



CARBON ASSESSMENT REPORT

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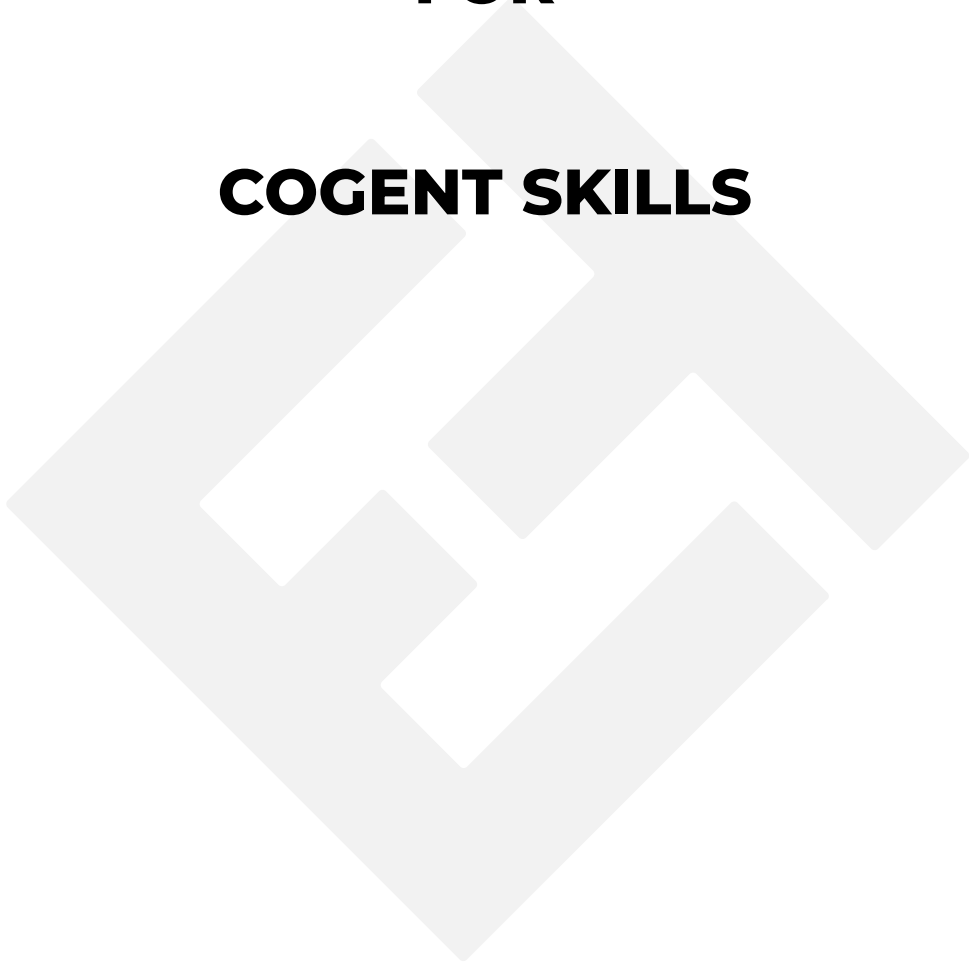
TUNLEY
ENVIRONMENTAL



