PROPERTY

NET ZERO CARBON PATHWAY
PROGRESS REPORT 2024

ROYAL LONDON
ASSET MANAGEMENT

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The Distillery, Bristol

Foreword

We are pleased to deliver this third update to our Property Net Zero Carbon Pathway that was first published back in 2021. In reflecting on our work over the past year, we have continued making progress against our seven step pathway programme through the implementation of various initiatives across our developments and operational assets. Delivering positive outcomes for our clients remains critical on our pathway to net zero carbon, whilst ensuring we meet our stakeholders needs and ultimately, deliver returns to our clients.

There has been growing demand across the built environment for greater consistency in the approach to net zero carbon. In this context, the pilot version of the UK Net Zero Carbon Buildings Standard launched in 2024 represents a significant milestone. By giving companies a cross-industry standard for labelling assets as net zero, this standard will not only increase consistency but also reduce greenwashing and promote transparency. Royal London Asset Management Property is working to understand the implications of the requirements set out in the UK Net Zero Carbon Buildings Standard to obtain net zero carbon status, and align our processes accordingly, reflecting our strong support for this pivotal new framework.

Furthermore, a key priority for Royal London Asset Management Property during 2024 has been on how best to build upon our net zero carbon audit programme, in particular developing out asset-level strategies for the implementation of the interventions set out in these reports. We have also remained committed to improving asset-level operational performance data, such as energy usage and carbon emissions, in order to capture more detailed metrics that will offer a deeper understanding of our buildings, allowing us to tailor initiatives for optimal results.

Both of these focus areas will be integral to delivering our net zero carbon strategy. Given the close collaboration required to obtain this level of detail, we are also increasing our engagement with building occupiers to strengthen these crucial relationships. This approach extends to the wider sector, with whom we are engaging through working groups and industry organisations. Sharing best practice will be essential if the built environment is to achieve its net zero goals.

This report demonstrates the progress made during 2024 against our original seven-step pathway, providing transparency for our stakeholders regarding the initiatives undertaken and their outcomes to date. A variety of case studies will showcase how we are embedding net zero carbon across the lifecycle of our properties, while also accumulating valuable knowledge and practical experience. Armed with this understanding of best practice, we will continue to build on our progress as we aim to move closer to achieving net zero carbon by 2040 across our property portfolio.

Mark Evans, Head of Property and Commercial Development

Document map

This document aims to highlight the progress made on our Net Zero Carbon Pathway. Helping us to achieve our strategic objectives is a suite of documents and guidance notes outlining the standards we are aiming to reach for new and existing assets, as well as detailed statements covering our achievements measured against these. The below map sets out this wider suite of supporting documents:

Our reporting suite

This report forms part of our wider Responsible Investment and Property-specific reporting suite:

Responsible Investment

Stewardship & Responsible Investment Report 2024
Our report as part of our commitment to the UK Stewardship Code

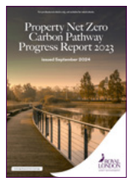
Royal London Climate Report 2024
This report in line with the Task Force on Climate-related Financial Disclosures (TCFD)

Royal London Asset Management Property

Responsible Property Investment Strategy 2021 to 2025
Sets out our RPI strategic framework and how we embed RPI across our portfolio

Property Net Zero Carbon Pathway 2021
Sets out our strategy to achieving net zero carbon by our target years

Responsible Property Investment Report 2023
Highlights our progress of delivering against our RPI strategic framework over 2023



Property Net Zero Carbon Pathway Progress Report 2023
Highlights our progress over 2023 towards achieving our net zero carbon goals

Property Development & Refurbishment Statement of Achievement 2024
Sets out our performance highlights against our New Construction and Major Refurbishment Sustainability Standards

New Construction and Major Refurbishment Sustainability Standards 2025
Our development standards mapped against eight sustainability categories

For more information, please visit rlam.com/uk/institutional-investors/responsible-investment and rlam.com/uk/institutional-investors/our-capabilities/property/responsible-property-investment.

We have additional policy and project documents for our development and refurbishment activities. These provide guidance to our design teams, whilst ensuring our sustainability targets and commitments are adhered to.

New Construction and Major Refurbishment Sustainability Standards framework suite of documents

Commitment

- Development and Refurbishment Sustainability Standards

Document

- Development and Refurbishment Sustainability Strategy

Project Documents

- Sustainability Procurement Guide
- Sustainability Building Standards
  - Circular Economy Brief
  - Approach to Net Zero
  - BREEAM Alignment Document
  - Lessons Learnt Document
- Sustainability Standards Tracker
  - Sustainability Tracker
  - Under £5 million Developments Tracker
  - Sector Specific Sustainability Standards

The Earnshaw, London

Introduction

Over the course of 2024, we maintained our focus on embedding net zero carbon principles across our development and asset management activities. The central pillars of this strategy include creating all-electric properties, utilising operational performance ratings and further enhancing how we collect data. This approach has been taken against a backdrop of significant changes in the corporate, political and regulatory landscape. Of these changes, the UK Net Zero Carbon Buildings Standard is of particular significance for the industry. As a responsible investor, we are committed to understanding the requirements and implications of the UK Net Zero Carbon Buildings Standard pilot programme, launched in September 2024.

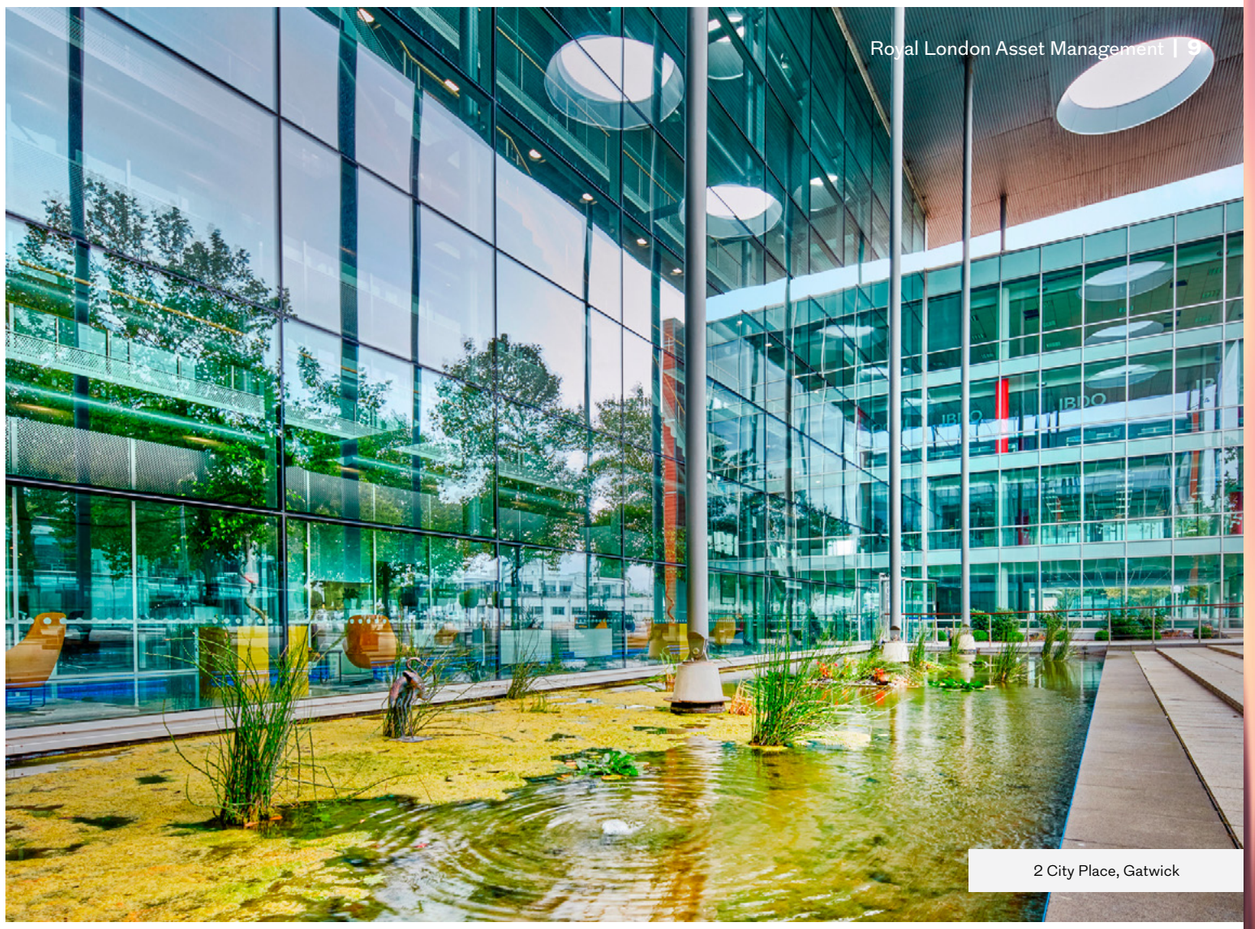
According to global data providers, last year was the hottest ever recorded. It also marked the first time the planet's average temperature was more than 1.5°C above pre-industrial levels[1]. Various meteorological events in 2024 underlined this symbolic milestone. In October, flash floods across Spain caused hundreds of casualties and severe devastation, coming just a month after similarly destructive weather hit central and eastern Europe[2]. England meanwhile experienced several severe storms in 2024 following the wettest 18 months on record, with UK insurance claims for weather damage reaching a record £1.4bn in Q2[3]. The increasing frequency of extreme weather events – and the substantial damage to buildings they entail – will push insurance premiums higher and make policies harder to obtain, driving up risk and costs. The examples seen in 2024 illustrate the importance of ensuring assets are resilient to further climatic changes.

