

# One Carbon World



## Report

Presented to:

One Carbon World Ltd.  
2022

Issued August 2023



# One Carbon World

One Carbon World Ltd. CO<sub>2</sub>e Report August 2023

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**Please consider the environment before printing this report.**

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## Introduction

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One Carbon World Ltd. have been awarded the One Carbon World Carbon Neutral International Standard grant.

This report details the carbon footprint of One Carbon World Ltd. and provides recommendations to reduce and off-set its footprint.

The activities included in the carbon footprint measurement were agreed in consultation between One Carbon World and One Carbon World Ltd.. The calculation of the footprint was undertaken by One Carbon World after a desk-top review of data provided by One Carbon World Ltd..

This report meets the reporting requirements of the Green House Gas (GHG) Protocol Corporate Standard and is compatible with international standards ISO 14064 and PAS 2060.

One Carbon World have taken all reasonable measures to ensure the accuracy of this report. Any omissions or errors in data are the responsibility of the grant recipient named in this report.

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## Carbon Footprint Report

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**Name: One Carbon World Ltd.**

Address: B3 Kingfisher House, Kingsway, Team Valley Trading Estate, Gateshead, England, NE11 0JQ

Description: Management consultancy activities other than financial management

Footprint boundary: All activities under operational control, covered under Scopes 1, 2 and 3 of the Green House Gas (GHG) Protocol Corporate Standard as detailed within this report.

Footprint Period: 01/04/2022 to 31/03/2023

### Activities/Emissions included in footprint:

- Energy,
- Fuel,
- Water,
- Waste,
- Business Travel,
- Materials Use &
- Purchase of Goods and Services.

### Emissions Summary:

Total carbon footprint of activities measured = 12.67 tonnes CO<sub>2</sub>e

Scope 1 emissions = 0.60 tonnes CO<sub>2</sub>e

Scope 2 emissions = 0.04 tonnes CO<sub>2</sub>e

Scope 3 emissions = 12.03 tonnes CO<sub>2</sub>e

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The GHG Protocol Corporate Standard requires reporting a minimum of scope 1 and scope 2 emissions.

## **Scope 1 - Direct Green House Gas (GHG) Emissions:**

Scope 1 (direct emissions) emissions are those from activities owned or controlled by an organisation. Direct emissions are principally the result of the following types of activities:

- Generation of electricity, heat, or steam. These emissions result from combustion of fuels in stationary sources, e.g. boilers, furnaces, turbines
- Transportation of materials, products, waste, and employees. These emissions result from the combustion of fuels in company owned/controlled mobile combustion sources (e.g. trucks, trains, ships, airplanes, buses and cars)
- Fugitive emissions. These emissions result from intentional or unintentional releases, e.g., equipment leaks from joints, seals, packing, and gaskets; methane emissions from coal mines and venting; hydrofluorocarbon (HFC) emissions during the use of refrigeration and air conditioning equipment; and methane leakages from gas transport
- Physical or chemical processing. Most of these emissions result from manufacture or processing of chemicals and materials, e.g. cement, aluminium, and waste processing

## **Scope 1 Emissions data supplied and included in footprint:**

- Total Fuels : Gaseous fuels : Natural gas kWh (Gross CV) :
- Total Bioenergy : Biomass : Wood logs kWh :

## Scope 2 - Indirect GHG Emissions:

Scope 2 (indirect) emissions are those released into the atmosphere that are associated with the consumption of purchased electricity, heat, steam and cooling. These indirect emissions are a consequence of an organisation's energy use, but occur at sources not owned or controlled.

### Scope 2 Emissions data supplied and included in footprint:

- Total UK electricity : Electricity generated : Electricity: UK kWh :
- Total Overseas electricity : Electricity generated : Electricity: Uruguay kWh :

## Scope 3 - Other Indirect GHG Emissions:

Scope 3 (other indirect) emissions are a consequence of actions that occur at sources not owned or controlled and not classed as Scope 2 emissions. Examples of Scope 3 emissions are business travel by means not owned or controlled by an organisation, waste disposal, or materials or fuels an organisation purchases. Deciding if emissions from a vehicle, office or factory are Scope 1 or Scope 3 may depend on how operational boundaries are defined.

### Scope 3 Emissions data supplied and included in footprint:

- Total WTT- fuels : Gaseous fuels : Natural gas kWh (Gross CV) :
- Total WTT- business travel (land) : WTT- taxis : Regular taxi km :
- Total WTT- business travel (land) : WTT- rail : National rail passenger.km :
- Total WTT- business travel (air) : WTT- flights : Long-haul, to/from UK passenger.km : Economy classWith RF
- Total WTT- bioenergy : WTT- biomass : Wood logs kWh :
- Total Transmission and distribution : T&D- UK electricity : Electricity: UK kWh :
- Total Transmission and distribution : T&D- overseas electricity : Electricity: Uruguay kWh :
- Total Money Value to CO<sub>2</sub>e : Telecommunications services : Telecommunications service costs :
- Total Money Value to CO<sub>2</sub>e : Other professional, scientific and technical services : Other professional, scientific and technical service costs :

