Virgin Atlantic 2024 Non-Financial Reporting Criteria

March 2025

2024 Non-Financial Reporting Criteria covers the methodologies, scopes and boundaries used for the following areas:

1. Greenhouse Gas Emissions
2. Diversity, Equity, and Inclusion
3. Community methodology

1. Greenhouse Gas Emissions

Overview
This statement summarises Virgin Atlantic Airway's (VAA's) carbon footprint reporting methodology for 2024. The methodology and Scope for reporting are consistent with The Greenhouse Gas Protocol Corporate Accounting and Reporting Standard (GHG Protocol Corporate Standard) and mandatory carbon reporting requirements of the Companies Act 2006 (Strategic Report and Directors' Report) Regulations 2013. The GHG emissions quantification process is subject to scientific uncertainty, which arises due to incomplete scientific knowledge about the measurement of GHGs and estimation (or measurement) uncertainty resulting from the measurement and calculation processes used to quantify emissions within the bounds of existing scientific knowledge.

Organisational boundary
VAA use the operational control approach to establish the organisational boundary of the carbon footprint reporting. In accordance with the GHG Protocol Corporate Standard, this includes 100% of GHG emissions from activities of owned or leased assets over which VAA has operational control (full authority to introduce and implement its operating policies at the operation) in the UK. VAA defines operational control as where we have operational activities and equipment that we control, including the implementation of operating policies. **Both Virgin Atlantic** (including Virgin Atlantic Cargo) **and Virgin Holidays are included together under the single VAA operation.**

Operational Scope
All GHG emissions under the operational boundary of VAA are included and categorised by Scope 1 (direct), Scope 2 (indirect) and Scope 3 (indirect value chain) emissions.

The Scope of VAA's operations covered by this approach include:

- VAA aircraft
- VAA's offices and buildings
  - The VHQ, Crawley
  - Clubhouse, London Heathrow
  - Revivals Lounge, London Heathrow
  - London Heathrow Hangar
  - London Heathrow offices, rooms, desks
  - Manchester Airport offices, rooms, desks
  - POBL Alexandra House, Swansea
  - Virgin Holidays retail stores
- VAA vehicle fleet

Emissions factors:

- UK Government GHG Conversion Factors for Company Reporting (2024)[1]
- United States Environmental Protection Agency (US EPA) Supply Chain Greenhouse Gas Emission Factors (v1.2 by NAICS-6), published July 2024[2]
    - This is a comprehensive dataset of supply chain emission factors covering all categories of goods and services in the US economy. It is deemed appropriate to use these US factors for the GHG calculation given VAA's predominantly transatlantic operation, and the accessibility and detailed categorisation of the dataset.

Scope 1 & 2

VAA's Scope 1 and Scope 2 carbon footprint is calculated using activity consumption data, multiplied by an appropriate UK Government emissions factor. The tables below summarise the activity sources, data collection approach emissions factor.

Scope 1

Activity	Unit	Source
Jet fuel consumption on VAA aircraft	Tonnes	Measured actuals. Fuel consumption is calculated for every flight taken during the year, using fuel on board data collated directly from the aircraft and recorded/invoiced fuel uplifts. Data is independently audited by an accredited environmental verification body
Gas consumption in VAA offices & hangars	kWh	Energy supplier invoices – measured actuals
Gas consumption in LHR clubhouse and LHR revivals lounge	kWh	Estimated using the CIBSE Restaurant Gas benchmark for gas consumption (370 kWh/m2) and the known floor space and number of days active
Diesel (airport equipment)	Litres	Energy supplier invoices – measured actuals
Refrigerants (VHQ and retail property)	Kg	Property manager invoices – measured actuals
Vehicles (airport and operational)	Miles	Measured actuals. Data is collected by the VAA Facilities team, requesting year-end mileage data of each vehicle from drivers of all ground fleet vehicles. Where actual mileage reading not available, estimate made based similar vehicle type and duration of vehicle operation

Scope 2

Activity	Unit	Source
Electricity at VAA offices, hangars, airport properties and retail stores	kWh	Energy supplier invoices.

CO_2e emissions from purchased electricity are calculated using both a location-based and market-based approach.

The location-based approach is a method to quantify Scope 2 GHG emissions based on average energy generation emission factors for defined geographic locations, including local, subnational, or national boundaries and is calculated using the UK grid average emission factors from UK Government conversion factors, representing average emissions from energy generation occurring in the UK in 2024.

The market-based approach is a method to quantify the Scope 2 GHG emissions of a company based on the specific GHG emissions emitted by the generators from which the company has chosen to purchase energy from, including any contractual instruments such as Renewable Energy Guarantees of Origin and energy supplier contractual evidence. This is calculated using emission factors derived from the GHG emission rate represented in the contractual instruments that meet Scope 2 Quality Criteria.

[1] https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2024
[2] https://catalog.data.gov/dataset/supply-chain-greenhouse-gas-emission-factors-v1-3-by-naics-6

Scope 3
VAA calculate and report on indirect value chain emissions from 9 out of the 15 Scope 3 categories. These categories were both material and relevant to VAA. The methodologies and data used to calculate these are summarised below.

