

# Green Home Finance Principles

# Introduction

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The green home finance market seeks to support and facilitate activities that enable the acquisition or construction of green homes, or activities that lower the environmental impact of housing through reducing energy consumption, carbon emissions and material use, as well as adapting homes to reflect the need for climate resilience.

**The GHFPs seek to create an industry-recognised framework of market standards and guidelines, which provides a consistent and transparent methodology for the application of financial proceeds towards the purchase, retrofit, or self-build construction of domestic buildings.**

The Green Home Finance Principles (GHFPs) seek to create an industry-recognised framework of market standards and guidelines, which provides a consistent and transparent methodology for the application of financial proceeds towards the purchase, retrofit, or self-build construction of domestic buildings that achieves verifiable environmental benefits.

The GHFPs comprise voluntary recommended process guidelines that seek to promote integrity in the development of the green home finance market by clarifying the circumstances in which a retail financial solution may be categorised as a Green Home Financing. It is hoped that the GHFPs will become a market standard for Green Home Financings such as, but not limited to, green mortgages and retrofit loans.

The GHFPs may be applied by financial institutions on a product-by-product or deal-by-deal basis, depending on the underlying characteristics of the transaction. Financial institutions should determine how best to adopt and apply the GHFPs within their individual organisations.

The GHFPs are intended for broad use across the domestic property market, in order to promote the improvement of energy efficiency, climate resilience, material use or the reduction of carbon emissions across domestic properties as a whole.

To learn more about the UK's Green Mortgage Market, please visit: [www.greenfinanceinstitute.co.uk/green-mortgages](http://www.greenfinanceinstitute.co.uk/green-mortgages)

# Green Home Financing

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A Green Home Financing is any type of retail financial solution made available to finance or re-finance, in whole or in part, the following:

- a)** the retrofitting of domestic buildings (single-family or multi-family) to achieve verifiable improvements in their energy efficiency, carbon emissions, material use or climate resilience; or
- b)** the acquisition of domestic buildings (single-family or multi-family) that meet or exceed relevant market standards on energy efficiency, carbon emissions, material use or climate resilience; or
- c)** the self-build construction of domestic properties (single-family or multi-family) that meet or exceed relevant market standards on energy efficiency, carbon emissions, material use or climate resilience.

Green Home Financings must align with the four core components of the GHFPs, as set out below. Green Home Financings should not be considered interchangeable with other financial products that are not aligned with the four core components of the GHFPs. Financial institutions should determine the appropriate method of aligning with the four core components of the GHFPs.

## Four Core Components

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The GHFPs set out a clear framework, enabling all financial institutions to clearly understand the characteristics of a Green Home Financing, based around the following four core components:

- 01. Use of Proceeds**
- 02. Process for Project Evaluation and Selection**
- 03. Management of Proceeds**
- 04. Reporting**

# 01.

## Use of Proceeds

The fundamental determinant of a Green Home Financing is the utilisation of the funds for Green Home Projects, which should be appropriately described in the finance documents. All designated Green Home Projects should achieve verifiable environmental benefits and seek to mitigate adverse environmental and social impacts associated with the proposed projects.

Where funds are to be used, in whole or part, for refinancing, it is recommended that borrowers provide an estimate of the share of financing versus refinancing. Similarly, where funds are to be used in part for financing a Green Home Project(s), it is recommended that borrowers provide an estimate of the share of funding put towards the Green Home Project(s).

# 02.

## Process for Project Evaluation and Selection

The borrower of a Green Home Financing should communicate clearly to the lender and/or investor the proposed Green Home Project(s) and where possible, how this relates to improvements in energy efficiency, climate resilience, material use or the reduction of carbon emissions of the property.

The GHFPs provide indicative categories of Green Home Projects (see Appendix 1). Financial institutions are encouraged to use this foundation to develop their own robust criteria, referencing recognised industry standards as relevant. For the avoidance of doubt, the GHFPs are designed to promote integrity in the development of the green home finance market, not to take a position on the green technologies, standards, claims and declarations that are optimal for undertaking a Green Home Project.

