



Net Zero Carbon Roadmap

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Introducing Places for London

For 160 years, Transport for London (TfL) has kept London moving. It has been one of the city's biggest innovators; an inventive creator and creative designer.

Places for London is financially independent property company. We are here to unlock more of the potential of TfL land, creating a greener, kinder and more connected London for everyone.

With 5,700 acres and £1.7bn of assets, stretching across almost every borough, TfL is already one of London's largest landowners. At Places for London, we're on a mission to help it become one of the most impactful too.

5,700 acres

TfL owns 1.5% of London's land mass

50%

Affordable homes across portfolio

850

Railway arches

3,000+

People with a job in construction having attended a course at one of our Skills Hubs

5,838

New homes completed or under construction

1,000

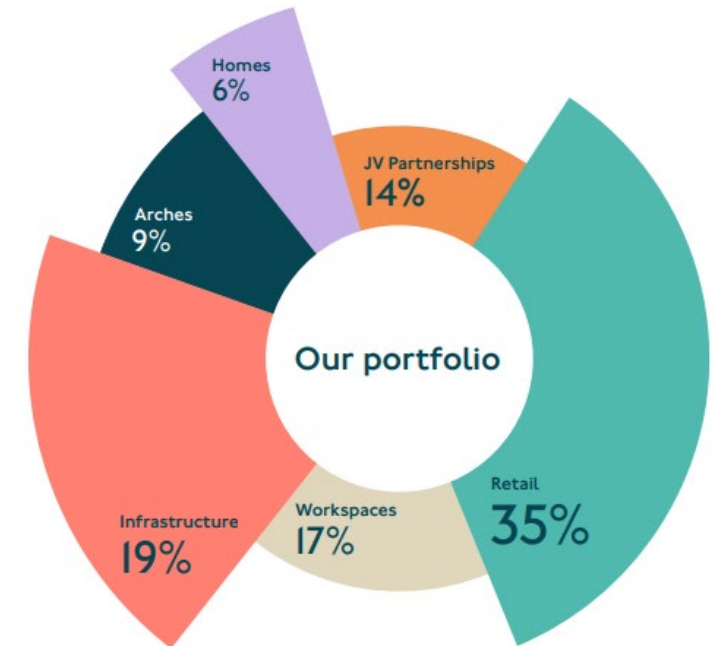
Retail units

95%

Small and Medium Enterprises on estate

GRESB 5*

Global Real Estate Sustainability Benchmark





Net Zero Carbon Roadmap

Places for London is pleased to present this latest update to our Roadmap.

Great progress has been made with significant time and effort dedicated to refining our carbon emissions baseline, providing a solid foundation for testing potential targets that benefit our customers, London, and wider UK.

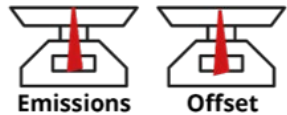
Our baseline has been updated using a combination of more comprehensive measured data and improved estimates for Scope 1, 2 & 3. Our Scope 3 constitutes over 95% of our total emissions and is primarily comprised of customer utility emissions, calculated using actual energy usage data, available Energy Performance Certificates (EPCs) from 2021, and best-practice estimation methodologies provided by our consultancy teams.

Within Greater London, our portfolio consists of approximately 3,000 properties, including 850 railway arches and 700 tenancies in underground stations – many of which are listed buildings or directly interface with operational railways. This unique asset base presents complexities that make direct comparisons with peers and other property types challenging. We also recognise the limitations in the quality of our current data and estimations.

An ongoing key action outlined in our Roadmaps is to enhance data collection from our customers to improve the accuracy of our baseline. This iterative approach is enabling us to refine our commitments over time and ensure they remain robust and actionable.

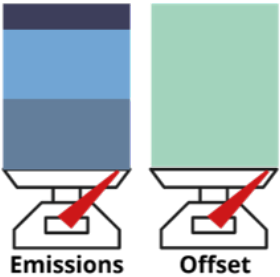
The pilot version of the Net Zero Carbon Building Standard (NZCBS) defines the requirements for buildings in the UK to be Net Zero Carbon. Although work continues to develop a finalised version, we have started to integrate the EUI and embodied carbon limits for new and existing buildings that are outlined in this document into our embodied and operational targets.

Places for London Definitions of Net Zero



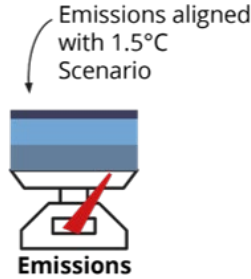
Absolute Zero Carbon

Eliminating all carbon emissions without the use of offsets.



Carbon Neutral

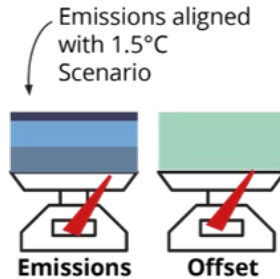
Balancing carbon emissions with offsets.