CARBON ASSESSMENT REPORT

FOR

COGENT SKILLS





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Nomenclature

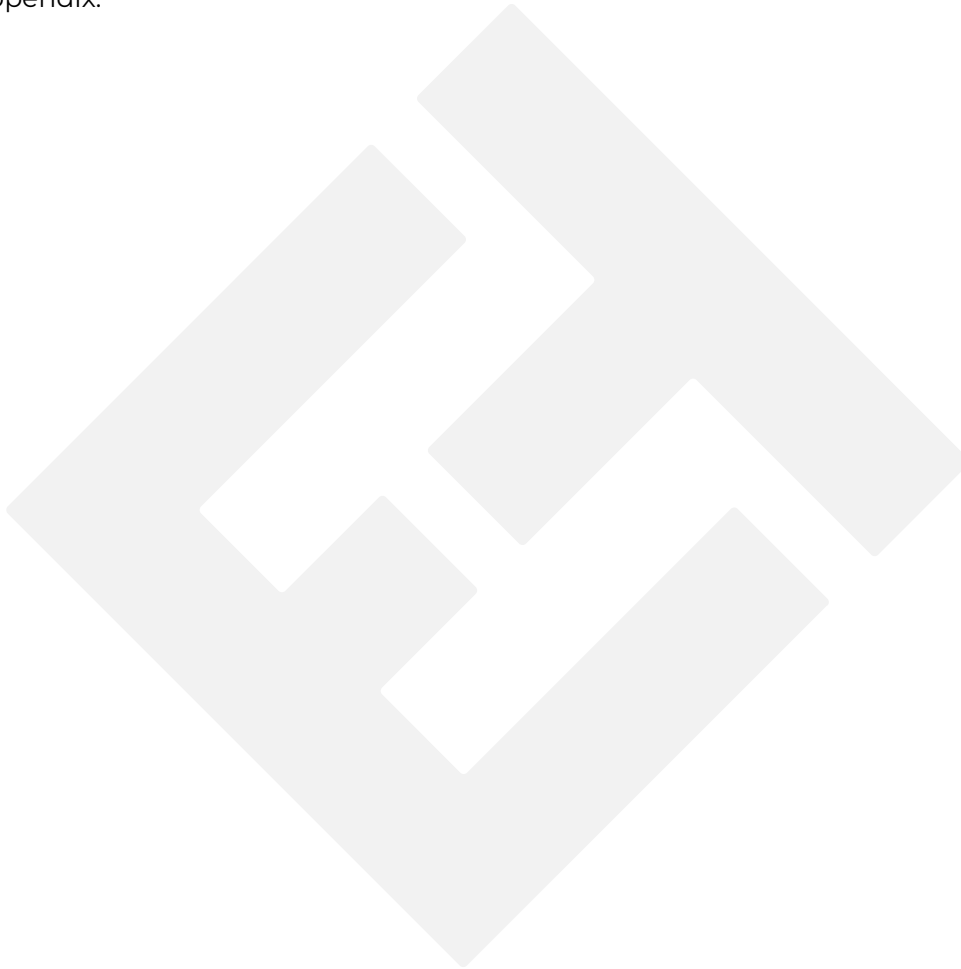
Nomenclature	Description
GHG	Greenhouse Gases, gases that trap heat in our atmosphere. GHG include Carbon dioxide, methane, nitrous oxides, and fluorinated gases.
Embodied Carbon	The total GHG emissions generated to produce a product; It includes those from extraction, manufacture, processing, transportation, and assembly in every component.
Carbon Equivalent	The effect on global warming of a greenhouse gas (GHG) relative to that of CO ₂ .
Zero Carbon	The absence of GHG emissions
Greenhouse Gas Protocol	The GHG Protocol Corporate Accounting and Reporting Standard which provides requirements and guidance to prepare a corporate-level GHG emissions inventory.
Net Zero Carbon (NZC)	The sum effect of combining actions to reduce GHG emissions with actions to off-set them.
Carbon Offsetting	A reduction in emissions of GHG to compensate for unavoidable emissions.
Global Warming Potential (GWP)	The heat adsorbed by any GHG as a multiple of the equivalent in carbon dioxide.
IPCC	The Intergovernmental Panel on Climate Change. It provides regular scientific assessment on climate change to policy makers.
AR6	The sixth assessment report of the IPCC. The most recent assessment report is 2021.
tCO ₂ e	Notation for tonnes of carbon dioxide equivalent emissions.
kgCO ₂ e	Notation for kilograms of carbon dioxide equivalent emissions.
ICE	The Inventory of Carbon and Energy.
Scope 1	Direct GHG emissions are those that occur from sources that are owned or controlled by the company such as emissions from combustion in owned or controlled boilers, furnaces, vehicles, etc., emissions from chemical production in owned or controlled process equipment.
Scope 2	Indirect GHG emissions account for GHG emissions from the generation of imported energy such as purchased electricity consumed by the company. Purchased electricity is defined as electricity that is purchased or otherwise brought into the organisational boundary of the company. Scope 2 emissions physically occur at the facility where electricity is generated.
Scope 3	Other indirect GHG emissions. The GHG Protocol Corporate Accounting and Reporting Standard defines Scope 3 as 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. BS EN ISO 14064 separates out Scope 3 emissions into categories 3 to 6 covering indirect emissions from transportation, products used, use of products from the business and other sources respectively.

Methodology and Quantification Standards

The Business Carbon Assessments was completed using methodology consistent with the international standards BS EN ISO 14064-1 and The GHG Protocol. Quantification of carbon dioxide equivalent emissions arising from business activities were completed in accordance with the emission factors of Greenhouse gas reporting: conversion factors published by DEFRA, the UK government Department for Business, Energy, and Industrial Strategy for 2023. Additionally, The Inventory of Carbon and Energy has provided carbon equivalent data conversions for complex materials.

Global Warming Potentials are stated from IPCC Sixth Assessment Report, 2021 (AR6).