The GHFPs recognise that national and international initiatives are considering standards and verification frameworks for the green home market (see Appendix 2). These may provide further guidance to lenders, investors and borrowers as to what may be considered an eligible Green Home Project, including how to verify resulting environmental benefits. In addition, there are institutions that provide independent analysis, advice and guidance on the quality of different environmental solutions and practices.

# 03.

## Management of Proceeds

Green Home Financings should be appropriately tagged in the internal systems of the lender and/or investor, in order to maintain transparency and promote the integrity of the product.

# 04.

## Reporting

Evidence of an improvement in the energy efficiency, carbon emissions, material use or the climate resilience of the property, or evidence that the property exceeds relevant market standards, should be reported by the borrower to the lender and/or investor, or captured by the lender and/or investor via other reliable methods, as soon as is practicable. The improvement may be evidenced by an industry-recognised metric or methodology, for example:

- an improvement in Energy Performance Certificate (EPC) rating;
- an improvement in Standard Assessment Procedure (SAP) rating;
- an improvement in other suitable property metrics;
- verification by an external review provider; or
- verification by a Government-endorsed organisation such as TrustMark.

The GHFPs do not require financial institutions to publicly disclose information related to Green Home Financings. However, financial institutions can consider public disclosure of information related to Green Home Financings, where considered appropriate and in compliance with the General Data Protection Regulation (GDPR).

# Appendix 1:

## Directory of indicative categories of Green Home Projects

This non-exhaustive directory sets out indicative categories of Green Home Projects, listed in no specific order. The GHFPs encourage financial institutions to use this foundation to develop their own robust practices, referencing recognised industry standards as relevant. This directory is relevant as of 28 September 2021.

### Retrofitting of domestic buildings

- **Energy efficiency measures:** Including tank and pipe insulation; draught proofing; loft insulation; low-energy lights; insulation to existing envelope components, such as external walls, roofs, lofts, basements and ground floors (including measures to ensure airtightness and reduce the effects of thermal bridges); cavity wall insulation; internal wall insulation; double glazing; insulated render; external wall insulation; energy-efficient external doors; etc.
- **Heating measures:** Including air source heat pumps; ground source heat pumps; micro combined heat and power (micro-CHP); heating controls; replacement of old pumps with efficient circulating pumps; installation and replacement of heating, ventilation and air conditioning (HVAC) and domestic hot water systems, equipment related to district heating; etc.
- **Renewable energy generation:** Including solar hot water; solar photovoltaic; rainfall capture; etc.
- **Resilience measures:** Including BS 851188 standard products to enhance resistance to flooding, such as flood doors and windows, demountable barriers; measures to enhance resilience to flooding, such as resilient wall and floor finishes; resilient insulation; measures to enhance resistance to heatwaves such as external shutters, external insulation; etc.
- **Material use and circular economy:** Including information on the use of sustainable materials and embodied carbon; recycling, reusing and repurposing of existing materials and components within a retrofit or construction project; etc.
- **Acquisition of domestic buildings:** Including homes that exceed local, national or industry standards for energy efficiency, environmental impact, climate resiliency or other sustainability metrics; etc.
- **Self-build construction of domestic buildings:** Including self-build and custom build homes that exceed local, national or industry standards for energy efficiency, environmental impact, climate resiliency or other relevant sustainability metrics; use of design and construction methods that minimise the environmental impact, embodied carbon, whole-life emissions and/or biodiversity impact of a self-build or a custom build home; etc.

# Appendix 2:

## Directory of national and international initiatives on standards and frameworks for the domestic retrofit market

This non-exhaustive directory of national and international initiatives, listed in no specific order, sets out a selection of standards and frameworks looking to support improvements in the energy efficiency, carbon emissions, material use and/or the climate resilience of domestic properties. This directory is relevant as of 28 September 2021.

### Frameworks and standards currently operational in the UK

#### 1. AECB Lifetime Carbon Standard

The aim of the AECB Lifetime Carbon Standard is to encourage the use of simple operational and embodied carbon calculations as part of the design process in UK construction projects.<sup>1</sup> In order to satisfy the criteria, two options exist for what should be assessed and reported. The first is operational carbon (related to heat and power) during the design phase; the other is embodied carbon (lifetime carbon, for no less than two alternative whole building construction options). PHribbon is the required software to certify to the AECB Lifetime Carbon Standard compliance and has been developed to allow operational and embodied carbon calculations to be carried out easily.

