

The Amey logo is displayed in white text in the top left corner of the page. The background of the entire page is a photograph of a tunnel interior, featuring a curved ceiling with a series of bright lights and blurred light trails from vehicles moving through the tunnel, creating a sense of motion and depth.

Amey

Amey UK Limited Greenhouse gas inventory report 2024

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Introduction

This report details the Amey UK Limited Greenhouse gas (GHG) inventory, or more commonly referred as Carbon Footprint.

The report is prepared in accordance with the requirements of ISO 14064-1:2018 Greenhouse gases – Organisational level quantification and reporting of greenhouse gas emissions and removals.

General description of the organisational goals and inventory objectives

Purpose

Amey recently published through SBTi commitment, that by 2030, we will achieve a;

- ✓ 52.8% reduction in Scopes 1 and 2 and;
- ✓ 30% reduction in Scope 3

With the aim to be a Net Zero organisation by 2040.

The purpose of the GHG report is to:

1. Meet assist in meeting several our compliance obligations, namely:
 - a. The Companies (Directors' Report) and Limited Liability Partnerships (Energy and Carbon Report) Regulations 2018 (Streamlined Energy and Carbon Reporting (SECR))
 - b. Companies (Strategic Report) (Climate-related Financial Disclosure) Regulations 2022
 - c. Science-based targets initiative (SBTi)
 - d. Race to Zero
 - e. IEMA Pledge to Zero.

Objectives

The objectives of the report are to:

1. Clearly communicate our GHG emissions inventory (carbon footprint) in a consistent manner that meets the requirements of ISO 14064-1
2. To gain external verification of our annual GHG emissions inventory to ISO 14064-1 standard
3. To have confidence in the footprint data we discuss, communicate, and make business decisions based upon.

Roles and responsibilities

The Group Carbon and Climate Change Business Partner is responsible for the preparation and production of the GHG report.

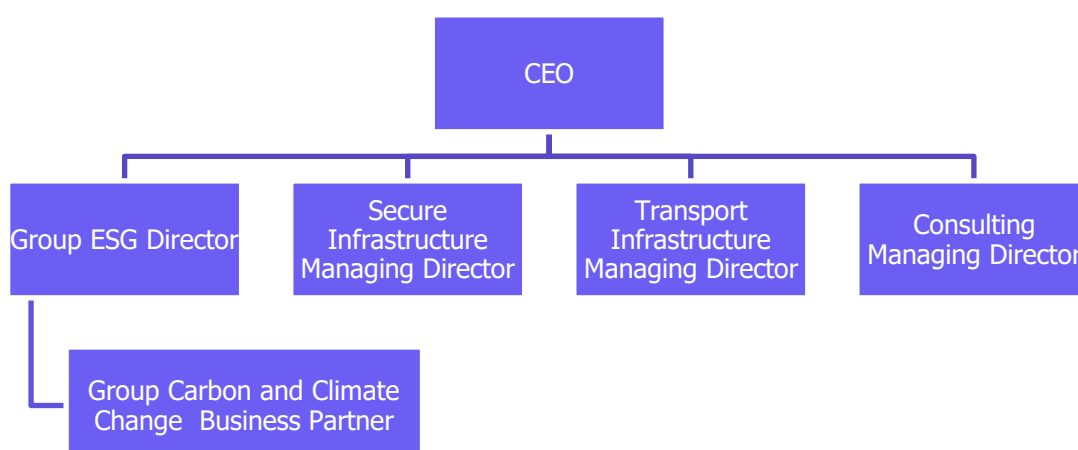


Figure 1: Organisational chart

Frequency and reporting period

The GHG report is prepared annually for each preceding calendar reporting period. This is chosen as it aligns with Amey's financial reporting period.

This report includes carbon accounting year 2024.

Report availability and methods of dissemination

The finalised GHG report, once externally verified, will be available electronically through our intranet (AmeyWorld).

This will be available to our stakeholders on request.

Information included in the report

The GHG's that are required to be included in GHG inventory reports are defined by the National reporting guidelines under the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol.

The table below details the seven GHG's, with an explanation of what they are.

GREENHOUSE GAS	EXPLANATION
Carbon dioxide (CO ₂)	Carbon dioxide (CO ₂) is a colourless, odourless, and non-poisonous gas formed by combustion of carbon and in the respiration of living organisms and is considered a greenhouse gas. Emissions means the release of greenhouse gases and/or their precursors into the atmosphere over a specified area and period. Carbon dioxide emissions or CO ₂ emissions are emissions stemming from the burning of fossil fuels and the manufacture of cement; they include carbon dioxide produced during consumption of solid, liquid, and gas fuels as well as gas flaring. ¹
Methane (CH ₄)	Methane (CH ₄) is a hydrocarbon that is a primary component of natural gas. Methane is also a greenhouse gas (GHG), so its presence in the atmosphere affects the earth's temperature and climate system. Methane is emitted from a variety of anthropogenic (human-influenced) and natural sources. ²
Nitrous oxide (N ₂ O)	Nitrous oxide, more commonly known as "laughing gas," is a potent greenhouse gas, 300 times more powerful than carbon dioxide. Global emissions of N ₂ O are increasing because of human activities that stimulate its production. ³
Hydrofluorocarbons (HFCs)	Hydrofluorocarbons (HFCs) are greenhouse gases (GHGs) commonly used in refrigeration, air-conditioning (AC), building insulation, fire extinguishing systems, and aerosols. ⁴
Perfluorocarbons (PFCs)	Perfluorocarbons are a group of human-made chemicals composed of carbon and fluorine only. Perfluorocarbons are powerful greenhouse gases that were introduced as alternatives to ozone depleting substances. PFCs replace chlorofluorocarbons (CFCs) in manufacturing semiconductors. ⁵
Sulphur hexafluoride (SF ₆)	SF ₆ has historically been used in a variety of applications, from metal smelting to filling double-glazing panels, but the electricity industry is one of the few places where it's still used today. ⁶

¹ https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Carbon_dioxide_emissions

² [https://www.epa.gov/gmi/importance-methane#:~:text=Methane%20\(CH4\)%20is%20a,%20influenced\)%20and%20natural%20sources.](https://www.epa.gov/gmi/importance-methane#:~:text=Methane%20(CH4)%20is%20a,%20influenced)%20and%20natural%20sources.)

