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Property Net Zero Carbon Pathway Progress Report 2023

issued September 2024



Cambridge Research Park, Cambridge

Contents

Foreword	3
Document map	5
Introduction	7
Commitment to Net Zero Carbon	8
– Step 1: understand the drivers for net zero carbon	10
– Step 2: define the scope and boundaries	11
– Step 3: identify carbon footprint and trajectory	12
– Step 4: reduce embodied carbon	15
– Step 5: increase operational efficiency	19
– Step 6: increase renewable energy supply	24
– Step 7: offset residual emissions	26
Challenges and solutions	28
Appendix 1 – Greenhouse Gas Reporting	29
Appendix 2 - Terminology and Acronyms	32

1 New York Street, Manchester

Foreword

Renaissance, Croydon



Mark Evans
Head of Property

We are proud to publish the second update to our original Property Net Zero Carbon Pathway that was unveiled in 2021. We have made significant progress over the past three years towards achieving our goals, while remaining focused on delivering positive outcomes for our stakeholders and embedding resilience across our portfolio.

The past year has seen a clear increase in demand for net zero carbon. It is anticipated that regulatory pressures will come from the UK's Transition Plan Taskforce (TPT) framework, which advises corporations on how to disclose their net zero transition. Other reporting frameworks meanwhile have further evolved, such as updates to the International Financial Reporting Standards (IFRS) Sustainability Disclosure Standards issued by the International Sustainability Standards Board (ISSB). We are also observing more evidence of net zero carbon influencing the property market, with suggestions of a 'green premium' driven by both occupier and investor demands. We are committed to ensuring our properties continue to meet these stakeholder demands – a commitment that will be supported by fulfilling our net zero carbon ambitions.

Furthermore, the importance of collaboration to achieving net zero carbon has become even more apparent. Developing strong landlord-occupier relationships is a critical step in driving down our environmental impacts. By gaining the trust of our occupiers, we can then propose ideas and initiatives that will benefit them and improve the efficiency of properties, such as installing renewable technology or lighting upgrades. Engaging with our property and facilities managers has also been hugely beneficial, helping us identify opportunities to increase operational efficiency as well as data collection. Our commitment to industry organisations and collaboration with various working groups has underlined the advantages of sharing knowledge, experiences and challenges with our peers as we push towards similar objectives.

This report provides an update on progress against our original seven-step pathway, giving all our stakeholders an insight into the actions we are taking and the outcomes achieved. Producing this report has also given us the opportunity to reflect on the last year, assessing our successes as well as the challenges faced. We will strive to take these learnings forward and continue making outstanding progress towards net zero carbon.

Mark Evans, Head of Property

Since our baseline year of 2019, we have reduced our greenhouse gas emissions by 41% - a significant achievement.



15 Rathbone Place, London

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 aim to reach for new and existing assets, as well as detailed statements covering our achievements measured against these targets. 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 2023¹

Our report as part of our commitment to the UK Stewardship Code

1. These reports cover the reporting period 1st January 2023 to 31st December 2023



Royal London Climate Report 2023

This report is in line with the Task Force on Climate-related Financial Disclosures

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



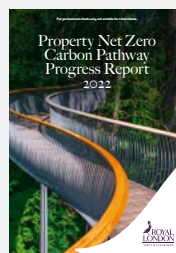
Property Net Zero Carbon Pathway 2021

Sets out our strategy to achieving net zero carbon by our target years



Responsible Property Investment Report 2022

Highlights our progress of delivering against our RPI strategic framework over 2022



Property Net Zero Carbon Pathway Progress Report 2022

Highlights our progress over 2022 towards achieving our net zero carbon goals



Property Development & Refurbishment Statement of Achievement 2022

Sets out our performance highlights against our New Construction and Major Refurbishment Sustainability Standards



New Construction and Major Refurbishment Sustainability Standards 2024

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 strategy and project documents for our development and refurbishment activities. These provide guidance to our design teams, whilst ensuring our sustainability targets and commitments are met.

New Construction and Major Refurbishment Sustainability Standards framework suite of documents



Atlantic Park, Liverpool



Introduction

Space, Working

Over the past year, we have continued to focus our efforts on decarbonising our properties through implementing new energy efficiency programmes, investigating innovative technologies and increasing data coverage. Being a responsible investor remains critical to our decision-making process, ensuring compliance with emerging regulation and reporting frameworks, whilst delivering positive outcomes to our stakeholders on our journey to net zero carbon.

Driven by anthropogenic climate change and the return of the 'El Nino' oceanic phenomenon, 2023 was the hottest year on record as unprecedented conditions swept the globe¹. Reports emerged warning that the 1.5-degree global warming threshold could be surpassed within the next five years, which would lead to far greater climatic impacts². Reflecting this, two of the top 10 immediate-term risks in the World Economic Forum's (WEF) 2023 Global Risks Report were related to climate change³. These are 'failure to mitigate climate change' and 'failure of climate change adaptation'. When looking at the next 10 years, the WEF rated these two risks as the most pressing of all. The risk of climate change is growing exponentially, placing even greater importance on decarbonising our portfolio to mitigate impact and ensure our properties are resilient.

Whilst the threat of climate change is all too evident, clear advances in tackling rising temperatures are being made on a global scale. The 28th United Nations Conference of the Parties (COP 28) saw the first explicit mention of fossil fuels in the event's history, as part of a call for governments to accelerate

their transition to renewables⁴. This is a significant milestone. The UK meanwhile is among those countries to sign up to the newly launched Buildings Breakthrough commitment⁵. Under this initiative, all buildings are to be 'nearly net zero' and 'resilient' by 2030, strengthening international collaboration to decarbonise the real estate sector. We hope these actions against climate change drive further global efforts to reduce greenhouse gas (GHG) emissions and increase our resilience.

The development of the UK Net Zero Carbon Buildings Standard was of particular relevance in 2023, with the release of its technical consultation in June representing a crucial milestone for the real estate industry. This outlined its approach to creating a clear definition of a net zero carbon building, as well as providing a first look at the operational energy and embodied carbon performance levels likely to be used to assess buildings⁶. Developing this consistent approach to net zero carbon across the industry is critical for ensuring consistency and minimising the risk of greenwashing. Royal London Asset Management is fully supportive of this and will continue monitoring its evolution.

1. <https://www.bbc.co.uk/news/science-environment-67861954>

2. World Meteorological Organisation (2023) WMO Global Annual to Decadal Climate Update, www.library.wmo.int/records/item/66224-wmo-global-annual-to-decadal-climate-update

3. <https://www.weforum.org/publications/global-risks-report-2023/>

4. <https://unfccc.int/cop28>

5. <https://www.unep.org/news-and-stories/press-release/buildings-breakthrough-global-push-near-zero-emission-and-resilient>

6. <https://www.nzcbuildings.co.uk/archive>

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 developments⁷, and by 2040 for indirectly managed property assets⁸. The publication of our pathway followed Royal London Asset Management becoming a signatory of the Better Buildings Partnership's (BBP) 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)⁹, 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. These targets, along with our non-property NZAM targets, can be found [here](#).

