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**THAT
LEEDS
MAG**

Corporate Greenhouse Gas Inventory

Readydebygo Ltd

30.08.2023

Executive Summary & Introduction

Climate change is affecting the entire world, causing extreme weather events and rapidly changing climate conditions. It is our role as a global society to limit global warming to 1.5 °C and achieve net-zero carbon emissions by 2050 at the latest.

Conducting a carbon footprint is the key first step in saving the planet. It is necessary to determine the extent of the emissions produced, establish reduction goals and measure progress against them.

Readydebygo Ltd has acknowledged their role and the need to act, to understand where their emissions sources and what actions can be taken to reduce them.

This report provides a comprehensive account of Readydebygo Ltd carbon footprint arising from its operations covering the 2022 calendar year. This carbon footprint has been calculated in line with the Greenhouse Gas (GHG) Protocol covering Scope 1, 2 and 3 emissions.

The total carbon footprint for Readydebygo Ltd for the 2022 calendar year was 22.86 tonnes CO₂e. The majority of these emissions were associated with the paper purchased and the printing services for That Leeds Mag. The emissions broken down by Scope were as follows:

Scope 1: 0.32 tonnes CO₂e
Scope 2: 0.68 tonnes CO₂e
Scope 3: 21.86 tonnes CO₂e

Taking into account the carbon neutral paper supplier, the residual emissions for the 2022 calendar year for Readydebygo Ltd were 10.06 tonnes CO₂e. Inclusive of a 5% buffer to account for any uncertainty around data or emissions factor quality, total emissions were **10.56 tonnes CO₂e.**

This is an increase of 695.37% compared to the 2021 carbon footprint measurement. Emissions have increased due to an increase in spend provided by Readydebygo Ltd.

By undertaking this exercise, MyCarbon have highlighted the key areas in which Readydebygo Ltd can focus on to reduce emissions. These include recording engagement with suppliers to understand the LCA's of their products and considering transitioning to lower carbon paper and printing alternatives.

Formal Notes

Client: Readydebygo Ltd.

Date: 30th August 2023

Reporting Period: From 1st January 2022 to 1st January 2023

The accuracy of this GHG assessment is directly related to the quality of the data provided by the client.

Primary data representative of activities occurred during the reporting period is used where available. In certain circumstances, secondary data in the form of estimates, extrapolations and/or industry averages is used where primary data is not available.

Assessments based largely on secondary data should only be viewed as an estimate of GHG emissions impact, and actual emissions may vary significantly. It is expected that all clients should aim to improve the proportion of primary data over time.

A Greenhouse Gas inventory produced by MyCarbon, an inventory service provided by Carbon Green Ltd.

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If Readydebygo Ltd is satisfied with the above information and the data provided is representative of authentic client activities within the reporting period of the XXX financial year, please sign below:

Client Representative Name: Email:

Job title: Phone number:

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1. Introduction

This is a greenhouse gas (GHG) inventory report for Readydebygo Ltd for the 2022 calendar year, produced by MyCarbon.

Readydebygo Ltd. is a single person business specializing in graphic design and magazine publishing. Readydebygo Ltd. is responsible for the creation and distribution of That Leeds Mag, an advertisement magazine for the city of Leeds, UK.

To maximise their environmental impact, Readydebygo Ltd is continuing to undertake the process of calculating their corporate carbon footprint. This process will help Readydebygo Ltd identify the extent of the emissions produced across their entire business, benchmark their sustainability progress and, importantly, allow them to create reduction goals.

This report follows the five main reporting principals as outlined by ISO 14064-1:

- **Transparency:** Address all relevant issues in a factual and coherent manner, based on a clear audit trail. Disclose any relevant assumptions and make appropriate references to the accounting and calculation methodologies and data sources used.
- **Relevance:** Ensure the GHG inventory appropriately reflects the GHG emissions of the company and serves the decision-making needs of users – both internal and external to the company.
- **Accuracy:** Ensure that the quantification of GHG emissions is systematically neither over nor under actual emissions, as far as can be judged, and that uncertainties are reduced as far as practicable. Achieve sufficient accuracy to enable users to make decisions with reasonable assurance as to the integrity of the reported information.
- **Consistency:** Use consistent methodologies to allow for meaningful comparisons of emissions over time. Transparently document any changes to the data, inventory boundary, methods, or any other relevant factors in the time series.
- **Completeness:** Account for and report on all GHG emission sources and activities within the chosen inventory boundary. Disclose and justify any specific exclusions.

