Impact Report for Bonds and Loans

Aster Group Framework for Sustainable Finance

SUSTAINALYTICS
a Morningstar company
IMPACT REPORTING

Impact Summary

Evaluation Date May 25, 2022
Issuer Location Wiltshire, United Kingdom

Sustainalytics has calculated the estimated impact achieved by the green bond issued by Aster Group in January 2021. Since issuance, GBP 176 million have been allocated in the Green Buildings category. Projects are located across the South of England. For a representative year of the bond's term to maturity, Sustainalytics has calculated 1,382 tonnes of avoided emissions in CO_2e.

£176M[1]
Allocated funds

1,382
Annual emissions avoided (tCO_2e)

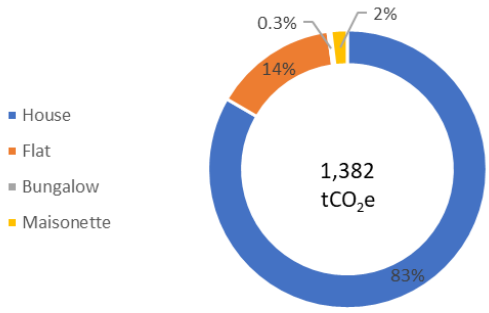
1,546
Homes

300
Cars driven for one year

1
Country

91K
Trees, yearly sequestration

Financed Projects by Avoided CO_2e Emissions and Number of Projects by Country



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[1] It should be noted that Aster spent a total of £210.9M on eligible projects in the reporting period but due to timing some of this expenditure refers to buildings that complete after this. The associated impact of the other development expenditure totaling £34.6M (see Appendix 1) will be reflected in future periods.

Introduction

Aster Group Limited ("Aster" or the "Company") as a developer of green building projects manages over 34,500 homes in the United Kingdom. In 2021, Aster issued a green bond and allocated the proceeds according to the Aster Group Framework for Sustainable Finance. Sustainalytics provided a Second-Party Opinion on the framework proposed by Aster, evaluating it as credible, impactful and aligned with the Green Bond Principles 2018 (GBP).[2]

Aster engaged Sustainalytics to quantify the environmental benefits of the projects financed with the proceeds from Aster's green bond. Using established methodologies, Sustainalytics has estimated avoided emissions from Aster's green building projects. This report presents the details of our findings, including a description of the methodology used to calculate the impacts.

Scope of Work and Limitations

Aster has engaged Sustainalytics to calculate the environmental impacts of the projects financed through the green bond issued. For this work, Sustainalytics relied on the data provided by Aster on the amount allocated and the technical data on the projects financed.

Sustainalytics' impact reporting is aligned with the June 2021 ICMA's *Handbook Harmonised Framework for Impact Reporting*.[3] The methodology and assumptions made for the impact calculation are outlined in the methodology chapter.

As part of this engagement, Sustainalytics exchanged information with various members of Aster's management team to understand the sustainability impact of its projects. Through these exchanges, Aster's representatives have confirmed that:

(1) They understand it is the sole responsibility of the Aster to ensure that the information provided is complete, accurate and up to date;

(2) They have provided Sustainalytics with all relevant information;

(3) Any provided material information has been duly disclosed in a timely manner.

Sustainalytics also reviewed relevant public documents and non-public information.

[2] The Green Bond Principles are administered by the International Capital Market Association and are available at https://www.icmagroup.org/greensocial-and-sustainability-bonds/green-bond-principles-gbp/
[3] ICMA Handbook Harmonised Framework for Impact Reporting, June 2021 at https://www.icmagroup.org/assets/documents/Sustainable-finance/2021-updates/Handbook-Harmonised-Framework-for-Impact-Reporting-June-2021-100621.pdf

Impact Findings

For reporting, Sustainalytics follows the ICMA Harmonised Framework for Impact Reporting.[4] This framework synthesizes market expectations and outlines recommendations for impact reporting to create a standardized reporting structure and to enhance the understanding of the impact to all stakeholders including bond investors.

Table 1 below provides a summary of the projects for which Sustainalytics has calculated the impacts at the portfolio level. Table 2 provides impact per building type. Further details can be found in the Appendix. These metrics represent the yearly impact of buildings financed in the period from April 2018 to March 2020.

Table 1: Summary of Impact - Portfolio Level

Gross Building Area	Allocated Amount	Average Project Lifetime	Financed Annual Emissions Avoided
m^2	GBP	Years	tCO_2e
119,584	176,334,067[5]	90	1,382

Table 2: Impact of Green Building Projects by Building Type

Building Type	Number of Homes	Gross Building Area	Allocated Amount	Financed Final Energy Reduction		Financed Emissions Avoided
		m^2	GBP	MWh	%	tCO_2e
House	1,175	98,030	145,394,981	5,069	43%	1,153
Flat	325	18,826	26,412,816	873	40%	198
Bungalow	6	554	478,106	21	32%	5
Maisonette	40	2,173	4,048,164	115	42%	26

[4] Harmonised Framework for Impact Reporting at https://www.icmagroup.org/assets/documents/Sustainable-finance/2021-updates/Handbook-Harmonised-Framework-for-Impact-Reporting-June-2021-100621.pdf

[5] In addition, the bond financed "Other Development expenditures" for GBP 34,610,265, bringing the total to GBP 210,944,332, but those expenditures refer to buildings completed after the reporting period and therefore the associated impact will be reflected in future periods.

