1 Emissions	4,523
Scope 2 Emissions (Location based)	5,270
Scope 2 Emissions (Market based)	3,425
Scope 3 Emission Categories	145,720
Category 1- Purchased goods and services ^a	106,965
Category 2- Capital goods	6,221
Category 3- Fuel and energy-related activities	2,557
Category 5- Waste generated in operations	522
Category 6- Business travel	16,127
Category 7- Employee commuting including Teleworking ^a	13,329
Total GHG Emissions (Location based)	155,513
Total GHG Emissions (market based)	153,668

Observations

Further observations and findings, made during the assurance engagement, are:

- Scope 3, Category 1 data currently includes the data for "Category 4- Upstream Transportation & Distribution" and "Category 9- Downstream Transportation and Distribution" which ought to have been separated.

Recommendations

- Consider choosing a consumption-based emission factor over distance-based factor for fuels when the source consumption data is available.
- Strengthen the collection of activity data for refrigerant leaks and waste to landfill.

LRQA's standards, competence and independence

LRQA GROUP LIMITED implements and maintains a comprehensive management system that meets accreditation requirements for ISO 14085 Greenhouse gases – Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition and ISO/IEC 17021 Conformity audit – Requirements for bodies providing audit and certification of management systems that are at least as demanding as the

^a The Category 1 data includes the data for "Category 4- Upstream Transportation & Distribution" and "Category 9- Downstream Transportation and Distribution".
^a Emissions from employees working remotely



requirements of the International Standard on Quality Control and comply with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants.

LRQA GROUP LIMITED ensures the selection of appropriately qualified individuals based on their qualifications, training and experience. The outcome of all verification and certification audits is then internally reviewed by senior management to ensure that the approach applied is rigorous and transparent.

The verification and certification assessments are the only work undertaken by LRQA for GHD Group and as such does not compromise our independence or impartiality.

Signed

Syju Alias
LRQA GROUP LIMITED Lead Verifier
LRQA reference: NEL00000687

Dated: 09 December 2024

LRQA GROUP LIMITED, its affiliates and subsidiaries, and their respective offices, employees or agents are, individually and collectively, referred to in this report as "LRQA". LRQA GROUP LIMITED assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or for any recovery provided, unless that person has signed a contract with the relevant LRQA GROUP LIMITED entity for the provision of this information or advice and in that case any responsibility or liability is excluded to the extent permitted by law and in that case any responsibility or liability is excluded to the extent permitted by law.

The English version of this Assurance Statement is the only valid version. LRQA GROUP LIMITED assumes no responsibility for versions translated into other languages.

This Assurance Statement is only valid when published with the report to which it refers. It may only be reproduced in its entirety.

Copyright © LRQA, 2024