Readydebygo Ltd has compiled a GHG inventory report for the 2022 calendar year to better understand their emissions and carbon footprint.

This report presents the findings of this exercise. The report follows the ISO 14064-1 standard entitled *Specification with Guidance at the Organisation Level for Quantification and Reporting of Greenhouse Gas Emissions and Removals*. The report will be made publicly available thatleedsmag.co.uk.

2. Context

2.1 What is the importance of measuring greenhouse gases (GHGs)?

GHG emissions are contributing to global warming and climate change, which have been recognised as a key sustainable development issue. Many governments through local and international efforts are taking steps to reduce GHG emissions through national policies that include the introduction of emissions trading programs, voluntary programs, carbon or energy taxes, and regulations and standards on energy efficiency and emissions. As a result, companies must be able to understand and manage their GHG risks if they are to ensure long-term success in a competitive business environment, and to be prepared for future national or regional climate policies.

Quantification of GHGs emitted by a business or organisation's activities in the form of a carbon footprint is an important tool used by stakeholders to recognise their impact and take action, often through offsetting activities.

Offsetting is a particular method employed to reduce, remove, or prevent the release of GHG emissions into the atmosphere, which can be done through the purchase and retirement of carbon credits. Due to the tight control on carbon credits, retirement of a credit is the only method one can do to offset their carbon footprint. For example, if a business produced 100 tonnes of CO₂, they would need to purchase and retire 100 carbon credits to become carbon neutral.

2.2 Reporting standards

When performing a GHG inventory, these assessments should align with one of two recognised standards for accounting and reporting corporate GHG emissions. The most well-known is 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). The International Organization for Standardization (ISO) also produced the ISO 14064 specification series, detailing specification and guidance for the organisation and project levels, as well as for the validation and verification of emissions.

Data supplied by clients is used in GHG assessments, which is quantified into GHG emission estimates by applying relevant and up-to-date emission factor(s) from reputable sources, like DEFRA. An emission factor is a representative value that attempts to relate the quantity of a pollutant released to the atmosphere with an activity associated with the release of that pollutant. Quality and accuracy of emission factors can vary between government publications and scientific research journals, therefore it is best practice to apply emission factors only from reputable sources, such as DEFRA.

GHG assessments quantify all six Kyoto Protocol GHGs, where applicable, and are measured in terms of tonnes carbon dioxide (CO₂) equivalence, or tCO₂e, where equivalence means having the same warming effect as CO₂ over a period of 100 years. The six Kyoto Protocol gases are CO₂, methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), sulphur hexafluoride (SF₆) and perfluorocarbons (PFCs). The global warming potential (GWP) of each GHG is listed in Table 1.

Table 1: GHGs listed in the Kyoto Protocol and their Global Warming Potential (GWP)

Greenhouse Gas	Chemical Formula	GWP (CO ₂ e)
Carbon dioxide	CO ₂	1
Methane	CH ₄	25
Nitrous oxide	N ₂ O	298
Hydro fluorocarbons	HFCs	Depends on gas
Sulphur hexafluoride	SF ₆	22,800
Perfluorinated compounds	PFCs	Depends on gas

2.3 Emissions Scopes

Emission sources can be broken down into three distinct categories called Scopes.

2.3.1 Scope 1

Scope 1 accounts for the direct GHG emissions occurring from sources that are owned or controlled by the company, for example, emissions from combustion in owned or controlled boilers, furnaces, vehicles, etc.: emissions from chemical production in owned or controlled process equipment.

2.3.2 Scope 2

Scope 2 accounts for GHG emissions from the generation of purchased electricity, heat or steam consumed by the company. Purchased electricity, heat or steam is defined as electricity, heat or steam that is purchased or otherwise brought into the organizational boundary of the company. Scope 2 emissions physically occur at the facility where electricity, heat or steam is generated.

