Appendix J

Mayor's Consultation Budget 2023-2024
Climate Budget Measures (Funded)

ID	Climate Action Area	Climate Action	Description	Funding source	Year funding starts	Year funding ends	Lifetime cumulative CO2e savings,	Year emissions savings start	Average annual CO2e savings to 2030, tonnes	Co-benefits	KPI 2023-2024	Traffic light progress	Further information	Total Exp. 23-24 £'000	Total Exp. 24-25 £'000	Total Exp. 25-26 £'000	Capital/Revenue /Mixed	Total cash savings 23-24 £'000	Total cash savings 24-25 £'000	Total cash savings 25-26 £'000	Comments
		GLA: Mayor																			
GLA-A.1	Buildings	Energy monitoring system to baseline energy consumption for GLA building and identify relevant projects	Use data to explore with Retrofit Accelerator- Workplaces opportunities for further energy saving projects.	FM Budget	2023-2024	2025-2026	Enabler	Enabler	Enabler	N/A	Contract to be in place 3 months after practical completion of the fit-out project.	TBC	N/A	40	N/A	N/A	Mixed	N/A	N/A	N/A	
GLA-A.2	Buildings	Complete LED lighting project at City Hall	Some areas of City Hall were outside the scope of the refurbishment project carried out by ISG. This project will ensure the remaining areas at City Hall building are upgraded to the latest LED lighting. This will be done as a Capital project by the	FM Budget	2023-2024	2023-2024	76	2023-2024	10	N/A	Contractor appointed by end of December 2022. Works to be completed by April 2023.	TBC	N/A	200	N/A	N/A	Capital	TBC	TBC	TBC	Opex savings from less electricity demand for lighting
GLA-A.3	Buildings	Thermal comfort policy	To ensure heating and cooling of the city hall building is compliant with legislation but doesn't waste energy.	FM Budget	2023-2024	2023-2024	Enabler	2023-2024	Enabler	N/A	1st Draft to be ready for environment team to review by Jan 2023.	TBC	N/A	50	N/A	N/A	N/A	TBC	TBC	TBC	Opex savings from less electricity demand due to running building more efficiently
GLA-A.4	Buildings	Investigate pump optimisation and control at City Hall	City Hall building has approx. 40 pumps used for various operational aspects of the building. A detailed survey will be carried out to ensure the pumps are running efficently and to the manafactures recommondation following Practical Completion of the fit-out project.	FM Budget	2023-2024	2023-2024	Enabler	2023-2024	Enabler	N/A	To be completed 6 months after practical completion of the fit-out prject.	TBC	N/A	30	N/A	N/A	Capital	TBC	TBC	TBC	Opex savings from less electricity demand due to running pumps more efficiently
GLA-A.5	Buildings	City Hall mechanical vents refurbishment	Achieve design parameters of the building by allowing natural cooling of the building in summer months. This project was outside the scope of the refurbishment project carried out by ISG. This will be done as a Capital project by the GLA FM team.	FM Budget	2023-2024	2024	28	2023-2024	4	N/A	Proposal from contractors to be ready by March 2023. Project to be completed by December 2023.	TBC	N/A	600	N/A	N/A	Capital	N/A	TBC	TBC	Opex savings from less electricity demand due to avoided air conditioning in summer months
		GLAP																			
GLAP-A.1	Buildings and Infrastructure	Collate Portfolio Baseline Utility Data for Year End March 2022	Project commenced with Avison Young to capture exact usage data using their Alpha Energy consultant across the GLAP portfolio	Mayor / GLAP	2022-2023	N/A	TBC	2023-2024	0	1. Creation of reference point 2. Ability to track and measure future emissions 3. Ability to measure reductions and rapidly adjust approach accordingly 4. Increased accuracy in financial budgeting 5. Identify redundant supplies 6. Identify energy management errors and equipment faults	Production of all quarterly reports and final year end data collation			N/A	N/A	N/A	Revenue	N/A	N/A	N/A	The Estates team and Avison Young have recently commenced this project therefore emissions saving targets are currently an initial estimate. Detailed data has begun to be compiled and has been agreed to be provided by Avison Young going forward on a quarterly basis.