Information on data sources and assumptions made to support this analysis are provided in the Appendix.



Executive Summary

Climate change poses a significant challenge to the environment, necessitating mitigation measures at international, national, and local levels. It impacts businesses, natural systems, and communities. This is caused by global warming, as a result of an increase in greenhouse gas (GHG) emissions, known as carbon emissions.

Cogent Skills would like to report on the carbon emissions for the baseline year between 1st January 2023 and 31st December 2023. Quantifying the business carbon emissions puts Cogent Skills in a position to demonstrate sustainability and environmental responsibility to their customers and the wider public. It allows Cogent Skills to understand their emission data between in the reporting year and facilitate the achievement of Net-Zero Carbon (NZC). Cogent Skills and Tunley Environmental have collaborated to identify emission sources and collect data.

Tunley Environmental has conducted an independent assessment to quantify carbon emissions due to business activities conducted by Cogent Skills, based on the data provided by the company. The evaluation herein reported includes two components of emission quantifications for:

- The company's business activities in 2023. This first component evaluates carbon emissions from their emissions in Scopes 1, 2 and 3,
- A roadmap to Net-Zero Carbon (NZC) based on data of the baseline year. This will act as a guidance for Cogent Skills to minimise their carbon footprint resulting from their business activities.

This assessment demonstrates Cogent Skills commitment to showing how carbon emissions can be reduced. It also provides Cogent Skills with a clear evaluation of carbon emissions associated with these business practices and aligns with Cogent Skills ambition for achieving carbon neutrality.

Total carbon emissions in tonnes of carbon dioxide equivalents (tCO₂e per annum) are 403.4 tCO₂e (**Figure 1**).

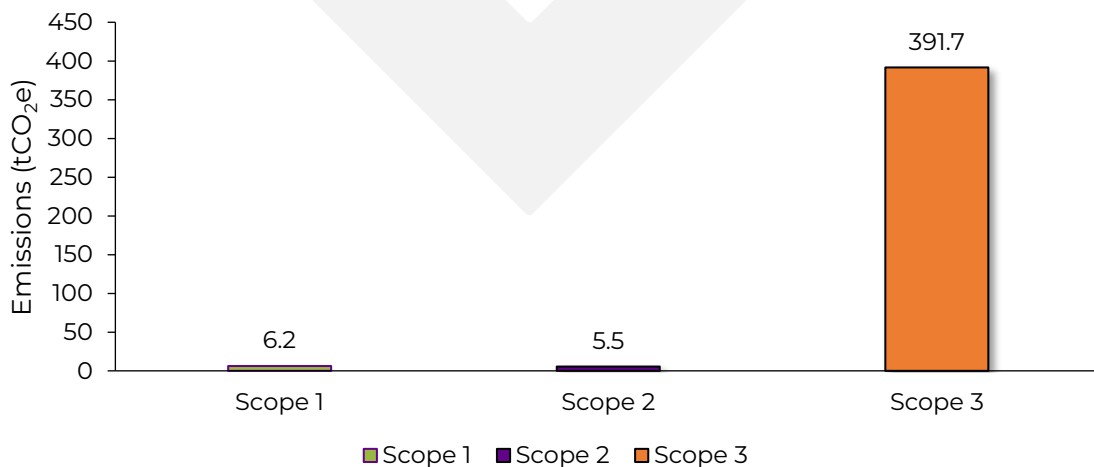


Figure 1. Greenhouse gas emissions for Scopes 1, 2 and 3.

Tunley Environmental recommend taking steps to reduce emissions and become NZC by 2035. By implementing the emission reduction initiatives suggested in this report, Cogent Skills will be able to reduce their emissions by 30% by 2033.

Introduction

Tunley Environmental conducted this assessment using the standard protocols stated above and data provided by Cogent Skills for their business activities, based on data in the reporting year between 1st January 2023 and 31st December 2023. Operational control approach was used for the assessment.

This assessment is based on data categorised into three scopes, as defined by the Greenhouse Gas Protocol. For each year, the assessment provides detailed quantification of GHG emissions due to:

- i) Scope 1: Direct emissions such as those arising from gas heating and fugitive emissions,
- ii) Scope 2: Indirect emissions from purchased electricity,
- iii) Scope 3: Other indirect emissions from business travel using employees' vehicles and by train, paper usage, hotel stays and commuting/working from home.

Appreciating the importance of determining major contributors to the emissions, Tunley Environmental provides Cogent Skills with detailed analysis and discussion on the contributions from different emission sources considered; this will support Cogent Skills with their decision-making processes to reduce their carbon emissions. Where information and data were limited, we made reasonable assumptions based on our expertise and external sources of data. This report is completed to internationally recognised [standards](#) mentioned previously.