³ <https://theconversation.com/nitrous-oxide-a-powerful-greenhouse-gas-is-on-the-rise-from-ocean-dead-zones-162812>

⁴ [https://www.epa.gov/snap/reducing-hydrofluorocarbon-hfc-use-and-emissions-federal-sector-through-snap#:~:text=Hydrofluorocarbons%20\(HFCs\)%20are%20greenhouse%20gases,fire%20extinguishing%20systems%2C%20and%20aerosols](https://www.epa.gov/snap/reducing-hydrofluorocarbon-hfc-use-and-emissions-federal-sector-through-snap#:~:text=Hydrofluorocarbons%20(HFCs)%20are%20greenhouse%20gases,fire%20extinguishing%20systems%2C%20and%20aerosols)

⁵ [https://ec.gc.ca/toxiques-toxics/Default.asp?lang=En&n=AA329670-1#:~:text=Perfluorocarbons%20\(PFCs\),\(CFCs\)%20in%20manufacturing%20semiconductor](https://ec.gc.ca/toxiques-toxics/Default.asp?lang=En&n=AA329670-1#:~:text=Perfluorocarbons%20(PFCs),(CFCs)%20in%20manufacturing%20semiconductor)

⁶ <https://www.nationalgrid.com/stories/energy-explained/what-is-sf6-sulphur-hexafluoride-explained>

Nitrogen trifluoride (NF₃)

NF₃ is used in a relatively small number of industrial processes. It is primarily produced in the manufacture of semiconductors and LCD (Liquid Crystal Display) panels, and certain types of solar panels and chemical lasers.⁷

Verification

The GHG inventory detailed within this report is calculated using documented processes and procedures in the GHG data gathering, data handling and documentation, model development and emission calculations, which form the GHG Quality Management Plan. Each element is intended to ensure the GHG inventory presented meets the requirements of both the GHG Protocol and the ISO 14064-1:2018 standard.

The report and the documented processes used have been externally verified against the ISO 14064-1:2018 standard.

The verification statement is included below.

⁷ <https://ghgprotocol.org/blog/nitrogen-trifluoride-now-required-ghg-protocol-greenhouse-gas-emissions-inventories>

Organisational boundary

Amey accounts for and reports our consolidated GHG data using the **operational control** approach as defined by the GHG Reporting Protocol.

Under the operational control approach, a company accounts for 100% of emissions from operations over which it or one of its subsidiaries has operational control.

The extent of the boundary includes the operational business units:

1. Transport Infrastructure,
2. Group Shared Services
3. Complex Facilities, and
4. Amey Consulting.

The locations included within the boundary of our footprint are detailed in the locations and scopes documents that are maintained within our ISO 9001, ISO 14001, and ISO 45001 certifications.

Transport Infrastructure

We make journeys better and exploring easier – by helping to make roads safer, railways smoother and our streets and green spaces clean.

Working through locally based teams, we support communities by helping to create better, safer, and more pleasant places through the provision of integrated highway design, well-designed streets, well-maintained grounds, modern public lighting, and efficient winter maintenance solutions.

And with 4.8 million journeys a day on UK railways, we are also hard at work, day, and night, maintaining the railways with the latest signalling systems, upgraded track and overhead lines and regular asset inspections.

Ultimately, investing to create well-functioning, safe spaces which minimise disruption, keep people moving and support thriving communities.

Complex Facilities

Amey Secure Infrastructure is the leading organisation in Facilities and Estate Management. We look after thousands of assets on behalf of the client in secure environments. We transform the way our clients live, work and travel. We ensure clients optimise their assets through data analytics and intelligent management to maximise performance, minimise cost and manage risk.

As a long term and trusted partner, we have integrated the genuine world leading capability of our consulting business with our client facing teams to produce an operating environment where back-office applications, asset management data and client and customer interfaces are integrated to enable greater client insight and better decision support.

Amey Consulting

Amey Consulting is one of the UK's leading engineering consultancies, inspiring change and driving improvements across the UK's critical infrastructure to create a positive impact on society.

We want to make a genuine difference to people's lives, whether we're using data to reduce delays across the road and rail network, designing carbon neutral schemes or delivering critical infrastructure projects. Our ambition is to leave a legacy of sustainable infrastructure for future generations.

Our team of designers, engineers and consultants are transforming the way we design strategic assets - providing collective creativity to our clients, to keep the country moving, and supporting economic growth. Providing two core services within our portfolio - Consultancy & Design and Advisory & Analytics, find out more about Amey Consulting.

Legal entities

Wholly owned subsidiaries

The boundary of the reporting includes all active wholly owned subsidiaries⁸ as detailed in Appendix 2 of this report.

As wholly owned subsidiaries, Amey has operational control and therefore 100% of the footprint is captured and accounted for within the reported carbon footprint.

Joint ventures

Amey has several joint ventures; some are incorporated, and some are unincorporated.