1.5°C Aligned

A 1.5°C-aligned asset is one that **complies with EUI* and embodied carbon thresholds**, ensuring its carbon emissions are consistent with the **global climate target** of limiting temperature rise to no more than 1.5°C.

Our main Commitment



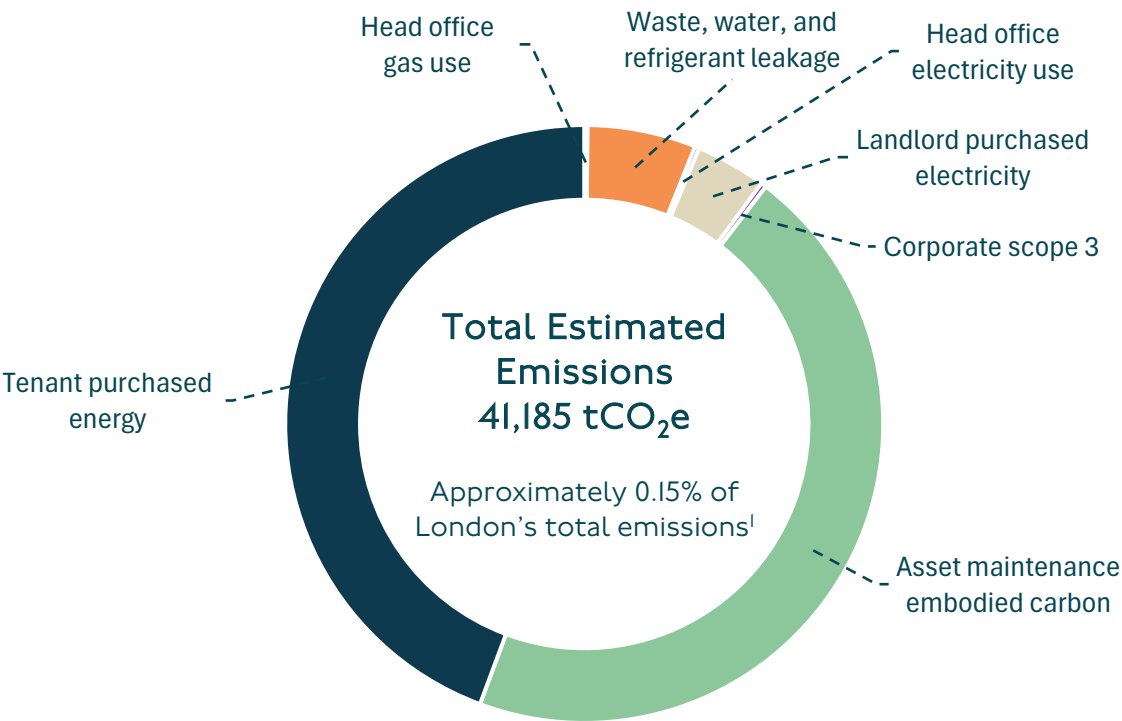
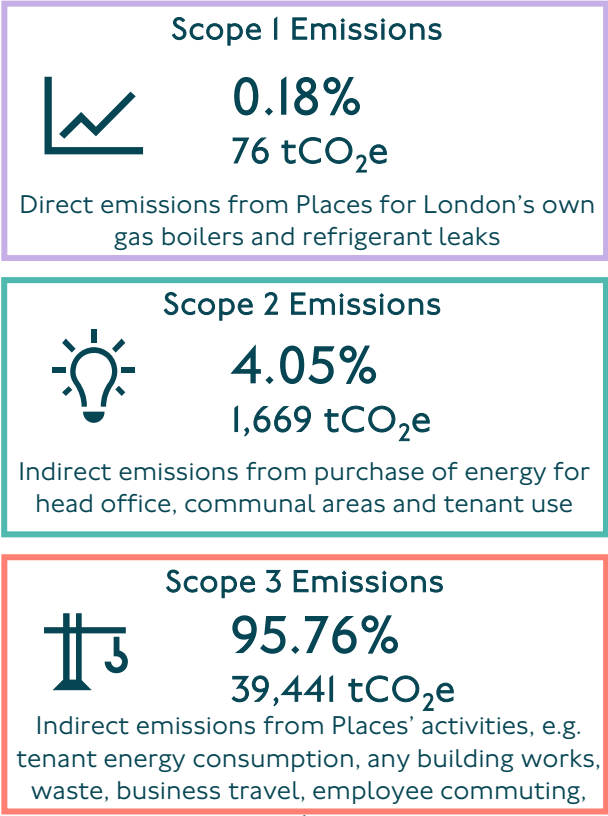
Net Zero (Whole Life) Carbon

A Net Zero (Whole Life) Carbon-aligned asset is one in which the total carbon emissions, including both **operational and embodied emissions**, are minimised throughout the asset's lifecycle to **meet EUI and embodied carbon limits**. Any **residual emissions are offset**, resulting in a net zero carbon footprint.