GLAP-A.2	Buildings	Riverway Cottages	Analysis of the 10 Riverway Cottages that GLAP own to ascertain the benefits and costs related to switching from gas to alternative system such as heat pump. Undertake feasibility study.	Mayor	2023-2024	2023-2024	TBC	TBC	TBC		Complete report										This workstream is a combination of reviewing the current performance of the gas boilers in these properties and then assessing the impact any change to alternative energy sources would have. Funding for this assessment is within the GLAP Estates budget
GLAP-A.3	Buildings	Compressor House	Building has recently been returned to GLAP after being leased to a third party. Assessments are being undertaken on the building to understand what services could be improved.	Mayor	2023-2024	2023-2024	TBC	TBC	TBC	Reduced running costs	Complete report										Funding for this assessment is within the GLAP Estates budget
GLAP-A.4	Infrastructure	Lighting Infrastructure - Dagenham	GLAP are responsible for several kilometers of road in the Dagenham area. The lighting has been identified as old and this is currently being reviewed to ascertain if it can be improved at all and what the cost of replacing the lamps would be.	Mayor	2023-2024	2023-2024	TBC	TBC	TBC	Reduced running costs	Complete report										Funding for this assessment is within the GLAP Estates budget
		MOPAC																			
MOPAC-P.1	Buildings	Asset Replacements	The capital costs and benefits here are for our LED Lighting changes from 2012/22 to 2025-2026. Note however that the benefits herein are only recorded for non-defined projects	Borrowing and receipts	2021-2022	2025-2026	7,978	2022-2023	835		The KPI will measure performance against the year end capital spend target and flag any delay / reduction in the delivery of elements contributing to decarbonisation.	Green	N/A	6,640	6,640	3,320	Capital	1,127	1,447	1,057	The capital costs, totalling £16.6m, and benefits here are for our LED Lighting changes from 2012/22 to 2025-2026. Note however that the benefits herein are only recorded for non-defined projects. All defined projects (such as P10, P11, and P5DS proposed projects) include their LED benefits in those specific projects.
MOPAC-P.2	Buildings	Asset replacements, building fabric and heat decarbonisation	Recommended Impact Assessment modelled decarbonisation and energy efficiency measures, plus LED lighting.	Borrowing and receipts	2024-2025	2024-2025	4,362	2025-2026	334		The KPI will measure performance against the year end capital spend target and flag any delay / reduction in the delivery of elements contributing to decarbonisation.	Green	N/A			5,200	Capital	-	-	81	Decarbonisation benefits are taken from the Impact Assessment Model, including LED and lighting for these sites too. Line includes only 'in scope' works, as per approved OBC
MOPAC-P.3	Buildings	Asset replacements	LED lighting system, BMS, Heat Recovery, Boiler Replacement, Fans	Borrowing and receipts	2022-2023	2026-2027	3,808	2022-2023	327		The KPI will measure performance against the year end capital spend target and flag any delay / reduction in the delivery of elements contributing to decarbonisation.	Green	N/A	1,895	1,580	830	Capital	183	317	258	The Project Savings forecast provided by the programme refer to the Energy Strategy outputs. This project does not include full heat decarbonisation. These revenue benefits have been converted to kWh, to calculate the carbon emissions savings, and utility savings are recalculated using Impact Assessment utility price forecasts.
MOPAC-P.4	Buildings	Asset replacements, building fabric and heat decarbonisation	Recommended Impact Assessment modelled decarbonisation and energy efficiency measures, plus LED lighting.	Borrowing and receipts	2025-2026	2025-2026	2,041	2026-2027	159		The KPI will measure performance against the year end capital spend target and flag any delay / reduction in the delivery of elements contributing to decarbonisation.	Green	N/A			4,250	Capital	-	-	-	Decarbonisation benefits are taken from the Impact Assessment Model, including LED lighting savings. FBC
MOPAC-P.5	Buildings	Adjusting building occupancy and vacating buildings		TBC	N/A	N/A	68,430	2022-2023	2,202		The KPI will indicate any delay / reduction in the delivery of elements contributing to decarbonisation (vacating buildings)	Amber	N/A	-	-	-	Capital	839	1,096	759	Significant carbon and revenue benefits are delivered as a result of the Estate Transformation Programme. The revenue savings listed relate solely to the direct kWh utility savings used for the carbon emissions savings calculations. No capital changes from the programme are shown in this spreadsheet. The Estate Transformation programme is currently undergoing a review, which may adjust the building being sold. Any detrimental changes will have a direct effect on the carbon benefits shown (hence the Amber KPI status).
