

CARBON REDUCTION PLAN 2023

APPENDIX TO ENVIRONMENTAL POLICY

CULLINAN
STUDIO

1. COMMITMENT TO ACHIEVING NET ZERO

Cullinan Studio proposes to achieve Net Zero operational carbon for building energy use by 2025.

Cullinan Studio is committed to achieving Net Zero emissions by 2050.

1.1 Context

This Carbon Reduction Plan (CRP) supersedes previous Energy Reports relating to energy use and associated greenhouse gas emissions produced by the property and activities of Cullinan Studio.

Annual energy reports have been carried out by Cullinan Studio since 2008 as part of our ISO 14001 Environmental Policy, which states that *“As an organisation we will: Monitor and examine our environmental performance and implement continuous improvement through the measurement of our office activities.”* This includes keeping record of energy useage, carbon monitoring and reduction procedures dated to 2008 and predate all strategies designed to reduce carbon emissions.

This CRP includes greater detail of the recent assessment of the property by Etude Consulting engineers, who are tenants of the building and are assisting Cullinan Studio in preparing and implementing a strategy for the building to reach Net Zero Operational Carbon by 2023. As advised by Carbon Trust, it encompasses a range of emission sources, from direct use of fuels to indirect impacts such as employee travel.

This Plan has been carried out for our main Studio office based in The Foundry, Islington, London, with a team of approximately 30 people within a coworking hub occupied by CS and other building tenants. In 2022 the occupancy split was 39% Cullinan Studio and 61% tenant organisations. Cullinan Studio also have 4 people working out of our Midlands Studio, based at desk rentals in the Dryden Enterprise Centre in Nottingham. The latter is not currently included in the scope of this Carbon Reduction Plan.

This Plan does not currently cover any products or services that CS produces. Energy considerations and carbon emissions of the buildings designed by Cullinan Studio are dealt with separately and do not form part of this reporting.

1.2 Data Collection

Data has been collected through a variety of methods, including meter readings, invoices and expense accounts. All business travel data was extracted from monthly accounts. Also taken into consideration were resources, such as paper and toner cartridges, which though measured are not accounted for in this document.

Cullinan Studio are members of the Islington Sustainability Network (ISN), and have reported our energy usage with them since 2010.

1.3 Scope and Boundaries of the CRP

We have collated an up-to-date carbon footprint for monthly figures under the following remits and used the conversion factor figures from DEFRA to equate all units into KgCO₂eq across Scopes 1-3:

SCOPE 1

Emissions from the use of gas.

- No longer used in our new building (since 2013)

SCOPE 2

Emissions from the use of purchased electricity. Although not directly in control of the emissions, by purchasing electricity the Company is indirectly responsible for them.

- Energy (electricity supply) - *SSE Green Tariff (since 2021, previously Bulb Energy Green Tariff)*

SCOPE 3

Indirect emissions from products and services – this includes water, waste and transport.

- Water Disposal – *Castle Water (previously called Thames Water)*
- Waste management - *Islington Council (since 2021, previously First Mile)*
- Business Travel
- Commuter Travel

As part of our commitment to promoting sustainable work and lifestyles, CS encourages all employees to complete personal carbon footprints, which are published elsewhere and reported to the Islington Sustainability Network (ISN).

Emissions are shown in measurements of CO₂e (Carbon Dioxide equivalent). For greater accuracy, all figures are measured in KgCO₂, with the final figures shown in tonnes (tCO₂).

2. BASELINE EMISSIONS FOOTPRINT

Baseline emissions are a record of the greenhouse gases that have been produced in the past and were produced prior to the introduction of any strategies to reduce emissions. Baseline emissions are the reference point against which emissions reduction can be measured.

Baseline Year: 2008	
Additional Details relating to the Baseline Emissions calculations.	
Cullinan Studio have monitored the footprint of our everyday activities since September 2007. The following sections covers footprint comparison for years 2008 – 2022.	
Baseline year emissions:	
EMISSIONS	TOTAL (tCO₂e)
Scope 1	12.107
Scope 2	23.515
Scope 3 (Included Sources)	25.149
Total Emissions	60.771

3. CURRENT EMISSIONS REPORTING

In 2012 Cullinan Studio retrofitted our premises to become a low energy workplace, therefore this year can be regarded as the first significant stage of carbon reduction strategies. In between 2020-2022 our premises had limited occupancy due to home-working and lockdowns resultant from the Covid-19 pandemic, and this is reflected in our data. As with many organisations, this was a catalyst for significant organisational change which affect use of our building and our business/commuting travel. As a result of this, in 2021 Cullinan Studio significantly reduced occupancy of our premises to 39% of the FTE occupancy of the building, and therefore the energy use of the building has been apportioned accordingly. This is reflected in the data below which charts how our organisation has progressed over the past decade.