*Energy Use Intensity (EUI) = The energy use in a building per m² over a year, including regulated (i.e. domestic hot water, heating & cooling, lighting, and ventilation) and unregulated loads (e.g. lifts, fridges, computers). It is a measure of the building's performance and therefore includes all energy supplied to the building, whether from the grid or on-site systems.







Places for London Carbon Footprint FY2022/23

Our updated analysis includes calculating our carbon footprint for **FY2022/23**, in line with TfL's **SBTi target baseline year**. Given that this is before our **10-year growth plan** gets underway which will significantly change our estate, the estate will broadly be the same in 2021 and FY2022/23 and allows **reasonable comparisons** to be drawn between these two years.



¹ Source: GLA data for 2022. <https://data.london.gov.uk/dataset/leggi>

Places for London Carbon Footprint FY2022/23

2021	FY2022/23	Change
<div><div>Scope I Emissions</div><div><div><div>0.67%</div><div>415 tCO₂e</div></div><div>Direct emissions from Places for London's own gas boilers and refrigerant leaks</div></div></div>	<div><div>Scope I Emissions</div><div><div><div>0.18%</div><div>76 tCO₂e</div></div><div>Direct emissions from Places for London's own gas boilers and refrigerant leaks</div></div></div>	<div><ul style="list-style-type: none">Emissions related to landlord purchased gas are included in Scope 3 due to data granularity issues.</div>
<div><div>Scope 2 Emissions</div><div><div><div>4.36%</div><div>2,691 tCO₂e</div></div><div>Indirect emissions from purchase of energy for head office, communal areas and tenant in-station use</div></div></div>	<div><div>Scope 2 Emissions</div><div><div><div>4.05%</div><div>1,669 tCO₂e</div></div><div>Indirect emissions from purchase of energy for head office, communal areas and tenant in-station use</div></div></div>	<div><ul style="list-style-type: none">Emissions associated with landlord purchased electricity are estimated using high-level assumptions based on the best available information for in-station retail assets.These estimates will be refined as more metering is installed and better information becomes available.</div>
<div><div>Scope 3 Emissions</div><div><div><div>94.97%</div><div>58,605 tCO₂e</div></div><div>Indirect emissions from Places' activities, e.g. tenant energy consumption, any building works, waste (Places & tenant), etc.</div></div></div>	<div><div>Scope 3 Emissions</div><div><div><div>95.76%</div><div>39,441 tCO₂e</div></div><div>Indirect emissions from Places' activities, e.g. tenant energy consumption, any building works, waste, business travel, employee commuting, etc.</div></div></div>	<div><ul style="list-style-type: none">Improved accuracy of EUI for current estate due to increased availability of metered energy data and inclusion of this.Increased embodied emissions for current estate (based on maintenance spend).Inclusion of corporate business travel and employee commuting.</div>

An Explanation of the Above Figures.....

Current Tenanted Estate

Our emissions baseline is predominantly made up of both operational and embodied emissions associated with the existing estate. Operational emissions are estimated by applying archetype-specific EUI values, derived from actual energy usage and EPC data, across the portfolio. Embodied emissions are estimated using annual maintenance expenditures and Environmentally Extended Input-Output modelling.

Property Development programme

In the FY22/23 period, no assets in the Property Development programme were completed, so associated emissions were zero in the baseline. Projections of embodied and operational emissions have been developed based on current development pipeline. These projections align with our 10-year growth strategy, enabling a forward-looking evaluation of future carbon impacts and alignment with TfL's Science Based Target initiative (SBTi) intensity targets.

Corporate Head Office emissions

Head Office emissions are calculated using actual utility and waste data, with refrigerant leakage estimated using best-practice guidelines. Business travel and employee commuting emissions are scaled using TfL data in proportion to the number of employees in our organisation.

Future baseline refinement

Over the coming years, the baseline will continue to be refined as more accurate property data and metered energy information becomes available. This iterative process will improve the precision of extrapolated EUI values across our estate and ensure that we have an increasingly reliable framework for emissions reporting.

Our Emerging Commitments

By **2030** achieving Net Zero Carbon for Scope 1 & 2 emissions, in line with TfL and GLA goals

By **2050** achieving Net Zero Carbon across the whole portfolio, in line with national targets

Below and right are proposed Net Zero commitments designed to support the achievement of our overall targets. We continue to assess the feasibility of these initiatives, which encompass all scopes of emissions: Property Development, Tenanted Estate, and Corporate Emissions.