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- Total Money Value to CO<sub>2</sub>e : Insurance, reinsurance and pension funding services, except compulsory social security & Pensions : Insurance, reinsurance and pension funding service costs, except compulsory social security & Pensions :
- Total Money Value to CO<sub>2</sub>e : Information services : Information service costs :
- Total Money Value to CO<sub>2</sub>e : Financial services, except insurance and pension funding : Financial service costs, except insurance and pension funding :
- Total Money Value to CO<sub>2</sub>e : Computer, electronic and optical products : Computer, electronic and optical product costs :
- Total Money Value to CO<sub>2</sub>e : Accounting, bookkeeping and auditing services; tax consulting services : Financial consulting service costs :
- Total Material use : Products : All Products CO<sub>2</sub>e Values :
- Total Business travel- land : Taxis : Regular taxi km :
- Total Business travel- land : Rail : National rail passenger.km :
- Total Business travel- air : Flights : Long-haul, to/from UK passenger.km : Economy classWith RF

## Footprint Calculation Method:

The most common approach for calculating GHG emissions is through the application of documented and approved GHG emissions conversion factors. These factors are calculated ratios that relate GHG emissions to a proxy measure of activity at an emissions source.

Further detail on emissions factors and the methodology behind them can be found at <https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>

The activity data or amount of 'resources' used are multiplied by the relevant emissions factors to calculate total Greenhouse Gas equivalent (CO<sub>2</sub>e) emissions.

$$\text{GHG emissions} = \text{activity data} \times \text{emission conversion factor}$$

There are seven main GHGs that contribute to climate change, as covered by the Kyoto Protocol: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF<sub>6</sub>) and nitrogen trifluoride (NF<sub>3</sub>). Different activities emit different gases and an organisation should report on the Kyoto Protocol GHG gases produced by its activities.

CO<sub>2</sub>e is the universal unit of measurement to indicate the global warming potential (GWP) of GHGs, expressed in terms of the GWP of one unit of CO<sub>2</sub>. The GWPs used in the calculation of CO<sub>2</sub>e are based on the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (AR4) over a 100-year period (this is a requirement for inventory/national reporting purposes).

All conversion factors used in this report are in units of kilograms of carbon dioxide equivalent (kg CO<sub>2</sub>e).



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## **Assumptions and/or Omissions:**

- Website Emissions – estimated using <https://www.websitecarbon.com> (+-10,000 views)
- WFH Fuels - heating based on 5kWh per hour for 7.5 hours per day per employee.
- WFH Hours – these have been set dependent on individual employee working hours in the reporting year.
- WFH Fuels – wood fuel heating based on 8kW burner on for 10 hours per day 20 weeks of heating during the year - utilisation factor of 66%.
- Waste assumed as de-minimus.
- Water assumed as de-minimus.
- Well to Tank Scope 3 emissions associated with extraction, refining and transportation of raw fuels and Transmission and distribution (T&D) Scope 3 emissions associated with grid losses (the energy loss that occurs in getting the electricity from the power plant to the organisations that purchase it), are included in the footprint calculations.

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## Carbon Footprint:

### Market Based

The Total Carbon Footprint of the activities measured = **12.77 tonnes CO<sub>2</sub>e.**

