

Carbon Baseline Review



Mills Ltd



"2000 litres of water is needed to produce 1kg of avocados."



"Human-generated CO₂ accounts for 76% of all greenhouse gas emissions."



"2.1 billion tonnes of waste is generated globally each year. If all this waste was put on lorries, they would go around the world 24 times."



"One football pitch of rainforest is lost every minute."



"By 2025 the ocean is expected to contain 1 tonne of plastic for every 3 tonnes of fish."

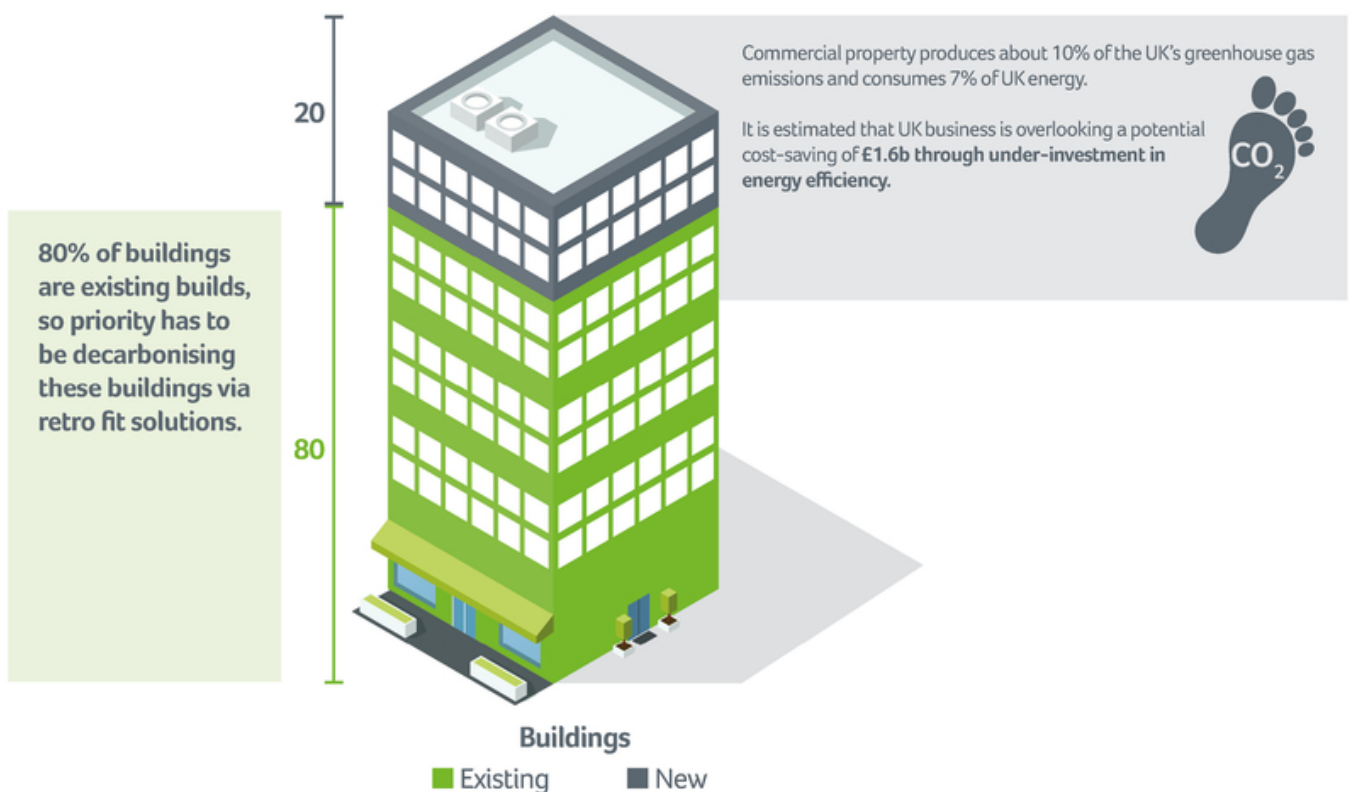


The bigger picture



UK Fact & Figures

- **UK's 1.8m** non domestic buildings produce almost 17% of the nation's carbon dioxide emissions.
- **UK legislation** drive to achieve net zero carbon emissions by 2035 / 2050 - as much as 18% or £157b of commercial real estate in England and Wales does not meet the minimum standards.
- **Penalty for renting** a property for a period of fewer than three months in breach of the MEES regulations is now equivalent to 10% of the property's rateable value.
- **Government estimates** 18% of commercial properties hold the lowest EPC rating of F or G. Around 230 councils have declared a climate emergency.
- **90%** of S&P 500 Index Companies now publish their sustainability credentials.



