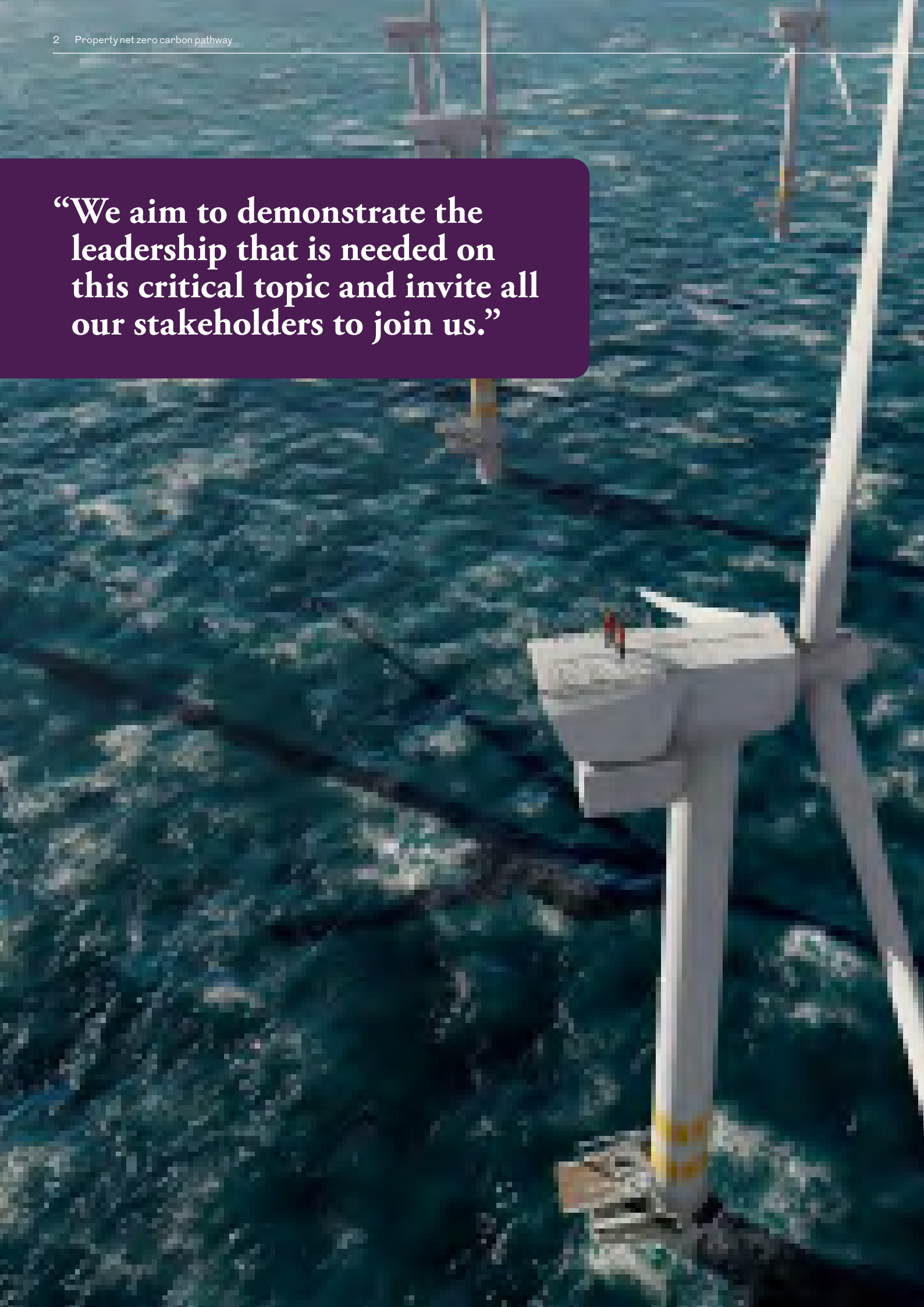
ROYAL LONDON
ASSET MANAGEMENT

Property net zero carbon pathway



"We aim to demonstrate the leadership that is needed on this critical topic and invite all our stakeholders to join us."

Foreword

Royal London Asset Management (RLAM) is committed to protecting today and investing in tomorrow. This approach flows into every aspect of our business and is immensely relevant to our sustainability agenda.

Cities, regions and countries have declared a climate emergency: an urgent situation in which immediate action is needed to prevent further human induced climate change and the negative environmental impacts that result from it. We believe that real estate and the built environment in its entirety have a transformational role to play in responding to this climate emergency.

With most people set to be living in urban areas by the middle of the century, we need to create spaces that are fit for a sustainable future. We have therefore developed a detailed net zero carbon pathway for our property investments which sets out how we can implement and achieve this strategy.

Our strategy is underpinned by rigorous modelling to identify opportunities and challenges in delivering net zero carbon by our target years. We identify the solutions needed across all the key areas of our business, from how we construct and manage our buildings to how we engage with our existing and prospective occupiers.

We aim to demonstrate the leadership that is needed on this critical topic and invite all our stakeholders to join us to carve out innovative and mutually beneficial solutions to all elements of the net zero carbon journey.

Mark Evans, Head of Property

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"RLAM has developed a detailed delivery plan for achieving net zero carbon that has concrete actions for the short, medium and long term."

Executive summary

Royal London Asset Management (RLAM) is targeting achieving net zero carbon by 2030 for our directly* managed property assets and developments, and by 2040 for our indirectly† managed property assets.

In setting these targets, RLAM is responding to the demand being seen from policymakers, investors, clients and occupiers to reimagine the future of the built environment as one that is positive for people and the planet.

RLAM's aim is to achieve net zero carbon in advance of the deadline set through the Paris Climate Agreement and the amended UK Climate Change Act. To demonstrate our broader commitment, RLAM is also a signatory to the Net Zero Asset Managers Initiative, which is part of the United Nations-backed Race to Zero campaign.

To undertake this ambitious approach we have evaluated the carbon in our property portfolio and projected its emissions out to its target years to understand what reductions and interventions will be needed.

Based on this assessment we have identified target interventions for our embodied carbon impacts, operational energy used for standing assets and new developments, increased on-site renewable energy capacity, off-site renewable energy procurement potential and carbon offsetting strategy.

With the direction of travel outlined, RLAM has developed a detailed delivery plan for achieving net zero carbon that has concrete actions for the short, medium and long term. These actions are now being embedded into our governance structure, acquisition process, leasing strategy, property management approach and development pipeline.

Cambridge Research Park, Cambridge

* Directly managed property assets are those which RLAM has complete operational control, greater than 50% equity share and joint ventures where they would cover the proportionate amount of emissions.

† Indirectly managed property assets are managed wholly by the occupier. Developments are any new development or major refurbishment that comes online from 2030 onwards.

> “Our industry has immense power to positively influence the future and RLAM aims to be one of the leaders in this journey”

Why net zero carbon?