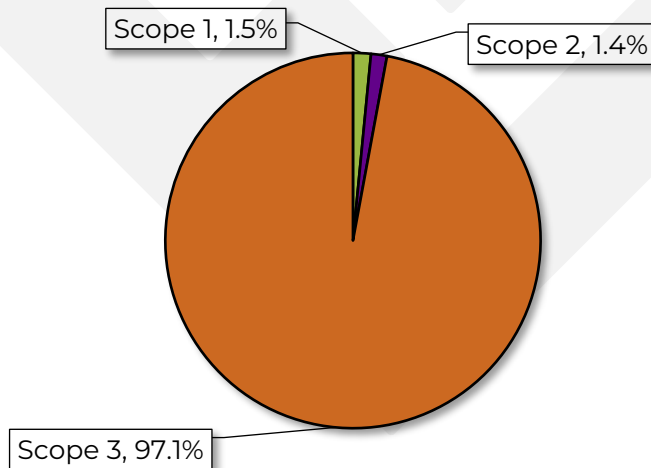
Emission data

Scope 1 made up 1.5% of the total emissions, which was 6.2 tCO₂e (Table 1, Figure 2). The total Scope 2 emissions were 5.5 tCO₂e (1.4%), which resulted from electricity usage. Scope 3 contributed 97.1% to the total carbon footprint in 2023.

Table 1. Emission data for Cogent Skills broken down in categories.

Item	Scope	Emissions (tCO ₂ e)
Gas	1	3.1
Refrigerant leakage	1	3.1
Electricity	2	5.5
Water supply	3	0.04
Water treatment	3	0.04
Paper usage	3	7.19
Recycled waste	3	0.1
Disposal waste	3	0.5
Commuting	3	36.5
Working from home	3	17.0
Business travel – Contracted staff	3	125.3
Business travel – Associates	3	205.1
Total		403.4

Figure 2. Percentage contributions of three scopes.



Scope 1

Emissions from gas usage and fugitive emissions (i.e., leakage of refrigerants) were equal at 3.1 tCO₂e. All gas usage was attributed to by the facility in Warrington as the Newton Aycliffe's office does not operate gas heating systems.

The leakage was estimated at 10% of the base level of refrigerant charges on air condition units at Cogent Skills' facilities.

Scope 2

Emissions from generating the purchased electricity for the Warrington and Newton Aycliffe were 3.4 and 2.2 tCO₂e, respectively, totalling 5.5 tCO₂e for Scope 2 emissions.