#### 2. AECB Retrofit Standard

The AECB Retrofit Standard combines a whole house 'fabric first approach' with ambitious energy efficiency measures.<sup>2</sup> Individual self-builders and larger-scale developers can positively contribute to a low-carbon future by adopting the AECB Retrofit Standard when improving their buildings. Compliance with the AECB Retrofit Standard requires the building to be modelled using a Passive House Planning Package (PHPP) verification sheet. The certification process can be done through an architect/engineer/other experienced consultant or contractor suitably experienced. Evidence needs to be uploaded to the AECB Low Energy Building Database.

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<sup>1</sup> <https://www.aecb.net/aecb-lifetime-carbon-standard/>

<sup>2</sup> <https://www.aecb.net/aecb-retrofit-standard/>

### 3. BREEAM

BREEAM is a sustainability assessment method for master-planning projects, infrastructure and buildings. It provides third-party certification of an asset's environmental, social and economic sustainability performance, using standards developed by the Building Research Establishment (BRE).

Within BREEAM there is a standard that can be used to assess the refurbishment and fit-out of most types and uses of existing buildings, including homes. In the UK, there are separate standalone technical standards for nondomestic and domestic projects.<sup>3</sup>

BREEAM Domestic Refurbishment is a performance-based assessment method and certification scheme for domestic buildings undergoing refurbishment. The primary aim of this scheme is to improve the environmental performance of existing dwellings in a robust and cost-effective manner.

### 4. Climate Bonds Initiative's Low Carbon Buildings Criteria

The Climate Bonds Initiative's Low Carbon Buildings Criteria sets out what building assets are eligible for certification under the Climate Bonds Standard.<sup>4</sup> They are divided into three different types, including residential buildings. This category includes buildings used for housing that includes single family, multi-family, and mixed use where more than 50% of the asset is residential. Subcategories of residential buildings have different emissions performance profiles. Existing instruments such as local building codes, energy rating schemes (e.g. US Energy Star) and energy labelling schemes (e.g. Energy Performance Certificates in the EU) are leveraged as emission performance proxies.

### 5. Code of Practice and guidance for property flood resilience – RP1055

Codes of Practice (CoP) are under development

on planning for property flood resilience, including CIRIA and BRE's Code of Practice and guidance for property flood resilience – RP1055. The standalone CoP for property flood resilience was launched in February 2020. The associated CoP guidance C790 for property flood resilience and complementary guides for households and businesses as well as local authority planners was published in January 2021.<sup>5</sup>

Also of relevance is new standard BS 851188, which replaces the previous publicly-available specification for flood protection products and systems, PAS 1188.

### 6. EDGE Building Certificate

An innovation of International Finance Centre, a member of the World Bank Group, EDGE ("Excellence in Design for Greater Efficiencies") was launched in 2014 and provides market leaders with the opportunity to gain a competitive advantage by differentiating their products and adding value to the lives of their customers. Currently operating in 170 countries, it is funded by the UK Government amongst others, and responds to the need for a measurable and credible solution to prove the business case for building green and unlocking financial investment. EDGE includes a cloud-based platform to calculate the cost of going green and utility savings.<sup>6</sup>

### 7. Energiesprong UK

Energiesprong is a whole house refurbishment and new build standard, offered with a specialised funding approach.<sup>7</sup> After an Energiesprong retrofit a home is net zero energy, meaning it generates the total amount of energy required for its heating, hot water and electrical appliances. This can be achieved by using new technologies, such as prefabricated facades, insulated rooftops with solar panels, smart heating, and ventilation and cooling installations.

<sup>3</sup> <https://www.breeam.com/discover/technical-standards/refurbishment-and-fit-out/>

<sup>4</sup> <https://www.climatebonds.net/standard/buildings>

<sup>5</sup> <https://www.ciria.org/ItemDetail?ProductCode=C790F&Category=FREEPUBS>

<sup>6</sup> <https://edgebuildings.com/>

<sup>7</sup> <https://www.energiesprong.uk/about>

## 8. Energy Performance Certificate (EPC) and Standard Assessment Procedure (SAP)

An EPC is required for properties when constructed, sold or let. The EPC provides details on the energy performance of the property and what can be done to improve it, containing:

- information about a property's energy use and typical energy costs;
- recommendations about how to reduce energy use and save money.

