Real Estate Net Zero Pathway

Federated Hermes Real Estate

Federated Hermes International

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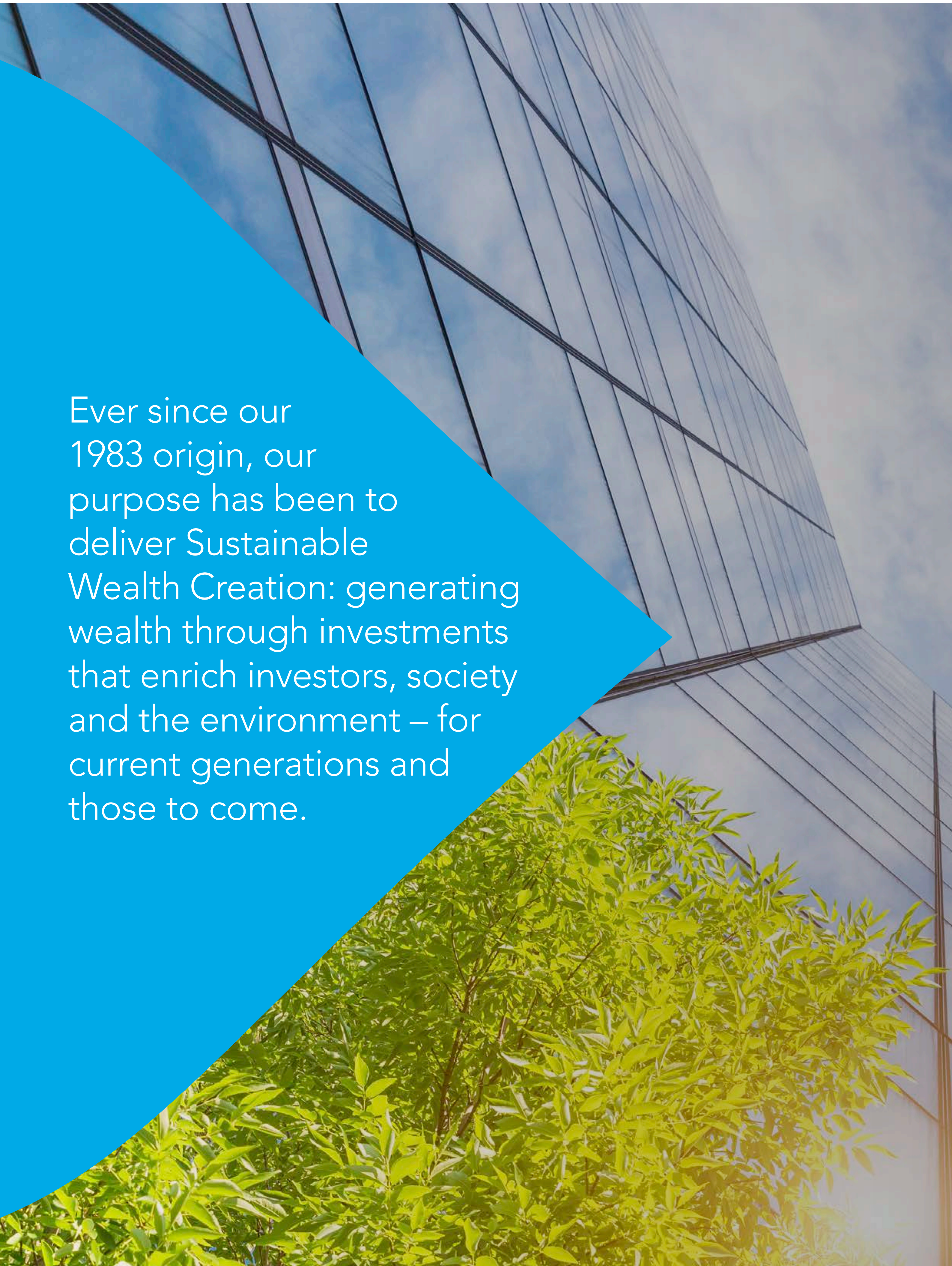

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For real estate, this means acknowledging the importance of the impact that properties have on the places where they are located. This includes understanding the wider economic and social impacts of properties, the externalities associated with physical assets and the resources used by those buildings. Our belief is that if we seek to minimise the negative externalities of the real estate assets we manage, use scarce resources with care in the operation and construction of real estate assets and acknowledge the impact we can have on the wider community, we will then deliver better outcomes for our clients and all stakeholders.

It is in that context that we present our net zero pathway. The international business of Federated Hermes was one of the first real estate investors in the world to set targets for the use of natural resources and, in 2006, we sought to reduce the emissions from our real estate portfolio by 40% in absolute terms over the subsequent decade. This stretching target was reached and exceeded – and it successfully de-coupled the growth of emissions from the growth of assets under management. At the same time, the target helped us deliver outperformance for our clients. But with climate change now presenting an existential risk to almost every aspect of our economic and personal wellbeing, as a fiduciary we feel a deep responsibility to play our part and work with our clients to go further. So, our pathway not only goes beyond what is required by regulation but is also market leading in its scope and vision and is aligned with our long-term client aims. It builds on our history and heritage as a business that has responsibility at its heart and is both bold and strategic in its approach. An approach driven by the reality that responsible ESG-integrated investing delivers better – and more sustainable – risk-adjusted returns.

The pathway to net zero is our next step on the journey to a low-carbon world. It will require commitment, expertise and support from all of our stakeholders – and we look forward to delivering it.

Chris Taylor
CEO Real Estate &
Head of Private Markets

Overview

As a global leader in active, responsible investment, Federated Hermes Inc. has £453bn of assets under management (AUM), of which £7.9bn is invested in real estate globally.[1] A major portion of this real estate portfolio is located in the UK, with a value (as of Q4 2020) of £6.1bn AUM.

At the international business of Federated Hermes, we recognise the importance of reducing carbon emissions in real estate assets and addressing the risks and opportunities associated with climate change. On behalf of our clients, we have set out a proposed pathway to achieve net zero in our managed assets included within our UK real estate portfolio (RE portfolio)[2] by 2035.[3]

This document outlines our approach and commitments to achieving net zero carbon in our RE portfolio. By taking a proactive approach in developing and operating net zero buildings, we will reduce the risks of having stranded assets, asset value declines and potential so-called 'brown penalties' (a higher cost of capital for carbon-intensive buildings). Net zero also presents opportunities for market leadership: to generate income resilience for our clients; support and retain our tenants; and provide long-term value to our stakeholders. Our RE portfolio's net zero targets are outlined below in figure 1.