Incorporated joint ventures – these are not included within the reported footprint as these are operating entities in themselves and not part of Amey operations.

Unincorporated joint ventures – these are typically operated by “Management Boards,” constituted from members of Amey and the joint venture party(ies). As a result, Amey does not have operational control and therefore these are excluded from the reported footprint.

There are some exceptions to this. A few unincorporated joint ventures exist where Amey does have operational control. These are detailed on the joint venture register (AMEY-LEGAL-JV-RE-01) that is maintained by Amey’s Legal Services team and is updated at least annually, or at a point of change.

Brokered energy, goods, waste & assets

There are instances within our contracts where we are required to use our supply chain to purchase fuel for the customer sites on their behalf. Examples are wood pellets for school boilers, red diesel (now diesel) for the prison emergency generators and electricity for a school.

This fuel purchased on behalf of our customers that Amey does not use itself, or form part of our service delivery is excluded from our carbon footprint, as it forms our customers Scope 1 or 2 emissions.

We also procure plant on behalf of our customers, again to utilise our supply chain power. These are not owned or part of the Amey, they are directly and wholly owned by our customers.

A final service we provide to our clients is in the use of brokered waste services, as we don’t not provide waste management services, in that we arrange for a third party to manage the removal of waste generated by our customers for offsite treatment. This forms our clients Scope 3, Category 5 and is once again, a financial transaction utilising our supply chain influence.

Where we are unable to accurately identify fuel, goods, or assets that we purchase for our clients under this brokering service, we include this within our reported inventory.

⁸ Amey Public Services LLP and Amey Roads (North Lanarkshire) Limited are not wholly owned with only 67% ownership in each but are considered to be within our operational control.

Reporting boundaries

The table below details and explains the emission categories that are considered within the GHG inventory report.

GHG PROTOCOL SCOPE	CATEGORY	DESCRIPTION	ISO 14064-1:2018 CATEGORY
Scope 1	Mobile emissions, Stationary emissions, Fugitive emissions	Direct emissions from owned or controlled sources	Category 1: Direct GHG emissions and removals
Scope 2	Purchased electricity, heat, and steam	Indirect emissions from the generation of purchased electricity, steam, heating, and cooling consumed by the reporting company. Where the majority of Ameys electricity is covered by REGO certificates there is a small portion that is Location based resulting from non-renewable electricity of which Amey hold no autonomy for given its directed through contract and accounts with Premises and clients.	Category 2: Indirect GHG emissions from imported energy
Scope 3	Category 1 - Purchased goods and services	Extraction, production, and transportation of goods and services purchased or acquired by the reporting company in the reporting year, not otherwise included in Categories 2 - 8	Category 4: Indirect GHG emissions from products used by organisation
Scope 3	Category 2 – Capital goods	Extraction, production, and transportation of capital goods purchased or acquired by the reporting company in the reporting year	Not included, as no GHG emissions identified
Scope 3	Category 3 – Fuel and energy-related activities (not included in scope 1 or scope 2)	a. Upstream emissions of purchased fuels (extraction, production, and transportation of fuels consumed by the reporting company) b. Upstream emissions of purchased electricity (extraction, production, and transportation of fuels consumed in the generation of electricity, steam, heating, and cooling consumed by the reporting company) c. Transmission and distribution (T&D) losses (generation of electricity, steam, heating, and cooling that is consumed (i.e. lost) in a T&D system) – reported by end user	Category 3: Indirect emissions from transportation
Scope 3	Category 4 – Upstream transport and distribution	a. Transportation and distribution of products purchased by the reporting company in the reporting year between a company's tier 1 suppliers and its own operations (in vehicles and facilities not owned or controlled by the reporting company) b. Transportation and distribution services purchased by the reporting company in the reporting year, including inbound logistics, outbound logistics (e.g., of sold products), and transportation and distribution between a company's own facilities (in vehicles and facilities not owned or controlled by the reporting company)	Category 3: Indirect emissions from transportation
Scope 3	Category 5 – Waste generated in operations	Disposal and treatment of waste generated in the reporting company's operations in the reporting year (in facilities not owned or controlled by the reporting company)	Category 4: Indirect emissions from products used by organisation
Scope 3	Category 6 – Business travel	Transportation of employees for business-related activities during the reporting year (in vehicles not owned or operated by the reporting company)	Category 3: Indirect emissions from transportation

GHG PROTOCOL SCOPE	CATEGORY	DESCRIPTION	ISO 14064-1:2018 CATEGORY
Scope 3	Category 7 – Employee commuting	Transportation of employees between their homes and their worksites during the reporting year (in vehicles not owned or operated by the reporting company)	Category 3: Indirect emissions from transportation
Scope 3	Category 8 – Upstream leased assets	Operation of assets leased by the reporting company (lessee) in the reporting year and not included in scope 1 and scope 2 – reported by lessee	Included, in scope but emissions reported in Category 1: Direct GHG emissions and removals; Category 2: Indirect GHG emissions from imported energy and Category 4: Indirect GHG emissions from products used by organisation
Scope 3	Category 9 – Downstream transport and distribution	Transportation and distribution of products sold by the reporting company in the reporting year between the reporting company's operations and the end consumer (if not paid for by the reporting company), including retail and storage (in vehicles and facilities not owned or controlled by the reporting company)	Not included, as no GHG emissions identified
Scope 3	Category 10 – Processing of sold products	Processing of intermediate products sold in the reporting year by downstream companies (e.g., manufacturers)	Not included, as no GHG emissions identified
Scope 3	Category 11 – Use of sold products	End use of goods and services sold by the reporting company in the reporting year	Not included, as no GHG emissions identified
Scope 3	Category 12 – End-of-life treatment of sold products	Waste disposal and treatment of products sold by the reporting company (in the reporting year) at the end of their life	Not included, as no GHG emissions identified
Scope 3	Category 13 – Downstream leased assets	Operation of assets owned by the reporting company (lessor) and leased to other entities in the reporting year, not included in scope 1 and scope 2 – reported by lessor	Not included, as no GHG emissions identified
Scope 3	Category 14 – Franchises	Operation of franchises in the reporting year, not included in scope 1 and scope 2 – reported by franchisor	Not included, as no GHG emissions identified
Scope 3	Category 15 – Investments	Operation of investments (including equity and debt investments and project finance) in the reporting year, not included in scope 1 or scope 2	Not included, as no GHG emissions identified

