

PLACES PEOPLE PREFER

Pathway to Net Zero Carbon



December 2020

Introduction

Our achievements in developing and managing more sustainable space have been recognised for more than a decade. Given the scale of the global climate challenge where the “next few years are probably the most important in our history”¹, it is clear to us that an especially ambitious approach is now required. That is why we are committing to achieving net zero carbon by 2030 – a goal shared by our investors, customers, partners and people.

Aligning with our stakeholders

The scale of the climate emergency and its impact on real estate has become apparent in recent years. Transitioning to more sustainable ways of doing business is therefore a key priority for us and aligns to our focus on delivering long term, sustainable value for our stakeholders.

Our investors are supportive of the measures we are taking to make our assets more resilient and to enhance their appeal to our customers. Our customers and our partners want to work with operators who are leaders in this field and at British Land, we have a large and active network of people who want to make a positive difference.

Setting ambitious targets

To achieve our net zero carbon goal, we have set highly challenging targets focused on reducing the embodied and operational emissions across our portfolio.

Our targets build on the strong progress we have made over the last decade. During this time, we reduced landlord carbon intensity across our portfolio by 73% from a 2009 baseline. By prioritising re-use, the embodied carbon intensities at our most recent developments are already in line with our 2030 commitment.

Recognising that more than two-thirds of our operational emissions come from tenant-controlled space, the scope of our commitment includes activities on space we do not control as well those arising from our own operations. This expanded scope will be challenging but it is also an opportunity to strengthen our relationships with our customers as we collaborate on climate initiatives in the years ahead.

This document – developed in line with the Better Buildings Partnership Net Zero Carbon Pathway Framework² – sets out how we will achieve net zero carbon by 2030.



¹ www.ipcc.ch/site/assets/uploads/2018/11/pr_181008_P48_spm_en.pdf

² www.betterbuildingspartnership.co.uk/net-zero-carbon-pathway-framework

Our Commitment

We will transform our portfolio to be net zero carbon by 2030.

Net zero carbon is achieved when all the carbon emissions associated with a building – from production and operation through to deconstruction and end of life – are zero or negative.

To deliver on this goal across our portfolio, we are focused on reducing our embodied and operational carbon emissions and have set out clear targets for improvement by 2030.

We also recognise that there will be some residual emissions we cannot eliminate. These will be offset through certified schemes.

Central to our plan is our Transition Vehicle, which has been established to finance the retrofitting of existing buildings, making them more efficient. This will be funded by an internal carbon levy set initially at £60 per tonne of embodied carbon in our developments.



50%

Reduction in embodied carbon at our developments

REDUCING EMBODIED CARBON

We will reduce embodied carbon emissions in our office developments to below 500 kg CO₂e per m² by 2030. We take a whole life approach, so we are also targeting a 50% reduction in embodied carbon in operations through the life of the building to 275 kg CO₂e per m² in office developments and 250 kg CO₂e per m² in retail and residential developments. To achieve our goals, we approach each new project with three priorities in mind:

- Prioritise retrofit above new build
- Employ circular economy principles in design and construction
- Be innovative in the use of more sustainable materials

£60

Per tonne, to be reviewed annually

TRANSITION VEHICLE

To incentivise our teams to reuse, recycle and resource sustainably we have introduced a carbon levy of £60 per tonne of embodied carbon in our developments, generating funds to retrofit our existing portfolio to achieve our goal of net zero carbon in operations.

In addition, a portion of the funds will be used to acquire accredited offsets for those emissions we cannot eliminate.

75%

Reduction in operational carbon intensity

REDUCING OPERATIONAL CARBON

By 2030, we will reduce the carbon associated with our operations across our portfolio by 75%; to support this, we are targeting a 25% improvement in whole building energy efficiency. Where we develop new properties, we will ensure they are designed to operate at the highest levels of efficiency, with a target of 90kWh_{eq} per m² for offices developments.

