

TfL Commercial Development

Better Buildings Partnership Climate Change Commitment

Net Zero Carbon Pathway

DATE: 22nd December 2020

Version: 6

Introduction

This document sets out TfL Commercial Development's initial Net Zero Carbon (NZC) Pathway for publication on the Better Building Partnership's (BBP's) website prior to the end of 2020.

1. Net Zero Carbon Target date

In the current financial climate TfL Commercial Development (TfL CD) can only commit to the legal minimum of a NZC target date of 2050. However, this may change over time depending on Mayoral objectives and a long-term funding deal with central Government. The work we will be doing to assess NZC delivery costs will also compare the cost differential from 2050 to 2030, as well as options for offsetting should TfL wish to use that route to meet an earlier target date instead.

2. Investment Boundary

TfL CD manages TfL's current property estate and new development opportunities. However, there are also elements of operational property, such as London Underground depots, Bus garages and retail tenancies in stations that blur the boundary between TfL CD and the wider operational businesses. Therefore, the initial pathway covers the following areas which TfL CD have sole responsibility (albeit coupled with private tenants in most cases):

- Property Development, (ie new build including Joint Ventures based on proportional ownership, which are mainly residential properties with some level of mixed use / offices), circa 1,660,000m² across 64 developments in the next 10 years, including 390,000m² of TfL apportioned Joint Ventures;
- Property Management (ie existing stock of commercially leased out properties, including Arches, Light Industrial, Off Station Retail, High Street shops, Arcades, Offices, Night Clubs, Pubs & Bars, Other Leisure and Residential), circa 385,000m² across 2,300 tenant units;
- Head Offices, (including buildings sub-leased to non-TfL tenants), circa 150,000m² across 27 sites.

Over the next 5 years we will work with the wider TfL Environment & Operations teams on their delivery strategies for NZC for the following operational crossover areas within TfL:

- Operational Property (such as London Underground Depots & Bus garages), circa 600,000m² across 1,300 buildings;
- In Station Retail, circa 15,000m² across 400 tenant units.



3. Carbon Emissions Boundaries

In line with Table I from the BBP's NZC Pathway Framework, we will aim to monitor, report and target NZC for the following carbon emissions within our investment boundary:

Activities which generate GHG emissions for real estate investment (directly or indirectly)	Activities controlled and managed by TfL*	Activities controlled and managed by tenants	TfL Head Offices (including sub-tenants) •
Energy to operate buildings (electricity, fuels & heat networks)	✓	✓	✓
Water to operate buildings	✓		✓
Waste generated during operation	✓		✓
Refrigerants (Fugitive emissions)	✓		✓
Purchase of goods and services (M&E & property management services)**	✓		✓
Business travel (excluding that associated with development works)			Covered by central TfL Annual SHE reporting
New development works	✓	✓	✓
Refurbishment works	✓	✓	✓
Fit-out Works	✓	✓	✓
End of life ***			

* All joint ventures will be covered on a proportional share of ownership basis.

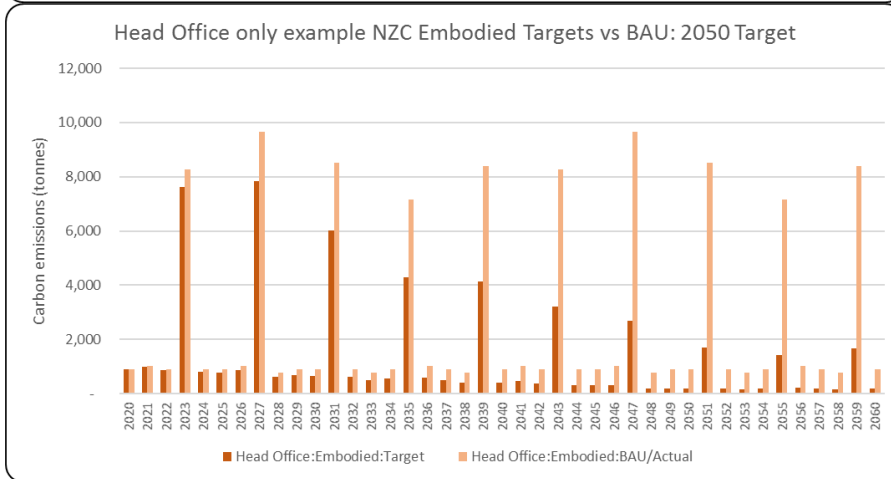
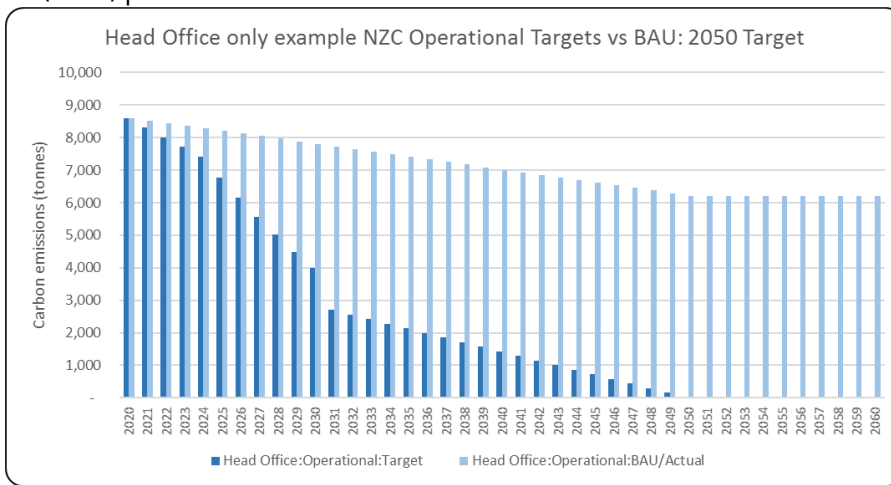
** This relates to services procured by TfL to service and maintain the space e.g. property management, service charge recoverable items and minor CapEx items e.g. minor replacements.