An EPC gives a property an energy efficiency rating from A (most efficient) to G (least efficient), alongside a numerical score out of 100, and is valid for 10 years.

The SAP is the methodology used to generate an EPC, produced by an accredited assessor registered with a certification body.<sup>6</sup>

## 9. Future Homes Standard

The Future Homes Standard will require new build homes to be future-proofed with low carbon heating and world-leading levels of energy efficiency; it will be introduced by 2025.<sup>7</sup>

## 10. Home Quality Mark (HQM)

The BRE had developed the HQM that is a standard, suitable for all types of new homes, that ensures the building of more high-quality new homes that fit our current and future needs is a national priority.<sup>8</sup> A home can be awarded a HMQ certificate when it has been independently verified to show that it goes beyond minimum standards for sustainability and quality. Once the minimum requirements for an HQM certificate are met, projects can achieve star ratings in a variety of ways that are of value to the people who will live in the homes being assessed.

## 11. London Energy Transformation Initiative (LETI) Embodied Carbon Primer

LETI have published a supplementary guidance to the Climate Emergency Design Guide, that is aimed at supporting project teams to design buildings that deliver ambitious embodied carbon reductions.<sup>9</sup>

## 12. Minimum Energy Efficiency Standard (MEES)

The Domestic Minimum Energy Efficiency Standard (MEES) Regulations set a minimum energy efficiency level for domestic private rented properties. The Regulations apply to all domestic private rented properties that are let on specific types of tenancy agreement and legally required to have an Energy Performance Certificate (EPC).<sup>10</sup>

## 13. Passivhaus and EnerPHit Standards

Passivhaus is an international low-energy design standard.<sup>11</sup> Passivhaus buildings achieve a 75% reduction in space heating requirements, compared to standard practice for UK new-build. Passivhaus certification is also possible for very low-energy retrofit projects. EnerPHit relaxes some criteria of the Passivhaus standard, where the existing architecture and conservation issues mean that meeting the Passivhaus standard is not feasible.

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<sup>8</sup> <https://www.homequalitymark.com/professionals/standard/>

<sup>9</sup> <https://www.leti.london/ecp>

<sup>10</sup> [https://www.gov.uk/guidance/domestic-private-rented-property-minimum-energy-efficiency-standard-landlord-guidance#:~:text=The%20Domestic%20Minimum%20Energy%20Efficiency,private%20rented%20properties%20that%20are%3A&text=legally%20required%20to%20have%20an%20Energy%20Performance%20Certificate%20\(%20EPC%20\)](https://www.gov.uk/guidance/domestic-private-rented-property-minimum-energy-efficiency-standard-landlord-guidance#:~:text=The%20Domestic%20Minimum%20Energy%20Efficiency,private%20rented%20properties%20that%20are%3A&text=legally%20required%20to%20have%20an%20Energy%20Performance%20Certificate%20(%20EPC%20))

<sup>11</sup> [https://www.passivhaustrust.org.uk/what\\_is\\_passivhaus.php](https://www.passivhaustrust.org.uk/what_is_passivhaus.php)

#### **14. Publicly Available Specifications (PAS)**

PAS are fast-track standards, specifications, codes of practice or guidelines developed by sponsoring organisations to meet an immediate market need. Sponsored by the UK Government, PAS 2035 (PAS 2035:2019: Retrofitting Dwellings for Improved Energy Efficiency – Specification and Guidance) is an overarching document in the retrofit standards framework, covering how to assess dwellings for retrofit, identify improvement options, design and specify energy efficiency measures and monitor retrofit projects. This is the specification for installers to follow when selecting materials, components and methods of installation.

PAS 2030, which was redeveloped in conjunction with PAS 2035, continues to cover the installation, commissioning and handover of retrofit projects.