Corporate Emissions (Head Office)



Developing a retrofit Plan in 2025



Net Zero Corporate Head Office emissions by 2027 (Scope 1 & 2)

Property Development



No Fossil fuels burnt onsite for buildings currently being planned



70
kWh/m²/yr



35
kWh/m²/yr



110
kWh/m²/yr



55
kWh/m²/yr

Good Practice and Leading Practice residential and commercial* energy limit for buildings with PC from 2030

650
kgCO₂/m²

300
kgCO₂/m²

750
kgCO₂/m²

350
kgCO₂/m²

Good Practice and Leading Practice upfront embodied carbon limit for buildings getting PC from 2030

Tenanted Estate

50%



Minimum reduction of carbon emissions by 2030



Identify a minimum of 20 assets to retrofit in a demonstrator programme by 2025

25%



Minimum energy consumption reduction by 2030



100% of energy metering of LU supplied Tenanted Estate by 2027, with data sharing for remaining assets by 2028



Every suitable property coming back from a lease with a gas supply will have it stripped out



Lowest EUI for each Sector, in line with the Net Zero Carbon Buildings Standard

*These commercial targets are for offices only. A small amount of industrial and retail space will be developed – the EUIs for these assets are outlined later in this roadmap.

Our Commitment to Scope 1 and 2 Emissions

Places for London commit to achieving a 90% reduction for Scope 1 and 2 emissions by **2030**. We will undertake the following actions:

- Ensure we are located in a NZC office by 2027.
- Undertaking an audit of landlord purchased energy, including a survey of assets to understand the areas served by landlord energy and monitoring energy use for those relevant properties.
- Retrofitting landlord systems so that they are optimised.
- Eliminating landlord gas usage.
- Increasing the procurement of renewable electricity.
- Evaluating potential offsetting strategies and ensuring that additionality criteria are met.
- Improving Places staff training and Carbon Literacy.



Existing Buildings: Target 1.5°C Aligned Net Zero Limits – Anticipated Targets

The pilot version of the NZCBS that defines the requirements for buildings in the UK to be NZC, was released in September 2024. We have used the NZCBS to set targets on the existing estate.

Existing Buildings	Energy Use Intensity kWh/m ² /yr		
	Current (estimated)		Post Deep Retrofit (no gas)
	Electricity	Gas	
Industrial (electric only)	21	-	n/a
Industrial (electric and gas)	31	-	n/a
Bus garage (electric only)	263	-	n/a
Bus garage (electric and gas)	97	-	n/a
Car park (electric and gas)	263	-	n/a
Residential (electric only)	105	-	45
Residential (electric and gas)	30	117	63
Arches (electric only)	64	-	46
Arches (electric and gas)	34	74	46
Office (electric only)	234	-	101
Office (electric and gas)	51	191	104
Retail Out of Station (electric only)	594	-	255
Retail Out of Station (electric and gas)	365	415	335
Retail In Station (electric only)	594	-	255
Other (electric only)	99	-	n/a
Other (electric and gas)	173	236	n/a

These EUI estimates are significantly more accurate than in previous years, as they incorporate actual metered data where available. We will continue to refine these estimates as more comprehensive data becomes accessible over time.

The post deep retrofit estimates remain high-level and are based on preliminary modelling conducted by our consultants. The retrofitting plans for certain asset types, such as industrial properties, remain uncertain. Consequently, their post deep retrofit EUI estimates have not been determined.

In 2025, we will undertake asset-level decarbonisation analysis to identify retrofit opportunities across our asset portfolio, further enhancing the precision of these estimates.

New Buildings: Target 1.5°C Aligned Net Zero Limits – Anticipated Operational Targets

The pilot version of the NZCBS that defines the requirements for buildings in the UK to be NZC, was released in September 2024.

We have submitted two Places for London projects to be used as case studies for the new standard.

New Buildings	SDF Good Practice - Energy Use Intensity kWh/m ² /yr
Residential	70 (SDF Good Practice)
Office	110 (SDF Good Practice)
Industrial	31 (Current EUI)
Retail	205 to 126 (NZCBS)*

New Buildings	SDF Leading Practice - Energy Use Intensity kWh/m ² /yr
Residential	35 (SDF Leading Practice)
Office	55 (SDF Leading Practice)
Industrial	31 (Current EUI)
Retail	205 to 126 (NZCBS)*

New Buildings	Current Performance - Energy Use Intensity kWh/m ² /yr
Residential	40 (Current performance)**
Office	55 (Current performance)***
Industrial	31 (Current EUI)
Retail	205 to 126 (NZCBS)*

Although there will be some industrial and retail space delivered as part of our growth strategy, growth will largely be driven by the delivery of new residential and office space.

The Sustainable Development Framework (SDF) is our ground-breaking set of key performance indicators that is helping us drive our new build programme to be the best it can be for London. By working with our joint venture partners, we are moving from our Good Practice targets (which already exceed many regulatory requirements) towards our Leading Practice targets to ensure we truly are making a positive difference.

