



**2022**

**GHG EMISSIONS REPORT**  
EMERALD BUILT ENVIRONMENTS, LLC



EMERALD BUILT  
ENVIRONMENTS



## EXECUTIVE SUMMARY

Emerald Built Environments is a sustainability consulting firm, working primarily with building owners and developers, and their design, construction, and operations teams to set and achieve sustainability goals. Guided by its core value of Environmental Stewardship, it is important for Emerald to lead its clients and stakeholders toward the behaviors required for a more sustainable future.

To that end, the company conducted a carbon analysis for the purpose of generating an annual Greenhouse Gas Emissions report. This assessment was conducted for the company’s operations and office. Currently, Emerald has one office, a 1,762 sf suite of leased space on the second floor of a five-story multi-tenant office building in Cleveland, Ohio.

- Timeline for the analysis: January 1st, 2022 – December 31st, 2022
- This data is self-reported

This report outlines current gaps in reporting data, current GHG impacts, and the recommended next steps.

To complete this analysis, Emerald utilized Carbon Footprint Business Calculator software. The data included in this analysis reviewed building energy, flight travel, business travel, and commuter travel.

This analysis sought to understand and evaluate current performance for the purpose of:

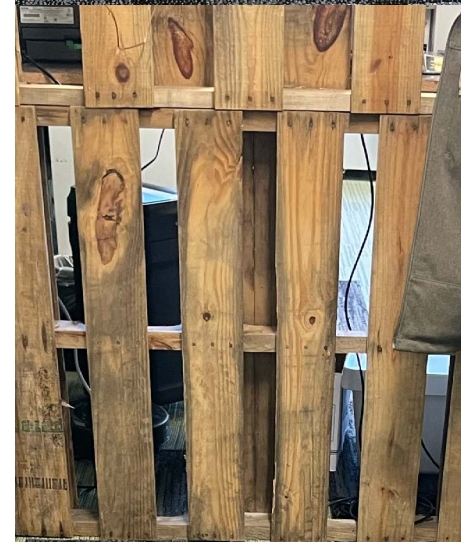
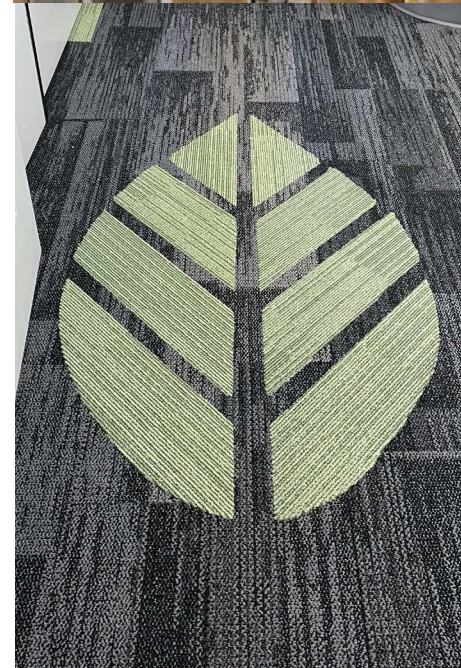
- Understanding current building and employee travel performance
- Clarifying how to collect and manage future data for ongoing reporting
- Outlining the results of limited Scope 1, 2, and 3 carbon reports and comparing them against similar businesses
- Recommending how to reduce and improve emissions

## OVERVIEW: GREENHOUSE GAS PROTOCOL

Greenhouse Gas Protocol is one of the world’s most widely used greenhouse gas accounting standards for companies. The Corporate Standard was utilized for the calculations in this report. Referred to as the GHG Protocol, this standard is referenced by many other reporting bodies and platforms. “In 2016, at least 92% of Fortune 500 companies responding to CDP used GHG Protocol directly or indirectly through a program based on GHG Protocol.” (<https://ghgprotocol.org/standards>)

By using this protocol, Emerald Built Environments can guide clients through measuring carbon impacts, which is necessary to manage, offset, and set reduction goals.