Categories 1, 2 & 4
A cost-based approach has been used to calculate the emissions for categories 1, 2 and 4. This approach is also used for part of the category 6 emissions calculations (see page 4).

- Category 1 – The indirect emissions from the extraction, production, and transportation of VAA's purchased goods and services, calculated using VAA's operational expenditure data on items and services purchased for their processes in the reporting year. This spend data is based on actual spend in year, on a cash basis, as opposed to the year the spend relates to. Fuel expenditure is excluded as this is captured in our Scope 1 and Scope 3 (category 3) emissions.
- Category 2 – The indirect emissions from the extraction, production, and transportation of VAA's capital goods, calculated using VAA's operational expenditure data on items and services purchased for their processes in the report year. This spend data is based on actual spend in year, on a cash basis.
- Category 4 – The indirect emissions from the transportation and distribution of products and services purchased, calculated using data on VAA's purchased logistics between all suppliers and its own operations. This spend data is based on actual spend in year, on a cash basis.

Each line-item value of spend was multiplied by an assigned cost-based United States (U.S) EPA emissions factor, providing a GHG emissions value for each item of spend. U.S. EPA categories were applied based on the category that best suited the expenditure, using the 3-tiered category information (categorised) or nominal information (uncategorised) detailed in the raw data. Categorised spend data reflects aggregated annual expenditure within unique defined three-tier categories. The 3-tier categories in which spend will fall is determined by the categorisation of suppliers, which is defined at point on onboarding within Virgin Atlantic's procurement system, and reflects the predominant activity of which the underlying spend and supplier services relate to. Uncategorised data reflects all other spend data where no appropriate three-tier categorisation is applied. The 3-tier categorisation and uncategorised nominal descriptions are used to determine which scope 3 category to allocate the spend and emissions calculations to. US EPA emissions factors are then assigned to each line of data. As this spend data is aggregated based on the 3-tier categorisation or uncategorised nominal description, the emissions factor assignment and calculations do not go down to the individual invoice level, as this is deemed to be impractical given the volume of information.

As U.S. EPA factors relate to $kgCO_2e$/USD spend, VAA calculations have converted GBP to USD, using a 2024 average GBP: USD exchange rate of 1.2781 (source: Bloomberg). Given the transatlantic nature of VAA operations, the use of US EPA emissions factors was deemed appropriate.

Category 3 – Fuel and energy-related activities not included in Scope 1 or Scope 2
This includes emissions from three distinct activities:
(1) Upstream emissions of purchased fuels (both stationary and mobile combustion).
(2) Upstream emissions from purchased electricity.
(3) Transmission & Distribution (T&D) Losses from purchased electricity.

The indirect upstream extraction, production, and transportation emissions from VAA's aviation fuel, office gas consumption, ground vehicle fuel and purchased electricity are calculated using the activity consumption data (used in Scope 1 and Scope 2 calculations) and applying UK Government well-to-tank emissions factors, plus transmission and distribution emissions factors for electricity (UK Government conversion factors).

Category 5 – Waste generated in operations
This includes emissions from the disposal and treatment of waste generated in the reporting year in facilities owned or controlled by VAA. VAA's waste is split into 3 distinct categories.

(1) Ground waste (VHQ and LHR Hangar only – data provided by contractor. Waste at all other sites including airport properties (including Clubhouse), retail properties and Alexandra House, is managed by airport, shopping centre, and building management respectively)
(2) Onboard aircraft cabin amenities waste
(3) Catering waste onboard aircraft and production facility

Primary waste data of tonnages by waste pathway (recycling, incinerated for energy recovery, anaerobic digestion, and landfill) is provided by VAA's waste contractors, for VHQ ground waste, onboard waste and catering and production waste. UK Government emissions factors for given waste pathways are then applied, to calculate the emissions from each waste source. The following waste emissions factors are used:

- UK Government conversion factors 2024, Waste Disposal, Refuse, Organic: Mixed food and garden waste, Anaerobic digestion Waste Disposal, Refuse, Household residual waste, Landfill

Clubhouse ground waste is estimated using an extrapolation of VHQ waste, based on floor area, due to lack of primary data. This accurately uplifts ground waste to account for all ground waste. For 2024, 4 months (September-December) of data from catering waste provider's production site was estimated, due to lack of available data. Estimates were based on the monthly average of January-August actual data for that site. This estimate is not deemed to have a material impact given it represents c. 1% of total waste tonnage.

Category 6 – Business travel

The calculation of emissions from VAA employee business travel includes staff business travel flights on Virgin Atlantic flights and ground-based staff business travel including, hotels, transportation, and fuel expenses, as well as crew hotel stays and crew ground transport. This category does not include flight crew flying emissions when operating a flight, as operational emissions are captured through scope 1 direct fuel use emissions, and crew hotel and transport is captured through scope 3 category 1 purchased goods and services.

Staff business travel flights data is recorded for all staff flights booked internally, flown on VAA flights. Using this data, the distance (Great Circle Distance[3]) determined by the route of travel, and the cabin class is used to assign the appropriate UK Government cabin-specific per passenger kilometre (pax.km) emissions factor ('business travel – air' and 'WTT business travel – air') to each journey.