To reduce operational carbon, we will:

- Deliver a step change in energy efficiency
- Use renewable energy from new, additional sources
- Support our customers with their own sustainability plans

100%

Developments net zero carbon from April 2020

OFFSETTING RESIDUAL EMISSIONS

Where we are unable to eliminate carbon emissions, we will procure carbon offsets which:

- Are certified
- Focus on true carbon absorption, such as nature-based solutions
- Are biodiverse and have a positive impact on local communities
- Are both in the UK and overseas
- Comply with BBP and UKGBC guidelines on offsetting

Reducing embodied carbon

50%

less embodied carbon
at our office developments
to below 500kg CO₂e per m²

50%

less embodied carbon
in operations at our office
developments to below
275 kg CO₂e per m²

100%

of developments delivered
after April 2020 to be
net zero carbon

Embodied carbon
is the carbon generated
in the production,
maintenance and
deconstruction of a
building. This includes
emissions relating to
the extraction and
transport of materials
and systems used in
its development and
day to day operations.



We retained virtually all the superstructure at 1 Triton Square and recycled 3,500m² of glass panels rather than buying new. Overall, our development and operational efficiencies will avoid an estimated 62,000 tonnes of carbon over 20 years.



Reducing embodied carbon

Our approach

We recognise that our greatest opportunity to reduce embodied carbon in developments is at the design stage, so in June, we re-launched our latest Sustainability Brief for Developments and Operations. This sets out our 2030 sustainability ambitions and specifies the KPIs and standards required to achieve them. The 'Energy & Carbon' and 'Circular Economy & Materials' sections are crucial to our net zero commitment and we are already making good progress in these areas:

Energy & Carbon

- Development and refurbishment standards have been updated in line with net zero carbon and we track progress against these standards
- We conduct whole life carbon assessments for all new developments, refurbishments and Cat A fit outs
- We only work with design and construction teams who are able to measure embodied carbon
- We incentivise the use of low carbon materials through our internal levy of £60 per tonne of embodied carbon on new developments, across the production and construction stages (A1-A5, see p10 for detail)
- We are offsetting the residual carbon of all future developments

Circular Economy & Materials

- We are prioritising re-use of existing structures / materials
- We are designing for longevity, flexibility, disassembly, deconstruction and end of life recoverability
- We are increasing the use of recycled materials
- We will use low carbon materials wherever practical



Orsman Road, Haggston, our first cross-laminated timber building



Recycled materials are used throughout the Triton Café at Regent's Place



Offset payments of £260,000 (our share) at 100 Liverpool Street above and £420,000 at 1 Triton Square



Reducing operational carbon

75%

reduction in carbon intensity across our portfolio by 2030

25%

improvement in whole building energy efficiency of existing assets by 2030

Operational carbon relates to the carbon emitted as a result of the buildings' operation. Examples include heating, cooling, lighting, and refrigeration.



In line with the NABERS Design for Performance approach to modelling and verification, 1 Broadgate is expected to achieve base build operational efficiency of around 45kWh_{eq} per m² in landlord areas, in line with our 2030 commitments



Reducing operational carbon

Our approach

Our definition of net zero considers the whole building as a single entity, so we are incorporating customer-controlled space into the scope of our commitment. This is a very significant expansion of our approach to managing our assets' operational carbon emissions. We are confident of achieving our targets in Offices, where we procure energy for our customers and usage is monitored. Progress will be more challenging in Retail, where we have limited unit level data. We have identified three core areas where we will take action across our portfolio:

Delivering a step change in energy efficiency

- We will supplement our existing knowledge with detailed energy audits of standing assets to map asset-specific paths to net zero in operation
- We will align future office developments with the NABERS Design for Performance approach
- We will use our Transition Vehicle to fund retrofit projects which improve efficiency

Use of renewable energy from new, additional sources

- We will conduct renewable feasibility studies for assets with renewable power generation potential
- We will investigate the potential for PPA¹-style agreements with a UK-based renewable energy generator
- We will continue to source REGO²-backed electricity for the proportion of power that is not from PPAs or self-generation

Supporting customers with their own sustainability plans

- We will work with key customers to develop joint energy efficiency action plans

¹ Power Purchase Agreement (PPA)-style agreements applies to renewable power from new renewable sources installed by or on behalf of British Land

² Renewable Energy Guarantee of Origin (REGO) certificates are a tracking instrument which prove that power supplied to an end consumer comes from a renewable source



LED upgrades in back of house and selected public places at Regent's Place



At Norton Folgate, we undertook enhanced building energy modelling to achieve an expected base build operational efficiency of 80kWh_{eq} per m²

2MW renewable energy capacity across our portfolio



Supported by our Transition Vehicle

Our Transition Vehicle supports our commitment to achieving net zero carbon in two key ways.