*Things found in the Emerald Office: Air purifiers (top right), the Emerald leaf (middle right), repurposed materials used for furniture (bottom right)*



## GHG SCOPE BY CATEGORY

The following table shows the full list of scopes and categories per the GHG Protocol. For transparency purposes, this also indicates the categories selected to calculate in this report based on a materiality assessment conducted internally and with influence from the Third-Party Verification Process in 2022 with Carbon Footprint Standard.

Scope	Category	Included in this Report	Not Relevant to Emerald Business
1	Direct Emissions – Natural Gas		
2	Indirect Emissions – Purchased Electricity		
3	1 – Purchased Goods & Services		
3	2 – Capital Goods		
3	3 – Fuel and Energy-Related Activities not included in Scope 1 or 2		
3	4 – Upstream Transportation & Distribution		
3	5 – Waste Generated in Operations		
3	6 – Business Travel		
3	7 – Employee Commuting		
3	8 – Upstream Leased Assets		
3	9 – Downstream Transportation & Distribution		
3	10 – Processing of Sold Products		
3	11 – Use of Sold Products		
3	12 – End-of-life Treatment of Sold Products		
3	13 – Downstream Leased Activities		
3	14 – Franchises		
3	15 – Investments		



## GHG DATA FINDINGS

The following data was collected and combined to report Emerald's emissions impact for the performance period of January 1st, 2022 to December 31st, 2022.

