Bensons Panels

External Carbon Footprint Report

Financial Year End March 2023

WORKING IN PARTNERSHIP WITH BEYONDLY

November 2024

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Total Emissions Summary

For April 2022 - March 2023 total emissions across all scopes and categories for Bensons Panels were 113,607 tCO2e. Scope 1 emissions, also known as direct emissions, are emitted directly from operations (as opposed to supply chain). Scope 1 emissions accounted for 56 tCO2e (0.05% of total emissions). Scope 2 emissions, or electricity consumption and the company plug in hybrids accounted for 10 tCO2e (0.01% of total emissions). Our reporting includes all relevant Scope 3 categories. Scope 3 emissions are associated with indirect emissions in the supply chain. Scope 3 emissions across these categories accounted for 113,541 tCO2e (99.94% of total emissions).

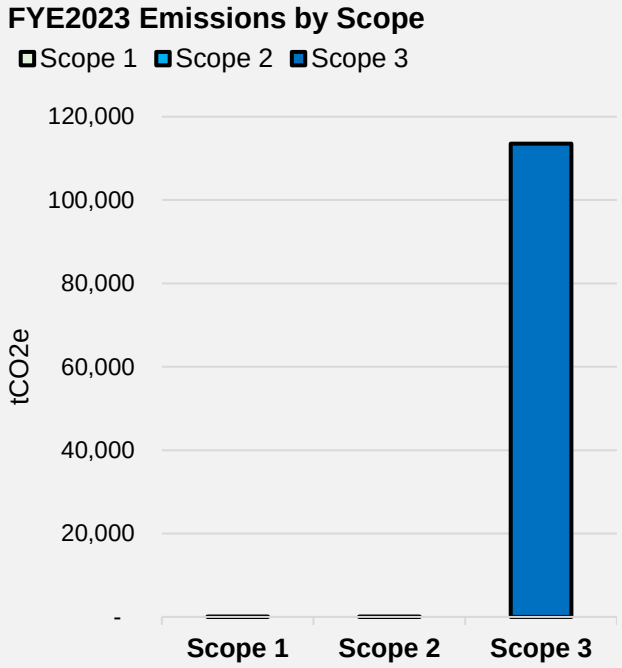


Figure 1 - Emissions by Scope

Emissions (tCO2e) by activity	Scope	Total
Electricity (purchased electricity)	2	9.6
Natural Gas	1	28.3
CNG	1	0.2
Company Cars	1	0.9
Electricity for EVs/Plug-in hybrid company vehicles	2	0.2
HGV's and vans	1	26.6
Category 1: Purchased Goods and Services	3	508.5
Category 2: Capital Goods	3	16.3
Category 3: Fuel and Energy related activities	3	15.0
Category 4: Upstream Transportation and Distribution	3	19.2
Category 5: Waste Generated in Operations	3	0.7
Category 6: Business Travel	3	1.8
Category 7: Employee Commuting	3	29.1
Category 11: Use of Sold Products	3	112,949.7
Category 12: End-of-life Treatment of Sold Products	3	1.0
Total Gross Carbon Emissions (tCO2e)		**113,607**
Total Gross Carbon Emissions Scope 1 (tCO2e)		**56**
Total Gross Carbon Emissions Scope 2 (tCO2e) Location Based		**10**
Total Gross Carbon Emissions Scope 2 (tCO2e) Market Based		**10**
Total Gross Carbon Emissions Scope 3 (tCO2e)		**113,541**
Intensity Metric CO2 to £m turnover (tCO2e)		**34,759**
Intensity Metric CO2 to FTE (tCO2e)		**2,642**
Total annual net emissions (tCO2e)		**113,607**

Scope 1 and 2 Emissions

Total Gross Scope 1 and Scope 2 GHG Emissions (tCO2e)