*The EUI is reduced over time, in line with the NZCBS.

**Based on the weighted average of preliminary operational estimates for a selection of residential projects.

***Based on the commitment for our Platinum Portfolio projects.



New Buildings: Target 1.5°C Aligned Net Zero Limits – Anticipated Embodied Targets

The SDF already has challenged and changed how we deliver new build properties, including for embodied carbon.

To help share learnings, we have put forward two of our recently completed projects to the NZCBS pilot.

New Buildings	SDF Good Practice – Upfront Embodied Carbon limits kgCO ₂ /m ²
Residential	650
Commercial	750

New Buildings	SDF Leading Practice – Upfront Embodied Carbon limits kgCO ₂ /m ²
Residential	300
Commercial	350

New Buildings	Current Performance – Upfront Embodied Carbon limits kgCO ₂ /m ²
Residential	404*
Commercial	600**

*Based on the weighted average of our two completed residential projects (Blackhorse Road & Kidbrooke Station Square).

**Based on the commitment for our Platinum Portfolio projects.

Target 1.5°C Aligned Net Zero Limits – Cost Estimates

Presented to the right are preliminary high-level cost estimates for the potential emissions reduction pathways, as modelled by our consultants.

The asset-level decarbonisation and options analysis planned for 2025 is expected to further refine these estimates.

Retrofit option	Existing Buildings – Operational Emissions		
	Cost (£)	Cost (£/m ²)	Explanation
EPC B	259m	690	All properties light retrofitted by 2030.
Net Zero 1	361m	961	All properties deep retrofitted by 2044.
Net Zero 2	444m	1,183	All properties deep retrofitted by 2034.

Build option	New Buildings – Operational Emissions		
	Cost (£)	Cost (£/m ²)	Explanation
SDF Good Practice	N/A	N/A	Assumed that this cost already factored into decision making.
Current Performance	72m	28	Improved build standards compared to SDF Good Practice.
SDF Leading Practice	120m	46	Improved build standards compared to Current Performance.

Build option	New Buildings – Embodied Emissions		
	Cost (£)	Cost (£/m ²)	Explanation
Standard Industry Practice	2,098m	807	In line with GLA WLC business-as-usual.
SDF Good Practice	2,209m	849	In line with SDF GP residential and commercial targets.
SDF Leading Practice	2,267m	872	In line with SDF LP residential and commercial targets.

Retrofit option	Corporate Head Office		
	Cost (£)	Cost (£/m ²)	Explanation
Retrofit	2m	565	One retrofit option for Victoria Station House has been modelled at this point.

Net Zero Carbon portfolio – Stepping Stones



1. Measure



2. Eliminate fossil fuels



3. Reduce energy consumption



4. Onsite renewable and renewable procurement

1.5°C aligned



5. Offsets

Net Zero Carbon

- Measure the energy consumption of the existing estate and ensure that new buildings are fully metered
- Understand who pays for which part of the estate, including proportion of energy supplied by 100% Renewable Energy Guarantees of Origin (REGO) backed renewable tariffs
- Determine the landlord / tenant split of energy consumption
- Establish when we could implement green leases
- Determine the maintenance upgrade schedule
- Switch existing estate heating sources from gas to electricity
- Consider available low carbon alternatives, including air source heat pumps and direct electric heating
- Continue to implement the High Performance Buildings metric of the SDF
- Pilot projects that enable achievement of NZC commitments and targets
- Test, determine and implement a retrofit programme for the existing estate that is aligned with the planned maintenance programme and projects
- Incorporate low embodied carbon retrofit solutions
- Review available roof space and the feasibility of deploying onsite renewables
- Consider PPA and our commitment to REGO backed electricity
- Incorporate onsite renewable energy in all our new developments in accordance with planning permissions
- Offset emissions, including:
 - Upfront embodied carbon of property development
 - Embodied carbon associated with retrofitting the tenanted estate
 - In-use operational carbon associated with both the current estate and new development
 - Other emissions (refrigerant leakage, waste, water, business travel, employee commuting)