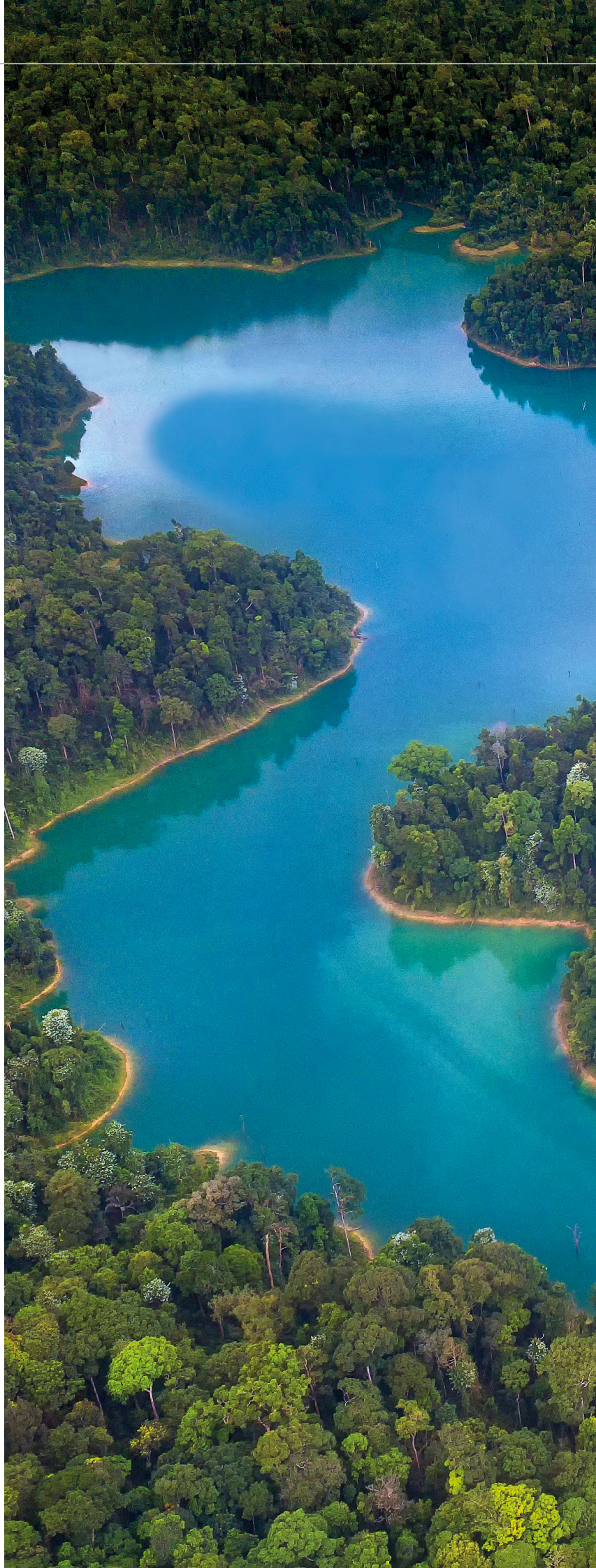
Climate change is the defining challenge of our time with many cities, regions and countries declaring a ‘climate emergency’.

The built environment is particularly susceptible to the effects of climate change. It affects the exposure of our assets to physical risks, such as flooding. It influences transition risks, such as divestment away from high-risk assets. It contributes to urban heat islands and impacts the health and wellbeing of occupants and local communities.

However, we are not only affected by climate change; our industry is also a major contributor to it. The built environment is responsible for around 40% of all emissions globally*.

Our industry has immense power to positively influence the future and RLAM aims to be one of the leaders in this journey.

* Source: World Green Building Council



What do we mean by net zero carbon?

In the most general terms, achieving net zero carbon means that the carbon dioxide emissions released from the property, organisation or country on an annual basis would be zero on average. While there is no unanimous definition of net zero carbon in the built environment, increasing amounts of clarifying guidance is being issued. This guidance suggests that a building can be considered net zero carbon if:

- Embodied carbon is reduced to the extent possible and remaining emissions offset.
- Operational energy efficiency is maximised.
- On-site renewable energy generation is maximised.
- Off-site energy is procured entirely from high-quality renewable backed sources.
- Residual emissions are compensated for using high-quality carbon offsets.

Aligning with global initiatives

The Paris Climate Agreement

At the end of 2015 and after nearly two decades of deliberations, the international community came together for the first time to sign the first international, legally binding agreement on climate change. This document – the Paris Climate Agreement – stated that the parties included agreed to limit global warming to well below 2°C and ideally below 1.5°C.

Of the countries that signed the Paris Climate Agreement, the United Kingdom was the first major economy to translate that commitment into a national legally binding target to achieve net zero carbon by 2050 at the latest. It is this national legislation that drives our agenda for the coming decades and guides RLAM to play our part in contributing to that national and international goal.

> "We have developed an informed pathway to bring our property portfolio to net zero carbon."

RACE TO ZERO

The RLAM pathway to net zero carbon

RLAM has reviewed the carbon footprint and trajectory of the property portfolio we manage for the coming decades. Based on this review, we have developed an informed pathway to bring the property portfolios to net zero carbon. This pathway is aligned with the latest guidance and principles for the built environment on how to reduce and compensate for our emissions meaningfully and accountably.

Net Zero Asset Managers Initiative

In pursuit of this goal, RLAM has signed up to the Net Zero Asset Managers Initiative. This initiative convenes an international group of asset managers who are committed to achieving net zero carbon by 2050 at the latest, which gives us a better chance of limiting average global warming to below 1.5°C, as well as supporting investment that is aligned with net zero carbon goals.

This global initiative, which is part of the United Nations convened Race to Zero, commits organisations to:

- Work in partnership with asset owner clients on decarbonisation goals that are consistent with an ambition to reach net zero emission by 2050 or sooner across all assets under management.
- Set an interim target for the proportion of assets to be managed in line with the attainment of net zero emissions by 2050 or sooner.
- Review the interim target at least every five years, with a view to ratcheting up the proportion of AUM covered until 100% of assets are included.

The net zero carbon strategy that RLAM has set out for its property assets aligns with these commitments and provides an accelerated roadmap for how they can be achieved ahead of 2050.

