



Bell & Bain

Carbon Baseline Report

Reporting Period: January 2025 – December 2025

Contents

1. Company Overview	Page 1
2. Reporting Boundaries	Page 2
3. Methodology	Page 2
4. Scope 1 Emissions (Direct)	Page 3
5. Scope 2 Emissions (Purchased Electricity)	Page 3-4
6. Scope 3 Emissions (Most Material Section)	Page 4-7
7. Emissions Summary	Page 8-9
8. Targets & Strategy	Page 9
9. Actions Taken This Year	Page 10
10. Data Quality & Improvements	Page 10
11. Key Risks & Opportunities	Page 10
12. 2024-2025 Continual Improvement	Page 11

1. Company Overview

Business Activity:

Book Printing

Locations:

303 & 311 Burnfield Road

555 Lawmoor Street

Employees:

131

Production Scale:

Large

Energy Profile:

High electricity usage for litho and digital print, binding lines and finishing equipment.

2. Reporting Boundaries

Organisational Boundary:

Approach: Operational Control

Includes:

- Printing facilities
- Warehousing
- Company owned vehicles
- Office Structure

Operational Boundary:

Scope 1: Direct fuel and refrigerants

Scope 2: Purchased electricity

Scope 3: Supply chain (paper, transport, waste, staff commuting & business travel)

3. Methodology

Standard: GHG Protocol Corporate Standard

Emission Factors: UK DEFRA (2025)

GWP: IPCC AR6

Calculation methods: Excel formula

Fuel & energy: Activity based

Paper and Suppliers: Hybrid (supplier data or spend-based)

Data Sources: Optimus (Custom MIS), Bills, Usage data, staff and supplier surveys

Utility Bills: Electricity, Gas and Water

Production Records: Optimus system

Procurement Data: Optimus system

Travel Records: Sales team log

4. Scope 1 Emissions

Emissions from sources owned or controlled by the organisation.

Key Sources:

- Diesel/petrol (Company Vehicles and Forklifts)
- Refrigerants (Vending Machines)
- Machinery and Computing

Scope 1 emissions for Bell and Bain Ltd, come from the fuels and systems and company uses in its operation. This includes the company fleet and any fuel they require to operate, the forklifts and the fuel they require. The machinery and auxiliary equipment also have emissions in this category. Also considered are smaller emitting factors such as the refrigerants from the vending machines available around the factory and are included Scope 1 emissions.

While Scope 1 emissions are a smaller part of the overall carbon footprint; compared to electricity and supply chain, they are still important to report. By improving on our energy efficiency, lowering carbon based heating options, and gradually swapping to electric vehicles, Bell and Bain are committed to meet their emission targets over time.

Scope 1 Report Table:

Source Type	Measurement Method	Total Emissions tCO ₂ e
Company Fleet	UK DEFRA (2025)	47.81
Forklifts	As above	8.65
Machinery	As above	453.12
Vending Machines	As above	8.64
TOTAL	As above	518.22

5. Scope 2 Emissions

Electricity uses across our operations

Key Considerations

High electricity demand from:

- Printers
- Folding Equipment
- Binding Equipment
- Lighting

Scope 2 emissions for Bell & Bain come from the electricity the company purchased to power its operations. This includes the energy used to run printing presses, folding equipment, binding equipment, our offices and lighting. As a print manufacturer, electricity is a big part of day-to-day production, meaning our Scope 2 emissions are a large part of the company’s carbon footprint.

We are taking steps to reduce these emissions wherever possible, and where not possible, to mitigate these factors. We want to improve our efficiency with processes and procedures to reduce re-runs and over-runs. We are investing in modern and lower-energy equipment, and with these measures we will make good progress with our targets. We have also switched to a green energy tariff, and are now looking at joining a trust to mitigate our carbon impact, which will help support our longer-term sustainability goals.

Scope 2 Report Table:

Energy Type	Supplier	Total Emissions tCO ₂ e
303 Burnfield Road Electricity	Shell	479.96
311 Burnfield Road Electricity	Shell	345.08
Lawmoor Electricity	Shell	149.44
TOTAL	As above	974.49

6. Scope 3 Emissions

Emissions across our supply chain

6.1 Purchased Goods & Services

- Paper
- Ink
- Plates

A significant part of Bell and Bain’s Scope 3 emissions come from the materials used in the printing process, particularly paper, inks and aluminium plates. The company works closely with suppliers to source paper from responsibly managed mills. We use FSC approved mills, which are primarily based in Europe, where environmental standards and forestry practices are well established. By prioritising certified and sustainable produced paper, Bell and Bain are helping to reduce their overall environmental impact associated with raw material extraction and processing.

We have made efforts to work with our ink and plate suppliers who offer lower impact products, for example vegetable inks. While these materials are essential to the business, careful sourcing and strong supplier partnerships allow Bell and Bain to take positive steps towards reducing this part of our Scope 3 footprint over time.