*** End of life carbon has not been included within the scope of the BBP Climate Change Commitment due to lack of industry consensus on how it should be accounted for. As industry understanding improves and an agreed approach adopted, this position will be reviewed.

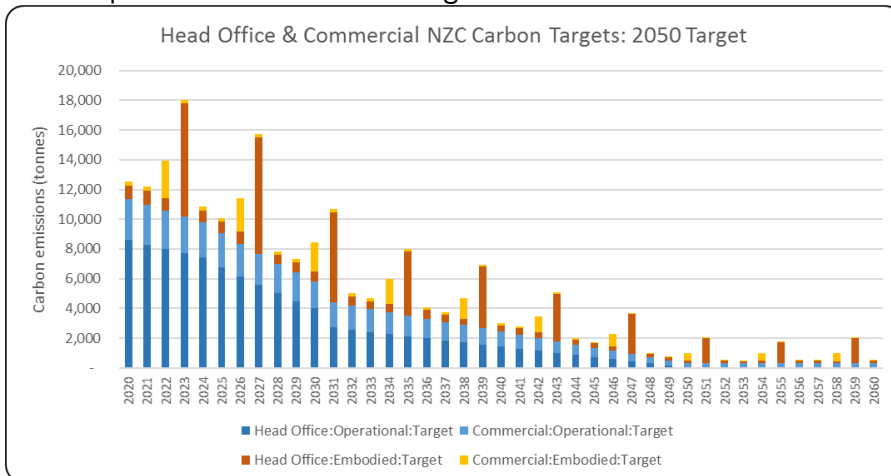
• Corporate emissions are not included within the scope as the focus of the BBP Climate Change Commitment is focused on Signatories' real estate investments. It is also likely these emissions are not significantly material. However, TfL has voluntarily elected to include them in our target scope.

More BBP framework details on the required carbon emission scope are provided in Appendix I

An initial baseline model has been set up for Head Offices to attempt to understand both operational and embodied emissions and how they might be targeted to 2050 and compared to business as usual (BAU) performance:



From this, an assessment of potential offsetting costs has been made to compare the “do nothing” position of solely purchasing offsets (should they be available!) These initial cost assumptions suggest over £188m additional costs until 2060 compared to working towards NZC targets instead. This model now needs external support to verify assumptions and roll out to the whole of TfL CD to more fully understand our operational baseline and potential future embodied emissions (below is an initial combined operational & embodied target for Head Offices & Commercial office lettings):



4. Delivery Strategy

In line with Table 2 from the BBP’s NZC Pathway Framework (repeated in Appendix 2), the following provides our initial delivery strategy, which will be developed over the next 2 years, subject to a long-term funding agreement with central Government:

TOPIC	OUTCOMES / AIMS	DELIVERY / MANAGEMENT STRATEGY	REPORTING METRICS
Operational Carbon (energy, water & waste)	Reduce operational carbon from 2020 baseline to net zero levels in 2050 via removal of gas heating, and delivery of electricity efficiencies of 55kWh/m ² for commercial properties (or DEC B40 ratings), and 35kWh/m ² for residential properties.	Development work during 2021/22 will cover: <ul style="list-style-type: none"> - Finalising our current Sustainable Development Framework (SDF) for our new developments; - Carrying out a baseline assessment of the circa 2,700 existing assets to estimate current performance, and impact of Joint Ventures; - Developing a ‘Tenant engagement & data collection strategy’ to allow us to include their performance in our reporting; - Developing a ‘Measurement & monitoring strategy’ to enable us to record all consumption, verify the baseline estimate and report annually; - Developing an equivalent SDF for the management of our existing assets; - Developing energy, water, waste & carbon targets (for both existing buildings and major refurbishments/ new developments). 	Electricity, gas, oil, heat, coolth - kWh; Water - m ³ ; Waste – kg; Area - Gross Internal Area m ² ; Data Quality - Estimate/ Actual; kWh/m ² targets; tonnes CO ₂ e reported.
On-site generation	Although options are limited, on site renewables are to be maximised on new developments and options investigated for retrofitted renewables on existing assets.	Development work during 2021/22 will cover: <ul style="list-style-type: none"> - Reviewing potential solar PV studies already carried out in the last 3 years; - Developing a workable strategy for the installation of renewables across the existing freehold estate; - Ensuring SDF includes reviews of early design layouts & cladding material choices in new developments to ensure opportunities for embedded renewables are taken. 	kWh generated renewable energy (electricity and heat); kW Peak capacity installed.
Renewables Procurement	Procure a PPA to cover at least 60% of all Tfl electrical demand by 2030 with “better than REGO” renewable energy tariffs for remaining demand.	Development work during 2021/22 will cover: <ul style="list-style-type: none"> - Supporting central Tfl procurement team with initial PPA roll out to ensure sufficient capacity is procured for Tfl CD sites; - Developing a strategy for encouraging renewable tariffs where tenants procure their own supplies, either through Tfl’s own PPA or through green leases requiring tenants to commit to their own renewable energy procurement. 	% of electricity consumption supplied from PPA tariff; % of electricity consumption supplied by “better than REGO” tariff; % of total tenant kWh supplied by renewable tariffs.

TOPIC	OUTCOMES / AIMS	DELIVERY / MANAGEMENT STRATEGY	REPORTING METRICS
Embodied carbon associated with capital goods, services, and capital works e.g. management, maintenance, fit-outs, refurbishment and new development	Improve understanding of our embodied carbon baseline from new developments, through refurbishments and down to the products purchased for the Facilities Maintenance of existing assets. Set targets to improve and work with contractors to deliver against those targets	Development work during 2021/22 will cover: <ul style="list-style-type: none"> - Ensuring SDF covers both embodied carbon targets and reporting requirements, and projecting likely embodied carbon emissions from the current planned developments and Joint Ventures; - Assessing the baseline of FM & refurbishment embodied carbon throughout existing assets; - Developing a monitoring strategy and database for recording and reporting, using LETI guidance; - Embedding low embodied carbon requirements into Asset management and FM strategies; - Developing a strategy for recording and targeting tenant fit out / refurbishment embodied carbon impacts. 	kgCO ₂ /m ² targets; tonnes CO ₂ e reported; % of new developments reporting embodied carbon; % of existing assets reporting embodied carbon.
Offsetting	Realistically offsetting will be the only way to ameliorate our future embodied carbon emissions, and may also provide a route to meeting an earlier NZC target date	Development work during 2021/22 will cover: <ul style="list-style-type: none"> - Engaging with offsetting providers to understand the most cost effective & carbon reducing approach to verified offsetting; - Utilising an internal cost of carbon in all new build and refurbishment planning to ensure that best value decisions are made to achieve NZC by 2050 - Reviewing the estimated baseline for operational & embodied carbon along with targets to 2050; - Developing a reporting tool that enables performance against NZC reduction targets to be assessed each year and projected at least 5 years in to the future. This will identify any early offsetting required to ensure we stay on our target pathway; - Gaining financial sign off to procure the reporting tool's projected offsetting requirements; - Investigating options for an internal transition fund (to improve existing assets) linked to the internal cost of carbon, in line with UKGBC guidance. 	tonnes CO ₂ e of verified offset emissions each year; % of residual carbon emissions offset
Third-party verification; industry standards and certification	Currently our head offices are assessed by the carbon trust standard scheme, while the whole of TfL CD is starting down the GRESB benchmarking journey. We would look to work with BBP partners to ascertain the most cost effective route to NZC third party verification.	Development work through to 2030 will cover: <ul style="list-style-type: none"> - Working with BBP partners to understand what third-party assurance & verification is available to audit performance against NZC targets; - Understanding what can be included in our current SDF support contracts and what requires additional external auditing. 	% of CO ₂ e emissions that have been audited by external verification schemes.

