

Rail Delivery Group



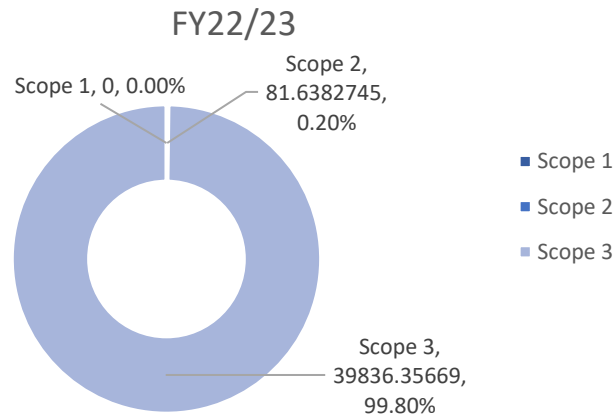
Rail Delivery Group Carbon Footprint Report 2022 – 2023

RDG's emissions on a page

Total emissions

In the financial year 2022 to 2023, RDG's total emissions were **39,918.0 tCO₂e**.

This is an **increase of 32%** from the previous year, which can be attributed to further recovery following the Covid-19 pandemic related reduction in rail services.



Almost all emissions fall into **Scope 3**.

Scope 3 emissions are all indirect emissions that occur in RDG's value chain, including both upstream and downstream emissions.

RDG's biggest contributor to Scope 3 is **Purchased Goods and Services**, accounting for **38,956.4 tCO₂e**

Comparison to FY 2021-2022

	tCO ₂ e	
	FY21/22	FY22/23
Scope 1		
Stationary combustion	-	-
Mobile combustion	-	-
Refrigerants	-	-
Scope 2		
Purchased heat	36.7	36.6
Purchased electricity	45.9	45.1
Scope 3		
Purchased goods and services	29,285.5	38,956.4
Capital goods	-	0.5
Fuel- and energy- related activities not included in S1 or S2	24.5	23.4
Upstream transportation and distribution	0.0	0.0
Waste generated in operations	0.3	0.5814
Business Travel	16.0	62.9
Employee commuting (& remote working)	396.2	232.0
Upstream leased assets	-	-
Downstream transportation and distribution	-	-
Processing of sold products	-	-
Use of sold products	-	-
End of life treatment of sold products	315.9	421.8
Downstream leased assets	-	-
Franchises	-	-
Investments	137.9	140.2

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1. Introduction

This report summarises the Rail Delivery Group's (RDG) carbon footprint for the financial year 2022-2023 (the 12-month period from 1st April 2022 – 31st March 2023).

The methodology, limitations and recommendations for improvement in subsequent years are also outlined, alongside comparison to the baseline year 2020-2021.

RDG's carbon footprint increased when compared to the baseline year, but this can be attributed to the change in service caused by the Covid-19 Pandemic.

The Climate Pledge

As part of RDG's efforts to reduce the impacts of its own operations, RDG joined the Climate Pledge on 21st April 2021. The Climate Pledge calls on companies to be net zero across their businesses by 2040, committing signatories to three principal areas of action:

1. **Regular reporting** - measure and report greenhouse gas emissions (GHG) on a regular basis across Scopes 1, 2 and 3. The Climate Pledge asks companies to refer to best practices within their industry, e.g. the Greenhouse Gas (GHG) Protocol, which is one of the Climate Pledge's recommended methods.
2. **Carbon elimination** - implement decarbonisation strategies in line with the Paris Agreement through real business changes and innovations, including efficiency improvements, renewable energy, materials reductions, and other carbon emission elimination strategies.
3. **Credible offsets** - neutralise any remaining emissions with additional, quantifiable, real, permanent, and socially-beneficial offsets to achieve net zero annual carbon emissions by 2040¹.

As part of the Climate Pledge, RDG commit to comprehensively reviewing and reporting of the organisation's greenhouse gas emissions, accounting for all emissions associated with RDG's operations, including those the organisation can control, Scopes 1 and 2, as well as emissions the organisation can influence, Scope 3.