Roadmap Delivery Strategy – Property Development

Topic	Outcomes / Aims	Delivery / Management Strategy	Reporting Metrics
Upfront Embodied Carbon Measurement & Assessment	<ul style="list-style-type: none"> ● Reduce embodied carbon and target Sustainable Development Framework Leading Practice 	<ul style="list-style-type: none"> • Continue to undertake embodied carbon assessments on Property Development projects, pushing towards Leading Practice for SDF KPIs relating to both upfront Embodied Carbon Intensity and Reused and Recycled materials. • Continue to set contractually binding maximum upfront embodied carbon targets, including live material trackers to monitor actual material consumption, recycled content and EPDs on materials supplied to site. • Analyse external projects meeting very low embodied carbon targets to inform potential future strategies to reduce upfront embodied carbon. 	<ul style="list-style-type: none"> • Embodied Carbon Intensity – kgCO₂e/m²
Operational Carbon reductions (energy, water & waste)	<ul style="list-style-type: none"> ● Reduce operational carbon and target Sustainable Development Framework Leading Practice 	<ul style="list-style-type: none"> • Continue to target low EUI, pushing towards Leading Practice for SDF KPIs relating to Operational Energy Use. • Continue to set contractually binding maximum EUI targets. • EUI calculation of assessment of EUI on projects which predate the SDF. • Deliver Passivhaus certification on new West London Partnership projects which is aligned to SDF leading practice. 	<ul style="list-style-type: none"> • EUI – kWh/m²/year
	<ul style="list-style-type: none"> ● Energy Monitoring In-Use 	<ul style="list-style-type: none"> • Continue to adhere to the GLA Be Seen London Plan policy as per the existing SDF Be Seen Best Practices KPI. • Continue to set targets for NABERS UK on all commercial projects as per existing SDF KPI Be Seen. 	<ul style="list-style-type: none"> • Mandatory commitment made
Renewable Procurement	<ul style="list-style-type: none"> ● Incorporate 100% renewable procurement in future leases. 	<ul style="list-style-type: none"> • Continue to require all communal / landlord energy supply to be through a green tariff or Power Purchase Agreement (PPA) as per SDF KPI Green Energy. • Continue to target SDF KPI Green Energy Leading Practice for all commercial tenanted space to be supplied through a green tariff or PPA. • Continue to install bio-solar PV arrays to all usable roof space as per SDF KPI Bio-Solar Roof Area. 	<ul style="list-style-type: none"> • Renewable electricity procured: kWh/year. • % of renewable electricity procured

Roadmap Delivery Strategy – Tenanted Estate

Topic	Outcomes / Aims	Delivery / Management Strategy	Reporting Metrics
Improvement to measurement and baselining of carbon emissions	<div>●</div> Comprehensive survey of the estate	<ul style="list-style-type: none">Undertake a comprehensive survey of the estate that monitors their energy consumption, if they are metered, and what they are being used for. This should focus on understanding the energy consumption of Landlord areas, as they form part of Scope 2 emissions.	<ul style="list-style-type: none">% of estate surveyed
	<div>●</div> Developing a more comprehensive baseline	<p>The priority is to improve the quality of the baseline. To achieve this, we have undertaken the following steps:</p> <ul style="list-style-type: none">Obtained meter readings for all the properties for which data was available (using ElectraLink for electricity and Xoserve for gas).Calculated floor area for the assets with actual energy usage data.Estimated EUI for each property archetype.Used the EPC for archetypes that had less than 5 properties with meter readings.Used a weighted EUI of metered data 80% and EPC data 20% where coverage of meter readings was less than 50% of properties per archetype.Applied the EUIs across each asset archetype to generate a new baseline. <p>Further improvements to be made include the following:</p> <ul style="list-style-type: none">As more metered data becomes available, this will be fed into the calculated average for each archetype.Once an archetype reaches 50% of properties with measured data, the EPC input will be removed from the EUI weighting calculations. <p><u>Monitoring refrigerant leakage:</u> Add this to the tenant compliance programme to ensure types of refrigerant and leakage rates are recorded.</p> <p><u>Monitoring water and waste:</u> The properties identified above should disclose their water meter readings and produce waste transfer notes for different waste streams.</p>	<ul style="list-style-type: none">Updating the baseline according to more detailed and robust data
	<div>●</div> Data monitoring	<ul style="list-style-type: none">Develop a programme of rolling out sub-metering for all tenants using station supplies.Share data with tenants to assist them with reducing their emissions.Engage tenants to encourage requests for smart meters from energy suppliers and novate Places as the appropriate third party to receive the data.	<ul style="list-style-type: none">Robust monitoring data received

