



Harley Haddow Ltd

Carbon Management Plan

August 2022

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Document Revision Control

Revisions	Date	Reason for Issue	By	Approved
0	August 2022	For Information		SJP

Executive Summary

Harley Haddow Strategy (2022 – 2025)

Harley Haddow Ltd recognises that all aspects of its operations consume energy.

We are committed to be as efficient as possible in our use of energy and natural resources in order to minimise both the impact on the environment through carbon and other emissions and its energy costs. These standards have been built on a period of significant energy and carbon reduction across our offices and operations over the last five years.

It is recognised that further changes will be required in the longer term in order to achieve these aims.

We will adopt the following principles.

- Ensure compliance with all relevant environmental legislation.
- Seek to identify forthcoming environmental legislation to ensure timely compliance with such new legislation as it applies to the organisation and our clients.
- Seek to improve its management of energy, emissions, use of resources and waste performance to prevent pollution and provide resources to support effective improvement opportunities without compromising operational requirements.
- Monitor and report annual energy usage and greenhouse gas emissions, as appropriate.
- Set agreed targets for stabilising and reducing site energy consumption and carbon emissions
- Review our Environmental Policy and other relevant environmental documentation at regular intervals.

The key targets for reduction, can be summarised as:

Energy - Reduce our own operational carbon emissions by 20% by 2025.

Design all new build projects to be net zero carbon in operation by 2030.

Reduce embodied carbon intensity of all new buildings, major retrofits and infrastructure projects by 30% by 2030.

Waste – No waste to landfill, at least 80% of waste to be recycled.

Business Miles – 25% reduction

Air miles – 50% reduction.

Introduction

This Carbon Management Plan (CMP) will set out carbon reduction targets and objectives for Harley Haddow for 2022-2025.

The current carbon footprint has been assessed and compared to future projections to produce realistic goals. The CMP will act as a focal document, signposting all related strategies which will deliver emissions reductions.

Global Context

The Paris Climate agreement, drafted in 2015, saw 195 countries reach consensus on the need to keep global temperature rises this century to well below 2°C, while pursuing efforts to limit the increase to 1.5°C.

The Intergovernmental Panel for Climate Change (IPCC) has published a special report which indicated that limiting global warming to 1.5°C would require 'net zero' carbon emissions by around 2050 (IPCC, 2018); any additional warming above 1.5°C would significantly worsen the risk of drought, floods, extreme heat, and poverty for hundreds of millions of people globally.

Legislative Context

The UK Climate Change Act 2008 commits the UK government by law to reducing greenhouse gas (GHG) emissions by at least 80% of 1990 levels by 2050. This has been put into Scottish law through the Climate Change (Scotland) Act 2009 which commits Scotland to a 42% reduction in emissions by 2020, and 80% reductions by 2050.

In April 2019, the Scottish Government declared a global climate emergency.

In May 2019, the Committee on Climate Change published their report 'Net Zero – The UK's contribution to stopping global warming'. This report recommended that Scotland adopt a target of reaching net-zero greenhouse gas emissions (GHGs) by 2045.

Subsequently, the Scottish Government amended the Climate Change Bill to set a target of net-zero emissions by 2045 at the latest. The 2030 and 2040 targets were also raised to 70% and 90% emissions reductions, respectively.

Harley Haddow Strategy 2022- 2025

Energy - Reduce our own operational carbon emissions by 20% by 2025.

Remove our reliance on Gas in tenanted office spaces where possible.

Design all new build projects to be net zero carbon in operation by 2030.

Reduce embodied carbon intensity of all new buildings, major retrofits and infrastructure projects by 30% by 2030.

Waste – No waste to landfill, at least 80% of waste to be recycled.

Business Miles – 25% reduction

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2.0 Carbon Management

2.1 Scope Emissions – GHG Emissions

Carbon impact reporting under the GHG Protocol splits the carbon emissions down into 3 emission streams.

- Scope 1 Direct Emissions
- Scope 2 Indirect Emissions – Owned
- Scope 3 Indirect Emissions – Not owned

The carbon emissions for each scope include the following which will all form part of the carbon management policy.