Description of Goods	Supplier	Total Emissions tCO ₂ e
Paper	Artic Paper	10696.97
Inks	Various	145.32
Plates	Various	485.00
TOTAL	As above	11,327.29

6.2 Upstream Transport

- Paper deliveries to sites
- Supplier logistics

Bell and Bain work to minimise our impact by optimising delivery schedules of both storage to site and site to site. We also engage with logistics partners to improve efficiency on our deliveries and supplies. By continuing to prioritise smart haulage choices, and a higher stock hold; the company can help to reduce emissions across its supply chain.

Description of Goods	Supplier	Total Emissions tCO ₂ e
Freight	Various	46.50
TOTAL	As above	46.50

6.3 Waste from Operations

- Paper waste
- Recycling vs Landfill
- Wastewater

Bell and Bain are committed to minimising waste by ensuring that all paper waste generated during the printing process is fully recycled. This includes offcuts, spoilage, and any surplus materials, which are carefully collected and picked up by our recycling partners rather than landfill. By maintaining a strong recycling approach, the company not only reduces its environmental impact but also supports a more circular use of materials within the printing industry.

Description	Recycling Partner	Total Emissions tCO ₂ e
Recycling	Highlander	42.65

Wastewater	Scottish Water	1.49
Waste	Veolia	0.89
TOTAL	As above	45.03

6.4 Business Travel

- Sales Travel
- Conferences

Our sales team is also playing a key role in reducing our environmental impact by shifting from air travel to rail for longer, domestic journeys where possible. This change supports a more sustainable way of working - significantly lowering carbon emissions – while keeping us well connected with our customers and partners. With this and our new electric fleet, it’s a great example of how small changes can make a big difference.

Sales Personnel	Method	Total Emissions tCO₂e
T. Mallon	Car, Train & Plane	0.29
A. Morgan	Car, Train & Plane	0.47
R. Docherty	Car, Train & Plane	0.58
TOTAL	As above	1.34

6.5 Employee Commuting

- Car
- Walk
- Bike
- Train

Employee travel at Bell and Bain includes a mix of commuting by train, car and walking. While many employees already use lower-carbon options such as public transport and active travel, car use remains a contributor to emissions. There is an opportunity to further reduce this impact by encouraging more sustainable travel choices, for example through the introduction of a cycle-to-work scheme. Supporting employees to shift towards cycling, walking or public transport can help lower emissions while also promoting healthier and more sustainable ways of commuting.

Source	Methods	Total Emissions tCO₂e
Employee Travel	Car, Train, Bike & Walk	142.60

TOTAL	As above	142.60
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6.6 Downstream Transport

- Distribution of books to customers

Downstream transport emissions at Bell and Bain come from the delivery of finished books to customers, including publishers, distributors and retailers. These deliveries are typically carried out using road freight and, for the more rare international orders, may involve sea or air transport. While these emissions are not directly controlled by the company, Bell and Bain works with logistics partners/customers to improve efficiency, optimise delivery routes and consolidate shipments where possible. By continuing to explore lower-carbon transport options and more efficient distribution methods, the company can help reduce the environmental impact of getting its products to customers.

6.7 End of Life Treatment

- Recycling

Books produced by Bell and Bain can be considered a “forever product” in many cases, as they are often kept, reused, passed on and enjoyed over long periods of time. When they do reach the end of their life, books are widely recyclable, particularly as they are primarily made from paper sourced from responsibly managed materials. This means their environmental impact can be significantly reduced through reuse, resale or recycling. By producing durable, high-quality books and supporting sustainable paper use, Bell and Bain help ensure its products remain part of a more circular and environmentally responsible system.

We do record a small amount of our packaging as part of their environmental impact assessment:

Product	Area	Total Emissions tCO₂e
Plastic Pallet Wrap	Despatch	4.246
Cartons	Binding	0.484
Plastic Parcel Wrap	Despatch	0.024
Plastic Tape	Binding	1.892
TOTAL	As above	6.646

7. Emissions Summary

Total Emissions

Bell and Bain's total greenhouse gas emissions are made up of contributions from Scope 1, Scope 2 and Scope 3 sources, as summarised below:

Scope	Total Emissions tCO ₂ e
Scope 1	518.22
Scope 2	974.49
Scope 3	11,569.41
Total	13,062.12

