



Greenhouse Gas Assessment for Reed Global Limited and its subsidiary companies – UK offices
Assessment Period: July 2021 - June 2022
Produced on Nov. 7, 2022 By *Our Impacts*

Assessment Details

This report is prepared on behalf of Natural Capital Partners for Reed Global Limited and its subsidiary companies – UK offices

Natural Capital Partners works with clients all over the world to develop carbon reduction strategies; including footprint measurement, establishing reduction targets and delivering carbon offset programmes.

Consolidation Approach

Operational control

Organisational Boundary

Operations of Reed Global Limited and its subsidiary companies – UK offices

Included

- Reed Global Limited and its subsidiary companies – UK offices
- UK Offices

Operational Boundary

- Air travel - with RFI for NCP
- Bus and coach
- Composted waste
- Electricity
- Employee owned cars
- Hotel night stays
- Incinerated waste
- Landfilled waste
- Natural gas
- R-22 Refrigerant gas
- Rail (train, tram, light rail, underground)
- Recycled waste
- Refrigerant gas loss and other fugitive emissions
- Taxi
- Water supply
- Water treatment

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CarbonNeutral® Certification Summary

CarbonNeutral® certification:			CarbonNeutral® Company			
Reporting period:			July 2021 - June 2022			
CarbonNeutral® certification scope and emissions to be offset:						
Scope	Emissions source		Required or recommended	Included in assessment	Location-Based Method (tCO ₂ e)	Market-Based Method (tCO ₂ e)
Scope 1	Direct emissions arising from owned, leased or directly controlled stationary sources that use fossil fuels and/or emit fugitive emissions (e.g. refrigerant gases)		Required	✓	333	333
	Direct emissions from owned, leased or directly controlled mobile sources		Required	n/a	-	-
Scope 2	Emissions from the generation of purchased electricity, heat, steam or cooling		Required	✓	847	1,401
Scope 3	Purchased goods and services		Recommended	✓	5.14	5.14
	Capital goods		Recommended	n/a	-	-
	Fuel- and energy-related activities (not included in Scope 1 or Scope 2)	Upstream emissions of purchased fuels	Recommended	✓	57	57
		Upstream emissions of purchased electricity	Recommended	✗	-	-
		Transmission and distribution (T&D) losses	Required	✓	72.8	72.8
	Upstream transportation and distribution	Outbound courier deliveries of packages	Recommended	n/a	-	-
Third-party transportation and storage of inbound production-related goods		Recommended	n/a	-	-	

Scope 3	Waste generated in operations	Wastewater	Recommended	✓	9.38	9.38	
		Other waste	Required	✓	7.37	7.37	
	Business travel	All transportation by air, public transport, rented/leased vehicle and taxi	Required	✓	506	506	
		Emissions arising from hotel accommodation associated with business travel	Recommended	✓	58.9	58.9	
	Employee commuting and homeworking	Employee transport between home and worksites	Recommended	n/a	-	-	
		Employee homeworking (teleworking/remote working)	Required	n/a	-	-	
	Downstream transportation and distribution	Third-party transportation and storage of sold products	Required	n/a	-	-	
	Use of sold products		Recommended	n/a	-	-	
	Overall compliance				✓		
	TOTAL FOR OFFSET(tCO₂e)*					1,897	2,451

* Please note total calculated GHG emissions are rounded up to the nearest whole tCO₂e for the purpose of offsetting. Rounding errors may apply.

Introduction

A greenhouse gas (GHG) emissions assessment quantifies the total greenhouse gases produced directly and indirectly from a business or organisation's activities. Also known as a carbon footprint, it is an essential tool, providing your business with a basis for understanding and managing its climate change impacts.

A GHG assessment quantifies all seven Kyoto greenhouse gases where applicable and is measured in units of carbon dioxide equivalence, or CO₂e¹. The seven Kyoto gases are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), nitrogen trifluoride (NF₃), sulphur hexafluoride (SF₆) and perfluorocarbons (PFCs). The global warming potential (GWP) of each gas is illustrated in the Table 1.