**Tonnes of CO2e**

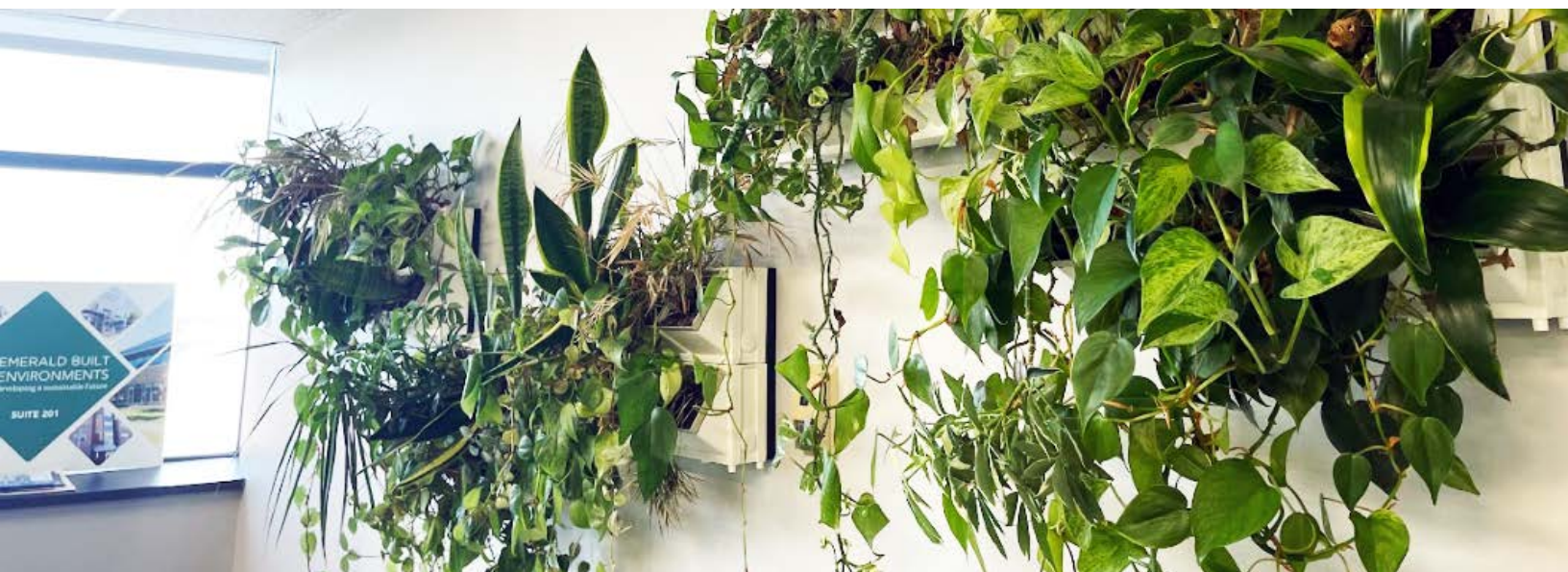
**Source**

### NOTES:

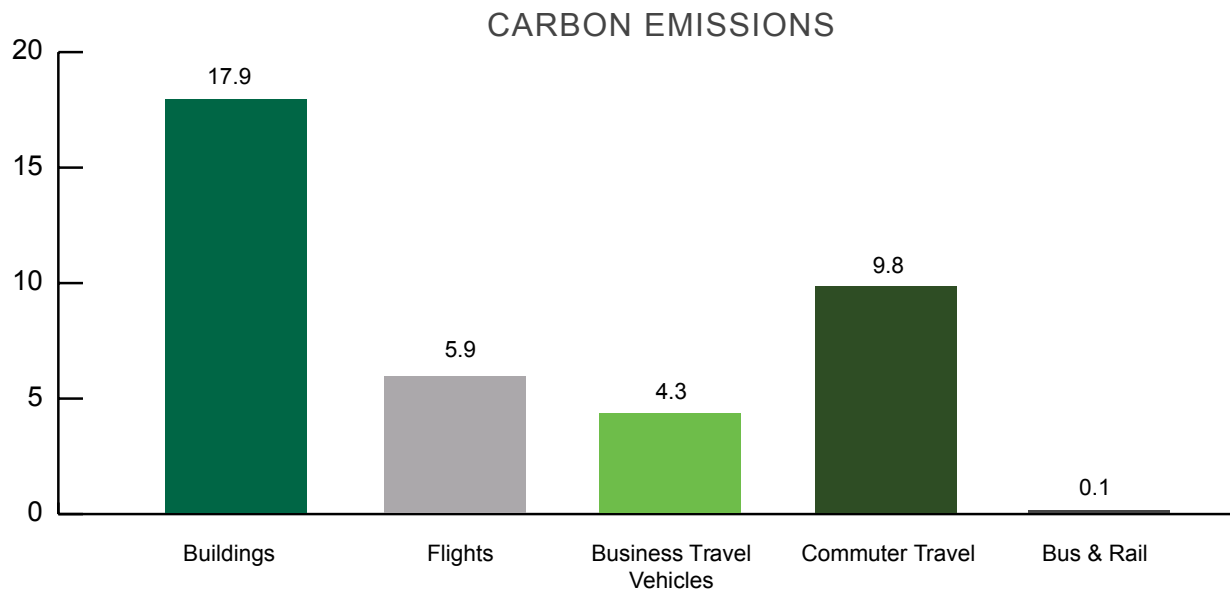
- The office was open for 11 of 12 months with variable required in-office days throughout the year.
- Calculations are based upon required days in office and were not reduced to reflect additional days worked from home.
- Calculations are overstated for the full-year and do not account for some employees that worked a portion of the year.
- Guests reported their travel distance and mode of transportation to one company-sponsored event.