Looking at your Emissions

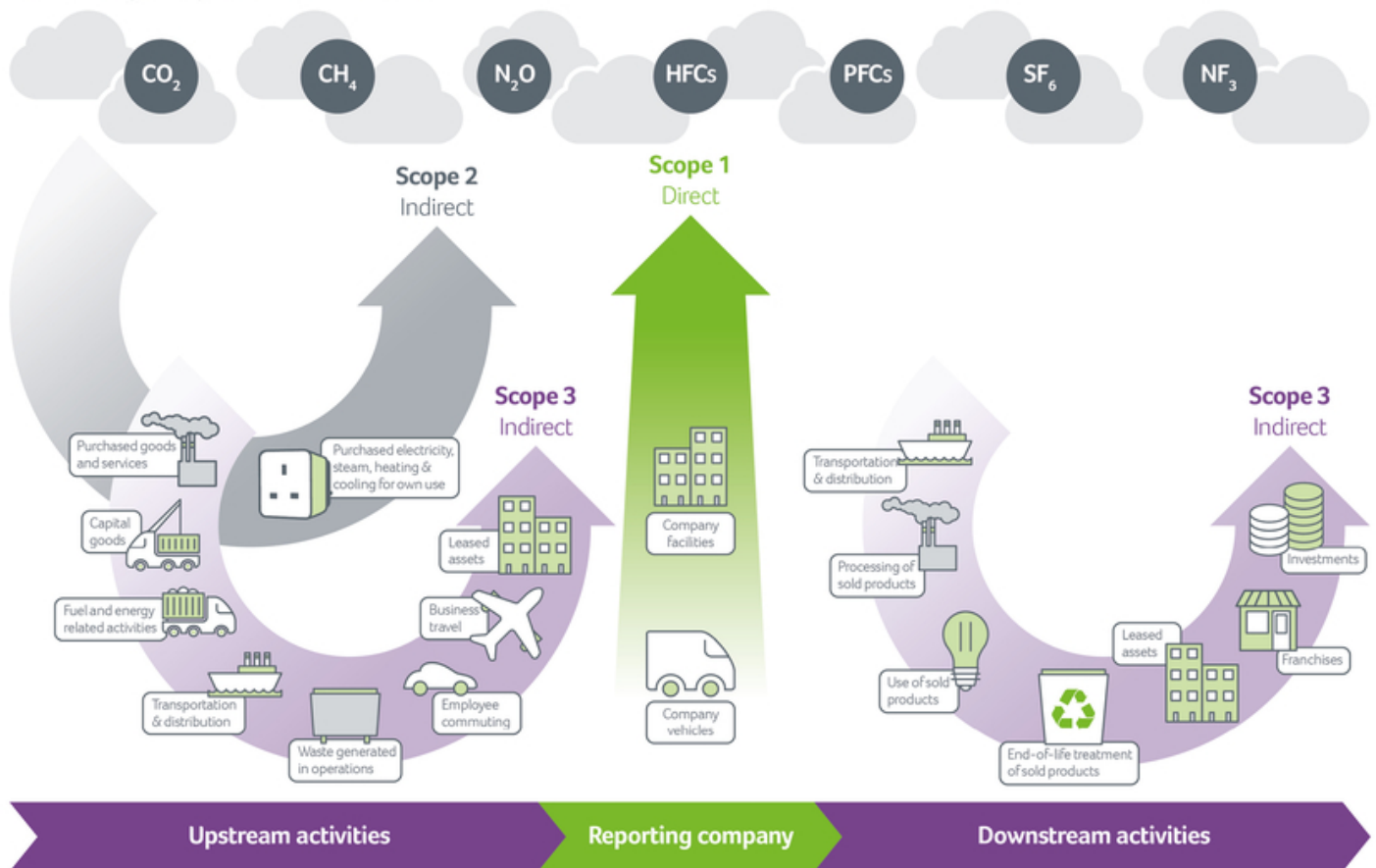


Image source: <https://compareyourfootprint.com/difference-scope-1-2-3-emissions/>



When reviewing this road map we must consider the difference between scope 1, 2 and 3 emissions

Emissions are broken down into three categories by the Greenhouse Gas Protocol in order to better understand the source.