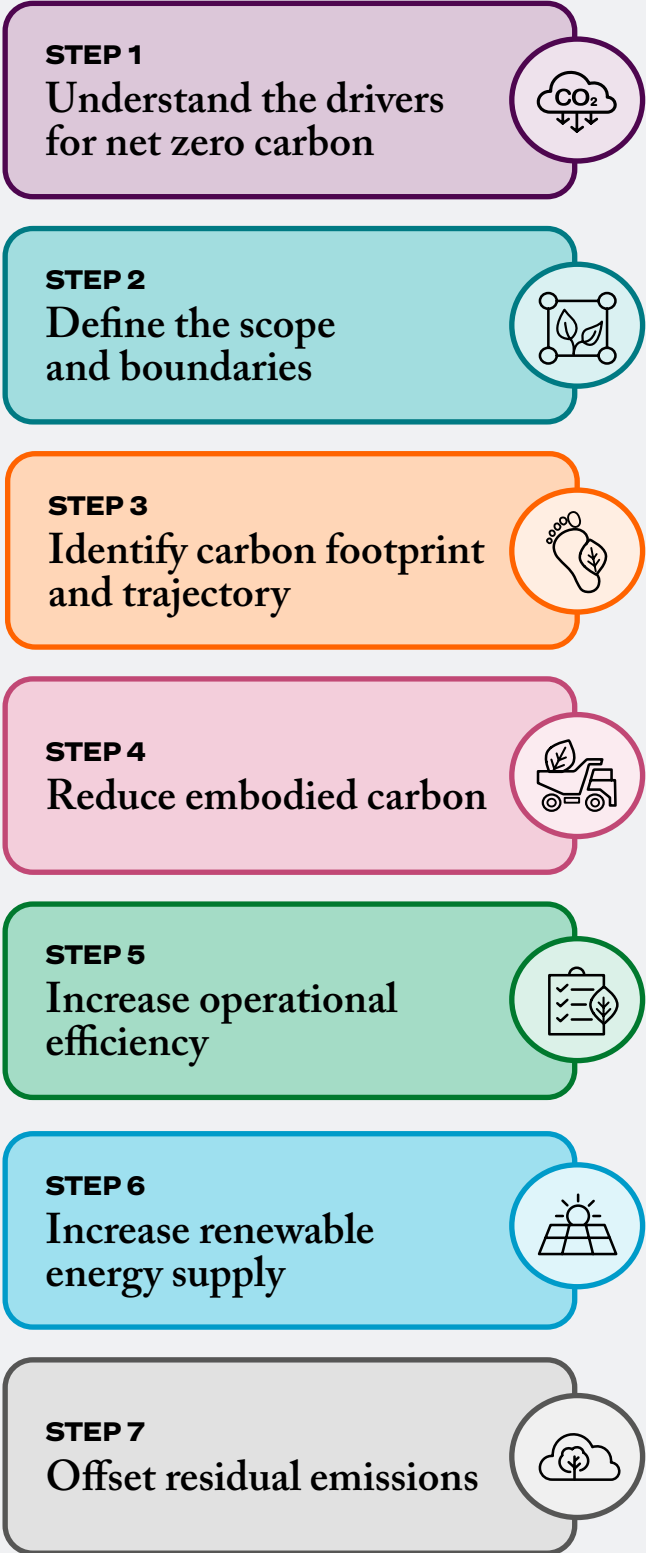
Our commitments are based on the expectation that governments and policymakers will deliver on the commitments to achieve the goals of the Paris Agreement and that the required actions do not contravene our fiduciary duty to our members and customers.

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. <https://www.netzeroassetmanagers.org/signatories/royal-london-asset-management/>



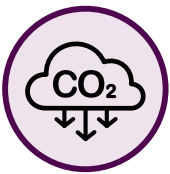
Holborn Viaduct, London

Our pathway to net zero carbon follows seven steps:



Step 1: understand the drivers for net zero carbon

One Gloucester Place, Brighton



Over the past year, our Responsible Property Investment (RPI) strategic framework has remained central to guiding our activities and delivering futureproof buildings that respond to growing occupier and investor demands. Its four pillars address each step in the property lifecycle, ensuring resilience is embedded across our portfolio.



Investing in a resilient portfolio



Developing for the future



Managing assets for positive impact



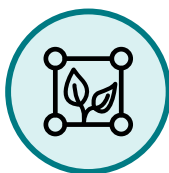
Making responsible decisions

During 2023 evidence continued to emerge of how sustainable real estate produces market premiums, with higher rents and lower voids recorded in buildings with strong Environmental, Social and Governance (ESG) credentials. This has been particularly prevalent in the central London office market, reflected in the growth of corporates setting net zero carbon and science-based targets. Properties that are more energy-efficient and consequently have lower operating costs are attracting a greater number of occupiers than ever before. This ever-growing demand for best-in-class space is a significant driver for Royal London Asset Management in achieving net zero carbon and investing to deliver positive environmental and social outcomes for our occupiers.

This demand, combined with evolving regulatory requirements, is spurring the transition of portfolios towards net zero carbon. We are committed to implementing programmes that help reduce our climate-related transition risks. These have included undertaking net zero carbon audits, which determine how our portfolio is performing against industry benchmarks so that we can manage any identified risks effectively. The emergence of reporting frameworks and legislation, such as the UK's Sustainability Disclosure Requirements (SDR), the IFRS Sustainability Disclosure Standards and the UK's Transition Plan Taskforce (TPT), also highlights the growing pressure from stakeholders for organisations to be more transparent over how they will decarbonise.

Step 2: define the scope and boundaries

Metroplex Business Park, Salford



Emissions Scope

Following our original Net Zero Carbon Pathway Report, we have adopted the BBP's Net Zero Carbon Pathway Framework¹⁰ 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. This will continue to be measured.

Within our original pathway, we excluded the emission source 'Investments' (Scope 3 Category 15). We have now decided to calculate and include these emissions within our current and baseline year carbon footprints for the first time. 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. This approach aims to provide full transparency on all material Scope 3 categories and aligns with the BBP Net Zero Carbon Pathway Framework, which recommends the inclusion of all emissions from our assets under management within scope – including the proportion held of any indirect investments. There have been no other modifications to the scope of emissions defined in the original pathway.

Investment Boundary

Our investment boundary remains the same as reported in our Net Zero Carbon Pathway Progress Report (2022).

Royal London Asset Management has three main property funds:

- 1 Royal London UK Real Estate Fund (RLUKREF)**
- 2 Royal London Pooled Property Fund (RLPPF)**
- 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 direct and indirect, in these funds, and this also includes co-investments and segregated mandates managed by Royal London Asset Management.

Statements made in this document about Royal London Asset Management's corporate ambitions across its property funds do not guarantee any of these funds will try to meet that objective individually. If you are seeking a particular 'green' outcome, always remember to check the fund objectives to ensure it will meet your needs.

10. Better Buildings Partnership, Net Zero Carbon Pathway Framework, https://www.betterbuildingspartnership.co.uk/sites/default/files/media/attachment/BBP_Net-zero%20Carbon%20Pathway%20Framework_June22_v3_0.pdf

Step 3: identify carbon footprint and trajectory



We are committed to improving our data collection year-on-year to facilitate a better assessment of our progress towards net zero carbon targets. In line with the principles of accuracy and consistency set out in the GHG Protocol Corporate Accounting and Reporting Standard¹¹, our external consultants have recalculated our baseline year emissions for the 2019 reporting year. This is due to material changes in methodology that have improved the accuracy of our current year footprints, as well as the alignment of reporting periods across all years. Re-baselining therefore improves not only consistency but also the accuracy of both baseline year emissions and any ongoing comparisons. In addition, the reporting period for our baseline year is now 1st October 2018 to 30th September 2019, having been adjusted to align with those used in all subsequent reporting periods. This allows for more accurate ongoing comparisons against our baseline year.

Furthermore, we have calculated Scope 3 emissions for our 2020 and 2021 reporting periods. Previously, our data for these years had only included Scope 1 and 2 emissions in alignment with the 2016 INREV (Investors in Non-Listed Real Estate Vehicles) Sustainability Reporting Guidelines¹². These updated figures enable annual comparisons of our emissions footprint.

For a detailed explanation of the methodological changes implemented and our annual emissions footprint from baseline to our latest reporting year, please refer to [Appendix 1](#).