2.3.3 Scope 3

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 activities of the company but occur from sources not owned or controlled by the company. Some examples of scope 3 activities are extraction and production of purchased materials, transportation of purchased fuels and use of sold products and services.

The GHG Protocol describes the quantification of Scope 1 and 2 as mandatory, whereas Scope 3 emissions are considered optional. Depending on the nature/remit of an organisation, Scope 3 activities can contribute a significant proportion of overall emissions, and therefore to gain a proper understanding of an organisation's GHG emissions it is advisable to include all relevant sources.

3 Methodology

3.1 Emission Factors

The methodologies used to collect and assess the emissions data varied throughout the inventory. The primary methodology used was multiplying GHG activity data by appropriate GHG emission factors. All methodologies were selected based on their ability to provide accurate and consistent results. The use of activity data and emission factors was feasible due to the availability of both accurate activity data and emission factors from reputable organisations.

MyCarbon uses the latest figures from DEFRA and peer reviewed literature for all common emission factors listed in Table 2. We have adhered to DEFRA's guidance for Readydebygo Ltd's 2022 calendar year.

3.1.1 Calculating and Accounting for Inflation

Where spend-based emissions conversion factors were not available for 2022, the most recent emissions factors were used. The inflation rate for UK-based emissions factors was calculated using the Consumer Price Indexes from the Office for National Statistics for 2020 and 2022. The rate of inflation between these years has been determined to be 11.95%. Based on this inflation increase, the BEIS spend-based emission factors from 2020 have been adjusted accordingly. [1]

3.1.2 Calculating End-of-Life Treatment of Sold Products

The End-of-Life Treatment of Sold Products has been calculated using the average weight of a 28-page magazine (87.16g – Cambrian Printers [2]), assuming that the magazine will be recycled.

Table 2: Emission factors used in this assessment.

Category	Emission Factor
Supermini, Diesel	0.21 kg CO ₂ e / mile (DEFRA, 2022)
Supermini, Diesel, WTT	0.05 kg CO ₂ e / mile (DEFRA, 2022)
Natural gas	0.18 kg CO ₂ e / kWh (DEFRA, 2022)
Natural gas, WTT	0.06 kg CO ₂ e / kWh (DEFRA, 2022)
Electricity generation	0.19 kg CO ₂ e / kWh (DEFRA, 2022)
Electricity generation, WTT	0.05 kg CO ₂ e / kWh (DEFRA, 2022)
Electricity transmission & distribution	0.00 kg CO ₂ e / kWh (DEFRA, 2022)
Average van	0.58 kg CO ₂ e / tonne.km (DEFRA, 2022)
Average van, WTT	0.15 kg CO ₂ e / tonne.km (DEFRA, 2022)
Coach	0.03 kg CO ₂ e / passenger.km (DEFRA, 2022)
Coach, WTT	0.01 kg CO ₂ e / passenger.km (DEFRA, 2022)

Waste disposal: paper	21.28 kg CO ₂ e / tonne (DEFRA, 2022)
Electrical items – IT	24,865.48 kg CO ₂ e / tonne (DEFRA, 2022)
Web hosting	0.12 kg CO ₂ e / £ (BEIS, 2020)
Printing	0.34 kg CO ₂ e / £ (BEIS, 2020)
Paper	919.40 kg CO ₂ e / tonne (DEFRA, 2022)

3.2 Organisational Boundaries

The GHG Protocol Corporate Standard outlines two approaches for consolidating GHG data, the equity share approach and the control approach, through organizational boundaries. These are boundaries that determine the operations owned or controlled by the reporting company, depending on the consolidation approach taken. In some cases, it may be possible to apply these approaches directly to emissions/removals associated with sequestered atmospheric carbon.