*Third-Party Verification of the reported data occurred for the period ending May 31, 2022.*

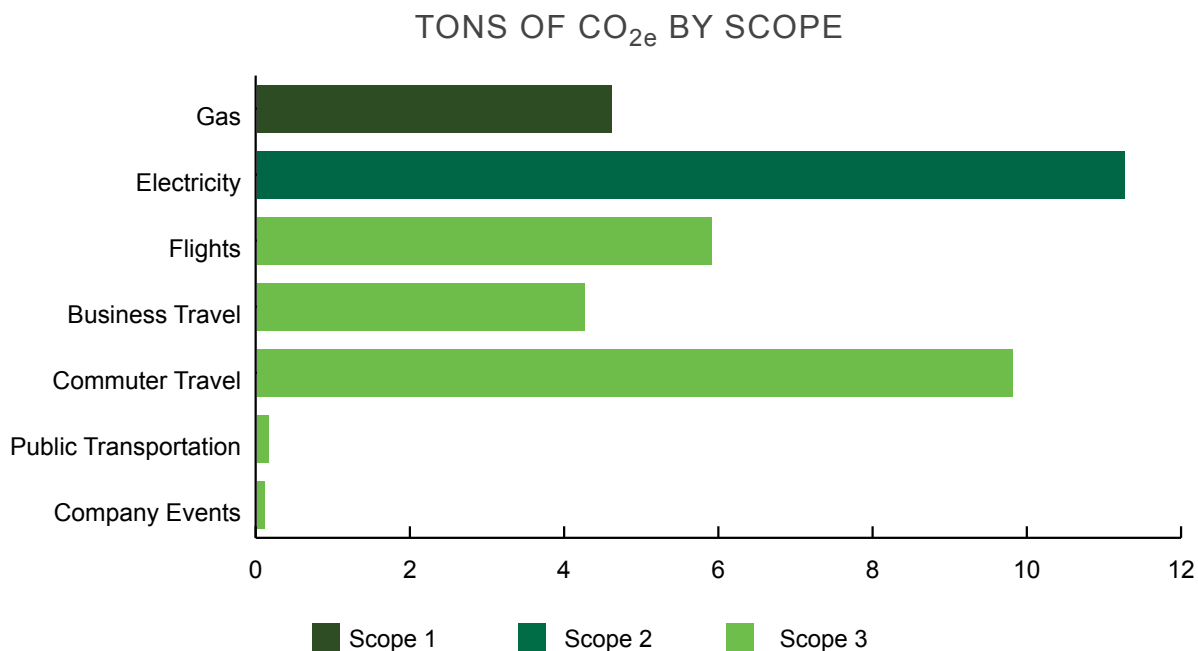
*Living wall in the Emerald office (below)*