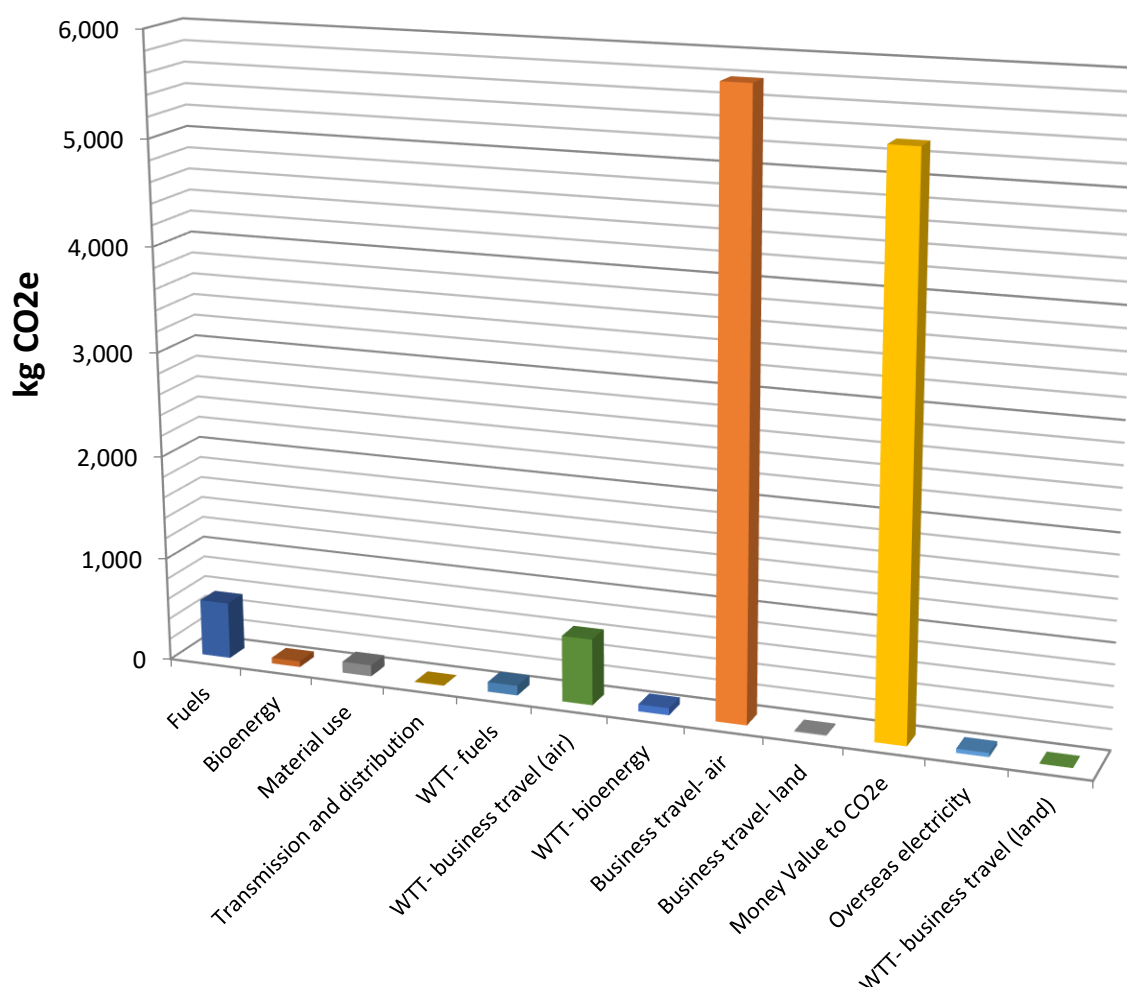
### Location Based

The Total Carbon Footprint of the activities measured = **12.67 tonnes CO<sub>2</sub>e.**

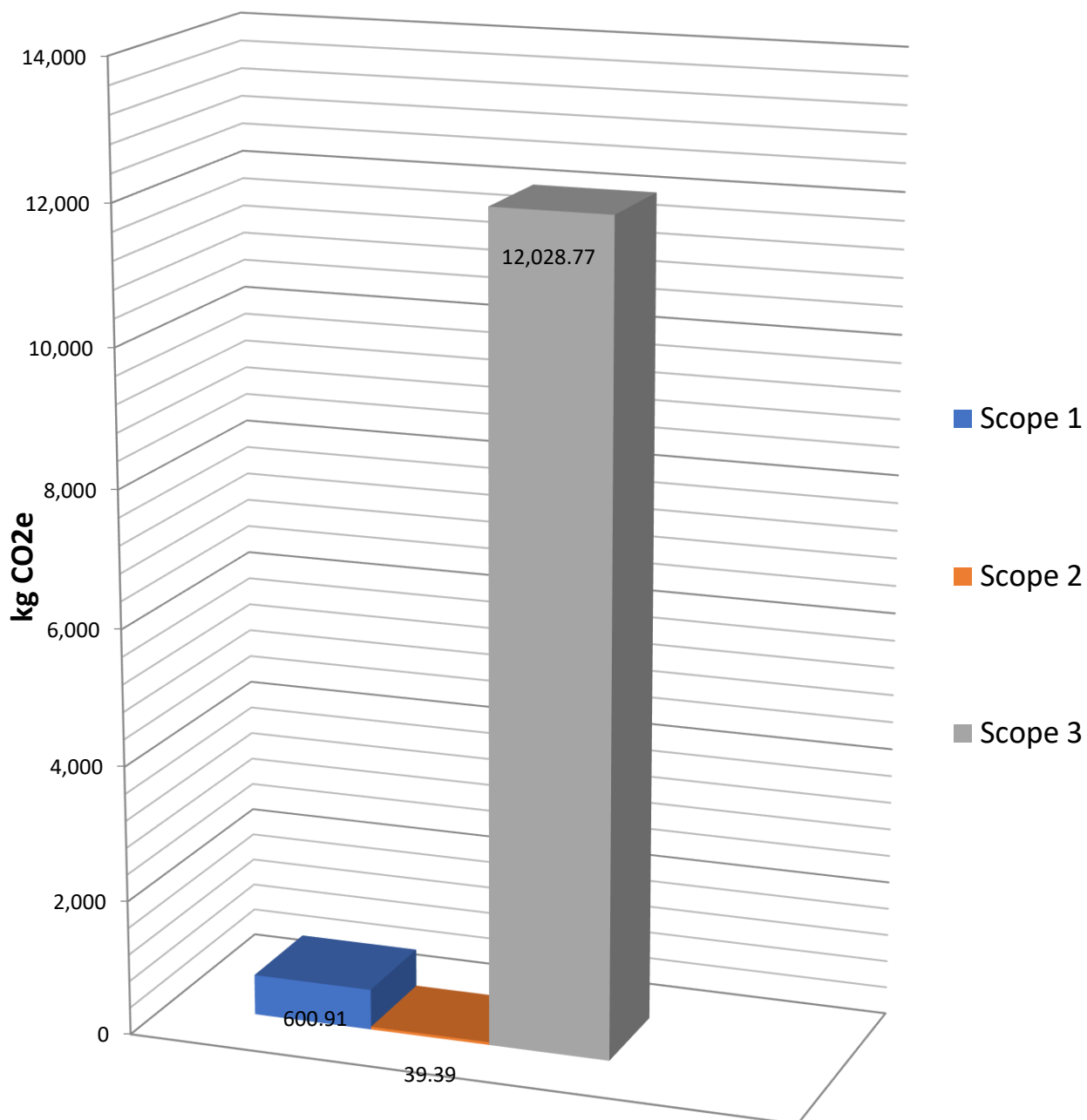
### Outside of Scopes

The Total Outside of Scopes emissions of the activities measured = **1.86 tonnes CO<sub>2</sub>e.**