- Immediate actions
- Mid-term Action 6-12m
- Long-term Action 12m +

Roadmap Delivery Strategy – Tenanted Estate

Topic	Outcomes / Aims	Delivery / Management Strategy	Reporting Metrics
Operational Carbon reductions (energy, water & waste)	<div></div> Retrofit delivery mechanisms to be explored	<ul style="list-style-type: none">Consider a range of possible retrofit delivery mechanisms, including a joint approach with Energy Performance Contracts, e.g. GLA Retrofit Accelerator and other frameworks.	<ul style="list-style-type: none">N/A
	<div></div> Demonstrator Projects	<ul style="list-style-type: none">Continue to undertake demonstrator projects on a representative sample of properties - half that are taken to NZC retrofit in one step, and half that are first upgraded to EPC B and then to NZC retrofit approximately 10 years later.Share a comprehensive list of lessons learned.	<ul style="list-style-type: none">% of pilot projects implemented
	<div></div> MEES compliance (EPC B) delivery plan	<ul style="list-style-type: none">Develop a delivery plan with regards to how to phase the estate to EPC B, including planning how to break up the estate into phases and what buildings are in the first three phases.Consider how a stepped retrofit can be integrated into a wider plan to get to NZC retrofit.Establish prioritised programme.Ensure prelims, set up, mobilisation, method statements, permits, etc. are all complete or factor in the opportunity cost.	<ul style="list-style-type: none">Development of a delivery plan
	<div></div> Net Zero Retrofit	<ul style="list-style-type: none">Introduce a phased roll-out of the retrofit programme, ensuring that it aligns to planned maintenance regime and projects.	<ul style="list-style-type: none">% of retrofit projects rolled out% of retrofit projects meeting targets
Carbon associated with capital goods, services, and capital works	<div></div> Green lease clauses into all new tenancies & responsible procurement on new works and contracts	<ul style="list-style-type: none">Continue to introduce light touch green lease clauses into all new tenancies, particularly for those properties that are coming up for renewal.Consider how these light touch green clauses can be improved over time to include more stringent requirements.Ensure responsible procurement practices are included in tenders and contracts for all goods and services.	<ul style="list-style-type: none">% implemented

Roadmap Delivery Strategy – Corporate Estate

Topic	Outcomes / Aims	Delivery / Management Strategy	Reporting Metrics
Operational Carbon reductions (energy, water & waste)	<div></div> Develop a plan for our Corporate Head Office building	<ul style="list-style-type: none">Undertake high-level modelling of Victoria Station House, including the identification of retrofit opportunities, the potential energy and carbon reductions, and associated capital costs.Assess and determine the feasibility of reducing carbon emissions of Places for London's head office.	<ul style="list-style-type: none">Estimate kgCO2e/m² reductionEstimate kWh/m² reductionEstimate £/kgCO₂e reduction
	<div></div> Develop a detailed plan for our Corporate Head Office building	<ul style="list-style-type: none">Develop a detailed implementation plan for our head office that builds on the high-level modelling outputs.	<ul style="list-style-type: none">Refine kgCO2e/m² reduction estimateRefine kWh/m² reduction estimateRefine £/kgCO₂e reduction estimate
	<div></div> Implement the plan for our Corporate Head Office building	<ul style="list-style-type: none">Implement the decarbonisation plan in partnership with TfL using a suitable delivery vehicle.	<ul style="list-style-type: none">Measure kWh/m² reduction
	<div></div> Carry out an audit of landlord purchased energy	<ul style="list-style-type: none">Carry out an audit of landlord purchased energy use, including a survey of assets to understand the areas of landlord purchased energy use and their respective energy usage.Transition to 100% green tariff energy.Eliminate gas usage.	<ul style="list-style-type: none">Audit results% of green electricity procured

Roadmap Investment Boundary

We have assets located across the Greater London area. Net Zero targets have been identified for all assets for which we have or could have operational control. These investment boundaries will be reviewed as the roadmap continues to be updated.

Criteria	Inclusions	Exclusions	Explanation
Operational Control	<ul style="list-style-type: none"> Tenanted Estate– existing stock of properties, including assets let to third parties - 368,956 m². Property Development programme – new build residential or commercial stock, including Joint Ventures (mostly) based on 49% ownership. Places for London Head Office. 		<ul style="list-style-type: none"> Two PD sites have a different JV ownership structure which has been factored into our modelling.
Asset Classes	<ul style="list-style-type: none"> Arches Retail Out of Station Retail In Station Office Residential Industrial Bus garage Car park Other (that returned an ElectraLink value) 	<ul style="list-style-type: none"> Other (those properties that did not return an ElectraLink value). Suspected vacant properties, i.e. defined as vacant in the property schedule and returned no ElectraLink value. 	<ul style="list-style-type: none"> Assets classed as 'Other' are predominantly land-based and therefore not associated with emissions. Vacant properties are associated with no operational emissions and therefore should not be included the archetype specific floor area that is used to scale up EUI.
Property Development - Joint Ventures	<ul style="list-style-type: none"> Approximately 20,000 homes and 500,000 m² of commercial space developed from 2022-2035. Assumption that we (mostly) account for 49% of operational and upfront embodied carbon emissions. 	<ul style="list-style-type: none"> Refrigerants, water and waste emissions are not included in operational emissions. End of life emissions. 	<ul style="list-style-type: none"> Limited information regarding emissions for refrigerants, waste and water for new space. Limited information on which assets will be sold. It is anticipated that there will be a 49% equity stake for all residential and commercial sites (except for two PD sites that have had a different proportion confirmed).
Landlord and Tenanted Spaces	<ul style="list-style-type: none"> Landlord and tenant operational carbon (current split is based on high-level estimates that will be refined over time). Refrigerants related to heating and cooling, water and waste (for the current estate). Embodied carbon of asset maintenance retrofit measures relating to fabric and systems (including retrofit and regular asset maintenance). 	<ul style="list-style-type: none"> Tenant refrigerant leakage – process loads. 	<ul style="list-style-type: none"> There is currently limited information with regards to the split of spend between regular asset maintenance and that which is related to retrofit.
Physical boundary Net Zero Carbon Roadmap	<ul style="list-style-type: none"> Gross internal area. 	<ul style="list-style-type: none"> Outdoor spaces, such as gardens. 	<ul style="list-style-type: none"> These areas are associated with no operational emissions and therefore should not be included the archetype specific floor area that is used to scale up EUI.