## CARBON IMPACT CATEGORIES



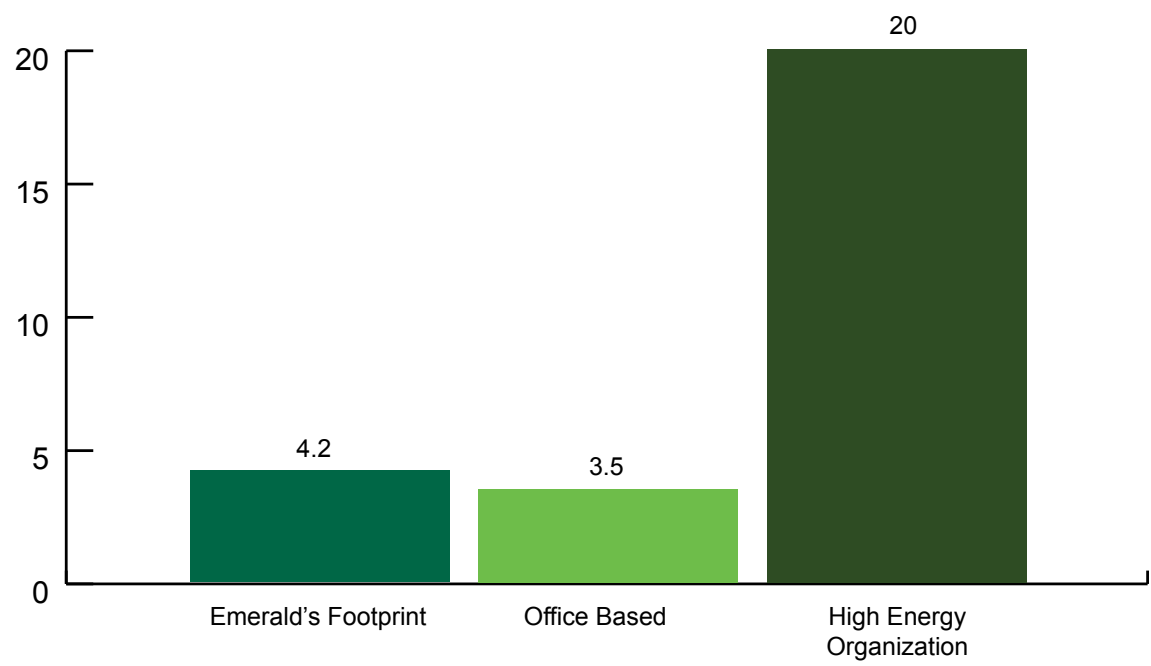
## CARBON BY SCOPE





## BENCHMARK COMPARISONS

Office administration organizations typically have a carbon footprint between 2-5 tonnes per employee according to Carbon Footprint's standards and database. Emerald's current carbon footprint per employee is 4.2 tonnes, which is within the benchmark.



Sights around the office: Target goals (bottom left), WELL 2022 certified (bottom middle), Emerald Core Values (bottom right)





# OUR OPPORTUNITY FOR IMPROVEMENT

Emerald recognizes the following opportunity for improvement in both performance and reporting process for reporting year 2023 and beyond. The 2022 verification through Carbon Footprint Standard and employee engagement sessions shaped the list impact opportunities.



Topic	Scope Impact	Timing
Upgrade software to include broader reporting and analysis capabilities	1	Immediate: 1-2 years
Upgrade lighting controls	2	Short-term: 3-5 years
Engage vendors in voluntary preliminary reporting	3	Immediate: 1-2 years
Require vendor emissions reporting	3	Short-term: 3-5 years
Reducing waste through audit and benchmarking	3	Immediate: 1-2 years
Implement eco-friendly travel policy	3	Immediate: 1-2 years
Evaluate incentives and reimbursements for employee commuting emissions	3	Immediate: 1-2 years
Improve embodied and ongoing emissions for office & office improvements	1, 2, 3	Long-term: 6-8 years





## ADDITIONAL FACTORS FOR CONSIDERATION



**FOR THE PLANET**  
- ENVIRONMENTAL PARTNER -

Emerald joined 1% for The Planet on July 1, 2022, a global network with thousands of businesses and environmental organizations working together to support people and the planet. As a factor of membership, Emerald received verification in April 2023 that 1% of its total revenue from the date of membership in 2022 was donated to non-profit organizations that work to reduce impact in four key areas:

- Rights to Nature
- Conservation & Restoration
- Resilient Communities
- Just Economies

## CONCLUSION / FINDINGS



THROUGH MAY 31, 2022

The total GHG emissions for Emerald increased from our first reporting period of May 2021-June 2022 at 31.8 tonnes to January 2022-December 2022 generating 38 tonnes. This increase in carbon emissions is expected based on more time in the office and an increased employee count compared to the prior period. Over the next few years, it is expected that Emerald's total carbon emissions will continue to increase as the company grows, and as such it is measuring its emissions on a per-employee basis. For the calendar year, 2022 reporting period, the carbon intensity in tonnes of CO<sub>2</sub> per employee is 4.2.

Emerald's carbon report includes limited Scope 1, 2, and 3 categories per the above data. To offset the current known carbon emissions, which includes the most impactful categories for Emerald, the total offset will need to be 38 tonnes of CO<sub>2</sub>e (the cost of this will need to be evaluated against what has already been offset for the previous 1 year that extended halfway into 2022).

Emerald offset 83% of our 2022 emissions with a purchase of 31.8T of certified carbon offsets in May of that year.