Table 1. GWP of Kyoto Gases (IPCC 2007)

Greenhouse Gas	GWP
Carbon dioxide (CO ₂)	1
Methane (CH ₄)	25
Nitrous oxide (N ₂ O)	298
Hydrofluorocarbons (HFCs)	124 - 14,800
Perfluorocarbons (PFCs)	7,390 - 12,200
Nitrogen trifluoride (NF ₃)	17,200
Sulphur hexafluoride (SF ₆)	22,800

This assessment has been carried out in accordance with the World Business Council for Sustainable Development and World Resources Institute's (WBCSD/WRI) Greenhouse Gas Protocol; a Corporate Accounting and Reporting Standard, including the GHG Protocol Scope 2 Guidance. This protocol is considered current best practice for corporate or organisational greenhouse gas emissions reporting. GHG emissions have been reported by the three WBCSD/WRI Scopes.

Scope 1 includes direct GHG emissions from sources that are owned or controlled by the company such as natural gas combustion and company owned vehicles.

Scope 2 accounts for GHG emissions from the generation of purchased electricity, heat and steam generated off-site. As the subject of this assessment operates in markets which offer contractual instruments with product or supplier-specific data, scope 2 emissions are reported using both the location-based method and the market-based method. The location-based method applies average emission factors that correspond to the grid where consumption occurs, whereas the market-based method applies emission factors that correspond to energy purchased (or not purchased) through contractual instruments. Contractual instruments include energy attribute certificates, direct energy contracts, and supplier specific emission rates. The subject of this assessment has ensured that any contractual instruments used in the market-based method have met the Scope 2 Quality Criteria, as defined in the Guidance. Where contractual instruments do not meet the Quality Criteria, or where contractual instruments were not purchased, market-based scope 2 emissions have been calculated using residual mix emission factors. Where residual mix emission factors are not available, market-based scope 2 emissions have been calculated using default location grid-average emission factors, per the Protocol hierarchy. This may result in double counting between electricity consumers, as an adjusted emission factor taking into account voluntary purchases of electricity with specific attributes was not available.

Scope 3 includes all other indirect emissions such as waste disposal, business travel and staff commuting. Reporting of these activities is optional under the WBCSD/WRI GHG Protocol, but as they can contribute a significant portion of overall emissions Ecometrica recommends they are reported where applicable.

A GHG assessment is an essential tool in the process of monitoring and reducing an organisation's climate change impact as it allows reduction targets to be set and action plans formulated. GHG assessment results can also allow organisations to be transparent about their climate change impacts through reporting of GHG emissions to customers, shareholders, employees and other stakeholders. Regular assessments allow clients to track their progress in achieving reductions over time and provide evidence to support green claims in external marketing initiatives such as product labelling or CSR reporting. Ecometrica GHG assessments are designed to be transparent, consistent and repeatable over time.

¹ Carbon dioxide equivalent or CO₂e is a term for describing different greenhouse gases in a common unit. For any quantity and type of greenhouse gas, CO₂e signifies the amount of CO₂ which would have the equivalent global warming impact.

Data Quality and Availability

In order to provide the most accurate estimate of an organisation's GHG emissions, primary (actual) data should be used where it is available, up to date and geographically relevant. Secondary data in the form of estimates, extrapolations and industry averages may be used when primary data is not available. Table 2 details the quality of data submitted for this assessment with the key assumptions used stated below.