This process was first completed in 20/21, setting a baseline for future greenhouse gas emissions to be measured against.

2. Methodology

The methodology used to calculate RDG's greenhouse gas emissions follows the World Resources Institute GHG Protocol - A Corporate Accounting and Reporting Standard, Revised Edition² ("the Protocol") and is guided by the Protocol's key principles of relevance, completeness, consistency, transparency and accuracy.

An operational control approach has been taken, meaning that the inventory covers emissions from all operations that are under the group's operational control. Emissions are reported in

¹ The Climate Pledge. *The Pledge*. Available: <https://www.theclimatepledge.com/us/en/the-pledge>.

² WRI GHG Protocol Corporate Standard. Available: <https://ghgprotocol.org/corporate-standard>.

line with the company's financial year, the baseline year being RDG's 2020/2021 financial year. UK Government emissions factors have been applied where available; electricity emission factors are location based.

To ensure full transparency, calculation methodologies, assumptions and any alternative emission factors have been disclosed within the 'RDG Carbon Inventory FY22_23'³ spreadsheet.

This approach is in line with the UK's Competition and Markets Authority (CMA) Green Claims Code⁴, which ensures green claims are truthful, accurate, clear and unambiguous, do not hide or omit important information, consider the full life cycle of a product or service and are substantiated.

3. RDG's Carbon footprint

Greenhouse gas emissions summary

A summary of RDG's GHG emissions for the 12-month period from 1st April 2022 - 31st March 2023 is shown in Table 1. Absolute emissions (total emissions) are summarised, as well as two intensity ratios. Intensity ratios provide a measure of greenhouse gas emissions in proportion to a measure of activity and are useful for annual comparison.

Summary table	
Absolute GHG emissions breakdown (tCO ₂ e) per financial year	
Scope	FY22/23
Scope 1	0.0
Scope 2	81.6
Scope 3	39,836.4
Total (Scope 1 and 2)	81.6
Total (Scopes 1, 2, and 3)	39,918.0
% change (year-on-year)	32%
GHG emission intensity (tCO ₂ e) per financial year	
Budget (£)	£65,662,000
Carbon intensity (tCO₂e per £ million budget)	607.9
% change	39%
Average FTEs	309.0
Carbon intensity (tCO₂e per FTE)	129.2
% change (year-on-year)	55%

Table 1: RDG GHG emissions summary (FY22/23).

³ Available on request.

⁴ HM Government, 2021. *Green Claims Code*. Available: <https://greenclaims.campaign.gov.uk/>.

RDG's impact

As illustrated in Figure 1, near 100% of RDG's GHG emissions fall within Scope 3. The remaining 0.20% of emissions are Scope 2 emissions from electricity and heat supplied through RDG's landlord.

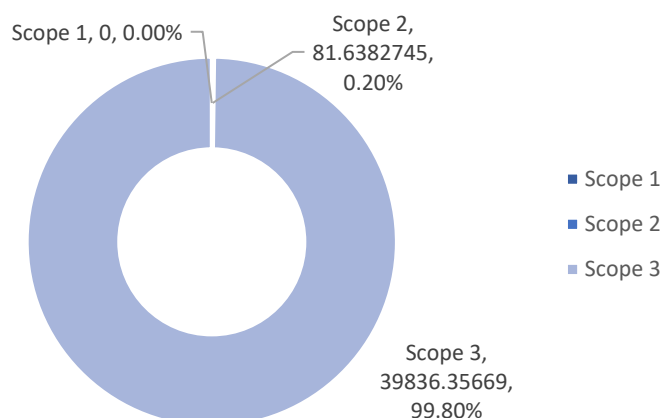


Figure 1: RDG's GHG emissions by scope (FY22/23).