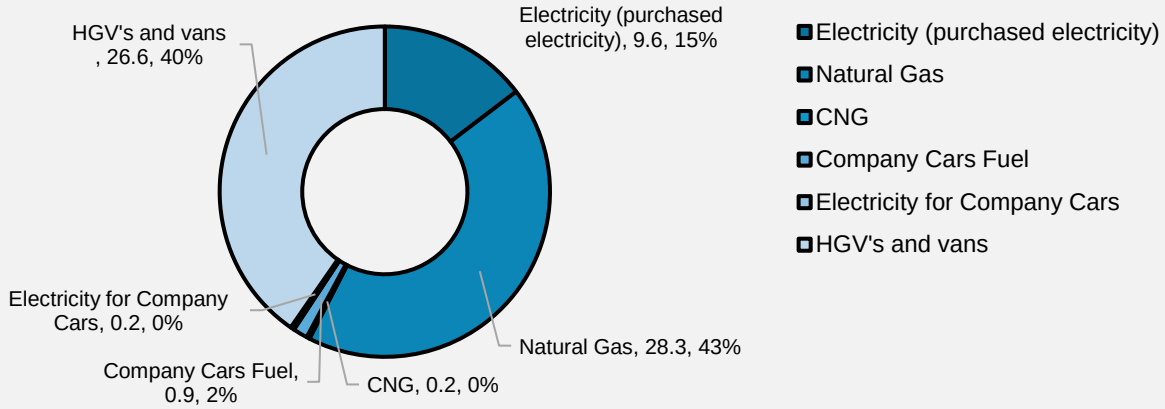


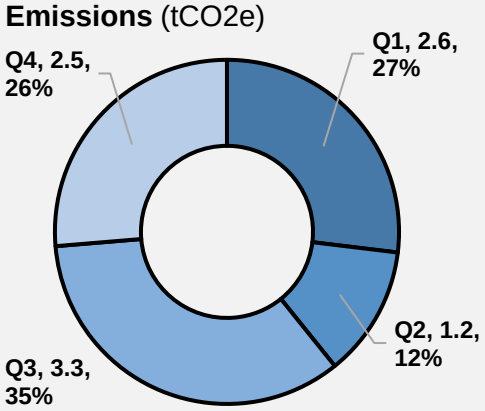
Figure 1 Total Gross Scope 1 and Scope 2 GHG Emissions tCO2e

While scope 1 & 2 emissions only accounted for 0.06% of the total emissions recorded within this FYE23, they are still important to examine as they are the emissions that Bensons Panels have the most control over.

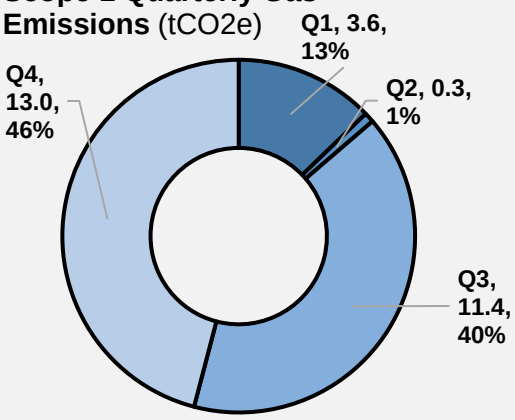
The 3 major sources of emissions are:

- **HGVs and Vans** - Transporting finished products to customers; 40% - 26.6 tCO2e
- **Natural Gas** – Heating of the Normanton site; 43% - 28.3 tCO2e
- **Electricity** – Lighting, powering machinery and other general uses; 15% - 9.6 tCO2e

Scope 2 Quarterly Electricity Emissions (tCO2e)



Scope 1 Quarterly Gas Emissions (tCO2e)



Scope 1 Natural Gas

Gas consumption at the site follows a seasonal pattern, with combined 86% (133,647 kWh) of total usage occurring in Q3 and Q4 (October to March). Warmer months in Q1 and Q2 demonstrate effective heating controls, with natural gas heating used only when necessary.

Scope 2 Electricity

Electricity consumption at the Normanton site follows a consistent pattern with some seasonal variation. Brighter months in Q1 and Q2 see lower usage compared to the darker winter months, during which 60% of total electricity is consumed. A spike in October is attributed to an invoice that includes most of September.

Scope 3 Emissions

Scope 3 Emissions are those which are a consequence of our activity, but which occur at sources which we do not own or control. Scope 3 is split into 15 categories. As with many organisations, we have a complex supply chain and measuring our scope 3 emissions will involve continuous improvement. Here we present baselines in all relevant categories.

A breakdown of the significant scope 3 emissions by category for Bensons Panels is outlined below. Scope 3 emissions are dominated by two categories, use of sold products which accounts for over 112,950 tCO2e (99.5% of total emissions) and purchased goods and services which accounts for 508.5 tCO2e (0.4% of total emissions). The 7 remaining relevant Scope 3 categories only account for a further 0.1% of Scope 3 emissions. Emissions from use of sold products has been estimated based on power demand and estimated lifetimes of products, and associated emissions conversion factors for electricity consumption, whilst purchased goods and services has been estimated based on spend data by industry type (SIC codes) and associated emissions conversion factors. We will endeavour to increase the accuracy of scope 3 categories over time.