Staff business travel distance travelled (miles) by vehicle-type is recorded via the employee expenses system, detailing the claimed mileage expenses for staff business travel. The appropriate UK Government passenger transport emissions factor ($kgCO_2e/km$, $kgCO_2e/pax.km$) emissions factor is assigned and applied to the total mileage by vehicle type. The emissions factors reflect tank-to-wake emissions.

Hotel stay related business travel data is recorded via the employee expenses system, detailing the number of nights hotel stay by country. The appropriate UK Government country-specific hotel stay ($kgCO_2e/night$) emissions factor is assigned and applied to the total night's hotel stay by country. Where a country-specific factor is not available, a European average (EU member states & UK) factor was applied to non-listed European countries, and a global average factor was applied to non-listed ex. European countries.

A cost-based approach has been used to calculate the indirect emissions from the extraction, production, and transportation related to expensed business travel fuel purchases, and expensed airfare (non-VS flights), rail, bus, and taxi business travel journeys. These emissions were calculated using employee expenses data reflecting claimed expenses spend in-year, on a cash basis. The total expensed value of each expenses category of spend was multiplied by an assigned cost-based U.S EPA emissions factor, providing a GHG emissions value for each item of spend. U.S. EPA categories were applied based on the category that best suited the expenditure, using the category information provided.

As U.S. EPA factors relate to $kgCO_2e/USD$ spend, VAA calculations have converted GBP data to USD, using a 2024 average GBP:USD exchange rate of 1.2781 (source: Bloomberg). Given the transatlantic nature of VAA operations, the use of US EPA emissions factors was deemed appropriate.

Category 7 – Employee Commuting

[3] https://www.greatcirclemapper.net/

The calculation of employee commuting emissions between home and work is based on the results of a VAA staff commuting survey and UK Government emissions factors (well-to-wake) by mode of transport. Modes of transport included car, car share, train, bus, taxi, motorbike, air travel, walk and cycle. The responses from staff provided a dataset of commuting distance and mode. The survey data was split by ground-based staff and flight crew, as they typically have different commuting patterns. Using the distance and mode and commuting frequency assumptions, the total emissions were calculated by applying the relevant UK Government emissions factor to the distance commuted by each mode. The emissions were then uplifted to reflect the total number of staff (ground and flight crew).

Homeworking emissions calculated using frequency of homeworking for ground-based employees only, based on results from VAA staff commuting survey, and UK Government homeworking emissions factors for office equipment and heating, and assumption of 8 working hours per working day. The inclusion of homeworking emissions represents an update on the previous methodology used by Virgin Atlantic. A restatement exercise has been conducted for scope 3 category 7 emissions, to assess whether historic restatement of emissions was required. The restatement threshold, in line with Virgin Atlantic's GHG restatement policy, was not surpassed, and therefore no historic restatement of these category emissions were required using this updated methodology.

Category 9 – Downstream transportation and distribution

The calculation of emissions from transportation and distribution of products sold between VAA's operations and the end consumer is based on passenger travel to the airport of departure and from the airport where they land to their final destinations. Data on the number of passengers by route and average distances from destination and origin airports to town centres were applied to calculate emissions. Average UK Government emission factors for both train and unknown fuel car transport types were used. Total travel distance was doubled to account for travel either side of each airport.

Category 11 – Use of sold products

The calculation of emissions from the use of sold products includes:

- Hotel accommodation
- Non-Virgin Atlantic operated flights
- Tours and excursions
- Car rental
- Cruises
- Transfers
- Third-party lounge access

The emissions related to hotel accommodation sold by VAA is calculated using sales data detailing the number of hotel nights sold, by country. The appropriate UK Government country-specific hotel stay ($kgCO_2e$/night) emissions factor is assigned and applied to the total night's hotel stay by country. Where a country-specific factor is not available, a European average factor was applied to non-listed European countries, and a global average factor was applied to non-listed ex. European countries.

The emissions related to non-VAA operated flights is calculated based on the number of passenger tickets sold, by route and the Great Circle Distance between the origin and destination of said route[4]. The appropriate UK Government $kgCO_2e$/pax.km emissions factor ('business travel – air' and 'WTT business travel – air') was then applied, reflecting the 'average passenger' factor (not cabin-specific) for short-haul to/from UK (<3,700 km), international to/from non-UK (>3,700km), or domestic to/from UK emissions factor.

The emissions related to sold tours and excursions (e.g., theme park tickets, which majority of excursions relate to) reflects emissions associated with the quantity of activities sold. Emissions from VAA sold tours (rail tours) are calculated based on the number of tour passenger days sold and approximated distance travelled based on tour type. Emissions UK Government conversion factors for rail mode of transport and country-specific hotel night were applied to calculate the emissions from sold tours. Emissions from VAA sold excursions (theme park tickets) were estimated based on the number days visits sold to theme parks (where exact days were not available an assumption was made based on sold ticket type), and an emissions factor per theme park visit per person per day (based on publicly available theme park emissions information) was applied to estimate total emissions[5].