Scope 3

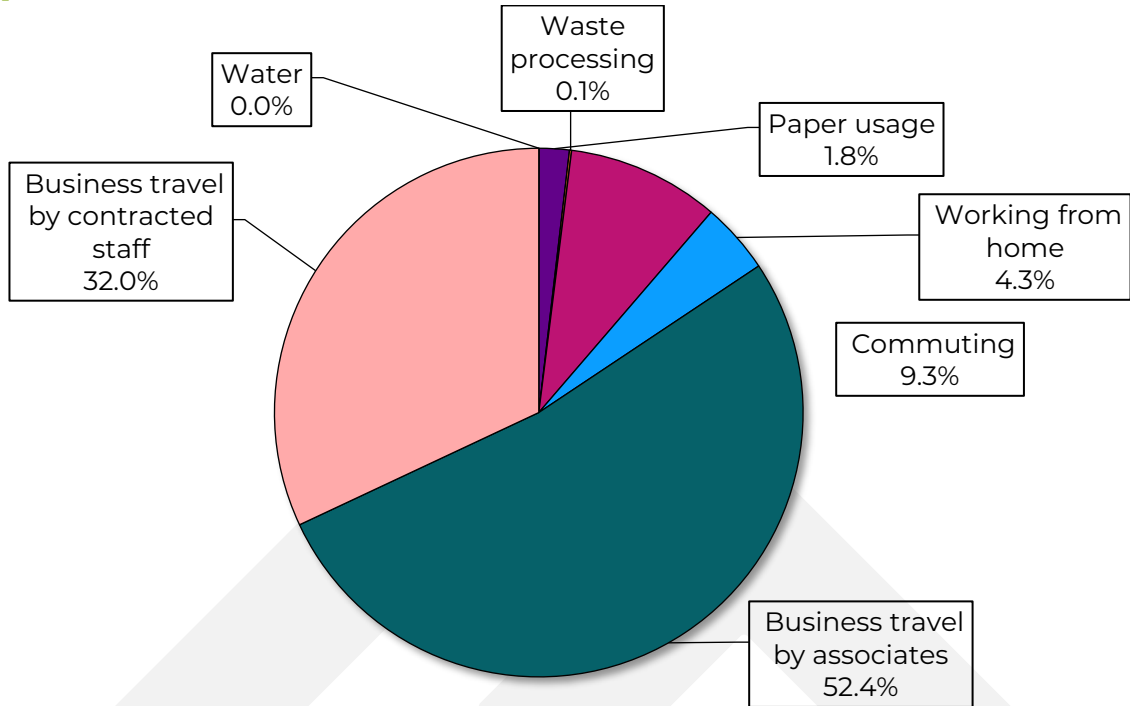


Figure 3. Percentage contributions of emissions sources within Scope 3.

Business travel and hotel stays were the most significant Scope 3 contributor, with emissions of 330.4 tCO₂e (total for both travelling by contracted staff and associates), making up 84.4% in Scope 3 (Table 1, Figure 3). This was followed by commuting at 9.3% and working from home at 4.3%. The contributions from other Scope 3 emission sources were minor.

Strategic CO₂e Reduction Initiatives

Tunley Environmental recommend Cogent Skills to implement a long-term approach on carbon reduction.

GHG emissions can be reduced 30% through implementing reduction strategies that focus on emission sources of significant contributions by 2033. Once the initiatives have been considered and taken, any unavoidable, remaining emissions can be removed by carbon off-setting actions (by 2035) (Figure 4). This section provides Cogent Skills with GHG reduction initiatives.

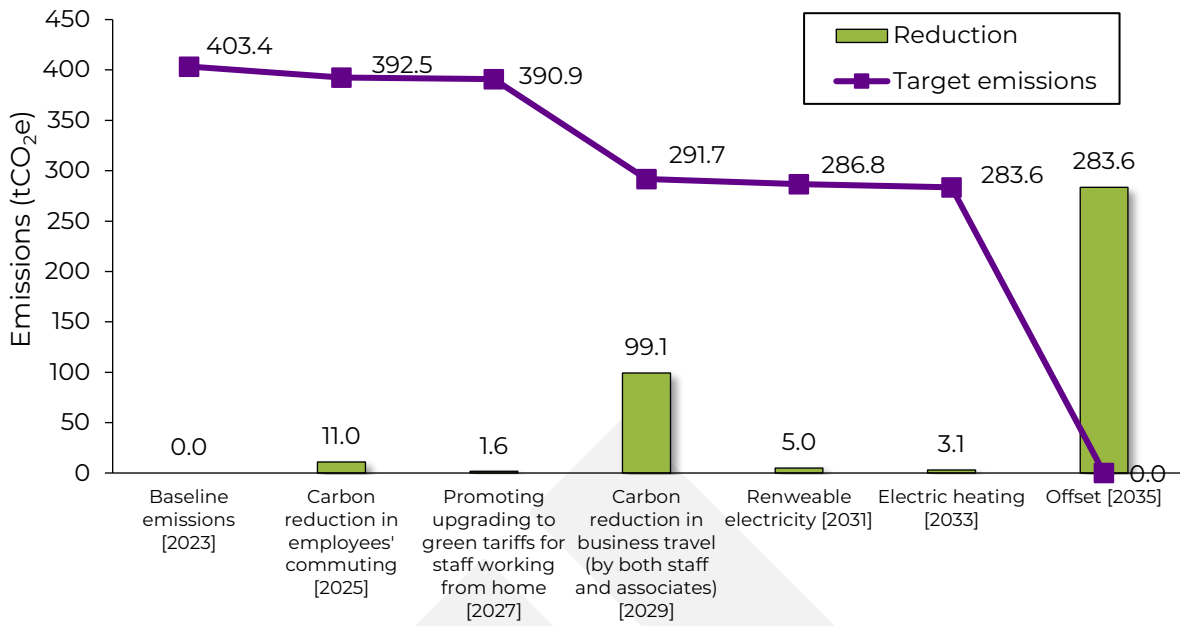


Figure 4. Roadmap to NZC by 2035.

Promoting Using Public Transport – 2025

Tunley Environmental assumed that there could be a 30% reduction from the current emission figure due to commuting to work by promoting the use of public transport, car sharing schemes, cycle to work schemes where possible.