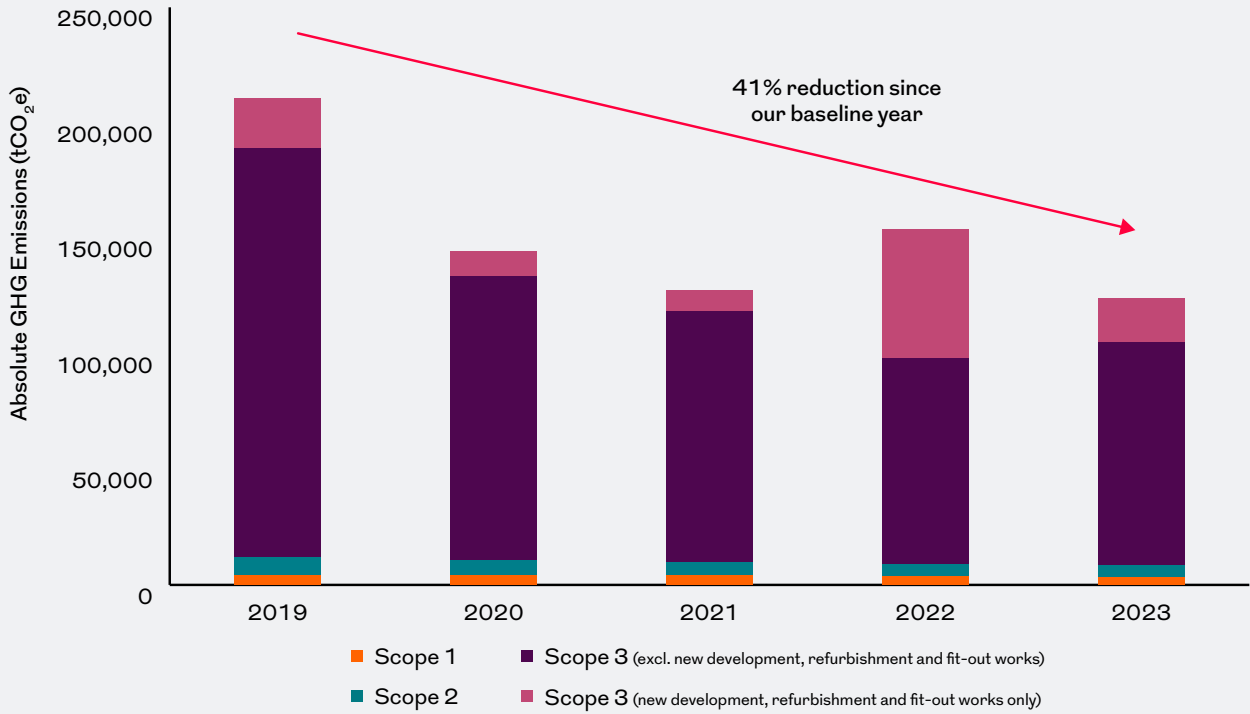
Since our baseline year of 2019, our Scope 1 and 2 emissions have reduced by 28%. This achievement reflects our commitment to improving the operational performance of our directly managed assets through various strategies. This includes undertaking a net zero carbon audit programme, implementing a Building Management System (BMS) optimisation software, and engaging with our occupiers to encourage them to operate the buildings as efficiently as possible.

Contrastingly, uplifts in embodied carbon emissions from our new development and fit-out works have been observed. As we report embodied carbon emissions at practical completion of the project, year-on-year fluctuations in these emissions are apparent. Whilst this can be challenging in demonstrating advances towards our net zero carbon goals, asset-level metrics to measure embodied carbon can be used to highlight progress. For example, during our reporting year, whilst Springfield Business Park in Chelmsford generated 17,410 tonnes of carbon, it achieved an upfront embodied carbon figure of 409 kgCO₂e/m². This is below our target of 600 kgCO₂e/m² for industrial new build and major refurbishment projects; a significant achievement.

11. The Greenhouse Gas Protocol, A Corporate Accounting and reporting Standard, <https://ghgprotocol.org/corporate-standard>

12. INREV (2016) sustainability best practice recommendations 2016 <https://www.inrev.org/media/7752>

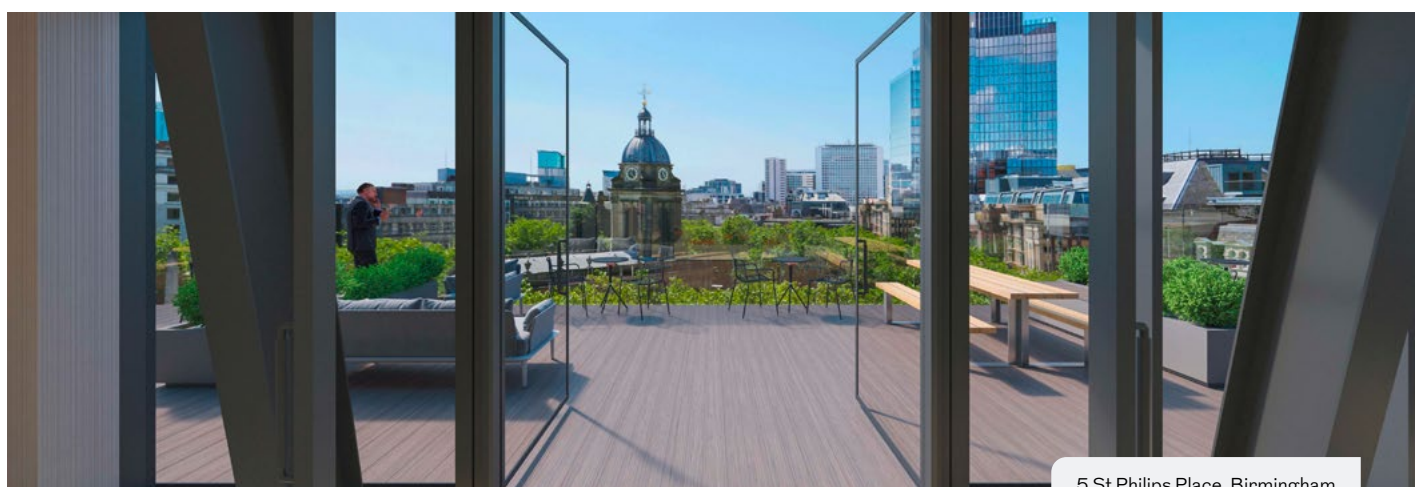
Figure 1: Annual GHG emissions (2019-2023)



5 St Philips Place, Birmingham

2023 Carbon footprint

Emissions Category	BBP Category	Activities controlled and managed by landlord, occupier or both	2019 (tCO ₂ e) Q4'18–Q3'19	2023 (tCO ₂ e) Q4'22–Q3'23	% Change
Scope 1	Natural gas	Landlord	3,575	2,851	-20%
	Refrigerants (fugitive emissions)	Landlord	663	558	-16%
Scope 2*	Electricity	Landlord	7,561	5,075	-33%
Scope 3	Natural gas and electricity	Occupier	62,051	61,543	-1%
	Water to operate buildings	Landlord	216	66	-69%
	Waste generated in operation	Landlord	31	46	47%
	Extraction, production, and transportation of fuels and energy	Landlord	2,319	2,164	-7%
	Purchase of goods and services	Landlord	17,117	17,311	1%
	Capital goods (excluding development activities)	Landlord	91,633	12,173	-87%
	New development works	Landlord	951	17,410	1,730%
	Refurbishment works**	Landlord & Occupier	20,693	0	-100%
	Fit-out works***	Landlord & Occupier	87	1,747	1,916%
	End of life	Landlord	0	0	0%
Investments	Landlord	3,821	3,182	-17%	
Total			210,718	124,125	-41%



5 St Philips Place, Birmingham

* Scope 2 (location-based) emissions.

** Landlord-controlled refurbishment works covers our major refurbishments activities, over £3 million.

*** Landlord-controlled fit-out works covers our minor refurbishment activities, under £3 million.



Step 4: reduce embodied carbon

Ashford Designer Outlet



Work to reduce embodied carbon across all new developments and major refurbishments progressed throughout 2023, in alignment with our 2030 targets.

Springfield Business Park, Chelmsford, was the only development or major refurbishment project completed during our latest reporting year. It provides a prime example of our focus on this metric, having achieved an upfront embodied carbon figure approximately 32% lower than Royal London Asset Management's target for industrial buildings. Full details of our RPI achievements at this new development can be found in the [Developing for the future](#) section of our [RPI Report \(2023\)](#).

Going forward, we will also be looking to calculate whole life carbon emissions (A-C, excluding B6 & B7)¹³ on our new build and major refurbishments, and to set targets within our [New Construction and Major Refurbishment Sustainability Standards](#). Key drivers of our whole life carbon agenda include growing momentum in parts of the industry, such as local planning authorities, as well as the likelihood that the UK Net Zero Carbon Buildings Standard will introduce targets in this area.

Targets

Net Zero Carbon Pathway

- 1 Reduce embodied carbon to 250 kgCO₂e/m² for major refurbishments by 2030.
- 2 Reduce embodied carbon to 500 kgCO₂e/m² 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)¹³ across all new build and major refurbishment projects in line with our New Construction and Major Refurbishment Sustainability Standards.

