

Carbon Trust Second Party Opinion Statement

To: Barclays PLC (the “**Bond Issuer**”)

Summary

The Bond Issuer’s Green Bond Framework (the “**Framework**”) provides a forward-looking framework for green bonds aligned with a mortgage lending strategy consistent with de-carbonisation of the residential property sector in line with limiting global warming to no more than 2°C above pre-industrial levels. The Bond Issuer has adopted a robust Framework for the financing and refinancing of mortgages on energy efficient residential properties that is aligned with the four components of the Green Bond Principles 2017: Use of Proceeds, Process for Project Evaluation and Selection, Management of Proceeds, Reporting.

An amount equal to the proceeds of the Bonds will be allocated by the Bond Issuer to finance/ refinance eligible energy efficient residential mortgage loans based on Energy Performance Certificates (“**EPCs**”) data in England and Wales. The proceeds of the Bonds will be allocated by the Bond Issuer within its corporate group for use by the relevant mortgage lending companies in accordance with the Framework. The Framework defines eligible projects within the residential housing stock located in England and Wales that support the objective of promoting a transition to a low-carbon and climate-resilient economy out to 2050 and identifies clear procedures for investor reporting. The Framework and supporting procedure documents have a strong governance structure that includes a yearly reporting mechanism verified by an independent assurer.

Terms of Engagement

Carbon Trust Assurance Limited (“**CTA**”) was commissioned by the Bond Issuer to assist in the development of a robust Framework for the issuance of green bonds related to energy efficient residential properties and to provide a second party opinion regarding the issuance by the Bond Issuer of the Barclays PLC Green Bonds (the “**Bonds**”) under the Framework and the Bonds’ alignment with International Capital Markets Association’s (“**ICMA**”) ‘*The Green Bond Principles, Voluntary Process Guidelines for Issuing Green Bonds*’¹ (“**GBP**”), 2017. CTA’s role was to act as a ‘Consultant Reviewer’ as defined by the GBP and provide a second party opinion as contemplated by the GBP by reviewing the Framework.

Barclays PLC is a British multinational bank and financial services company headquartered in London and is proposing to issue Bonds under this Framework. The Issuer will use an amount equal to the proceeds of the Bonds to allocate to finance/ refinance mortgages on certain energy efficient residential properties in England and Wales based on EPC data. The mortgage lending will be done by another company in the Bond Issuer’s group to whom the proceeds will be allocated in accordance with normal internal procedures. In order to provide this second party opinion, the Carbon Trust reviewed relevant documents and held conversations with the Issuer’s management to understand the use of proceeds, management of proceeds and reporting aspects of its Bonds, as well as the sustainability strategy of the company as a whole.

No opinion or assurance is provided regarding the financial performance of the Bonds or the value of any investments in the Bonds or any asset deriving value from the Bonds. The Carbon Trust’s objective has been to provide an opinion on whether the Bonds have met the criteria described in the basis of opinion set out below.

Basis of Opinion

The Bond Issuer has established the Framework to underpin the Bonds and provide evidence that they are structured to meet the principles and criteria laid out in the GBP. The GBP are a set of voluntary process guidelines for issuing green bonds that “enable capital-raising and investment for new and existing projects with environmental benefits”ⁱⁱ.

The GBP is comprised of four core components and CTA reviewed the alignment of the proposed Bonds with them, namely:

- Principle one: Use of Proceeds

The proceeds of the bonds should be used to finance or refinance Green Projects which should be appropriately described in the legal documentation of the security. All designated Green Project categories should provide clear environmental benefits, which will be assessed and, where feasible, quantified by the issuer. Eligible Green Projects are described in the GBP Principles.

- Principle two: Process for Project Evaluation and Selection

The issuer of a green bond should outline a process to determine how the projects fit within the eligible Green Projects categories identified in the GBP and the process for determining eligibility and the criteria used. The process should consider the environmental sustainability objectives of the proposed bond.

- Principle three: Management of Proceeds

The net proceeds of green bonds should be credited to a sub-account, moved to a sub-portfolio or otherwise tracked by the issuer in an appropriate manner and attested to by a formal internal process linked to the issuer’s lending and investment operations for Green Projects. A declaration should be made as to how any unallocated funds are managed.

- Principle four: Reporting

Issuers should make, and keep, readily available up to date information on the use of proceeds to be renewed annually until full allocation, and as necessary thereafter in the event of new developments.

