

Amalgamated Lifts Limited

Carbon (GHG) Emissions Report

2021



Completed by Carbon Neutral Britain Ltd

July 2024

Project No: 04112



Table of Contents

1 - Message from Carbon Neutral Britain™	03
2 - Carbon Emissions Summary	04
3 - Context	06
4 - Methodology	11
5 - Results	13
6 - Carbon Reduction Plan	15
7 - Contact	20

1 - Message from Carbon Neutral Britain™

It has never been more important for businesses to step up and take account of the environmental impact associated with their operations.

"We are delighted to partner with Amalgamated Lifts Limited to help identify and offset their environmental impact for 2023 and beyond."

James Poynter
Director - Carbon Neutral Britain

In the UK, businesses account for over 85% of total GHG emissions - making corporate action the number one priority in helping stop climate change.

Looking to do their part for the environment, Amalgamated Lifts Limited engaged with Carbon Neutral Britain in July 2024, with the ambition to measure their 2021, 2022 and 2023 annual emissions.

As specialists in the installation, repair, and maintenance of escalators and moving walks, it was identified that the main emissions were to occur from company vehicles, and the fuel combusted within the reporting period.

2 - Carbon Emissions Summary

Organisation	Amalgamated Lifts Limited
Reporting Period	1st January 2021 - 31st December 2021
Consolidation Approach	Operational Control
Base Year (first year)	2021 - 341.05 Tonnes of Carbon Dioxide Equivalent

2.1 Emissions Table

Scope 1:

Stationary or Mobile Combustion Source	-	kg CO2e
Mains Gas	-	kg CO2e
Company Owned/Lease Vehicles	219168.28	kg CO2e
Refrigerant Gas Loss Recharge	-	kg CO2e
Total	219168.28	kg CO2e
Total (Tonnes)	219.17	t CO2e

Scope 2:

Total Organisation Energy Usage on Site	13011.93	kg CO2e
Total Electric Vehicle Energy Usage	-	kg CO2e
Total	13011.93	kg CO2e
Total (Tonnes)	13.01	t CO2e

Scope 3:

Total Organisation Energy Usage WFH	769.03	kg CO2e
Organisation Waste	1688.87	kg CO2e
Business Travel (not using owned/leased Vehicles)	482.92	kg CO2e
Staff Commuting (not using owned/leased Vehicles)	32180.10	kg CO2e
Business Hotel or Event Activities	72.00	kg CO2e
Inbound Deliveries	6511.67	kg CO2e
Outbound Deliveries	-	kg CO2e
Organisation Water Usage	145.15	kg CO2e
Transmission & Distribution Losses	1125.73	kg CO2e
Well to Tank	65889.56	kg CO2e
Total	108865.03	kg CO2e
Total (tonnes)	108.87	t CO2e

Total

Total Organisation Emissions	341.05	t CO2e
-------------------------------------	---------------	---------------



3 - Context



3.1 The purpose of this report

This Carbon Emission Report will measure and calculate the total Greenhouse Gas (GHG) Emissions produced directly and indirectly from the organisations activities. Compulsory for Large Organisations as part of their Streamlined Energy and Carbon Reporting (SECR), HM Government encourages all organisations to take action and measure their emissions on a voluntary basis - as the most effective tool in monitoring and reducing an organisations climate impact.

GHG Emission (also referred to as Carbon Footprint) Calculation, Offsetting and Reducing are now the most popular method for businesses to make an environmental impact as part of their Corporate Social Responsibility policies due to the accurate and measured methodologies, providing complete transparency about their climate impact and resulting actions. Annual emissions reports are regularly used by organisations to track their progress in achieving emissions reductions across the business over time, and in many cases helps identify areas within the business that produce the most emissions - as an area to focus and improve.

Most importantly of all, carbon emission reports also help identify an organisations total carbon footprint - measured in tonnes of carbon dioxide equivalent (tCO₂e), a set unit to ensure carbon offsetting is accurate, and will reverse the organisations environmental impact to achieve carbon neutral status - increasingly important for customers, shareholders, employees and other stakeholders.