[4] Distance data sources: https://www.transtats.bts.gov/Distance.aspx, https://www.greatcirclemapper.net/

[5] https://greenly.earth/en-gb/blog/ecology-news/could-theme-parks-become-sustainable

The emissions related to car rentals is calculated based on the total number of days of car rentals sold, average distance driven by car rental per day (assumed to be 241 km/day based on industry insights[6]), and the UK Government emissions factor for an average car of unknown fuel type.

The emissions related to sold cruises is calculated based on the total number of passenger cruise nights sold and a $kgCO_2e$ per available lower berth day (ALB) emissions factor based on industry data[7]. Each ALB represents a guest cabin available on a cruise ship, assuming 2 passengers per cabin.

The emissions related to passenger transfers (typically to/from airport hotel/destination) sold is calculated based on the total number of passengers sold transfers by route, airport to typical destination (assumed to be the city centre) distance by route and a UK Government emissions factor for a regular taxi travel ($kgCO_2e$/pax.km). It is assumed that, where VAA operates a route, that only 80% of passengers are passengers flown on a VAA flight and sold a transfer, and therefore are therefore excluded from the calculation to avoid double counting of emissions in Scope 3 category 9 downstream transportation and distribution.

The emissions related to third-party lounge access sold is based on the estimated energy consumption per passenger visit. The methodology uses CIBSE energy benchmarking data[8], average lounge space industry data[9] and UK Government conversion factors.

The 2024 methodology for all use of sold product categories represents an update on the previous methodology used by Virgin Atlantic, in an effort to capture all category 11 emissions using accurate activity-related data and align to the GHG protocol. A restatement exercise has been conducted for scope 3 category 11 emissions, to assess whether historic restatement of emissions was required. The restatement threshold, in line with Virgin Atlantic's GHG restatement policy, was not surpassed, and therefore no historic restatement of these category emissions were required using this updated methodology.

Excluded
The remaining 6 Scope 3 categories are not calculated by VAA, as they are either not relevant to the operation, or are deemed as immaterial.

Excluded as not relevant:

- Category 8 – Upstream leased assets.
    - The emissions from upstream leased assets have already been included under Scope 1 and 2 inventory, as the footprint has been calculated following the operational control approach
- Category 10 – processing of sold products
    - Not relevant, VAA do not sell intermediate products
- Category 14 – Franchises
    - No relevant franchises
- Category 15 – Investments
    - No relevant investments

Excluded as immaterial:

- Category 12 – End of life treatment of sold products
    - VAA sold products are fundamentally transportation services, from which there is no end-of-life treatment
- Category 13 – Downstream leased assets
    - VAA have minimal downstream leased assets

[6] https://blog.rentcars.com
[7] https://sustainability.nyc3.cdn.digitaloceanspaces.com/assets/content/pdf/Carnival_Corporation_plc_FY2023-Sustainability-Report.pdf
[8] CIBSE Energy Benchmark (TM46: 2008) - Restaurant gas & electricity use kwh/m2
[9] https://www.aviationpros.com/airports/article/12226663/independent-airport-lounges

Emissions factors

GHG emissions are reported in line with the UK Government's 'Environmental Reporting Guidelines: including mandatory greenhouse gas emissions reporting guidance' (2013). These emissions calculations use:

UK 2024 Conversion Factor[10]	EF kgCO_2e/unit	Emissions factor
Fuels - Aviation turbine fuel -	tonnes	3178.3652
Fuels - Natural gas -	kWh (Gross CV)	0.1829
Refrigerant & other - R410A -	kg	1924
Fuels - Diesel (average biofuel blend) -	litres	2.51279
Passenger vehicles - Small car - Diesel	miles	0.22522
Passenger vehicles - Medium car - Diesel	miles	0.2705
Passenger vehicles - Large car - Diesel	miles	0.33362
Passenger vehicles - Small car - Petrol	miles	0.23126
Passenger vehicles - Medium car - Petrol	miles	0.28526
Passenger vehicles - Large car - Petrol	miles	0.43267
Passenger vehicles - Medium car - Hybrid	miles	0.18492
Passenger vehicles - Average car - Unknown	miles	0.2686
Delivery vehicles - Class I (up to 1.305 tonnes) - Diesel	miles	0.24716
Delivery vehicles - Average (up to 3.5 tonnes) - Diesel	miles	0.40273
UK electricity - Electricity: UK -	kWh	0.20705
WTT - fuels - Aviation turbine fuel -	tonnes	661.79468
WTT - fuels - Natural gas -	kWh (Gross CV)	0.03021
WTT - fuels - Diesel (average biofuel blend) -	litres	0.61101
Transmission and distribution - Electricity: UK -	kWh	0.0183
WTT- UK electricity - Electricity: UK -	kWh	0.0459
WTT- UK electricity - Electricity: UK -	kWh	0.00397
Business travel- land - Small car - Diesel	miles	0.22522
Business travel- land - Medium car - Diesel	miles	0.2705
Business travel- land - Large car - Diesel	miles	0.33362
Business travel- land - Small car - Petrol	miles	0.23126
Business travel- land - Medium car - Petrol	miles	0.28526
Business travel- land - Large car - Petrol	miles	0.43267
Business travel- land - Medium car - Hybrid	miles	0.18492
Business travel- land - Average car - Unknown	miles	0.2686
Business travel- land - Average car - Battery Electric Vehicle	miles	0.07636
WTT- pass vehs & travel- land - Small car - Diesel	miles	0.05486
WTT- pass vehs & travel- land - Medium car - Diesel	miles	0.06603
WTT- pass vehs & travel- land - Large car - Diesel	miles	0.08159
WTT- pass vehs & travel- land - Small car - Petrol	miles	0.06461
WTT- pass vehs & travel- land - Medium car - Petrol	miles	0.07977
WTT- pass vehs & travel- land - Large car - Petrol	miles	0.12115
WTT- pass vehs & travel- land - Medium car - Hybrid	miles	0.04824
WTT- pass vehs & travel- land - Average car - Unknown	miles	0.07079
WTT- pass vehs & travel- land - Average car - Battery Electric Vehicle	miles	0.01688