2.1.1 Scope 1: Direct Emissions

Scope 1 emissions are greenhouse gas emissions released on an organisation's site or from their vehicles.

More accurately they are CO₂ emissions that come from sources owned or controlled by an organisation.

Typically, these are emissions generated by gas boilers and owned or leased cars, vans & lorries.

2.1.2 Scope 2: Indirect Emissions – Owned

Scope 2 are the greenhouse gases released into the atmosphere from the consumption of purchased electricity, steam, heat, and cooling. Although the CO₂ emissions result from an organisation's activities, they occur at sources it does not own or control.

As a result, they are indirect emissions. For many organisations, electricity taken from the grid will be the only source of Scope 2 emissions and can be controlled by the purchase of "green" electricity from the utility provider.

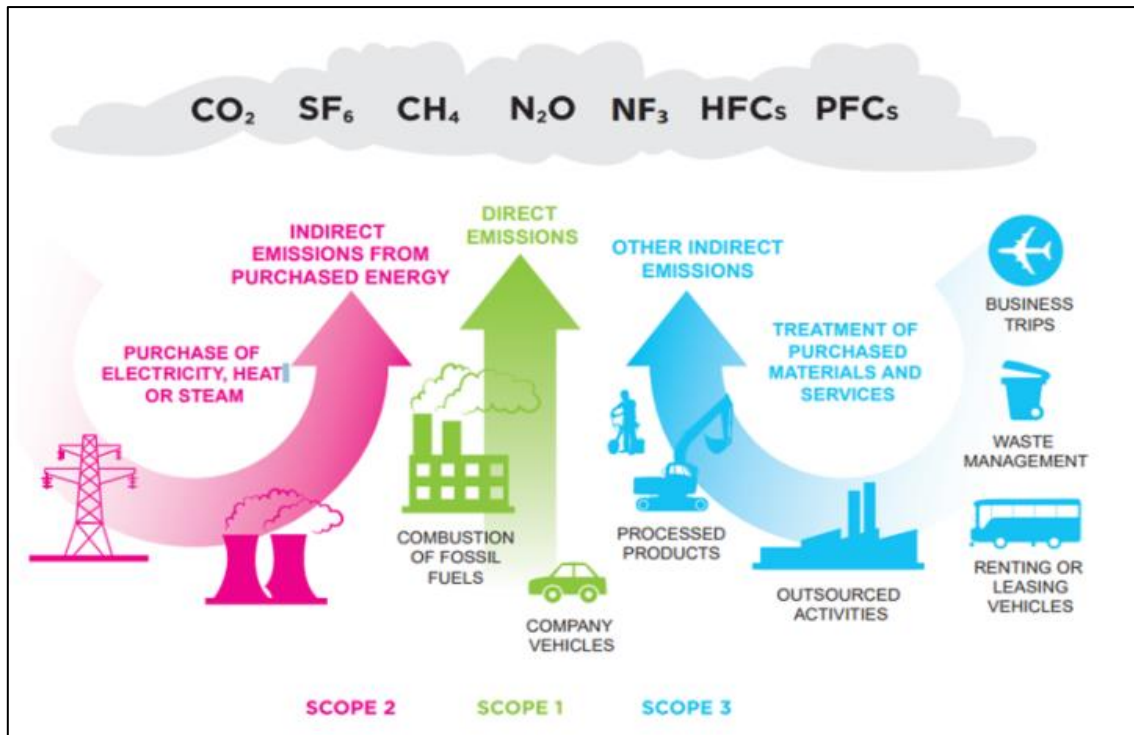


Figure 1: Scope Emissions

2.1.3 Scope 3: Indirect Emissions – Not Owned

Scope 3 emissions covers emissions that are a consequence of your actions, which occur at sources which you do not own or control and which are not classed as Scope 2.

More useful examples of Scope 3 emissions are business travel by means you do not own (like a train journey), energy use and related emissions from business travel in rental cars or employee-owned vehicles, or waste disposal processes which you do not own or control.