13. Within the whole life carbon assessment, life cycle stage B6 covers operational energy use and B7 covers operational water use. These are excluded from the assessment of whole life carbon. [Source: Whole life carbon assessment for the built environment, Royal Institute of Chartered Surveyors \(RICS\), 1st edition, November 2017](#)

Progress

Commitments made	Actions taken	Future progress
<p>Identify strategic assets in the development pipeline that can be brought to net zero carbon prior to 2030 target deadline.</p>	<p>Selected developments:</p> <ul style="list-style-type: none"> Holborn Viaduct, London. Atlantic Park, Liverpool. Test Lane, Southampton. 5 St Philips Place, Birmingham. <p>Project documents:</p> <ul style="list-style-type: none"> Our Approach to Net Zero guide is used by all design teams. It sets out minimum standards across the net zero carbon hierarchy for all developments and major refurbishments. Our Sustainable Development Brief is used across all new healthcare developments. This sets out minimum and aspirational requirements of various metrics within the scope of net zero. These include upfront embodied carbon, onsite renewable energy generation and operational energy intensity. 	<ul style="list-style-type: none"> Continue to monitor our development pipeline for opportunities. Continue to undertake net zero operational carbon feasibility studies across developments and major refurbishments. Where available, use the recommendations of the net zero carbon audits to inform design of retrofit and/or refurbishment projects. Integrate an Internal Carbon Price into our development budgets to understand the estimated cost of carbon offsetting in the early stages of a project. Our Approach to Net Zero guide will be updated in 2024, reflecting the anticipated publication of the UK Net Zero Carbon Buildings Standard.
<p>Measure materials in new developments and major refurbishments, and measure the sources of embodied carbon.</p>	<p>Current requirements:</p> <ul style="list-style-type: none"> All new build and major refurbishment projects must undertake a whole life carbon assessment of materials. Our standards contain upfront embodied carbon targets across seven sectors, and project teams must monitor alignment to the relevant target throughout project stages. <p>Project documents:</p> <ul style="list-style-type: none"> Our Sustainability Standards Tracker sets out minimum embodied carbon standards across seven sectors. Our Sustainable Development Brief for healthcare developments contains a minimum requirement and an aspirational requirement for upfront embodied carbon. Our Sustainable Procurement Guide has been updated for 2024 to reflect changes in our new standards, such as those related to lifecycle assessments and the circular economy. It also provides clarification on the roles and responsibilities of design teams to support more seamless project delivery. Our Approach to Net Zero Brief sets out guidance for embodied carbon data collection for design teams to guide decision-making. 	<ul style="list-style-type: none"> Our Approach to Net Zero guide will be updated in 2024, reflecting the anticipated publication of the UK Net Zero Carbon Buildings Standard. Continue to work with our consultants and property managers on minor refurbishment projects to improve the accuracy of embodied carbon measurements. Undertake upfront embodied carbon assessments across our healthcare developments. In 2024, we will begin measuring whole life carbon (A-C, excluding B6 & B7)¹⁴ across our developments and major refurbishments, and we will look to set targets for whole life carbon in future iterations of our New Construction and Major Refurbishment Sustainability Standards. Develop sector-specific occupier sustainability fit-out guides that align with our RPI Strategy and New Construction and Major Refurbishment Sustainability Standards, aiming to encourage occupiers to make more sustainable choices.

14. Within the whole life carbon assessment, life cycle stage B6 covers operational energy use and B7 covers operational water use. These are excluded from the assessment of whole life carbon. [Source: Whole life carbon assessment for the built environment, Royal Institute of Chartered Surveyors \(RICS\), 1st edition, November 2017](#)

Commitments made	Actions taken	Future progress
<p>Adopt circular economy ideas and explore design approaches for both disassembly and use of less carbon-intensive materials.</p>	<p>Current requirements:</p> <ul style="list-style-type: none"> A Circular Economy workshop is undertaken, and a Circular Economy Statement is produced for any development or major refurbishment project, including for healthcare. Across our healthcare developments, we must report on raw materials consumption. <p>Project documents:</p> <ul style="list-style-type: none"> Our Circular Economy Brief sets out design guidelines, tools for measuring circularity and a case study of the approach taken at Statesman House, Maidenhead. Our Sustainable Development Brief sets out indicators based on our three key themes that must be reported against throughout project stages. This includes the reporting of raw materials usage and diversion of waste from landfill. 	<ul style="list-style-type: none"> Continue to implement our Circular Economy Brief and review regularly. Our consultants will be leading a Circular Economy workshop for our internal development managers and RPI Team to share knowledge on best practice industry guidance, innovative approaches and strategies to better embed circular economy principles. We will look to undertake pre-demolition and/or pre-redevelopment audit feasibility studies to identify opportunities to reduce waste and increase reuse.



Case study: Milton Keynes Care Home

Sustainable Development Brief in action – over a third reduction in upfront embodied carbon

Royal London Asset Management is currently developing an 80-bed care home in Milton Keynes. With the aspiration to be a leader in sustainable healthcare, we undertook a whole life carbon assessment¹⁵ of its proposed design¹⁶. This focused on the construction materials used within the initial build, from extraction to installation. Our assessment indicated that the proposed design was achieving an upfront embodied carbon of 636 kgCO₂e/m² (GIA). This was better than the industry standard of 800-1,000 kgCO₂e/m².¹⁷ However, with our Sustainable Development Brief requiring an upfront embodied carbon figure of less than 500 kgCO₂e/m² – and aspiring to get it under 400 kgCO₂e/m² – we decided to review each building element within the design to determine how we could achieve further reductions. This included the substructure, walls, floors and façade. If the measures recommended by this review are taken forward, it is estimated that the project could achieve upfront embodied carbon of 413 kgCO₂e/m². This would represent a reduction of more than a third from the initial design – and would meet the requirements set out in our Sustainable Development Brief. We will be exploring this further and putting these learnings into practice across our future healthcare developments.

Milton Keynes Care Home



15. In accordance with the he RICS Whole life carbon assessment (WLCA) for the built environment guidance and the EU life cycle modules EN 15804.

16. An upfront embodied carbon assessment includes modules A1-A5.

17. The Greater London Authority (GLA) whole life carbon benchmarks vary from 750-1,200 kgCO₂e/m², depending on building type. There is currently no benchmark for the healthcare sector. 800-1,000 kgCO₂e/m² has been used as an average of the GLA benchmarks across the sectors.



Case study: Test Lane, Southampton

Development Sustainability Standards in action

Royal London Asset Management is currently developing a new 45,599 sq. ft. industrial and logistics facility, at Test Lane, in Southampton. Minimising the development's embodied carbon and embedding circular economy principles have been at the forefront of its design. An embodied carbon assessment has been undertaken, which included an optioneering assessment to explore the emissions of various modern methods of construction, such as cross-laminated timber (CLT) and modular structural and landscaping design options. This enabled us to select options that would minimise embodied carbon. Our assessment calculated an upfront embodied carbon figure¹⁸ of 409 kgCO₂e/m², far below our Development Sustainability Standards' requirement of 600 kgCO₂e/m² for industrial new build and major refurbishment projects. Furthermore, the development has been designed with flexibility in mind, enabling end-users to easily subdivide the property to fit their operations. Reducing waste generation has also been a key focus, with steel frames built offsite and composite wall panels cut to length, ensuring we are following circular economy principles.

The design of Test Lane aims to minimise operational energy use and carbon emissions, supported by energy efficiency measures as well as the use of air-source heat pumps (ASHP) and a 78 kWp solar photovoltaic (PV) array on the roof. The development is also targeting a BREEAM Excellent rating and an Energy Performance Certificate (EPC) A rating, along with a Biodiversity Net Gain (BNG) of 106%.



Test Lane, Southampton



Test Lane, Southampton

18. An upfront embodied carbon assessment includes modules A1-A5.

Step 5: increase operational efficiency



Improving the precision of our utility consumption data remains a significant priority for us. This is critical to accurately tracking progress towards our goals, identifying opportunities to maximise energy efficiency, and creating avenues to engage and collaborate with our occupiers. We continued implementing our utility data collecting measures during 2023. These included the installation of Automatic Meter Reading (AMR) devices and utility loggers for our single-let units, and sourcing aggregated, anonymous data at the building level across approximately 500 single-let units via a specialist consultancy. Through these various measures, we have increased our energy data coverage to 44% of our whole portfolio. For 2024, we are seeking to obtain data on approximately a further 1,000 single-let units from the national energy database, with the aim of increasing our portfolio coverage further.