[10] Greenhouse gas reporting: conversion factors 2024

Freighting goods - Class I (up to 1.305 tonnes) - Diesel	miles	0.24716
Freighting goods - Average (up to 3.5 tonnes) - Diesel	miles	0.40273
WTT- delivery vehs & freight - Class I (up to 1.305 tonnes) - Diesel	miles	0.06028
WTT- delivery vehs & freight - Average (up to 3.5 tonnes) - Diesel	miles	0.09863
Waste disposal - Glass - Open-loop	tonnes	6.41061
Waste disposal - Organic: mixed food and garden waste - Composting	tonnes	8.88386
Waste disposal - Household residual waste - Combustion	tonnes	6.41061
Waste disposal - Organic: mixed food and garden waste - Anaerobic digestion	tonnes	8.88386
Waste disposal - Household residual waste - Landfill	tonnes	497.04416
Business travel- air - Domestic, to/from UK - Average passenger	passenger.km	0.27257
Business travel- air - Short-haul, to/from UK - Average passenger	passenger.km	0.18592
Business travel- air - Long-haul, to/from UK - Average passenger	passenger.km	0.26128
Business travel- air - Long-haul, to/from UK - Economy class	passenger.km	0.20011
Business travel- air - Long-haul, to/from UK - Premium economy class	passenger.km	0.32015
Business travel- air - Long-haul, to/from UK - Business class	passenger.km	0.58028
Business travel- air - International, to/from non-UK - Average passenger	passenger.km	0.1758
Business travel- air - International, to/from non-UK - Economy class	passenger.km	0.13465
Business travel- air - International, to/from non-UK - Premium economy class	passenger.km	0.21542
Business travel- air - International, to/from non-UK - Business class	passenger.km	0.39044
WTT- business travel- air - Domestic, to/from UK - Average passenger	passenger.km	0.0335
WTT- business travel- air - Short-haul, to/from UK - Average passenger	passenger.km	0.02286
WTT- business travel- air - Long-haul, to/from UK - Average passenger	passenger.km	0.03213
WTT- business travel- air - Long-haul, to/from UK - Economy class	passenger.km	0.02461
WTT- business travel- air - Long-haul, to/from UK - Premium economy class	passenger.km	0.03937
WTT- business travel- air - Long-haul, to/from UK - Business class	passenger.km	0.07137
WTT- business travel- air - International, to/from non-UK - Average passenger	passenger.km	0.02162
WTT- business travel- air - International, to/from non-UK - Economy class	passenger.km	0.01656
WTT- business travel- air - International, to/from non-UK - Premium economy class	passenger.km	0.02649
WTT- business travel- air - International, to/from non-UK - Business class	passenger.km	0.04802
Hotel stay - United Kingdom -	Room per night	10.4
Hotel stay - Australia -	Room per night	35
Hotel stay - Belgium -	Room per night	12.2
Hotel stay - Canada -	Room per night	7.4
Hotel stay - China -	Room per night	53.5
Hotel stay - Colombia -	Room per night	14.7
Hotel stay - France -	Room per night	6.7
Hotel stay - Germany -	Room per night	13.2
Hotel stay - Hong Kong, China -	Room per night	51.5
Hotel stay - India -	Room per night	58.9
Hotel stay - Indonesia -	Room per night	62.7
Hotel stay - Malaysia -	Room per night	61.5
Hotel stay - Maldives -	Room per night	152.2
Hotel stay - Mexico -	Room per night	19.3
Hotel stay - Netherlands -	Room per night	14.8
Hotel stay - Portugal -	Room per night	19

Hotel stay - Saudi Arabia -	Room per night	106.4
Hotel stay - Singapore -	Room per night	24.5
Hotel stay - South Africa -	Room per night	51.4
Hotel stay - Spain -	Room per night	7
Hotel stay - Switzerland -	Room per night	6.6
Hotel stay - Thailand -	Room per night	43.4
Hotel stay - United Arab Emirates -	Room per night	63.8
Hotel stay - United States -	Room per night	16.1
Hotel stay - Average -	Room per night	38.78205128
Hotel stay - Europe average -	Room per night	11.57
Business travel- land - Average -	miles	0.18293
Business travel- land - Regular taxi -	passenger.km	0.14861
Business travel- land - Local bus (not London) -	passenger.km	0.12999
Business travel- land - National rail -	passenger.km	0.03546
Business travel- land - International rail -	passenger.km	0.00446
Business travel- land - Average car - Unknown	km	0.16691
Business travel- land - Average - Unknown	km	0.11367