There were also a number of important political developments during 2024 that will affect the built environment. Public policy in relation to housebuilding, renewables and energy efficiency underwent notable shifts following the UK general election. Ministers announced a 50% increase in funding for the next renewable energy auction, as they look to galvanise clean energy production, infrastructure and programmes[4]. The government then used COP 29 to announce that it will be targeting an 81% cut in emissions by 2035 against a 1990 baseline. Improving the operational performance of our assets is therefore crucial if we are to make a significant contribution to meeting the UK's carbon reduction commitments.

60 Fenchurch Street, London

The government then used COP 29 to announce that it will be targeting an 81% cut in emissions by 2035 against a 1990 baseline.

1 https://climate.copernicus.eu/copernicus-2024-first-year-exceed-15degc-above-pre-industrial-level
2 https://civil-protection-humanitarian-aid.ec.europa.eu/news-stories/stories/flash-floods-spain-joining-forces-rapid-recovery_en
3 www.edie.net/uks-quarterly-weather-damage-insurance-claims-reach-record-1-4bn-as-climate-crisis-bites
4 www.gov.uk/government/news/record-breaking-funding-for-clean-energy-in-britain



2 City Place, Gatwick

The Voluntary Carbon Markets Integrity Initiative (VCMI) released further guidance on claims and carbon credit use, helping to instil confidence in offsetting among investors[5]. Complementing this, the Integrity Council for the Voluntary Carbon Market (ICVCM) published its Core Carbon Principles[6], which aim to further address concerns over greenwashing by serving as global benchmarks for robust, credible offsetting. The Better Buildings Partnership (BBP) meanwhile is developing its own guidance on carbon offsetting procurement, which will build upon the UK Green Building Council's (UKGBC) carbon offsetting report. Royal London Asset Management Property is contributing to the development of this guidance, which will support occupiers and organisations to make informed decisions around their offsetting measures.

Whilst we recognise that our property portfolio contributes towards climate change, we have a responsibility to minimise the impact that our properties have on the local and global environment. We see this report as an opportunity to engage and be transparent with our stakeholders on the progress we have made towards our net zero carbon goals, and demonstrate the measures we have been implementing to help reduce our carbon emissions.

Heatherton House, Derby

5 www.vcmintegrity.org/vcmi-claims-code-of-practice/
6 www.icvcm.org/core-carbon-principles/

Commitment to Net Zero and our seven steps

Commitment to Net Zero Carbon

In 2021, we published our Net Zero Carbon Pathway in which we committed to achieving net zero carbon by 2030 for directly managed property assets and developments[7], and by 2040 for indirectly managed property assets[8]. The publication of our pathway followed Royal London Asset Management becoming a signatory of the BBP's Climate Commitment, an industry pledge to deliver net zero buildings by 2050. As a signatory, we have committed to:

- **Annually disclose our progress towards this pathway**
- **Disclose the energy performance of our portfolios**
- **Develop comprehensive climate change resilience strategies for our portfolios**

Furthermore, since 2022, Royal London Asset Management has been a signatory of the Net Zero Asset Managers Initiative (NZAM), an international group of asset managers who are committed to achieving net zero carbon by 2050 at the latest. Our targets under NZAM cover 100% of our property portfolio, capturing both embodied carbon and operational carbon emissions[9].

Our pathway to net zero carbon follows seven steps:

STEP 1
Understand the drivers for net zero carbon

STEP 2
Define the scope and boundaries

STEP 3
Identify carbon footprint and trajectory

STEP 4
Reduce embodied carbon

STEP 5
Increase operational efficiency

STEP 6
Increase renewable energy supply

STEP 7
Offset residual emissions

7 Directly managed property assets are those which Royal London Asset Management has complete operational control, greater than 50% equity share and joint ventures where they would cover the proportionate amount of emissions. Developments are any new development or major refurbishment that comes online from 2030 onwards.
8 Indirectly managed property assets are either partially managed by Royal London Asset Management or managed wholly by the occupier
9 At the time of report writing, the NZAM was reviewing the initiative to ensure it remains fit for purpose in the new global context.

Step 1: understand the drivers for net zero carbon

Throughout 2024, we have continued to deliver against our Responsible Property Investment (RPI) strategic framework. It remains critical to driving strategic decision-making across our acquisition, development and asset management processes, with the ultimate aim of creating resilient buildings that deliver positive outcomes to key stakeholders, including our occupiers and investors. Its four pillars address each step in the property lifecycle.

Investing in a resilient portfolio

Developing for the future

Managing assets for positive impact

Making responsible decisions

In recent years, evidence has mounted that assets with strong Environmental, Social and Governance (ESG) credentials may produce 'green' market premiums and begin delivering higher rents and lower voids. Building on this trend, in 2024 the Royal Institution of Chartered Surveyors (RICS) published a report that demonstrates the growing significance of ESG[10]. The report lists ESG factors that should be considered when valuing assets, with the aim of supporting a proactive approach to meeting the evolving needs of investors. Though the report focuses on the European Union (EU) market, it nevertheless marks a significant step in establishing the importance of ESG in valuations.

If we are to continue benefiting from green premiums and the reputational gains they entail, we must maintain our focus on embedding net zero carbon transitional strategies across the portfolio.

This process requires strong relationships with our occupiers, as their collaboration is crucial to achieving our net zero carbon goals. During 2024, we have focused on better understanding our occupiers' own corporate ESG and net zero aspirations. An increasing number are signing up to relevant industry bodies and organisations, such as the Science Based Targets initiative (SBTi) that supports companies to set carbon reduction goals. This reflects increasing moves by occupiers to create and deliver against ambitious objectives. Accordingly, we expect demand for best-in-class ESG assets to continue growing – particularly in the offices sector. Our development and asset management activities will reflect this key trend, futureproofing our properties to negate the risk of stranded assets as we work towards net zero carbon.

Several developments in 2024 underscored the importance of climate and net zero transition plans, which remained a key focal point within our RPI Strategy. In April, the UK Transition Plan Taskforce published the final version of its guidance for climate transition plan disclosures[11]. This provides practical, sector-specific advice for asset owners and managers to achieve their net zero carbon targets. Additionally, we also saw the Financial Conduct Authority's (FCA) Sustainability Disclosure Requirements (SDR) come into effect in 2024. These developments will serve to improve transparency around ESG credentials, reflecting a growing demand among investors and stakeholders for greater openness.

10 RICS (2024) ESG data list for real estate valuations, WBEF-ESG-and-valuation-2024-data-list.pdf
11 www.pwc.co.uk/industries/financial-services/understanding-regulatory-developments/tpt-publishes-final-set-of-resources.html

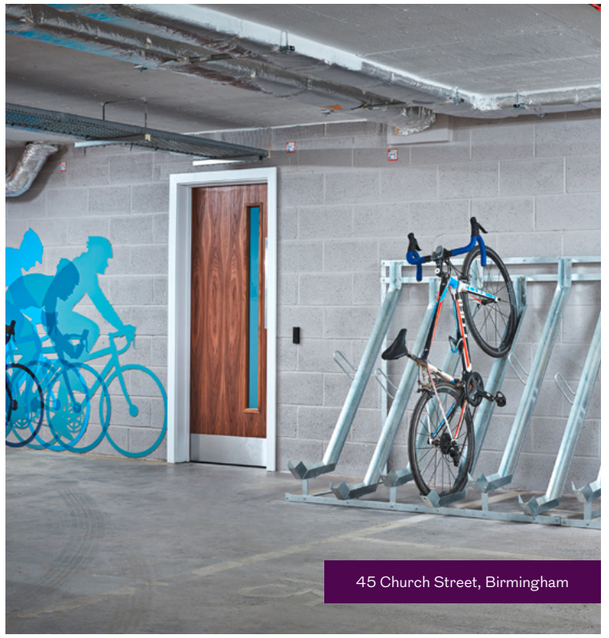
Step 2: define the scope and boundaries

Emissions Scope

Following our original Net Zero Carbon Pathway Report, we have adopted the BBP's Net Zero Carbon Pathway Framework to ensure all significant sources of emissions are considered in our pathway.

Within our Net Zero Carbon Pathway Progress Report (2022), we outlined the change to include the emission source 'waste generated during operation', an activity controlled and managed by landlords. Additionally, within our Net Zero Carbon Pathway Progress Report (2023), we stated our decision to include the emission source 'investments' (Scope 3 Category 15). These are investments that are managed by a third party, such as co-investments with no management control or investments in other real estate investment vehicles.

In this year's report, there are no further modifications to the scope of emissions defined in the original pathway.



45 Church Street, Birmingham

Investment Boundary

Our investment boundary remains the same as reported in our Net Zero Carbon Pathway Progress Report (2023).

Royal London Asset Management has three main property funds:

1. **RLPPF**
2. **Royal London UK Real Estate Fund (RLUKREF)**
3. **Royal London Property Fund (RLPF)**

These make up 99% of our property portfolio by assets under management (AUM). The commitment pathway covers all property assets, both directly and indirectly managed, in these funds, and this also includes co-investments managed by Royal London Asset Management.

In addition, we have three smaller property funds; Royal London Operational Estate (RLOE); Royal London Long Term Fund (RLLTF); and Royal London Cooperative Insurance Society (RLCIS). These smaller property funds are currently excluded from our Net Zero Carbon Pathway, as they cover less than 1% of the total property portfolio.

Royal London Asset Management's corporate property ESG and climate ambitions do not guarantee any particular property fund will try to meet that objective individually. If you are seeking a particular outcome, always remember to check the fund objectives to ensure it will meet your needs.

Step 3: identify carbon footprint and trajectory

Since our baseline year of 2019, our Scope 1 and 2 emissions have reduced by 19% on an absolute basis. We have maintained our commitment to improving the operational performance of our properties, with a key focus on where we can directly influence energy usage. This includes implementing an LED light replacement programme for the estate lighting across all our retail parks, now completed across 23 of these parks, leaving two remaining, along with our industrial parks. Additionally, we are seeking opportunities to leverage technologies that optimise performance, including Hank, a Building Management System optimisation software, and Turntide Induction Motors, to avoid unnecessary energy usage and subsequently minimise our carbon emissions.