The below table illustrates the comparison of our annual carbon footprint per scope for intervening years. Our reporting years run in line with financial year reporting, i.e. April 2021 – March 2022 noted as 2022.

Year	Scope 1 (kgCO ₂ eq)	Scope 2 (kgCO ₂ eq)	Scope 3 (kgCO ₂ eq)	Total Footprint (kgCO ₂ eq)
2008	12,107.22	23,515.11	25,149.46	60,771.78
2009	10,311.22	23,139.08	19,824.51	53,274.81
2010	12,566.26	22,620.47	19,495.84	54,682.57
2011	10,546.48	19,379.34	13,404.47	43,330.28
2012	8,675.88	15,515.66	13,536.67	37,542.01
2013	0	26,914.33	13,767.94	40,764.27
2014	0	27,183.02	14,027.33	41,210.34
2015	0	26,118.19	18,440.09	44,558.28
2016	0	26,476.94	19,922.45	46,399.39
2017	0	26,353.28	35,773.92	62,127.20
2018	0	26,466.33	28,378.00	54,844.33
2019	0	20,135.62	20,175.84	40,311.47
2020	0	16,247.45	12,764.17	29,011.62
2021	0	5,879.01	626.50	6,505.51
2022	0	5,510.00	6,871.56	12,381.56

Reporting Year: 2022	
EMISSIONS	TOTAL (tCO ₂ e)
Scope 1	0
Scope 2	5.510
Scope 3 (Included Sources)	6.871
Total Emissions	12.381

Compared to figures from 2008, Cullinan Studio managed a total carbon footprint reduction of **84%** to date.

4. EMISSIONS REDUCTION TARGETS

In order to continue our progress to achieving Net Zero, we have adopted the following carbon reduction targets:

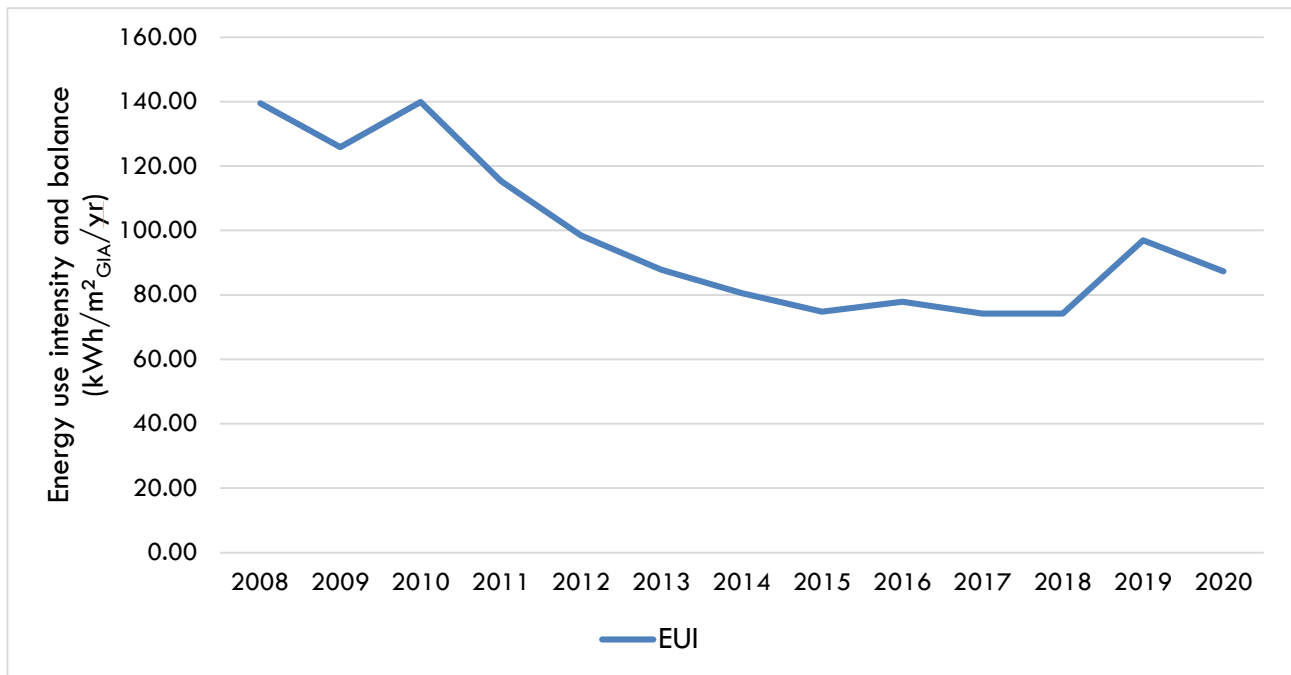
- We aim to reduce our Scope 2 carbon emissions to NET Zero tCO_{2e} by 2025.
- This will give a reduction of **44%** to our Total Emissions across Scopes 1-3.