Criteria to determine significant emissions

Across the GHG scopes included in the inventory there are elements of our footprint that have not met the criteria for significant emissions and therefore the GHG emissions not calculated.

The criterion for significant emission is detailed below one or more criterion needs to be met for the emission to be considered sufficient:

- Is a Scope 1 or Scope 2 emission source
- The estimated or calculated emissions for that scope 3 emission category (that is not captured in our Scope 1 or 2) contributes >1% of Amey's total carbon emission inventory.

- Is a category that is deemed to be an area of focus of emission reduction activity for the organisation within our Roadmap to Net Zero, or other associated policies or projects.

GHG emission factors

The GHG emission factors used within the calculation of this inventory are from several sources as summarised below. The exact GHG emission factors used are detailed within the Data Management Plan (Version 9.0) and listed in each of the datasets that have been provided to the external auditors for full transparency.

- DEFRA GHG conversion factors for the calendar year 2024
- DEFRA Table 13: Indirect emissions from supply chain
- Bitumen GHG conversion factor: <https://trl.co.uk/permanent-landing-pages/asphalt-pavement-embodied-carbon-tool-aspect/>
- Concrete GHG conversion factor: Fennell, P. S., Davis, S. J. and Mohammed, A., (2021). *Decarbonizing cement production*. Joule, Volume 5, Issue 6, pp. 1305-1311. Available at: <https://www.sciencedirect.com/science/article/pii/S2542435121001975>
- Commercial waste conversion factor: Reconomy.

GWP values

The GWP values used in the calculation of the emission factors for refrigerants are detailed in the inventory tables within this report and listed below.

These have been sourced from the AR6 IPCC report, using the 100-year values⁹.

- Carbon Dioxide (CO₂) (kg) 1 kgCO_{2e}
- Methane (CH₄) (kg) 27.9 kgCO_{2e}
- Nitrous Oxide (N₂O) (kg) 273 kgCO₂
- Hydrofluorocarbons (HFC's)
 - HFC-227ea (kg) 3,600 kgCO₂
 - R410A (kg) 2,088 kgCO_{2e}
 - R407C (kg) 1,774 kgCO_{2e}
- Perfluorocarbons (PFC's) No emissions
- Nitrogen Trifluoride (NF₃) No emissions
- Sulphur Hexafluoride (SF₆) No emissions

⁹ https://www.ipcc.ch/report/ar6/wq1/downloads/report/IPCC_AR6_WGI_Chapter07_SM.pdf

Biogenic anthropogenic emissions

Biogenic anthropogenic carbon emissions are those that originate from biological sources such as plants, trees, and soil.¹⁰

Explanation / Definition of biogenic anthropogenic carbon

Biogenic CO₂ emissions are one of several activities labelled 'outside of scopes' by the GHG Protocol Corporate Accounting and Reporting Standard because the Scope 1 impact of these fuels has been determined to be a net '0' (since the fuel source itself absorbs an equivalent amount of CO₂ during the growth phase as the amount of CO₂ released through combustion).

Full reporting of any fuel from a biogenic source, including electricity, should have the biogenic CO₂ value documented to ensure complete accounting of the emissions created.¹¹

The biogenic anthropogenic sources of carbon emissions have been identified within the carbon inventory for each year within the row detailed *Direct emissions in tonnes of CO₂ from biomass*.

Impact of uncertainties on the accuracy of the GHG emissions

ISO 14064-1:2018 requires the assessment of uncertainty for the GHG inventory, specifically the data that is used to calculate it.

The methodology used is developed on the Greenhouse Gas Protocol Short Guidance for Calculating Measurement and Estimation Uncertainty for GHG Emissions.¹² Full methodology can be found in Appendix 1, which has a copy of the Greenhouse gas (GHG) data uncertainty assessment procedure (Version 1).

Uncertainty commentary

Category 1: Direct GHG emissions and removals in tonnes CO₂e

The use of employee entered business miles and odometer readings to calculate business fuel use for those employees with company cars and a company fuel card, introduces a small level of uncertainty. However, the recording of business miles is undertaken through a market leading external organisation whose processes and capture systems have been audited by HMRC on several occasions.

The business mileage calculation is used to proportionally split the fuel between personal use and business use. The alignment of the mileage data and fuel card data is dependent on timely input of mileage by the employee. If there is no mileage data against the fuel card for that reporting month then the full fuel card volume is considered business use. This conservative methodology results in the likelihood that the fuel card fuel that contributes to our direct emissions may be over reported. It is considered this is likely to be small percentage as employees are financially incentivised to claim on time as the reimbursement is via their pay, plus our mileage capture system provides reminders in advance of reporting and contacts those reporting late or not reporting at all, which is part of the service package with the external organisation.