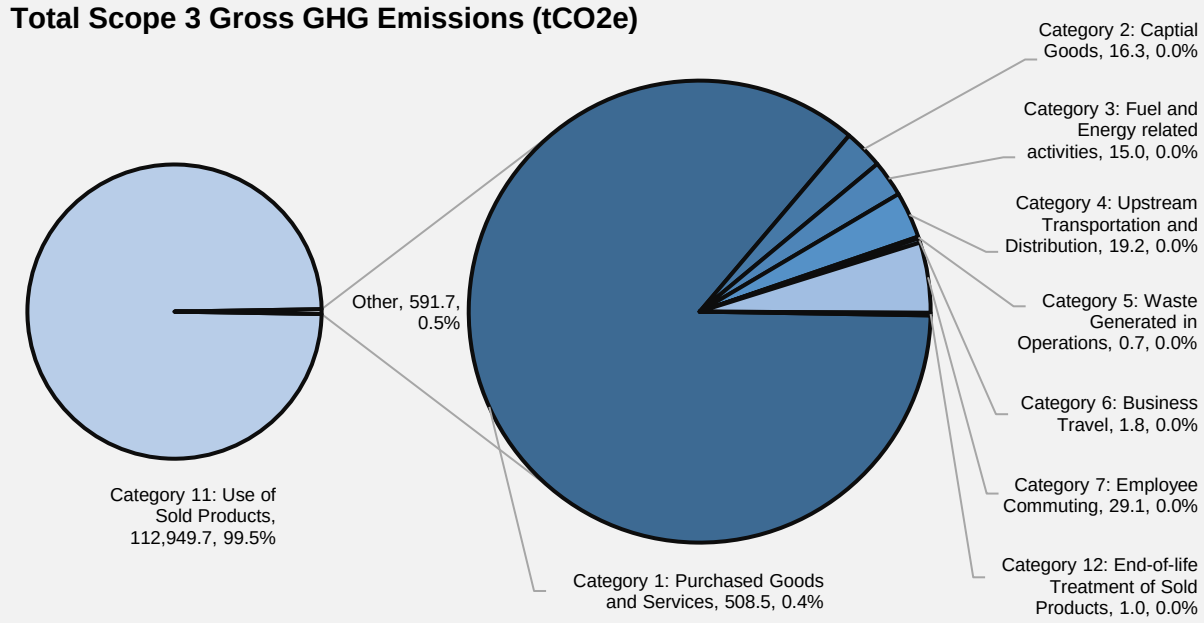


Figure 2 Total Scope 3 Emissions tCO2e

Use of Sold Products

Emissions associated with the use phase of the control panels manufactured and sold by Bensons in FYE23 account for 99.5% of the total GHG emissions calculated within this report. This amounts to 112,950 tCO2e.

This is not unexpected due to the control panels being assumed to be operational 24hrs / 5 days per week with a 10-year life expectancy. The control panels which Bensons manufacture are generally integral to the operation of customers systems, hence the high level of operational hours.

To calculate the emissions figure, the electrical power consumed by each control panel was estimated. This estimate was made by using the size of each control panel's incoming isolator

as a proxy for the current drawn by the control panel, since the supply voltage to each control panel is known, then an estimate for power consumed can be made. Current estimates are based on the UK grid fuel mix for electricity generation in 2023. In the future we aim to secure more accurate data regarding the type of energy our customers consume to facilitate the use of our products, this will allow us to consider customer sites which may rely heavily on renewable energy or be on a clean energy tariff.

An analysis of the power consumption of the control panels sold in FYE23 over 10 years (584,081,729 kWh) was made, based on the size of the incoming power supply. This highlighted that many of the control panels manufactured by Bensons have relatively lower power consumption.