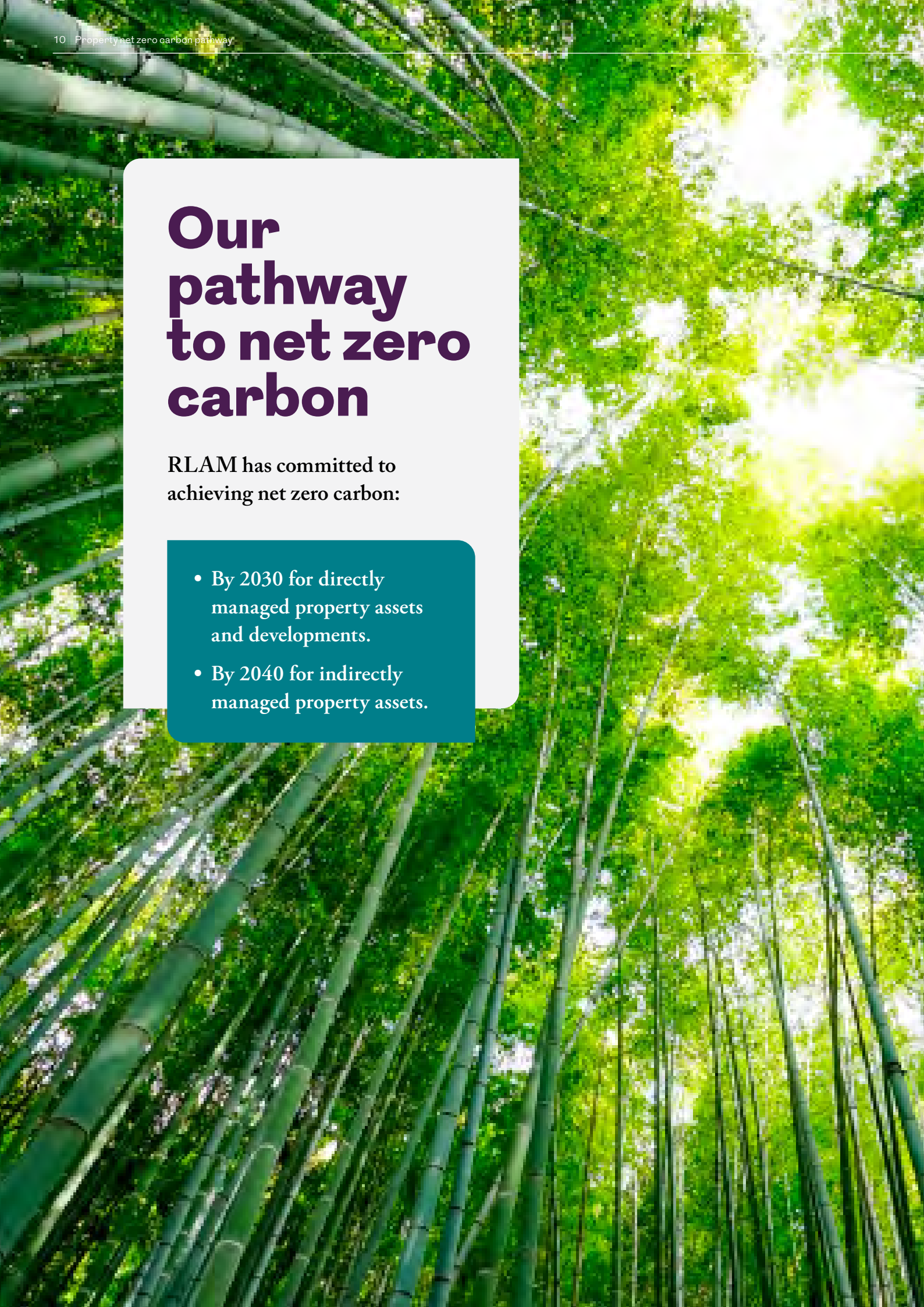
A key element of our Responsible Property Investment agenda

'Transition to net zero carbon' was identified as a material issue during the recent development of our Responsible Property Investment strategy.

The issue will be managed in different ways across the four strategic focus areas of:

- Investing in a resilient portfolio
- Developing for the future
- Managing assets for positive impact
- Responsible decision making.

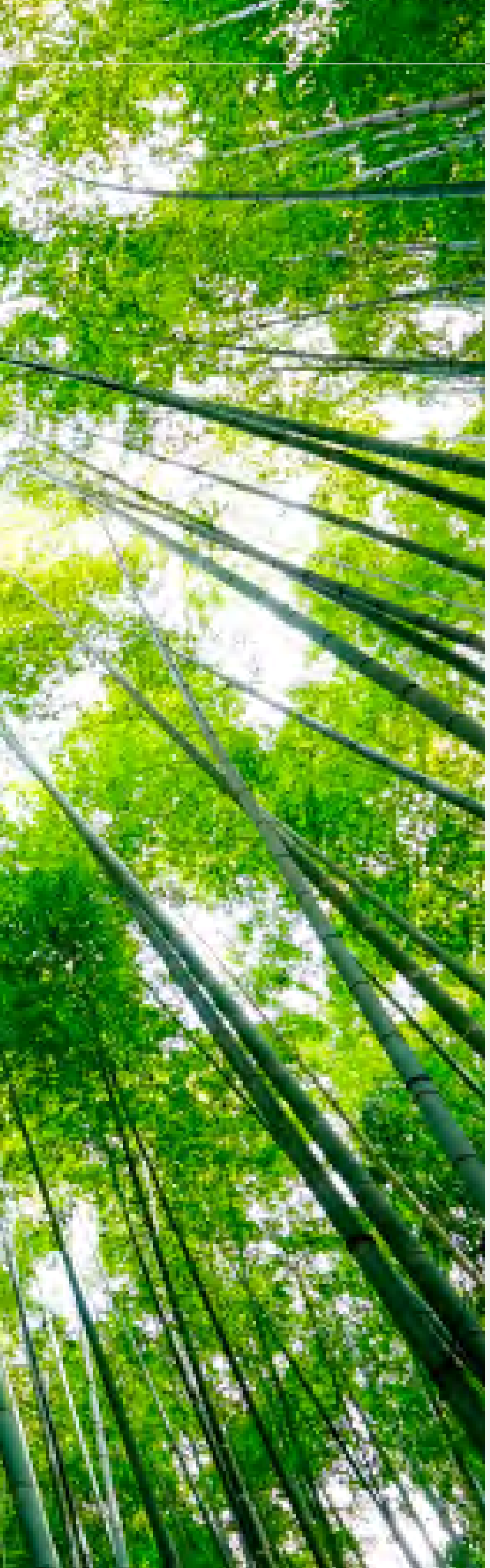
The selected interventions will depend on the focus area and the implementation of both the overarching RPI strategic roadmap and the subset of actions within the RLAM net zero carbon pathway.



Our pathway to net zero carbon

RLAM has committed to achieving net zero carbon:

- By 2030 for directly managed property assets and developments.
- By 2040 for indirectly managed property assets.



To achieve these targets, RLAM has developed a pathway structured along the following key 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

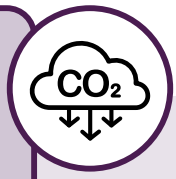
STEP 5
Increase operational efficiency

STEP 6
Increase renewable energy supply

STEP 7
Offset residual emissions

STEP 1

Understand the drivers for net zero carbon



There has never been a better time to act on delivering net zero carbon in real estate. A convergence of market and legislative forces are all pushing in the same direction. The real estate advisor, Jones Lang LaSalle (JLL), has outlined some of the key driving factors towards net zero carbon in its report 'The impact of sustainability on value', including the following:

Asset performance

Evidence is increasingly coming to bear that demonstrates that green buildings are associated with higher rents, shorter void periods, and increased customer attraction. For instance, Outstanding/Excellent Building Research Establishment Environmental Assessment Method (BREEAM) rated spaces had lower void rates 24 months after completion than Very Good rated space. In addition, BREEAM Outstanding buildings have been found to be almost entirely pre-let whilst only 50% of buildings with lower ratings were.