3.2 The Kyoto Protocol Greenhouse Gases (GHGs)

Seven Greenhouse Gases are calculated as part this emissions report, known as the seven Kyoto Protocol GHGs. These gasses occur the most often as a result of business activities, with the highest Global Warming Potential. For the purposes of emissions reporting, these gases are simplified and measured in the unit of tonnes of carbon dioxide equivalent (tCO₂e). The Global Warming Potential (GWP) of these gases are not the same however, which creates the unit equivalence compared to carbon dioxide over a period of 100 years (shown below). The latest AR5 values have been used.

GHG	Formula	GWP (CO ₂ e)
Carbon Dioxide	CO ₂	1
Methane	CH ₄	28
Nitrous Oxide	N ₂ O	265
Hydro fluorocarbons	HFCs	Depends on specific gas
Sulphur hexafluoride	SF ₆	23,500
Perfluorinated compounds	PFCs	Depends on specific gas
Nitrogen trifluoride	NF ₃	16,100

3.3 Calculating Emissions & Emissions Factors

The emissions calculations have been made using client-supplied activity data, with assumed full disclosure of all relevant and necessary information. The data received (such as energy usage in Kwh, or vehicle mileage) are then multiplied by the relevant emissions factors from published and reputable sources. Depending on the needs of the organisation the emissions factors used in some cases are scientific research journals or independent studies, but in most cases are from HM Government publications. Most commonly used - UK Government Conversion Factors for Company Reporting (Year: 2023, Expiry: 10/06/2024, Version 1.1) - DBEIS / DEFRA). Any assumptions or estimations of relevant data are published within this report.

3.4 Reporting Standards

GHG emissions reports are most widely carried out in accordance with the ISO 14064:1-2018 and GHG Emissions Protocol Accounting and Reporting Standards, whose methodologies have been used in the creation of this report.

The International Organisation of Standardisation (ISO) created the ISO 14064 standard in 2006, updating in 2018 to specify the principles and requirements at the organisational level for the quantification and reporting of greenhouse gas (GHG) emissions and removals. It includes requirements for the design, development, management, reporting and verification of an organization's GHG inventory.

The "Greenhouse Gas Protocol - Corporate Accounting and Reporting Standard" (GHG Protocol, 2011) developed in a partnership of the World Business Council for Sustainable Development (WBCSD) and the World Resource Institute (WRI) follow a similar methodology mirroring those of the ISO standard.

Using the two most widely recognised and used emission standards in the world, ensure all measurements, calculations and subsequent offsetting are completed to the most regulated and accurate standards possible.

3.4 Scopes of Emissions

Using the ISO 14064 and GHG Emissions Protocol Standards, business emissions are identified using three scopes of emissions:

Scope 1 (Direct emissions)

Activities owned or controlled by the organisation that release emissions straight into the atmosphere.

For manufacturing business these would be emissions from equipment and machinery used in production. Businesses that own or lease vehicles are also included within scope 1. For many office-based businesses, scope 1 emissions are usually very small.

Scope 2 (Energy indirect)

Emissions being released into the atmosphere associated with the consumption of purchased electricity, heat, steam and cooling. These are indirect emissions that are a consequence of the organisation's activities - but occur at sources that the business does not own or control.

These emissions would be the energy usage by the organisation and staff working at sites under the operational control of the business.

Scope 3 (Other indirect)

Emissions that are a consequence of business activity, which occur at sources which are not owned or controlled, which are not classed as scope 2 emissions.

Scope 3 emissions can be quite broad, including areas such as waste management, business travel, staff commuting, events, the emissions produced from delivery to and from the organisation (including third party delivery services), transmission and distribution losses associated with electricity usage, and well to tank emissions from combustion fuels.

3.5 Radiative Forcing

Radiative forcing (RF) is a measure of the additional environmental impact of aviation. These include emissions of nitrous oxides and water vapour when emitted at high altitude.

HM Government guidance recommends organisations should include the influence of radiative forcing RF in air travel emissions to capture the maximum climate impact of their travel habits. As such, radiative forcing has been included within the emission factor calculations of air travel within this report and future reports, where applicable.