Data Quality Overview



Location-based Accuracy Overview		
	tCO ₂ e/year	%
Actual	1,517	80
Estimated	379	20
Total	1,897	100



Market-based Accuracy Overview		
	tCO ₂ e/year	%
Actual	2,071	84.5
Estimated	379	15.5
Total	2,451	100

Table 2. Data Quality and Availability

Source of emissions	Data quality
Premises	
Composted waste	Actual
Electricity	Actual
Fuel oil	N/A
Incinerated waste	Actual
Landfilled waste	Actual
Natural gas	Actual
Other fuel(s)	N/A
R-22 Refrigerant gas	Actual
Recycled waste	Actual
Refrigerant gas loss and other fugitive emissions	Actual
Water supply	Mixed
Water treatment	Mixed
Company owned vehicles	
Cars	N/A
Motorcycle	N/A

Trucks	N/A
Vans	N/A
Business Travel	
Air travel - with RFI for NCP	Actual
Bus and coach	Estimated
Employee owned cars	Estimated
Hired cars	N/A
Hotel night stays	Actual
Rail (train, tram, light rail, underground)	Actual
Taxi	Actual
Commuting	
Bicycle	N/A
Bus and coach	N/A
Cars	N/A
Motorcycle	N/A
On foot	N/A
Rail (train, tram, light rail, underground)	N/A
Homeworkers	
Homeworkers	N/A
Purchased Goods and Services	
Paper	N/A
Purchased Office Materials and Equipment	N/A
Purchased Services, Couriers and Messengers	N/A
Third-party transportation and storage of inbound production-related goods	
Air freight - NCP	N/A
Electricity	N/A
Fuel oil	N/A
Landfilled waste	N/A
Natural gas	N/A
Other fuel(s)	N/A
Rail freight	N/A
Refrigerant gas loss and other fugitive emissions	N/A
Road freight, shared vehicle (tonne.km factors)	N/A
Road freight, whole vehicle (km factors)	N/A
Sea freight	N/A
Third-party transportation and storage of sold products	
Air freight - NCP	N/A
Electricity	N/A
Fuel oil	N/A
Landfilled waste	N/A
Natural gas	N/A
Other fuel(s)	N/A

Rail freight	N/A
Refrigerant gas loss and other fugitive emissions	N/A
Road freight, shared vehicle (tonne.km factors)	N/A
Road freight, whole vehicle (km factors)	N/A

Key Assumptions

Premises

- Electricity consumption has been estimated based on the amount spent and the BEIS (2021) average electricity price per kWh for a small/medium consumer during the assessment period.
- Natural gas consumption has been estimated based on the amount spent and the BEIS (2021) average natural gas price per kWh for an average consumer during the assessment period.
- Water supply has been estimated based on FTE and the BBP (2018) assumption for office water intensity (typical practice). Water treated has been assumed to be equal to water supplied.

Business Travel

- Business travel by train, underground, and tram has been estimated based on the amount spent and the DFT (2022) average cost per [pass.km](#) for travel by train, underground, and tram.
- Business travel by local bus has been estimated based on the amount spent and the DFT/TFS (2022) average cost per [pass.km](#) for travel by local bus.
- Business travel by taxi has been estimated based on the amount spent and the DFT (2003) average cost per [pass.km](#) for travel by taxi.
- A Radiative Forcing Index (RFI) of 1.4 was used for air travel to account for the additional negative effects air travel has on the environment. Business travel by air has been estimated based on the number of journeys and the BTS (2020) typical distances for short-, medium-, and long-haul flights.

Assessment Summary for Reed Global Limited and its subsidiary companies – UK offices

Gross Overall Emissions (location-based): 1,897 tCO₂e

Gross Overall Emissions (market-based): 2,451 tCO₂e

Key Performance Indicators

Absolute GHG emissions will vary over time and often correspond to the expansion or contraction of an organisation. It is useful therefore to use reporting metrics that take these effects into account and monitor relative GHG emissions intensity. A common emissions intensity metric is tonnes of CO₂e per full time equivalent. This has been calculated, along with other relevant metrics, in the table below:

Data	KPI
3,684 Full Time Equivalent Employees	0.515 tCO ₂ e per Full Time Equivalent Employee (Location-Based)
3,684 Full Time Equivalent Employees	0.665 tCO ₂ e per Full Time Equivalent Employee (Market-Based)

Summary by Activity (Location-Based, tCO₂e)



By Activity	tCO ₂ e/year	%
Premises	1,332	70.2
Business Travel	565	29.8
Total	1,897	100

Summary by Activity (Market-Based, tCO₂e)



By Activity	tCO ₂ e/year	%
Premises	1,885	76.9
Business Travel	565	23.1
Total	2,451	100

Summary by WBCSD/WRI Scope (Location-Based, tCO₂e)



By Activity	tCO ₂ e/year	%
Scope 1	333	17.6
Scope 2	847	44.6
Scope 3	717	37.8
Total	1,897	100

Summary by WBCSD/WRI Scope (Market-Based, tCO₂e)



By Activity	tCO ₂ e/year	%
Scope 1	333	13.6
Scope 2	1,401	57.2
Scope 3	717	29.3
Total	2,451	100

Summary by Greenhouse Gas

Greenhouse Gas	GWP	tGHG/year (Location-Based)	tCO ₂ e/year (Location-Based)	tGHG/year (Market-Based)	tCO ₂ e/year (Market-Based)
CO ₂	1	1,707	1,707	2,269	2,269
CH ₄	25	0.178	4.46	0.0506	1.27
N ₂ O	298	0.0302	9	0.0119	3.53
CO ₂ e	1	177	177	177	177
Total			1,897	2,451	

Summary of Scope 2 Market-Based Method for Reed Global Limited and its subsidiary companies – UK offices

Energy Consumed and Emissions By Factor Type In Scope 2 Market-Based Method

Scope 2 Market-Based Energy

Scope 2 Market-Based Emissions



Emission Factor Type	Energy		Market-Based Emissions	
	MWh	%	tCO ₂ e	%
Client-supplied market-based instrument	0	0	0	0
Residual mix factors	3,988	100	1,401	100
Default location-based factors	0	0	0	0
Total	3,988	100	1,401	100

Detailed Results

Detailed Summary by WBCSD/WRI Scope

Location-Based methodology

Source of Emissions	tCO ₂ /yr	tCH ₄ /yr	tN ₂ O/yr	Total Emissions (tCO ₂ e/yr)	%
Scope 1 Total	332	0.0182	6.1e-4	333	17.6%
Premises Total	332	0.0182	6.1e-4	333	17.6%
Natural gas	332	0.0182	6.1e-4	333	17.6%
Scope 2 Total	838	0.128	0.0183	847	44.6%
Premises Total	838	0.128	0.0183	847	44.6%
Electricity	838	0.128	0.0183	847	44.6%
Scope 3 Total	536	0.0325	0.0112	717	37.8%
Business Travel Total	464	0.0213	0.00964	565	29.8%
Air travel - with RFI for NCP	54.9	3e-4	0.00125	55.3	2.92%
Air travel - with RFI for NCP: Flights, medium-haul, average, upstream emissions	0	0	0	6.97	0.367%
Air travel - with RFI for NCP: Flights, medium-haul, economy, upstream emissions	0	0	0	0.403	0.0213%
Air travel - with RFI for NCP: Flights, short-haul, upstream emissions	0	0	0	0.835	0.044%
Bus and coach	2	1.37e-5	5.7e-5	2.02	0.107%
Bus and coach: Local bus, upstream emissions	0	0	0	0.492	0.026%
Employee owned cars	285	0.0114	0.00618	287	15.1%
Employee owned cars: Average unknown fuel car, upstream emissions	0	0	0	75.5	3.98%
Hotel night stays	58.7	0.00483	2.26e-4	58.9	3.11%
Rail (train, tram, light rail, underground)	57.9	0.00475	0.00175	58.5	3.09%
Rail (train, tram, light rail, underground): Light rail, upstream emissions	0	0	0	0.112	0.00593%
Rail (train, tram, light rail, underground): Train, national, upstream emissions	0	0	0	11.7	0.617%
Rail (train, tram, light rail, underground): Underground, upstream emissions	0	0	0	0.194	0.0103%
Taxi	5.76	4.62e-6	1.76e-4	5.82	0.307%
Taxi: Regular taxi, upstream emissions	0	0	0	1.42	0.0749%
Premises Total	72	0.0112	0.00161	152	8%
Electricity: Electricity - transmission & distribution losses	72	0.0112	0.00161	72.8	3.84%
Incinerated waste	0	0	0	2.11	0.111%
Landfilled waste	0	0	0	4.09	0.216%
Natural gas: Natural gas (average UK network) (gross CV), upstream emissions	0	0	0	57	3.01%
Recycled waste	0	0	0	1.16	0.0612%