- Our carbon levy of £60 per tonne of embodied carbon in new developments incentivises us to reuse, recycle and resource more sustainably.
- The funds generated by this levy will be supplemented by an additional annual loan of £5m, providing ring fenced capital we can invest into transforming the energy performance of our existing assets.

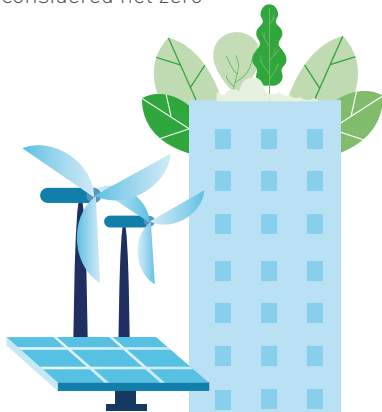
We envisage that two-thirds of Transition Vehicle funds will be invested in projects that deliver either energy efficiency improvements or energy source improvements, including renewables.

We also recognise the important role that innovation can play in delivering more sustainable real estate so we will also invest in research & development which progresses industry advances in materials or operational efficiency.

To support our customers with their own sustainability plans, we are making loans available to finance energy efficiency improvements on customer controlled space.

We have established formal governance procedures for the Transition Vehicle and will report on its performance in our annual sustainability report.

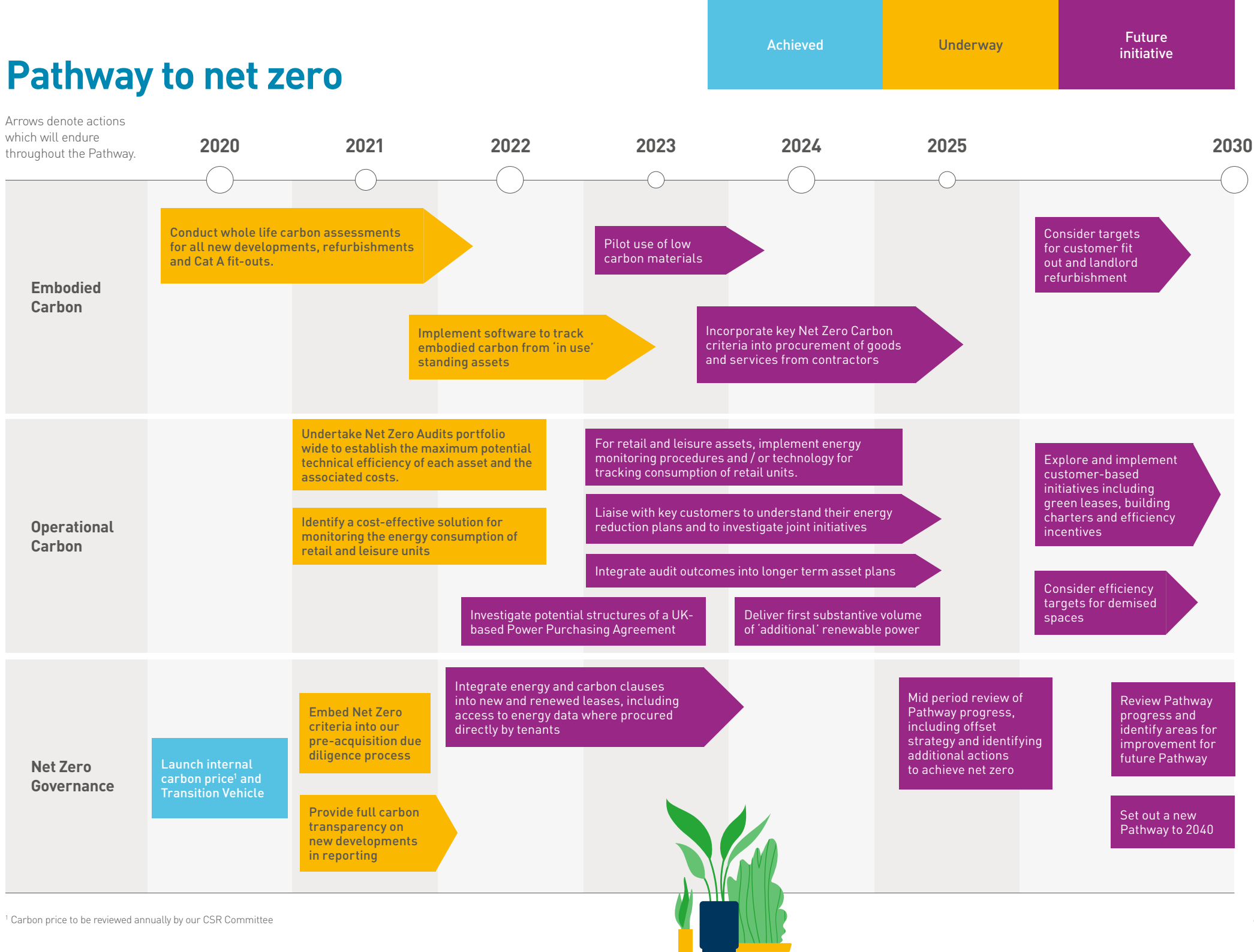
Approximately one-third of the Transition Vehicle funds will be used to acquire accredited offsets to ensure that our developments can be considered net zero embodied carbon.