Scope 1

Scope 1 emissions involve the direct GHG emissions that are released as a result of operations that are controlled or owned by an organisation. There are three major subcategories within Scope 1: stationary combustion (the combustion of fuel within machinery or equipment such as boilers), mobile combustion (the combustion of fuels due to the operation of vehicles owned or leased), and fugitive emissions (emissions from refrigeration systems)⁵. There are no Scope 1 emissions associated with RDG's operations as RDG did not operate or maintain any heating or cooling plant and had no company-owned vehicles in the baseline year. Fugitive emissions from refrigerants used in cooling plant have been accounted for in Scope 3 due to RDG's indirect control.

Scope 2

Scope 2 emissions are caused by the indirect release of GHG emissions that are derived from the purchase of heat, electricity, steam, and cooling. RDG's Scope 2 emissions make up 0.20% of overall GHG emissions: 45.1 tCO₂e are from purchased electricity and 36.6 tCO₂e are from purchased heat, both of which were supplied by RDG's landlord at its office premises located at 200 Aldersgate Street, London.

Scope 3

Scope 3 emissions are all indirect emissions (not included in Scope 2) that occur in RDG's value chain, including both upstream and downstream emissions⁶. Whilst RDG's operations are predominantly office-based, the reach of the organisation's operations, and therefore the Scope 3 emissions, is large. A breakdown of RDG's Scope 3 emissions, as per the GHG Protocol's fifteen Scope 3 categories is shown in Figure 2. All applicable categories were

⁵ US EPA Scope 1 and Scope 2 Inventory Guidance. Available: <https://www.epa.gov/climateleadership/scope-1-and-scope-2-inventory-guidance>.

⁶ WRI GHG Protocol. FAQ. Available: https://ghgprotocol.org/sites/default/files/standards_supporting/FAQ.pdf.

included in the carbon inventory for completeness and to assess the materiality of emission sources for future GHG emission calculations.

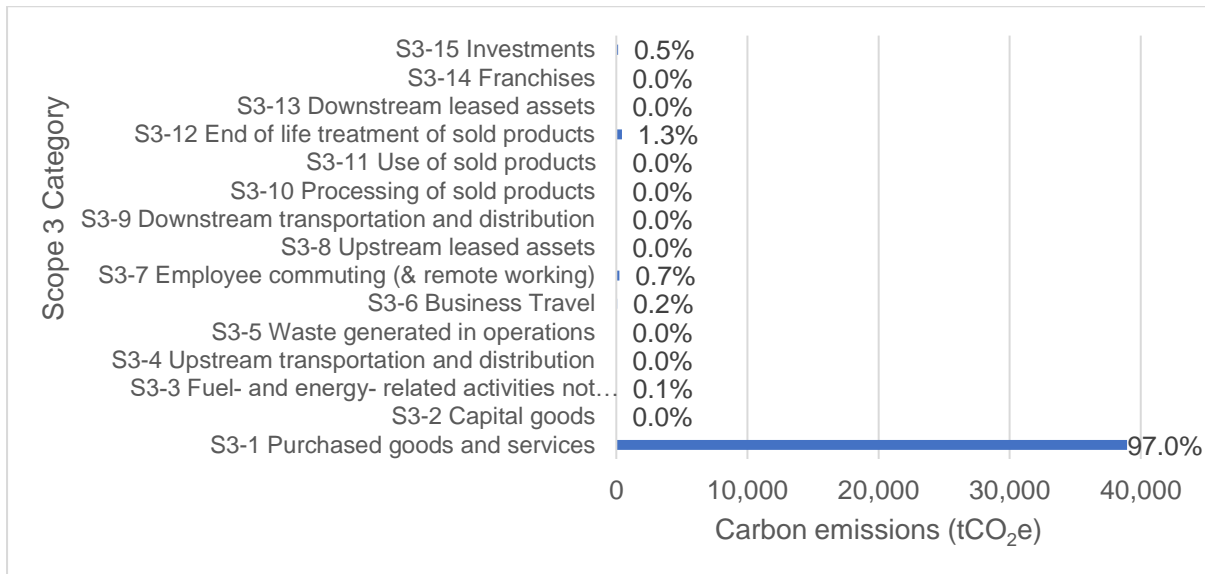


Figure 2: RDG's GHG Scope 3 emissions.