5. CARBON REDUCTION INITIATIVES

5.1 Benchmarking

Since 2021 Cullinan Studio have begun benchmarking our premises against the Low Energy Transformation Initiative (LETI) Commercial Office Energy Use Intensity (EUI) Target of 55 kWh/m²GIA/yr. This target is based on a new build office, and therefore is particularly challenging given the building status as a constrained retrofit with Grade II* listed elements.

Etude Consulting have plotted this data below in order to assess potential for reduction:



5.2 Completed Carbon Reduction Initiatives

PROJECT A: BUILDING RETROFIT - Work completed: 2012

The refurbishment of a dilapidated building to provide a new low energy work space including:

- Air sourced heat pumps installed in lieu of gas boilers
- Highly insulated envelope to reduce energy loss through the external fabric
- Airtight envelope construction to further reduce fabric energy losses.
- Renewable energy generation provided on south facing roof – Generating 15kwh/yr/m²
- Natural ventilation strategy in lieu of mechanical cooling
- BMS – installed within base scheme to monitor actual energy use

PROJECT B: LED FITTINGS - Work completed: 2020

Replacement of fluorescent lighting with low energy use LED fittings

ADDITIONAL INITIATIVES:

In addition to the Projects A and B listed above, the following initiatives are employed to reduce our total carbon footprint:

Scope 2:

- Train all building users on use energy saving lighting
- Promote the “switch off the lights” culture for all desk lights
- Continue to upgrade to energy saving equipment
- Evaluate our energy usage more closely using the Building Management System

Scope 3:

- Further promote the “re-use / re-cycle” culture and responsible purchasing
- Further encourage cycling / walking to work (secure bicycle storage provided)
- Further encourage use of public or shared transport for business purposes
- Encourage the use of Team video calls to reduce the need to travel for meetings.
- Introduce daily collections of food waste, additional food waste containers on all floors

5.3 Proposed Carbon Reduction Initiatives: Proposed Installation date – May 2024.

A major renewable energy proposal currently being costed is to optimise the roof area with photovoltaic panels to increase the energy generation and reduce the carbon emissions from existing grid energy within Scope 2.

The efficiency of the existing 10-year-old PV panels used on the building is around 50% of technology now available. This proposal seeks to maximise the use of 450Wp PV panels on the roof to generate enough energy to supply most of the electricity used by the building.