Furthermore, our focus on increasing operational efficiency is evident through our net zero carbon audit programme, having completed 22 such audits across our multi-let offices during 2023 and an accompanying 16 technical feasibility studies where required. These have created asset-level decarbonisation pathways, each setting out initiatives to improve the property's operational performance that consider key factors such as the tenancy schedule and the lifecycle of existing building plant. A further 12 audits have been commissioned for 2024. In addition, we have been actively implementing a BMS optimisation software, Hank, across nine of our multi-let offices. Its installation at Birmingham's 45 Church Street in February 2023 has achieved significant energy and carbon savings, creating a mutual benefit for both Royal London Asset Management and our occupiers. Please see page 21 for full details of these accomplishments.

Targets

Net Zero Carbon Pathway

- 1 15% targeted energy intensity reductions by 2025 for standing assets.

RPI Portfolio Targets

Material ESG issue: safeguarding natural resources

Operational Portfolio

- 1 Target 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 2030¹⁹.
- 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 projects²⁰.

19. Through undertaking operational energy modelling using CIBSE TM54 methodology. This target also applies to offices designed from either 2025 or 2030.

20. This excludes residential projects.

Progress

Commitments made	Actions taken	Future progress
<p>Aim for an average of 15% reduction in energy intensity across the managed property portfolio by 2025.</p>	<ul style="list-style-type: none"> • Hank, a BMS optimisation system, has been implemented across nine multi-let offices. • All office new build and major refurbishments must now aim to achieve a NABERS UK Design for Performance (DfP) 5-star rating. • The ongoing LED lighting replacement programme across our retail parks has successfully upgraded LED lighting at 16 sites. This covers 1,372,385 sq. ft. – equivalent to 58% of our retail parks by floor area. 	<ul style="list-style-type: none"> • Undertake Hank assessments across all multi-let offices to determine opportunities to install. • Finalise and submit our first NABERS UK Energy for Offices assessment at Aurora, Bristol in 2024. • Identify assets to undergo further NABERS UK Energy for Offices assessments. • Aim to complete LED light replacements across a further eight retail parks in 2024, equating to nearly 900,000 sq. ft. • Initiate an LED light replacement programme across our multi-let industrial estates.
<p>Target benchmark energy use intensities for asset types and align with UK Green Building Council (UKGBC) Energy Use Intensity (EUI) target of 70kWh/m² for offices.</p>	<ul style="list-style-type: none"> • Completed net zero carbon audits across 22 directly managed offices, with an additional technical feasibility study undertaken on 16 of these. • Compared operational building performance against industry benchmarks, including the UKGBC EUI targets for offices and the Carbon Risk Real Estate Monitor (CRREM). • Identified interventions to increase asset efficiency, align with benchmarks and achieve net zero carbon status. • Analysed the feasibility of these interventions using key property information, including the Planned Preventative Maintenance (PPM) and tenancy schedules. • Our New Construction and Major Refurbishment Sustainability Standards contain operational EUI performance targets, which cover seven sectors and must be adhered to by individual projects. 	<ul style="list-style-type: none"> • Complete a further 12 net zero carbon audits for the remaining directly managed offices that require one by the end of 2024. • Work with occupiers and property managers to implement recommendations from the net zero carbon audits and technical feasibility studies.

Commitments made	Actions taken	Future progress
<p>Increased engagement with occupiers to improve operational efficiency.</p>	<ul style="list-style-type: none"> • Increased occupier utility consumption data coverage through various initiatives, including the appointment of a data specialist to access aggregated, anonymous consumption data for 500 single-let units. • Regular occupier engagement continued to be undertaken by: <ul style="list-style-type: none"> - Asset managers through meetings. - Property managers through meetings, events and distribution of newsletters. - Rolled out submetering for directly managed offices as required, allowing us to understand occupiers' energy consumption and use this data in occupier engagement meetings. 	<ul style="list-style-type: none"> • Engage with key occupiers who have net zero carbon and ESG targets to identify opportunities for implementing measures collaboratively that will reduce energy usage. • Complete submetering programme across remaining directly managed offices that require it. • Explore opportunities to bring occupiers in multi-let properties together to encourage collaboration, such as through Green Committees. • Develop a formalised occupier engagement strategy, covering measures such as: <ul style="list-style-type: none"> - Updating our green lease clause based on the expected revisions to the BBP's Green Lease Toolkit. - Identifying opportunities to further increase occupier utility data coverage across the portfolio through engagement. - Establishing a bespoke set of discussion points for the occupier engagement meetings undertaken by asset managers, helping us understand their corporate sustainability commitments and determining how we can work collaboratively.
<p>Achieve an Energy Performance Certificate (EPC) of B by 2030 on all new commercial spaces.</p>	<ul style="list-style-type: none"> • EPC building upgrade reports have now been undertaken across 290 units/assets with an EPC rating of C or lower. • EPCs have now been awarded to 90% of our properties, of which 30% are B and above. • Our New Construction and Major Refurbishment Sustainability Standards require a minimum EPC A rating for new build non-residential developments, and a minimum EPC B rating for refurbishment projects. • Our Sustainable Development Brief requires a minimum EPC A rating for new healthcare developments, with an aspirational target of A+. 	<ul style="list-style-type: none"> • Complete EPC building upgrade reports until we have covered all units with an EPC rating below B. • Transfer recommendations from EPC building upgrade reports into Asset Business Plans at the start of 2024, ensuring asset managers integrate the required interventions into their strategies.



Case study: 45 Church Street, Birmingham

Focusing on optimising building performance

Identifying opportunities to maximise operational efficiency is crucial to achieving our net zero carbon goals. We believe that smart technology can play a key role in driving down energy demand, lowering costs for our occupiers, and prioritising investment in operational measures ahead of capital expenditure. In February 2023, we implemented the BMS optimisation software, Hank, at 45 Church Street, a 125,000 sq. ft. multi-let office building in Birmingham. Hank is an artificial intelligence (AI) software that optimises Heating, Ventilation and Air Conditioning (HVAC) systems by creating a digital twin and analysing how the equipment operates. It aims to identify opportunities for reducing energy consumption by making real-time micro-adjustments. Since its installation in February 2023, 45 Church Street reduced electricity use by 348,717 kWh and gas by 970,026 kWh²¹. These combined reductions have resulted in a carbon saving of 247 tonnes. Most recently, 45 Church Street received a Silver Green Apple Award for this initiative, representing a significant achievement. This success has also led Royal London Asset Management to implement Hank across a further eight multi-let offices to improve their operational performance – a vital step in achieving our net zero carbon goals.



21. As at 31st December 2023.



Case study: 8 Lancashire Court, London

Occupier engagement in action

We recognise that there will be ongoing challenges on our journey to achieving net zero carbon. Chief among these is the limited control we have over our indirectly managed property assets²², which are targeting net zero carbon by 2040. Engaging with occupiers will therefore play a critical role in reaching our goals. An example of this can be found at 8 Lancashire Court, a high street retail property located in Mayfair that forms part of a holding totalling nearly 78,000 sq. ft. It has been let to a single occupier since 1999, with the fund taking the asset on from 2013. We have recently been agreeing terms for a long lease with a new occupier, who has also set a net zero carbon target. We realised that this presented an excellent opportunity to undertake a net zero carbon audit of the building, which could identify measures to improve operational energy performance ahead of the occupier taking residence. The audit also generated recommendations that the occupier could undertake as part of their fit-out, enabling them to fulfil their net zero carbon commitment as well as benefitting Royal London Asset Management. We are now discussing the net zero carbon audit's outcomes with the occupier to determine how we can work collaboratively to minimise the asset's carbon emissions.

8 Lancashire Court, London



Case study: LED Light Replacement Programme

Improving energy efficiency across retail parks

Since 2022, we have been working closely with our property managers to implement an LED light replacement programme across our retail parks, improving energy efficiency and reducing lighting costs. As the upgrade costs were to be incorporated into the service charge, we had to justify our decision to our occupiers while also considering the payback period. This played a key role in selecting the retail parks for this programme. Following our review, a total of 24 retail parks were chosen. These upgrades have been completed across 16 retail parks to date, with a further eight planned for 2024. Despite the initial upfront cost, the long-term aim of the programme is to reduce service charge fees for occupiers whilst lowering our carbon emissions. As a result of this initiative, we received a Commended Green Apple Award in recognition of its positive impact.