2.2 Grid Decarbonisation

As the electrical grid is now being produced increasingly by renewable power sources rather than gas or coal fired power stations the grid is decarbonising and as such the carbon emission factor for electricity as a fuel is due to be revised.

Currently the carbon emission factor for electricity is 0.519kgCO₂/kWh this will be updated to 0.138 kgCO₂/kWh in 2022.

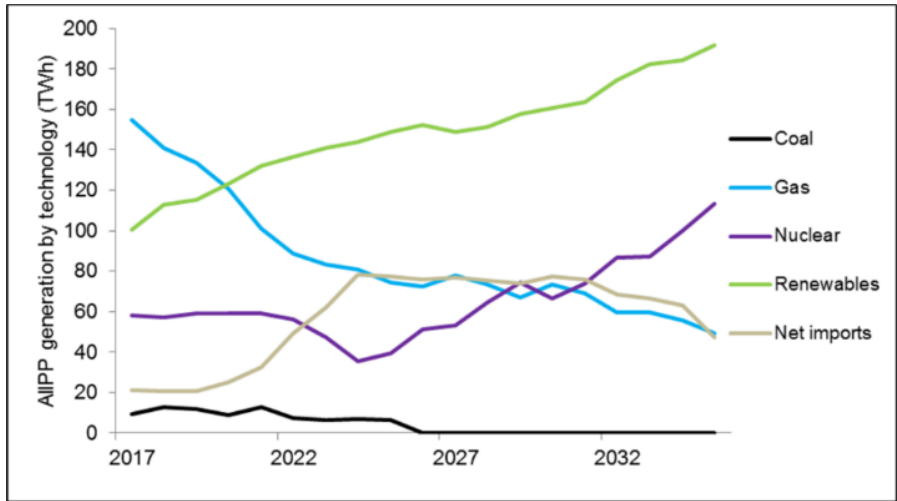


Figure 2: Grid generation breakdown

The grid will then continue a downward trend to eventually becoming fully net zero by 2050 – and most probably in advance of this date, this impact therefore needs to form a key consideration in a carbon management plan.