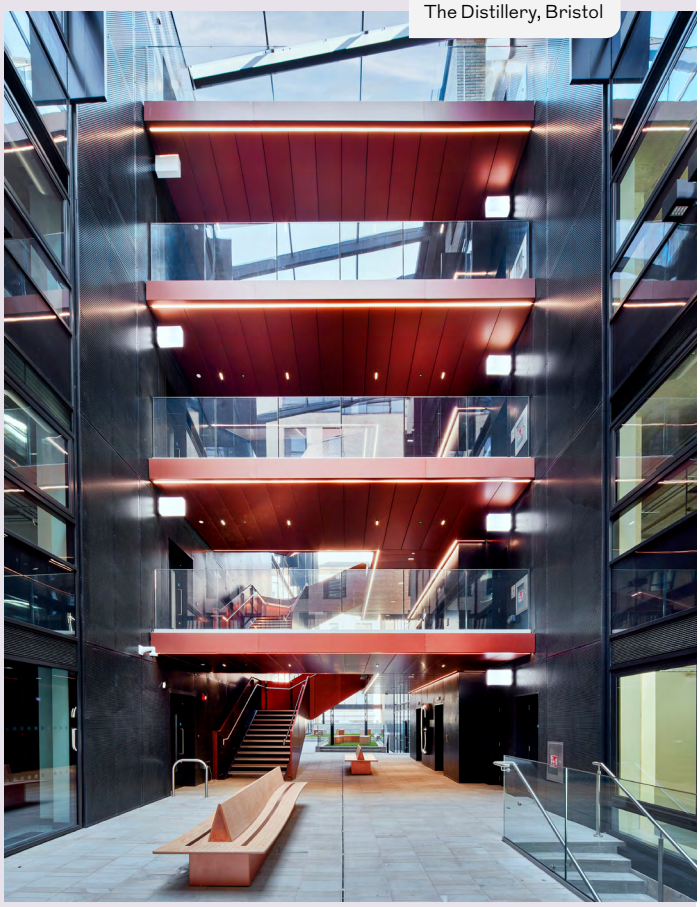
Occupier demand

Many corporate occupiers are making their own net zero carbon and/or science-based targets commitments. They are seeking out spaces that will enable them to deliver against these commitments.

Investor pressure

Investors are increasingly becoming aware of the physical and transition risks posed to real estate assets by climate change. They are aware of the risk of assets becoming stranded as the demand shifts away from carbon intensive buildings. In response, the demand on asset managers to ensure their buildings are climate-proofed and contributing to the transition to net zero carbon is increasing. This mounting pressure is reflected in the large number of initiatives, including the Task Force for Climate-related Financial Disclosures (TCFD), that are providing investors ways to understand and reduce risk in their portfolios.

Aurora, Bristol



The Distillery, Bristol

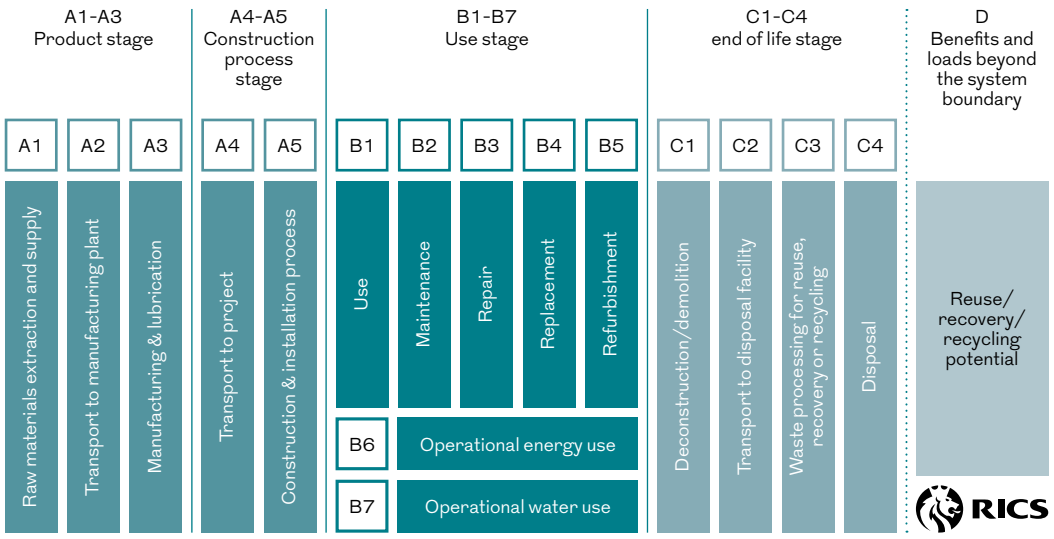
10 Chiswell Street, London

Hardman Square, Manchester

STEP 2

Define the scope and boundaries

There is currently no universal definition of a net zero carbon building. However, in the past few years since the UK Government set its legally binding target of achieving net zero carbon by 2050, a wealth of industry guidance has come forward. This guidance sets out the emissions along the whole life carbon cycle that need to be included for a company to claim that it will achieve net zero carbon. Our pathway includes all elements of the whole life carbon cycle that are material to our carbon footprint.



Source: Whole life carbon assessment for the built environment, Royal Institute of Chartered Surveyors (RICS), 1st edition, November 2017.

BBP | BETTER BUILDINGS PARTNERSHIP

Alignment with the Better Buildings Partnership's Net Zero Carbon Pathway Framework

Of the various frameworks and guidance documents available, the Better Buildings Partnership's Net Zero Carbon Pathway Framework stands out as a robust and detailed method for determining scope and boundaries. This framework is designed to support signatories to the Better Buildings Partnership's Climate Change Commitment deliver against their net zero commitments by 2050. It encourages improved transparency and clear guidance around the emissions that should be included in developing a net zero carbon pathway.

RLAM has aligned with this framework to ensure that Scope 1, Scope 2 and all material Scope 3 emissions are included in our pathway. We have also ensured that the boundaries of our emissions include all significant elements of the whole life carbon approach including both operational and embodied carbon, as outlined in this table:

Activities which generate GHG emissions for real estate investments (directly or indirectly)	Activities controlled and managed by landlords	Activities controlled and managed by occupiers	Corporate/ head office
Energy to operate buildings (electricity, fuels and heat networks)	✓	✓	Corporate emissions are not included within the pathway scope of the BBP Climate Commitment. This is because the focus is on signatories' real estate investments. These emissions are also immaterial to the pathway.
Water to operate buildings	✓		
Waste generated during operation	Excluded due to materiality		
Refrigerants (fugitive emissions)	✓		
Purchase of goods and service	✓		
Business travel			
New development works	✓		
Refurbishment works	✓	✓	
Fit-out works	✓	✓	
End of life	✓		

STEP 3

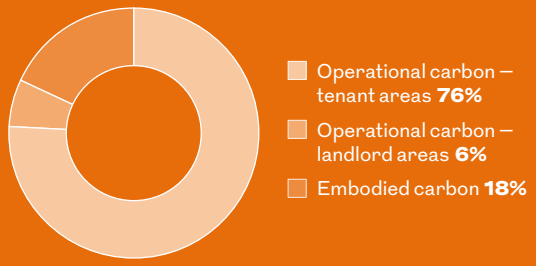
Identify carbon footprint and trajectory

To understand the scale of the challenge in the years leading up to our target years, we undertook a carbon footprinting exercise. Best practice suggests that the baseline year for your carbon footprint should be the latest, most representative year. For RLAM, this is 2019. We found that in our baseline year, our operational emissions were 51,704 tCO_2e and our embodied carbon emissions amounted to 11,353 tCO_2e.