F-GAS reporting – Due to limited information being available in relation to FGAS an assumptive model was prescribed which attributed turnover to know and verified 2022 figures to reach a standardised factor which could then be applied to 2024's annual turnover. We are actively working to manage F-Gas reporting through potential building management systems and continue to develop tools to capture the required data.

Category 2: Indirect GHG emissions from imported energy

The complexity of this organisation as tenants of buildings or depots, not owned by Amey poses a risk of increased uncertainty compared to owning our entire operational locations. However, the processes

¹⁰ Harris, Z. M., Milner, S., Taylor, G., (2018). *Greenhouse Gas Balances of Bioenergy Systems*. Academic Press, pp. 55-76.

¹¹ DEFRA GHG Conversion Factors - 2022

¹² <https://ghgprotocol.org/sites/default/files/ghg-uncertainty.pdf>

and data capture developed for this category is considered to have satisfactorily addressed this and therefore there is no significant concerns with this category.

Category 3: Indirect GHG emissions from transportation

The complexity and size of our supply chain result in the estimation of emissions for products delivered to our sites more difficult. The methodologies developed to assess this focuses on the significant materials that we purchase, of which there is a more evidence within our datasets to accurately calculated these emissions, such as weights or volumes. This approach considers that over 75% of our supply chain has a good assessment of the transportation emissions.

The commuting dataset is calculated using methodology that introduces a level of uncertainty into the emissions reported. using the following methodology; a sphere formula to calculate the straight-line distance between two postcodes; an assumption that the direct line distance needs to be doubled to take into account that roads do not run in straight lines; the professional judgement to determine how often an employee with a specific job title will travel to the office or depot in a week; the mode of transport to commute uses the 2023 UK national statistics annual report on UK transport and the employee dataset for 2024. With these combined, the uncertainty of this element of the indirect emissions is considered notable. However, the emission reported for commuting is likely to be over, rather than under reported, as the number of our people living close to depots is high and therefore it is considered a greater percentage of our employees use active transport to commute and that the double of the straight-line distance between two postcodes is estimated to calculate on-average 12% longer distance than that returned from The AA route finder.

Category 4: Indirect GHG emissions from products used by organisation

As discussed in category 3, Amey's supply chain is large and complex. The material emissions within the products and services are assessed for over 75% of our purchases and therefore, the inventory is considered to have a good assessment of our indirect emissions in this category. Work to move the remaining of the supply chain methodology to an evidence-based methodology will continue.

Where we have an unknown quantification for constituent parts within some products, such as, Kerbs, we assume 100% of the material used e.g. aggregate, when assigning a carbon conversion factor.

Category 5: Indirect GHG emissions associated with the use of products from the organisation

None, no emissions in this category.

We are working with brokers and some waste contractors don't have weighbridges therefore these are estimates and % diverted from landfill. Some of our larger waste brokers will assign a carbon factor to a waste movement and we don't necessarily know the methodology behind the figure (carbon conversion). If we are in a shared office the waste in co collected and the facilities manager will dispose ergo we don't have sight of our specific waste as co collected. On projects they use a broker. In some instances, our clients waste and our project waste is co collected resulting in ambiguity on proportionality.

Category 6: Indirect GHG emissions from other sources

None, no emissions in this category.

Conclusion

In conclusion, it is considered that the reported inventory captures a very high percentage of our carbon emissions with the uncertainty being most prevalent within the indirect emissions.

Uncertainty assessment findings

Emissions		Data source	Fuel sources	Estimation uncertainty		Systematic certainty	Overall certainty Ranking
1	Category 1: Direct GHG emissions and removals in tonnes CO ₂ e			Parameter certainty	Model certainty		
1.1	Direct emissions from stationary combustion	Procurement (SAP)	Bulk fuel (Kerosene)	High	High	High	High
	Direct emissions from stationary combustion	Total Energies (invoice data)	Natural gas	High	High	High	High
	Direct emissions from stationary combustion	Accounts Payable - ledger entries	Natural gas	Good	Good	Good	Good
	Direct emissions from stationary combustion	Utility Team verified invoice data	Natural gas	High	High	High	High
1.2	Direct emissions from mobile combustion	Shell Fuel Card	Forecourt fuel (Diesel, Petrol & LPG)	High	High	High	High
	Direct emissions from mobile combustion	Procurement (SAP)	Bulk fuels (Diesel, Petrol, LPG, Bottled Gas, Red Diesel)	High	High	High	High
	Direct emissions from mobile combustion	Innovation LLP	Business miles	High	High	High	High
1.3	Direct process emissions and removals arise from industrial processes	End of year data request	Refrigerants	Fair	Good	Fair	Fair
1.4	Direct fugitive emissions from the release of greenhouse gasses in anthropogenic systems						
2	Category 2: Indirect GHG emissions from imported energy						
2.1	Indirect emissions from imported electricity	Utility Team verified invoice data	Purchase renewable	High	High	High	High
	Indirect emissions from imported electricity	Accounts Payable - ledger entries	Purchased non-renewable & renewable not part of central contract	Good	Good	Good	Good
3	Category 3: Indirect GHG emissions from transportation						
3.1	Emissions from Upstream transport and distribution for goods	Procurement (SAP)	Transport of main categories	Good	Good	Good	Good
3.2	Emissions from Business travels	Clarify Travel/Aggitto	Rail & air travel and Hotel stays	Good	Good	Good	Good
	Emissions from Business travels	SAP Concur	Fuel expenses - private car	Good	Good	Good	Good
3.3	Emissions from Employee commuting	HRHelpDesk		Fair	Fair	Fair	Fair
4	Category 4: Indirect GHG emissions from products used by organisation						
4.1	Emissions from Purchased goods & services	Procurement (SAP)	Purchasing spend	Fair	Fair	Fair	Fair
4.2	Emissions from the disposal of solid and liquid waste	Procurement (SAP)	Waste spend	Fair	Good	Good	Fair
4.4	Emissions from the use of assets	Fleet & Plant	Value of asset purchased	High	High	High	High
5	Category 5: Indirect GHG emissions associated with the use of products from the organisation						
	None						
6	Category 6: Indirect GHG emissions from other sources						
	None						