Figure 1. Our net zero targets

2025
- 25% reduction in energy intensity, based on 2018 baseline
- 100% coverage of zero-carbon electricity in landlord areas
- Develop embodied carbon targets in development and operations

2030
- 40% reduction in energy intensity, based on 2018 baseline
- Engage with tenants to convert to zero electricity tariffs
- Develop and implement onsite-renewable energy targets

2035
- 66% reduction in energy intensity, based on 2018 baseline
- 100% assets to be net zero aligned in development and operations

Source: Federated Hermes, as at April 2021.

Our energy intensity reduction targets are based on the 2018 performance of the current RE portfolio and are aligned with the UK Green Building Council (UKGBC)'s Paris Proof approach.[4] These targets are to be reviewed and updated periodically to account for portfolio turnover and the evolution of the industry's definition of net zero carbon.

At the international business of Federated Hermes, we recognise the importance of reducing carbon emissions in real estate assets and addressing the risks and opportunities associated with climate change.

[1] Source: Federated Hermes, as at 31 December 2020.

[2] Our net zero pathway covers £4.05bn-worth of UK-managed assets, representing 66.4% of our assets under management.

[3] This forms part of our commitment to the Better Building Partnership (BBP) Climate Change Commitment which we signed in 2019. For more information, see: https://www.betterbuildingspartnership.co.uk/node/877.

[4] See Appendix C for our glossary of definitions.

Our approach to sustainability

The international business of Federated Hermes has signed up to the Net Zero Asset Managers initiative. The initiative represents a commitment from all signatories to work with their clients to reach net zero emissions alignment across their portfolios by 2050 or sooner and set interim 2030 emissions reduction targets.

This has been driven by the growing realisation that climate change is a global issue likely to impact long-term environmental, social and economic stability. Further to this, due to increasing legislation and the importance of managing climate risks and creating income resilience, all asset managers will be required to further integrate climate resilience considerations into their investment process.

The international business of Federated Hermes has long been a leader in this space. Our RE portfolio has a long-standing commitment to tracking and reducing operational carbon, which began with an absolute emissions target of a 40% reduction from our 2006 levels. This goal was achieved in 2019 ahead of its 2020 target, finishing with a 55% reduction compared with baseline levels. We achieved this by decoupling our RE portfolio growth and emission reduction. Additionally, we launched our 'impactful intent' framework in 2018, which outlined a new robust set of structuring principles that guide our real estate investment practices. In 2020, we signed up to BBP NABERS 'Design for Performance'(DfP) and London Energy Transformation Initiative (LETI) pioneer projects to help design and deliver net zero buildings.

The Covid-19 pandemic has accelerated the pressing need to 'build back better', and the industry is exploring new ways of living and working. We are in the process of setting our long-term environmental, social, governance (ESG) framework. This framework aims not only to help us work toward net zero, but also to look at the long-term climate resilience of our assets and how they overlap with other ESG considerations, with a particular focus on biodiversity, health and wellbeing and social value.

Our approach to climate change resilience

At the international business of Federated Hermes, we recognise the impact of climate change on our assets and infrastructure. Over the years, we have carried out a number of climate risk and resilience-related remediation in our RE portfolio. In 2022 we will develop a comprehensive climate change resilience strategies for all our RE portfolios. By that year, we also aim to develop consistent industry disclosure on climate change risks in line with industry standards, including the Task Force on Climate Related Financial Disclosure (TCFD).

Our net zero pathway

Our roadmap to net zero has a target date of 2035. Alongside this roadmap, we have a long-term strategic plan to manage emerging risks and opportunities.

Our pathway encompasses:

- A long-term emissions reduction trajectory that accounts for investment, development and refurbishment so that decisions are being made to future-proof assets and the portfolio. This will enhance value and reduce downside capital value risks associated with 'brown penalties'.
- Clear identification of key stakeholders such as tenants, contractors, suppliers and staff for a proactive approach to engagement, leases, contracts and objectives. This will be integrated into operations so that it becomes business as usual and maximises commercial, brand and retention value.
- A clear hierarchy of priorities to provide options for balancing net zero requirements with other outcomes of our RE portfolio.
- Advocating and articulating 'known unknowns' so that these can be addressed by the industry as a whole, driving innovation as the industry seeks to collectively address some of the technical issues surrounding net zero.

Acting quickly and effectively will strengthen the alignment between sustainability and business value. It will also ensure investments can be planned over the longest possible time horizon, reducing the risk of stranded assets or costly remediation improvements.

Definition – what is net zero?

There is often confusion around what is meant by net zero due to the lack of a commonly agreed upon definition. Moreover, the term 'net zero' is commonly confused or conflated with terms like 'carbon neutral', 'zero carbon' and 'carbon negative'. For clarity, in context of our pathway we define net zero as ***'reducing company and value chain greenhouse gas emissions in line with limiting warming to 1.5 degrees Celsius, and to balance any remaining emissions by enhancing carbon sinks which remove carbon dioxide from the atmosphere.'***

For real estate this means: '*the carbon emissions emitted as a result of all activities associated with the development, ownership and servicing of a building are zero or negative.*'[5]

Clarifying the confusion: zero carbon, carbon neutral and carbon negative?

Zero carbon: no carbon emissions are being produced from an asset, product or service.

Carbon neutral: measures an asset's carbon footprint and offsets that with a reduction in emissions or a removal of carbon including buying carbon credits.

Carbon negative: requires an asset to remove more carbon dioxide from the atmosphere than it emits.

[5] BBP – Net Zero Carbon Pathway Framework – Supporting Signatories of the BBP Climate Change Commitment.

Our commitment

At the international business of Federated Hermes, we have set our proposed pathway to achieve net zero in our managed assets included within our £6.1bn RE portfolio in the UK by 2035.

Over the period to 2035, we propose to align our RE portfolio with the net zero aspirations set out in the pathway, with a focus on delivery against four specific pillars of activity.

1. Decarbonisation – remove fossil fuels, increase energy efficiency, use green tariffs and reduce embodied carbon in new developments and major refurbishments. Support improvements in local infrastructure, emphasising best-practice innovation, such as electric vehicle charging and on-site renewable energy creation where practical.

2. Deliver energy efficiency – by 2035, reduce energy use intensity (EUI) by 66% against our 2018 baseline for the RE portfolio.[6]

3. Stakeholder engagement – work with occupiers, suppliers and other stakeholders to transition to net zero alignment.

4. Offset – use credible, permanent carbon removal schemes for residual carbon utilising schemes such as natural capital solutions for carbon sequestration to address embodied carbon.