Upgrading to Green Tariffs for Staff Working from Home – 2027

Cogent Skills should encourage and support their employees who work from home to upgrade their electricity to green tariffs. This will potentially lower the company's emissions down by 1.6 tCO₂e. This requires 100% of employees who currently work from home (for both full-time and part-time home based) to switch to use renewable electricity or electricity supplied via green tariffs.

Sustainable Travel by Staff and Associates – 2029

By using environmentally friendly travel options (e.g., using economy class for flights, traveling by train where possible, staying at hotels which have commitment to lower their carbon footprint, using EVs for business travel, etc.), Cogent Skills can reduce their emissions by 99.1 tCO₂e. This estimation was based on a 30% reduction.

Given the need of associates being on site for extended periods, Cogent Skills rely on hotel stays as business activities. Tunley Environmental suggest that Cogent Skills investigate different options of low carbon hotels. For example, most Ibis hotels are committed to banning single-use plastic (e.g., single-use wet amenities, plastic cups, door keys, etc.); Ramada promote the reduction of harmful waste and paper waste, they may also install aerator taps to minimise the use of water.

Using Renewable Electricity – 2031

Tunley Environmental appreciate that Cogent Skills do not have direct control on different options of electricity suppliers. However, they can discuss with their landlords to consider switch to use renewable electricity by opting for an Ofgem-certified green electricity tariff (Renewable Energy Guarantees of Origin, [REGO](#)). The best way to choose a renewable

electricity tariff is by using comparison websites and assessing the renewable origin guarantee information provided. At present, most electricity suppliers offer at least one 100% renewable electricity option. Implementing a green electricity tariff will reduce emissions by 5.0 tCO₂e per year.

Using Electric Heating – 2033

Once electricity has been supplied from renewable sources, switching to electric heating, where possible, can significantly lower the emissions of the company by 3.1 tCO₂e per year. Strategies to incorporate this include heat pumps, electric combi-boilers, or far infrared heating panels.

Offsetting – 2035

Whilst reducing emissions is the ideal end goal in decarbonisation this is not always feasible with every source emission. In these instances, offsetting against the carbon emissions is necessary. Therefore, the remaining carbon emissions will have to be offset with bona fide suppliers. Consequently, Tunley recommends all offsets be purchased from One Tribe (<https://onetribe.global.com/>). The cost of carbon credits typically operates between a range of £12 to £18 per tCO₂e. One Tribe's carbon credits are typically procured through one or more of the following regulatory bodies: Verra, Gold Standard, American Carbon Registry and Delta. OneTribe use their purchasing power to facilitate the very best pricing for their clients, however, it's important to note that these prices are subject to change based on market demand and other factors.

To offset against all of the calculated emissions at the cost of £18 per tCO₂e would equate to £7,262. However, if offsetting is performed after the proposed reduction initiatives the remaining emissions can be offset at a cost of £5,105.

Conclusion

Total GHG emissions for Cogent Skills' business activities in the baseline year between 01st January 2023 and 31st December 2023 are 403.4 tCO₂e. The carbon footprint quantification presented in this report was conducted using data provided to Tunley Environmental by Cogent Skills.

Tunley Environmental has provided Cogent Skills with detailed analysis of the emissions and recommendations on approaches by which Cogent Skills can reduce its carbon footprint.

Tunley Environmental Report Emission Statement

Tunley Environmental GHG emissions from completing this assessment were 0.22 kgCO₂e.

Appendix

Data Sources and Assumptions

Below we provide all of the data analysed with notes on sources provided and assumptions used in the calculation of emissions (**Table A1**). Additionally, the error score calculated as a factor of both data provided and emission factor used is displayed.

Table A1. Data sources and assumptions. Data accuracy assessment system utilised explained below.

Facility	Item	Label 1	Label 2	Overall score
Warrington	Gas	Provided - Band 1	Defra 2023 - Band 1	1
Warrington	Refrigerant - R407C	Estimated - Band 2	Defra 2023 - Band 1	2
Newton Aycliffe	Refrigerant - R410A	Estimated - Band 2	Defra 2023 - Band 1	2
Warrington	Electricity	Provided - Band 1	Defra 2023 - Band 1	1
Newton Aycliffe	Electricity	Provided - Band 1	Defra 2023 - Band 1	1
Warrington	Water supply	Estimated - Band 3	Defra 2023 - Band 1	3
Newton Aycliffe	Water supply	Provided - Band 1	Defra 2023 - Band 1	1
Warrington	Water treatment	Estimated - Band 3	Defra 2023 - Band 1	3
Newton Aycliffe	Water treatment	Provided - Band 1	Defra 2023 - Band 1	1
Warrington	Paper usage	Estimated using data of three months - Band 3	Defra 2023 - Band 1	3
Newton Aycliffe	Paper usage	Estimated using data of three months - Band 3	Defra 2023 - Band 1	3
Warrington	Recycled waste	Estimated, assuming 15 kg of waste/bag - Band 3	Defra 2023 - Band 1	3
Warrington	Disposal waste	Estimated, assuming 15 kg of waste/bag - Band 3	Defra 2023 - Band 1	3
Warrington	Recycled waste	Estimated, assuming 15 kg of waste/bag - Band 3	Defra 2023 - Band 1	3
Newton Aycliffe	Disposal waste	Estimated, assuming 15 kg of waste/bag - Band 3	Defra 2023 - Band 1	3
Companywide	Commuting	Survey data - Band 3	Defra 2023 - Band 3	9
Companywide	Working from home	Survey data - Band 3	Defra 2023 - Band 3	9
Companywide	Business travel including hotel stays	Provided - Band 1	Defra 2023 - Band 3	3

