

CARBON FOOTPRINT REPORT



01st March 2017 – 28th February 2018



ELLIS Patents Ltd. Carbon Footprint Report FY2017/18

1. Outline

Carbon footprint report of ELLIS Patents Ltd. From 01st March 2017 to 28th February 2018.

ELLIS Patents Ltd. emitted 334 tCO₂e (tons of carbon dioxide equivalent) for 2017/18 (across scope 1 & 2). This value has attributing intensity indicators of 5.67 tCO₂e per total full-time equivalent employee (FTE) and 43.47 tCO₂e per million GBP turnover.

Addition of scope 3 emissions brings the total to 537 tCO₂e.

This report for FY2017/18 will be used as a baseline to allow comparison of years from FY2022/23 onwards.

Carbon Reduction Measures pre FY2017/18:

- Investment in new, more energy efficient machinery.
- Increase in plug-in hybrid company cars.
- Compliance with ISO14001 (Environmental Management Systems) standard since 2012.
- Segregation, tracking and monitoring of all waste streams as part of ISO14001.
- Bike-to-work scheme introduced in 2014.
- Installation of LED lighting and PIR sensors.

Carbon reduction measures planned (post FY2017/18):

- Installation of solar panels to reduce non-renewable energy consumption.
- Installation of more EV charging points.
- Transition to an EV company car fleet.
- Development of a sustainable travel policy.
- Zero waste to landfill.
- 100% LED lighting on site.

2. Methodology and Definitions

Methodology

TRACC methodology has been implemented to produce the data for the carbon footprint reports in line with the GHG Protocol, maintaining:

- Transparency
- Relevance
- Accuracy
- Consistency
- Completeness

The DESNZ GHG Conversion Factors 2023 have been used to translate the data collected into CO₂e GHG emissions.

CO₂e is the universal unit of measurement used to represent the global warming potential (GWP) of greenhouse gases (GHGs) where 1 kgCO₂e = GWP of 1 kg CO₂. There are many different greenhouse gases with different global warming potentials, and the CO₂e unit allows for like for like comparison between them all.

Definitions:

£m Turnover = Million GDP Turnover

FTE = Full time Employee

GHG = Greenhouse Gases

GWP = Global Warming Potential

RF = Radiative Forcing

Scope 1 - Direct GHG emissions that occur from sources controlled / owned by an organisation.

Scope 2 - Indirect GHG emissions from the purchase of electricity or heating / cooling. Scope 2 emissions physically occur at the facility where they are generated, but they are included in an organisation's GHG emissions because they are a result of the organisation's energy use.

Scope 3 - Indirect GHG emissions from activities and assets not owned or controlled by an organisation, but that the organisation indirectly affects in its value chain. This includes upstream and downstream activities.

T&D = Transmission & Distribution

WTT = Well-to-tank

3. Results

Table 1. GHG emissions for period 01st March 2017 to 28th February 2018.

Emission Source	Unit	kgCO ₂ e	tCO ₂ e
Scope 1			
Burning Oil	23,000 l	58,244	58.24
Average Car (plug-in hybrid)	177,199 km	22,974	22.97
Average Car (diesel)	174,439 km	31,202	31.20
Van - Average (up to 3.5 tonnes) (diesel)	37,604 km	9,683	9.68
Total Scope 1		122,102	122.10

Scope 2			
UK National Grid Electricity	603,527 kWh	212,176	212.18
EV Charging	380 kWh	134	0.13
Total Scope 2		212,309	212.31

Total Scope 1 & 2			334.41
Total tCO₂e per *FTE on gross Scope 1 & 2			5.67
Total tCO₂e per *£m Turnover on gross Scope 1 & 2			43.47

Scope 3 (Category – Emission Source)			
1 - Water Supply	662 m ³	228	0.23
3 - Water Treatment	662 m ³	469	0.47
3 - Transmission & Distribution of UK National Grid Electricity	603,527 kWh	19,838	19.84
3 - WTT - UK Electricity (generation)	603,527 kWh	33,828	33.83
3 - WTT - UK Electricity (T&D)	603,527 kWh	3,162	3.16
3 - WTT - Burning Oil	23,000 l	12,117	12.12
3 - WTT - Average Car (unknown fuel)	10,852 km	507	0.51
3 - WTT - Average Car (plug-in Hybrid)	191,178 km	5,424	5.42
3 - WTT - Average Car (diesel)	292,358 km	12,437	12.44
3 - WTT - Average Car (petrol)	90,005 km	4,546	4.55

3 - WTT - Van - Average (up to 3.5 tonnes) (diesel)	37,604 km	2,327	2.33
3 - WTT - Regular taxi	723 passenger.km	38	0.04
3 - WTT - National Rail	41,955 passenger.km	386	0.39
3 - WTT - London Underground	1,250 passenger.km	9	0.01
3 - WTT - Local bus (not London)	17,133 passenger.km	501	0.50
3 - WTT - Flights (Short-haul, Economy Class, with RF)	45,551 passenger.km	791	0.79
3 - WTT - Flights (Long-haul, Economy Class, with RF)	280,569 passenger.km	4,649	4.65
5 - Waste generated in operations	40,515 kg	1,092	1.09
6 - Local bus (not London)	39 passenger.km	5	0.00
6 - Flights (Short-haul, Economy Class, with RF)	45,551 passenger.km	7,218	7.22
6 - Flights (Long-haul, Economy Class, with RF)	280,569 passenger.km	42,419	42.42
6 - Average Car (Unknown fuel)	10,852 km	1,980	1.98
6 - Regular taxi	723 passenger.km	158	0.16
6 - National Rail	41,955 passenger.km	1,963	1.96
6 - London Underground	1,250 passenger.km	58	0.06
6 - Hotel Stay (Various Countries)	194 nights	5,818	5.82
7 - Local bus (not London)	17,094 passenger.km	2,052	2.05
7 - Average Car (petrol)	90,005 km	16,532	16.53
7 - Average Car (diesel)	117,919 km	20,934	20.93
7 - Average Car (plug-in Hybrid)	13,978 km	992	0.99
Total Scope 3		202,477	202.48