This pathway has been developed using the UKGBC Advancing Net Zero framework.[7] The chosen date – 2035 – is both challenging and realistic, and is aligned with our clients' objectives. It has also been identified by the UKGBC as the year by which buildings should achieve 'Paris proof' levels, as the economy decarbonises. Details of the scope and boundary of this target can be found later in this document.

The net zero strategy and timeline will be subject to continual review and revision in recognition of the need to adapt to a multitude of influences such as technological developments, regulatory requirements, standardisation of definitions and ongoing changes in portfolio composition. During the first year of the pathway, a full analysis of the assets, taking into consideration their ability to achieve net zero as defined by the UKGBC, will be undertaken. This will specifically determine whether the pathway can be reviewed in line with the 2030 targets endorsed by the World Green Building Council (WGBC) net zero buildings commitment. We aim to support and deliver the objectives of each client, embracing their specific goals and supporting them to a net zero alignment through the application of the pathway's four pillars. Details of our approach to each pillar can be found later in this document (Note: our road map to net zero can be found in Appendix A).

Our net zero scope and boundary

Investment boundary

Our pathway focuses on £4.05bn of our managed assets in the UK, which represents 66.4% of our AUM. Our real estate boundary mainly consists of four key sub-boundaries:

1. **UK RE portfolio:** consists of assets in the UK with £6.1bn in AUM as of Q4 2020. The portfolio includes all of our managed assets in the UK. These have been further classified into working boundaries as seen in figure 2.
2. **International portfolio:** consists of all assets outside the UK with £646m in AUM as of Q4 2020. This portfolio includes assets in US, Canada, Australia and France. Assets are a mixture of pooled fund exposures, separate accounts and directly managed assets across retail, office, industrial and residential.
3. **Debt portfolio:** a portfolio of loans against European real estate, predominantly in the UK, with £497m in AUM as of Q4 2020, and £63m undrawn commitments. The majority of loans are against standing investments in the commercial property sector but also include residential and development finance.
4. **Advisory funds:** assets within the funds without management mandates where we (the international business of Federated Hermes) act as an advisor to the asset owner. Assets in these funds are excluded from the net zero pathway, as they are owned and managed by another entity and our involvement is in an advisory capacity.

[6] 'Net zero carbon: energy performance targets for offices', published by UKGBC on 14 January 2020.
[7] See: https://www.ukgbc.org/wp-content/uploads/2020/01/UKGBC-Net-zero-Carbon-Energy-Performance-Targets-for-Offices.pdf

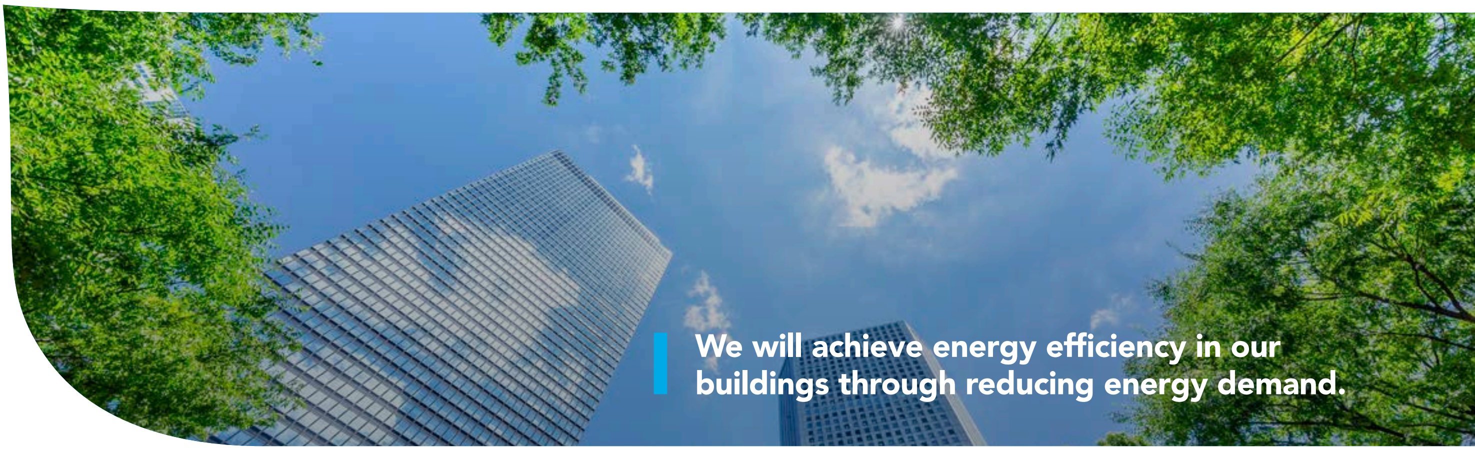


Figure 2. Our UK RE portfolio working boundaries

UK MANAGED ASSET WORKING BOUNDARIES			
CORE ASSETS	MULTI-ASSET ESTATES	RESIDENTIAL ASSETS	INDIRECT ASSET
Commercial multi-tenanted assets (office, retail and industrial) or assets which are clustered on estates.	Estates with multiple buildings which are under a common centralised management structure. These can have any asset class.	All residential assets in the UK, excluding those on estates.	Office, retail and industrial assets which are single tenanted, and tenants have FRI or IRI leases.

Source: Federated Hermes, as at April 2021.

The working boundary defines what is included within this pathway. The overall project boundary that is considered in the net zero pathway includes all assets where we have investment or asset-management oversight. Some of these funds and assets were then excluded with a defined rationale. This clearly identifies inclusions and exclusions and phasing in the roadmap to 2035.

Phasing

This pathway document covers our UK and international portfolio. However, due to varied level of complexities in data visibility in some parts of our portfolio, we have proposed a phased approach to our net zero pathway.

Phase 1: Includes all of our managed assets in the UK and has a target date of 2035.

Phase 2: Includes our international portfolio and debt portfolio in the UK. Target dates for these will be determined after a detailed gap analysis is carried out as a part of the implementation as defined in the road map.

Exclusions: this pathway to net zero excludes our corporate office and related activities, which are covered by a separate policy and commitment.[8] Funds where we have only an advisory role are also excluded at this stage and will be subject to their own targets and net zero alignment strategies. Those funds will be aligned with the pathway for the managed asset portfolios.

Our carbon scope

This pathway covers carbon and other greenhouse gas (GHG) emissions from the development, construction and operation of our real estate assets. It considers both embodied carbon from new developments and refurbishment and operational carbon. The pathway uses the RICS Whole Life Carbon (WLC) and Life Cycle Assessment (LCA) methodology. This will cover carbon scope from both landlord and tenant areas. Details of our carbon scope can be found in Appendix B. Our approach to carbon in the property life cycle is outlined below.