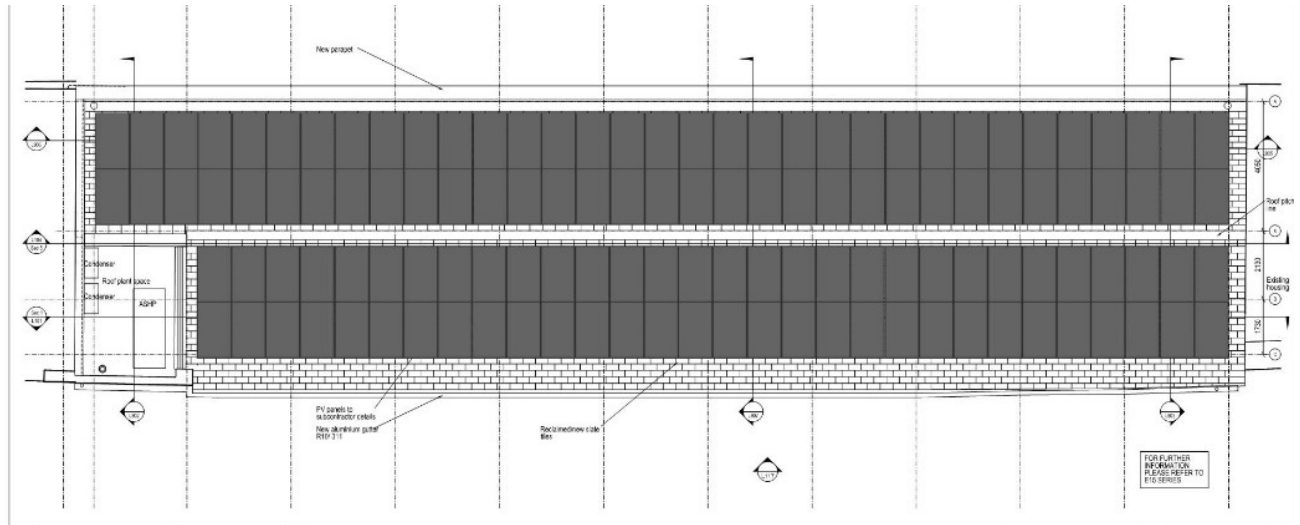
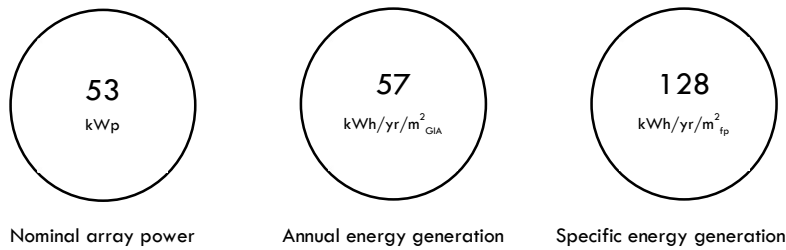
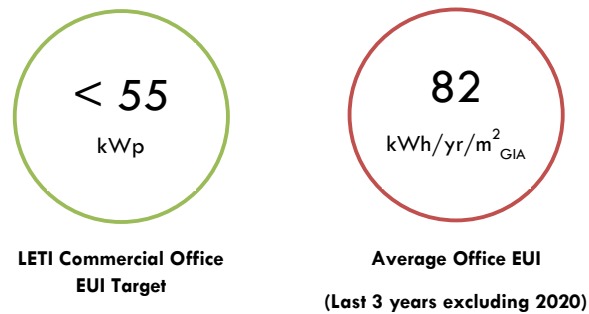


Figure: Building Roof Plan: Optimum PV roof installation



Energy generation estimates:



Building Energy usage: Target and Current

The outline PV array power of the proposed layout is very close to LETI’s Energy Use Intensity target for consumption (55kwh/m²/yr) which is a good indication that maximised solar technology could generate the buildings energy consumption if the EUI can reduce to the recommended target (current usage 82kwh/m²/yr). The building energy use will need to reduce to 67% of current figures for generation to match consumption.

5.4 Further Recommendations to reduce the energy consumption.

We continue to review carbon reduction measures beyond those outlined above, Including:
Further monitoring by setting up sub-metering to identify how the EUI is split and therefore prioritise the following potential improvements:

- Changing the thermostat throughout the office to better monitor the internal temperatures
- Change the lighting controls with Daylight dimming sensors in the office work spaces
- Checking that the roof insulation/ build-up is continuous and isn't leading to heat loss
- continued behavioural training to reduce energy use.
- Review and include Nottingham Studio in calculations – will require collaboration with the Dryden Enterprise Centre Nottingham.

6. DECLARATION AND SIGN OFF

This Carbon Reduction Plan has been completed in accordance with PPN 06/21 and associated guidance and reporting standard for Carbon Reduction Plans.

This Plan will be communicated to all relevant suppliers and subcontractors, is available for viewing on the company website.

Emissions have been reported and recorded in accordance with the published reporting standard for Carbon Reduction Plans and the GHG Reporting Protocol corporate standard and uses the appropriate Government emission conversion factors for greenhouse gas company reporting .

Scope 1 and Scope 2 emissions have been reported in accordance with SECR requirements, and the required subset of Scope 3 emissions have been reported in accordance with the published reporting standard for Carbon Reduction Plans and the Corporate Value Chain (Scope 3) Standard .

This Carbon Reduction Plan has been reviewed and signed off by Cullinan Studio Directors at a Partner's Meeting on 24th May 2023.

Signed on behalf of the Cullinan Studio:



Allan Collins
Office Environmental Manager
20th September 2023