2024 US EPA industry category emissions source[11]	**Emissions factor kg CO_2e/USD**
230301, 230302, 233210, 233230, 233240, 233262, 2332A0, 2332D0, 233411, 233412, 2334A0 - Other Building Finishing Contractors	0.221
230301, 230302, 233210, 233230, 233240, 233262, 2332A0, 2332D0, 233411, 233412, 2334A0 - All Other Specialty Trade Contractors	0.221
315000 - Apparel Accessories and Other Apparel Manufacturing	0.12
336411 - Aircraft Manufacturing	0.139
339940 - Office Supplies (except Paper) Manufacturing	0.265
423400 - Office Equipment Merchant Wholesalers	0.074
423400 - Computer and Computer Peripheral Equipment and Software Merchant Wholesalers	0.074
423400 - Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers	0.074
423400 - Other Professional Equipment and Supplies Merchant Wholesalers	0.074
447000 - Gasoline Stations with Convenience Stores	0.183
4B0000 - All Other Miscellaneous Store Retailers (except Tobacco Stores)	0.111
481000 - Scheduled Passenger Air Transportation	0.644
484000 - General Freight Trucking, Long-Distance, Truckload	0.595
485000 - Taxi Service	0.566
485000 - Limousine Service	0.566
485000 - All Other Transit and Ground Passenger Transportation	0.566
48A000 - Air Traffic Control	0.162
48A000 - Other Airport Operations	0.162
493000 - Other Warehousing and Storage	0.244
512100 - Motion Picture and Video Distribution	0.052
515100 - Radio Networks	0.079
517110 - Wired Telecommunications Carriers	0.075
517A00 - All Other Telecommunications	0.078
518200 - Data Processing, Hosting, and Related Services	0.093
52A000 - Monetary Authorities-Central Bank	0.059
524200 - Insurance Agencies and Brokerages	0.029
524200 - All Other Insurance Related Activities	0.029
531ORE - Residential Property Managers	0.246

[11] US EPA Supply Chain Greenhouse Gas Emission Factors v1.3 by NAICS-6

532100 - Passenger Car Rental	0.11
532400 - Other Commercial and Industrial Machinery and Equipment Rental and Leasing	0.106
541100 - All Other Legal Services	0.041
541200 - Other Accounting Services	0.054
541300 - Engineering Services	0.103
541512 - Computer Systems Design Services	0.089
54151A - Computer Facilities Management Services	0.08
541610 - Other Management Consulting Services	0.078
541800 - Advertising Agencies	0.085
541800 - Public Relations Agencies	0.085
541800 - Media Representatives	0.085
5419A0 - Marketing Research and Public Opinion Polling	0.08
5419A0 - Translation and Interpretation Services	0.08
550000 - Corporate, Subsidiary, and Regional Managing Offices	0.084
561300 - Employment Placement Agencies	0.051
561300 - Executive Search Services	0.051
561400 - All Other Business Support Services	0.111
561500 - All Other Travel Arrangement and Reservation Services	0.088
561600 - Security Systems Services (except Locksmiths)	0.074
561700 - Other Services to Buildings and Dwellings	0.214
561900 - All Other Support Services	0.127
611B00 - Professional and Management Development Training	0.108
611B00 - Educational Support Services	0.108
621400 - All Other Outpatient Care Centers	0.096
621900 - All Other Miscellaneous Ambulatory Health Care Services	0.18
721000 - Hotels (except Casino Hotels) and Motels	0.145
722A00 - Caterers	0.132
812300 - Drycleaning and Laundry Services (except Coin-Operated)	0.158
813B00 - Civic and Social Organizations	0.128
813B00 - Professional Organizations	0.128

Reporting of Sustainable Aviation Fuel (SAF) emissions and avoided emissions
Virgin Atlantic report the annual quantity of neat SAF used and, in line with IATA's Sustainable Aviation Fuel (SAF) Accounting & Reporting Methodology guidance[12], the TTW biogenic emissions, and WTW emissions reductions related to the SAF. Neat SAF refers to the sustainable portion (bioquantity) of the SAF only, and not the fossil jet fuel that it is blended with. The biogenic TTW emissions and WTW emissions reductions from the consumption of this SAF on our aircraft are reported separately from our main GHG tables as an additional disclosure separate to VAA's main Scope 1 and 3 reported emissions.

The emissions and emissions reductions of SAF are calculated using UK Government conventional aviation turbine fuel emissions factors and actual SAF lifecycle assessment (LCA) data provided by the SAF suppliers, evidenced through the Product Transfer Document, or Proof of Sustainability, documentation. The emissions and emissions reductions of SAF are calculated following the IATA guidance, but have used different fossil fuel comparator values aligned with Virgin Atlantics reporting and actual SAF data. Biogenic TTW emissions are estimated using actual SAF % GHG LCA data and the appropriate UK Government TTW fossil jet fuel conversion factor. SAF Emissions reductions are calculated using the actual LCA GHG % reduction values of the SAF from the fuel supplier, against conventional fossil jet fuel well-to-wake factor.