Within Scope 3, the purchase of goods and services (S3-1) accounts for 38,956.4 tCO₂e of RDG's overall footprint and is therefore by far the largest emission source. Figure 3 shows a further breakdown of emissions within Scope 3-1 Purchased goods and services. Professional services account for 10,010.9 tCO₂e of emissions, IT services account for 9,208.7 tCO₂e of emissions within this category and Marketing is a further 9,737.8 tCO₂e together these three sub-categories make up 74% of the Scope 3-1 emissions.

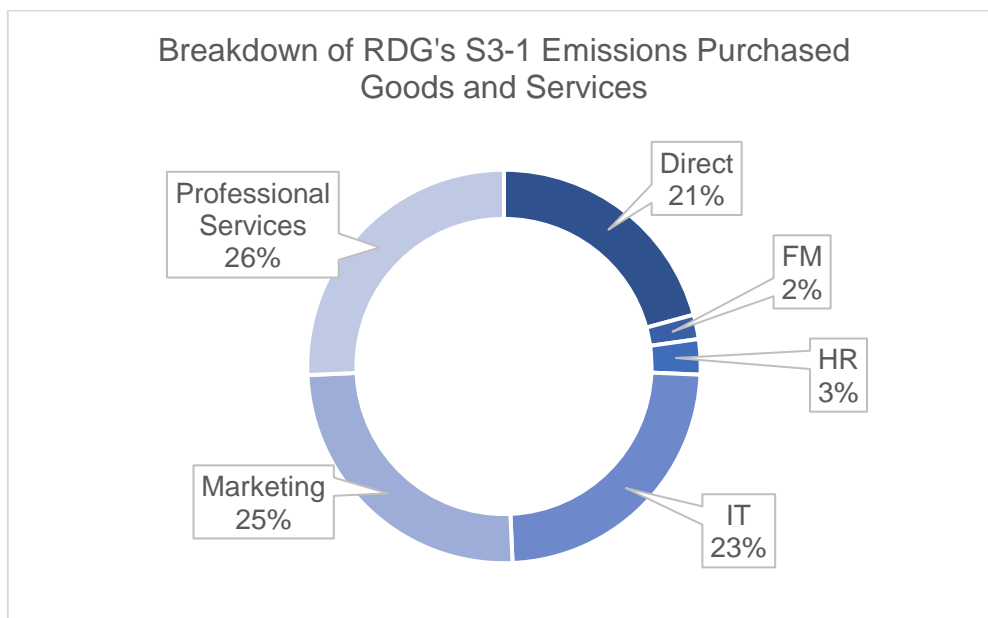


Figure 3: Breakdown of RDG's GHG emissions (tCO₂e) within S3-1 Purchased goods and services on FY 22/23.

The GHG emissions associated with End of life treatment of sold products (S3-12), which for RDG is rail tickets, is the second largest category within Scope 3, accounting for 420.4 tCO₂e. Employee commuting and remote working (S3-7) and RDG's investments (S3-15), i.e. pension payments, are also significant emission sources accounting for 232.0 tCO₂e and 140.2 tCO₂e respectively.

Emissions Intensity Ratio

In order to compare RDG's GHG emissions annually, two intensity ratios have been calculated, as shown in Table 2. The carbon emissions per British Pound of budget and per full-time equivalent (FTE) have been calculated.

Total carbon footprint and intensity ratio		
Carbon intensity (intensity ratio)	Carbon emissions per £ million budget	607.9 tCO ₂ e
	Carbon emissions per FTE	129.2 tCO ₂ e

Table 2: RDG Carbon intensity ratio.

4. Comparison to Previous FY

Greenhouse gas emissions comparison

A summary of RDG's GHG emissions for financial years 2021/22 and 2022/23 is shown below (table 2). Absolute emissions (total emissions) are summarised, as well as two intensity ratios.

There was an increase of 9,659.1 tCO₂e from FY21/22 to FY22/23.