3.6 Quality and Accuracy

The accuracy of a GHG assessment is directly related to the quality of the activity data provided, and for this assessment and report, 'primary data' (such as electrical usage in Kwh for the reporting period), have been used wherever possible. 'Secondary data' in the form of estimates, extrapolations and/or industry averages has been used when primary data is not available - to provide as accurate estimates of emissions as possible.

In addition, this report has been completed following the WRI GHG Protocol principles of relevance, completeness, consistency, transparency and accuracy.



4 - Methodology



AMALGAMATED LIFTS

4.1 Business Introduction

Carbon Neutral Britain was engaged by Amalgamated Lifts Limited in order to measure and calculate the organisation's total carbon footprint for 2021.

As specialists in the installation, repair, and maintenance of escalators and moving walks, it was identified that the main emissions were to occur from company vehicles, and the fuel combusted within the reporting period.

4.2 Operational Boundary and Data

Using the operational control consolidation approach was determined as the best method for Amalgamated Lifts Limited, due to the standard business structure and business practices. As a result, the following scope of data was collected.

Scope 1 - Stationary and Mobile Source Emissions (equipment and quantity combusted), Company Owned and Leased Vehicles (vehicle type and distance travelled), Refrigerant Gas Losses (refrigerant type and new/disposed units) for the organisation only.

Scope 2 - Energy (electricity, imported heat, steam in kwh) from the office and vehicles, using the location based method.

Scope 3 - Homeworking Energy (Days), Water (consumption and waste volume), Waste (landfill, recycled and composted weight), Business Travel (type and distance), Staff Commuting (average distance and type), Hotel Stays (UK, Europe or Worldwide days), Inbound/Outbound delivery (weight/volume, type and source), Transmission and Distribution losses associated with electricity usage (kwh) and Well To Tank emissions from combustion fuels (volume combusted).

4.3 Assumptions and Estimations

Where primary emissions data could not be collected, the following assumptions and estimations were used:

- Throughout the reporting period, some staff worked remotely from home. Due to the unknown primary energy data from staff at home, the energy usage was calculated based on the number of days staff worked, assuming 8 hours per day.
- Scope 3 inbound delivery emissions were calculated using estimated weight and distance, using UK DEFRA freight emission factors for the predominant delivery type.
- Scope 3 data was estimated by the company based on a one month sample of business activity.
- Transmission and distribution losses associated with electricity usage, as well as 'well to tank' emissions from combustion fuels were included in the assessment.
- Any incidental emissions less than 1% from the sources measured were not included within this report.