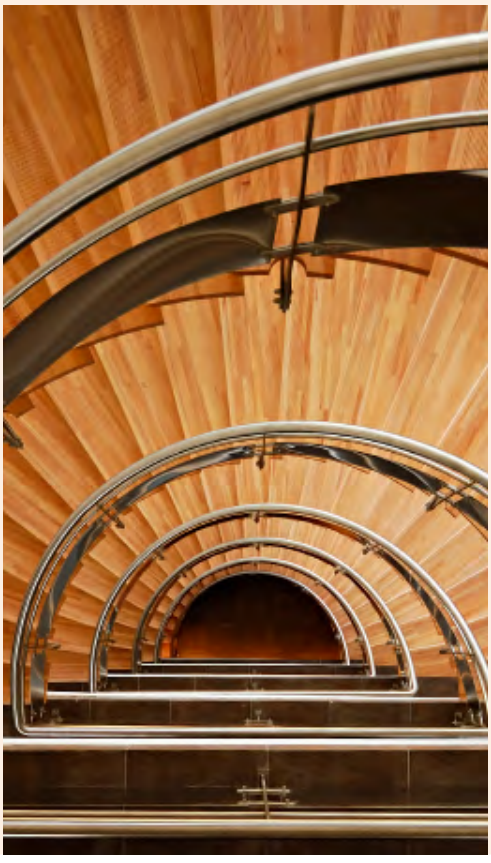
In our baseline year, the portfolio has a diversity of asset types that will all require different approaches to achieve net zero carbon. One of the challenges for reducing emissions from this baseline is our assets under single let leases. Most of the emissions are in these spaces where it is the occupiers who have the operational control, as highlighted in the graph. We look forward to engaging with them to find mutually beneficial net zero carbon solutions.

In addition to understanding our footprint today, we need to understand how this will change in the years leading up to our target years of 2030 and 2040. We project that our emissions will rise because of our acquisition and development plan. While some of these emissions will be countered by the decarbonisation of the electricity grid in the United Kingdom, we will also need to undertake considerable efforts along each step of the net zero carbon hierarchy to reach our goals.

RLAM's carbon emissions (tCO_2e) in baseline year 2019



Source: RLAM as at 31 December 2019



STEP 4

Reduce embodied carbon

Reduce embodied carbon to 250 $kgCO_2e/m^2$ for major refurbishments

Reduce embodied carbon to 500 $kgCO_2e/m^2$ for developments

Even though 2030 is our overall deadline for embodied carbon from new developments, we will identify strategic assets that are in the development pipeline between now and 2030 and consider bringing them to net zero embodied carbon in advance of that deadline.

To achieve this, we will undertake several key steps. First, we will ensure that we are measuring materials in our new developments and major refurbishments so that we can actively measure the sources of embodied carbon and therefore identify opportunities to reduce it. Improved measurement is key to reducing embodied carbon. Currently, there is a strong reliance in the industry on benchmarks. While these are very useful, to meaningfully reduce emissions we need to shift towards asset-by-asset measurements.

Second, we will intervene as early as possible in the design process. It is critical to be able to design out both carbon and waste. We will adopt a series of circular economy ideas, including exploring design for disassembly and seeking opportunities for less carbon-intensive materials. Third, we will ensure that whatever emissions cannot be reduced, we will mitigate using high-quality offsets. Our approach to high-quality offsetting is outlined later in this report.

As we increase the measurement of our embodied carbon and as benchmark data develops, we will continue to review and revise our property development embodied carbon standards. While strict and specific legislation beyond the overall legally binding net zero carbon national goal is not yet widespread, such regulations are developing. With specific regard to new developments and major renovations, a pertinent example is 'Policy SI 2 minimising greenhouse gas emissions' outlined in the new London Plan, adopted by the Greater London Authority in March 2021. Policy SI 2 states that a minimum on-site carbon emissions reduction of at least 35% beyond building regulations is required for major development. Residential development should achieve 10%, and non-residential development should achieve 15% of this overall reduction through energy efficiency measures. Where it is clearly demonstrated that the zero carbon target cannot be fully achieved on-site, any shortfall should be provided, in agreement with the borough, either:

- Through a cash in lieu contribution to the borough's carbon offset fund with current indicative pricing set at £95/tonne.
- Off-site provided that an alternative proposal is identified and delivery is certain.

STEP 5

Increase operational efficiency

To reduce our operational carbon, we need to improve operational efficiency in both our standing assets and our new developments.

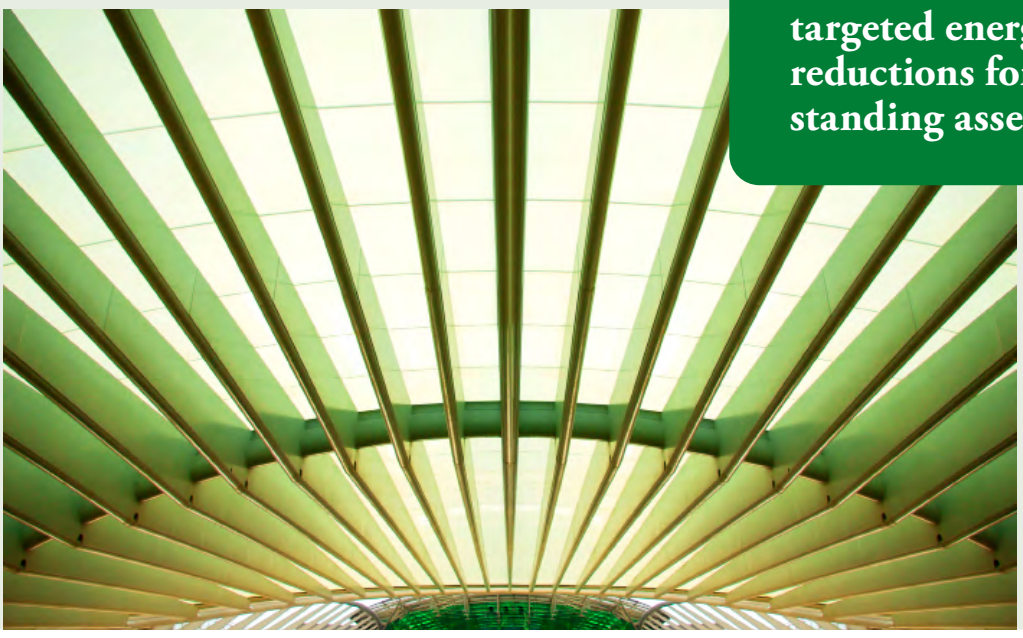
Based on our carbon modelling, we will aim for an average of 15% reduction in energy consumption across the property portfolio we manage by the target years. This reduction varies based on the type of asset. Our projections of achievable reductions are based on a comprehensive review of our energy data and documentation, including EPC ratings and energy audits.