In contrast, our total Scope 3 emissions have increased by 1% against our baseline year of 2019. Emissions from our tenants has been a significant driver in this, increasing 50% between 2019 and 2024. We recognise that the ongoing diversification of our property portfolio, most notably our care home assets, as well as our net transactional activity and our investment strategy's may be among the factors driving this absolute increase in emissions. Methodological changes to calculating emissions from our occupiers were also implemented last year. This included benchmarking and estimations, which affected our ability to directly compare 2024 data with previous reporting years. However, from 2025, we expect that these methodological changes will not have an impact on emissions data comparisons[12]. In 2025, we will investigate recalculating our Scope 1, 2 and 3 (Category 13) emissions for 2019 to 2023 using our latest methodological approach to enable the direct comparability of historic emissions data.

Furthermore, we note an uplift in embodied carbon emissions from our new development and fit-out works in comparison to the previous year; specifically, an increase of over 55,000 tonnes of carbon. Six of our development projects reached practical completion during the 2024 reporting period, compared with only one major refurbishment project the previous year. Whilst it can be challenging to compare embodied carbon emissions annually, the implementation of our New Construction and Major Refurbishment Sustainability Standards (hereafter 'Development Sustainability Standards') ensures that each individual new build and major refurbishment project is minimising embodied carbon where possible and striving for top ESG credentials.

For a detailed explanation of the methodologies and our annual emissions footprint from baseline to our latest reporting year, please refer to Appendix 1.

Metroplex Business Park, Salford

12 Whilst we anticipate that the methodological changes for this year's reporting will not impact comparisons from 2025, metrics and methodologies may change at some point in the future.

2024 Carbon footprint

Emissions Category	BBP Category	Activities controlled and managed by landlord, occupier or both	2019 (tCO_2e) Q4'18 – Q3'19	2024 (tCO_2e) Q4'23 – Q3'24	% change
Scope 1	Natural gas	Landlord	3,546	2,966	-16%
	Refrigerants (fugitive emissions)	Landlord	663	763	15%
Scope 2[13]	Electricity	Landlord	7,561	5,827	-23%
Scope 3	Natural gas and electricity	Occupier	62,051	93,370	50%
	Water to operate buildings	Landlord	216	24	-89%
	Waste generated in operation	Landlord	31	10	-69%
	Extraction, production, and transportation of fuels and energy	Landlord	2,315	2,072	-11%
	Purchase of goods and services	Landlord	17,117	28,990	69%
	Capital goods (excluding development activities)	Landlord	91,633	0	-100%
	New development works	Landlord	951	54,487	5,629%
	Refurbishment works[14]	Landlord & Occupier	20,693	3,686	-82%
	Fit-out works[15]	Landlord & Occupier	87	16,231	18,631%
	End of life	Landlord	0	0	0%
	Investments	Landlord	3,821	1,696	-56%
Total			**210,685**	**210,122**	**-0.3%**

13 Scope 2 (location-based) emissions.
14 Landlord-controlled refurbishment works covers our major refurbishments activities, over £3 million.
15 Landlord-controlled fit-out works covers our minor refurbishment activities, under £3 million.

Step 4: reduce embodied carbon

We are continuing to target reductions in embodied carbon across our projects, which in the last reporting year comprised five new-builds and one major refurbishment. All six of these programmes showcased exceptional ESG credentials, underpinned by the application of our Development Sustainability Standards.

Our projects in 2024 recorded several significant achievements, particularly in terms of building certification. At an office refurbishment in Birmingham, we received our first 4-star rating under the NABERS UK Design for Performance (DfP) scheme. Two of our projects also achieved BREEAM Excellent and another BREEAM Outstanding.

Moving into 2025, our focus on embodied carbon will extend to incorporating the new UK Net Zero Carbon Buildings Standard framework. In ensuring our own processes are aligned with those of the UK Net Zero Carbon Buildings Standard, we will be revising our sector-specific embodied and operational carbon limits accordingly as part of our annual review of our Development Sustainability Standards. In addition, we will implement a requirement for pre-demolition audits to be carried out on our projects. These will identify opportunities for circularity, such as re-using or recycling existing materials – a crucial driver of embodied carbon reduction.

Targets

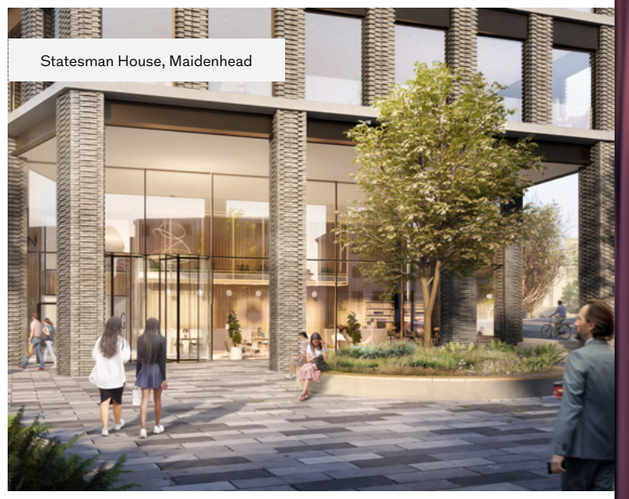
Net Zero Carbon Pathway

1. Reduce embodied carbon to 250 kg CO_2e/m^2 for major refurbishments by 2030.
2. Reduce embodied carbon to 500 kg CO_2e/m^2 for new developments by 2030.

RPI Portfolio Target

Material ESG issue: transition to net zero carbon

1. Aim to achieve a reduction in embodied carbon (A1-A5)[16] across all new build and major refurbishment projects in line with our New Construction and Major Refurbishment Sustainability Standards.



Statesman House, Maidenhead

16 A1-A5 covers upfront embodied carbon. This is the carbon generated during the construction process. It excludes in use carbon, operational carbon user carbon and end of life. Source: Whole life carbon assessment for the built environment, Royal Institute of Chartered Surveyors (RICS), 2nd edition, July 2024

Metroplex Business Park, Salford

Progress

Commitments made	Action taken	Future progress
Identify strategic assets in the development pipeline that can be brought to net zero carbon prior to 2030 target deadline	**Project documents:** • **Approach to Net Zero guide:** updated at the end of 2024 for implementation in 2025. It has been updated with reference to the UK Net Zero Carbon Buildings Standard pilot. • **Sustainable Development Brief:** used across all new healthcare developments. This sets out minimum and aspirational requirements of various metrics within the scope of net zero.	• Continue to monitor our development pipeline. • Continue to undertake net zero carbon feasibility assessments across all new build and major refurbishment projects. • Integrate the requirements of the UK Net Zero Carbon Buildings Standard pilot within our Development Sustainability Standards, including limits on embodied carbon, operational energy usage and refrigerant global warming potential (GWP). These are to be applied across all new build and major refurbishment projects. • Following publication of the final UK Net Zero Carbon Buildings Standard, various documents will require updating including: – Approach to Net Zero guide. – Development Sustainability Standards. – Sustainable Development Brief and Sustainable Asset Management Brief for healthcare assets.
Adopt circular economy ideas and explore design approaches for both disassembly and use of less carbon-intensive materials	**Current requirements:** • A circular economy workshop is undertaken, and a Circular Economy Statement produced for all new build and major refurbishment projects, including for healthcare. **Project documents:** • **Circular Economy Brief:** sets out design guidelines, tools for measuring circularity. • **Sustainable Development Brief:** requires each healthcare project reports on raw materials usage and diversion of waste from landfill to help promote resource efficiency.	• Following two successful circular economy workshops in 2024, continue to identify opportunities to share lessons learnt and innovative approaches to maximise circularity. • Continue to implement our Circular Economy Brief and review regularly. • Undertake pre-demolition audits for all new build and major refurbishments to promote opportunities for circularity.
Measure materials in new developments and major refurbishments, and measure the sources of embodied carbon	**Current requirements:** • Whole life carbon (A-C, excluding B6 & B7)[17] must be measured and reported on for all new build and major refurbishment projects (see Appendix B for the full definition of 'whole life carbon'). • All new build and major refurbishment projects to aim to align with the sector-specific embodied carbon limits within our Development Sustainability Standards. **Project documents:** • **Development Sustainability Standards:** sets minimum embodied carbon limits across seven sectors. • **Sustainable Development Brief** sets embodied carbon limits for healthcare. • **Sustainable Procurement Guide:** updated for 2025 to reflect changes in our new Development Sustainability Standards. • **Approach to Net Zero guide:** provides guidance on measuring embodied carbon for design teams.	• Our updated Development Sustainability Standards will require a pre-demolition audit is undertaken on all new build and major refurbishment projects to identify opportunities for circularity. • Explore the opportunity for material passports across all new build and major refurbishments to support making sustainable procurement choices. • Continue to work with our consultants and property managers on minor refurbishment projects to improve the accuracy of embodied carbon measurements. • Finalise and launch our three sector-specific occupier sustainability fit-out guides, aiming to encourage occupiers to make more sustainable choices.

Test Lane, Southampton

17 Whole life carbon includes upfront carbon during the construction phase, in use and end of life. This excludes operational carbon and user carbon. Source: Whole life carbon assessment for the built environment, Royal Institute of Chartered Surveyors (RICS), 2nd edition, July 2024

Case study: 5 St Philips Place, Birmingham

5 St Philips Place, Birmingham

Our Development Sustainability Standards were embedded from start to finish, which resulted in the project achieving a 4-star NABERS UK DfP certification – a first for Royal London Asset Management Property.