Relevant Documentation

The following information and documents have been reviewed in order to form the basis of the opinion.

- Barclays’s Green Bond Framework
- Barclay’s Internal Procedures Document dated 7th September 2017
- Barclays Mortgage and EPC Dataset Spreadsheet dated 7th September 2017
- Department for Communities and Local Government (“**DCLG**”) EPC Database
- SAS Software EPC-Mortgage Cross-matching Code

Management Responsibility

The management of the Bond Issuer are responsible for the following (the “**Procedures**”):

- designing, implementing and maintaining internal controls relevant to the preparation and issuance of the Bonds that are free from material misstatement, whether due to fraud or error;
- selecting and/or developing a suitable green framework to underpin the issuance and management of the Bonds;
- developing a suitable eligibility criteria and process for selecting investments;
- reporting relevant information on the use of proceeds; and
- maintaining alignment with the GBP criteria.

Our Responsibilities

Our responsibility is to plan and perform our work to form an opinion on whether the Framework for the Bonds has been prepared in accordance with the principles of the GBP, as described in the Basis of Opinion and to report to the Bond Issuer in the form of a ‘Second Opinion’ based on the work undertaken and the evidence obtained.

We have not performed any work, and do not express any conclusion regarding the ongoing effectiveness of the application of the Procedures.

Assurance Standards

We performed our work in accordance with CTA’s assurance methodology which is based on the International Standard on Assurance Engagements 3000 (“**ISAE 3000**”). However, this second opinion is not an assurance opinion in accordance with ISAE 3000.

Our Assurance Activities

Our objective was to assess whether the the Bonds are structured in accordance with the principles of the GBP. We planned and performed our work to obtain all the information and explanations that we believe were necessary to provide a basis for our opinion.

Our work included, but was not restricted to:

- Conducted interviews with the Verifier and key staff responsible for the Bonds to obtain an understanding of the organisation, its environmental objectives and intended use of proceeds;
- Reviewed the Issuer’s Framework, including processes, systems and controls in place for management of proceeds, investment areas for proceeds and intended types of temporary investment instruments for the management of any unallocated proceeds;
- Checked the list of type of projects, which are proposed to be associated with the Bonds and their conformance with eligibility requirements specified in the GBP; and
- Assessment of the cross-matching and prioritisation process of EPC data to mortgages identified by the Bond Issuer.

CTA Competence

CTA ensures the selection of appropriate individuals to carry out the work in order to give this opinion, based on their qualifications, training and experience. The outcome of all opinion conclusions are internally quality assured by senior management.

Our Opinion

Based on the work we have undertaken and the evidence provided by the Bond Issuer, we believe that the proposed Bonds and the related Procedures comply with the principles of the GBP. Set out below are our specific findings and statements in relation to each of the GBP as they relate to the Bonds:

- Principle one: Use of Proceeds

The proceeds of the Bonds will be allocated to finance/ refinance existing mortgage loans from English and Welsh residential buildings that represent the top 15% in terms of environmental performance based on estimated Carbon Intensity (kgCO₂/m²/year).

Estimated carbon intensity data for buildings is available as part of the EPC Register released by the DCLG. That data was matched to mortgages identified by the Bond Issuer. Beyond providing mortgage loans in relation to properties that at the time of inclusion perform in the top 15% of the local UK market, the Framework developed by the Issuer aligns with a long-run trajectory towards the UK Government's linear target of 'close to zero' carbon emissions for residential properties by 2050.

Green buildings comprise one of the project categories recognized by the GBP as addressing key areas of environmental concern. Globally, the buildings sector is the largest energy-consuming sector, accounting for one-third of final energy consumption. According to the International Energy Agency ("IEA")ⁱⁱⁱ, limiting global temperature rises to 2°C above the pre-industrial level will require a 77% reduction in total CO₂ emissions in the building sector compared to current levels. Based on the Carbon Trust's opinion, energy efficiency measures in residential buildings will reduce Greenhouse Gas (GHG) emissions and help the UK meet its climate and sustainability targets.

- Principle two: Process for Project Evaluation and Selection

The Bond Issuer's process for selecting eligible mortgages is based on the cross-matching of its mortgage property data against residential properties within the EPC Register. Once EPC data has been cross-matched to properties in the Bond Issuer's mortgage book, additional filtering is undertaken to account for target carbon intensity levels and encumbrance.