## Sources of CO<sub>2</sub>e by emission activity

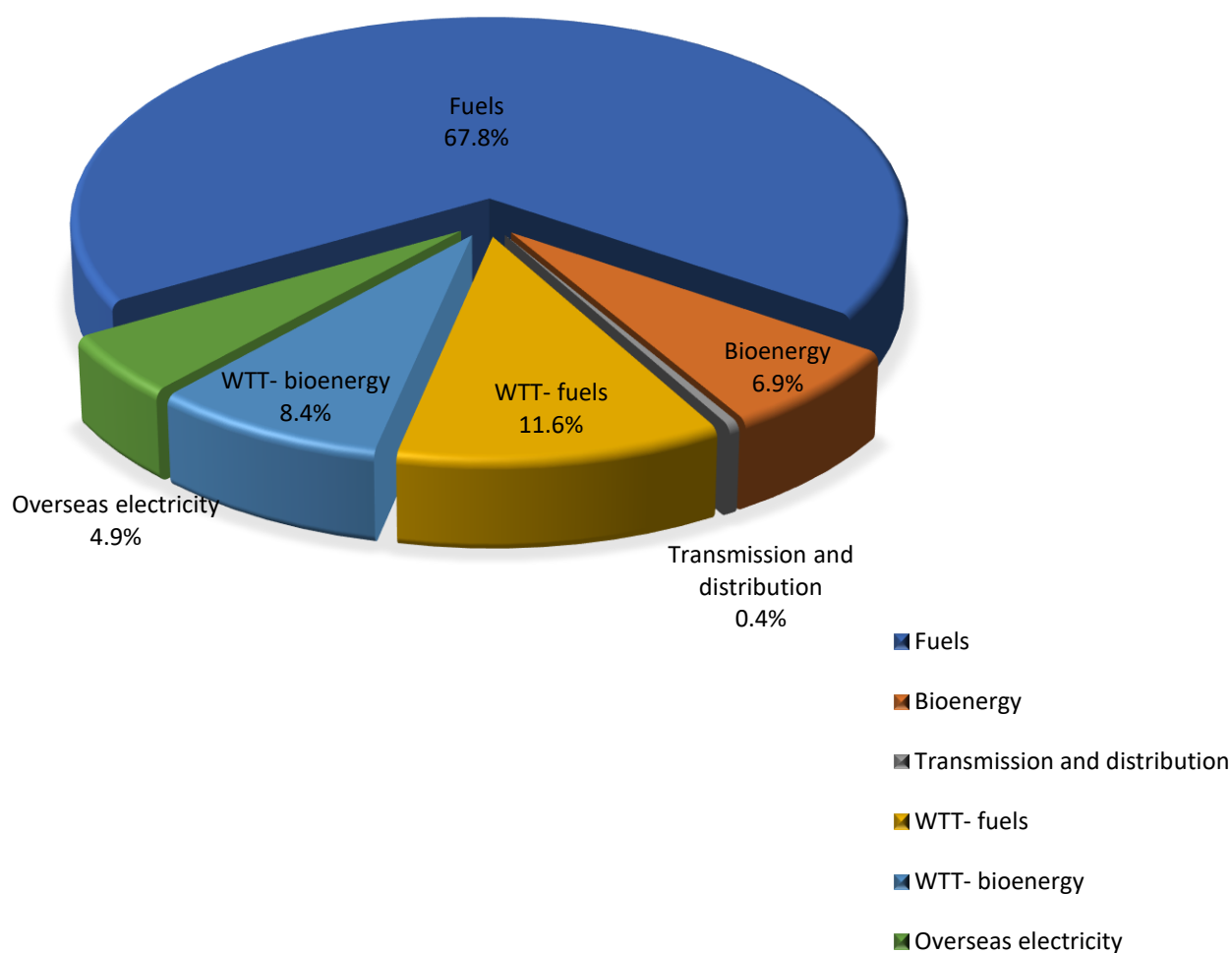


## Sources of CO<sub>2</sub>e emissions by GHG Protocol Scope