MOPAC-F.1	Transport	Fleet - Enabling Project (Tech)	Key enabling technology for achieving Met Zero compliance. Attached to a vehicle this technology will monitoring the health and location of a Met vehicle using GPS technology.	Borrowing and receipts	2020/21	2025-2026	Enabler	Enabler	Enabler	This will support the future deployment and charging strategies of the Met Fleet.	Project Odyn is a current Telematics Trail project with supplier. 100 Met vehicles installed and testing	tbc	tbc	500	500	500	Capital	N/A	N/A	N/A	A reduction in over all fleet size is expected due to optimisation, using the information this telematics project will provide
MOPAC-F.2	Transport / PSD	Installation of Estates EV charging infrastructure	Implementation programme for the installation of 600 additional vehicle electric charging points across the MPS estate. To support ULEZ fleet hybridisation.	Borrowing and receipts	2020/21	2025-2026	Enabler	Enabler	Enabler	Support the roll out of the planned hybridization and electrification of the Met general purpose fleet:	Additional charging points installed to match increase of hybrid vehicles on fleet	tbc	tbc	1,000	2,000	2,000	Capital	N/A	N/A	N/A	Charging infrastructure - support ULEZ vehicles only – includes feasibility study into MET estate charging capacity & requirements
		London Fire Commissioner									**London Fire Commissioner**										
LFC-A.1	Buildings	Building retrofit Cookers	Replace 40 gas powered cookers with Electric	Mayor	2022-2023	2023-2024	1,284	2023-2024	107		Carbon reduction	TBC	LFC-0641	160	N/A	N/A	Capital	N/A	N/A	N/A	Carbon reduction
LFC-A.2	Buildings	Building retrofit - ASHP	Replace 3 gas boiler with ASHP	LFC0256	2023-2024	2027-2028	360	2024-2025	30		Carbon reduction	TBC		1,000	N/A	N/A	Capital	N/A	N/A	N/A	Carbon reduction
LFC-A.3	Buildings	Building retrofit -SPV	Instal 4 Solar PV arrays	Mayor	2023-2024	2023-2024	132	2023-2024	11		Carbon reduction	TBC		300	N/A	N/A	Capital	N/A	N/A	N/A	Energy bill savings
LFC-A.4	Buildings	Building retrofit windows	Window replacement	LFC0354	2023-2024	2023-2024	1,500	2023-2024	360		Carbon reduction	TBC		4,415	N/A		Capital	TBC	247	247	
LFC-A.5	Buildings	Buildings retrofit	Appliance bay doors	LFC0353Y + LFC0354Y	2023-2024	2024-2025	22	2023-2024	15		Carbon reduction	TBC		1,200			Capital	TBC	TBC	TBC	
LFC-A.6	Buildings	Buildings retrofit	Appliance bay doors	LFC 0354	2024-2025	2025-2026	46	2024-2025	18		Carbon Reduction	TBC	LFC0354Y		2,600	N/A	Capital	TBC	TBC	TBC	
LFC-A.7	Buildings	Building retrofit windows	Window replacement	FWR	2024-2025	2025-2026	325	2025-2026	27		Carbon reduction	TBC		1,177	N/A		Capital	TBC	TBC	TBC	
LFC-A.8	Buildings	Building retrofit roofing	Roof replacement	AWP	2023-2024	2024-2025	1,170	2024-2025	390		Carbon reduction	TBC		916	916	N/A	Capital	TBC	TBC	TBC	Energy saving and carbon saving
LFC-A.9	Transport	Current Asset Replacement Programme	Replacement of hybrid pool cars to 50 electric vehicles	Mayor	2022-2023	2023-2024	1,185	2023-2024	237		Carbon reduction	TBC	LFC-0562	1,500	N/A	N/A	Capital	N/A	N/A	N/A	Carbon reduction
LFC-A.10	Transport	Current Asset Replacement Programme	Replacement of 2 driver training cars	Mayor	2023-2024	2024-2025	45	2023-2024	9		Carbon reduction	TBC		70	N/A	N/A	Capital	N/A	N/A	N/A	Carbon reduction
LFC-A.11	Behaviour Change	Carbon impact training	Carbon impact training for all LFB staff- following on from the LFB senior leader carbon literacy training	Internal staff rescouces	N/A	N/A	N/A	2023-2024	Enabler	Facilitate emissions reductions in other areas	Carbon reduction	TBC	TBC	N/A	N/A	N/A	Capital	N/A	N/A	N/A	Carbon impact training is an enabling measure and will facilitate emissions reductions in other areas
		TfL																			
TfL-A.1	Bus fleet	Zero emission vehicles	Zero emission fleet 2034	TfL	Ongoing	2033-34	3,408,169	Ongoing	102,929	Air quality.	TBC			6,532	18,509	27,811	Revenue	-	-	-	Carbon savings from transition of diesel fleet to zero emission.