The GHG inventory report covers all Scope 1, 2 and 3 emissions for Readydebygo Ltd. Details of the site included within the organisational boundary of this report are detailed below:

[THAT LEEDS MAG | A Local North Leeds Magazine](#)

Readydebygo Ltd has compiled a GHG inventory report for the 2022 calendar year to better understand their emissions and carbon footprint. The corporate organisational boundaries for the inventory were defined according to the requirements of **clause 4.1 of the ISO 14064-1 standard**. The control approach was used for the consolidation of corporate GHG emissions.

3.3 Identified Emissions and Exclusions

The following emissions were determined to be relevant within the organizational boundaries:

- Natural gas consumption at home
- Company vehicle mileage (supermini / diesel)
- Electricity consumption at home
- Transport & Distribution of That Leeds Mag
- Paper purchased for That Leeds Mag
- Print services purchased for That Leeds Mag
- Electrical product purchased
- Business travel (coach)

Excluded Emissions

All identified Scope 1, 2 & 3 emissions have been included within this report as listed above. No scope 1, 2 or 3 emissions have been excluded.

Please see the Appendix where all purchased goods and services have been broken down and categorized with their relative emissions factor.



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Findings & Analysis

4 Scope 1, 2 & 3 Emissions

4.1. Scope 1

Table 3: Scope 1 Emissions

Emission Source	Consumption	Unit	Emissions (tCO ₂ e)
Company vehicles	300.00	miles	0.06
Stationary combustion	1392.00	kWh	0.26
Total			0.32

Total Scope 1 emissions for Readydebygo Ltd. equalled 0.32 tonnes CO₂e. The combustion of natural gas within the home office accounts for 80% of total Scope 1 emissions with the remaining 20% produced from vehicle mileage. The total emissions for mileage are 0.06 tonnes CO₂e and natural gas are 0.26 tonnes CO₂e.

4.2 Scope 2

Table 4: Scope 2 Emissions

Emission Source	Consumption	Unit	Emissions (tCO ₂ e)
Electricity	3504.00	kWh	0.68
Total			0.68

Purchased electricity was the only source of Scope 2 emissions for Readydebygo Ltd. within the 2022 calendar year. The total emissions equalled 0.68 tonnes CO₂e.

4.3 Scope 3

Table 5: Scope 3 Emissions

Emission Source	Emissions (tCO ₂ e)
Purchased Goods & Services	21.04
Capital Goods	0.02
Fuel & Energy Related Activities	0.37
Transportation & Distribution	0.14
Business travel	>0.01
End of life treatment of sold products	0.30
Total	21.86

Total Scope 3 emissions for Readydebygo Ltd. equaled 21.86 tonnes CO₂e. Purchased Goods & Services were responsible for 96.22% of Scope 3 emissions.

4.4 Emissions by Source

Table 6 lists the source of Scope 3 emissions produced by Readydebygo Ltd. The sources of these emissions are listed from highest to lowest: Purchased goods and services (92.02%), electricity consumption (2.96%), fuel and energy related activities (1.63%), stationary combustion (1.12%), company vehicles (0.28%), upstream transportation and distribution (0.62%), end of life treatment of sold products (0.30%), capital goods (0.07%), and business travel (0.01%).

Table 6: Scope 3 emissions by source.

Emissions Source	Emissions (tCO ₂ e)
Purchased goods and services	21.04
Electricity usage	0.68
Fuel and energy related activities	0.37
End of life treatment of sold products	0.30
Stationary combustion	0.26
Upstream transportation and distribution	0.14
Company vehicles	0.06
Capital goods	0.02
Business travel	>0.01