Development Sustainability Standards in action – first NABERS UK Design for Performance rating

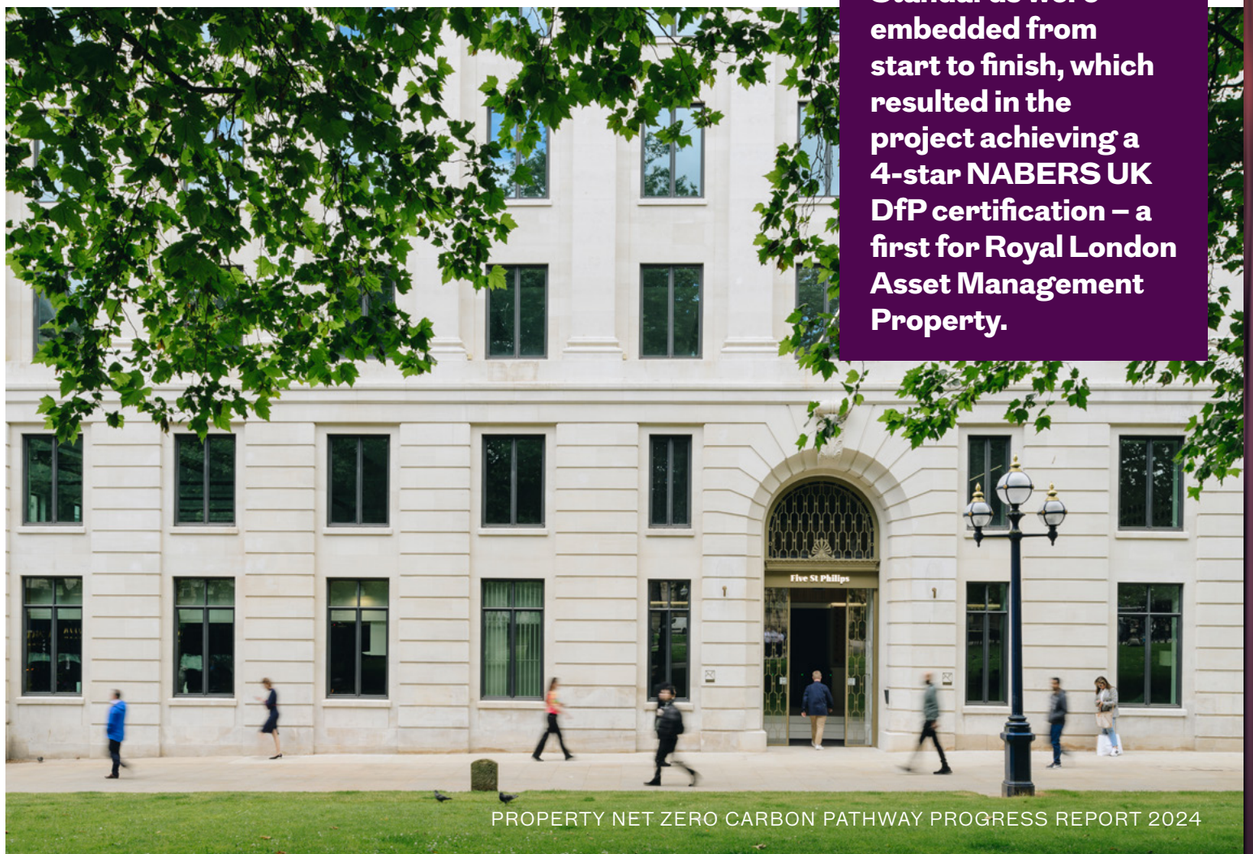
March 2024 marked the completion of work at 5 St Phillips Place in Birmingham. The 77,000 sq. ft. office underwent a full refurbishment, transforming it into modern commercial premises featuring state-of-the-art facilities. The consideration of ESG standards was a priority from the outset as we aimed to focus on embodied carbon and green certifications.

Our Development Sustainability Standards were embedded from start to finish, which resulted in the project achieving a 4-star NABERS UK DfP certification – a first for Royal London Asset Management Property. We optimised operational performance across the office and specified equipment based on energy efficiency, including air source heat pumps (ASHP) and variable refrigerant volume (VRV) technology.

Following detailed discussions at the design stage, we opted for a refurbishment over a redevelopment – a decision strongly influenced by the substantially lower embodied carbon this approach entails.

Once underway, we prioritised the efficient use of resources, with excavation materials re-used on site and facades retained where possible. Against a target of 95%, the project achieved 99% diversion from landfill. Overall, the refurbishment recorded an upfront embodied carbon of just 122 $kgCO_2e/m^2$ – significantly below the Development Sustainability Standards target for offices of 600 $kgCO_2e/m^2$.

The office's revised design integrated occupant wellbeing into every facet. The team specified high-quality ventilation systems and low volatile organic compound (VOC) products, while new showers and changing rooms will both support and encourage occupiers to opt for sustainable transport methods such as cycling to work. Active facades aim to encourage social cohesion and pedestrian activities, complemented by a strategic Social Value Plan embedded throughout the project.



Case study: Atlantic Park Phase 1, Liverpool

Development Sustainability Standards in action – embedding circular economy principles

Circular economy principles form a vital component of our Development Sustainability Standards, as demonstrated on the construction of four industrial units in Liverpool during 2024. Circular principles were embedded at each stage of this project, beginning with a pre-demolition audit aimed at identifying re-usable materials, through to re-using the project's demolition waste as part of the construction phase. To support its approach, the team held a 'Design Out Waste' workshop to explore opportunities for greater circularity. Modular construction techniques represented one such opportunity, the use of which on this site offers benefits such as easier module replacement and recovery in future.

The project is on track to achieve a 99% diversion from landfill rate for its demolition and construction waste, surpassing the target of 95% set in our Development Sustainability Standards. Upfront embodied carbon stood at 502 $kgCO_2e/m^2$ for the four units, outperforming our benchmark of 600 $kgCO_2e/m^2$.

The site is aiming for an annual Energy Use Intensity of 38 kWh/m^2, far below the 60 kWh/m^2 targeted in our standards. To achieve this exceptional outcome, the team undertook a zero-carbon feasibility study that identified the potential for installing ASHPs and a 461 square metre solar photovoltaic (PV) array. These additional measures served to further optimise operational performance and energy efficiency.

The project is targeting an EPC A rating and BREEAM 'Excellent' upon practical completion, having received this grading at its design stage.

Atlantic Park Phase 1, Liverpool

The project is targeting an EPC A rating and BREEAM 'Excellent' upon practical completion, having received this grading at its design stage.

Step 5: increase operational efficiency

Our net zero carbon audit programme remained a top priority last year, with a further 17 audits undertaken in 2024, following on from the 22 completed in 2023. We are continuing to focus on how we use the findings from these audits to develop strategic decarbonisation roadmaps for each asset. Every roadmap will inform investment decisions and produce actions within Asset Business Plans, ensuring that asset managers give these recommendations appropriate consideration.

Equally important is how we utilise emerging technologies to maximise operational efficiency within our properties. In 2024, this strategy drove the implementation of Turntide Induction Motors at six of our office assets. This smart motor technology represents one of our 'quick win' measures that offers immediate energy, carbon and cost savings for occupiers.

Adding to last year's achievements, we attained our first 3-star NABERS Energy for Offices rating at Aurora Finzels Reach, Bristol. The NABERS scheme aligns with our commitment to optimise operational efficiency, helping guide our initiatives while also creating further opportunities to engage occupiers on how to improve performance.

Aurora Finzels Reach, Bristol

Targets

Net Zero Carbon Pathway

1. 15% – target reduction in energy intensity by 2025 for standing assets.

RPI Portfolio Targets

Material ESG issue: safeguarding natural resources

Operational Portfolio

1. Achieve a 30% reduction in Energy Use Intensity across our directly managed portfolio by 2030, against a 2019 baseline.
2. Aim to align with UKGBC Paris-proof Energy Use Intensity target of 70 kWh/m² by 2030 across our directly managed offices.