TfL-A.2	Energy purchasing	Power Purchase Agreements	Renewables purchasing	TfL	Ongoing	TBC	330,896	2027-28	30,781		TBC			558	558			-	-	-	Assumed cost neutral to existing purchasing strategy. Carbon profile aligned to TfL's energy purchasing strategy.
TfL-A.3	Buildings	Building retrofit (all modes)	Removal of gas and energy efficiency	TfL	2023-2024	2030/31	254,365	2023-2024	6,617	Staff comfort, ambiance, air quality.	TBC			3,000	9,000	12,000		543	2,516	4,805	Savings from reduction in energy cost.
TfL-A.4	Vehicle fleet	Zero emission vehicles	Transition of support fleet	TfL	2023-24	2030-31	88,788	2023/25	1,704	Air quality.	TBC			500	1,500	1,000					Converts circa 1,000 cars and vans in TfL support fleet to zero emission. Does not cover circa 20 HGVs
TfL-A.5	Tube	Piccadilly line	Trains & associated line upgrades	TfL	Ongoing	2031-32	38,754	2023-24	3,293	Reliability, ambience.	TBC			479,000	698,000	632,000		6,305	7,232	6,932	Savings from reduction in energy cost. Improvements from regen braking and lighter rolling stock.
TfL-A.6	Solar	Private Wire project	3rd party delivered solar installs	TfL	Ongoing		6,240	2024-25	590	TBC	TBC			300	300	300		-	1,138	1,091	Savings from reduction in energy cost as a result of directly connected renewables contracted through a PPA.
TfL-A.7	Carbon training	Carbon literacy training	Roll out across TfL	TfL	Ongoing	N/A	N/A	N/A	N/A	Adaptation.	TBC			5	5	5	Revenue	N/A	N/A	N/A	Carbon literacy training is being rolled out across TfL, with priorities including senior staff, staff involved in project delivery, and commercial staff to meet the commitment in the Responsible Procurement Implementation Plan
TfL-A.8	Non building LEDs	Bus Shelter - Courtesy Lights and Advertising panels	Complete conversion	TBC	Ongoing	2024-2025	2,354	2023-2024	336	Maintainable assets / material replacement availability. Potential for reduced maintenance, investment helps to maintain advertising income				-	-	420	Capital	-	729	743	This project aims to retrofit LED lamps into Bus Shelter courtesy lights and advertising panels that currently utilise halogen & fluorescent lighting. As the sale of halogen & fluorescent lights are being phased out by August 2023 this will allow our revenue generating assets to continue to operate, but with a lower level of carbon emmissions, maintenance and energy requirements, leading to savings for TfL. The costs and the savings are based upon initial discussions with our maintenance contractors and advertising partner, and will be refined and amended as the project takes shape.
		LLDC																			
LLDC-A.1	Public Realm	Low Energy Lighting	Street Lighting Replacement luminaires for replacement across the Park and roadways	GLA	2023-2024	2023-2024	270	2023-2024	30	Energy Efficiency Annual energy savings • in MWh = 128/yr / GWh (electricity) • GJ/TJ (other energy savings)	Reduction in annual kWh (tbc) usage against basline	Green	Number of lights replcaed? Approximately 320 luminaires. How carbon is calculated? Refer to H2	210	-	-	Capital	6	13	13	
LLDC-A.2	Buildings	Energy Efficient water pumps	London Aquatics Centre – Pool circulation pumps replacement	GLA	2023-2024	2023-2024	510	2023-2024	51	Energy Efficiency Annual energy savings • in MWh = 208/ yr /GWh (electricity) • GJ/TJ (other energy savings)	Reduction in annual kWh (tbc) usage against basline	Green	-	475	-	-	Capital	35	77	77	
LLDC-A.3	Buildings	Low Energy Lighting	Copper Box Arena – Perimiter, Gym and Circulation Corridors lighting replacement of flouresent lighting with LED lighting. Aprox. 200.	GLA	2023-2024	2023-2024	101	2023-2024	8	Energy Efficiency Annual energy savings • in MWh = 13/ yr /GWh (electricity) • GJ/TJ (other energy savings)	Reduction in annual kWh (tbc) usage against basline	Green	Energy saving estimated at 41%. Cost saving over life of the lamps at average 40,000hrs £42.2k.	120	-	-	Capital	2	3	3	
LLDC-A.4	Public Realm	Solar photovoltaic panels	4 x London Stadium Solar PV installations: Workforce Entrance, Bridge 4, Bridge 1, Chiller Canopy	LLDC Carbon Offset Fund Grant	2023-2024	2023-2024	175	2023-2024	13	Staff/ visitors educational, green skills development opportunities Renewable Energy Annual renewable energy • in MWh = 114/ yr /GWh (electricity) • GJ/TJ (other energy)	kWh generated per year (tbc)	Green	Various system yields of 16,573; 48,615; 11,049; 38,671 kWh respectively per year	286	-	-	Capital	31	31	31	