Embodied carbon

Embodied carbon in our assets is the GHG emissions from new developments, refurbishments (major and minor) and landlord and tenant fit-out. This will account for carbon from materials, construction, in-use and end of life. Assets will be subjected to LCA assessments as a part of the design process. FHI is working on establishing embodied carbon targets by 2022, as detailed in Appendix A. Embodied carbon will be reported as carbon intensity ($kgCO_2/m^2$ GIA).

Operational carbon

Operational carbon is all carbon emitted from our asset energy use. This includes both landlord and tenant heating, hot water, cooling, ventilation, and lighting systems, and equipment usage. Reducing operational energy is key to achieving our net zero aspirations. While reducing energy demand in our existing assets will reduce the stress on our grid infrastructure. Operational carbon will be reported as energy intensity ($kWh/m^2/year$) and carbon intensity ($kgCO_2e/m^2/year$).

End of life

In the roadmap to 2035, we explore ways to quantify and reduce end of life carbon, thus covering the RICS whole life carbon for an asset's lifecycle.

[8] The international business of Federated Hermes' Corporate Net Zero Commitment. For more information, see: tcfd-report-hermes-19.pdf (hermes-investment.com)

The four pillars of our pathway

1. Decarbonisation

Remove the use of fossil fuels, increase energy efficiency, use renewable tariffs and reduce embodied carbon in our new development and major refurbishments. This should support improvements in local infrastructure and emphasise best-practice innovation.

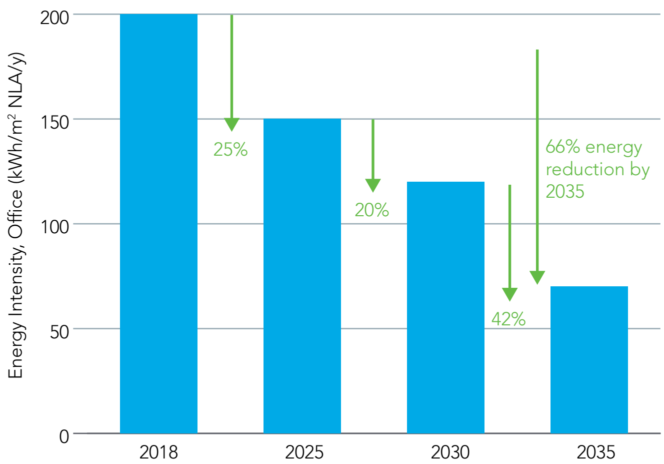
In our existing assets we will carry out feasibility studies for building upgrade to identify opportunities to decarbonise our portfolio. We will work with our property managers (PMs) to decarbonise our RE portfolio through reducing energy demand and increasing our operational efficiency. We recognise that it is possible to decarbonise without energy demand reduction, but in order to achieve net zero it is necessary to both reduce energy demand and improve operational efficiency. A large decarbonisation without reducing our energy balance would enhance the risk of carbon costs rising, particularly through electricity tariffs. The impact of decarbonisation will be measured in tCO_2e, unlike demand reduction, which will be measured in kWh. Some of the measures will include:

- **Decarbonising heating:** we will aim to make our assets fossil fuel free through redesigning our buildings with low carbon and efficient heating sources.
- **Energy demand reduction:** we will improve asset fabric performance and implement electricity reduction targets developed for the RE portfolio based on a 2018 baseline – this aligns with UKGBC Advancing Net Zero status in 2035.
- **On-site generation:** on-site renewables have been a part of our RPD programme since 2015. We will review and update these requirements to be more explicit about how to approach on-site generation. Figures will be reported in absolute kWh and as a percentage of portfolio electricity starting in 2021.
- **Green tariffs:** procurement through 100% renewables backed by zero carbon electricity has been mandated within our property management agreements (PMA) and is in effect for all of the electricity we purchase for our standing RE portfolio of managed assets. We will further develop clearer guidance within our PMAs over electricity contracts for voids and tenant spaces and report on the progress in our annual reporting. Power purchasing agreements (PPAs) will be investigated, particularly for our multi-asset estates. Renewable energy procurement would be aligned with UKGBC guidance on renewable energy procurement and carbon offsetting.
- **Embodied carbon:** we will carry out a test phase of embodied carbon data that will be completed by 2022. Subsequently, specific requirements, targets and penalties for embodied carbon will be set.
  - **Embodied carbon in developments:** we will require all new build developments to estimate, measure, reduce and report embodied carbon in line with the RICS WLC approach and RIBA Climate Challenge. This will be implemented and monitored through our 'Design Innovation Strategy'. Where mandated to offset emissions by local law, for example as a Section 106 commitment, we will report the total embodied carbon, the offsets, and the surplus Scope 3 emissions which are not covered by compliance.
  - **Embodied carbon in operations:** the majority of embodied carbon in operations comes via maintenance, fit-out and minor refurbishment projects. These will be addressed in our Responsible Property Development (RPD) programme, which will be updated this year. The RPD refresh will include specific guidelines over how embodied carbon should be reported at a project level, for whole building refurbishments, floor level refurbishments, maintenance projects and fit-outs, including tenant fit-outs where RICS WLC assessment won't be undertaken.

2. Deliver energy efficiency

Reduce EUI by 66% in the years to 2035 against a 2018 baseline.

Figure 3. Energy intensity pathway



Source: Carbon Intelligence, as at December 2020.

We will achieve energy efficiency in our buildings through reducing energy demand. Demand reduction lowers the carbon risk of assets, ensuring they are not exposed to increased costs for future electricity. With transport and industrial processes becoming increasingly electrified, there will be challenges to supply sufficient electricity to meet national climate targets and electricity demand. This will either increase electricity costs or reduce energy security. Reducing energy demand is the best way to address this challenge and maintain asset value and attractiveness to tenants. This will be achieved through:

Feasibility studies and building upgrades: The largest components of demand reduction will be achieved as buildings upgrade to become zero carbon and net zero aligned. This includes improving insulation and the building's fabrics. We also wish to shift away from the use of natural gas as heating, and instead adopt more efficient forms of zero carbon heating such as heat pumps.

The RPD update in 2020 will provide greater detail over the requirements, and the process, for meeting our asset standards. Our investment managers will work with property managers to oversee these upgrades in line with building business plans.

Energy reduction pathway: the targets for demand reduction are aligned with the best estimation of how much green electricity will be available for commercial buildings as the economy decarbonises. This was work developed by the UKGBC, but aligns with estimates from other sources including RIBA and CIBSE. Electricity reduction targets have been developed based on a 2018 baseline, but correspond with UKGBC Advancing Net Zero status in 2035.