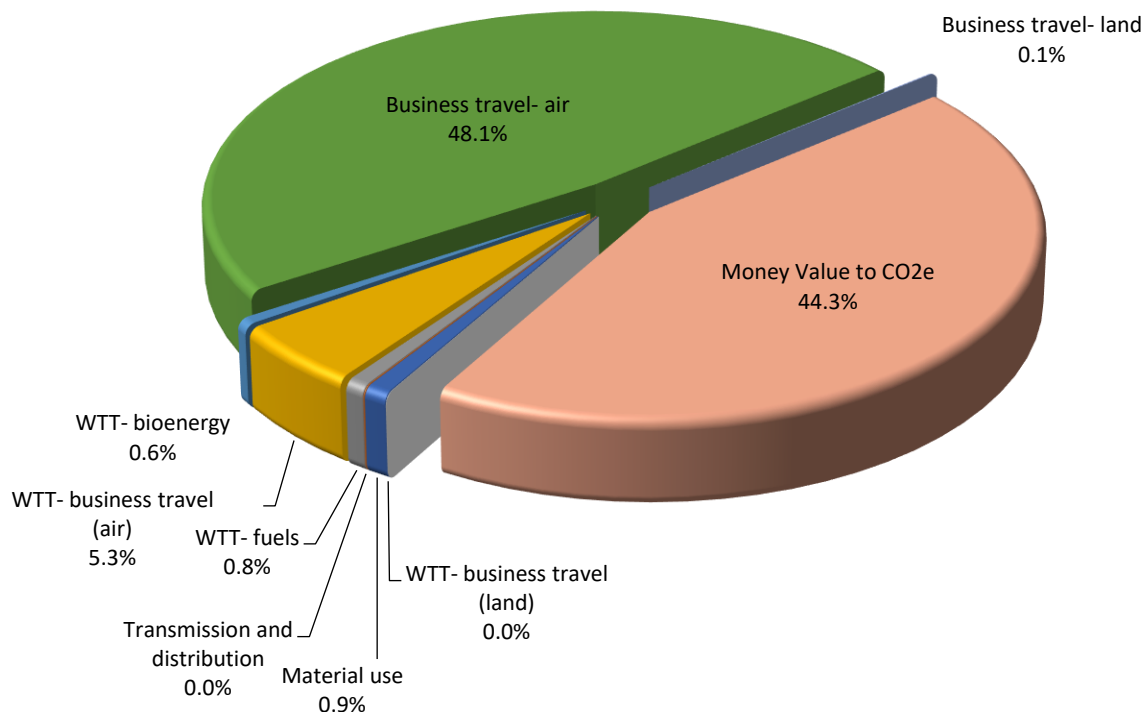


## Footprint detail

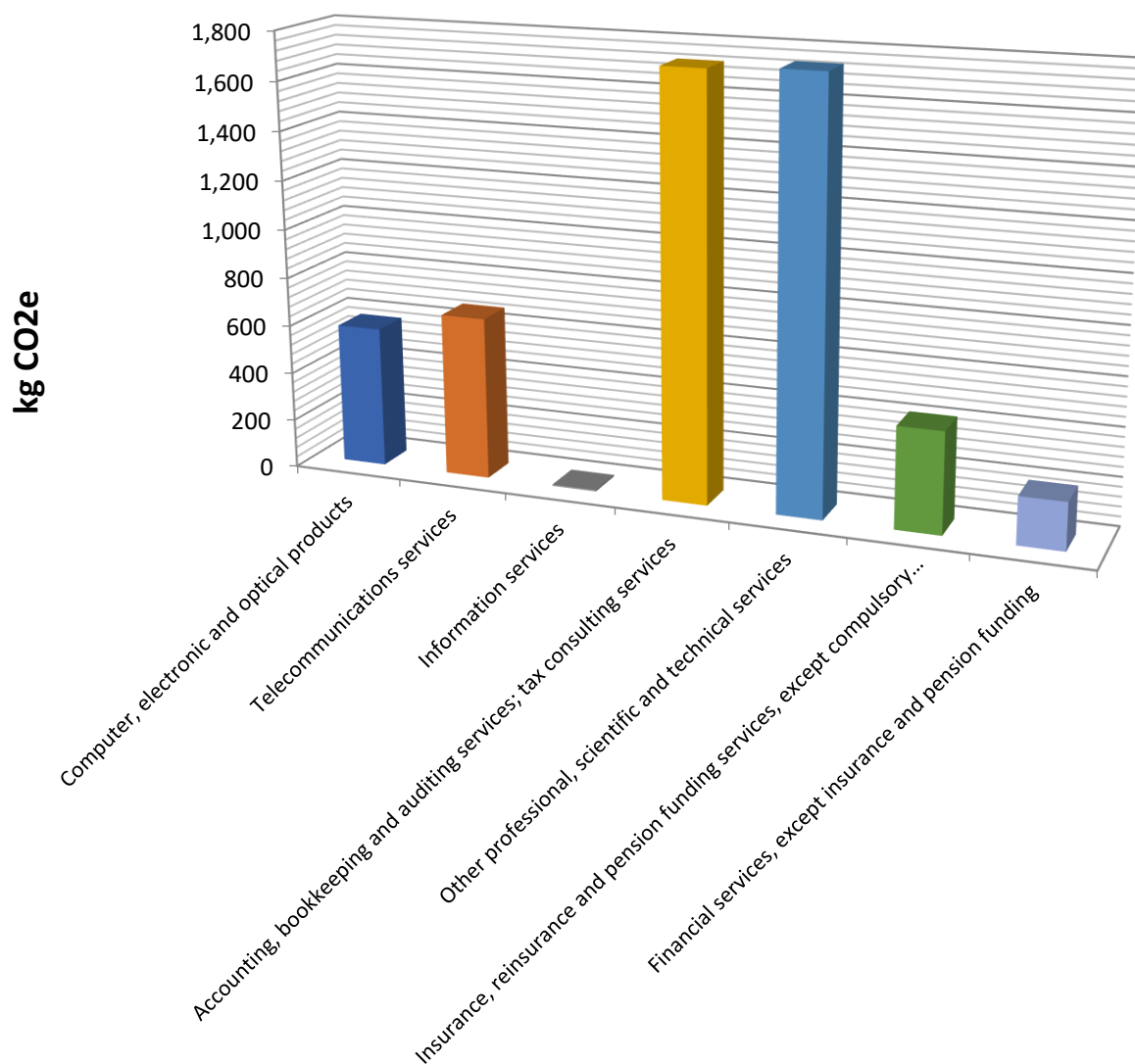
### Sources of CO<sub>2</sub>e emissions by Energy & Fuel Use