		OPDC																			
OPDC-A.1	Energy	Local Area Energy Plan	An action plan for local area energy resilience, capacity for growth and decarbonisation	Mayor	2022-2023	2023-2024	tbc	2025	tbc	Capacity for future growth, local energy resilience	Publication of Local Area Energy Plan	Green		130	-	tbc	Revenue	N/A	N/A	N/A	Implementation of recommendation will be subject to further decision and commitment of funding

Appendix J

Mayor's Consultation Budget 2023-2024
Climate Budget Measures (Unfunded and Uncommitted)

ID	Climate Action Area	Climate Action	Description	Funding Source	Year funding starts	Year funding ends	Lifetime cumulative CO2e savings, tonnes or Enabling Measure	Year emissions savings start	Average annual CO2e savings to 2030, tonnes	Co-benefits	Responsibility (dept)	Further information	Proposed Exp. 23-24 £'000	Proposed Exp. 24-25 £'000	Proposed Exp. 25-26 £'000	Proposed Exp. 2026-27 to 2030-2031 (incl.) £'000	Total Proposed Expenditure £'000	Capital/ Revenue/ Mixed	Proposed cash savings 23-24 £'000	Proposed cash savings 24-25 £'000	Proposed cash savings 25-26 £'000	Proposed cash savings 2026-27 to end 2030-	Total Proposed cash savings to end 2030-	Grant and/or Debt funding? Provide further details on any debt funding	Readiness: Immediate/ 2-3y/ 3y+	Comments
	GLA																									
GLA-B.1	Buildings	Crystal Palace Review	Decarbonisation and GHG emmission reduction feasibility review. Assessment of forthcoming wider works design and programme are initially required to then understand what improvements could be made to the scheme.	Mayor	2023-2024	2023-2024	Unknown	Unknown	Unknown	Reduced running costs	GLA Estates Team		TBC	TBC	TBC	TBC	TBC	Mixed	TBC	TBC	TBC	-	-	N/A	2-3 years	The forthcoming site works programme remains in development and is yet to be finalised. Once progressed, the programme and design will be assessed with the expectation to subsequently examine appropriate options. If 2023-2024 assessment is positive and budget allows, then the work will commence to implement feasibility study recommendations.
	GLAP																									
GLAP-B.1	Buildings	Optimising Energy Management	Review energy usage data quarterly and compare year end 2024 data against 21/22 annual base line figure. Subsequent applicable optimisation work will be implemented	Mayor	2022-2023	2023-2024	Unknown	Unknown	10%	1. Ability to review and report performance against baseline 2. Adjust approach if required 3. Increased accuracy in financial budgeting 4. Remove redundant supplies 5. Rectify energy management errors and equipment faults	GLA Estates Team	TBC	-	-	-	-	TBC	Mixed	-	-	-	-	-	N/A		
GLAP-B.2	Buildings	Policy	Work with internal stakeholders and external consultants to create a Sustainability Policy for assets held in GLA Land and Property Ltd	Mayor	2022-2023	2023-2024	Unknown	Unknown	Unknown	1. Ensure statutory compliance 2. Ensure GLAP alignment with Mayoral Policy 3. Ensure an approach to Net Zero that balances financial and policy aims 4. Ensure focus remains on areas of largest impact	GLA Estates Team		-	-	-	-	TBC	Mixed	-	-			-	N/A		A budget would be required for staffing time and any external consultant support needed to implement this project
GLAP-B.3	Buildings	Policy	Replace end of life gas heating with low carbon alternatives	Mayor	2022-2023	2023-2024	Unknown	Unknown	10% (TBC)	1. Direct local reduction in GHG emissions 2. Improved local air quality 3. Sustains and grows London's green economy by encouraging jobs and skills in clean technology	GLA Estates Team		-	-	-	-	TBC	Mixed	-	-	-	-	-	N/A		A budget would be required for staffing time and any external consultant support needed to implement this project
