



Nottingham Trent
University



European Union

European Regional
Development Fund

Sustainability in Enterprise

Environmental and Carbon Assessment Report

Company: Melius Homes Ltd

Version: 1

Date of Site Visit: 21 October 2021

This programme is funded by the European Regional Development Fund (ERDF). ERDF helps local areas to stimulate their economic development by investing in projects which will support innovation, businesses, create jobs and local community regenerations

1. Executive Summary

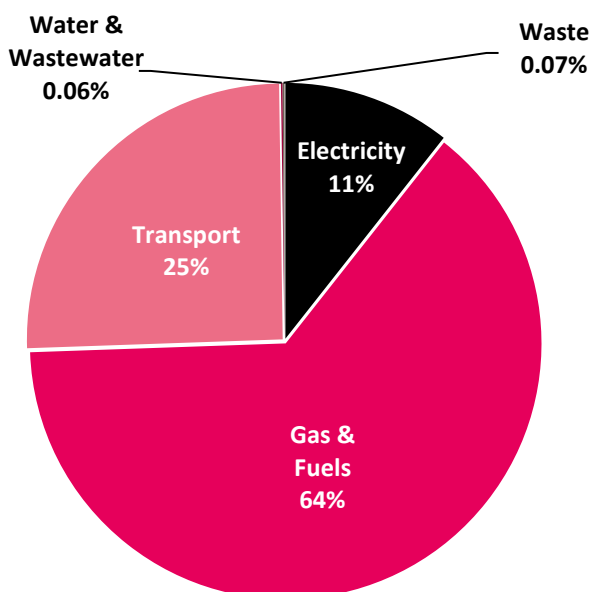
The following report has been prepared by Nottingham Trent University’s Sustainability Team as part of the ERDF Sustainability in Enterprise programme. The information contained in this report and recommendations form part of the funded consultancy support offered to eligible SMEs to help reduce their operational carbon emissions and improve environmental performance. The report is based on an initial Environmental and Carbon Assessment meeting and site visit carried out with Melius Homes on 21st November 2021.

Melius Homes Limited design, fabricate and construct new homes as well as transform existing dwellings using a precision engineered, panellised structural timber solution. Whilst the company’s main focus is providing a sustainability product for the home retrofit market, Melius Homes has not yet had an opportunity yet to review their own operations in terms of environmental performance and carbon emissions. Melius Homes have expressed an interest in multiple strands of SiE support including the Sustainability Consultancy to understand their baseline operational carbon emissions.

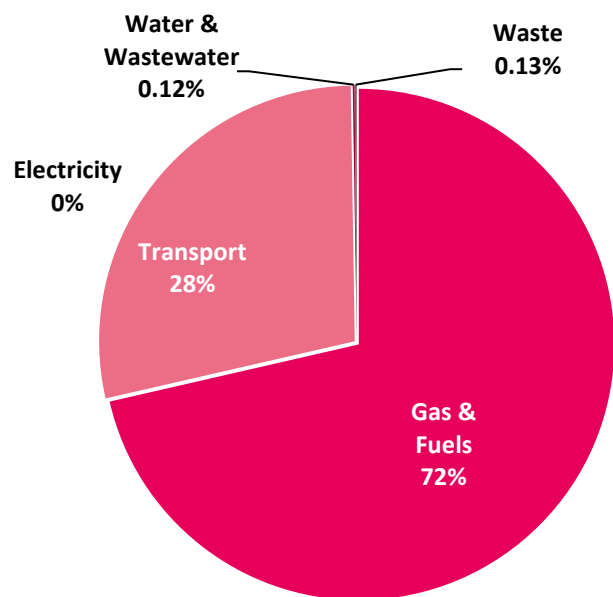
Baseline Carbon Footprint

Whilst its best practice to measure carbon emissions across a specific calendar or financial year, data was not available for a full year due to disruption from the Covid-19 pandemic and a newly opened premises. Instead, data has been provided during months the business has been operational and then scaled up to represent an estimation across a 12-month period. As a result, the following information provides a summary of the carbon emission baseline for operations for a typical year. Data was provided by Melius Homes and through observations during the site visit. For any areas where data was incomplete, estimates have been made in consultation with Melius Homes. Full details of carbon emissions categorised by scopes, along with sources of data and any assumptions are in the Appendix.