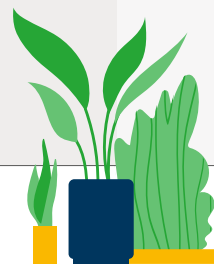
Source of Funds	Total Contribution	Uses of Funds
	<i>100 Liverpool St</i> £0.8m <i>(Our share)</i>	<div>Carbon Offsets</div>
	<i>1 Triton Square</i> £1.3m	
	<i>Norton Folgate</i> £1.4m	<div>Transition Vehicle</div> <div>Retrofitting projects focused on improvements in energy efficiency and energy sourcing on the standing portfolio</div>
	£5m <i>Annual loan</i>	
		<div>Research & Development</div>

Pathway to net zero

Arrows denote actions which will endure throughout the Pathway.



¹ Carbon price to be reviewed annually by our CSR Committee



Detailed embodied & operational carbon targets

Embodied Carbon

- From 2020 all developments will be net zero embodied carbon at practical completion
- By 2030 we will reduce the whole life carbon in new developments by 50%

Asset	2020 baseline Up to PC (A1-A5 ¹) kgCO ₂ e/m ²	2030 target Up to PC (A1-A5 ¹) kgCO ₂ e/m ²	2030 target Lifecycle (B1-B5 ² & C1-C4) kgCO ₂ e/m ²
Offices	1000	500	275
Retail	900	450	250
Residential	900	450	250

¹ A1-A3 refers to The Product Stage, the sourcing of materials, transport to manufacturing plant and fabrication processes. A4-A5 refers to The Construction Stage, the transport from plan to site and on-site construction and installation including waste disposal.

² B1-B5 refers to In Use, including emissions arising during the use of the building, maintenance, repair, replacement, refurbishment.

Operational Carbon

- By 2030 we will reduce the carbon associated with our operations by 75%
- By 2030 we will improve whole building energy efficiency of existing assets by 25%
- By 2030 all new developments will operate in line with the UKGBC 2030 targets
- New developments will design out fossil fuels where possible
- Beyond 2030, our long term aim is that our portfolio performs in line with the UKGBC's Paris Proof 2050 targets

2030 operational energy intensity targets		
	Whole building kWh _{eq} per sqm (NLA)	Improvement in whole building kWh _{eq} per sqm (NLA)
Asset Type	New developments	Standing assets ³
Offices	90	25%
Retail	60 ⁴	25%
Residential	35	25%

³ A minimum 25% improvement in energy intensity is targeted. When the Net Zero Audits of the portfolio are complete, these asset-specific paths to Net Zero Carbon will provide asset-specific reduction targets for our 2030 programme.

⁴ Interim figure, will be updated following the publication of the UKGBC's Paris Proof Energy Performance Targets for Retail.



Investment Boundary

Our Net Zero Carbon 2030 targets are designed for assets where British Land has operational control, which represents over 75% of our UK real estate portfolio by floor area. From 2030, all assets in our operational control will be Net Zero in Operation.

We are currently excluding assets where we have limited control but these will achieve Net Zero in Operation not later than 2050.