- **Scope 1** – All Direct Emissions from the activities of an organisation or under their control. Including fuel combustion on site such as gas boilers, fleet vehicles and air-conditioning leaks.
- **Scope 2** – Indirect Emissions from electricity purchased and used by the organisation. Emissions are created during the production of the energy and eventually used by the organisation.
- **Scope 3** – All Other Indirect Emissions from activities of the organisation, occurring from sources that they do not own or control. These are usually the greatest share of the carbon footprint, covering emissions associated with business travel, procurement, waste and water.
 - Purchased goods and service
 - Capital goods
 - Fuel and energy related activities not included in Scope 1 or 2
 - Upstream transportation and distribution
 - Waste generated in operations
 - Business travel
 - Employee commuting
 - Upstream leased assets
 - Downstream transportation and distribution
 - Processing of sold products
 - Use of sold products
 - End-of-life of sold products
 - Downstream leased assets
 - Franchises
 - Investments

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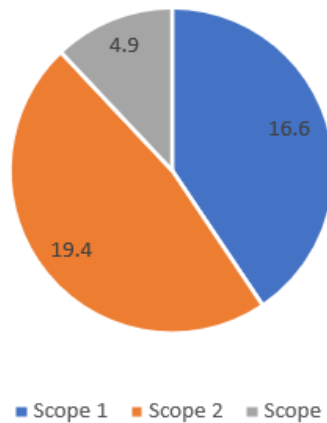


1. Executive Summary

A Carbon Baseline has been undertaken which has identified that in the year to January to December 2022 the emissions associated with the organisation were 40.8tCO₂e.

The distribution of these emissions is as summarised in the following chart.

Carbon Summary



Implementation of the measures identified in our SORT report has the potential to reduce the Scope 1 and 2 emissions by 18.78tCO₂e.



2. Introduction

Mills Ltd is a telecomms and energy saving tool shop operating from a site at Unit 2 and Unit 8, Zodiac Business Park, High Rd, Cowley, Uxbridge UB8 2GU.

SaveMoneyCutCarbon.com has been invited to prepare a Carbon Baseline for Burgess Group for the reporting year Jan-Dec 2022.



3. Carbon Footprint



3.1 Methodology

Mills Ltd's GHG emissions have been assessed in line the principles and guidelines detailed within the GHG Protocol Corporate Standard.



3.1.1 Scope Definitions

Under GHG Protocol guidance the emissions should be categorised according to direct and indirect emissions. Direct emissions arise from sources that the organisation owns or has direct control over. Indirect emissions are a consequence of the organisation's activities but occur at sources owned or controlled by another organisation/company.

GHG Protocol guidance further classifies direct and indirect GHG emissions into three "Scopes". Direct emissions are to be included in Scope 1 (direct emissions from owned or controlled sources) and indirect emissions are included in Scope 2 (indirect emissions from the generation of purchased energy consumed by the organisation) and Scope 3 (all other indirect emissions that occur in the organisations supply chain).

Category	Description
Scope 1	Direct emissions from owned or controlled sources e.g. natural gas used in boilers or fuel used in vehicles and plant owned by the organisation.
Scope 2	Indirect emissions associated with purchased energy consumed by the organisation e.g. grid-supplied electricity.
Scope 3	All other indirect emissions that occur in the organisation's supply chain e.g. business travel or purchased good and services

While the organisation has control over its Scope 1 and 2 emissions, it only has influence over its indirect Scope 3 emissions. The standard therefore requires that organisations account for and report all Scope 1 and Scope 2 emissions and gives organisations flexibility in whether and how to account for Scope 3 emissions. Scopes 1 and 2 are carefully defined to ensure that two or more organisations will not account for emissions in the same scope.



3.1.1.1 Scope 1: Direct emissions from owned or controlled sources

Direct GHG emissions occur from sources that are owned or controlled by the organisation, for example, emissions from combustion in owned or controlled boilers, furnaces and vehicles. Organisations should report GHG emissions from sources they own or control as Scope 1. Direct GHG emissions are principally the result of the following types of activities undertaken:

- Generation of electricity, heat or steam. These emissions result from combustion of fuels in stationary sources e.g., boilers, generators etc.
- Transportation of materials, products, waste and people. These emissions result from the combustion of fuels in company owned/controlled mobile combustion sources (e.g., vans, lorries, buses and cars)



3.1.1.2 Scope 2: Indirect emissions from the generation of purchased energy consumed by the reporting company

Scope 2 accounts for GHG emissions from the generation of electricity, heat or steam which is purchased by the organisation. Almost all organisations generate indirect emissions due to the purchase of electricity for use in their buildings, processes or services. These are energy sources where the emissions are not generated within the boundaries of the organisation but are emitted remotely at the facility where energy is originally generated.



3.1.1.3 Scope 3: indirect emissions from the generation of purchased energy consumed by the reporting company

Under the GHG Protocol Standard guidance, Scope 3 is an optional reporting category that allows for the treatment of all other indirect emissions. Scope 3 emissions are a consequence of the organisation's activities but occur from sources not owned or controlled by itself.