Horsted Retail Park, Chatham

22. Indirectly managed property assets are either partially managed by Royal London Asset Management or managed wholly by the occupier.

Step 6: increase renewable energy supply



Amid volatile energy markets and the move away from fossil fuels, the demand for renewable energy continues to grow rapidly. Since undertaking a feasibility study across our retail parks and industrial assets, we have engaged with occupiers to understand their appetite for installing solar PV panels on their roofs. In addition, occupiers themselves have instigated discussions over installing solar PV, opening up further opportunities to engage on the matter. To establish consistency in delivering solar PV across our assets, we are aiming to develop a solar PV specification next year, ensuring occupiers follow best practice on their design, installation and maintenance.

A landmark achievement for Royal London Asset Management during 2023 was the signing of our first Power Purchase Agreement (PPA), agreed with our occupier Panalux for the Pasadena Distribution Centre in Hayes. As part of a major

refurbishment, a 200 kWp PV system with 544 PV modules was installed on the facility's roof, creating the opportunity to sell renewable energy at below-market rates to the occupier. Not only have these efforts generated a financial benefit to us, they have also contributed towards our target of generating up to 9.5 GWh of renewable energy onsite per year by 2040. For full details, see the Investing in a resilient portfolio section of the RPI Report (2023).

Targets

Net Zero Carbon Pathway & Portfolio Target

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

Progress

Commitments made	Actions taken	Future progress
Generate up to 9.5 GWh of renewable energy onsite across the portfolio.	<ul style="list-style-type: none"> Established a PV Working Group to bring together sector specialists and the RPI Team to determine our PV strategy. Signed our first PPA at Pasadena Distribution Centre, Hayes, with the occupier, Panalux. Submitted a planning application for the installation of three wind turbines at One Gloucester Place to maximise onsite renewable energy generation. 	<ul style="list-style-type: none"> Continue conversations with occupiers who are engaging with us on the installation of solar PV. This will include undertaking structural roof surveys to determine the feasibility of installation. Create a solar PV specification that will be applied across all projects, for use by both Royal London Asset Management project teams and occupiers to ensure consistency.
Explore options for offsite, high-quality renewable energy.	<ul style="list-style-type: none"> All 56 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, demonstrating it is from renewable sources. 	<ul style="list-style-type: none"> Engage with our energy brokers on energy procurement contract options available in the market. Continue to ensure that properties within our EMS remain on 100% REGO tariffs. Investigate switching to all-bundled REGO-backed tariffs across properties within our EMS.



Case study: One Gloucester Place, Brighton

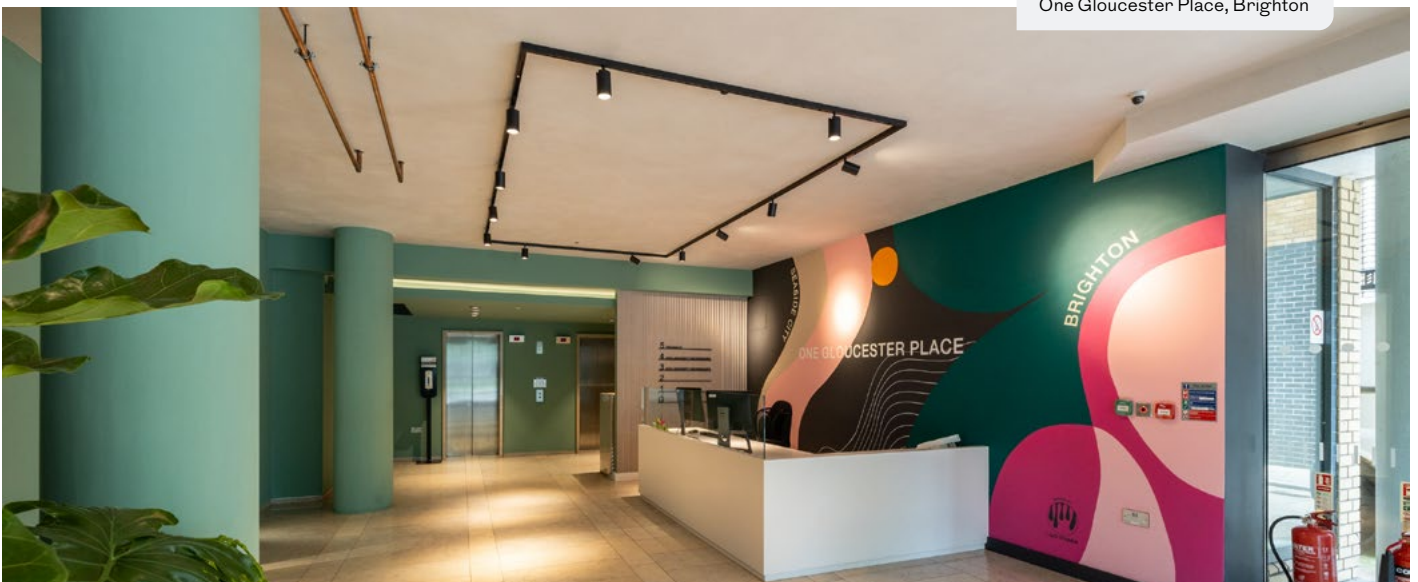
Exploring innovative renewable technologies

Over the past year, we have been exploring innovative options for generating renewable energy onsite across our assets. One Gloucester Place is a 50,000 sq. ft. multi-let office located in Brighton. As it falls within our goal of achieving net zero carbon by 2030, a net zero carbon audit of the property was undertaken in 2022. This recommended a series of interventions to improve its operational performance, one of which being the installation of solar PV. However, to maximise onsite renewable energy generation, we are looking to utilise a breakthrough wind turbine system specifically designed for rooftops and wind flow in cities. Installing a three-turbine system at One Gloucester Place is expected to generate 252 MWh – 224 MWh more than solar PV was forecast to produce even with maximised roof space. Generating onsite renewable energy would reduce the asset's reliance on the grid, improving its resilience as well as increasing its appeal to occupiers amid rising energy costs. Combined with other energy efficiency improvements, installing the three turbines is projected to reduce the asset's EUI below the UKGBC's target of 70 kWh/m² per annum by 2030 – a key benchmark for achieving net zero carbon. Having submitted our planning application, we are now in discussions with Brighton & Hove City Council on our proposed scheme. If successful, we will investigate the potential for installing these wind turbines across the wider portfolio, helping us towards our target of generating up to 9.5 GWh of renewable energy onsite per year by 2040.

One Gloucester Place, Brighton



One Gloucester Place, Brighton



Step 7: offset residual emissions

Aurora, Bristol



Implementing measures to address our embodied and operational carbon emissions remained a top priority during 2023, alongside identifying opportunities to generate renewable energy. These efforts were set against a backdrop of increased demand from stakeholders, including occupiers and local planning authorities, for the delivery of net zero carbon buildings. This ongoing trend has driven Royal London Asset Management to outline an approach to carbon offsetting for our properties, with a particular focus on current and future developments.

Using a live development project as a pilot, we have been exploring the various options and approaches for carbon offsets, with the aim of purchasing these in the next year. This process has helped improve our knowledge of the carbon offsetting market, which we can take forward for future projects that require offsetting. We are seeking to align with the Oxford Offsetting Principles²³ and UKGBC guidance²⁴, in line with our original [Net Zero Carbon Pathway](#). Additionally, we will aim to incorporate a standard carbon offsetting price into budgets for all developments and major refurbishment projects, ensuring it is adopted at the earliest stage and considered as part of the project feasibility. This proactive approach will position our teams to use carbon offsets effectively when required.