For our new developments, the energy efficiency potential will also vary. We will target the benchmarks available for the asset types. Of note, for the offices in our portfolio, by 2030 we will aim to align with the UK Green Building Council Paris Proof energy intensity target of 70 kWh/m^2.

One of our challenges is that we own many assets that are indirectly managed. Improving the operational efficiency of these assets will require dynamic engagement with our occupiers to find solutions that are suitable for all parties and that support us in achieving our common goals.

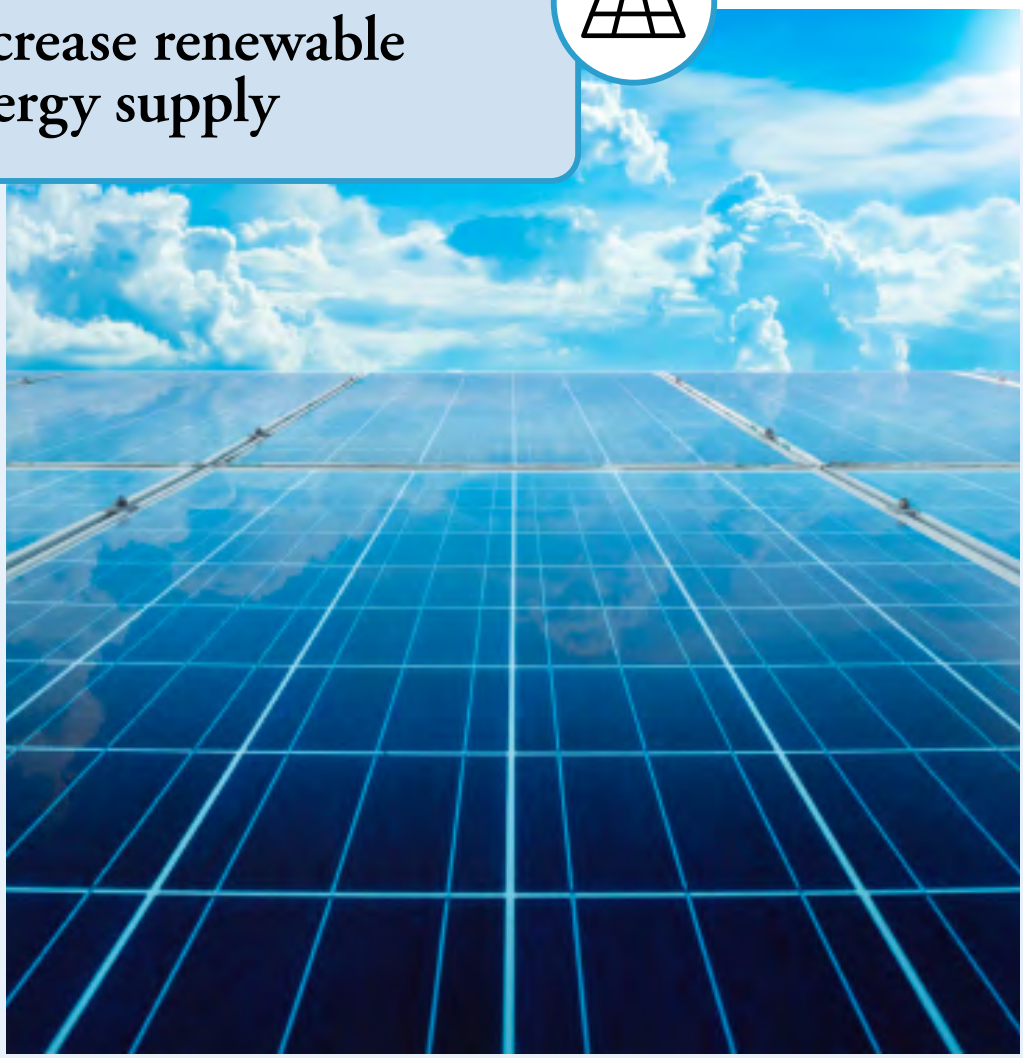
Despite the challenges, the demand for optimised energy efficiency is ever present. The UK Minimum Energy Efficiency Standards Regulations (also known as MEES) now require that new commercial spaces obtain an Energy Performance Certificate rating (EPC) of B by 2030, compared with the previous requirement of an EPC rating of E only.

15%
targeted energy reductions for standing assets



STEP 6

Increase renewable energy supply



We will explore a multifaceted approach to increasing renewable energy supply for our portfolio. We will prioritise increasing on-site renewable energy using solar photovoltaics. We will aim to generate up to 9.5 GWh of renewable energy on-site across the portfolio. We understand that installing renewable energy on-site will mean cooperation with our occupiers to seek out mutually beneficial options and we look forward to taking this journey together.

After determining the potential for on-site renewable energy capacity, we will determine the amount of outstanding energy supply that needs to be procured. To meet these needs, we will explore options for off-site high quality renewable energy. We will begin by exploring the potential for power purchase agreements (PPAs). Where this is not possible, we will ensure our remaining energy is supplied using bundled Renewable Energy Guarantees of Origin (REGO)-backed electricity to ensure high quality supplies.

STEP 7

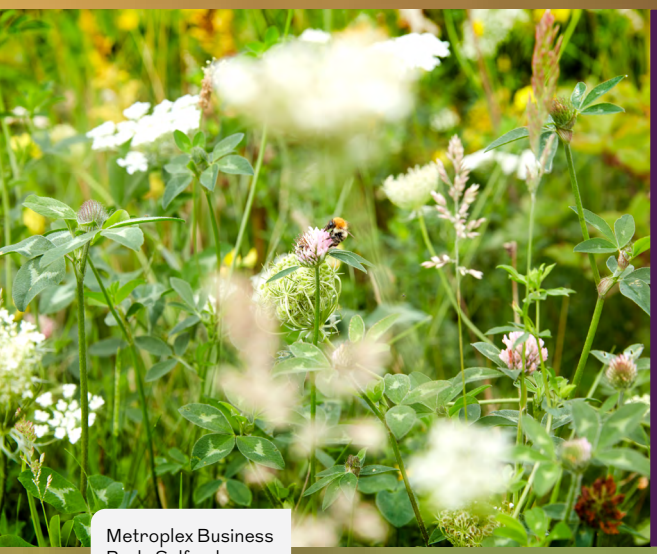
Offset residual emissions

In accordance with the net zero carbon hierarchy, we will consider carbon offsetting, with our investors, for only those residual emissions that we were not able to abate by any other means. We will ensure that any offsets align with the Oxford Offsetting Principles as well as industry guidance, including from the UK Green Building Council (UKGBC).