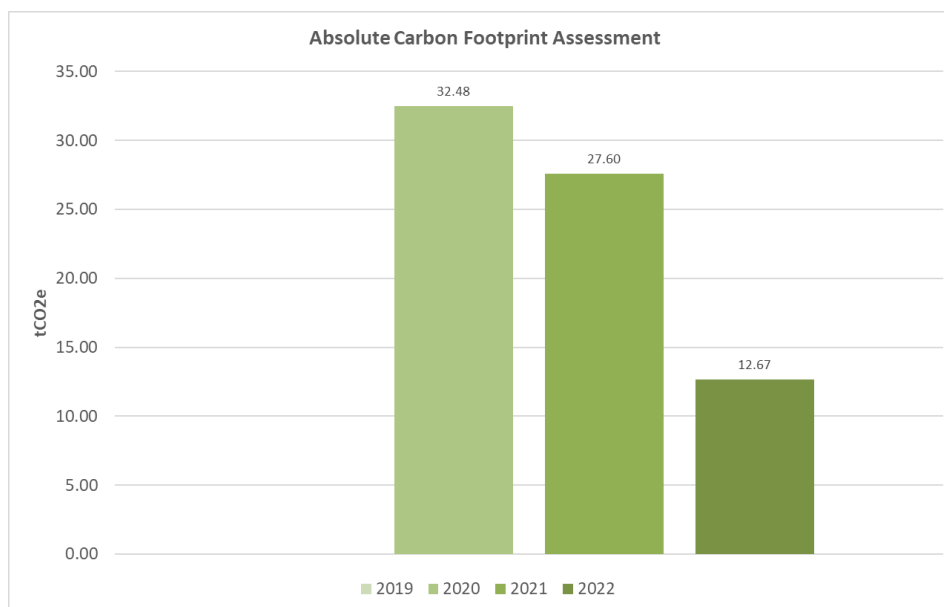
## Sources of CO<sub>2</sub>e by Indirect Emissions (Scope 3)



## **Sources of CO<sub>2</sub>e from expenditure data provided (Scope 3)**

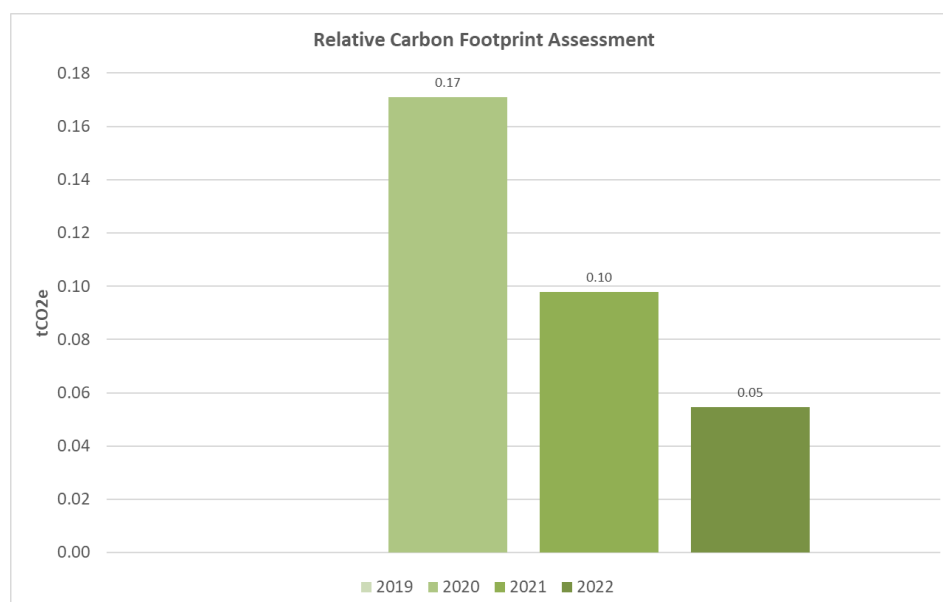


## Carbon Footprint Year on Year Comparison



### One Carbon World Ltd. Absolute Carbon Footprint Comparison Assessment

On an absolute basis, the total aggregated emissions in 2022 were stated as 12.67 tCO<sub>2</sub>e (-54%) compared with 27.60 tCO<sub>2</sub>e in 2021.



### One Carbon World Ltd. Relative Carbon Footprint Comparison Assessment

On a relative basis, using the performance indicator for One Carbon World Ltd. the relative total emissions in 2022 were stated as 0.05 tCO<sub>2</sub>e per serviced client (-44%) compared with 0.10 tCO<sub>2</sub>e in 2021.

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## Part 1 – Carbon Footprint Reduction Recommendations

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The most significant sources of CO<sub>2</sub>e emissions identified are:

- Emissions arising from business travel including WTT (51%)
- Emissions arising from purchased goods and services (42%)

The One Carbon World Ltd. carbon footprint is very robust in terms of methodologies and data applied. To build on this One Carbon World Ltd. could discuss with their core suppliers if carbon footprint data specific to their products is available. This is generally available from transportation providers but could start with suppliers of products with the highest carbon footprint/revenue (accounting, bookkeeping and auditing services; tax consulting services), such requirements could be built into contract specifications. Through further engagement with these suppliers One Carbon World Ltd. can articulate their sustainability and efficiency objectives that their providers are expected to support through contract specifications and contract management.

To effectively monitor the Carbon Footprint of One Carbon World Ltd. over time, it is also recommended that a relevant performance indicator is chosen e.g. tonnes CO<sub>2</sub>e per number of serviced clients.

### Footprint Period: 2022 Assessment

12.67 tCO<sub>2</sub>e / 232 serviced clients = 0.05 tCO<sub>2</sub>e per client per year.