Figure 4. Energy reduction targets

Year	% reduction from 2018 baseline	Energy intensity (using offices as an example)
2025	25%	150 kWh/m^2
2030	40%	120 kWh/m^2
2035	66%	70 kWh/m^2

Source: Carbon Intelligence, as at December 2020.

Smart buildings for optimised operations: we use a central data platform to collect and monitor building-level data, providing a multitude of analytical tools to derive actionable insights from that data. Moving forward this platform will be used to track our progress against net zero. Since 2016, we have also pioneered the retrofit of smart buildings technology to optimise buildings. This has been integrated into operations for a number of our sites. Integration enables profound insights into how buildings perform and operate in the real world. This then helps inform decisions on projects, upgrades, and improvements further to drive the net zero pathway's decision-making process.

Tenant demand reduction: a tenant engagement programme will be developed to focus on tenant demand reductions and collaboration with tenants to reduce usage and improve the quality of the assets.

3. Stakeholder engagement

Work with occupiers, suppliers and other stakeholders to successfully transition to net zero alignment.

In the coming months, we will develop a long-term approach to tenant engagement with the aim of collaborating with tenants to achieve net zero and other wider ESG targets. This engagement programme will aim to share data with occupiers, moving them to green tariffs and improve our green-lease framework to provide agreed but non-structural incentives.[9] The incentive structure will not place specific requirements on either party. However, it will provide a reason for tenants to support or co-invest in net zero collaborations. A secondary memoranda of understanding programme should parallel the above structure that can be used where existing leases are in place or if the green lease cannot be included.

We also host an annual property managers forum and RPI awards, which have been great tools to incentivise and engage property managers. We will include specific focus on net zero in these forums from 2022. We also aim to work similarly with tenant forums to help with net zero implementation.

4. Utilise offset opportunity

Use credible carbon-removal methodologies for residual carbon utilising schemes, such as natural-capital solutions for carbon sequestration to address embodied carbon.

We will develop a sequestration strategy to create natural carbon sinks to absorb any residual carbon in the RE portfolio. The strategy will utilise natural capital solutions to deliver credible solutions and generate yield for our investors. Our offsetting and carbon removals will be reported in (tCO_2e).

Integrating net zero carbon through the asset lifecycle

In developing our net zero carbon pathways, we will follow the principles of the energy hierarchy to ensure effort is focused first on reducing energy demand and then improving energy efficiency.

Our real estate investment boundary includes assets at different stages of their lifecycle. The key considerations for net zero alignment are:

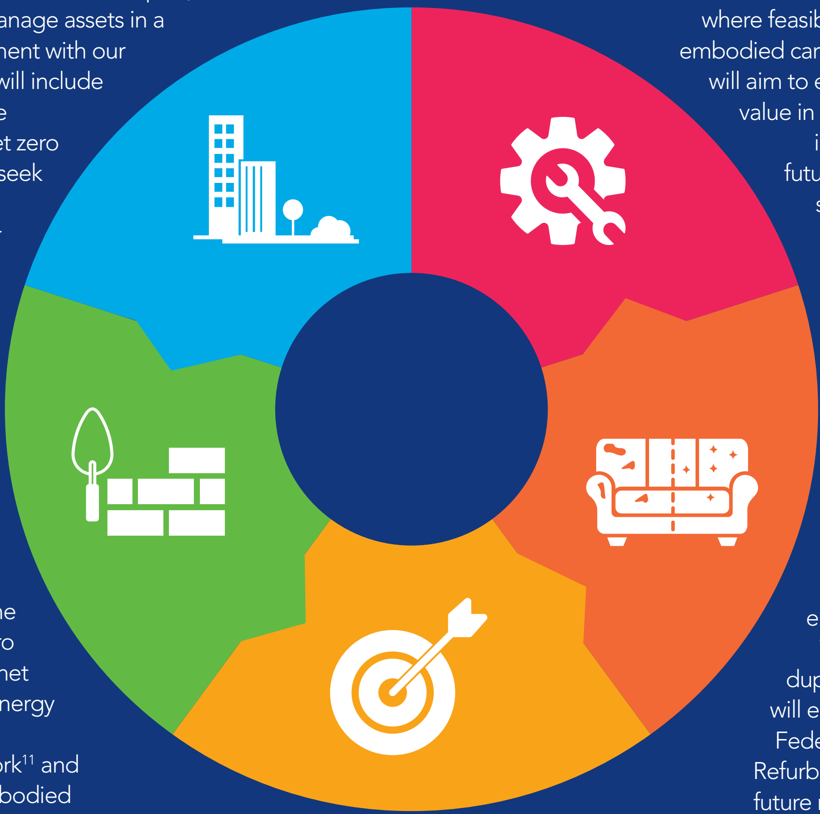
- It is designed to be fossil-fuel free;
- It incorporates on-site renewable energy generation, where feasible;
- It operates on verified zero-carbon electricity tariffs, including tenant areas;
- It meets embodied carbon targets in new development and refurbishments;
- It achieves EPC of B or higher; and
- It achieves an EUI below the UKGBC Advancing Net Zero threshold.[10]

These indicators for net zero alignment will be reviewed further as we look at different asset types and regions and updated to reflect the evolution of industry net zero carbon definitions. We will develop a set of asset standards to support acquisition, development and operations of assets and be the basis of business cases to invest or divest from assets. The net zero requirements will be implemented across five key stages of the asset lifecycle.

[9] Agreed, non-structural incentives which will not be binding to future owners and avoid a penalty to valuations.

[10] For office assets with an appropriate equivalent for other assets.

Implementing net zero requirements to the asset lifecycle



1. Acquisitions

Our net zero strategy will inform all of our investment decisions including asset acquisitions. This does not mean we will be screening for acquiring net zero buildings only. We will be properly assessing the future risks for assets we acquire, and will develop an approach to manage assets in a way that will result in alignment with our net zero programme. This will include carrying out acquisition due diligence in line with our net zero requirements. We will also seek to obtain building ESG performance data from our sellers as a part of our acquisition process.

2. New developments

We will work with our partners to align all new developments with the 'Federated Hermes Real Estate Design Innovation Standards' that underpin the requirements of our net zero pathway. Our approach to net zero will be based on the energy hierarchy as defined by the UKGBC Net Zero Framework[11] and aim to reduce both the embodied carbon and the operational carbon of our buildings.