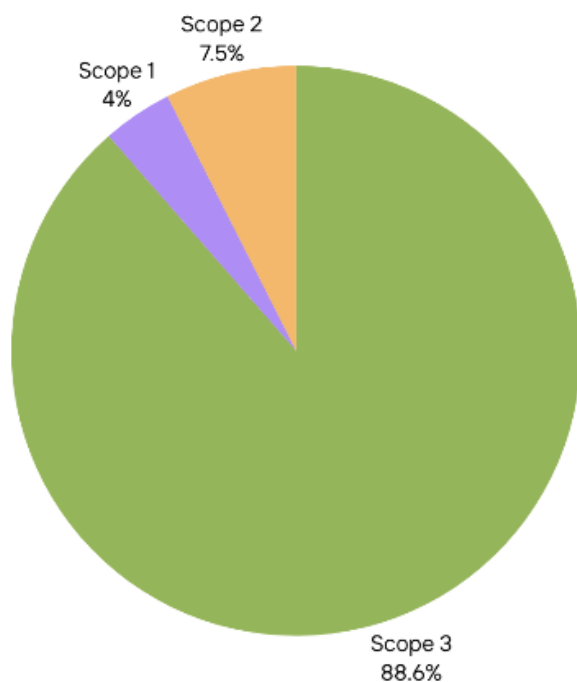
Breakdown

Overall, most emissions are associated with Scope 3 activities, particularly the sourcing of paper and other materials, while Scope 2 emissions from electricity use also represent a significant portion. Scope 1 emissions make up a smaller share but remain an important area for ongoing reduction.

Scope 3 – 88.57%

Scope 2 – 7.46%

Scope 1 – 3.97%



Intensity Metrics

Metric	Emissions	Activity Data	Intensity result tCO ₂ e/
Per tonne of paper used	13062.12 tCO ₂ e	8072 tonnes	1.618/ per tonne
Per 1000 books printed	13062.12 tCO ₂ e	12899743.00 books	1.0125 per / 1000 book
Per £ revenue	13062.12 tCO ₂ e	£21,519,353.79	607 tCO ₂ e / £m
Per employee	13062.12 tCO ₂ e	131	99.710 per person

8. Targets & Strategy

Bell and Bain 2026

Looking ahead to 2026, Bell and Bain aim to continue reducing its environmental impact through a set of clear and achievable targets. These include lowering overall emissions by improving energy efficiency across our operations, changing to a renewable electricity tariff and further reducing waste in the production process.

We look forward to working with our sustainable sourcing partners to lower the impact of our paper and key materials. Our management team will look for sustainable travel choices that can be implemented for employees, and the sales team will continue to support our targets with minimal air travel.

Along with trying to achieve being a “certified carbon balanced printer” with the World Land Trust, 2026 looks to be a year of massive progress within our Net Zero Targets. The above will also form a strong basis for our next planned steps of SBTi alignment.

Net Zero Target - 2040

Reduce scope 1 by 5% by 2030

Reduce scope 2 by 5% by 2030

Reduce scope 3 by 20% by 2030

Introducing - cycle to work 2026-27

Add more electric to fleet - 2027

Improve efficiency to reduce waste/print time 5% - 2026

9. Actions Taken this Year 2026

Bell and Bain 2026

Have already agreed the switch to renewable tariffs.

Introduced supplier sustainability criteria

Optimising production to reduce reworks/overruns – aiming for target of 5%

10. Data Quality & Improvements

Bell and Bain have taken a structured approach to ensure the accuracy and reliability of its emissions data. Emissions calculations have been based on the UK Government (DEFRA) emissions factors, providing a consistent and recognised methodology. Data for Scope 1 and Scope 2 emissions is considered high confidence, as it is drawn directly from company records including electricity, gas and water bills.

For Scope 3 emissions, a combination of internal data, supplier informed estimates have been used. Bell and Bain have undertaken supplier surveys to gather more specific data on materials such as paper, inks and plates; helping to improve the accuracy of emissions associated with purchased goods. Staff travel surveys have also been carried out to capture detailed employee commuting patterns. A third-party report was reviewed as a benchmark reference; however, as this was largely estimate-based, the company has prioritised its own and supplier-provided data to ensure greater accuracy. Scope 3 data is therefore assessed as medium to high confidence, with ongoing opportunities for refinement.

Planned Improvements

Moving forward, Bell and Bain will continue to strengthen its data collection processes, expand supplier engagement and improve data tracking systems. These steps will further enhance the quality, completeness and transparency of emissions reporting in future years.

11. Risks and Opportunities

Category	Description	Impact
RISK	Rising Energy Costs	High
RISK	Increasing regulatory and reporting requirements	Medium

RISK	Environmental impact and availability of paper from higher-carbon and non-sustainable sources	High
RISK	Growing customer expectations for low-carbon and sustainable printing solutions	High
Opportunity	Improving energy efficiency	High
Opportunity	Strengthening relationships with low-carbon suppliers and partners	Medium
Opportunity	Reducing waste	High

12. 2024/2025 Continual Improvement

During 2024 – 2025, Bell and Bain have continued to make steady progress on reducing its environmental impact, achieving a 2% reduction in the CO₂e emissions across the business. This reflects ongoing efforts to work more efficiently, from improving our energy use to making small but meaningful changes in everyday operations. While it may seem like a modest step, it shows a consistent and positive direction. The Bell & Bain team will stay focused on achieving our long-term sustainability goals.

Year	Emissions	Tonnes Books Produced	Mt CO ₂ e / mt books produced	Kg CO ₂ e / kg books produced	Variance
2024	11425	5210	2.19	2192.86	-
2025	13062	6075	2.15	2150.14	-2%



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