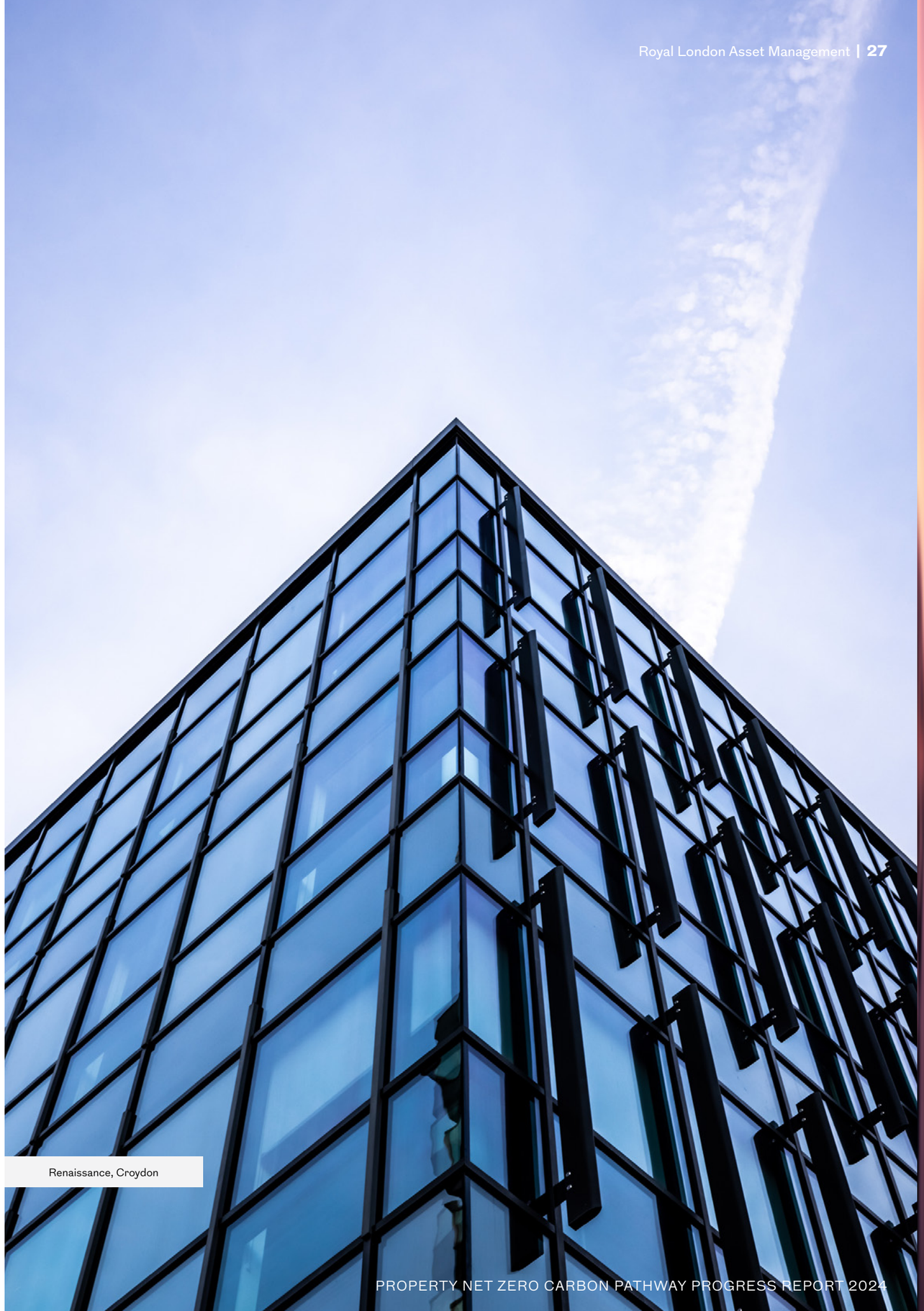
Development Portfolio

1. Target the UKGBC Paris-proof Energy Use Intensity target across all office new build and major refurbishment projects of 90 kWh/m² by 2025, and 70 kWh/m² by 2030.
2. Aim to incorporate water efficiency measures and/or water recycling to reduce mains use by 40% compared to the BREEAM baseline across all new build and major refurbishment projects.

Progress

Commitments made	Action taken	Future progress
Aim for an average of 15% reduction in energy intensity across the managed property portfolio by 2025	• Achieved our first NABERS UK Energy for Offices 3 star rating at Aurora Finzels Reach, Bristol. • Hank, a Building Management System optimisation software, has been installed across a further two offices. • Turntide Induction Motors has been installed at six offices. • All office new build and major refurbishment projects must aim to achieve a NABERS UK DfP 5 star rating. • Our LED lighting replacement programme has continued and extended, with upgrades complete across: – 23 retail parks – Eight multi-let industrial estates – Four high street retail sites	• Identify opportunities to undertake further NABERS UK Energy for Offices assessments and submit our assessment at No. 1 and No. 2 The Distillery in Bristol. • Continue to seek more opportunities to install Hank and Turntide, looking to expand beyond our directly managed offices. • Continue implementing our LED lighting replacement programme in 2025 and install across: – Remaining two retail parks – Nine multi-let industrial estates – Four high street retail sites • From 2025, our Development Sustainability Standards will require office new build and major refurbishments to align with a NABERS UK DfP 5.5 star rating.
Target benchmark energy use intensities for asset types and align with UKGBC Energy Use Intensity target of 70kWh/m² for offices	• Completed net zero carbon audits across a further 17 assets building on the 22 undertaken in 2023. – Recommendations from these audits have been transferred into our Asset Business Plans for implementation by asset managers. • Our Development Sustainability Standards contain sector-specific operational Energy Use Intensity performance targets for all new build and major refurbishment projects. • Our Sustainable Development Brief sets out operational energy intensity requirements for healthcare.	• Expand our net zero carbon audit programme to our retail and industrial parks. • Commence the implementation of net zero carbon interventions across our directly managed office portfolio. • Sector-specific operational energy usage limits in our Development Sustainability Standards will be updated for 2025 to align with the UK Net Zero Carbon Buildings Standard pilot. • Our Sustainable Asset Management Brief for the healthcare portfolio will be reviewed and updated in line with the UK Net Zero Carbon Buildings Standard pilot.

Commitments made	Action taken	Future progress
Increased engagement with occupiers to improve operational efficiency	• Continued engaging with occupiers to encourage the sharing of data, preferably through automation, using this data to identify opportunities to maximise energy efficiency. • Undertook a screening of all occupiers to identify those with public net zero carbon targets and/or targets approved by SBTi. • Continued regularly engaging with occupiers via our asset managers and property managers. • Commenced updates to the green clauses within our leases, in line with the BBP's Green Lease Toolkit released last year.	• Undertake an audit of the energy metering systems across all directly managed offices to ensure energy metering and submetering is NABERS-compliant. • Enhance our occupier engagement strategy: – Develop standardised ESG discussion points for each sector. – Formalise our approach to storing and analysing information gathered from occupier meetings. – Refresh engagement materials, such as newsletters and occupier handbooks. – Finalise our updated green clauses. Develop a template for gathering data on the clauses accepted in new leases on a sector-basis.
Achieve an EPC of B by 2030 on all new commercial spaces	• Completed our portfolio-wide EPC programme that began in 2022. See our RPI Report 2024 for more details. • EPC Building Upgrade Reports (BUR) have been undertaken across 698 assets or units with an EPC rating of C or lower. – Recommendations have been transferred into Asset Business Plans for implementation by the asset managers. • Our Development Sustainability Standards continue to require a minimum EPC A rating for new build non-residential developments, and a minimum EPC B rating for refurbishment projects and residential developments. • The Sustainable Development Brief requires a minimum EPC A rating for new healthcare developments, with an aspirational target of A+.	• Continue to improve the portfolio's EPC profile, with the aim of annually increasing the proportion of units with an EPC rating of B or above. • For refurbishment projects, continue having design specification reviews undertaken to ensure that the asset will achieve a minimum EPC B rating following completion. • Review the EPC BUR recommendations in the Asset Business Plans to determine feasibility, considering other factors including the leasing schedule and lifecycle of the equipment.



Renaissance, Croydon

Case study: Unit 3 Stourton Link, Leeds

Unit 3 Stourton Link, Leeds

Working with occupiers to deliver operational energy savings

Real-time data represents a cornerstone of our RPI strategy, enabling us to accurately track our progress towards net zero carbon. By detailing how an asset operates, real-time data also highlights ways to improve performance and reduce environmental impact.

In 2022, we installed Automatic Meter Reading (AMR) devices at Unit 3 in Stourton Link, Leeds, which is occupied by Hugh Steeper Group. The aim of this measure was to collect accurate occupier utility data from which we could gain important insights, while simultaneously identifying opportunities to maximise energy efficiency and implement energy saving initiatives.

Using AMR technology also enables energy consumption data to be viewed in real-time on a platform that is accessible to both us and our occupier. This could help to steer operational strategies towards greater carbon and cost savings.

Following the installation of the AMR, Hugh Steeper Group has used the resulting data to roll out several improvements to energy efficiency and adjustments to manufacturing methods. In 2024, they reduced gas usage by 8% and electricity usage by 12% compared with the previous year, resulting in significant carbon and operational cost savings[18]. These positive outcomes demonstrate how collaborative measures based on real-time metering data offer substantial benefits both for us and our occupiers.

Into 2025, we will continue to expand our occupier utility data programme to support more of our occupiers. By replacing usage estimates with actual onsite data, we will further enhance the performance of our portfolio while accurately tracking our pathway towards net zero carbon.

Adam Marshall, Head of Health, Safety & Environment (HSE) at Steeper Group, explains one of the ways this collaboration has improved performance:

"We are committed to continuous improvement, and often this process feeds into the bottom line. Last year, as a case in point, we were looking at our usage of gas and found we could further adjust our manufacturing to limit the burn-off of airborne solvents. This improvement reduced our carbon emissions and helped cut the amount of gas needed at a time when costs had effectively doubled; the increase in gas charges meant our bill, whilst high, was not as high as it could have been."

18 Source: Hugh Steeper Group.

Case study: 44-45 Great Marlborough Street, London

44-45 Great Marlborough Street, London

Leveraging innovative technologies to reduce energy usage

As part of our Net Zero Carbon Pathway, improving the operational efficiency of properties is critical. A fundamental step towards this is firstly identifying any operational measures that can improve performance without the need for significant capital expenditure. Targeting these smaller-scale, marginal gains is driving us to explore and adopt new systems that offer innovative solutions.

During 2024, we installed a smart motor technology, Turntide Induction Motors, at 44-45 Great Marlborough Street, a 19,000 sq ft office asset in central London. Its purpose is to drive improvements in operational performance by optimising the building's energy usage. Turntide Induction Motors replaces the existing standard induction motor within the heating, ventilation and air conditioning (HVAC) system, improving its energy efficiency which in turn reduces emissions and operating costs.

As a result of the installation, the asset is forecasted to achieve an annual energy saving of 5,000 kWh, a carbon saving of 1.13 tonnes and operational cost saving of £3,659. Our approach also lowers embodied carbon by extending the lifespan of the old equipment, thereby deferring the need for a complete HVAC system replacement. The combination of these factors helps to increases the asset's appeal to occupiers.

Going into 2025, we will continue identifying opportunities to deploy Turntide Induction Motors across assets as well as other innovative technologies as we seek further performance improvements and operational efficiencies.

Step 6: increase renewable energy supply

Onsite renewable energy generation is becoming ever more critical throughout the built environment, as the UK's decarbonisation policies move buildings away from fossil fuel usage. The accompanying shift towards all-electric systems and operations is placing greater demand on the national grid, highlighting the importance of delivering assets that can mitigate that pressure by producing their own energy.

Over the past year, we have continued to engage with occupiers to determine the level of demand for solar PV installations. Assessing the suitability of rooftop areas for PV arrays has proven challenging in some instances. However, we are committed to overcoming these barriers through close collaboration with each occupier to identify the best approach to installation.