As an initial step towards the net zero journey, in 2020, we signed up for two BBP DfP Pioneer projects[12] to drive down operational energy consumption in buildings. This includes our developments 4 Angel Square Noma, in Manchester, and Wellington Place, in Leeds. 4 Angel Square has also signed up for the LETI Pioneer Project aiming to achieve the KPI targets set out in the LETI's Climate Emergency Design guide.[13]

3. Operational performance

We set out our operation emission targets in 2006 and they have since been refreshed to align with the pathway targets requirements. We recognise the importance of collaborating with our tenants and occupiers in achieving energy efficiency in operations. We will work with our property managers, facility managers, tenants and occupiers to reduce energy demand in our buildings. We will develop a focused engagement programme to help reduce operational carbon not only in landlord spaces but also tenant spaces and work with our supply chain to reduce their footprint. Emissions reporting is to continue, and include complete Scope 1, 2 and 3 reporting, targeting net zero carbon by 2035.

4. Refurbishments and fit outs

Landlord refurbishments and tenant fit-outs play a vital role in removing fossil fuels and reducing the energy demand on our sites. To avoid costly retrofits and duplication of fit-out works, we will ensure – through our revised Federated Hermes Responsible Refurbishment Guide – to align all future refurbishments and retrofits to our net zero pathway requirements. Prior to each major site refurbishment, a feasibility study is to be carried out to establish if the building requires detailed redesign of fabric, plant or systems to become net zero aligned. For tenant fit-out, we are going to provide guidelines to ensure they are aligned with landlord systems and our pathway targets.

5. Disposals

We will consider a circular economy approach to prioritise refurbishment over demolition. Where demolition is required, we are going to implement an energy hierarchy. This hierarchy will ensure materials are used on-site and off-site first, where feasible, then recycled to reduce embodied carbon in our RE portfolio. We will aim to enhance and maintain asset value in our RE portfolio to increase income resilience for us and future potential buyers. We will share building performance data with potential buyers to responsibly dispose our assets.

[11] https://www.ukgbc.org/wp-content/uploads/2019/04/Net-Zero-Carbon-Buildings-A-framework-definition.pdf
[12] https://www.betterbuildingspartnership.co.uk/federated-hermes-and-mepc-reinforce-net-zero-aspirations-becoming-design-performance-pioneers
[13] https://b80d7a04-1c28-45e2-b904-e0715cface93.filesusr.com/ugd/252d09_3b0f2acf2bb24c019f5ed9173fc5d9f4.pdf

Governance and communication

Net zero governance group: We established a net zero working group to help develop this pathway. This is led by our ESG team and includes fund directors, investment managers and input from consultants to ensure integration of net zero into investments and operations. This group will review and assess progress toward our net zero aim and support the communications of the net zero strategy to our investors and clients, other teams within the business, our property managers, facilities manager and occupiers. As a part of the implementation, we will seek representatives from external industry partners and speciality consultants to attend meetings when appropriate.

Communication of data and KPIs: We will maintain a net zero alignment report. The report is to be updated quarterly to show the number of assets that are net zero aligned and progress made against our wider net zero targets. This report will be supplied to the ESG team in advance of net zero governance group meetings, to enable discussion and decision-making.

Reporting: we will annually disclose our progress towards our net zero carbon pathway and explain the scope and implementation of this commitment as it relates to our individual funds. The energy performance of our portfolios is to be publicly disclosed, where we have permission to do so, as a minimum at a portfolio level. Disclosures will be made by geography, and ideally at a property level, and support efforts to develop consistent industry performance disclosure and benchmarks. We will further report our net zero progress within our annual real estate RPI report.

Risks and opportunities review: to maintain a comprehensive review of risks and opportunities, the net zero governance group will maintain a review of risks as a standing agenda item. This review will include a rolling report from the ESG and Responsibility team of current risks to achieving the target, and opportunities from having the target. The risks highlighted here have been developed through stakeholder engagement meetings across the business in 2020.

Verification and certification

We will ensure that all our net zero data is verified by a third party annually. We have verified emissions to ISO 14064-3 since 2014 and will continue to do so.

Where a more specific net zero verification or certification scheme is available that clearly addresses value to stakeholders and appropriate transparency, we will revisit this approach. A breakdown of schemes to incorporate into the net zero programme is provided below in figure 5.

Figure 5. Verification schemes

	Scheme	Detail
Verification	ISO14064-3	All emissions continue to be verified to ISO14064-3 annually so as to confirm that the data and reporting system is correct.
Validation	Carbon Intelligence DIA review	Data is validated on a quarterly basis by Carbon Intelligence Data Integrity Analysts. This includes all data reported to us and used for decision-making.
Certification	None available for net zero	When an appropriate certification scheme becomes adopted, the net zero governance group can review applicability to our programme.
Certification	Green Building certifications	New and existing developments will continue to be certified under building sustainability certificates including DfP, NABERS, BREEAM in Use etc., as appropriate.
Reporting	GRESB	Net zero and CRREM risk reporting to investors via GRESB.
Reporting	FHI Net Zero Asset Status	Lobby signage in sites which have achieved net zero alignment or have received an Advancing Net Zero award.
Commitment	BBP Climate Change Commitment	The international business of Federated Hermes is among the 23 original commitment members, and our pathway aligns with the BBP Commitment.
Commitment	World Green Building Council	The WGBC has a Net Zero Buildings Commitment, which this document aligns with, and commitment is recommended.

Source: Federated Hermes, as at April 2021.

Appendix A: Our path to net zero

2020
- Publish Pathway commitment

2021
- Publish our Net Zero Strategy
- FHI Asset Standards (DIS and RPD)

2022
- Establish embodied carbon targets
- Residential Pathway
- International Pathway
- Debt Pathway
- Tenant engagement strategy

2023
- Update net zero

2025
- 25% reduction in energy intensity, based on 2018 baseline
- 100% coverage of zero carbon electricty for landlord areas

2030
- 40% reduction in energy intensity, based on a 2018 baseline
- Engage with tenants to convert to zero electricity tariffs
- Develop and implement onsite-renewable energy targets

2035
- 100% of assets to be net zero aligned in development and operations
- 66% reduction in energy intensity, based on a 2018 baseline

Appendix B: BBP Climate Commitment Scope

Our Climate Change Commitment Carbon Boundaries[14]

Activities which generate GHG emissions for real estate investments (directly or indirectly)	Activities controlled and managed by landlords*	Activities controlled and managed by occupiers	Corporate / Head Office§
Energy to operate buildings (electricity, fuels & heat networks)	✓	✓	✗
Water to operate buildings	✓		✗
Waste generated during operation	✓		✗
Refrigerants (Fugitive emissions)	✓		✗
Purchase of goods and services (M&E & property management services)†	✓		✗
Business Travel (excluding that associated with development works)			✗
New development works	✓		N/A
Refurbishment works	✓	✓	✗
Fit-out works	✓	✓	✗
End of Life‡			✗

* It is expected that this includes all AUM covered by the BBP Climate Change Commitment, including indirect investments on a proportional share basis. Signatories must clearly state whether these emissions will be covered proportionally on the basis of ownership or operational control.
† This relates to services procured by the landlord to service and maintain the space e.g. property management, service charge recoverable items and minor CapEx items e.g. minor replacements.
‡ End of life carbon has not been included within the scope of the BBP Climate Change Commitment due to lack of industry consensus on how it should be accounted for. As industry understanding improves and an agreed approach adopted, this position will be reviewed.
§ Corporate emissions are not included within the scope as the focus of the BBP Climate Change Commitment is on Signatories' real estate investments. It is also likely these emissions are not significantly material. However, some Signatories may voluntarily elect to include them in their target scope.