Estimated Absolute Emissions (64.10 tCO₂e)



Estimated Net Emissions (57.29 tCO₂e)



Total Absolute Emissions (tCO ₂ e)	
Electricity	6.81
Net electricity*	0
Gas & Fuels	40.91
Transport	16.23
Water & wastewater	0.07
Waste	0.08
Total	57.29

*Melius Homes has indicated they have a REGO backed 100% renewable electricity tariff, thus net emissions for electricity can be reported as zero.

A green energy tariff enables the public reporting of 0 tCO₂e net electricity emissions, however it's still important to report both net and absolute energy emissions and implement measures to reduce absolute business emissions where possible. Figures and percentages in this report will be based on net carbon emissions. It is estimated that Melius Homes utilise 25% of the total electricity generated through onsite PV Panels, this electricity generated and used onsite results in zero emissions.

Key recommendations for reducing carbon emissions

Melius Homes total carbon emissions associated with annual business operations has been estimated to be **57.29 tCO₂e for a typical year**. Emissions associated with heating form a significant proportion of overall emissions and as such, also present the greatest opportunity for reducing carbon emissions.

Melius Homes currently lease their main warehouse space and have recently gone through a major retrofit to make the space fit for purpose. As such implementing recommendations related to invasive building and/or heating upgrades may not be feasible, or possible without commitment from the landlord. However, the full range of recommendations are included in this report to demonstrate potential carbon savings, to support making business cases for change and in case circumstances change in the future.

The top recommendations for carbon reduction have been identified based on what would be the most impactful and the most realistic to implement. The full list of carbon and environmental recommendations are provided within the report.

	Recommendation	Indicative Costs	Estimated Carbon Saved per year
1	Run an Employee Energy Engagement Campaign	£89 - £178	0.68 tCO₂e
2	Transition to a lower carbon heating system	Unknown	11.37 tCO₂e
3	Set an internal target to reduce business travel miles	£0	1.56 tCO₂e
4	Set an internal target to reduce staff commuting miles by car	£0	0.85 tCO₂e

Net Carbon Emission Breakdown	Total emissions (tCO ₂ e)	Scope 1 emissions (tCO ₂ e)	Scope 2 emissions (tCO ₂ e)	Scope 3 emissions (tCO ₂ e)
Energy				
Purchased electricity	6.81	-	4.96	1.85
<i>Displaced CO₂e due to Green Tariff/ Renewables used on site</i>	-6.81	-	-4.96	-1.85
Gas and fuels	40.91	34.82	-	6.09
Transport				
Business Travel	7.78	-	-	7.78
Employee Commuting	8.45	-	-	8.45
Water & Wastewater	0.07	-	-	0.07
Waste	0.08	-	-	0.08
Total	57.29	34.82	0	22.46
Proportion by Scope		60.8%	0%	39.2%

Please see the list below for references used throughout and resources for further information:

Carbon calculations: UK government guidance on company greenhouse gas reporting and [carbon conversion factors](#) are provided by the Department for Business, Energy & Industrial Strategy. 2021 Conversion Factors were used for the estimation of Melius Home's carbon footprint. Further guidance can also be found in the [Environmental Reporting Guidelines](#).

Carbon Trust guides for SMEs: energy and carbon saving estimations were informed by guidance documents available for SMEs through the [Carbon Trust](#).

Energy efficient lighting: Information found in [Zero Waste Scotland's Lighting Improvements Calculator](#) was consulted whilst estimating energy savings from lighting upgrades. The Carbon Trust also have useful resources for [assessing lighting options](#)

[Zero Waste Scotland resources for SMEs](#) (though Scotland-based, the resources can be useful for general information for environmental best practice and energy efficiency in businesses).

Please find further information on the Sustainability in Enterprise's funding:



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To find out more information about ERDF please visit:
https://ec.europa.eu/regional_policy/en/funding/erdf/