Carbon intensity metric: CO_2/RTK
Virgin Atlantic disclose an annual carbon emissions intensity metric of CO_2 per revenue tonne kilometre (RTK). This is carbon efficiency metric related to Virgin Atlantic's aircraft fuel burn only. It is calculated as follows:

$$\frac{Total\ CO2\ emissions\ (kg)}{Total\ revenue\ tonne\ kilometres}$$

Total CO_2 emissions relates to the emissions from Virgin Atlantic's annual aircraft fuel burn from all flights in 2024.

- Total CO_2 emissions = Total tonnes of jet fuel burn x 3.14967 $kgCO_2/kg$ emissions factor
- Tonnes jet fuel data is tracked in Virgin Atlantic's Sustainability Warehouse database at flight level and is calculated using fuel on board data collated directly from the aircraft and recorded/invoiced fuel uplifts.
- Emissions factor source: UK Government 2024 conversion factors, Aviation turbine fuel

Revenue tonne kilometre is calculated as the annual total revenue-generating tonnage flown and multiplied by distance over which it is flown.

- Revenue generating tonnage is the sum of revenue paying passengers * 100 kg/pax (industry recognised standard value), and the weight of revenue cargo, collated from each flight's final load sheet.
    - Revenue passengers refers to all fare-paying passengers, non-revenue passengers refers to non-fare paying passengers, including infants.
    - Revenue cargo refers to the loadsheet net weight, excludes non-revenue generating cargo weight including pallet weight, ULDs and equipment.
- This is multiplied by the Great Circle Distance (GCD) kilometres flown +8%. GCD is the shortest distance between two points, measured along the surface of the earth. GCD is taken from the flight planning system, where it is calculated using the Vincenty formula.
- As aircraft rarely fly this direct route exactly, an additional factor is used to account for indirect routing, holding etc. The additional +8% is determined by UK Greenhouse Gas Inventory reporting[13].
- Both the revenue tonnes and GCD are tracked in Virgin Atlantic's Sustainability Warehouse database at flight level.

Reporting period
Virgin Atlantic report carbon emissions on a calendar year basis. This report summarises the period 1st January 2024 to 31st December 2024.

Restating of historic emissions
Virgin Atlantic follow the GHG Protocol accounting procedures that require that historic emissions data be recalculated as organisations undergo significant structural changes such as acquisitions, divestments, and mergers or methodology changes such as error correction and changes in calculation methodology.

[12] https://www.iata.org/en/programs/sustainability/reports/saf-accounting-reporting-methodology/
[13] DfT, Journey emissions comparisons: Methodology and guidance

Retrospective adjustments are necessary as structural and methodological changes will change the historical reporting profile, making meaningful comparisons over time difficult. To allow like-for-like comparison over time, historic emissions data may need to be recalculated. Virgin Atlantic's approach to GHG emissions restatement follows our internal restatement policy, defining the approach, approval process and restatement threshold used to determine any historic emissions restatement. Virgin Atlantic's approach is continuously reviewed during the year. No restatement of historic emissions were required in 2024.

2. Diversity, Equity and Inclusion Methodology

Overview

Annual Report methodology
Calculation methodology data is extracted from the HR management system to calculate our diversity figures. The diversity figure published is calculated based on the number of employees at the 31st December 2024. An employee is defined as a person with an employment relationship with Virgin Atlantic, who is paid by Virgin Atlantic through our payroll. This includes those who are on short/long-term leave and on parental leave, however, excludes those who are on Income Protection.

Percentage of women in D+ leadership roles
We define those who are in leadership positions are those who are in the following grades: D, E, F, G, H and I. Our leadership population does not include our pilot workforce as they are graded out with our leadership structure. All our gender data relies on our employees' classification of their own gender as male or female. This is a mandatory, binary field in our HR system and therefore Virgin Atlantic has a gender disclosure rate of 100%. We use the following methodology to calculate: Percentage of females in D+ roles= (females in D+ roles) / (total D+ workforce).

Ethnicity of entire workforce
Total workforce refers to all employees, regardless of paygrade. The table below shows the groups that are defined as diverse and non-diverse. This data relies on our employees self-disclosing. Diverse employees are those that have self-declared their diversity status. Individuals who have chosen not to declare their diversity status are not included in the calculation. This is different to 2023 where they were included in the non-diverse population. At the 31st of December 2024, 91.42% of employees had disclosed their ethnicity.

We use the following methodology to calculate: Percentage of ethnically diverse workforce = (Total ethnically diverse employees) / (Total employees).

Percentage of ethnically diverse people in senior leadership roles

As part of our commitment to the Parker Review we have set a target focussing on Exec co –1 level leadership. We define those who are in exec co –1 leadership positions are those who are in the following grades: G, H and I. Our leadership population does not include our pilot workforce as they are graded out with our leadership structure. The table below shows the groups that are defined as diverse and non-diverse. This data relies on our employees self-disclosing. Diverse employees are those that have self-declared their diversity identity. In a change from 2023 individuals who have chosen not to declare their diversity identity are not included in the calculation in line with the Government's report 'standards for ethnicity data' - April 2023
At the 31st of December 2024, 91.42% of employees had disclosed their ethnicity.