Installing PV arrays as part of refurbishment projects remains an important strand of our wider strategy. This key differentiator within the market is attracting a growing number of occupiers, who recognise that PV arrays represent not only operational cost savings but a vital step towards their own ESG targets. Our recent refurbishment at Royal London Park in Eastleigh offered an example of this emerging trend, with its new PV installation cited as a contributing factor in convincing a quality occupier to lease the space on a five-year term.

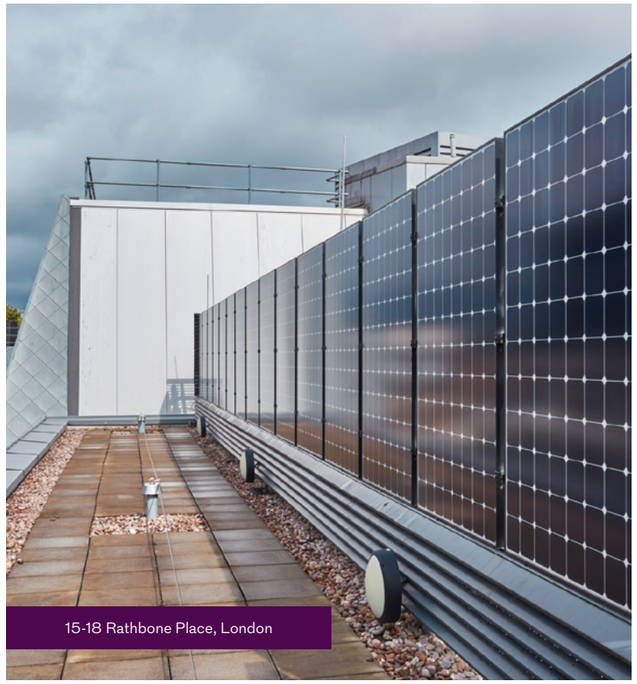
We are currently developing a solar PV specification guide for use on both landlord-led and occupier-led projects. This will ensure stakeholders adhere to best practice in the design, installation and maintenance of PV arrays, strengthening consistency in this area across our portfolio. The new guide will be completed and implemented during 2025.

Targets

Net Zero Carbon Pathway & RPI Portfolio Target

Material ESG issue: transition to net zero carbon

1. Generate up to 9.5 GWh (equivalent of 11.2 MW of capacity) of renewable energy onsite per year by 2040.



15-18 Rathbone Place, London

Progress

Commitments made	Action taken	Future progress
Generate up to 9.5 GWh of renewable energy onsite across the portfolio	• Continued seeking opportunities to install solar PV, both as part of refurbishment projects and through occupier engagement. • Commenced development of a solar PV specification guide for landlord-led and occupier-led installations. • Undertook an audit of our managed portfolio to determine which assets currently have PV installed and the availability of data on the PV, such as solar energy generation and usage.	• Complete the solar PV specification guide and rollout across the portfolio for both Royal London Asset Management Property and the occupiers. • Improve our approach for capturing solar PV data, specifically focusing on the automation of data collection, to support more accurately tracking progress towards our target. • Explore the feasibility for installing PV carports in car parks across our retail park portfolio as an alternative to roofs. • Investigate the feasibility of microgrid systems, combining solar PV with battery storage systems. • Continue engaging with occupiers to understand appetite for solar PV.
Explore options for offsite, high-quality renewable energy	• All properties within our Environmental Management System (EMS) remained on electricity supply contracts under which 100% of the energy provided is backed by Renewable Energy Guarantees of Origin (REGO) certificates.	• Continue to ensure that properties within our EMS remain on 100% REGO tariffs. • Source landlord electricity's supply contracts from sub-hourly time-matched REGOs from October 2025.

Pasadena Close, Hayes

Case study: Royal London Park, Eastleigh

Royal London Park, Eastleigh

The PV array is expected to generate around 85 MWh a year, reducing the use of electricity from the national grid by 31% and operating costs by 15%.

Installing onsite renewables to attract high quality occupiers

Royal London Park is a 111,000 sq. ft. multi-let industrial park in Eastleigh, near Southampton. Unit 1 on the site covers around 60,000 sq. ft. and underwent a comprehensive refurbishment during 2023. ESG measures were heavily integrated into the design, including the installation of LED lighting with passive infra-red sensors, and six dual-point electric vehicle (EV) charging stations. Fossil fuels were also eliminated through the refurbishment, minimising the asset's transitional risk.

In 2024, the installation of a 99.6 kWp solar PV system was completed as part of the refurbishment, covering approximately 10% of the available roof space. Its delay was due to inclement weather and nesting birds. Incorporating onsite renewable energy generation helps embed resilience by reducing the asset's reliance on the national grid.

The PV array is expected to generate around 85 MWh a year, reducing the use of electricity from the national grid by 31% and operating costs by 15%. This demonstrates how integrating ESG into the design can deliver positive environmental and financial outcomes. Through these various ESG measures, the site achieved an EPC A rating following the project's completion.

Following the refurbishment, Unit 1 at Royal London Park was successfully let on a five-year term to a high quality occupier, minimising the void period. Our occupier cited that the solar PV array and other ESG credentials were a key factor in persuading them to lease the space as it aligns with their own approach to sustainability. This underlines the benefits of investing in ESG measures to attract high quality occupants and ultimately deliver returns to our investors.

Step 7: offset residual emissions

Last year saw the release of several new and updated guidance documents focused on science-based emissions reduction and carbon offsetting. These included the revised Oxford Principles for Net Zero Aligned Carbon Offsetting[19], new guidance from the SBTi on measures beyond a company's value chain[20], and a Code of Best Practice from the International Carbon Reduction and Offset Alliance (ICROA). This plethora of new publications underlines the growing demand from companies for further resources to support decision-making, while also enhancing transparency and integrity[21].

The SBTi sparked controversy with one particular update, announcing in April 2024 its support for allowing companies to use carbon credits and other "environmental attribute certificates" to offset their Scope 3 (indirect) emissions[22]. This marked a significant departure from the organisation's previous position, which had required emission cuts to be tied directly to a company's operations or supply chain. The SBTi's announcement was criticised internally and created a significant backlash from sections of the industry, such as advisory bodies and environmental groups.

Furthermore, towards the end of 2024, the UK Government launched a consultation on the implementation of its principles for voluntary carbon and nature market integrity[23]. These principles aim to provide guidance on how to responsibly participate in the voluntary carbon market. This demonstrates that the government clearly recognises that these markets are complex and of growing importance with the rise of corporate net zero carbon targets being set. We will maintain a close eye on the outcome of the consultation next year.

Clearly, carbon offsetting remains a relatively unsettled area of net zero policy that poses challenges for those who engage with it. Despite this uncertainty, we have continued to monitor the role of offsetting as part of our commitment to further understanding the voluntary carbon market. This is particularly relevant in light of the growing interest from stakeholders in net zero carbon buildings – and the offsetting measures these may entail. Reflecting this trend, various local planning bodies increased their carbon price during 2024, with Westminster Planning Authority setting theirs at £880/tonne[24].

One notable development for Royal London Asset Management in 2024 was the purchase of 21,000 acres of farmland across Cambridgeshire and Lincolnshire. This marks our first investment in natural capital and agriculture, reflecting a broader strategy of delivering diversified returns. The acquisition presents opportunities for implementing sustainable farming techniques, as well as nature-based solutions to mitigate climate change and biodiversity loss.

Targets

Net Zero Carbon Pathway

Material ESG issue: transition to net zero carbon

1. Carbon offset for those residual emissions that we were not able to abate by any other means using high-quality offsets that are aligned to industry best practice.

Progress

Commitments made	Action taken	Future progress
Develop a robust strategy for procuring high-quality carbon offsets for residual emissions	• Continued engaging with the voluntary carbon market to understand potential options for a live development project. • Undertook an exercise to estimate our projected embodied and operational carbon emissions up to 2040 to determine the likely amount of carbon offsets that would be required to achieve our net zero carbon aspirations. • Integrated a carbon price into development appraisals for the Property Investment Committee. Whilst offsetting is not always required in development projects, this approach ensures it remains visible. • Completed the purchase of 21,000 acres of grade 1 farmland in the UK. This offers the potential for nature-based solutions which could support our offsetting requirements.	• Develop a carbon offsetting strategy for Royal London Asset Management Property. • Complete a baselining project at our new natural capital investment to understand the current state of the farmland, including current volume of carbon stored in the peatland. This step is crucial in determining potential opportunities for generating carbon offset credits. • With our support of the UK Net Zero Carbon Buildings Standard and our aim to align with the standard, we will continue to engage with the pilot programme to ensure we understand its carbon offsetting requirements.

Cambridge Research Park, Cambridge

19 Revised Oxford principles for net zero aligned carbon offsetting
20 Beyond Value Chain Mitigation - Science Based Targets Initiative
21 ICROA Code of Best Practice | ICROA
22 Internal turmoil at SBTi: controversial policy shift on carbon offsets sparks debate - Leasing Life
23 Voluntary carbon and nature market integrity: UK government principles - GOV.UK
24 Policy notice: Update on carbon off-set payment proposals - Westminster Property Association

Case study: Waldersey Farm

Diversifying our investment landscape

We are focused on embedding resilience to long-term challenges by diversifying our portfolio. In 2024, we invested in 21,000 acres of grade 1 farmland in a joint venture with South Yorkshire Pension Authority. This marked our first investment into natural capital and agriculture, reflecting the group's strategy of delivering diversified returns to our clients.

The vision for this investment is to proactively manage its natural capital assets and provide long-term financial returns, while also supporting the topographical and ecological aspects of the site. As well as farmland, the estate features reservoirs, irrigation systems, grain dryers and commercial and residential properties. These present challenges but also opportunities, such as repurposing redundant buildings and enhancing the residential estate. In doing so, we can ensure the farm benefits from best-in-class facilities and delivers positive outcomes for occupiers.

The farmland offers the potential for several nature-based solutions that align with United Nations Sustainable Development Goals (SDG), such as those concerning climate change and biodiversity loss. Alongside this, we will focus on seeking to reduce the farmland's environmental impact through the use of sustainable and regenerative farming techniques.