Table 1: 2024 Uncertainty assessment findings

Quantified GHG inventory of emissions and removals

Historical base year and GHG inventory

The base year for Amey UK Limited is 2019 as this is pre-pandemic and considered an appropriate base year for the continuation of our decarbonisation of our organisation.

As our systems and operational boundaries have remained largely the same we have not undertaken a rebaselining. Any changes to our operational structure have so far resulted in a non material change to our organisational boundaries.

REPORTING COMPANY		Amey UK Limited	
Person or Entity responsible for the report		Group Environmental Business Partner	
Reporting period covered		From	To
Organisational boundaries		01/01/2019 31/12/2019	
Reporting boundaries		Attached document Attached document	

Emissions	Notes	2019 CO ₂ e TOTAL (Tonnes)	Carbon Dioxide (CO ₂)	Methane (CH ₄) Oxide (N ₂ O)	Nitrous (HFC's)	Hydrofluor- ocarbons (PFC's)	Perfluoroca- rbons (NF ₃)	Nitrogen Trifluoride (SF ₆)	Sulphur Hexafluoride	Quantitative certainty	Qualitative certainty
		GWP	1	28	273	See report					
1	Category 1: Direct GHG emissions and removals in tonnes CO ₂ e	44,283	43,569	20	532	163	-	-	-		
1.1	Direct emissions from stationary combustion	9,757	9,650	11	96						H
1.2	Direct emissions from mobile combustion	34,363	33,918	9	436						H
1.3	Direct process emissions and removals arise from industrial processes	163				163					P
1.4	Direct fugitive emissions from the release of greenhouse gasses in anthropogenic systems										
1.5	Direct emissions and removals from Land Use, Land Use Change and Forestry										
Direct emissions in tonnes of CO2 from biomass		27									
	Indirect emissions in tonnes CO ₂ e	S/NS*	397,447								
2	Category 2: Indirect GHG emissions from imported energy		506								
2.1	Indirect emissions from imported electricity	S	506								H
2.2	Indirect emissions from imported energy	NS									
3	Category 3: Indirect GHG emissions from transportation		42,832								
3.1	Emissions from Upstream transport and distribution for goods	S	14,129								G
3.2	Emissions from Downstream transport and distribution for goods	NS									
3.3	Emissions from Employee commuting	S	24,318								F
3.4	Emissions from Client and visitor transport	NS									
3.5	Emissions from Business travels	S	4,386								G
4	Category 4: Indirect GHG emissions from products used by organisation		354,109								
4.1	Emissions from Purchased goods	S	352,221								G
4.2	Emissions from Capital goods	NS									
4.3	Emissions from the disposal of solid and liquid waste	S	1,888								G
4.4	Emissions from the use of assets	NS									
4.5	Emissions from the use of services that are not described in the above subcategories	NS									
5	Category 5: Indirect GHG emissions associated with the use of products from the organisation		-								
5.1	Emissions or removals from the use stage of the product	NS									
5.2	Emissions from downstream leased assets	NS									
5.3	Emissions from end of life stage of the product	NS									
5.4	Emissions fom investments	NS									
6	Category 6: Indirect GHG emissions from other sources	NS	-								
Removals											
Direct removals in tonnes CO ₂ e		0									
Storage											
Total storage as of year end in tonnes CO ₂ e		0									
Carbon financial instruments											
Total renewable electricity purchase in kWh											
Renewable electricity purchased in kWh with contractual instruments compliant with ISO 14064-1 Annex E		12,772,197 kWh									
Renewable electricity purchased in kWh with contractual instruments not compliant with ISO 14064-1 Annex E		0 kWh									
Offsets from GHG Scheme in tonnes CO ₂ e		0 CO ₂ e									
Other related information											
Disclosure of most significant sources, sinks, and reservoirs							None				
Statement of emission reduction initiatives							None				
Significance criteria							See attached document				
Uncertainty assessment							See attached document				
Notes											
* Significant / Not significant											

2024 GHG inventory of emissions and removals

REPORTING COMPANY
Person or Entity responsible for the report
Reporting period covered
Organisational boundaries
Reporting boundaries

Amey UK plc
Group Environmental Business Partner
From 01/01/2024 To 31/12/2024
Attached document
Attached document