Barclays has demonstrated a clear decision making process for selecting mortgages and filters assets as outlined in internal documents. This filtering process furthermore takes steps to reduce risk in relation to the expiry of EPCs over the duration of the Bonds. The Carbon Trust is of the view that EPCs represent the best widely-available metric for determining the environmental sustainability of residential properties in the UK at present and is confident that selected mortgages will adhere to the criteria of the GBP. EPCs are recognized as an appropriate basis for a green bond on account of the certificate being mandated by legislation whenever a property is sold, built or rented.

- Principle three: Management of Proceeds

Proceeds from the issuance of the Bonds will be allocated to finance/ refinance existing mortgages that meet the eligibility criteria outlined above. The Bond Issuer will track and monitor the size of allocated eligible mortgage assets proactively on a monthly basis with preference given to mortgages with EPC certificates that are valid until the maturity date of the Bonds, as well as mortgages with recent origination dates.

Mortgages that have been redeemed in full or where the EPC certificate is no longer valid will be replaced with mortgage loans that meet the eligibility criteria noted above. The Bond Issuer will seek to ensure that the aggregate amount outstanding under all eligible mortgages is larger than the amount outstanding under the Bonds at any point in time.

On a monthly basis, if there is a shortfall between the aggregate amount outstanding under the eligible mortgages and the amount outstanding under the Bonds that cannot be covered by eligible mortgage assets, the Bond Issuer will invest excess proceeds into a liquidity pool comprised of temporary investment instruments that are cash, or cash equivalents, within their Treasury function.

The Bond Issuer additionally intends to ensure that the Bonds will be verified to the Climate Bonds Initiative (the “CBI”) Standard, which ensures a high level of transparency.

- Principle four: Reporting

The Bond Issuer will publish an annual investor report for the Bonds that contains both information on the financial constitution of the Bonds and the estimated environmental impact assessment of the mortgage loans that have been financed with the Bonds proceeds. No independent assessment or calculations will be required to determine the environmental performance of the eligible mortgage loans financed or refinanced by the proceeds, as EPCs already contain information on Carbon Intensity (measured in $\text{kgCO}_2/\text{m}^2/\text{year}$) that is included alongside the EPC data for each individual property.

The Carbon Trust affirms that the reporting process is transparent, aligns with the GBP, will be verified by an independent assurer on a yearly basis and be made available to investors.

This opinion shall be read in the context of the inherent limitations of the Procedures and this statement's intended use.



Carbon Trust Assurance Limited
14 September 2017



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This second opinion statement ("Opinion") is given by Carbon Trust Assurance Limited ("CTA") and is addressed solely to the Bond Issuer in accordance with the terms of the engagement contract between us and the Bond Issuer. Those terms permit disclosure to other parties (whether by publication on the website of the International Capital Markets Association Green Bond Resource Centre (the "GBRC") or otherwise), solely for the purpose of enabling the Bond Issuer to show that it has obtained a second opinion as contemplated by the GBP in connection with the Bonds. We have not considered the interest of any other party in the Opinion. To the fullest extent permitted by law, we accept no responsibility and deny any liability to any other party for our work, for this statement or for the conclusions we have reached. CTA will not accept any form of liability for the substance of the Opinion and/or any liability for damage arising from the use of the Opinion and/or the information provided in it. As the Opinion is based on information made available by the Bond Issuer, CTA does not warrant that the information presented in this Opinion is complete, accurate or up to date. Nothing contained in this Opinion shall be construed as to make a representation or warranty, express or implied, regarding the advisability of investing in any securities or any asset whose value is derived from any securities. Any person other than the Bond Issuer who obtains access to the Opinion or a copy thereof and chooses to rely on it will do so at its own risk. Furthermore, this Opinion shall in no event be interpreted and construed as an assessment of the economic performance and credit worthiness of the Issuer or the Bond. The issuance and the performance of the Bond Issuer and the Bond is outside the scope of this engagement. We have consented to the inclusion of the Opinion on the GBRC or in such other manner as ICMA shall from time to time use for making second opinions rendered in respect of Green Bonds available to the public. We reserve the right to withdraw such consent at any time.

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ⁱ ICMA. (2017). The Green Bond Principles 2017. Paris: ICMA.

ⁱⁱ ICMA. (2017). The Green Bond Principles 2017. Paris: ICMA.

ⁱⁱⁱ IEA. (2013). Transition to Sustainable Buildings: Strategies and Opportunities to 2050. Paris: IEA.