4.4.1 Purchased Goods and Services

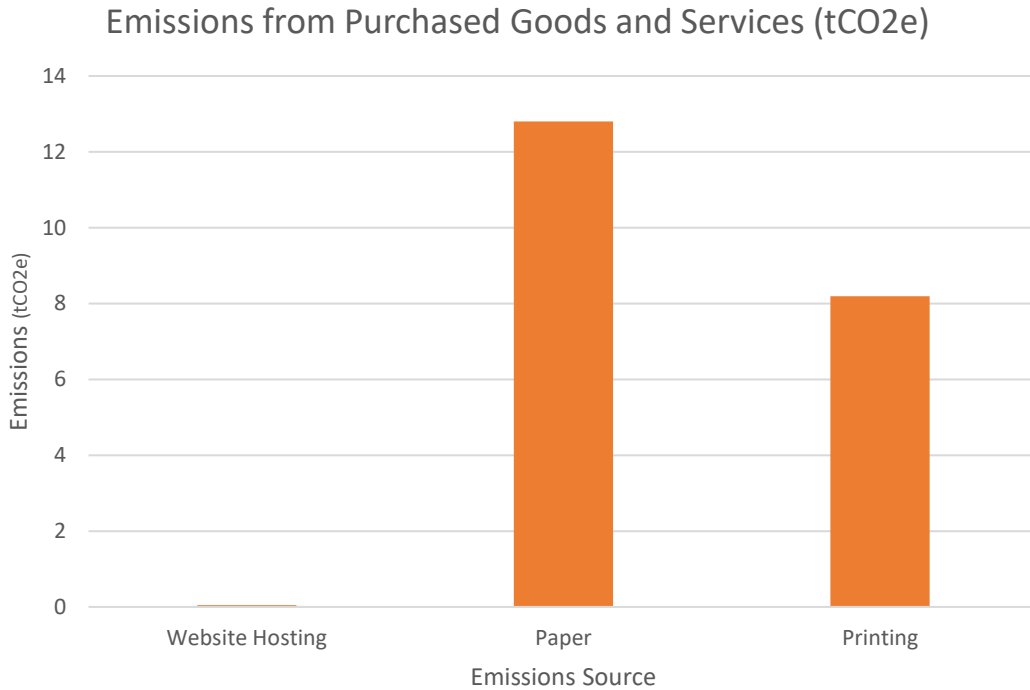


Figure 1 is a bar chart plotting the emissions produced by purchased goods and services. The materials with the highest emissions are paper which contributed 12.80 tonnes CO₂e (60.84%), followed by printing which accounted for 8.19 tonnes CO₂e (38.93%), and Website Hosting which was responsible for 0.05 tonnes CO₂e (0.23%).

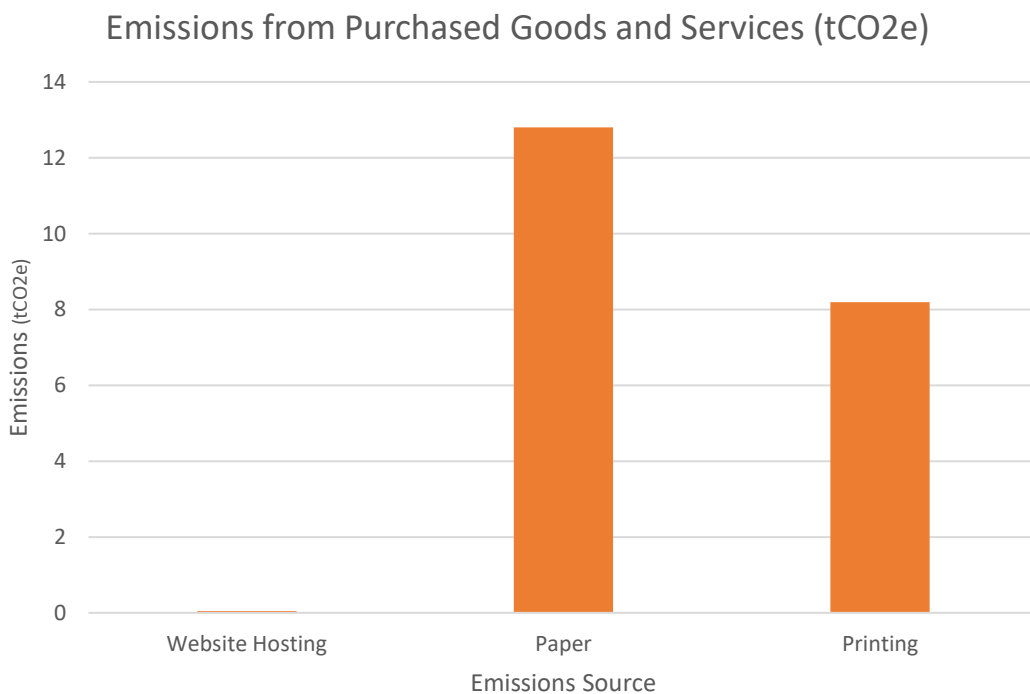


Figure 1: Emissions from purchased goods and services by category.