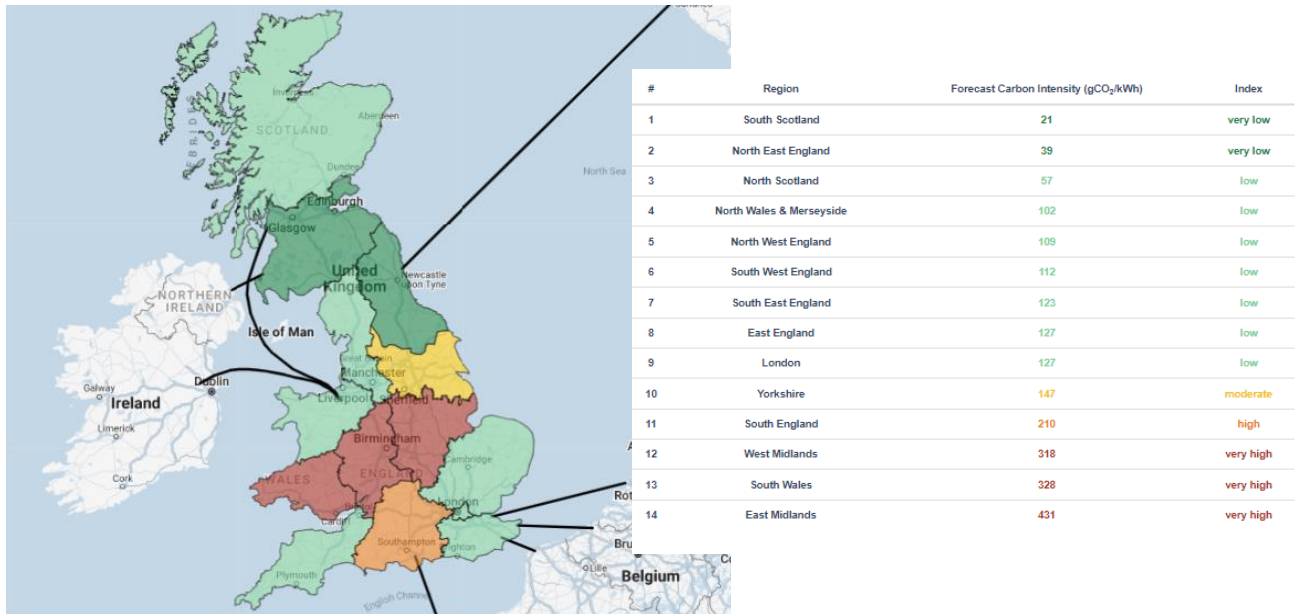


Figure 3: Grid generation breakdown – UK Variation

2.3 Carbon Footprint Data

The below summarises the annual carbon footprint data, over the period 2021/2022, for gas and electricity consumption by site. Energy monitoring and annual KPI reductions have been in place since 2016/17.

As the Harley Haddow offices are located in tenanted office space, some elements of energy consumption are out with our control and are monitored by the landlord:

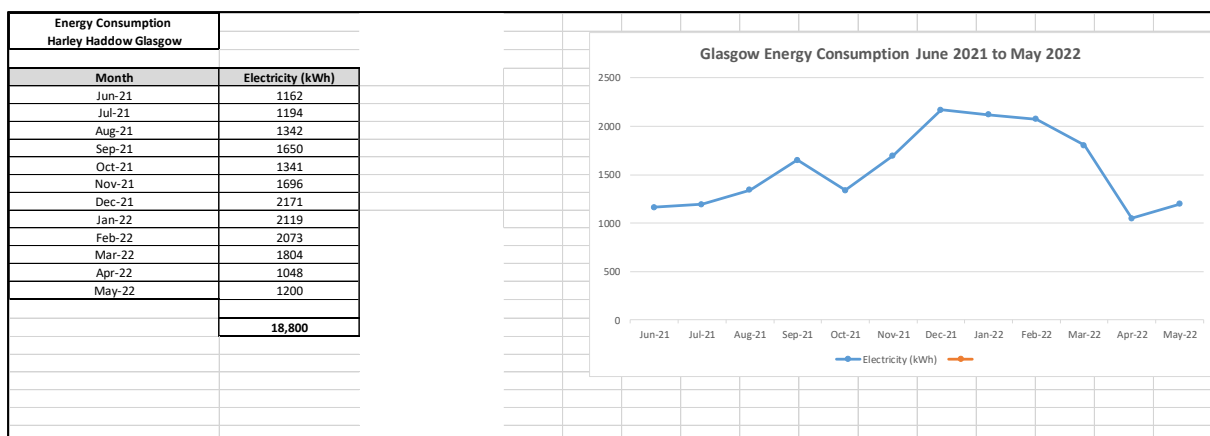
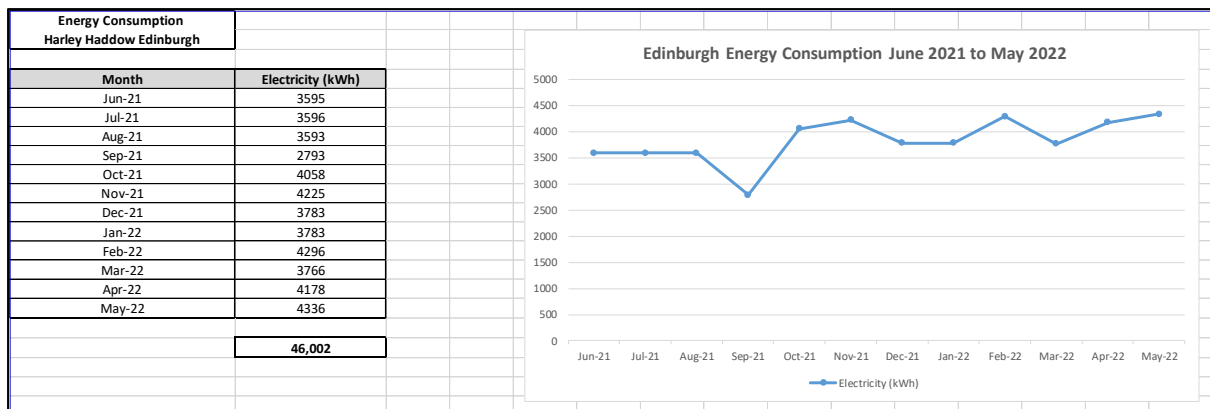
Edinburgh Office – Heating Via Landlord plant, monitored under Landlord’s carbon management regime. Electricity consumption monitored by Harley Haddow.