#### **15. RICS Whole Life Carbon Assessment for the Built Environment**

The 1st edition of RICS' guidance on Life Carbon Assessment sets out specific mandatory principles supporting guidance for the interpretation and implementation of EN 15978 methodology (that assesses the environmental performance at the building-level). The objectives of the professional statement includes providing a consistent whole life carbon assessment implementation plan and reporting structure for built projects, and promoting the reliability of whole life carbon assessments by acting as a solid reference for the industry.

#### **16. SuperHomes Rating Scheme**

The Rating Scheme is a retrofit assessment methodology, funded by MSC Charitable Foundation and ran by the National Energy Foundation, that provides a comparable benchmark of exemplar retrofit performance. It is designed to encourage whole-house retrofit, is applicable to all housing tenures, and is able to recognise all types of retrofits that are carried out as a single operation or one that is carried out incrementally over time. The Rating Scheme has been designed to align with the provisions of PAS 2035 and PAS 2030 TrustMark.

#### **17. TrustMark**

TrustMark is the Government Endorsed Quality Scheme covering work a consumer chooses to have carried out in or around their home.

TrustMark was established in 2005 in conjunction with Government, industry bodies and consumer protection groups. In response to the industry led, Government-commissioned Each Home Counts review, the TrustMark remit has expanded to include all Repair, Maintenance and Improvement (RMI), Energy Efficiency and Retrofit measures.

TrustMark delivers consumer confidence through its network of Scheme Providers and their Registered Businesses. TrustMark Scheme Providers commit to meeting the Framework Operating Requirements, and ensuring their Registered Businesses maintain required standards of technical competence, customer service and trading practices.<sup>12</sup>

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<sup>12</sup> <https://www.trustmark.org.uk/aboutus/what-is-trustmark>

# Frameworks and standards currently operational outside the UK

## 1. The Circular Economy Finance Guidelines

Guidelines published in 2018 by members of the FinanCE working group alongside FGGM and the Ellen MacArthur Foundation. The guidelines, also developed with the same four pillars as the GHFPs, aim to promote and develop the role finance can play in the transition, beginning with a definition of the circular economy and circular economy finance.<sup>14</sup>

## 2. The Energy Efficient Mortgages Action Plan (EeMAP)

The EeMAP Initiative aims to create a standardised “energy efficient mortgage”, according to which building owners are incentivised to improve the energy efficiency of their buildings or acquire an already energy efficient property, by way of preferential financing conditions linked to the mortgage. EeMAP defines Energy Efficient Mortgages (EEMs) as mortgage products intended to finance the purchase/construction and/or renovation of both residential (single-family and multi-family) and commercial buildings where there is evidence of: (1) energy performance which meets or exceeds relevant market best practice standards in line with current EU legislative requirements; and/or (2) an improvement in energy performance of at least 30%.<sup>15</sup>

## 3. EU Taxonomy for sustainable activities

The EU Taxonomy provides a tool to help investors, companies, issuers and project promoters navigate the transition to a low carbon, resilient and resource-efficient economy. The EU Taxonomy sets performance thresholds (referred to as ‘technical screening criteria’) for sectors including building and construction. The performance thresholds aim to help companies, project promoters and issuers access green financing to improve their environmental performance, as well as helping to identify which activities are already environmentally friendly.

## 4. Minergie home label – Switzerland

Minergie is a Swiss building label for new and retrofitted low energy consumption buildings, providing quality assurance in planning, construction and operation. Minergie provides three levels of building standards, based on a scale of improvements in comfort and energy.

## 5. United States of America

For an extensive directory of the different building regulations that are currently operational within the USA, please follow this link: [www.wbdg.org/resources/green-building-standards-and-certification-systems](http://www.wbdg.org/resources/green-building-standards-and-certification-systems)

<sup>14</sup> <https://www.rabobank.com/en/images/circular-economy-finance-guidelines-secure-july-2018.pdf>

<sup>15</sup> [https://eemap.energyefficientmortgages.eu/wp-content/uploads/EeMAP\\_EMF-ECBC\\_D6.5\\_Final.pdf](https://eemap.energyefficientmortgages.eu/wp-content/uploads/EeMAP_EMF-ECBC_D6.5_Final.pdf)



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