Carbon Neutral Suppliers:

Paper is sourced from Beyond Neutral Paper which is a verified carbon neutral company.

5 Emissions Summary

5.1 Emissions Summary

Emissions by Scope (tCO₂e)

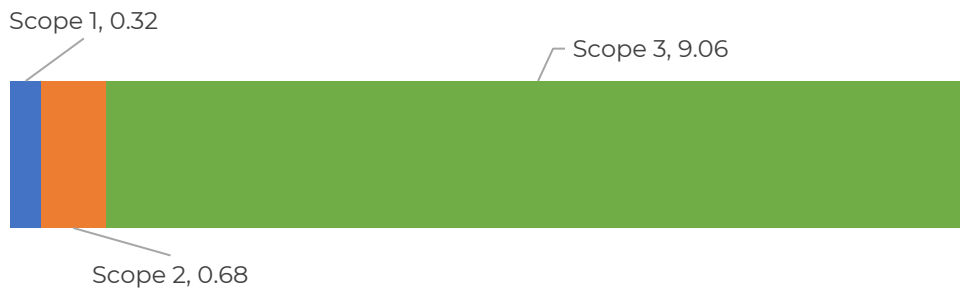


Figure 2: Readydebygo emissions by Scope.

The total Scope 1, 2 & 3 GHG emissions for Readydebygo Ltd for the 2022 calendar year, equalled 21.86 tonnes CO₂e. With a 5% buffer added as industry standard, the **total footprint equalled 24.00 tonnes CO₂e.**

Taking into account carbon neutral suppliers, emissions for the 2022 calendar year, equalled 10.56 tonnes CO₂e inclusive of a 5% buffer.

6 Emissions Progress

6.1 Annual Emissions Update

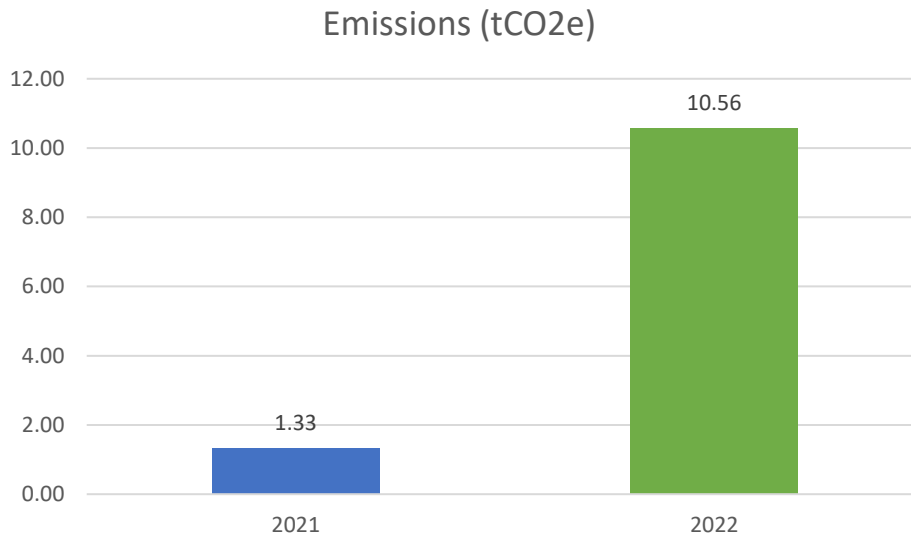


Figure 4: Readydebygo Ltd emissions for 2021 and 2022 inclusive of a 5% buffer. Emissions from carbon neutral supplies have been omitted from the totals.

Total emissions for Readydebygo Ltd. increased from 1.33 tonnes CO₂e in 2021 to 10.56 tonnes CO₂e in 2022.