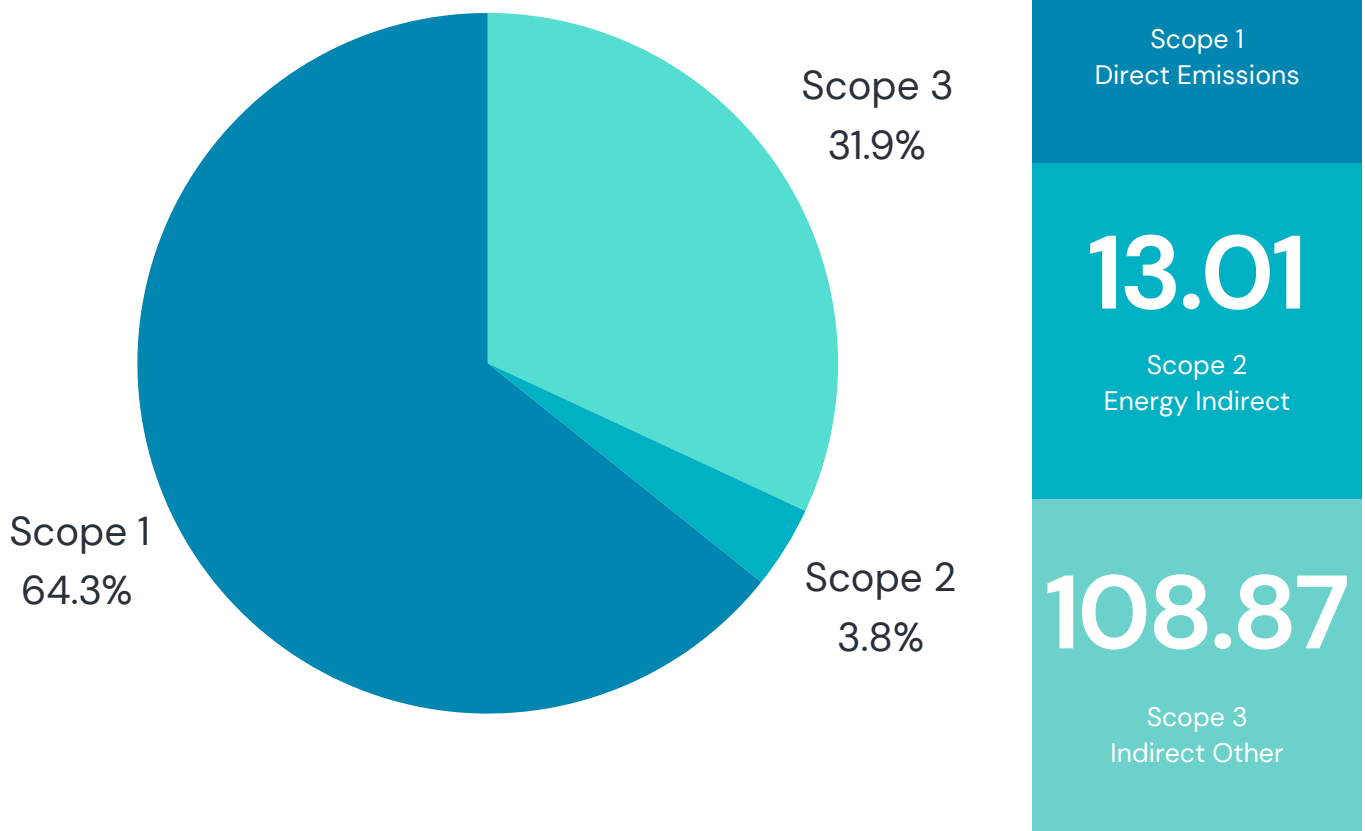


5 - Results

5.1 Summary

Amalgamated Lifts Limited Carbon (GHG) Emissions

Reporting Period - 01/01/21 - 31/12/21



5.2 Emissions by Scope

219.17

Scope 1
Direct Emissions

All Scope 1 emissions occurred from company vehicles, and the fuel combusted within the reporting period.

13.01

Scope 2
Energy Indirect

All Scope 2 emissions occurred from the company energy usage within the reporting period.

108.87

Scope 3
Indirect Other

The main Scope 3 emissions occurred from well to tank emissions from fuel combusted from travel. Other emissions occurred from staff working from home (these emissions were attributed 'additional' energy consumption that would not have otherwise occurred at home), waste, business travel, staff commuting, business hotel stays, inbound delivery of goods and water usage.



6 - Carbon Reduction Plan (CRP)

6.1 Reduction Overview

IPCC studies (and COP discussions) have highlighted the importance of businesses making a difference in the next 5 years before changes to the climate are irreversible, and by Carbon Offsetting and becoming Carbon Neutral, Amalgamated Lifts Limited is proactively doing its part for the planet now - when it is the most important.

In addition to Carbon Offsetting and Carbon Neutral status - it is recommended that Amalgamated Lifts Limited takes further action to reduce its future emissions - as much as practically possible. By reducing all avoidable emissions to zero - the organisation will achieve Net Zero status.

6.2 Science Based Targets

As part of the 2015 Paris Agreement, world governments committed to curbing global temperature rise to well-below 2°C above pre-industrial levels, and pursuing efforts to limit warming to 1.5°C. In 2018, the IPCC warned that global warming must not exceed 1.5°C to avoid the catastrophic impacts of climate change.

It was agreed that to achieve this, GHG emissions must halve by 2030 – and drop to Net Zero by 2050. In order to align with these Science Based Targets - Amalgamated Lifts Limited must commit to reducing half of its GHG emissions by 2030, and to achieve Net Zero by 2050.