Methodology

Sustainalytics developed its own methodologies for quantifying GHG avoidance and other metrics, including leveraging publicly available best-in-class methodologies, protocols and frameworks that are currently industry best practice. First, our estimation practices and general principles rely on the GHG Protocol[6]. Our methodologies are based on guidance provided by the International Financial Institutions' (IFIs)[7] Approach to GHG Accounting for Renewable Energy Projects[8], notably on calculation methodology and global emissions. In addition, we rely on the Partnership for Carbon Accounting Financials' (PCAF) Global Accounting Standard[9] for guidance on estimation where data is not readily available and assumptions must be made. Finally, the UN's Clean Development Mechanism[10] provides guidance and information, serving as the foundation for these and other methodologies, including those implemented in this report.

Green Buildings

It is assumed that new buildings displace existing buildings, and therefore the emissions associated with the new and existing generation. The approach followed in order to derive the carbon avoidance is based on the comparison between:

a) The emissions of the green building projects. To the extent available, the reporting is based on metered energy consumption. If such information is not available, estimates for the relevant projects are based on the building certificates, standards or country-level averages.
b) The baseline emissions, or emissions occurring in the absence of the projects. This figure is based on the estimated energy intensity of comparable buildings, or in the case of refurbishments, the prior emissions.[11]

Data Sources and Assumptions

- For the projects included in this report, building data including gross building area, location and green building certificates were provided by Aster and used as inputs for the calculations.
- Certification estimates were used to model baseline energy consumption, which are based on engineering models using building characteristics. In this case, the SAP ratings were used to model energy consumption for each home.
- Based on location and building characteristics such as type and size, publicly available statistical models are used to estimate the energy intensity of the baseline building.
- The baseline emission factors are based on the energy mix for typical buildings in the UK, and a weighted average of current and future energy intensities.
- The grid emission factors for the UK were sourced from IFI.[11] To account for emissions from upstream activities, Sustainalytics applies an additional, indirect emissions factor.[12]

[6] The Greenhouse Gas Protocol provides standards, guidance, tools and training for business and government to measure and manage climate-warming emissions (https://ghgprotocol.org/).
[7] Close to 25 institutions are currently members of the IFI Technical Working Group, and include multilateral development banks, such as the Asian Development Bank, African Development Bank, European Bank for Reconstruction and Development, European Investment Bank, Inter-American Development Bank, and the World Bank Group. The UNFCCC secretariat has been a member of the IFI TWG since 2015.
[8] The IFI Approach to GHG Accounting for Renewable Energy is in accordance with the International Approach to Greenhouse Gas Accounting. A technical working group of IFI's have agreed to a common methodology and set of emissions factors for GHG accounting of electricity production from renewable energy projects.
[9] PCAF is a group of leading international financial institutions that launched a global initiative to develop a global GHG accounting standard to increase the number of financial institutions applying the standard and ultimately make GHG accounting common practice within the financial industry (https://carbonaccountingfinancials.com/).
[10] CDM, Methodology Booklet, at: https://cdm.unfccc.int/methodologies/documentation/index.html
[11] To calculate the greenhouse gas emissions associated with energy consumption, harmonized grid emission factors from the UNFCCC are used. Harmonized Grid Emission factor data set can be accessed at: https://unfccc.int/climate-action/sectoral-engagement/ifis-harmonization-of-standards-for-ghg-accounting/ifi-twg-list-of-methodologies
[12] Government of the UK, Department for Business, Energy & Industrial strategy, "Government conversion factors for company reporting of greenhouse gas emissions", at: https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting

The allocated amount covers all construction and other building costs for the period in question. The number of homes on which impact is assessed were completed in that same period, but some of the costs are allocated to homes whose impact was not accounted for in the report. This creates a discrepancy between the allocated funds and the number of completed homes, which is due to the continuous nature of projects when compared with the number of units completed in a specific reporting period. This discrepancy means that the allocated amount might include some costs from homes not included in the bond. The discrepancy is estimated to be approximately 5% of the allocated amount.

Appendix 1: Detailed Impacts of Green Buildings by Building Type

Building Type	Number of Homes	Gross Building Area	Allocated Amount	Share of total project financing	Project Lifetime	Energy intensity	Energy Reduction[12]	Project Direct Emissions[13]	Project Indirect Emissions[14]	Project Avoided Emissions
		m^2	GBP	%	Years	kWh/m^2	%	tCO_2e	tCO_2e	tCO_2e
House	1,175	98,030	145,394,981	100	90	69	43%	1,280	250	1,153
Flat	325	18,826	26,412,816	100	90	71	40%	254	49	198
Bungalow	6	554	478,106	100	90	78	32%	8	2	5
Maisonette	40	2,173	4,048,164	100	90	72	42%	30	6	26
Other Development expenditure			34,610,265							
Total	**1,546**	**119,584**	**210,944,332**	**100%**	**n/a**	**n/a**	**42%**	**1,572**	**307**	**1,382**

[13] Direct Emissions are the emissions from the energy consumed directly on the premises
[14] Indirect Emissions are the emissions resulting from the extraction, refining and transportation of primary fuels, including transmission and distribution losses, before their use in the generation of electricity

Disclaimer

About Sustainalytics, a Morningstar Company

Sustainalytics, a Morningstar Company, is a leading ESG research, ratings and data firm that supports investors around the world with the development and implementation of responsible investment strategies. For more than 30 years, the firm has been at the forefront of developing high-quality, innovative solutions to meet the evolving needs of global investors. Today, Sustainalytics works with hundreds of the world's leading asset managers and pension funds who incorporate ESG and corporate governance information and assessments into their investment processes. Sustainalytics also works with hundreds of companies and their financial intermediaries to help them consider sustainability in policies, practices and capital projects. With 17 offices globally, Sustainalytics has more than 1500 staff members, including more than 500 analysts with varied multidisciplinary expertise across more than 40 industry groups.

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