Our investment boundaries are detailed below:

Criteria	Inclusions	Exclusions	Rationale
Operational control	<ul style="list-style-type: none"> → All assets directly managed by British Land → All assets managed by a third party on behalf of British Land → All new developments including potential FRI leases 	<ul style="list-style-type: none"> → All assets not managed by British Land with a Fully Repairing and Insuring (FRI) lease 	British Land has limited control and influence over FRI properties. However, as FRIs return to the portfolio (e.g. when leases end), these will be included within the boundary and energy/carbon reduction measures will be applied.
Asset classes	<ul style="list-style-type: none"> → Offices → Retail warehouses → Retail shopping centres → Leisure → Build to Rent (BTR) residential 	<ul style="list-style-type: none"> → Non-BTR Residential 	Similar to FRIs, British Land's non-BTR residential assets are either on long leases or due to be sold. Therefore British Land has limited control and influence over the performance of these assets.
Landlord vs. tenant	<ul style="list-style-type: none"> → Consumption in landlord-controlled AND tenant-controlled areas 	N/A	
Physical boundary	<ul style="list-style-type: none"> → All activities covered by gross internal and external areas. This includes indoor and outdoor car parks and gardens, where relevant 	N/A	
Acquisitions & disposals	<ul style="list-style-type: none"> → All assets which have been held for a full financial year / service charge year 	<ul style="list-style-type: none"> → Acquisitions which have not been in the portfolio for a full financial year → Disposals made during the course of the financial year 	British Land will only include assets which have been held for a full financial year, to allow for consistent and stable consumption and data availability.

Greenhouse Gas Emissions Boundaries

Business Area	Sub-Area	Reporting Category	GHG Scope	BBP Framework	British Land Scope
Corporate	Head office energy use	Company facilities	1 & 2	N	Y
	Company vehicles	Company Vehicles	1	N	Y
	Business travel (excluding commuting)	Business travel	3	N	Y
	Purchased Goods and services	Purchased goods & services	3	N	N
	Operational waste generated	Waste generated in operations	3	N	Y
	Operational water use	Purchased goods & services	3	N	Y
	Employee commuting	Employee commuting	3	N	N
Direct Real Estate Holdings	Landlord purchased energy (electricity & fuels)	Purchased electricity, heat and steam	1, 2 & 3	Y	Y
	Landlord refrigerants	Purchased goods and services	1	Y	Y
	Landlord purchased water	Purchased goods & services	3	Y	Y
	Landlord managed operational waste	Waste generated in operations	3	Y	Y
	Tenant purchased energy (electricity & fuels)	Downstream leased assets	3	Y	Y
	Tenant refrigerants	Tenant Scope 3	3	N	N
	Tenant purchased water	Tenant Scope 3	3	N	N
	Tenant managed operational waste	Tenant Scope 3	3	N	N
	Tenant / visitor transport emissions	Tenant Scope 3	3	N	N*
	Tenant supply chain emissions	Tenant Scope 3	3	N	N
	Landlord purchased capital goods & services (M&E & property management services)	Purchased goods and services	3	Y	Y

* Reporting only

Greenhouse Gas Emissions Boundaries (cont.)

Business Area	Sub-Area	Reporting Category	GHG Scope	BBP Framework	British Land Scope
Investments (Indirect Real Estate Holdings)	Landlord purchased energy (electricity & fuels)	Purchased electricity, heat and steam	1, 2 & 3	Y	Y
	Landlord refrigerants	Purchased goods and services	1	Y	Y
	Landlord purchased water	Purchased goods & services	3	Y	Y
	Landlord managed operational waste	Waste generated in operations	3	Y	Y
	Tenant purchased energy (electricity & fuels)	Downstream leased assets	3	Y	Y
	Tenant refrigerants	Tenant Scope 3	3	N	N
	Tenant purchased water	Tenant Scope 3	3	N	N
	Tenant managed operational waste	Tenant Scope 3	3	N	N
	Tenant / visitor transport emissions	Tenant Scope 3	3	N	N
	Tenant supply chain emissions	Tenant Scope 3	3	N	N
	Landlord purchased capital goods & services (M&E & property management services)	Purchased goods and services	3	Y	Y
Development	New development (including those where funding is being provided)	Purchased Goods & Services	3	Y	Y
	Refurbishments	Purchased Goods & Services	3	Y	Y
	Fit-out (landlord controlled)	Purchased Goods & Services	3	Y	Y
	Fit-out (tenant controlled)	Tenant Scope 3	3	Y	Y
	End of life	End of life treatment of sold products	3	N	Y