We will ensure that our approach is appropriately verified by a third-party and disclosed.

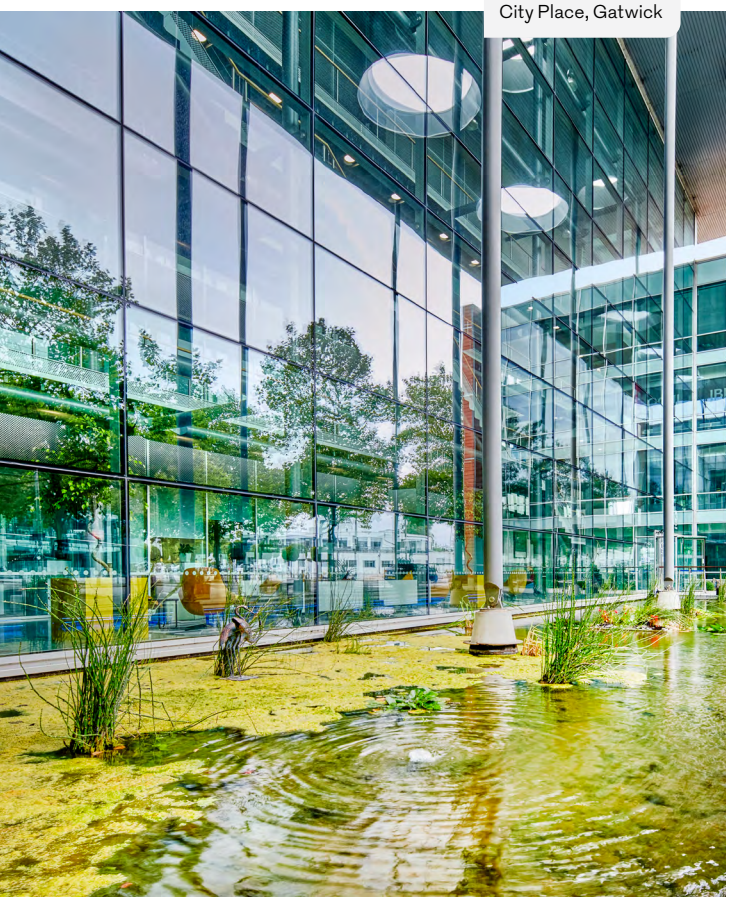
We will ensure that our high-quality offsets:

- Are additional, i.e., they would not have taken place without our intervention.
- Avoid unintended negative consequences.
- Limit potential for reversal through careful selection and monitoring of projects.
- Transition from emissions reduction offsets to carbon removal offsets.

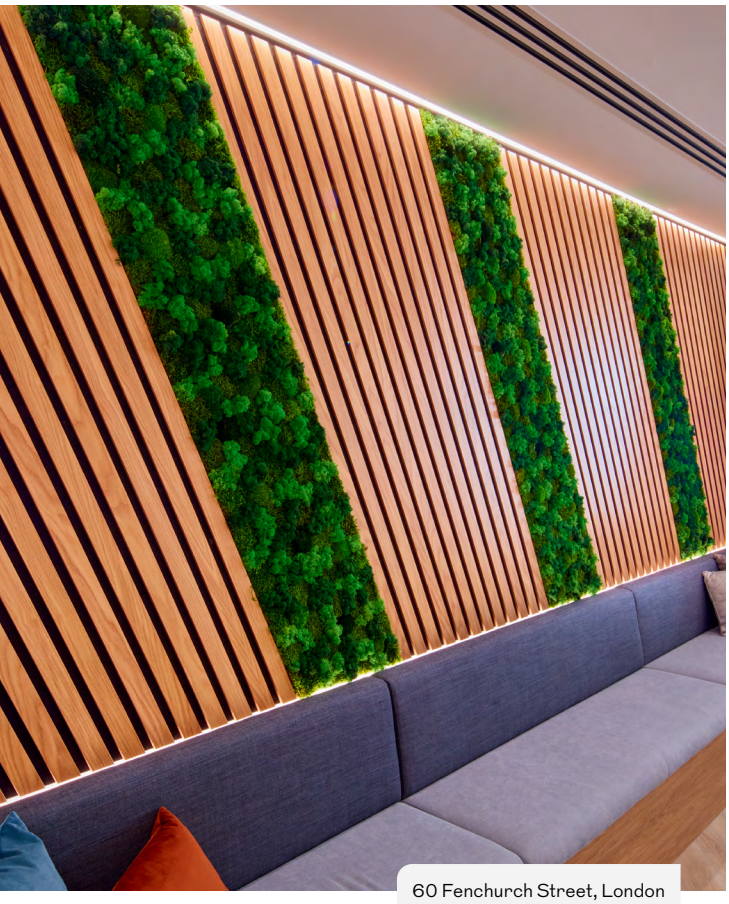


Metroplex Business Park, Salford

Achieving net zero



City Place, Gatwick



60 Fenchurch Street, London

RLAM has developed a Responsible Property Investment strategy with which the net zero carbon pathway will align. Some actions between the two strategies will naturally complement each other. There will also be a series of actions that are specific to net zero carbon. These actions will be undertaken in the short, medium and long term.

The entire delivery rests on a strong and coordinated governance system that stems from our Responsible Property Investment team. However, we know that to achieve the radical transformation that is required for a net zero carbon journey, our entire team has to be involved. Therefore, we will mainstream net zero carbon into all elements of our team deliverables and business planning to include a systematic internal reporting mechanism to monitor progress.

As part of the net zero carbon journey, we will ensure that we continue to improve our data collection and analysis to ensure that we are making the most informed decisions. Based on this, we will review the scope and boundaries of our net zero carbon related data and targets regularly. We also seek to document our progress along our journey through case studies and lessons learned that we could share with our peers. Beyond this, we will ensure that net zero carbon is embedded within our approach to acquisitions, leasing, property management and developments and major refurbishments.

Action plans

Embedding net zero carbon into our business model

Achieving net zero carbon will require a rethinking of our business practices both for identifying new priorities and embedding smaller changes into actions. Some of the key actions that we will take in pursuit of this include:

Area	Action
Governance	Develop action plans for each business area to embed appropriate net zero carbon considerations.
Assurance	Review appropriate methods for embedding net zero carbon related data and targets into assurance processes.
Monitoring	Review scope and boundaries of net zero carbon commitment annually as data and portfolio change.
Monitoring	Periodically review carbon targets and action plans to ensure alignment and ambition are appropriate.
Training	Upskill RLAM colleagues on net zero carbon and its implications for their business.
Renewable energy procurement	Investigate potential for power purchasing agreements with a UK-based renewable energy generator.
Internal carbon financing	Investigate the need for a decarbonisation fund.
Carbon offsetting	Develop a robust strategy for procuring high quality carbon offsets for any residual emissions.