Water supply	0	0	0	5.14	0.271%
Water treatment	0	0	0	9.38	0.494%
Total	1,707	0.178	0.0302	1,897	100%

Market-Based methodology

Source of Emissions	tCO ₂ /yr	tCH ₄ /yr	tN ₂ O/yr	Total Emissions (tCO ₂ e/yr)	%
Scope 1 Total	332	0.0182	6.1e-4	333	13.6%
Premises Total	332	0.0182	6.1e-4	333	13.6%
Natural gas	332	0.0182	6.1e-4	333	13.6%
Scope 2 Total	1,401	0	0	1,401	57.2%
Premises Total	1,401	0	0	1,401	57.2%
Electricity	1,401	0	0	1,401	57.2%
Scope 3 Total	536	0.0325	0.0112	717	29.3%
Business Travel Total	464	0.0213	0.00964	565	23.1%
Air travel - with RFI for NCP	54.9	3e-4	0.00125	55.3	2.26%
Air travel - with RFI for NCP: Flights, medium-haul, average, upstream emissions	0	0	0	6.97	0.284%
Air travel - with RFI for NCP: Flights, medium-haul, economy, upstream emissions	0	0	0	0.403	0.0165%
Air travel - with RFI for NCP: Flights, short-haul, upstream emissions	0	0	0	0.835	0.0341%
Bus and coach	2	1.37e-5	5.7e-5	2.02	0.0825%
Bus and coach: Local bus, upstream emissions	0	0	0	0.492	0.0201%
Employee owned cars	285	0.0114	0.00618	287	11.7%
Employee owned cars: Average unknown fuel car, upstream emissions	0	0	0	75.5	3.08%
Hotel night stays	58.7	0.00483	2.26e-4	58.9	2.4%
Rail (train, tram, light rail, underground)	57.9	0.00475	0.00175	58.5	2.39%
Rail (train, tram, light rail, underground): Light rail, upstream emissions	0	0	0	0.112	0.00459%
Rail (train, tram, light rail, underground): Train, national, upstream emissions	0	0	0	11.7	0.478%
Rail (train, tram, light rail, underground): Underground, upstream emissions	0	0	0	0.194	0.00793%
Taxi	5.76	4.62e-6	1.76e-4	5.82	0.237%
Taxi: Regular taxi, upstream emissions	0	0	0	1.42	0.0579%
Premises Total	72	0.0112	0.00161	152	6.19%
Electricity: Electricity - transmission & distribution losses	72	0.0112	0.00161	72.8	2.97%
Incinerated waste	0	0	0	2.11	0.0862%
Landfilled waste	0	0	0	4.09	0.167%
Natural gas: Natural gas (average UK network) (gross CV), upstream emissions	0	0	0	57	2.33%

Recycled waste	0	0	0	1.16	0.0474%
Water supply	0	0	0	5.14	0.21%
Water treatment	0	0	0	9.38	0.383%
Total	2,269	0.0506	0.0119	2,451	100%