6.3 Procurement Policy Note 06/21

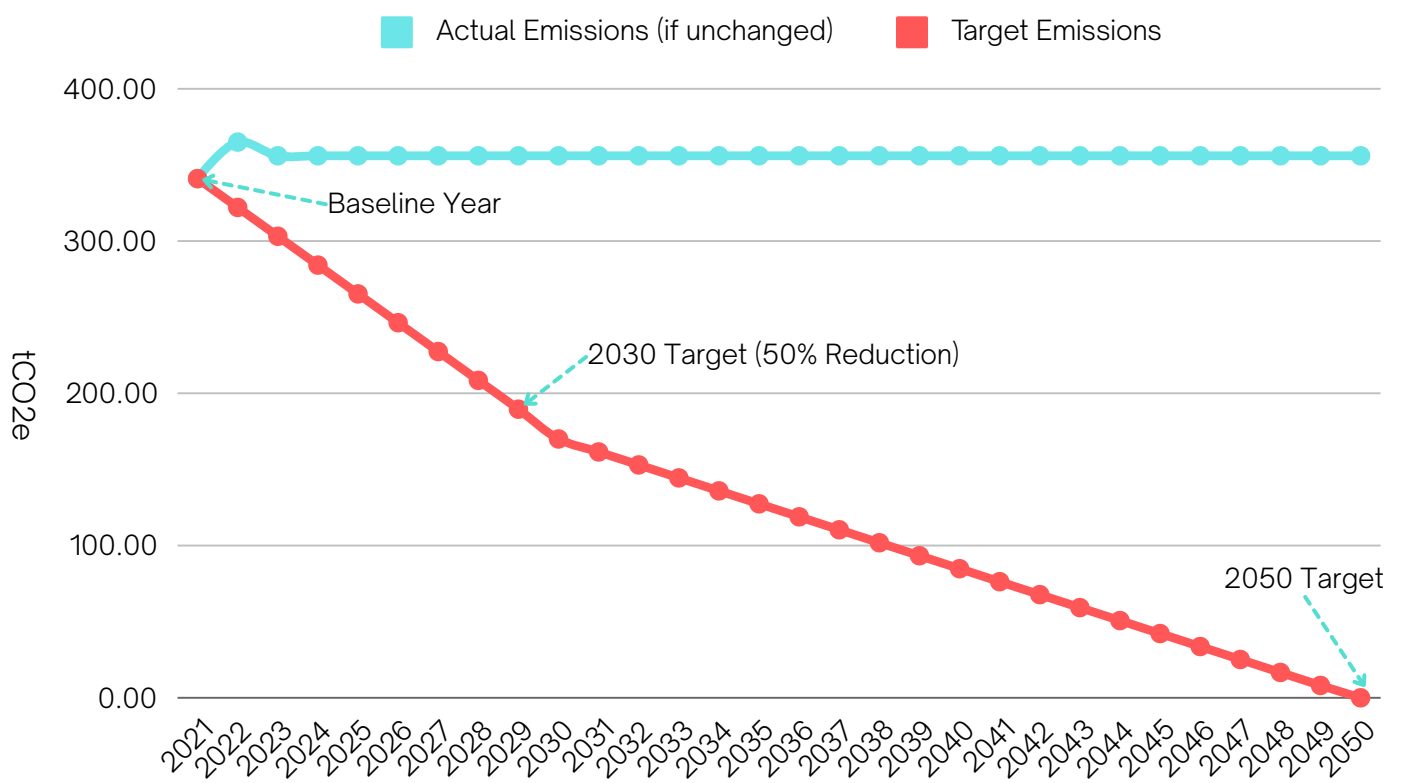
The UK Government amended the Climate Change Act 2008 in 2019 by introducing a target of at least a 100% reduction in the net UK carbon account (i.e. reduction of greenhouse gas emissions, compared to 1990 levels) by 2050. This is otherwise known as the 'Net Zero' target.

To aid in this target, UK suppliers to government contracts are required to meet the requirements of Procurement Policy Note (PPN) 06/21, by providing a Net Zero Carbon Reduction Plan.