The inclusion of Scope 3 emissions involves identification of other indirect emissions from the organisation's upstream and downstream activities not included in Scope 1 or Scope 2. Upstream Scope 3 emissions are indirect GHG emissions related to purchased or acquired goods and services. Downstream Scope 3 emissions are indirect GHG emissions relating to sold goods and services.

The GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard categorises Scope 3 emissions into 15 distinct categories intended to help provide organisations with a systematic framework to organise, understand and report on the diversity of Scope 3 activities within an organisation's supply chain.

Upstream: Purchased goods and services, Capital goods, Fuel and energy related activities (not included in Scope 1 or 2), Upstream transportation & distribution, Waste generated in operations, Business travel, Employee commuting, Upstream leased assets

Downstream: Downstream transportation and distribution, Processing of sold products, Use of sold products, End of life treatment of sold products, Downstream leased assets, Franchises, Investments

The inclusion of Scope 3 emissions would allow Mills Ltd to expand its emissions inventory boundary along its supply chain and to identify all relevant GHG emissions. This provides a broad overview of various business linkages and possible opportunities for significant GHG emission reductions that may exist upstream or downstream of its immediate operations.

Although optional this provides an opportunity to understand the broader environmental impact of the organisation and explore innovative approaches to GHG management. Organisations may want to focus on accounting for and reporting those activities that are relevant to their organisation and goals and for which they have reliable information. Since organisations have discretion over which categories they choose to report, Scope 3 may not lend itself well to comparisons across organisations. However, GHG Protocol does offer guidance criteria for identifying relevant Scope 3 activities:

Criteria	Description of activities
Size	They contribute significantly to the organisations' total anticipated Scope 3 emissions
Influence	There are potential emission reductions that could be undertaken or influenced by the organisation
Risk	They contribute to the organisation's risk exposure (e.g. climate change risks such as financial, regulatory, supply chain, product and technology, compliance/ litigation, and reputational risks)
Stakeholders	They are deemed critical by key stakeholders (e.g. customers, suppliers, investors, or civil society)
Outsourcing	They are outsourced activities previously performed in-house or activities outsourced by the reporting company that is typically performed in-house by other organisations in the reporting organisation's sector
Sector Guidance	They have been identified as significant by sector-specific guidance
Spending or revenue analysis	They are areas that require a high level of spending or generate a high level of revenue (and are sometimes correlated with high GHG emissions)
Other	They meet any additional criteria developed by the organisation or its sector



3.1.2 Baseline

The GHG Protocol guidance states that organisations shall select and report a baseline year for which verifiable emissions data are available and specify their reasons for choosing that particular year. Most organisations select a single year as their baseline year but it is also possible to choose an average of annual emissions over several consecutive years. A multi-year average may help smooth out unusual fluctuations in GHG emissions that would make a single year's data unrepresentative of the organisation's typical emissions profile.

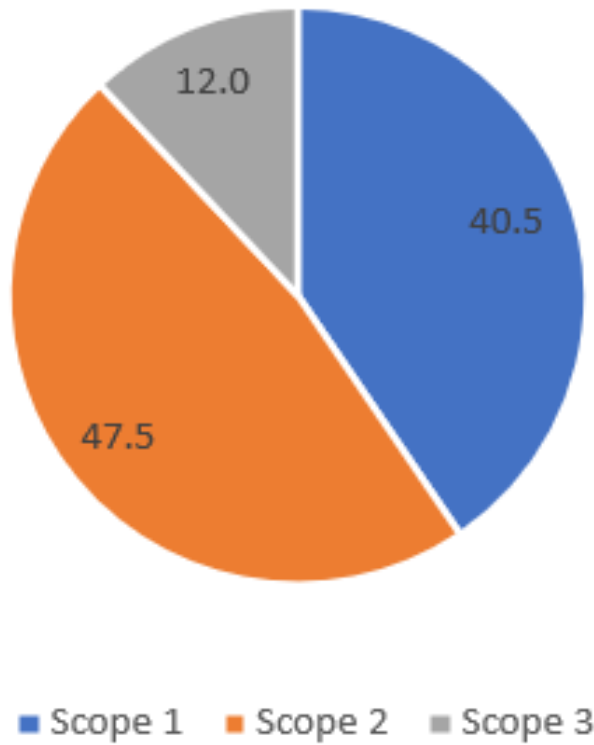
The inventory baseline year can also be used as a basis for setting and tracking progress towards a GHG target in which case it is referred to as a target baseline year.