Emissions		Notes	2023 CO ₂ e TOTAL (Tonnes)	Carbon Dioxide (CO ₂)	Methane (CH ₄)	Nitrous Oxide (N ₂ O)	Hydrofluor- ocarbons (HFC's)	Perfluoroca- rbons (PFC's)	Nitrogen Trifluoride (NF ₃)	Sulphur Hexafluoride (SF ₆)	Quantitative uncertainty	Qualitative uncertainty
			GWP	1	28	273	See report					
1	Category 1: Direct GHG emissions and removals in tonnes CO ₂ e		46,983	29,629	13	387	252	-	-	-		
1.1	Direct emissions from stationary combustion	S	2,363	677	0	9						H
1.2	Direct emissions from mobile combustion	S	44,368	28,952	13	378						H
1.3	Direct process emissions and removals arise from industrial processes	NS	252				252					
1.4	Direct fugitive emissions from the release of greenhouse gasses in anthropogenic systems	NS										
1.5	Direct emissions and removals from Land Use, Land Use Change and Forestry	NS										
Direct emissions in tonnes of CO2 from biomass												
	Indirect emissions in tonnes CO ₂ e	S/NS*	1,345,474									
2	Category 2: Indirect GHG emissions from imported energy		558									
2.1	Indirect emissions from imported electricity	S	558									
2.2	Indirect emissions from imported energy	NS										
3	Category 3: Indirect GHG emissions from transportation		26,640									
3.1	Emissions from Upstream transport and distribution for goods	S	3,761									
3.2	Emissions from Downstream transport and distribution for goods	NS										
3.3	Emissions from Employee commuting	S	21,495									
3.4	Emissions from Client and visitor transport	NS										
3.5	Emissions from Business travels	S	1,384									
4	Category 4: Indirect GHG emissions from products used by organisation		1,318,276									
4.1	Emissions from Purchased goods	S	1,287,777									
4.2	Emissions from Capital goods	NS										
4.3	Emissions from the disposal of solid and liquid waste	S	18,647									
4.4	Emissions from the use of assets	NS										
4.5	Emissions from the use of services that are not described in the above subcategories	NS	11,852									
5	Category 5: Indirect GHG emissions associated with the use of products from the organisation		-									
5.1	Emissions or removals from the use stage of the product	NS										
5.2	Emissions from downstream leased assets	NS										
5.3	Emissions from end of life stage of the product	NS										
5.4	Emissions from investments	NS										
6	Category 6: Indirect GHG emissions from other sources	NS	-									
Removals												
	Direct removals in tonnes CO ₂ e		0									
Storage												
	Total storage as of year end in tonnes CO ₂ e		0									
Carbon financial instruments												
Total renewable electricity purchase in kWh				Market based emission factors compliant with ISO 14064-1 Annex E								
Renewable electricity purchased in kWh with contractual instruments compliant with ISO 14064-1 Annex E				9,367,040.00	kWh	17.69 gCO ₂ e/kWh		165,702.94		tCO ₂ e See attached document		
Renewable electricity purchased in kWh with contractual instruments not compliant with ISO 14064-1 Annex E				1,939	CO ₂ e							
Offsets from GHG Scheme in tonnes CO ₂ e				0	CO ₂ e							
Other related information												
Disclosure of most significant sources, sinks, and reservoirs								See attached document				
Statement of emission reduction initiatives								See attached document				
Significance criteria								See attached document				
Uncertainty assessment								See attached document				
Notes												

- Renewable electricity purchased in kWh with contractual instruments not compliant with ISO 14064-1 Annex E value of 1,939 tCO₂e is location based.

Revision history

REVISION	DATE	AMENDMENTS	CONTENT OWNER	AUTHORISER
1.0	13/06/202		Carbon and Climate Change Business Partner.	Group HSEQ Director
2.0	01/09/2025	Version updated with current branding.	Carbon and Climate Change Business Partner.	Group HSEQ Director

Appendix 1 – Uncertainty assessment procedure

Introduction

ISO 14064-1:2018 requires the assessment of uncertainty for the GHG inventory, specifically the data that is used to calculate it.

This methodology is developed on the Greenhouse Gas Protocol Short Guidance for Calculating Measurement and Estimation Uncertainty for GHG Emissions.¹³