This document will be reviewed on an annual basis and updated to reflect the outputs from the detailed next phases of the work defined above.

Appendix 1 – BBP commitment carbon boundary scope details

Business Area	Sub-Area	GHG Protocol Reporting Category	Emissions Scope	Commitment Inclusion
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	●
Direct Real Estate Holdings (including JVs with management control)	Landlord purchased energy (electricity & fuels)	Purchased electricity, heat and steam	1, 2 & 3	✓
	Tenant purchased energy (electricity & fuels)	Downstream leased assets	3	✓
	Landlord refrigerants	Purchased goods and 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 and services	3	✓
Investments (Indirect Real Estate Holdings, e.g., where investments are managed by a third party such as JVs with no management control or investments in other real estate investment vehicles)*	Landlord purchased Energy (electricity & fuels)	Investments (proportional to the investment)	3	✓
	Tenant purchased energy (electricity & fuels)	Investments (proportional to the investment)	3	✓
	Landlord refrigerants	Investments (proportional to the investment)	3	✓

	Tenant refrigerants	Tenant Scope 3	3	
	Landlord purchased water	Investments (proportional to the investment)	3	✓
	Tenant purchased water	Tenant Scope 3	3	
	Landlord managed operational waste	Investments (proportional to the investment)	3	✓
	Tenant managed operational waste	Tenant Scope 3	3	
	Visitors 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 and services	3	✓
Development	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	***

● Corporate emissions are not included within the scope as the focus of the BBP Climate Change Commitment is on Signatories real estate investments. It is also likely these emissions are not significantly material. However, some Signatories may voluntarily elect to include them in their target scope.

* For indirect investments it is recommended that carbon emissions should be attributed as a % ownership of the investment.

** This relates to services procured by the landlord to service and maintain the space e.g. property management, service charge recoverable items and minor CapEx items e.g. minor replacements.

*** End of life carbon has not been included within the scope of the BBP Climate Change Commitment due to lack of industry consensus on how it should be accounted for. As industry understanding improves and an agreed approach adopted, this position will be reviewed.

Appendix 2 – BBP commitment delivery strategy requirements

Table 2

TOPIC	OUTCOMES / AIMS	DELIVERY / MANAGEMENT STRATEGY	REPORTING METRICS
Operational Carbon (energy, water & waste)	Desired outcomes in relation to improving operational carbon performance and efficiency across the portfolio.	<p>Commentary could cover:</p> <ul style="list-style-type: none"> - Acquisition strategy and processes. - Asset, property management & FM strategies. - Tenant engagement & data collection strategy. - Energy, water, waste & carbon targets (for existing building and major refurbishments/ new developments. - Measurement & monitoring strategy. 	
On-site generation	Desired outcomes in relation to installing on-site renewables.	<p>Commentary could cover:</p> <ul style="list-style-type: none"> - Strategy to identify on-site capability for the installation of renewables. - Delivery / roll-out strategy. 	
Renewables Procurement	Desired outcomes in relation to the procurement of renewable energy.	<p>Commentary could cover:</p> <ul style="list-style-type: none"> - Procurement strategy covering renewable energy tariffs, Power Purchase Agreements and considerations for additionality. - Strategy for encouraging renewable tariffs where tenants procure their own supplies. 	
Embodied carbon associated with capital goods, services, and capital works e.g. management, maintenance, fit-outs, refurbishment and new development	Desired outcomes in relation to measuring and reducing embodied carbon.	<p>Commentary could cover:</p> <ul style="list-style-type: none"> - Requirements for new development / refurbishment briefs. - Embodied carbon targets. - Measuring and monitoring strategy and commentary on calculation methodologies used. - Asset, property management and FM strategies. - Procurement strategy. - Strategy for capturing and managing tenant embodied carbon impacts. 	
Offsetting	Desired outcomes in relation to offsetting carbon emissions.	<p>Commentary could cover:</p> <ul style="list-style-type: none"> - Principles and approach to offsetting e.g. Type of project and locations; use of independent standards etc. - Proportion of carbon to be offset. - Development of an internal cost of carbon to support procurement decision making. 	
Third-party verification; industry standards and certification	Desired outcomes in relation to third party verification of quality assurance purposes, and the use of certification schemes & industry standards.	<p>Commentary could cover:</p> <ul style="list-style-type: none"> - Use of third-party assurance & verification to audit performance against the Net Zero Carbon Pathway. - Use of any certification scheme or industry standard. 	