Summary table		
Absolute GHG emissions breakdown (tCO ₂ e) per financial year		
Scope	FY21/22	FY22/23
Scope 1	0.0	0.0
Scope 2	82.6	81.6
Scope 3	30,176.3	39,836.4
Total (Scope 1 and 2)	82.6	81.6
Total (Scopes 1, 2, and 3)	30,258.9	39,918.0
% change (year-on-year)	40%	32%
GHG emission intensity (tCO ₂ e) per financial year		
Budget (£)	£69,200,000	£65,662,000
Carbon intensity (tCO₂e per £ million budget)	437.3	607.9
% change	8%	39%
Average FTEs	362.0	309.0
Carbon intensity (tCO₂e per FTE)	83.6	129.2
% change (year-on-year)	19%	55%

Table 2: RDG GHG emissions summary (FY 21/22 and FY22/23).

Commentary

Reason for emissions increase

The emissions for the period from 1st April 2021 - 31st March 2022 was impacted by the Covid-19 pandemic. Service provision for the rail network was at a lower rate than usual, with passenger numbers recovering from a low of 10% of pre-pandemic numbers in the previous year.

The substantial increase in GHG emissions for 1st April 2022 - 31st March 2023 is further propagated through steeper increases in the carbon intensity per FTE and the carbon intensity per £ million. These intensity metrics are impacted by a fall in staff numbers by 53 FTEs (14.6%) and a (5.1%) fall in budget over the same period respectively.

RDG's Impact

SCOPE 1

Scope 1 is out of scope for both years.

SCOPE 2

Scope 2 emissions of electricity has reduced by 1 tCO₂e. However, RDG's Scope 2 energy use is calculated as a percentage of the building's emissions. This reduction reflects a decreased electricity usage for the whole building, of which RDG occupies 6%.

SCOPE 3

Purchased goods and services was the largest category in both years.

Areas of RDG that operated almost business as usual, such as IT services, have remained relatively stable from 2021/22 to 2022/23.

The sub-category with the biggest change was the 1.6 times increase in 'Direct' emissions (e.g. from hardware, print, railcards) this is because of a greater requirement for physical assets and materials in the first full financial year post pandemic. The second steepest rise in emissions, from Professional Services, a 37% increase, this could be due to the fall in FTEs over the same period (by 5.1%) and hence having to outsource some activities.

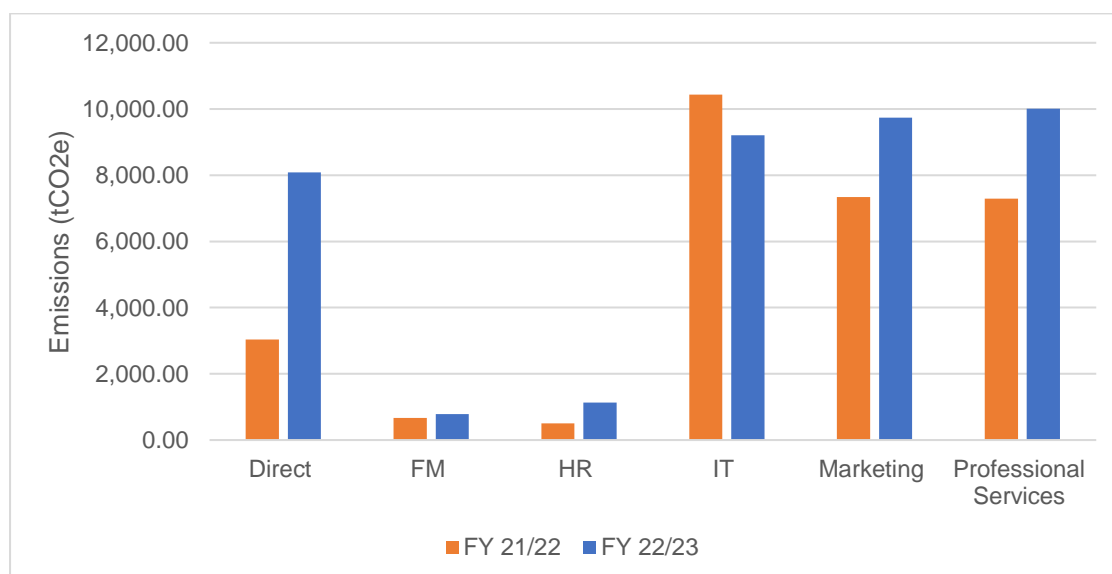


Figure 4: Breakdown of RDG's GHG emissions (tCO₂e) within S3-1 Purchased goods and services for financial years 2021/22 and 2022/23