Ahead of implementing these strategies, we have commenced a large-scale baselining project to understand the current state of the farmland. This includes assessing the volume of carbon currently contained within the peatland, determining the onsite biodiversity value, and undertaking a hydrological assessment to monitor groundwater levels.

We aim to consolidate this data for the purpose of informing our strategies and gauging the farm's underlying performance, which will guide future decision-making. This baselining exercise will continue into 2025.

We invested in

21,000

acres of grade 1 farmland in the UK

1st

investment in natural capital and agriculture

The farmland offers the potential for several nature-based solutions that align with United Nations Sustainable Development Goals (SDG), such as those concerning climate change and biodiversity loss.

Waldersey Farm

Challenges and solutions

The challenge posed by climate change was demonstrated throughout 2024. Both its physical impacts and financial implications grew clearer. Against this backdrop, significant progress has been made through the introduction of regulatory measures which have the potential to promote greater transparency on emissions and net zero carbon. However, further actions are required – from both government and regulators – to help organisations implement their carbon transition plans and fulfil their net zero ambitions.

As we look ahead, political uncertainty represents one of the most conspicuous challenges for the built environment. The US election sparked widespread concerns over global climate policy, with the incoming Trump administration reiterating its intention to withdraw from the Paris Agreement. The US Securities and Exchange Commission is also expected to adjust to the new political landscape by rowing back on its climate disclosures rule for public companies, which had already been challenged in the courts and faces clear opposition from the Trump White House. Though this proposed framework was relatively modest, its failure would still represent a setback for those stakeholders seeking greater transparency over climate-related risk. We will continue to monitor the new administration's impact on global trends and initiatives.

Pear Springs, Wesham

In contrast, the UK has seen several positive steps in relation to net zero carbon over the past year. The implementation of the FCA's SDR framework, complete with its anti-greenwashing rule, is expected to enhance transparency by ensuring companies report their ESG activities accurately. We also welcomed a pilot version of the UK Net Zero Carbon Buildings Standard, a potentially pivotal moment on the path to net zero. In creating a single standard for labelling buildings as net zero carbon, the UK Net Zero Carbon Buildings Standard is set to improve consistency, reduce greenwashing and remove the confusion caused by overlapping frameworks. That these initiatives are primarily driven by market forces, rather than government policies, emphasises the demand for transparency among investors. Both the SDR and UK Net Zero Carbon Buildings Standard will provide streamlined platforms for decision-making, backed by a consistent approach to ESG reporting.

> **The UK Net Zero Carbon Buildings Standard is set to improve consistency, reduce greenwashing and remove the confusion caused by overlapping frameworks.**

One initiative that is being led by government is the UK Green Taxonomy consultation, which opened in 2024 and is due to close in February 2025. This outlined proposals for a green taxonomy – similar to that of the EU – aimed at supporting sustainable investment while mitigating greenwashing. Along with Royal London Group, we responded and wrote to the Treasury advising the department to prioritise policies that unlock finance for green and sustainable activities in the real economy, rather than focussing on methodologies that have had limited success in supporting green asset investments to date. We will assess the outcome of this proposal closely, as it could provide an early indication of longer-term shifts in government policy.

The Earnshaw, London

Securing access to data on building performance continues to pose a challenge, one that is exacerbated by the high proportion of single-let properties within our portfolio. Robust, real-time data is essential if we are to monitor our progress towards net zero carbon accurately. Comprehensive datasets play a vital role in identifying where performance can be enhanced and in shaping broader strategic investment decisions. As such, we are prioritising targeted engagement with our occupiers that strengthens relationships and increases data-led collaboration. We believe the UK Government can play a positive role in this area, potentially involving the use of regulation to support improved data exchange.

In 2024, Whitehall launched a consultation on possible reforms to the Energy Performance of Buildings regime. These proposals include using multiple metrics to determine EPC ratings, as well as reducing how long EPCs and Display Energy Certificates are valid for. Though it is encouraging that the government is re-evaluating its current frameworks, it nevertheless needs to accelerate these efforts. Through our involvement with industry bodies such as the BBP and the UKGBC, we will seek out opportunities to engage with the government regarding these proposals and other relevant issues.

Though challenges continue to emerge, the progress we have made on our net zero journey over the past year has been overwhelmingly positive. Underpinning our strategy – and its achievements to date – are the relationships that will be crucial to realising our ambitions. Closer collaboration with occupiers, investors, government and industry bodies holds the key to unlocking the challenges that lie ahead. Accordingly, we are committed to further strengthening our stakeholder engagement over the coming year. We will also continue to explore every possible innovation for reducing emissions, which will drive our portfolio onwards towards net zero carbon while delivering positive outcomes for our properties.

Appendix 1

Appendix 1 – Greenhouse Gas Reporting

Emissions Category	BBP Category	GHG Protocol Category	Activities controlled and managed by landlord, occupier or both	Absolute emissions (tCO_2e)					
				2019 Q4'18–Q3'19	2020 Q4'19–Q3'20	2021 Q4'20–Q3'21	2022 Q4'21–Q3'22	2023 Q4'22–Q3'23	2024 Q4'23–Q3'24
Scope 1	Natural gas	Scope 1	Landlord	3,546	3,495	3,781	3,400	2,851	2,966
	Refrigerants (fugitive emissions)	Scope 1	Landlord	663	545	290	252	558	763
Scope 2[25]	Electricity	Scope 2	Landlord	7,561	6,580	5,891	5,246	5,075	5,827
Scope 3	Natural gas and electricity	Cat. 13 (Downstream leased assets)	Occupier	62,051	61,919	62,167	62,472	61,543	93,370
	Water to operate buildings	Cat. 1 (Purchased goods and services)	Landlord	216	100	52	57	66	24
	Waste generated in operation	Cat. 5 (Waste generated in operations)	Landlord	31	30	28	39	46	10
	Extraction, production, and transportation of fuels and energy	Cat. 3 (Fuel and energy-related activities)	Landlord	2,315	2,393	2,783	2,385	2,164	2,072
	Purchase of goods and services	Cat. 1 (Purchased goods and services)	Landlord	17,117	6,689	10,090	4,109	17,311	28,990
	Capital goods (excluding development activities)	Cat. 2 (Capital goods)	Landlord	91,633	48,606	29,994	16,632	12,173	0
	New development works	Cat. 2 (Capital goods)	Landlord	951	9,835	8,224	36,468	17,410	54,487

25 Scope 2 (location-based) emissions.

Emissions Category	BBP Category	GHG Protocol Category	Activities controlled and managed by landlord, occupier or both	Absolute emissions (tCO_2e) 2019 Q4'18–Q3'19	2020 Q4'19–Q3'20	2021 Q4'20–Q3'21	2022 Q4'21–Q3'22	2023 Q4'22–Q3'23	2024 Q4'23–Q3'24
Scope 3	Refurbishment works[26]	Cat. 2 (Capital goods)	Landlord & Occupier	20,693	0	0	4,503	0	3,686
	Fit-out works[27]	Cat. 2 (Capital goods)	Landlord & Occupier	87	751	1,085	14,878	1,747	16,231
	End of life	Cat. 12 (End-of-life treatment of sold products)	Landlord	0	0	0	0	0	0
	Investments	Cat. 15 (Investments)	Landlord	3,821	3,268	3,155	3,539	3,182	1,696
Total				210,685	144,211	127,539	153,981	124,125	210,122

3 Hardman Square, Manchester

26 Landlord-controlled refurbishment works covers our major refurbishments activities, over £3 million.
27 Landlord-controlled fit-out works covers our minor refurbishment activities, under £3 million.

Figure 1: Annual GHG emissions (2019-2024)

Methodology

Emissions Category	BBP Category	GHG Protocol Category	Emission Factor Used
Scope 1	Natural gas	Scope 1	UK Government GHG Conversion Factors for Company Reporting (Full Set) for Reporting Year
	Refrigerants (fugitive emissions)	Scope 1	UK Government GHG Conversion Factors for Company Reporting (Full Set) for Reporting Year
Scope 2	Electricity (location-based)	Scope 2	UK Government GHG Conversion Factors for Company Reporting (Full Set) for Reporting Year
	Electricity (market-based)	Scope 2	UK Government GHG Conversion Factors for Company Reporting (Full Set) for Reporting Year
Scope 3	Natural gas and electricity	Cat. 13 (Downstream leased assets)	UK Government GHG Conversion Factors for Company Reporting (Full Set) for Reporting Year
	Water to operate buildings	Cat. 1 (Purchased goods and services)	UK Government GHG Conversion Factors for Company Reporting (Full Set) for Reporting Year
	Waste generated in operation	Cat. 5 (Waste generated in operations)	UK Government GHG Conversion Factors for Company Reporting (Full Set) for Reporting Year
	Extraction, production, and transportation of fuels and energy	Cat. 3 (Fuel and energy-related activities)	UK Government GHG Conversion Factors for Company Reporting (Full Set) for Reporting Year
	Purchase of goods and services	Cat. 1 (Purchased goods and services)	UK Government GHG Conversion Factors for Company Reporting (Full Set) for Reporting Year
	Capital goods (excluding development activities)	Cat. 2 (Capital goods)	UK Government GHG Conversion Factors for Company Reporting (Full Set) for Reporting Year
Scope 3	New development works	Cat. 2 (Capital goods)	In order of preference dependent on available data: 1) Developer provided carbon intensity where available 2) ADEME Carbon Database (where floor area or spend data is available)
	Refurbishment works	Cat. 2 (Capital goods)	
	Fit-out works	Cat. 2 (Capital goods)	
	End of life	Cat. 12 (End-of- life treatment of sold products)	Greater London Authority (GLA) Whole Life Carbon benchmark is applied to the entire building area to calculate associated emissions
	Investments	Cat. 15 (Investments)	In order of preference dependent on available data: 1) Investee provided GHG emissions data where available 2) UK Government GHG Conversion Factors for Company Reporting (Full Set) for Reporting Year (where floor area data is available)

Appendix 2

Appendix 2 – Terminology and Acronyms

Methodology

The following table lists key defined terms used throughout the report.