Total Scope 1, 2 & 3	536.89
Total tCO2e per *FTE on gross Scope 1, 2 & 3	9.10
Total tCO2e per *£m Turnover on gross Scope 1, 2 & 3	69.80

Notes: For 01 March 2017 to 28 February 2018 the number of FTE's was 59 and the turnover was £7,692,078.

Carbon Footprint Breakdown:

The results from the previous table have been used to create the figures below allowing for visualisation of CO₂e emissions by scope or by category.

Figure 1 demonstrates that 77% of total emissions are indirect (scope 2 & 3). Direct emissions from Ellis Patents only account for 23% of the total emissions.

Figure 2 breaks down emissions into categories demonstrating the five largest contributors Ellis GHG emissions are:

1. UK National Grid Electricity (39%)
2. Fuel & Energy Related Activities Not Included in Scope 1 & 2 (19%)
3. Company Vehicles (12%)
4. Kerosene Heating Oil (11%)
5. Business Travel (11%)

* Green = Scope 1, Blue = Scope 2, Orange = Scope 3

The large GHG emission contributors within scope 1 and scope 2 are areas where there are significant opportunities for carbon reduction.

Table 2. FY2017/18 CO₂e emissions by scope for total, per FTE and per £m Turnover.

Scope	Total tCO ₂ e	tCO ₂ e per FTE	tCO ₂ e per £m Turnover
1	122	2.1	15.9
2	212	3.6	27.6
3	202	3.4	26.3
1 & 2	334	5.7	43.5
1, 2 & 3	537	9.1	69.8

Figure 1. Emissions by scope as a percentage

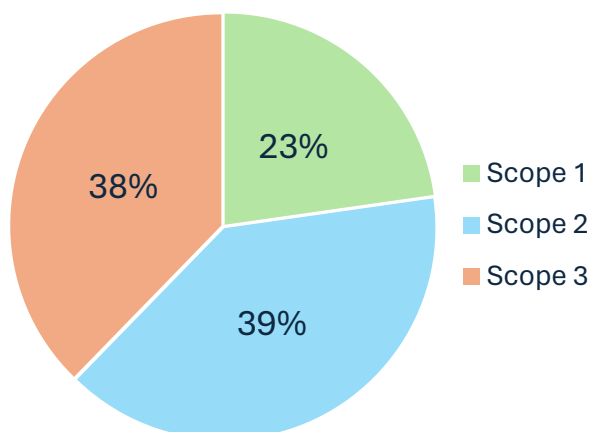
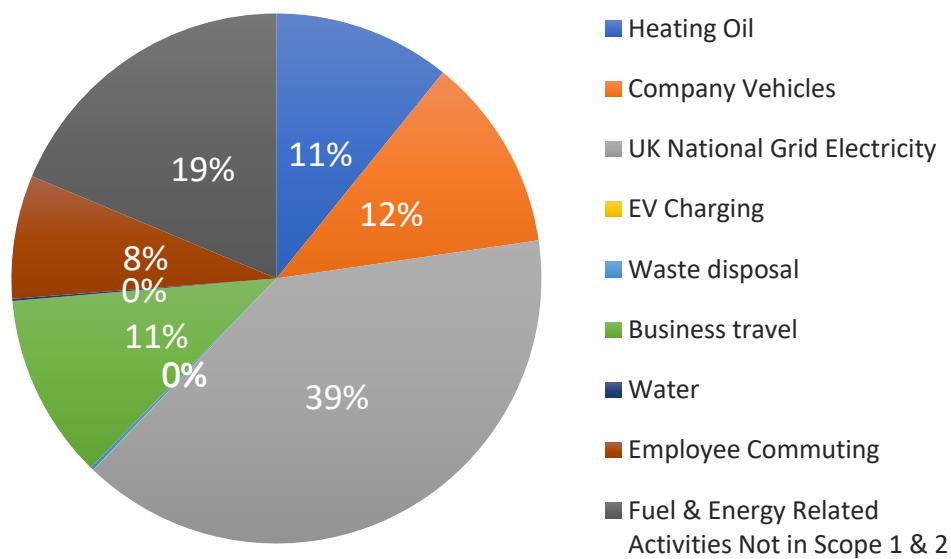


Figure 2. Emissions by categories as a percentage.



Additional Information

Table 2: Scope 3 emissions by categories and which are reported.

Scope 3 Categories	Reported (Y/N)	Comments
1: Purchased Goods and Services	Y	Only water reported.
2: Capital Goods	N	
3: Fuel and Energy Related Activities Not Included in Scope 1 or Scope 2	Y	
4: Upstream Transportation and Distribution	N	
5: Waste Generated in Operations	Y	
6: Business Travel	Y	Flight emissions reported with RF.
7: Employee Commuting	Y	
8: Upstream Leased Assets	N	
9: Downstream Transportation and Distribution	N	
10: Processing of Sold Products	N	
11: Use of Sold Products	N	
12: End-of-Life Treatment of Sold Products	N	
13: Downstream Leased Assets	N	
14: Franchises	N	
15: Investments	N	