We use the following methodology to calculate: Percentage of ethnically diverse employees in G+ roles = (ethnically diverse employees in G+ roles) / (total G+ workforce).

Ethnicity Definition List

American Indian Alaskan Native	Ethnically diverse	**Mixed – Any other mixed or multiple ethnic background**	Ethnically diverse
Asian – Any other Asian background	Ethnically diverse	**Mixed – White & Asian**	Ethnically diverse
Asian – Bangladeshi	Ethnically diverse	**Mixed – White & Black African**	Ethnically diverse
Asian – Chinese	Ethnically diverse	**Mixed – White & Black Caribbean**	Ethnically diverse
Asian – Indian	Ethnically diverse	**Native Hawaiian and Other Pacific Islander**	Ethnically diverse
Asian – Pakistani	Ethnically diverse	**Other – Any other ethnic group**	Ethnically diverse

Black – African	Ethnically diverse	**Other – Arab**	Ethnically diverse
Black – Any other	Ethnically diverse	**White – Any other white background**	Non-diverse
Black – Caribbean	Ethnically diverse	**White - Roma**	Non-diverse
Black or African American	Ethnically diverse	**White – English/Welsh/Scottish/Northern Irish/ British**	Non-diverse
Chinese	Ethnically diverse	**White – Gypsy or Irish Traveller**	Non-diverse
Hispanic	Ethnically diverse	**White – Irish**	Non-diverse

3. Community methodology

Overview
This section outlines how the community KPIs and metrics referred to in the Annual Report are calculated. Data is tracked throughout the year through Virgin Atlantic's internal community database.

3.1 Charitable contributions

- Definition: Comprises all contributions invested into Virgin Atlantic's community programmes.
- Scope: Includes financial contributions made by Virgin Atlantic Airways Ltd, financial grants made to partner charities and community initiatives, the monetary value of Virgin Atlantic's in-kind donations (flights, cargo, Flying Club points), and the monetary value of employee time spent volunteering.
- Units: Reported in GBP.

3.11 Funds from Virgin Atlantic Airways Ltd

- Definition: Comprises only financial contributions made by Virgin Atlantic Airways Ltd, as a direct contribution to a charity or not-for-profit organisation.
- Scope: Monetary contributions incurred by Virgin Atlantic Airways Ltd. Contributions are recognised from the point of raising a Purchase Order with the Finance department to carry out the transaction.
- Units: Reported in GBP.

3.12 Charitable grants

- Definition: Comprises financial grants to our partner charities and community programmes.
- Scope: Includes monies donated by customers onboard via cash and contactless payments, monies raised via staff fundraising, and monies raised via our "Pennies" payroll giving scheme.
- Units: Reported in GBP (all translations to GBP from foreign currencies collected onboard are made at the collection date's spot rate).
- Prior to September 2024, all financial grants were administered by the Virgin Atlantic Foundation. Since September 2024, grant funding has been administered directly by Virgin Atlantic. Grant payments are tracked internally by our Finance Reporting team. Both Virgin Atlantic Foundation and Virgin Atlantic are audited externally yearly.

3.13 In-kind donations

- Definition: Monetary value of physical assets, products or services donated by Virgin Atlantic for community initiatives. Community initiatives are defined as activities to benefit not-for-profit organisations, local educational programmes and charities.
- Scope: Includes Virgin Atlantic flights, Flying Club points, and Cargo space.
- Units: Reported in GBP.
- Method: The value of Virgin Atlantic flights and Flying Club points donated for charity and/or medical purposes is calculated using the average in-year cost of an Economy, Premium or Upper sector flown that year, multiplied by the number of sectors we donated in-year.
- Method: In-kind donations for disaster relief comprises the cargo cost of aid that we deliver pro-bono, and the operating costs of a return relief flight. Per sector, this is calculated assuming £15,435 in fuel costs, £17,504 in non-fuel variable costs, £1,168 for airport and ground handling costs, £13,397 for Sector direct operating costs, £547 for Cargo direct operating costs (e.g. security screening charges), and £17,504 for Engineering variables.

3.14 Volunteer time

- Definition: Monetary value of employee time spent volunteering on community initiatives during working hours. Includes manual and skilled volunteering. Community initiatives are defined as activities to benefit not-for-profit organisations, local educational programmes and charities.
- Scope: Employee volunteering taking place during working hours for the reporting period.
- Units: Reporting in GBP.

- Method: The value of Virgin Atlantic volunteer time is calculated using the average hourly salary multiplied by the number of volunteer hours. The average hourly salary is calculated based off the salary data extracted from the HR management system of Virgin Atlantic employees in grades A-H, including basic pay, shift pay, National Insurance and pension, assuming 251 working days and a 7.5 hour working day. Volunteering hours are captured by the Community team and entered into the Community database. As of 1st December 2024 the average hourly salary is £28.72.