In addition to calculating Scope 1, 2 and a subset of Scope 3 emissions in tCO₂e for the six greenhouse gases covered by the Kyoto Protocol (as outlined in this report), Amalgamated Lifts Limited is required to make a commitment to achieving net zero by 2050, outline its reduction plans, and publish its Carbon Reduction Plan (CRP) on its website.



6.4 Reduction Target Plan



In order to achieve a 50% reduction in emissions by 2030, Amalgamated Lifts Limited is required to reduce its emissions by **170.52 tCO₂e** over the next 9 years from 2021 to 2030.

This will require a reduction of **5.55%** (18.93 tCO₂e) per year from the 'Baseline' (first year) assessment of the organisation. A further reduction of **2.5%** (8.52 tCO₂e) each year is then required in order to achieve Net Zero.

Should significant changes to the business size and structure occur in the future - Carbon Neutral Britain will amend the 'baseline' assessment year, as well as look at intensity values (tCO₂e per million turnover, FTE or other metric), to further track and implement reduction strategies.

"By accurately measuring, offsetting and committing to annually reduce emissions 5.55% by 2030, Amalgamated Lifts Limited is not only Carbon Neutral, but in alignment with both Science Based and UK Government targets for Carbon Emissions Reductions"

James Poynter
Director - Carbon Neutral Britain

6.5 Reduction Strategies



Although some emission reductions will require technological and third party improvements, it is recommended that Amalgamated Lifts Limited targets the three largest emissions sources of the organisation, in order to make the most impactful, and quickest reduction in emissions possible. The three largest emission sources are:

Company Vehicles - 219 tCO₂e (64% of total emissions)

Staff Commuting - 32 tCO₂e (9% of total emissions)

Electricity Consumption - 13 tCO₂e (4% of total emissions)

Recommendations for the organisation are as follows:

Company Vehicle Emissions

Immediate reduction in vehicle emissions can occur from improved efficiency in the journeys undertaken. If journeys can be avoided (facilitating meetings via video call), routes can be shortened, and ride sharing can occur - small but incremental improvements can be made over time. Switching vehicles to hybrid and/or electric vehicles will understandably have the most significant impact.

Staff Commuting

Although this may not be able to be reduced to zero (until electric vehicles become the predominant mode of transport from 2030 onwards), emissions can be reduced by encouraging ride sharing, walking, and cycling to work wherever possible. Financial incentives - such as ride to work schemes, and electric vehicle allowances are also recommended.

Electricity Consumption

Reducing usage wherever possible through energy efficient machinery, equipment and lighting is best practice to reduce consumption wherever possible. For leased sites (where infrastructure changes are not possible), moving to a more energy efficient site could also be considered. Where hybrid working is possible - limiting the number of staff within the office, and downsizing (therefore lowering energy requirements) could also have a significant impact on the direct energy consumption of the business (working from home staff produce almost half the energy output of the equivalent usage from an office).



7 - Contact



2024 The Year to Make a Difference

Help Support Climate Action

© Carbon Neutral Britain LTD 2024

Whilst care has been used in processing, analysing and developing this document, Carbon Neutral Britain Ltd gives no warranty that the information supplied is free from error. Carbon Neutral Britain Ltd shall not be liable for any loss suffered through the use, directly or indirectly, of any information, product or service based on any part of this report.

This report is not intended to be a comprehensive review of the practices of the named recipient nor the viability of its products or services. It is the responsibility of the named recipient to ensure that all its products or services adhere to and are compliant with all applicable laws, regulations and other generally accepted standards of quality and performance.

Calculations have been made based on accurate and assumed full disclosure of all relevant and necessary data by the named recipient, and has not verified the validity, accuracy or comprehensiveness of any information supplied to Carbon Neutral Britain Ltd in the provision of this report.

Carbon Neutral Britain Ltd does not accept any responsibility whether in contract, tort, equity or otherwise for any action taken, or reliance placed on it, or for any error or omission from this report.

OFFICE ADDRESS

1 Poultry Road, London, EC2R 8EJ

WEBSITE

carbonneutralbritain.org

EMAIL

business@carbonneutralbritain.org

**Carbon
Neutral
Britain™**