[14] *BBP Climate Change Commitment Carbon Boundaries* – table highlights activities that should be included within signatories' net zero carbon target.

BBP Carbon Scope

The table below outlines the carbon scope covered within the BBP Climate Change Commitment. In addition to the breakdown of activities, references to the carbon scope, as well as how activities align to the GHG Protocol reporting categories are also provided.

Greenhouse Gas Protocol Alignment

Business Area	Sub-Area	GHG Protocol Reporting Category	Carbon Scope	Commitment Inclusion	FHI
Corporate	Head office energy use	Company facilities	1&2	●	
	Company vehicles	Company Vehicles	1	●	
	Business travel (excluding commuting)	Business travel	3	●	
	Purchased Goods and services	Purchased goods & services	3	●	
	Operational waste generated	Waste generated in operations	3	●	
	Operational water use	Purchased goods & services	3	●	
	Employee commuting	Employee commuting	3	●	
Direct Real Estate Holdings (including JVs with management control)	Landlord purchased energy (electricity & fuels)	Purchased electricity, heat and steam	1, 2 & 3	✓	✓
	Tenant purchased energy (electricity & fuels)	Downstream leased assets	3	✓	✓
	Landlord refrigerants	Purchased goods and services	1	✓	✓
	Tenant refrigerants	Tenant Scope 3	3	✓	✓
	Landlord purchased water	Purchased goods & services	3	✓	✓
	Tenant purchased water	Tenant Scope 3	3	✓	✓
	Landlord managed operational waste	Waste generated in operations	3	✓	✓
	Tenant managed operational waste	Tenant Scope 3	3		
	Tenant transport emissions	Tenant Scope 3	3		
	Tenant supply chain emissions	Tenant Scope 3	3		
	Landlord purchased capital goods & services (M&E & property management services)†	Purchased goods and services	3	✓	✓
Investments (Indirect Real Estate Holdings, e.g., where investments are managed by a third party such as JVs with no management control or investments in other real estate investment vehicles)*	Landlord purchased Energy (electricity & fuels)	Investments (proportional to the investment)	3	✓	✓
	Tenant purchased energy (electricity & fuels)	Investments (proportional to the investment)	3	✓	✓
	Landlord refrigerants	Investments (proportional to the investment)	3	✓	✓
	Tenant refrigerants	Tenant Scope 3	3		
	Landlord purchased water	Investments (proportional to the investment)	3	✓	✓
	Tenant purchased water	Tenant Scope 3	3		
	Landlord managed operational waste	Investments (proportional to the investment)	3	✓	✓
	Tenant managed operational waste	Tenant Scope 3	3		
	Visitors transport emissions	Tenant Scope 3	3		
	Tenant supply chain emissions	Tenant Scope 3	3		
	Landlord purchased capital goods & services (M&E & property management services)†	Purchased goods and services	3	✓	✓
Development	New development (including those where funding is being provided)	Purchased Goods & Services	3	✓	✓
	Refurbishments	Purchased Goods & Services	3	✓	✓
	Fit-out (landlord controlled)	Purchased Goods & Services	3	✓	✓
	Fit-out (tenant controlled)	Tenant Scope 3	3	✓	✓
	End of life	End of life treatment of sold products	3	‡	

• Corporate emissions are not included within the scope as the focus of the BBP Climate Change Commitment is on Signatories real estate investments. It is also likely these emissions are not significantly material. However, some Signatories may voluntarily elect to include them in their target scope.
* For indirect investments it is recommended that carbon emissions should be attributed as a % ownership of the investment.
† This relates to services procured by the landlord to service and maintain the space e.g. property management, service charge recoverable items and minor Capex items e.g. minor replacements.
‡ End of life carbon has not been included within the scope of the BBP Climate Change Commitment due to lack of industry consensus on how it should be accounted for. As industry understanding improves and an agreed approach adopted, this position will be reviewed.

Appendix C: Glossary and definitions

BBP Climate Commitment

In recognition of this challenge and the transformation that is required across the real estate sector, the BBP group has worked collaboratively with members to develop a Climate Change Commitment. The signatories hope that their leadership provides an important catalyst for change within the sector and encourages other property owners to follow suit. For more information, see: https://www.betterbuildingspartnership.co.uk/member-climate-change-commitment

EPC

An Energy Performance Certificate (EPC) is a report that assesses the energy efficiency of a property and recommends specific ways in which the efficiency of your property could be improved.

EUI

Energy Use Intensity (EUI) expresses buildings energy consumption as a function of its size or other characteristic. In our pathway it is expressed as kWh per square metre per year. The measurement of floor area can be expressed in terms of Net Lettable Area (NLA) or Gross Internal Area (GIA).

GHG Protocol

The Greenhouse Gas (GHG) Protocol is the internationally recognised accounting standard for GHG emissions.

Scope 1	Scope 2	Scope 3
Direct emissions	Indirect emissions	Value chain emissions
Natural gas or other combustible fuels	Electricity or district heating	Supply chain, tenants, embodied carbon of developments

Overview of types of GHG ("carbon") emissions

	Whole life carbon	Embodied carbon	Operational carbon
Defined as	Emissions over the whole lifespan of the building. Includes both embodied carbon and operational carbon.	Emissions from materials used within a development project.	Emissions from operations within a building, i.e. from daily energy use.
Used for	Design decisions to minimise overall environmental impacts of a design	Design decisions to minimise impacts of materials and practices in construction or management of an asset.	Operational decisions over energy efficiency, procurement of energy tariffs and fuels used to operate a building.
When Considered	In initial designs	During design and construction	During lifecycle
Reported	No	As Scope 3	As Scopes 1-3

ISO 14064-3

ISO 14064-3 is an international standard for verification of GHG emissions in line with the GHG Protocol GHG accounting standard. The process of verifying emissions to ISO14064-3 checks that the data presented is correct, evidence-based and in alignment with the reporting guidance.