Table 1 - Highest Power Consuming Control Panel Sizes

Incoming Current	Panels Produced	kWh	Energy Use in 1yr (kWh)*
Less than 25A	550	8	26,028,598
Between 25A and 32A	35	10	2,120,148
Between 32A and 40A	32	13	2,423,026
Between 40A and 63A	27	20	3,219,974
			33,791,746

Table 2 - Highest Energy Consuming Control Panels

Incoming Current	Panels Produced	kWh	Energy Use in 1yr (kWh)*
315A	4	101	2,385,166
500A	1	160	946,494
600A	3	192	3,407,380
630A	2	202	2,385,166
800A	1	256	1,514,391
			10,638,597

**Scaled for revenue*

Purchased goods and services

Despite only accounting for 0.4% of the total emissions, purchased goods and services in FYE23 resulted in 508.5 tCO2e. The largest spend does not always correlate with the largest associated emissions, for example - Wholesale trade services which is a wide category covering 30% spend, while only covering 3% of associated emissions. In the context of Bensons Panels, Wholesale trade services covers the goods that we purchase from wholesale suppliers, such as wire, trunking and day to day consumable parts, as well as certain switchgear components.

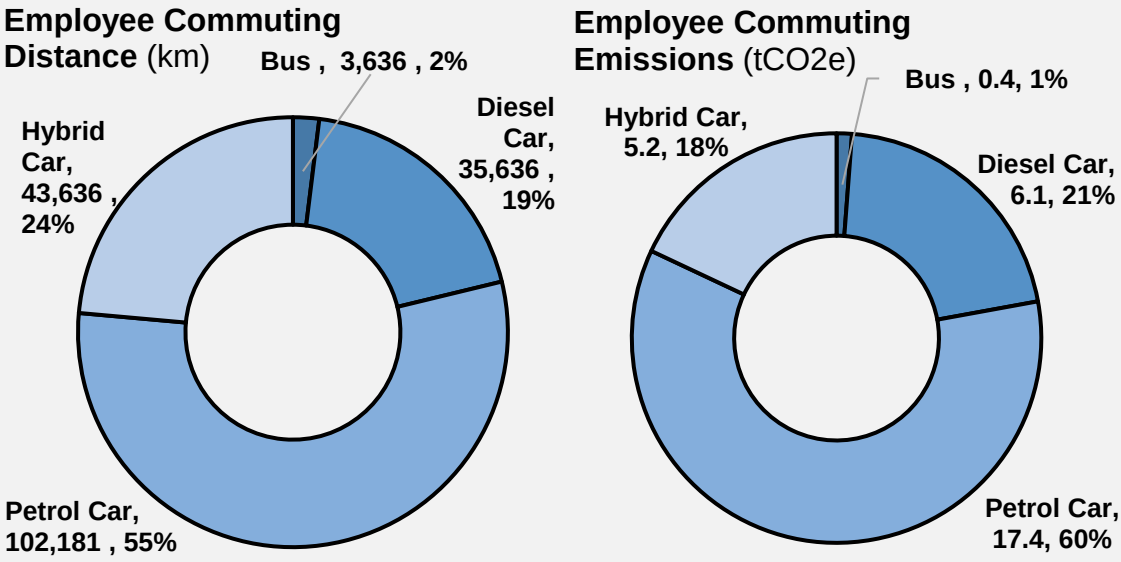
The spend category associated with the most emissions was fabricated metal products at 40% (203 tCO2e), this is primarily the metal enclosures used in the control panels that Bensons Panels builds. This is also the second largest spend category for Bensons. The second largest category for emissions was computer and electronic products at 22% (112 tCO2e) which covers 14% of spend. This is primarily the switchgear and components that Bensons uses in the manufacture of our control panels. Other manufactured goods represent a further 12% of emissions (61 tCO2e), whilst covering 5% of total costs.

Table 3 - Goods & Services SIC Categories with 10+ tCO2e

Industry Group	Emissions (tCO2e)	Percentage Emissions
Fabricated metal products	203.1	40%
Computer and electronic products	112.3	22%
Other manufactured goods	60.8	12%
Trade/ Repair services of motor vehicles	18.8	4%
Rental and leasing services	15.5	3%
Services of head offices	15.2	3%
Wholesale trade services	13.3	3%
Insurance, pension funding	12.4	2%
Electrical equipment	10.7	2%

Employee Commuting

Employee commuting is the third largest contributor to overall emissions, producing 19 tCO2e in FYE23 although at a low percentage still only accounting for 0.03% of the total GHG emissions across all scopes.