Roadmap Carbon Scope Table & GHG Protocol Alignment

Business Area	Sub-area	GHG Protocol Reporting Category	Carbon Scope	BBP Framework	Places for London
Corporate	Head office energy use	Company facilities	1 & 2	✗	✓
	Company vehicles	Company vehicles	1	✗	✗
	Business travel (excluding commuting)	Business travel	3	✗	✓
	Purchased goods and services	Purchased goods & services	3	✗	✗
	Operational waste generated	Waste generated in operations	3	✗	✓
	Operational water use	Purchased goods & services	3	✗	✓
	Employee commuting	Employee commuting	3	✗	✓
	Head office refrigerant leakage	Company facilities	1	✗	✓
Direct Real Estate Holdings (including JVs with management control) - 'Tenanted estate'	Landlord purchased energy (electricity & fuels)	Purchased electricity, heat and steam	1 & 2	✓	✓
	Tenant purchased energy (electricity & fuels)	Downstream leased assets	3	✓	✓
	Landlord refrigerants	Purchased goods & services	1	✓	✓
	Tenant refrigerants	Tenant Scope 3	3	✗	✓*
	Landlord purchased water	Purchased goods & services	3	✓	✓
	Tenant purchased water	Tenant Scope 3	3	✗	✓
	Landlord managed operational waste	Waste generated in operations	3	✓	✓
	Tenant managed operational waste	Tenant Scope 3	3	✗	✓
	Tenant transport emissions	Tenant Scope 3	3	✗	✗
	Tenant supply chain emissions	Tenant Scope 3	3	✗	✗
	Landlord purchased capital goods & Services (M&E property management services)	Purchased goods & services	3	✓	✓
Net Zero Carbon Roadmap					

Business Area	Sub-area	GHG Protocol Reporting Category	Carbon Scope	BBP Framework	Places for London
Investments (Indirect Real Estate Holdings)	Landlord purchased energy (electricity & fuels)	Investments (proportional to the investment)	3	✓	N/A
	Tenant purchased energy (electricity & fuels)	Investments (proportional to the investment)	3	✓	N/A
	Landlord refrigerants	Investments (proportional to the investment)	3	✓	N/A
	Tenant refrigerants	Tenant Scope 3	3	✗	N/A
	Landlord purchased water	Investments (proportional to the investment)	3	✓	N/A
	Tenant purchased water	Tenant Scope 3	3	✗	N/A
	Landlord managed operational waste	Investments (proportional to the investment)	3	✓	N/A
	Tenant managed operational waste	Tenant Scope 3	3	✗	N/A
	Visitors transport emissions	Tenant Scope 3	3	✗	N/A
	Tenant supply chain emissions	Tenant Scope 3	3	✗	N/A
Property Development	Landlord purchased capital goods & Services (M&E property management services)	Purchased goods & services	3	✓	N/A
	New development (including those where funding is being provided)	Purchased goods & services	3	✓	✓
	Refurbishments	Purchased goods & services	3	✓	✓
	Fit-out (landlord controlled)	Purchased goods & services	3	✓	✓
	Fit-out (tenant controlled)	Tenant Scope 3	3	✓	✓
	End of life	End of life treatment of sold products	3	✗	✗
December 2024					

Next steps...

Detailed decarbonisation modelling

We are developing our NZC roadmap delivery strategy for our tenanted estate, property development pipeline, and corporate head office. The key next step is to work with our chosen consultants to:

- Undertake asset-level decarbonisation modelling;
- Analyse the options available from both an emissions and cost perspective; and
- Develop an associated investment plan off the back of these analyses.

Integration with the Strategic Impact Framework

Our decarbonisation work will be integrated into the wider Strategic Impact Framework (SIF) workstream that is being undertaken. The SIF is designed to enable us to demonstrate to our stakeholders the range of economic, social, and environmental value that we create, of which GHG emissions is one piece.

Development of an internal carbon price

We are considering how setting an internal carbon price (ICP) would enable us to advance our decarbonisation objectives. Determining the appropriate price level, however, involves complex considerations, including methodologies such as the social cost of carbon and the opportunity cost approach. If we consider this will be effective in supporting our drive to net zero, any approach would require regular updates to ensure its continued relevance and effectiveness.



Thank you

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