LCA

Life-cycle assessment or LCA (also known as life-cycle analysis) is a methodology for assessing environmental impacts associated with all the stages of the life cycle of a building.

LETI Climate Emergency Design Guide

The London Energy Transformation Initiative (LETI) Climate Emergency Design Guide covers five key areas: operational energy; embodied carbon; the future of heat; demand response; and data disclosure. Our methodology includes setting the requirements of four key building archetypes (small-scale residential, medium/large-scale residential, commercial offices, and schools). The guide was developed by over 100 LETI volunteers over a period of 12 months. For more information, see: https://www.leti.london/cedg

LETI Pioneer Projects

A LETI Pioneer project will seek to achieve the KPI targets set out in the Climate Emergency Design guide. The LETI guide outlines the need for all new buildings to be Net Zero Carbon by 2030 and to get there 10% of all projects will have to be aligned with the LETI Design Guide. These are called as 'LETI Pioneer projects.'

Market-based or location-based emissions

In 2015 the GHG Protocol was amended to include specific guidance for Scope 2 emissions, and how to manage the carbon intensity of tariffs. Scope 2 emissions is now separated into two ways of reporting:

- Location-Based: the national grid emissions factors. This is how the FHI has been reporting since 2006, it uses the same electricity emissions factor for all supplies across a country; and,
- Market-Based: the specific emissions factor for an energy tariff. This allows organisations to reflect the benefit of procuring green electricity. The Net Zero targets within this pathway use the Market-Based Scope 2 and can reflect zero emissions tariffs that FHI have mandated for all purchased electricity.

For more information, see: https://ghgprotocol.org/sites/default/files/standards/Scope%202%20Guidance_Final_Sept26.pdf

Note on GHG Reporting KPIs: from 2006 to 2020, FHI greenhouse gas (GHG) reductions KPI was: "Absolute 'Location-Based' GHG Emissions, using national emissions calculations. However, going forward our KPI will be based on Absolute 'Market-Based' GHG Emissions, using emissions factors from specific tariffs. This change recognises zero emissions tariffs and allows for more accurate tracking of the path to Net Zero 1. This new KPI will be used on future reporting from 2020-2035.

NABERS DfP

Developed by the Building Better Partnership, this is an industry-backed project established to tackle the performance gap and provide an approach, based on measurable performance outcomes, to ensure new developments deliver on their design intent. This is based on the National Australian Built Environment Rating System (NABERS), is an initiative by the government of Australia to measure and compare the environmental performance of Australian buildings and tenancies and its approach is the basis of Design for Performance.

Paris Agreement

The Paris Agreement is a legally binding international treaty on climate change. It was adopted by 196 Parties at COP 21 in Paris, on 12 December 2015 and entered into force on 4 November 2016.

Its goal is to limit global warming to well below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels.

Paris Proof

The 'Paris Proof' methodology establishes the amount of energy reduction required for the UK economy to be fully powered by zero carbon energy in 2050 and it clearly demonstrates that energy efficiency is essential to achieving a net zero carbon economy. Simply relying on decarbonisation of the electricity grid is not a viable solution for offices or any other sector.

Power Purchase Agreements (PPAs):

PPAs are electric power agreements which are essentially a contract for the purchase of electricity. The length of the contract can be typically between 5 and 20 years and can include energy, capacity and/or ancillary services.

RIBA Climate Challenge

RIBA has developed the 2030 Climate Challenge to help architects meet net zero (or better) whole life carbon for new and retrofitted buildings by 2030. For more information, see: https://www.architecture.com/-/media/files/Climate-action/RIBA-2030-Climate-Challenge.pdf

RICS professional statement on whole life carbon

The Royal Institution of Chartered Surveyors (RICS) Professional Statement on Whole Life Carbon (2017) is the standard for assessing both whole life carbon (Stages A-C) and embodied carbon (Stage A). For more information, see: https://www.rics.org/globalassets/rics-website/media/news/whole-life-carbon-assessment-for-the--built-environment-november-2017.pdf

TCFD

The Financial Stability Board created the Task Force on Climate-related Financial Disclosures (TCFD) to improve and increase reporting of climate-related financial information.

The UKGBC EUI Pathway

To prioritise energy efficiency the UKGBC targets represent more stretching requirements for commercial offices claiming net zero in operation and set out a trajectory of tightening energy performance requirements over the next fifteen years.

Figure 6. UKGBC EUI Pathway

Scope	Metric	Interim targets 2020-2025	Interim targets 2025-2030	Interim targets 2030-2035	Paris proof target 2035-2050
Whole building energy	kWh_e/m^2 (NLA) / year	160	115	90	70
	kWh_e/m^2 (GIA) / year	130	90	70	55
	DEC rating	D90	C65	B50	B40
Base building energy	kWh_e/m^2 (NLA) / year	90	70	55	35
	kWh_e/m^2 (GIA) / year	70	55	45	30
	NABERS UK star rating	4.5	5	5.5	6
Tenant energy	kWh_e/m^2 (NLA) / year	70	45	35	35

NLA = net lettable area. GIA = gross internal area.
Source: UKGBC EUI. UKGBC Advancing Net Zero Framework, as at January 2020.

The UK Green Building Council (UKGBC) framework has been developed by an industry task group of businesses, trade associations and non-profit organisations, undertaken in a spirit of collaboration and consensus-building. It provides guidance on the definition of net zero carbon buildings – both homes and non-domestic – and a way to demonstrate how a building has achieved net zero-carbon status. It focuses on carbon impacts that can be readily measured and mitigated today – operational energy and embodied impacts of construction. For more information, see: https://www.ukgbc.org/wp-content/uploads/2017/09/UK-GBC-Task-Group-Report-Delivering-Building-Performance.pdf

WGBC Net Zero Buildings Commitment

The Net Zero Carbon Buildings Commitment (the Commitment) challenges companies, cities, states and regions to reach net zero operating emissions in their portfolios by 2030, and to advocate for all buildings to be net zero in operation by 2050.

By setting ambitious 'absolute' targets, the World Green Building Council (WGBC) Commitment aims to maximise the chances of limiting global warming to below 2°C, and ideally below 1.5°C, by drastically reducing operating emissions from buildings.

The Commitment provides a framework for organisations to develop globally ambitious yet locally relevant, flexible and universally viable solutions for their portfolio to both reduce energy demand and achieve net zero carbon emissions. For more information, see: https://www.worldgbc.org/thecommitment

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