Environmental Report + Carbon Analysis 2021/22

Interim Results (Half Year)

IIC's overarching aim as an organisation is to minimise its carbon footprint as far as practicably possible. We have set 2030 as a deadline for Scope 1 and 2 emissions with Scope 3 emissions for 2050 - this feels like a long target, however, IIC will seek to eliminate or reduce emissions where possible but where Scope 3 emissions result from essential activities, we will have to consider either excluding emissions that are genuinely beyond our influence and control from our Net Zero reporting in future years, or we will have to use a carbon off-set or 'in-set' model for essential use, and ensure schemes follow the latest ethical guidance and best practice. IIC's preference is for the latter so that emissions are at least responsibly accounted for and captured in our analysis and reporting.

Baseline reporting

We are pleased to be able to report on our carbon use for Q1-Q2 for financial year 2021 / 22 – which will be our baseline year. We are calculating staff and contractor home working energy use as well as carbon emissions associated with the website. We are also reporting on travel and attendance at COP26 in Glasgow. A carbon impact assessment will be included in the full year report to cover the office move, online events, and publications. Where calculations are based on assumptions these are clearly indicated.

Carbon Calculations, Assumptions and Key Performance Indicators

In 2021 we have 3.4 full time equivalents (FTE) members of staff including freelancers equivalent to 1.2 FTE.

IIC has an office in Birdcage Walk (Grade 1 listed building) in London, with shared services for post, cleaning, utilities, and waste. During the year IIC made the decision to continue working largely from home even when restrictions were lifted, with an office moved planned in September 2021 to significantly downsize the office space (50% reduction in size to 18.48m2/199 sg ft) and reduce onsite storage for financial records, documentation, and archives. In July 2021 IIC transferred phone services to digital/ VOIP as part of the office move. IIC's financial system had already transferred from a paper based / desk based digital system to a fully online/remotely accessed accounts system in February 2020.

IIC Council, committee, and annual general meetings continued online during 2021. To note IIC moved online in March 2020 and shifted to a completely paperless system for accessing meeting agendas, minutes etc. at the start of the pandemic. IIC office operates to 'Zero Waste' standards.

We have identified the total Full Time Equivalent (FTE) for staff and contractors, and the total income for reporting Key Performance Indicators (KPIs). It is also appropriate to report against the changes in size of the physical assets and include gross internal area (GIA) given changes implemented during the baseline year.

Interim Results (half year) 2021/22 for our baseline year:

- Our carbon footprint sits at 0.64 tonnes for the 2021 (Q2 year period to end of December 2021), which included travel to COP26 in Glasgow (See Appendix 1 calculations)
- The main emissions are due to homeworking, attendance at the COP26 Glasgow Climate Conference in November 2021 and emissions associated with hosting our website and congress platform.
- The website presented the largest emission with 402kg of CO2e for a 6-month period.
- Overall, our carbon footprint for travel is extremely low due to the pandemic and restrictions on commute and staff travel to the office. The number of full-time staff equivalents (FTE) decreased from 2.2 to 1.6 although there has been an overall increase in freelance contractor time with 3.4 FTE for the year.
- Staff including freelance staff, have continued working from home during 2021 with the office move taking place between July and September 2021. However, we have accounted for work from home emissions covering energy emissions for laptops heating and lighting, noting we operate paperless /zero waste systems.

Carbon Summary	**Staff + Contractor (FTE)**	**Total Carbon Emissions ($kgCO_2$)**	**Carbon Emissions per FTE ($kgCO_2$/FTE)**	**Approx. Income for half year £**	**Carbon Emissions per unit of income $kgCO_2$/£**	**Gross Internal Area (m^2)**
Scope 1						
Direct Emissions (Shared Office Services + Utilities)	3.4	-	-	-	-	18.48
Scope 2						
Website	3.4	402	118.235	£200,000	0.00201	-
Scope 3						
Business Travel + Exhibition (COP26)	3.4	0.948	0.2678	£200,000	0.000004	-
Homeworking	3.4	250.597	73.705	£200,000	0.00125	-
TOTAL	**3.4**	**653.545**	**191.925**	**£200,000**	**0.00326**	**18.48**

Appendix 1 – Carbon Calculations

Working from home: heating, lighting and electricity for laptops

Laptops: 140 watts x 3.4 people x 107 working hours per month = 50.9 kWh electricity

Lighting: 10 watts x 3.4 people x working 107 hours each month = 3.6 kWh electricity

Heating: 800 kWh x (66.7% x 3.4 people) = 1,814 kWh heating

Lighting and electricity total for year:

That's 54.5 kWh x 0.256 kg of CO2 x 12 months = 167.424 kg of CO2

Heating total for year:

That's 1,814 kWh x 0.184 kg of CO2 = 333.77 kg of CO2

Combined total for year for 3.4 FTE working from home:

167.424 kg of CO2 + 333.76 kg of CO2 **=** 501.194 kg CO2 or **250.597 for half year**

Assumptions:

- Emission factor of electricity (UK) is 0.256 kg of CO2e per kWh – for electricity from 50% from a renewable supplier and 50% from a non-renewable supplier. Working with colleagues our ambition as a workforce is to extend this to 100% renewal supply source.
- Emissions factor for heating is 0.184 kg of CO2 per kWh. Ambition as above.
- Manufacturer estimates average power use for a laptop or computer is 140 watts.
- UK Government estimate average power use for lighting is 10 watts.
- Assumption that lighting is on 8 hours x 5 days x 32 weeks (assumes annual leave + sick leave = 1280 hours per year or 106.67 hours per month
- Assumption 5hWh of gas per hour, heating is seasonal and 800 kWh to keep employees warm per month between October and March. With a third taken for residual heat or someone else (non-employees) being in the home.