Data Accuracy Assessment

All the raw data provided to Tunley Environmental were broken down into accuracy levels reflective of the data sources provided (Table A2 & Table A3). This allows for inaccuracy and uncertainty to be accounted for in this assessment. Both activity data (e.g., quantities of material, usage of electricity,

etc) and emission factors are scored using the same band-based system, with 1-6 corresponding to the highest & lowest levels of accuracy, respectively. *via*

Emission factors are to be evaluated using the following five indicators:

- Technological relevance.
- Temporal coverage.
- Geographical coverage.
- Completeness.
- Reliability (e.g., peer-reviewed source, reproducible, low uncertainty in the information provided).

Table A2 Accuracy bands assigned to data, description of data assignment, adjustment factor provided increase to CO₂ emission calculations.

Accuracy Score	Description
1	Activity data accurately measured, fully accounted for and/or reported. Emission factor satisfies all five indicators.
2	Activity data provided directly by company/organisation; some generalisations made. Emission factor satisfies four indicators.
3	Activity data produced based on information provided by company/organisation. Emission factor satisfies three indicators.
4	Activity data assumption based on similar product/event reports by the same company/organisation. Emission factor satisfies two indicators.
5	Activity data assumption based on product/event reports by a similar company/organisation. Emission factor satisfies one indicator.
6	Activity data assumption made based only on publicly available information. Emission factor is estimated using the data available for a broader data category to which the emission source belongs, the estimated emission factor does not meet the indicators' requirements.

Table A3. Overall error score matrix for accuracy assessment.

Error Score	Action
1 - 2	Use the data, no further action required.
3 - 4	Can use the data, recommended to improve data quality by e.g., i) checking raw data with client (assessing recollection need) and ii) sourcing different emission factors or averaging several data points, required to declare this in the report.
5 - 10	Strive to improve data as a priority and only use the data when no further improvements can be made (see above)
12 - 25	Required to improve data quality (see above).
30 - 36	Do not use the data , discuss with the client and the carbon team to improve data quality and/or to assess whether the data can be used and the approach to report this.

Table A4. Actions to improve data quality and reduce uncertainty.

Error Score	Emission Factor					
	Five indicators	Four indicators	Three indicators	Two indicators	One indicator	No indicators

Data	Excellent	1	2	3	4	5	6
	Very good	2	4	6	8	10	12
	Good	3	6	9	12	15	18
	Relevant	4	8	12	16	20	24
	Acceptable	5	10	15	20	25	30
	Poor	6	12	18	24	30	36

Scope 1 & 2 GHG Emissions

Where possible Scope 1 and Scope 2 emissions are separated into known greenhouse gas emissions. This enables further understanding for Cogent Skills on their direct greenhouse gas emissions.

Table A5. Direct GHG emissions detailed separately for Scope 1 and Scope 2 showing CO₂, CH₄, N₂O emissions in tonnes of CO₂e.

Item	Data (kWh)	Emissions (tCO ₂ e)			
		Total	CO ₂	CH ₄	N ₂ O
Gas	17,175	3.14	3.14	0.005	0.002
Electricity	26,748	5.54	5.48	0.02	0.03