End of life treatment of sold products remains RDG's second greatest category of emissions in Scope 3. This covers rail tickets, which RDG supplies on behalf of the industry. The vast majority of these tickets are non-recyclable so, to the best of our knowledge, are sent to landfill. The increase in this category, from 315.9 tCO₂e to 420.4 tCO₂e, reflects the increased number of passenger journeys following the lockdowns of 2020 and 2021.

Employee commuting and remote working remained the third largest category in FY22/23. However, the emissions fell significantly from FY21/22 largely due to a decrease in remote working emissions (by 54 tCO₂e, 29%).

From our analysis of commuting patterns rail accounts for most kilometres travelled, with 76% of employees taking mainline rail for some proportion of their trip. Almost all walk some of the distance. However, 28% of staff drove for at least a portion on their journey, and those who drove typically drove for an average of just over 4 miles. This is a journey distance that is within DfT's target range to switch to cycling.

5. Next Steps - Emissions Reduction

Having quantified Scope 1, 2 and 3 emissions, RDG's next step will be to identify opportunities to make emissions reductions.

With Scope 3 emissions from purchased goods and services forming the majority of its emissions, RDG will focus on this area through engaging with individuals and teams who make the high-spend purchases and the supply chain, firstly to better understand and quantify these emissions, then to seek to make reductions where possible through supplier engagement and considering carbon emissions as part of its future procurement strategy and purchasing decisions.

RDG is already working on a project to reduce the emissions from end-of-life treatment of sold products. The responsible directorate is focused on increasing options for alternative ticket-types, such as PAYG smartcards, barcode and paper tickets (rather than the current magnetic, non-recyclable tickets).

Scope 2 emissions are currently out of RDG's control. Steps to reduce this will be taken when RDG moves into its new office in June 2023, which is expected to allow RDG greater control of its energy emissions than is currently provided.

6. Limitations of Methodology and Recommendations

As with all GHG emissions inventories, there are limitations to the methodology applied and certain assumptions had to be made in the absence of suitable quantified data. A summary of key limitations and recommendations for improvement in subsequent years is shown below:

Spend based emission calculations

- **Limitation:** Emissions were based on the best data available at the time of calculation. Primary data was provided for emission categories where available. In some instances, primary data was based on spend in place of weight/volumes, which reduces the accuracy of emission calculations.
- **Recommendation:** It is recommended that emissions from purchased goods and services are based on quantity of goods/services in place of spend, however, this approach is considered appropriate to assess the scale.

Assumptions/benchmarks used in place of some primary data source

- **Limitation:** Neither primary or spend data was available for some 'in-scope' categories. In these instances, calculations are based on benchmarked data or assumptions. These assumptions have been noted within the extended methodology report and within the GHG Inventory.
- **Recommendation:** Obtain primary data for scope categories where assumptions or benchmarks have been used.

Emissions are based on the best available emission factors.

- **Limitation:** There is a lack of specific up to date emission factors for some Scope 3 categories, particularly Scope 3-1 Purchased goods and services.
- **Recommendation:** Continue to work with suppliers to obtain supplier specific emission factors to improve the accuracy of emission calculations within this category.

It is acknowledged that the calculation methodology and data sources will evolve in the future as improved data becomes available. If data quality improves significantly there may be a need to re-baseline.

The above limitations will not have a material impact on the overall inventory. Where assumptions have been made, a 'worst case scenario' has been chosen, to ensure emissions are not underestimated.