Word/Phrase	Definition
1.5° Aligned/ 1.5° Pathway	A target, commitment or reduction pathway which, if applied globally, will ensure global warming is either limited to 1.5°C above pre-industrial temperatures, or allow them to return to 1.5°C above by the year 2100 (following an overshoot). See also 'Paris-aligned'.
Asset Owner	An individual or organisation allocating capital for the acquisition, development or operation of a building – potentially as part of a pension fund, endowment or foundation, or for high-net-worth and retail investors who own underlying real assets but charge the management of those assets to asset/investment managers.
Base Building	Areas of a building managed by the landlord, rather than the occupier.
BREEAM	Building Research Establishment Environmental Assessment Model (BREEAM) is a green building certification used to assess, rate and certify the sustainability of a building.
Carbon Offsetting	Actions or investments made at a building or organisational level to facilitate another party to reduce or avoid emissions, or absorb atmospheric carbon. Often used as a means of compensation for emissions generated elsewhere. This is in the context of the built environment.
Climate Change Mitigation	Actions or investments made at a building or organisational level to reduce or prevent the emission of greenhouse gas.
Circular Economy	The circular economy prioritises the reuse of materials, preventing the over extraction of natural resources and the number of usable materials that end up in landfill.
Circularity	Optimising the use of resources throughout the lifecycle of the building in order to minimise waste sent to landfill.
Directly Managed Property Assets	Property assets where Royal London Asset Management has complete operational control and greater than 50% equity share, and joint ventures where they would cover the proportionate amount of emissions.
Embodied Carbon	Greenhouse gas emissions associated with building construction, including those arising from extracting, transporting, manufacturing, and installing building materials, in addition to the operational and end-of-life emissions of the materials.

Word/Phrase	Definition
Energy Hierarchy	A principle which prioritises the improvement of energy performance above all other carbon mitigation/compensation methods and allows offsetting to be used only as a last resort in any net zero carbon definition.
Energy Use Intensity	The measured unit of consumption (kWh) per unit of floor area (m^2) for a property.
Environmental Management System	An internal framework that structures all procedures, projects and initiatives into a collective programme which aligns the sustainability efforts at entity level.
Fitwel	A global building certification system used to assess, rate and certify a building based on its promotion of health and wellbeing within buildings.
Global Warming Potential	Measure of how much energy the emissions of 1 ton of gas will absorb over a given period of time, relative to the emissions of 1 ton of carbon dioxide (CO_2). The higher the global warming potential, the more that given gas warms the Earth compared to CO_2.
GRESB	Formerly the Global Real Estate Sustainability Benchmark, GRESB is a global sustainability benchmark for commercial real estate and infrastructure.
Indirectly Managed Property Assets	Property assets that are either partially managed by Royal London Asset Management or managed wholly by the occupier.
Internal Carbon Price	A monetary unit is applied to a ton of carbon dioxide equivalent (CO_2e) that is determined by an organisation which can be used to determine financial opportunities and risks.
Landlord	An individual or organisation responsible for the ownership of a building which is rented or leased to an individual or organisation.
Low-and Zero-Carbon Technologies	Technologies that emit low levels of carbon dioxide (CO_2) emissions, or no net (CO_2) emissions.
Material Passports	Digital document that stores key information on construction materials and products to help support the recovery and reuse of these materials over their lifecycle.
Microgrid	System consisting of a group of interconnected energy resources that generate electricity from renewable energy sources, such as solar and wind, for a localised area, operating independently to the national grid.
Modular Construction	Constructing individual building sections/modules off-site before transporting them to site for assembly.

Word/Phrase	Definition
NABERS UK	Green building certification that uses the actual operational performance of a building to assess, rate and certify the sustainability of a building.
Net Zero Carbon Building	A building-level status whereby the building has undergone steps to improve the energy performance and reduce inefficiencies. Building-level status is also achieved on completion of national grid decarbonisation. Residual emissions are offset.
Occupier	An organisation residing in/operating from a building.
Operational Carbon	Greenhouse gas emissions associated with the operational stage of a building's lifecycle, mostly attributed to emissions from energy use.
Paris-Aligned	A target, commitment or reduction pathway which is aligned with the requirements of the Paris Agreement (2015) – synonymous with 1.5° aligned.
Paris-Proof	A concept pioneered by the Dutch Green Building Council basing energy reduction requirements on the future zero carbon energy generation capacity. Paris Proof targets set out the expected magnitude of energy efficiency improvements required by 2050.
Pre-demolition Audit	Survey undertaken on an existing building prior to its demolition or major redevelopment to help maximise the recovery of materials and components for reuse or recycling, minimising waste sent to landfill.
Property Manager	Third party service, procured by the asset owner, who manages the operational stage of a building lifecycle.
Refrigerants (Fugitive Emissions)	Emissions that are not produced intentionally – within the built environment, this is usually attributed to leakage of refrigerants from cooling systems and heat pumps.
Renewable Energy Guarantees of Origin (REGO) Certificate	A certificate issued by the Office of Gas and Electricity Markets (Ofgem), certifying that the electricity in respect of which the certificate is issued, was electricity produced from renewable energy sources. This is in the context of the built environment.
Science Based Targets	Targets that commit organisations to reducing emissions in line with the Paris Agreement goals.
Scope 1 Emissions	All direct emissions from sources that an organisation owns or controls directly, such as emissions associated with fuel combustion in boilers.
Scope 2 (location-based) Emissions	Indirect emissions from electricity purchased and used by the organisation. Emissions are based on the average emission factor of the UK National Grid.

Word/Phrase	Definition
Scope 2 (market-based) Emissions	Indirect emissions from electricity purchased and used by the organisation. Emissions are based on the emission factors of the chosen energy contract.
Scope 3 Emissions	All other indirect emissions from upstream and downstream activities of the organisation, occurring from sources that they do not directly own or control.
Submeter	Technology used to measure part of the energy load of the building. This can either be location-based, such as the energy use of a floor or occupier in a building, or be energy load specific, such as the lighting or chillers.
Transition Fund	An approach to carbon offsetting. The amount of residual emissions for a new or existing property asset is multiplied by an assigned monetary value of carbon to create a fund that is used to both offset the residual emissions from a new or existing property asset, as well as fund additional projects that contribute towards the transition to net zero carbon.
Voluntary Carbon Market	Enables the generation, buying and selling of carbon credits on a voluntary basis rather than for legal compliance purposes and do not include compliance schemes such as the UK Emissions Trading Scheme.
WELL	Green building certification used to assess, rate and certify the health and wellbeing performance of a building.
Whole Life Carbon	Greenhouse gas emissions associated with the full lifecycle of a building, from materials and construction through to demolition, combining embodied carbon, operational carbon and any other sources of emissions. Whole life carbon is broken down into the building's lifecycle into stages and modules. These are as follows: • Module A: A0-A5: Upfront Carbon. This covers the construction phase. • Module B: – B1-B5: In Use. This covers the use of the building including its maintenance, repair and refurbishment. – B6 & B7: Operational carbon. This covers the operational energy and waste usage of the building. – B8: User carbon. This covers activities by the occupier not covered in B1-B7. • Module C: C1-C4: End of life: This covers the deconstruction/demolition of a building and disposal of any waste generate during this process. (Source: Whole life carbon assessment for the built environment, Royal Institute of Chartered Surveyors (RICS), 2nd edition, July 2024)

Acronyms

The following table includes a list of acronyms used throughout the report.

Abbreviation	Meaning
AI	Artificial Intelligence
AMR	Automatic Meter Reading
ASHP	Air Source Heat Pump
AUM	Assets Under Management
BBP	Better Buildings Partnership
BNG	Biodiversity Net Gain
CCC	Climate Change Committee
CO_2e	Carbon Dioxide Equivalent
COP	Conference of the Parties
CRREM	Carbon Risk Real Estate Monitor
DfP	Design for Performance
EMS	Environmental Management System
EPC	Energy Performance Certificate
ESG	Environmental, Social and Governance
EUI	Energy Use Intensity
EV	Electric Vehicle
FCA	Financial Conduct Authority
GHG	Greenhouse Gas
GIA	Gross Internal Area

Abbreviation	Meaning
GLA	Greater London Authority
GWh	Gigawatt Hour
GWP	Global Warming Potential
HVAC	Heating, Ventilation and Air Conditioning
ICROA	International Carbon Reduction and Offset Alliance
ICVCM	Integrity Council for the Voluntary Carbon Market
IFRS	International Financial Reporting Standards
IPCC	Intergovernmental Panel on Climate Change
ISSB	International Sustainability Standard Board
KPI	Key Performance Indicator
kWh	Kilowatt hour
kWp	Kilowatt peak
LED	Light-emitting Diode
MEES	Minimum Energy Efficiency Standard
MW	Megawatt
NDC	Nationally Determined Contribution
NZAM	Net Zero Asset Managers Initiative

Abbreviation	Meaning
NZC	Net Zero Carbon
PV	Photovoltaic
REEB	Real Estate Environmental Benchmark
REGO	Renewable Energy Guarantees of Origin
RI	Responsible Investment
RICS	Royal Institute of Chartered Surveyors
RPI	Responsible Property Investment
SBTi	Science Based Targets Initiative
SDR	Sustainability Disclosure Requirements

Abbreviation	Meaning
TCFD	Task Force on Climate-related Financial Disclosures
TNFD	Taskforce on Nature-related Financial Disclosures
TPT	Transition Plan Taskforce
UKGBC	UK Green Building Council
UKNZCBS	UK Net Zero Carbon Buildings Standard
VCMI	Voluntary Carbon Markets Integrity Initiative
VOC	Volatile Organic Compound
VRV	Variable Refrigerant Volume

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