Website and Data Centre Hosting

The internet accounts for 4% of the world's carbon emissions, which is similar to the airline industry – for a standard website 4,500 pageviews a month is equal to 300 miles in a petrol car and about 100kg of CO2 per year (ClimateCare). IIC can generate 4,500 page views for just one article, with a range of between 25,000 to 40,000 page views per month (using the mean for 2020/21 with a carbon calculator online the results for IIC's website are as follows:

- 1.52g of CO2e per page view
- Not Eco-friendly

Calculation: (29,000 page views x 12 months) x 1.52g = 804,019g of CO2e / 804kg of CO2e for a year or **402kg of CO2e for a half year.**

COP26 – Glasgow Green Zone Exhibition

	Total Distance Travelled – Km or Watts / Time - kWH	**Emissions Factor kgCO2e per Km/ kgCO2e per kWh**	**Carbon Emissions (tonnes CO2e)**
TRAVEL			
Rail	1036	0.00497	0.005
Flight	1197	0.2443	0.293
Courier	1036	0.91	0.942
OTHER			
Exhibition materials (re-suable) + COP26 Film – Energy Use	4.4	0.256	0.001
TOTAL			**0.948**

- Staff and volunteer (3 people) travel to Glasgow (Rail round trip + Short Haul Domestic round-trip Flight+ On-Foot in Glasgow):
- Pre-used exhibition with net zero courier travel service (DPD) to Glasgow (Net Zero Delivery using an offset) – however we have included emissions for a Petrol van given IIC cannot verify the Off-set Scheme used by the DPD Courier Service.
- Exhibition stand x 2 days with 8 hours of use for 2 x laptops.

140 watts x 2 x 16 working hours = 4.4 kWh electricity
Emission factor of electricity (UK) is 0.256 kg of CO2e per kWh – for electricity from a non-renewable supplier.

UK Government GHG Conversion Factors for Company Reporting -2021

Source: conversion-factors-2021-condensed-set-most-users.xls (live.com)

Activity	Haul	Class	Unit	kg CO_2e
Flights	Domestic, to/from UK	Average passenger	passenger.km	0.2443
	Short-haul, to/from UK	Average passenger	passenger.km	0.15553
		Economy class	passenger.km	0.15298
		Business class	passenger.km	0.22947
	Long-haul, to/from UK	Average passenger	passenger.km	0.19085
		Economy class	passenger.km	0.14615
		Premium economy class	passenger.km	0.23385
		Business class	passenger.km	0.42385
		First class	passenger.km	0.58462
	International, to/from non-UK	Average passenger	passenger.km	0.18181
		Economy class	passenger.km	0.139245
		Premium economy class	passenger.km	0.22278
		Business class	passenger.km	0.40379
		First class	passenger.km	0.55695

Activity	Type	Unit	kg CO_2e
Taxis	Regular taxi	passenger.km	0.14549
		km	0.20369
	Black cab	passenger.km	0.20793
		km	0.31191

Activity	Type	Unit	kg CO_2e
Bus	Local bus (not London)	passenger.km	0.1195
	Local London bus	passenger.km	0.07856
	Average local bus	passenger.km	0.10312
	Coach	passenger.km	0.02732

Activity	Type	Unit	kg CO_2e
Rail	National rail	passenger.km	0.03694
	International rail	passenger.km	0.00497
	Light rail and tram	passenger.km	0.02991
	London Underground	passenger.km	0.0275

Activity	Type	Unit	kg CO_2e
Car	Small petrol car, up to 1.4 l	km travelled	0.14836
	Medium petrol car, 1.4 - 2.0 l	km travelled	0.18659
	Large petrol car, >2.0 l	km travelled	0.2781
	Average petrol car	km travelled	0.1743
	Small diesel car, up to 1.7 l	km travelled	0.1372
	Medium diesel car, 1.7 - 2.0 l	km travelled	0.1664
	Large diesel car, >2.0 l	km travelled	0.2042
	Average diesel car	km travelled	0.16844
	Hybrid - Medium	km travelled	0.107
	Hybrid - Large	km travelled	0.1448
	Plug-In Electric - Medium	km travelled	0.09251
	Plug-In Electric- Large	km travelled	0.10515

Activity	Type	Unit	kg CO_2e
Courier	Motorbike	km travelled	0.11337
	Car, Average, Petrol	km travelled	0.1743
	Car, Average, Diesel	km travelled	0.16844
	Car, Average, Hybrid	km travelled	0.11558
	Van, Average, Diesel	km travelled	0.97
	Van, Average, Petrol	km travelled	0.91