The increase in emissions is attributed to changes in the scope and boundary of Readydebygo Ltd.'s work, as well as changes in activity by the company.

In 2022, the primary source of emissions for Readydebygo Ltd. was the paper procured for the production of That Leeds Mag. It's worth noting that the paper supplier, Fusion Paper, has taken steps to measure and offset their emissions, resulting in the exclusion of greenhouse gas emissions from paper in Readydebygo Ltd's 2021 report. While Fusion Paper is operating as a carbon-neutral entity, Readydebygo Ltd. should explore avenues for further emission reduction related to paper usage. One such approach could involve transitioning to lighter-weight paper or incorporating more recycled paper into their production processes.

A UK government spend-based emission factor was utilised to calculate emissions associated with printing, which was the second largest emission source for Readydebygo Ltd. in 2022.

To provide a comprehensive overview of Readydebygo Ltd.'s emissions, the boundary of the company's work now includes Fuel & Energy Related Activities and End of Life Treatment of sold products. This ensures that all emissions associated with Readydebygo Ltd. have been accounted for, and accounts for a minor part of the attributed emission increase.

7 Recommendations

7.1 Recommendations

Based on the findings of this report, several recommendations are proposed. Due to the increased procurement of paper and printing services (compared to 2021) these areas have been highlighted as key areas for emission reduction:

Paper suppliers:

1. Consider the use of lower weight paper to further contribute to emission reduction.
2. Engage with the paper supplier each year to obtain an updated emission factor to ensure accurate measurement and tracking of emissions.

Printing:

1. Readydebygo Ltd. should engage with their printing supplier to gain a better understanding of the carbon emissions associated with their printing processes. This information can help identify areas for improvement and guide efforts to reduce emissions in this aspect of their operations.

Renewable energy supplier:

1. Readydebygo Ltd. should consider transitioning to a renewable energy supplier for their electricity consumption in their home office.

References

- [1] DEFRA, "Greenhouse gas reporting: conversion factors 2022," 22 June 2022. [Online]. Available: [Greenhouse gas reporting: conversion factors 2022 - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2022) [Accessed 30 May 2023].
- [2] Weight Calculator - Cambrian Printers (cambrian-printers.co.uk) [Accessed 30 May 2023].
- [3] Department for Environment, Food and Rural Affairs. 2019. "Table 13" Indirect emissions from the supply chain. [online] Available at: [Table_13_2019.ods \(live.com\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/424442/2019-table-13-indirect-emissions-from-the-supply-chain-ods-live.com) [Accessed 30 May 2023].
- [4] BEIS. 2023. *UK and England's carbon footprint to 2020* [online] Available at: <https://www.gov.uk/government/statistics/uks-carbon-footprint>. [Accessed 07 June 2023].

Appendix

Appendix A- Emissions Factors and Products & Services

Table 7: Product categories and the emissions factors used.

Category	Emission factor	Products
Computer programming, consultancy and related services	0.12 kg CO ₂ e/£	Hosting
Paper and board: paper	919.40 kg CO ₂ e/tonne	Paper
Printing and recording services	0.34 kg CO ₂ e/£	Printing
Electrical items - it	24,865 kg CO ₂ e/tonne	Hard drive

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Carbon Offsetting

Certificate of Offset Status

MyCarbon has analysed the scope and emissions to be offset which are displayed in the certificate table below.

Table 8: Certification summary of offset status

Organisation:	Readydebygo Ltd			
Certification of Offset Status:	Approved			
Reporting Period:	01/01/2022 – 31/12/2022			
Scope	Emission Source Category	Required or Recommended	Coverage	tCO ₂
1	Direct emissions from operations that are owned or controlled by the reporting company			0.26
	Direct emissions from owned, leased or directly controlled mobile sources			0.06
2	Indirect emissions from the generation of purchased electricity, heat, steam or cooling			0.68
3	Business Travel			>0.01
	Transportation of goods			0.14
	Purchased goods & services			8.24
	Waste generated in operations			0.00
	Leased assets & capital goods			0.00
	End of life of purchased goods			0.30
	Employee commuting & home working			0.00
Offset total (tCO₂e)				10.56