Glasgow Office – Heating Via Landlord plant, monitored under Landlord’s carbon management regime. Electricity consumption monitored by Harley Haddow.

London Office – New premises, Electricity consumption monitored by Harley Haddow.

2.3.1 Energy Consumption

The below details the total energy consumption – Scope 1, 2 and 3 relating to buildings impact.



Energy Consumption Harley Haddow	2021/2022
Month	Electricity (kWh)
Jun-21	4,757
Jul-21	4,790
Aug-21	4,935
Sep-21	4,443
Oct-21	5,399
Nov-21	5,921
Dec-21	5,954
Jan-22	5,902
Feb-22	6,369
Mar-22	5,570
Apr-22	5,226
May-22	5,536
Total	64,802
Previous Year (COVID)	44,522
Target KPI (3.5% Reduction)	65,109
Achieved Reduction (%)	0.47%

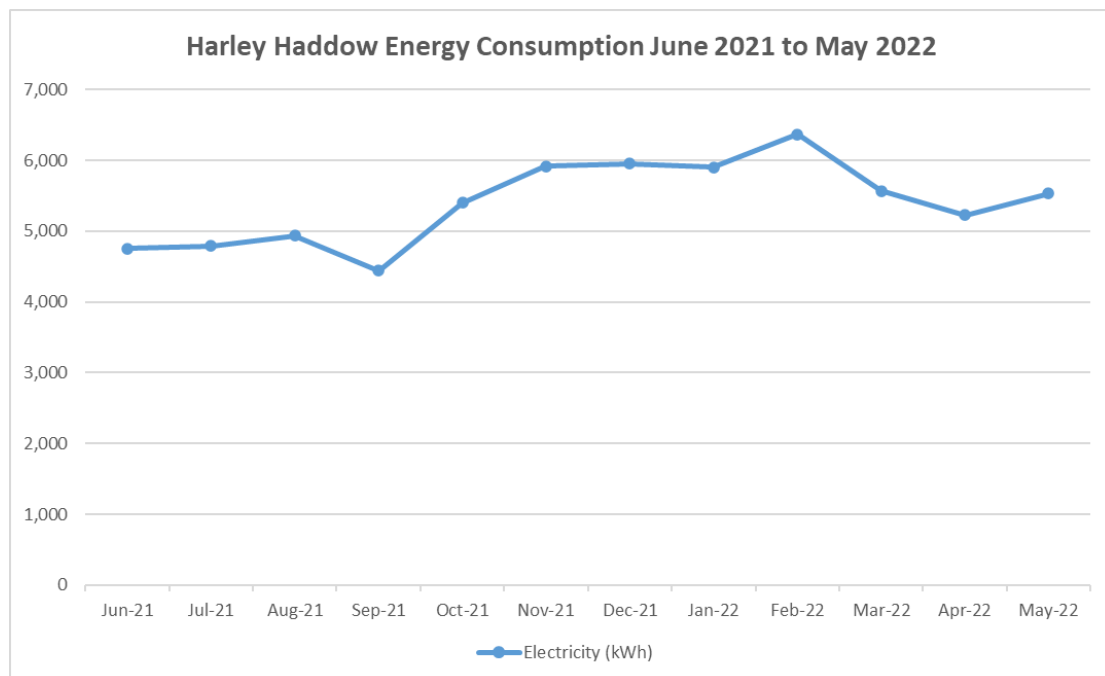


Figure 4: Energy 2021/22

2.3.2 Carbon Emissions

The carbon emissions directly related to the Scope 1, 2 and 3 building energy consumption is detailed below.