The majority of distance commuted, and captured within the survey, was completed within cars at 98%. All commuting completed within a car was assumed to be single occupancy, implementing a car sharing scheme and recording usage is expected to reduce reliance on single occupancy commutes and therefore reduce emissions. Commuting by public transport only accounted for 2% of all commute distance and represented an even lower number of emissions at 1% (0.4 tCO2e).

Disclaimer

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Appendix

1. Scope of Report

Company Name	Bensons Panels
Chosen Consolidation Approach	Operational Control
Subsidiaries included	No
Reporting Year	1st April 2022 – 31st March 2023
A list of scope 3 activities included in the report	Category 1: Purchased Goods & Services Category 2: Capital Goods Category 3: Fuel and Energy Related Activities Category 4: Upstream Transportation & Distribution Category 5: Waste Generated in Operations Category 6: Business Travel Category 7: Employee Commuting Category 11: Use of sold products Category 12: End-of-Life treatment of sold products
A list of scope 1, scope 2, and scope 3 activities excluded from the report with justification for their exclusion	The following categories are not applicable: Category 8: Upstream Leased Assets Category 9: Downstream Transportation & Distribution Category 10: Processing of sold products Category 13: Downstream leased assets Category 14: Franchises Category 15: Investments
The year chosen as base year and rationale for choosing the base year	April 2022-March 2023. This was the first year Benson Control Panels calculated a full scope 1, 2 and 3 Carbon Footprint Assessment.
Base Year recalculation method	We will adjust our base year emissions to account for significant changes (e.g. acquisitions, methodology changes, discovery of errors) which drives a change in emissions of greater than 5%
Emissions Intensity Metric	tCO2e per £m Turnover (£3.27m) and FTE (43)
Renewable Generation	NA
Green Energy	NA

2. Methodology

Scope / Category	Data Sources & Estimates	Calculation Method	Data Quality
Scope 1	Natural Gas use at the Normanton site based on actual data from invoices. Consumption of fuel for company vehicles was based on business mileage split per vehicle including fuel type.	UK Government (DESNZ) GHG Conversion Factors 2022.	Good
Scope 2	Electricity consumption is calculated based on monthly consumptions provided through supplier invoices and billing	UK Government (DESNZ) GHG Conversion Factors 2022.	Good
Category 1: Purchased Goods and Services	Spend Data split by supplier and industry type A cumulative 93% of spend was used to cover the majority of purchases	DEFRA SIC Code emissions factors for different industries.	Poor
Category 2: Capital Goods	Capex spend data split by supplier and industry type	DEFRA SIC Code emissions factors for different industries	Poor
Category 3: Fuel and Energy related activities	Fuel and energy consumption data as outlined in scope 1 and 2 table above.	DESNZ Conversion factors for 2022.	Good
Category 4: Upstream Transportation and Distribution	Weight and approximate distance used (Germany) for Switchgear Enclosures utilised weights and accurate distances from manufacturer Spend Data was used for courier services	DESNZ Conversion factors for 2022 where distance and transport type known, SIC Codes used Otherwise	Fair

Category 5: Waste generated in operations	Amount of waste produced per waste stream and the method of disposal. Water spend was based on FYE24 – used as proxy, assuming a similar spend in FYE23. Water spend was based on FYE24 – used as proxy.	DESNZ Conversion factors for 2022	Good
Category 6: Business Travel	Distance and transport mode data from travel provider: MJB Business travel management Secondary data provided for Hotels	DESNZ Conversion factors for 2022.	Good
Category 7: Employee commuting	Activity data (primary data): Survey of employees to ascertain distances and transport modes. Accounts for annual leave. FYE24 sales used then scaled by turnover to represent FYE23 Assumption that all control panels sold are used 24hrs per day, 5 Days a week	Emissions factors were obtained from the DESNZ 2022 published conversion factors for company reporting	Good
Category 11: Use of Sold Products	Detailed data provided on power demand for 12 core product lines, along with lifetime, and number of units sold.	Emissions factors were obtained from the DESNZ 2022 published conversion factors for company reporting for UK Sales.	Good
Category 12: End-of-life Treatment of Sold Products	Product and packaging weight and material types provided from UK quantity sold in Aug 23-Jul 24, and then scaled using the revenue figure change. UK Disposal factors used for all products. Assumes 100% incinerated or recycled. Weight of packaging estimated at 1% of total panel weight	Emissions factors were obtained from the DESNZ 2022 published conversion factors	Fair