23. [ukgbc.org/resources/carbon-offsetting-and-pricing-guidance](https://www.ukgbc.org/resources/carbon-offsetting-and-pricing-guidance)

24. www.smithschool.ox.ac.uk/research/oxford-offsetting-principles

Targets

Net Zero Carbon Pathway

Material ESG issue: transition to net zero carbon

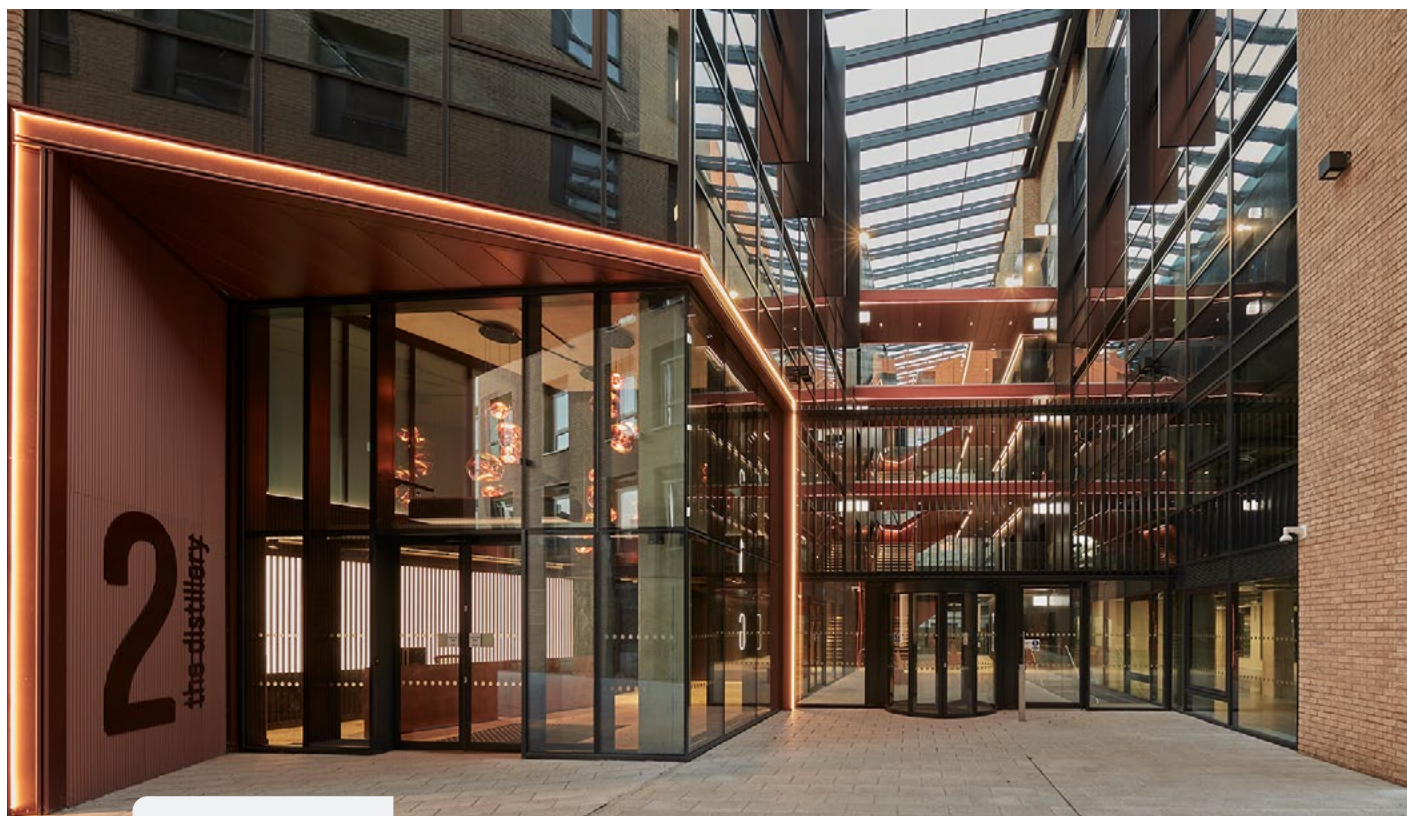
- 1 Carbon offset for those residual emissions that we were not able to abate by any other means using high-quality offsets that are aligned to industry best practice.



Renaissance, Croydon

Progress

Commitments made	Actions taken	Future progress
<p>Develop a robust strategy for procuring high-quality carbon offsets for residual emissions.</p>	<ul style="list-style-type: none"> Investigated options for carbon offsetting on a live development project, including forward-purchasing carbon offsets and creating a transition fund. Continued exploring nature-based solutions to directly control our carbon offsets and ensure we use high-quality offsets where needed. 	<ul style="list-style-type: none"> Establish carbon offsetting options for the live development project to discuss with the Property Investment Committee (PIC), with the aim of procuring these carbon offsets. Determine and integrate an Internal Carbon Price into our development budgets to understand the estimated cost of carbon offsetting in the early stages of a project. Develop a strategy for carbon offsetting that prioritises new developments and covers types of offsets, origin and costs. Forecast carbon emissions across both our development and operational portfolios up to 2040, helping to estimate the likely amount of carbon offsets required to achieve net zero carbon. Investigate forward-purchasing carbon offsets for our development and operational portfolios.



The Distillery, Bristol



Challenges and solutions

Leonardo Hotel, Bristol

Despite growing concern over the acceleration of climate change across the globe, major policy shifts in the UK are posing challenges for organisations. During 2023, there were several pauses or rollbacks of previous commitments related to both domestic and non-domestic buildings. As a result, there is now a growing need for stronger climate policy signals and regulatory ambition for net zero carbon, particularly for real estate developers and property owners.

In contrast, there continues to be significant policy and regulatory activity in the financial markets, and we expect that this will help to create clarity for organisations over the next year. The role of transition plans has been increasingly highlighted by leading figures, including those on the UK's Transition Plan Taskforce (TPT), and by the Financial Conduct Authority (FCA) as part of its deliberations over the UK's Sustainability Disclosure Requirements (SDR). Whilst the TPT framework is not yet mandatory, there is a clear direction of travel towards greater demand for organisations to disclose how they will transition to net zero. Moreover, the FCA believes the TPT framework will assist with reporting against the International Sustainability Standards Board's (ISSB) Climate-related Disclosures (IFRS S2). The evolution of these frameworks will help avoid greenwashing and create consistency in reporting across organisations – something the industry is increasingly calling for.

We are also hopeful that the new UK Net Zero Carbon Buildings Standard, expected to be launched in 2024, provides clarity to landlords and their stakeholders on how assets can achieve net zero carbon. The variety of existing frameworks creates challenges and is likely to produce inconsistent approaches. We see this new standard as a way to overcome the current shortfalls in climate policy for the built environment.

Furthermore, whilst we are increasingly seeing 'green premiums' given to net zero carbon buildings, more data is needed so that it can be adequately incorporated into building valuations. Evidence that net zero carbon drives financial performance is vital for us to demonstrate that investing in such measures delivers better returns to our clients and is crucial in maintaining value.

As outlined in [Step one: Drivers for net zero carbon](#), pressure to deliver sustainable buildings is growing

from occupiers and investors. This is driving us to engage with specialist consultancies and advisers to implement programmes that will help us achieve our goals and keep pace with the market. However, demand for these third-party organisations is growing among peers who are facing the same pressures. Access to expert net zero knowledge and resources is therefore increasingly challenging, highlighting the need for upskilling and investment in people.

Whilst we have identified the challenges of achieving net zero carbon, our commitment as members of industry organisations, such as the BBP and UKGBC, is essential to addressing these issues and sharing best practice. Joining together with our peers in the real estate market will continue to be a focus for Royal London Asset Management in the year ahead, as we further minimise our environmental impacts and work towards net zero carbon goals.