Delivery strategy

Topic	Aims	Delivery Strategy and Key Steps	Reporting Metrics
Corporate and Governance	Accountability	Cascade the Net Zero targets into the objectives of the Executive Committee	→ Annual Report and Accounts → Sustainability Accounts
	Align Net Zero Carbon targets with climate science	Secure approval from the Science-Based Targets initiative that our Net Zero Carbon targets are aligned with the 1.5°C trajectory required by SBTi	
		Regularly review whether climate targets are still appropriate for the portfolio and Net Zero carbon trajectory (e.g. at 3, 5 and 8 years)	
	Capacity building	Include Net Zero Carbon training into company CPD training programme	
Embodied Carbon in Construction	50% improvement in embodied CO ₂ e per sqm in construction by 2030	Conduct whole life carbon assessments for all new developments, refurbishments and Cat A fit-outs	Embodied carbon intensity (kgCO ₂ e per sqm)
		Establish an internal carbon price for investment decisions	
		Pilot innovative uses of low-carbon materials to minimise embodied carbon	
		Consider the use of REGO-backed power on developments	
Embodied Carbon In Use	50% improvement in 'in use' embodied CO ₂ e per sqm from new developments by 2030	Implement software or tool to track embodied carbon which will be embedded in existing procurement and/or maintenance systems	Embodied carbon intensity (kgCO ₂ e per sqm)
		Train all property managers and other relevant staff to log embodied carbon in-use when equipment and furnishing is replaced	

Delivery strategy (cont.)

Topic	Aims	Delivery Strategy and Key Steps	Reporting Metrics
Operational Carbon	75% improvement in whole building carbon intensity by 2030	Develop a Net Zero Carbon readiness checklist / building survey scope of work to be used during pre-acquisition due diligence process	Whole building energy intensity (kWh _{eq} per sqm) Whole building carbon intensity (tCO ₂ e per sqm)
		Aligning future office developments with the NABERS Design for Performance approach	
		Establish process for conducting post-occupancy assessments of NABERS Design for Performance	
		Supplement our existing knowledge with detailed energy audits of standing assets to specify asset-specific paths to net zero in operation	
		Launch an internal carbon price and Transition Vehicle, which will fund retrofit projects	
		Work with key customers to develop joint energy efficiency action plans, and more broadly develop an customer engagement programme on Net Zero	
		Develop a sustainable operations charter for each building, a framework specifying how the building will be managed sustainably and the commitments requested from customers as part of this	
		Develop energy and carbon lease clauses (or related agreements) with legal advisors and communicate clauses with asset management and leasing teams	
		Integrate energy and carbon clauses into new and renewed leases (or related agreements) accompanied by explanatory material. This should include access to energy data where procured directly by tenants	
		For retail assets, install AMRs or equivalent monitoring technology at main incoming and sub-metering for tenanted areas, ideally for each retail tenant. Where monitoring technology are not yet installed, site leads should take regular meter readings	
On-site generation Renewables procurement		Implement new data management processes and a system which can automatically collect energy data (including tenant data) from suppliers	→ MWh of on-site generation → Location and market-based emissions (tCO ₂ e)
		Identify key Net Zero Carbon criteria to be used during the procurement of goods and services from contractor	
		Incorporate Net Zero Carbon KPIs and objectives into all new supplier contracts, which are contractually binding and against which they will be monitored	
		Conduct in-depth renewable feasibility studies for assets with high renewable potential according to past analysis	
		Investigate the potential for PPA-style agreements with a UK-based renewable energy generator. Continue to source 100% REGO-backed power, and where possible source RGGO-backed gas.	

Delivery strategy (cont.)

Topic	Aims	Delivery Strategy and Key Steps	Reporting Metrics
Offsetting	All new developments to be Net Zero Carbon from April 2020.	Launch offsetting strategy in line with the offset criteria of the BBP and the UKGBC	Total emissions offset (tCO ₂ e)
		From April 2020, offset 100% of embodied carbon from construction and major refurbishment projects (RICS A1-A5)	
Third-party verification	Formal third-party assurance of our progress against targets	Net Zero Carbon targets will undergo third-party assurance annually against the ISAE3000 standard	Independent Assurance Report
		Following practical completion, our developments will undergo third-party assurance to validate their achievement of 'net zero carbon – construction' against the UKGBC Net Zero Buildings framework	

Glossary

BBP

The Better Buildings Partnership is a collaboration of the UK's leading commercial property owners who are working together to improve the sustainability of existing commercial building stock.