Emission Data Report to ISO 14064-1

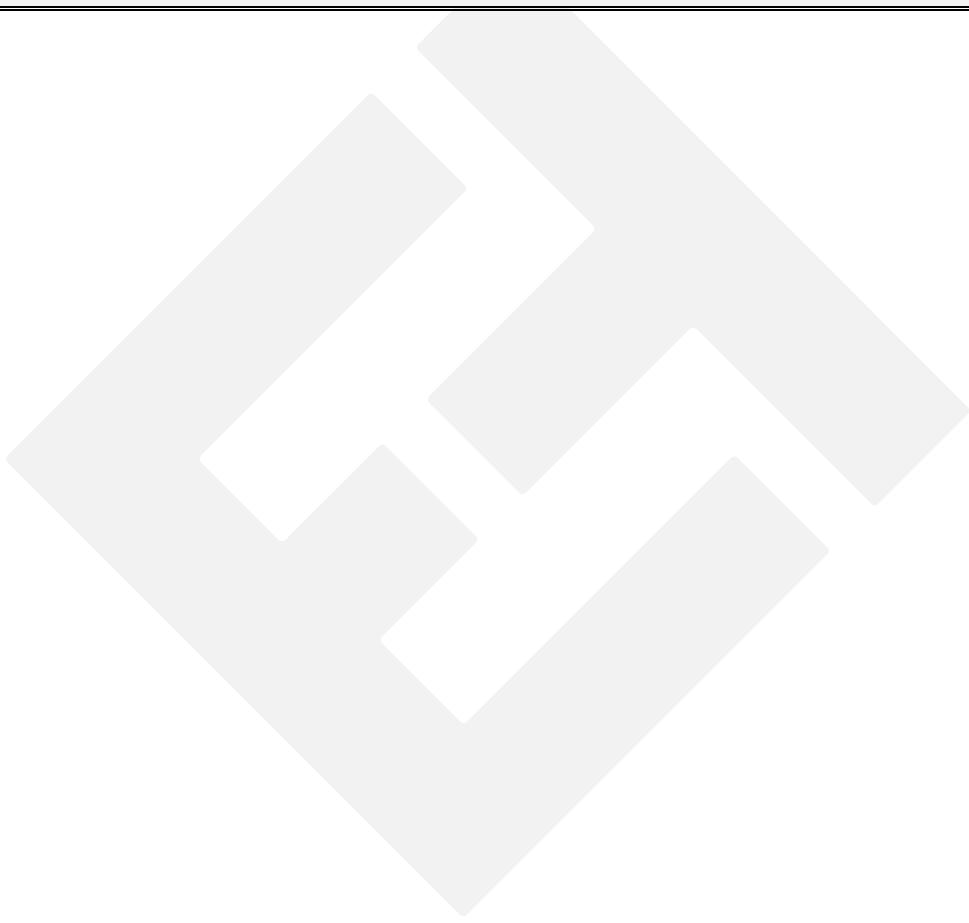
To encourage completeness, consistency, and readability ISO 14064-1 recommends that the GHG quantification should be reported using the full descriptive categories provided. Therefore, this is fully displayed and categorised in **Table A1**.

Table A6. Complete ISO14064-1 data categorisation table.

Category	Description	Emissions (tCO ₂ e)
1	Direct GHG emissions & removals in tCO₂e	
1.1	Direct emissions from stationary combustion	3.1
1.2	Direct emissions from mobile combustion	
1.3	Direct process emissions and removals arising from industrial processes	
1.4	Direct fugitive emissions arising from release of GHGs in anthropogenic systems	3.1
1.5	Direct emissions and removals from land use, land use change, and forestry	
2	Indirect emissions in tCO₂e	
2.1	Indirect emissions from imported electricity	5.5
2.2	Indirect emissions from imported energy	
3	Indirect GHG emissions from transportation	
3.1	Emissions from upstream transportation and distribution	
3.2	Emissions from downstream transportation and distribution	
3.3	Emissions from employee commuting & teleworking	53.5
3.4	Emissions from client and visitor transport	
3.5	Emissions from business travel	330.4
4	Indirect GHG emissions from products used by the organisation	



4.1	Emissions from purchased goods	7.2
4.2	Emissions from capital goods	
4.3	Emissions from the disposal of solid and liquid waste	0.6
4.4	Emissions from the use of assets	
4.5	Emissions from the use of services that are not described in the above subcategories	1.9
5	Indirect GHG emissions associated with the use of products from the organisation	
5.1	Emissions or removals from the use stage of the product	
5.2	Emissions from downstream leased assets	
5.3	Emissions from end-of-life stage of product	
5.4	Emissions from investments	
6	Indirect GHG emissions from other sources not specified	0



Approval

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Approval date:	7 th June 2024
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Revision:	C

Revision History:	Change Description:	Changed by:	Date:	Approved by:	Date:
B	More details in the discussion	LH	19 th Jun 24	N/A (further changed required)	N/A
C	Modified the roadmap	LH	1 st July 24	GD	1 st July 2024
D					
E					
F					

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