Property management

We will need to embed net zero carbon considerations into the property management cycles of all our assets. Key activities to achieve this will include:

Area	Action
Data collection	Review energy and floor area data of existing assets to ensure energy and emissions intensities can be calculated accurately.
	Obtain and record occupancy rates for tenanted buildings.
Energy efficiency	Implement an EPC improvement plan and ensure that all new assets obtain EPC certificates.
	Undertaking energy and/or net zero carbon audits on selected assets.
On-site renewable energy generation	Conduct renewable feasibility studies for assets and integrate results into key interventions where possible.
Off-site renewable energy procurement	Identify renewable energy capacity and therefore viable procurement options for tenanted spaces.
Sustainable procurement	Identify key net zero carbon criteria to be used during the procurement of goods and services. This will support the work undertaken in leasing regarding such criteria.

Leasing

A large proportion of RLAM's portfolio consists of indirectly managed property assets. These will be some of the most challenging for RLAM to decarbonise. We understand that to ensure these assets reach net zero carbon, we will need strong and active engagement with our occupiers. To achieve this, we will:

Area	Action
Tenant engagement	Establish a clear and transparent process for identifying prospective tenants whose carbon intensity and net zero carbon ambitions align with our own.
	Engage tenants who have not developed net zero carbon programmes yet to sensitise them to the need and benefits.
Green leases and clauses	Strengthen relationships with tenants who already have strong net zero carbon ambitions to find mutual beneficial opportunities.
Tenant energy efficiency	Engage early and often with our tenants to identify opportunities to optimise energy efficiency and enable renewable energy supply.
Renewable energy procurement	Identify renewable energy capacity and therefore viable procurement options for tenanted spaces, in alignment with property management investigations.

Ashford Designer Outlet, Ashford

Acquisitions

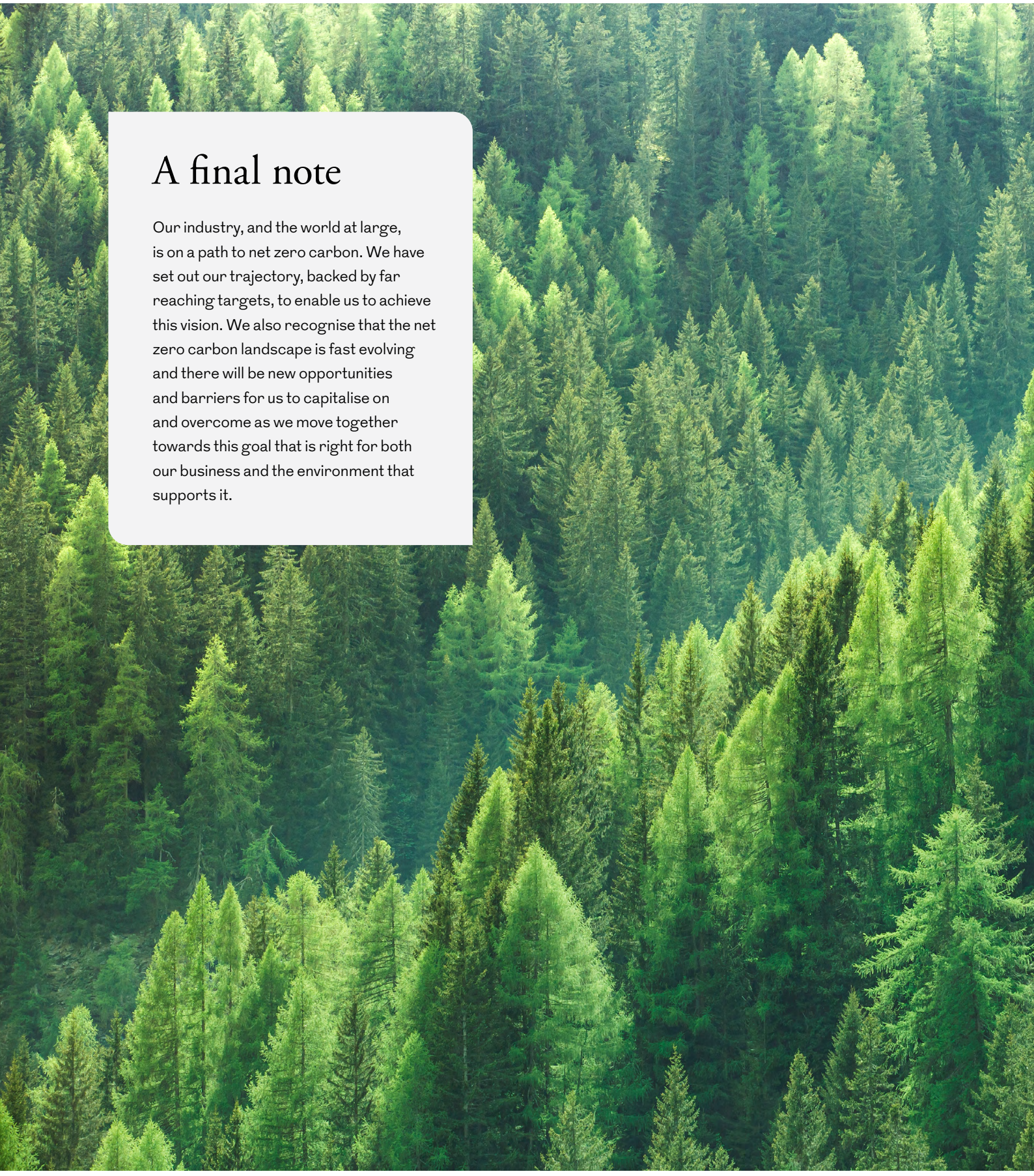
To meet our net zero carbon targets, we will need to ensure that the assets we acquire are aligned with our long-term trajectory, or where they are not, that they can be appropriately managed to achieve our goals. To achieve this, we will:

Area	Action
Pre-acquisition screening	Establish a clear and transparent process for assessing the carbon intensity of potential acquisitions.
	Review our existing acquisition checklist to incorporate net zero carbon and climate readiness factors.
Internal carbon pricing	Explore the potential for an internal carbon price to guide our investment decisions.

New developments and major refurbishments

Our new developments and major refurbishments have a large influence on our carbon trajectory. They also represent great potential for designing out emissions and ensuring that our portfolio is made up of assets that represent the direction of our business. To achieve this, we will:

Area	Action
Embodied carbon	Develop a detailed programme to measure and reduce embodied carbon emissions.
	Liaise with design and engineering teams to embed circular economy principles into building design and ensure alignment with Design for Performance.
Whole life carbon assessments	Consider whole life carbon assessments for all new developments, refurbishments, and Category A fit-outs.



A final note

Our industry, and the world at large, is on a path to net zero carbon. We have set out our trajectory, backed by far reaching targets, to enable us to achieve this vision. We also recognise that the net zero carbon landscape is fast evolving and there will be new opportunities and barriers for us to capitalise on and overcome as we move together towards this goal that is right for both our business and the environment that supports it.

All information is correct at November 2022 unless otherwise stated.

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