4. Carbon Footprint

4.1 Summary

It has been calculated that based upon the data available, the total GHG emissions for the base year were 40.8tCO₂e, of which 40.5% are attributable under Scope 1, 47.5% under Scope 2, and 12% under Scope 3.

Emissions Percentage




 4.2 Scope 1 Emission and Boundaries

Scope 1 emissions are those associated with direct emissions within company owned or controlled sources. For Mills Ltd these are emissions associated with gas consumption which amount to 16.6tCO₂e. Overall they are assessed to account for 40.5% of the total reported emissions.

 4.3 Scope 2 Emission and Boundaries

Scope 2 emissions are those associated with indirect emissions within company owned or controlled sources. For Mills Ltd these are emissions associated with electricity consumption from the grid which amount to 19.4tCO₂e. Overall they are assessed to account for 47.5% of the total reported emissions.

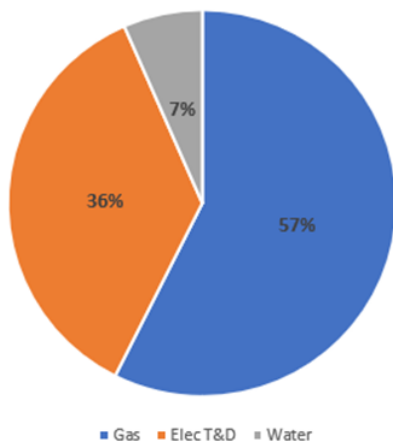
In relation to usage of electricity generated onsite from renewables, a carbon report should always publish a “gross” figure using the UK-wide electricity factor, and may optionally include a “net” figure using a market factor more representative of their own generation. This is because the UK electricity carbon factor is an average that considers all grid-connected electricity generation in the UK, and is revised annually by Government (usually downwards). The principle is that grid-connected generation is shared nationally. Therefore the low carbon electricity from any renewable generation you operate has assisted in lowering the UK factor. To allocate a carbon factor of zero to your own consumption of onsite renewable generation would count this twice, and would imply that the grid factor for other consumers should rise slightly. Here we have reported the “gross” figure. Only off-grid or “island” generation can be allowed a factor of zero.

 4.4 Scope 3 Emission and Boundaries

The complexity of Scope 3 requires the definition of a clear boundary around the assessment for reporting purposes. Scope 3 emissions may be included partially, where known and as declared. In the case of Mills Ltd, no mileage or additional data has been provided and we can therefore only assess the scope 3 emissions associated with the utility information provided for gas, electricity and water.

The scope 3 emissions associated with gas, electricity and water consumption account to 4.9 tCO₂e. Overall, they are assessed to account for 12% of the total reported emissions. The scope 3 breakdown is shown in the following figure and table:

Scope 3 emissions breakdown



Description	Emissions, tCO ₂ e	Proportion
Gas WTT	2.8	57%
Electricity T&D	1.8	36%
Water	0.3	7%



4.5 Emission Breakdown

Note 1 – The electricity consumption is an estimated annual figure based upon 3 months consumption, Jan 2022 to Apr 2022. The consumption has been calculated to covered a 12 month period.

Note 2 – The gas consumption is an estimated annual figure based on 9 months consumption from 2021, the months not provided were calculated using an average between the month before and after.

Note 3 - The water consumption is estimated annual figure based on 3 months consumption, Jan 2022 to Apr 2022. The consumption has been calculated to cover a 12 month period.

Gas WTT – are the emissions associated with the extraction and transportation of the gas from the Well to tank.

Electricity T&D are the emissions associated with the transmission and distribution of the electricity. These emissions cannot be avoided by moving to green electricity supply contract.

5. Improvement Areas

The emission sources can be categorised in terms of the relative ease by which changes can be implemented. Scope 1 and 2 emissions are within the direct control of the organisation and can be impacted by energy and business improvement programmes. Scope 3, and the supply chain emissions can be more difficult to influence.



5.1 Scope 1 and 2 Improvements

Implementation of the improvement opportunities identified in the SORT report has the potential to reduce Scope 1 and 2 emissions.

Some measures will make only a minimal improvement.

Opportunity	Indicative Investment	Annual Cost Saving (£)	Annual Carbon Saving (tonnes)	ROI (years)
Tap Upgrade	£240	£1,075	1.91	0.22
Urinal Upgrade	£874	£447	0.09	1.95
Hand Dryer Upgrade	£1,649	£801	1.21	2.06
Shower Upgrade	£182	£74	0.12	2.46
Solar PV	£84,171	£9,730	15.45	8.65
Total	£87,116	£12,127	18.78	3.06