Scope 2 Emissions	KWh/annum	Carbon Tonnes CO2
Edinburgh and Glasgow	64,802	14.45
London (<i>estimated</i>)	18,000	4.01
Total HH		18.46

Figure 5: Buildings Carbon 2021/22

2.3.3 Transport – Carbon Impact

Surveys have been carried out to establish the carbon impact for staff travel to the main office locations, the data is shown below.

Mode of Transport	CEF (kgCO ₂ /km)
Car (Average size) Diesel	0.16843
Car (Average size) Petrol	0.17431
Car (Average size) Electric	0.05477
Motorbike (Average size)	0.11355
Taxis (Black Cab)	0.30624
Bus (Average local)	0.10227
London Underground	0.02781
Rail (National rail)	0.03549

Total CO ₂ Emissions	
(kgCO ₂)	(tonnesCO ₂)
1025.58	1.03

Figure 6: Scope 3: Travel to work Carbon 2021/22

Methods to reduce include the promotion of cycle to work schemes and electric vehicle schemes.

Methods are being adopted to measure and monitor business travel to then set annual reduction measures.

Strategies are already in place to reduce business travel as much as possible with the promotion of virtual meetings and limiting air-travel.

2.4 Energy and Carbon Reduction Measures Current and Future

It should be noted that up to the point of the preparation of this carbon management plan, Harley Haddow has adopted several energy and carbon reduction projects over the last 5-years which has already set exemplar performance standards and allowed the company to significantly reduce its energy and carbon impact.

These projects already adopted are summarised as below along with future projects.

Lighting Control – Low energy lighting fitted to office spaces with daylight dimming incorporated. PIR controls installed.

Printing – Printing resources managed to limit use.

Cycle to work scheme

Electric Vehicle Scheme

Encourage staff cycling to work by promotion of cycle schemes and provision of cycle storage and facilities.

Increase the proportion of staff using video conferencing facilities as an alternative to travelling.

Reduce the proportion of staff typically using taxis for travel.

Waste - The offices currently recycle paper, cardboard, plastic bottles, cans, batteries and toner cartridges.

Reduce energy consumption through a targeted programme of **communications and education** to minimise usage and improve efficiency.

Operational efficiencies: e.g.: space utilisation, use of paper, sustainable procurement, management of staff travel, IT equipment running etc.

Develop an ongoing programme of **preventative maintenance** in order to improve the efficiency of the building systems.

Continually improve the energy efficiency of the estate by eliminating energy waste through close **control of plant and equipment**.

Build on and embed the fostering of energy-aware **behaviours**.

Upgrade to more energy-efficient and low-carbon plant and equipment wherever practicable.

Environmental Policy Statement

Harley Haddow Group is committed to upholding and maintaining a Business Management System (BMS) that controls the impacts the Company activities may have upon the environment, risk to the environment and is consistent with the legislative framework it operates within.

The Company recognises that our work activities may have an impact upon the environment in terms of waste generation and seek to minimise this as far as is reasonably practicable through our BMS which has been certified against the BS EN ISO14001:2015 standard.

To achieve these aims, the Company is committed to:

- Protecting the environment.
- Prevention of pollution.
- Remain compliant to environmental legislation, regulations and authorisations relevant to the industry sector in which we operate.
- Continual improvement in our environmental performance.

It is the policy of Harley Haddow Group to:

- Minimise waste to landfill through recycling where possible.
- Meet our duty of care requirements in relation to waste by ensuring the safe keeping and subsequent disposal of waste.
- Our designs in layout, form and material specification, are prepared with due regard to their effect on the environment.
- Recommendation is made for the adoption of sustainable measures in our designs.
- Pollution prevention methods are kept to the fore in all our designs.
- Ensuring the public has access to our environmental policy.
- The environmental policy is monitored for effectiveness.
- Encourage Employee to feedback to Directors about the Company's environmental performance.
- Set environmental objectives and publish them in the Company's promotional literature.

We will communicate this Environmental Policy to all our Employee and ensure that they are given the appropriate training to raise awareness of environmental issues. The Company will review this policy as part of the Management Review Meeting agenda, taking account of any changes within legislation and other factors.



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**The Multi-disciplinary
Engineering Consultancy**

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