Types of uncertainties associated with greenhouse gas inventories

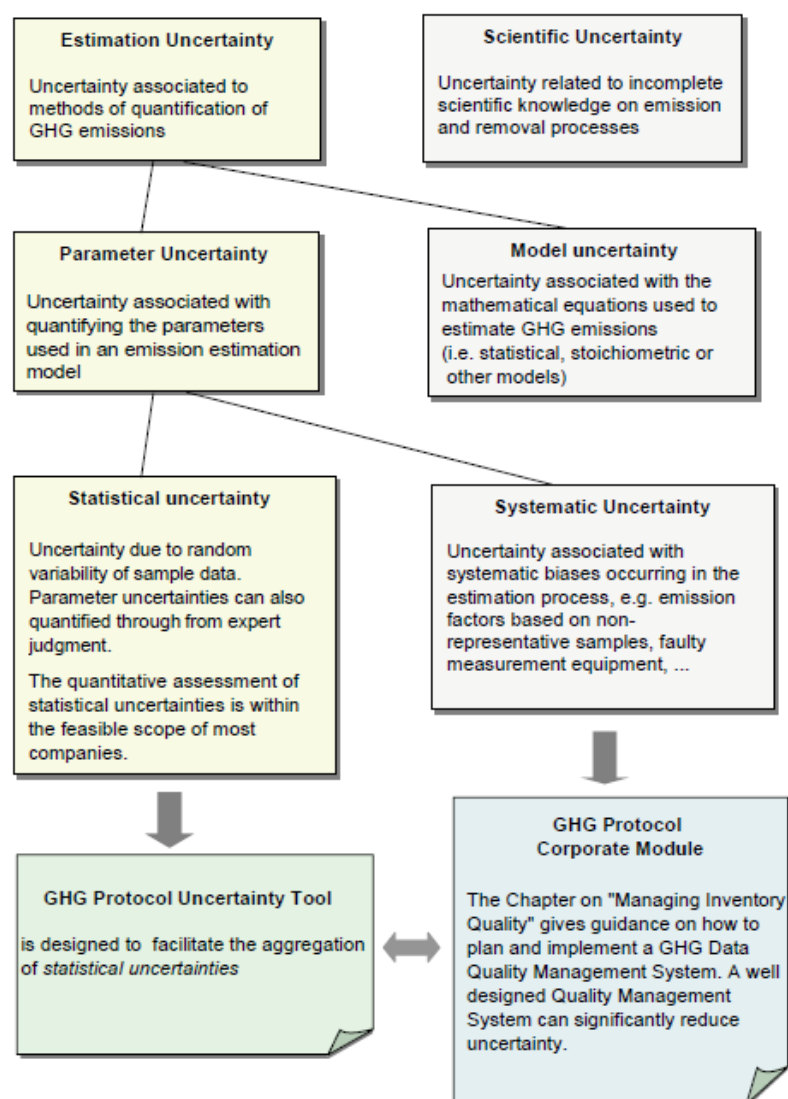


Figure 1: Uncertainties associated with GHG inventories¹⁴

The process

¹³ <https://ghgprotocol.org/sites/default/files/ghg-uncertainty.pdf>

¹⁴ Short Guidance for Calculating Measurement and Estimation Uncertainty for GHG Emissions

The assessment of uncertainty considers three main elements, which are detailed below. The assessment is undertaken by the Group Carbon and Climate Change Business Partner.

The uncertainty assessment is recorded using the GHG inventory uncertainty record template (AMEY-ENVT-GHGUNCERTAINTYASSESS-FO-01).

Estimation uncertainty

Estimation uncertainty arises at any time when GHG emissions are quantified. This is assessed by considering the two main elements of the calculation process; the parameter uncertainty (the inputs into the calculation process) and the model uncertainty (the mathematical formula/model used to calculate the emission(s)).

Parameter uncertainty

The assessment of uncertainty of the GHG inventory has focussed on a qualitative assessment of the parameter uncertainty as this is within feasible scope, as identified in the Greenhouse Gas (GHG) Protocol.

Model uncertainty

The model uncertainty is discussed for each data set and is informed by expert judgement as described above for systematic uncertainties.

Systematic uncertainty

The systematic uncertainties are associated with each of the parameter uncertainties. It considers if the data is systematically biased. In other words, the average of the measured or estimated value is always less or greater than the true value.

These are informed and discussed by expert judgement. It is recognised that the expert judgement when identifying systematic uncertainty may be difficult to obtain in a comparable (i.e. unbiased) and consistent manner across parameters.

Uncertainties not assessed

Statistical uncertainty

The assessment does not assess statistical uncertainty as the data is made up of single data points, such as a fuel card transaction, a monthly utility consumption on a site or a supplier transaction for goods or services. This prevents any meaningful statistical uncertainty analysis.

Scientific uncertainty

The assessment does not assess the scientific uncertainty of the knowledge and understanding of the emission and removal processes. It is considered this is subject to discussion outside the scope of this assessment.

Scoring

For each data source for each fuel type within the inventory, each of the three elements of the uncertainty assessment is scored by applying the following scoring matrix.

Certainty terminology	Degree of certainty
High confidence	>90% certain of accuracy
Good confidence	70-90% certain of accuracy
Fair confidence	50-70% certain of accuracy
Poor confidence	<50% certain of accuracy

Table 2: Scoring matrix for uncertainty assessment.

An overall certainty ranking is determined based on the lowest score of the three elements.

Associated documents

AMEY-ENVT-GHGUNCERTAINTYASSESS-FO-01 - GHG inventory uncertainty record template

Appendix 2 – Legal entities included in-scope of inventory

ACTIVE SUBSIDIARY UNDERTAKING	NATURE OF BUSINESS
Accord Limited	Holding company
Amey Community Limited	Facility management services
Amey Construction Limited	Building maintenance
Amey Defence Services Limited	Facilities management and building maintenance
Amey Defence Services (Housing) Limited	• Facilities management and building maintenance
Amey Finance Services Limited	Group insurance related services
Amey Fleet Services Limited	Fleet management and the hiring of small tools and plant
Amey Group Information Services Limited	Group IT services
Amey Group Services Limited	Group central services
Amey Highways Limited	Highway management and maintenance
Amey Holdings Limited	Holding company
Amey Investments Limited	Investment holding company
Amey LG Limited	Highways management and maintenance
Amey Limited	Holding company
Amey OW Limited	Civil engineering consultancy
Amey OW Group Limited	Holding company
Amey OWR Limited	Engineering consultancy to the railway industry
Amey OWR Ireland Limited (Republic of Ireland)	Professional services to rail market
Amey Power Services Limited	Construction, installation and maintenance of electricity infrastructure.
Amey Public Services LLP (67%)	Highway management and maintenance
Amey Rail Limited	Renewal and modification of track, signalling and electrical infrastructure for the rail industry
Amey Services Limited	Group employment services
Amey TPT Limited	Management Consulting services to the rail travel industry
Amey Ventures Limited	Contract bidding
Amey Ventures Asset Holdings Limited	Investment holding company
A.R.M. Services Group Limited	Holding company

Byzak Limited	Water systems maintenance
Enterprise Limited	Holding company
Enterprise (AOL) Limited	Provision of public services
Enterprise (Venture Partner) Limited	Investment company
Enterprise Holding Company No.1 Limited	Holding company
Enterprise Managed Services Limited	Provision of maintenance services
Globemile Limited	Holding company
Nationwide Distribution Services Limited	Street lighting maintenance services
Seilwaith Amey Cymru/Amey Infrastructure Wales Limited	Railway infrastructure maintenance.
Sherard Secretariat Services Limited	Company secretarial services