Circular economy

An approach to design and manufacturing which targets the minimisation of waste and raw material demand through material reuse, repair, refurbishment, remanufacturing, and recycling. In construction, a circular approach can include (i) reuse of the existing asset in its redevelopment, (ii) designing a new building for its eventual disassembly and the recoverability of its materials, and (iii) designing out waste from the construction process.

CO₂e

Carbon dioxide equivalent. Each greenhouse gas has its own global warming potential (GWP). The unit CO₂e allows the impact of any greenhouse gas (e.g. methane, HFCs) to be conveyed in terms of the carbon dioxide emissions with an equivalent impact.

Embodied Carbon (or A1 to A5)

Refers to embodied carbon in the construction materials and process. A1-A3 refers to The Product Stage, the sourcing of materials, transport to manufacturing plant and fabrication processes. A4-A5 refers to The Construction Stage, the transport from plan to site and on-site construction and installation including waste disposal. For further information, see the RICS guidance 'Whole life carbon assessment for the built environment', 1st ed, Nov 2017.

FRI leases

A Fully Repairing and Insuring (FRI) lease is a lease where the tenant bears responsibility for the maintenance and repair of the property.

NABERS UK (or Design for Performance)

A UK energy rating scheme for offices. With the NABERS UK scheme, developers will be able to use the Design for Performance process to target a NABERS Energy rating at the design stage of a new office development or refurbishment and verify performance when the building is occupied. NABERS UK is designed to address the existing performance gap between the design and in-use energy performance of offices in the UK.

Net zero carbon (NZC):

in real estate, NZC refers to: In construction, when the amount of greenhouse gas emissions associated with a building's product and construction stages up to practical completion is zero or negative, through the use of offsets or the net export of on-site renewable energy.

In operation, when the amount of carbon emissions associated with the building's operational energy on an annual basis is zero or negative. A net zero carbon building is highly energy efficient and powered from on-site and/or off-site renewable energy sources, with any remaining carbon balance offset.

Offsets

Refers to emission reductions / removals credits, a transferable instrument certified by governments or independent certification bodies to represent an emission reduction of one metric tonne of CO₂ or CO₂e. Any carbon offset credits bought must be 'retired' in a registry for the purchaser to claim the related reductions / removals towards their own GHG accounting.

Operational emissions

The total greenhouse gas emissions generated in running a building. This includes emissions from electricity and gas used to heat, cool and light the building, both in common areas and customer spaces.

PPA-style agreements

Power Purchase Agreement (PPA)-style agreements refer to renewable power from new renewable sources installed by or on behalf of British Land

REGO-backed electricity

Renewable Energy Guarantee of Origin (REGO) certificates are a tracking instrument which demonstrate that power supplied to an end consumer comes from a renewable source.

Renewable energy

The use of on- or off-site solar, wind, or geothermal power sources.

Science-Based Target initiative (SBTi)

The SBTi is a partnership between CDP, the United Nations Global Compact (UNGC), World Resources Institute (WRI) and the World Wide Fund for Nature (WWF). SBTi facilitates a third-party validation process which assesses whether corporate climate targets are in line with the emissions reductions required by climate science.

Scope 1 emissions

The organisation's direct greenhouse gas emissions resulting from the combustion of fuels and from fugitive emissions.

Scope 2 emissions

The indirect greenhouse gas emissions which result from the organisation's procurement of electricity, steam, heating, or cooling from a third-party.

Scope 3 emissions

The indirect greenhouse gas emissions which occur in an organisation's value chain, including emissions from its supply chain ('upstream') or its customers ('downstream').

UKGBC

The UK Green Building Council is a charitable organisation which campaigns for a sustainable built environment.

Whole life carbon

The total embodied and operational emissions that occur over the lifetime of a building. In the RICS guidance, this is structured into stages A1-A5 (Product and Construction Process stages), B1-B7 (Use stage), and C1-C4 (End of Life stage).

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