### Footprint Period: 2021 Assessment

27.60 tCO<sub>2</sub>e / 282 serviced clients = 0.10 tCO<sub>2</sub>e per client per year.

### Footprint Period: 2020 Assessment

32.48 tCO<sub>2</sub>e / 190 serviced clients = 0.17 tCO<sub>2</sub>e per client per year.

Other performance indicators could also be used, such as those based on financial data e.g., KgCO<sub>2</sub>e per £, with the cost indicator linked to financial turnover and/or profit.



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OCW operate a carbon management strategy to which they annually updated and maintain in line with the UN recommended guidelines to align their targets with global goals of limiting temperature increases to 1.5°C above pre-industrial levels:

- Net Zero target by 2050 or earlier.
- Interim reduction targets aligning with the science - reduce emissions by 50% of the OCW baseline by 2030 **(5% per year target in place)**.
- Strategy to develop and to achieve short – mid- and long-term targets.
- On-going review of emissions against targets to track progress and ensure continued alignment with the climate science.
- It is accepted that reduction targets can be demonstrated against the relative emissions e.g., tonnes CO<sub>2</sub>e/serviced client (see above).

OCW have already reduced their emissions significantly through the purchasing of renewable electricity and through a no travel policy. Energy use should continue to be reduced through continued staff energy and environmental awareness to support positive action. To minimise emissions from staff working some options have been included below which have wider benefits for continued climate related engagement:

- Encouraging colleagues to move to LEDs, possibly through subsidised schemes.
- Encourage colleagues to maintain purchasing of renewable energy tariffs .
- Continued investment in energy efficient technology for colleagues WFH.
- Continued implementation of the no travel policy (in place).

These recommendations are non-exhaustive and are designed to provide guidance only.

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## Part 2 – Carbon Neutrality Achievement

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We are pleased to confirm that One Carbon World Ltd. has been awarded the One Carbon World Carbon Neutral International Standard grant which includes the retirement of up to 100 tonnes equivalent of carbon credits.

The 100 carbon credits that will be retired in the name of One Carbon World Ltd. come from both verified international afforestation projects and from United Nations clean development mechanism projects. With the retirement of these credits from 2022 - 2023 the Carbon Footprint from One Carbon World Ltd. will be offset to a total of 0 **tonnes**.

**Congratulations!** By offsetting the balance of its 01/04/2022-31/03/2023 Carbon Footprint, One Carbon World Ltd. have achieved carbon neutrality status and can communicate to all stakeholders that they have measured and off-set all emissions arising from their Scope 1, Scope 2 and Scope 3 activities. OCW will also issue you a Statement of Carbon Neutrality in support of your achievement covering the period 01/04/2022-31/03/2023.



## Scope kg CO<sub>2</sub>e Summary Table

Activity	Total kg CO <sub>2</sub> e	Total Tons CO <sub>2</sub> e
Scope 1	600.91	0.60
Scope 2	39.39	0.04
Scope 3	12,028.77	12.03
Outside of Scopes	0.00	0.00
<b>Total</b>	<b>12,669.08</b>	<b>12.67</b>

## Activity Type kg CO<sub>2</sub>e Summary Table

Activity Type	Total kg CO <sub>2</sub> e	Total Tons CO <sub>2</sub> e
Fuels	545.32	0.55
Bioenergy	55.60	0.06
Material use	108.43	0.11
Transmission and distribution	3.23	0.00
WTT- fuels	92.91	0.09
WTT- business travel (air)	633.03	0.63
WTT- bioenergy	67.43	0.07
Business travel- air	5,781.72	5.78
Business travel- land	8.15	0.01
Money Value to CO <sub>2</sub> e	5,331.89	5.33
Overseas electricity	39.39	0.04
WTT- business travel (land)	2.00	0.00
<b>Total</b>	<b>12,669.08</b>	<b>12.67</b>

## Type kg CO<sub>2</sub>e Summary Table

Type	Total kg CO <sub>2</sub> e	Total Tons CO <sub>2</sub> e
Biomass	55.60	0.06
Gaseous fuels	545.32	0.55
Electricity generated	39.39	0.04
Computer, electronic and optical products - Money Value	580.02	0.58
Telecommunications services - Money Value	668.35	0.67
Information services - Money Value	6.02	0.01
Accounting, bookkeeping and auditing services; tax consulting services - Money Value	1,725.00	1.73
Other professional, scientific and technical services - Money Value	1,740.40	1.74
Insurance, reinsurance and pension funding services, except compulsory social security & Pensions - Money Value	416.03	0.42
Financial services, except insurance and pension funding - Money Value	196.08	0.20
T&D- overseas electricity	3.23	0.00
Products	108.43	0.11
Gaseous fuels	92.91	0.09
WTT- flights	633.03	0.63
WTT- taxis	1.53	0.00
WTT- rail	0.48	0.00
WTT- biomass	67.43	0.07
Flights	5,781.72	5.78
Taxis	6.25	0.01
Rail	1.90	0.00
<b>Total</b>	<b>12,669.08</b>	<b>12.67</b>