Summary by Company Unit

Location-Based methodology

Assessment	July 2020 - June 2021		July 2021 - June 2022	
Company Unit	Total Emissions (tCO ₂ e)	Emissions per FTE (tCO ₂ e/FTE)	Total Emissions (tCO ₂ e)	Emissions per FTE (tCO ₂ e/FTE)
Reed Global Limited and its subsidiary companies – UK offices	1,534	0.59	1,897	0.515
UK Offices	1,534	0.59	1,897	0.515

Market-Based methodology

Assessment	July 2020 - June 2021		July 2021 - June 2022	
Company Unit	Total Emissions (tCO₂e)	Emissions per FTE (tCO₂e/FTE)	Total Emissions (tCO₂e)	Emissions per FTE (tCO₂e/FTE)
Reed Global Limited and its subsidiary companies – UK offices	1,987	0.765	2,451	0.665
UK Offices	1,987	0.765	2,451	0.665

Annual Activity Data

Source of Emissions	Value	Unit
Business Travel		
Air travel - with RFI for NCP		
Average flight length, average class (with RFI for NCP)	278	journey
Medium-haul, economy (with RFI for NCP)	22	journey
Short-haul (with RFI for NCP)	67	journey
Bus and coach		
Local bus	2,445	GBP
Employee owned cars		
Average car (unknown fuel)	1,040,314	mi
Hotel night stays		
Hotel night stays	2,678	night
Rail (train, tram, light rail, underground)		
Intercity/National train	243,141	GBP
Light rail/Tram	6,034	GBP
Underground/Subway	10,548	GBP
Taxi		
Average taxi	17,611	GBP
Premises		
Composted waste		
Electricity		
Electricity spend, small/medium consumer	688,263	GBP
Incinerated waste		
Combusted waste, energy recovery, municipal waste, average	99.2	tonne
Landfilled waste		
Landfilled waste	8.76	tonne
Natural gas		
Natural gas spend, average consumer	67,207	GBP
R-22 Refrigerant gas		
R-22 emissions	0	kg
Recycled waste		
Waste, recycled	54.5	tonne
Refrigerant gas loss and other fugitive emissions		
Water supply		
Water supply	34,485	m3
Water treatment		
Water treatment	34,485	m3

Key Observations

Overall

- No market-based instruments have been applied. Reed Global Limited and its subsidiary companies – UK offices are located in the United Kingdom, which has a valid electricity residual mix factor available. This residual mix factor has been applied to the electricity consumption to derive a result in line with the Scope 2 market-based methodology.
- Reed Global Limited and its subsidiary companies – UK offices have chosen not to report or estimate employee commuting due to inconsistencies in the data available, to ensure accuracy of the report.

Location-based methodology

- Overall emissions have increased by 363 tonnes of CO₂e, or 24%, from 1,534 tonnes of CO₂e during the 2020/2021 assessment period to 1,897 tonnes of CO₂e during the 2021/2022 assessment period. This increase is mainly due to an increase in business travel after COVID restrictions lessened.
- Electricity consumption (including transmission & distribution losses) accounts for the largest portion of emissions with 920 tonnes of CO₂e, or 49% of the total emissions.
- Natural gas consumption accounts for the second largest portion of emissions with 333 tonnes of CO₂e, or 18% of the total emissions.

Market-based methodology

- Overall emissions have increased by 464 tonnes of CO₂e, or 23%, from 1,987 tonnes of CO₂e during the 2020/2021 assessment period to 2,451 tonnes of CO₂e during the 2021/2022 assessment period. This increase is mainly due to an increase in business travel after COVID restrictions lessened.
- Electricity consumption (including transmission & distribution losses) accounts for the largest portion of emissions with 1,474 tonnes of CO₂e, or 60% of the total emissions.
- Natural gas consumption accounts for the second largest portion of emissions with 333 tonnes of CO₂e, or 14% of the total emissions.

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