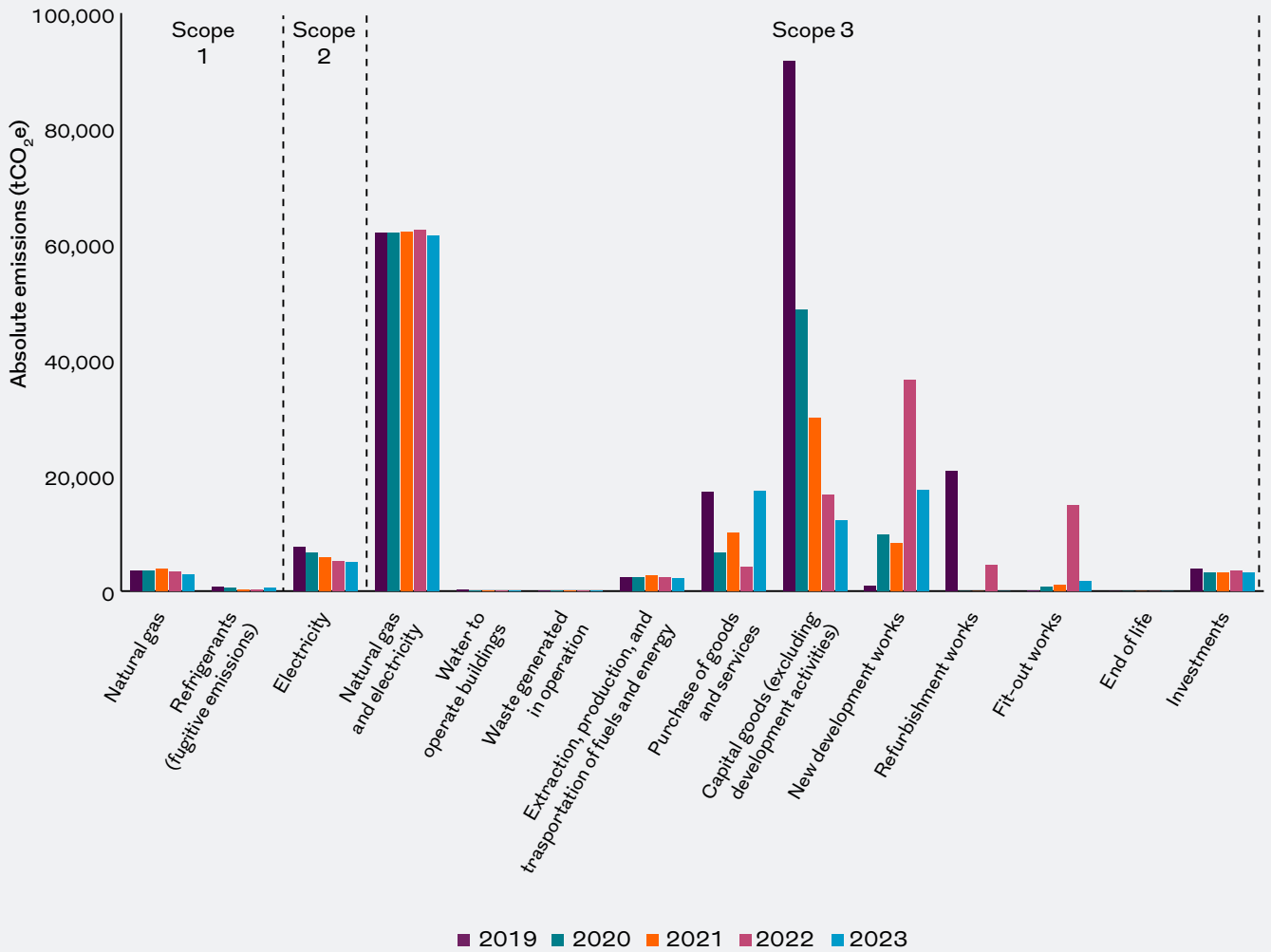
Appendix 1

– Greenhouse Gas Reporting

Full Portfolio Greenhouse Gas Emissions

Emissions Category	BBP Category	GHG Protocol Category	Activities controlled and managed by landlord, occupier or both	Absolute emissions (tCO ₂ e)				
				2019	2020	2021	2022	2023
				Q4'18-Q3'19	Q4'19-Q3-20	Q4'20-Q3'21	Q4'21-Q3'22	Q4'22-Q3'23
Scope 1	Natural gas	Scope 1	Landlord	3,575	3,495	3,781	3,400	2,851
	Refrigerants (fugitive emissions)	Scope 1	Landlord	663	545	290	252	558
Scope 2	Electricity	Scope 2	Landlord	7,561	6,580	5,891	5,246	5,075
Scope 3	Natural gas and electricity	Cat.13 (Downstream leased assets)	Occupier	62,051	61,919	62,167	62,472	61,543
	Water to operate buildings	Cat.1 (Purchased goods and services)	Landlord	216	100	52	57	66
	Waste generated in operation	Cat.5 (Waste generated in operations)	Landlord	31	30	28	39	46
	Extraction, production, and transportation of fuels and energy	Cat.3 (Fuel and energy-related activities)	Landlord	2,319	2,393	2,783	2,385	2,164
	Purchase of goods and services	Cat.1 (Purchased goods and services)	Landlord	17,117	6,689	10,090	4,109	17,311
	Capital goods (excluding development activities)	Cat.2 (Capital goods)	Landlord	91,633	48,606	29,994	16,632	12,173
	New development works	Cat.2 (Capital goods)	Landlord	951	9,835	8,224	36,468	17,410
	Refurbishment works	Cat.2 (Capital goods)	Landlord & Occupier	20,693	0	0	4,503	0
	Fit-out works	Cat.2 (Capital goods)	Landlord & Occupier	87	751	1,085	14,878	1,747
	End of life	Cat. 12 (End-of-life treatment of sold products)	Landlord	0	0	0	0	0
Investments	Cat. 15 (Investments)	Landlord	3,821	3,268	3,155	3,539	3,182	
Total				210,718	144,211	127,539	153,981	124,125

Figure 2: Scope 1, 2 and 3 emissions (2019-2023)



Methodology

1. We have calculated emissions in line with the GHG Protocol methodology.²⁵
2. We have used the following emissions factors:

Emissions Category	BBP Category	GHG Protocol Category	Emissions 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 during 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
	Purchased of goods and services	Cat.1 (Purchased goods and services)	Quantis Tool
	Capital goods (excl. developments)	Cat.2 (Capital goods)	Quantis Tool
	New development works	Cat.2 (Capital goods)	In order of preference dependent on available data:
	Refurbishment works	Cat.2 (Capital goods)	1) Developer provided carbon intensity where available
	Fit-out works	Cat.2 (Capital goods)	2) Scottish Future Trust – Embodied Carbon for New Buildings (where floor area provided) 3) Quantis Tool for minor developments and procurement data
	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)	Carbon Risk Real Estate Monitor (CRREM) sector-specific benchmarks	

25. Greenhouse Gas Protocol, Standards <https://ghgprotocol.org/standards>

Appendix 2 - Terminology and Acronyms

Terminology

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.
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.
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.
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 ₂ e) 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.

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.
Property Manager	Third party service, procured by the asset owner, who manages the operational stage of a building lifecycle.
Quantis Tool	Provides spend-based emission factors which can be applied for greenhouse gas reporting.
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.
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.
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.
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.
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.

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
BMS	Building Management System
BNG	Biodiversity Net Gain
CIBSE	Chartered Institution of Building Services Engineers
CLT	Cross-laminated Timber
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
FCA	Financial Conduct Authority
GHG	Greenhouse Gas
GIA	Gross Internal Area
GLA	Greater London Authority
GWh	Gigawatt Hour
GWP	Global Warming Potential
HVAC	Heating, Ventilation and Air Conditioning
IFRS	International Financial Reporting Standards
INREV	Investors in Non-Listed Real Estate Vehicles
IPCC	Intergovernmental Panel on Climate Change
ISSB	International Sustainability Standard Board
KPI	Key Performance Indicator

Abbreviation	Meaning
kWh	Kilowatt hour
kWp	Kilowatt peak
LED	Light-emitting Diode
LETI	London Energy Transformation Initiative
MEES	Minimum Energy Efficiency Standard
MW	Megawatt
NZAM	Net Zero Asset Managers Initiative
NZC	Net Zero Carbon
PIC	Property Investment Committee
PPA	Power Purchase Agreement
PPM	Preventative Planned Maintenance
PV	Photovoltaic
RCP	Representative Concentration Pathway
REEB	Real Estate Environmental Benchmark
REGO	Renewable Energy Guarantees of Origin
RI	Responsible Investment
RIBA	Royal Institute of British Architects
RICS	Royal Institute of Chartered Surveyors
RPI	Responsible Property Investment
SBTi	Science Based Targets Initiative
SDR	Sustainability Disclosure Requirements
SFDR	Sustainable Finance Disclosure Regulation
SSP	Shared Socioeconomic Pathway
TCFD	Task Force on Climate-related Financial Disclosures
TPT	Transition Plan Taskforce
UKGBC	UK Green Building Council
UN PRI	United Nations Principles for Responsible Investment
WEF	World Economic Forum

Contact us

For more information about our range of products and services, please contact us.

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