## Class & UOM kg CO<sub>2</sub>e Summary Table

Class & UOM	Total kg CO <sub>2</sub> e	Total Tons CO <sub>2</sub> e
Natural gas kWh (Gross CV)	545.32	0.55
Wood logs kWh	55.60	0.06
Electricity: Uruguay kWh	39.39	0.04
All Products CO <sub>2</sub> e Values	108.43	0.11
Computer, electronic and optical product costs - Money Value	580.02	0.58
Telecommunications service costs - Money Value	668.35	0.67
Information service costs - Money Value	6.02	0.01
Financial consulting service costs - Money Value	1,725.00	1.73
Other professional, scientific and technical service costs - Money Value	1,740.40	1.74
Insurance, reinsurance and pension funding service costs, except compulsory social security & Pensions - Money Value	416.03	0.42
Financial service costs, except insurance and pension funding - Money Value	196.08	0.20
Electricity: Uruguay kWh	3.23	0.00
Natural Gas kWh (Gross CV)	92.91	0.09
Long-haul, to/from UK passenger.km	6,414.75	6.41
Regular taxi km	7.77	0.01
National rail passenger.km	2.38	0.00
Wood logs kWh	67.43	0.07
<b>Total</b>	<b>12,669.08</b>	<b>12.67</b>

## Client Reference kg CO<sub>2</sub>e Summary Table

Scope	Reference	Total kg CO <sub>2</sub> e	Total Tons CO <sub>2</sub> e
Scope 1	Fuel Use - Staff WfH	600.91	0.60
Scope 2	Electricity Use - Staff WfH	27.57	0.03
Scope 2	Fuel Use - Staff WfH	11.83	0.01
Scope 3	Business Travel	6,424.90	6.42
Scope 3	Electricity Use - Staff WfH	3.23	0.00
Scope 3	Fuel Use - Staff WfH	160.33	0.16
Scope 3	OCW - Website	108.43	0.11
Scope 3	Purchased Goods & Services	5,331.89	5.33
<b>Total</b>		<b>12,669.08</b>	<b>12.67</b>

## Emissions factors used in footprint calculation:

Activity Type	Emissions Factor	Source
WTT- fuels	Total WTT- fuels : Gaseous fuels : Natural gas kWh (Gross CV) :	DEFRA Conversion Factors Full Set for Advanced Users 2022
WTT- business travel (land)	Total WTT- business travel (land) : WTT- taxis : Regular taxi km :	DEFRA Conversion Factors Full Set for Advanced Users 2022
WTT- business travel (land)	Total WTT- business travel (land) : WTT- rail : National rail passenger.km :	DEFRA Conversion Factors Full Set for Advanced Users 2022
WTT- business travel (air)	Total WTT- business travel (air) : WTT- flights : Long-haul, to/from UK passenger.km : Economy classWith RF	DEFRA Conversion Factors Full Set for Advanced Users 2022
WTT- bioenergy	Total WTT- bioenergy : WTT- biomass : Wood logs kWh :	DEFRA Conversion Factors Full Set for Advanced Users 2022
UK electricity	Total UK electricity : Electricity generated : Electricity: UK kWh :	DEFRA Conversion Factors Full Set for Advanced Users 2022
Transmission and distribution	Total Transmission and distribution : T&D- UK electricity : Electricity: UK kWh :	DEFRA Conversion Factors Full Set for Advanced Users 2022
Transmission and distribution	Total Transmission and distribution : T&D- overseas electricity : Electricity: Uruguay kWh :	IEA (2022)
Overseas electricity	Total Overseas electricity : Electricity generated : Electricity: Uruguay kWh :	IEA (2022)
Money Value to CO <sub>2</sub> e	Total Money Value to CO <sub>2</sub> e : Computer, electronic and optical products : Computer, electronic and optical product costs :	Defra / OCW
Money Value to CO <sub>2</sub> e	Total Money Value to CO <sub>2</sub> e : Telecommunications services : Telecommunications service costs :	Defra / OCW
Money Value to CO <sub>2</sub> e	Total Money Value to CO <sub>2</sub> e : Information services : Information service costs :	Defra / OCW
Money Value to CO <sub>2</sub> e	Total Money Value to CO <sub>2</sub> e : Financial services, except insurance and pension funding : Financial service costs, except insurance and pension funding :	Defra / OCW
Money Value to CO <sub>2</sub> e	Total Money Value to CO <sub>2</sub> e : Insurance, reinsurance and pension funding services, except compulsory social security & Pensions : Insurance, reinsurance and pension funding service costs, except compulsory social security & Pensions :	Defra / OCW
Money Value to CO <sub>2</sub> e	Total Money Value to CO <sub>2</sub> e : Accounting, bookkeeping and auditing services; tax consulting services : Financial consulting service costs :	Defra / OCW
Money Value to CO <sub>2</sub> e	Total Money Value to CO <sub>2</sub> e : Other professional, scientific and technical services : Other professional, scientific and technical service costs :	Defra / OCW



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Material use	Total Material use : Products : All Products CO <sub>2</sub> e Values :	Bespoke Calculation
Fuels	Total Fuels : Gaseous fuels : Natural gas kWh (Gross CV) :	DEFRA Conversion Factors Full Set for Advanced Users 2022
Business travel- land	Total Business travel- land : Taxis : Regular taxi km :	DEFRA Conversion Factors Full Set for Advanced Users 2022
Business travel- land	Total Business travel- land : Rail : National rail passenger.km :	DEFRA Conversion Factors Full Set for Advanced Users 2022
Business travel- air	Total Business travel- air : Flights : Long-haul, to/from UK passenger.km : Economy classWith RF	DEFRA Conversion Factors Full Set for Advanced Users 2022
Bioenergy	Total Bioenergy : Biomass : Wood logs kWh :	DEFRA Conversion Factors Full Set for Advanced Users 2022