GLAP-B.4	Buildings	Policy Changes	Work with development colleagues and solicitors to ensure all new leases include "green" clauses	Mayor	2022-2023	2023-2024	Unknown	Unknown	Unknown	1. Implement Mayoral Policy 2. Reduce GHG emissions 2. Ensure buildings are operated optimally 3. Improve perception of GLAP operated assets 4. Attract environmentally aware tenants 5. Enable monitoring of data to ensure progress to meeting targets	GLA Estates Team	https://www.betterbuildingspartnership.co.uk/sites/default/files/media/attachment/bbp-gltk-2013_0.pdf					-					-	-			Options for Green Lease clauses to be considered - Co-operation obligation Environmental Management Plan Data sharing and metering Restrictions on tenant alterations. A budget would be required for staffing time and any external consultant support needed to implement this project
GLAP-B.5	Buildings	Riverway Cottages	If 2023-2024 assessment is positive and budget allows, then the work will commence to implement feasibility study recommendations.	Mayor	2023-2024	2023-2024	Unknown	Unknown	Unknown	1. Direct local reduction in GHG emissions 2. Improved local air quality 3. Sustains and grows London's green economy by encouraging jobs and skills in clean technology	GLA Estates Team		TBC	-	-	-	TBC	Mixed	-	-	-	-	-	N/A	1-2 years	No budget in 2023-2024 has been identified yet as this depends on the findings of teh study. No cost savings for GLAP as they are not the entity paying for the utility usage. The properties are occupied by residential tenants and therefore the responsibility of the landlord for this type of investment / improvement.
GLAP-B.6	Buildings	Compressor House	Building has recently been returned to GLAP after being leased to a third party. Assessments are to be undertaken as per A3. undertaken on the building to understand what services could be improved. If 2023-2024 assessment is positive and budget allows, then the work will commence to implement feasibility study recommendations.	Mayor	2022-2023	2023-2024	Unknown	Unknown	Unknown	Reduced running costs	GLA Estates Team		TBC	TBC	TBC	TBC	TBC	Mixed	TBC	TBC	TBC	-	-	N/A	2-3 years	This piece of work is looking at this building holistically. The one major piece that has been identified is switching the gas boiler over to a different type of heating mechanism. The options will be reviewed with the works being budgeted for next financial year.
GLAP-B.7	Infrastructure	Lighting Infrastructure - Dagenham	GLAP are responsible for several kilometers of road in the Dagenham area. The lighting has been identified as old and this is currently being reviewed to ascertain if it can be improved at all and what the cost of replacing the lamps would be. If 2023-2024 assessment is positive and budget allows, then the work will commence to implement feasibility study recommendations.	Mayor	2022-2023	2023-2024	Unknown	Unknown	Unknown	Reduced running costs	GLA Estates Team		TBC	TBC	TBC	TBC	TBC	Mixed	TBC	TBC	TBC	-	-	N/A	2-3 years	This piece of work is looking at this infrastructure this financial year with the works being budgeted for next financial year.
	MOPAC																									
MOPAC-M.1	Management	Programme Management of Net Zero Programme		Unidentified - revenue	2023-2024	2030-2031	Enabler	Enabler	Enabler		Property Services	N/A	1,000	1,000	1,000	5,000	8,000	Revenue	N/A	N/A	N/A	N/A	N/A	Unidentified - revenue - to be confirmed	Immediate	Programme prior to 2023-2024 was largely Salix LCSF grant funded, plus borrowing and receipts. Funding for for 2023-2024 and beyond is TBC.
MOPAC-C.1	Electricity	PPA zero carbon electricity implementation stage	Progression with the GLA / TfL in PPA collaborative procurement exercise to source PPA, for zero carbon electricity on up to 80% of electricity requirements, prior to 2030.	Unidentified - revenue	2022-2023	2024-2025	41,312	2027-2028	4,064		Commercial	N/A	350	350	-	-	920	Revenue	N/A	N/A	N/A	unknown	unknown	Unidentified - revenue - to be confirmed, although PPA will only be progressed if value for money is determined.	2-3y	40% electricity set to zero emissions by 2027-2028 and 80% by 2029-2030. The Carbon benefit from PPA are shown as approximate, shown as the likely maximum level of carbon benefit (with all measures funded and a fixed EV charging % on MPS sites). The PPA benefits change if just the currently funded measures are funded, or future changes to electricity demand are made. Changes to electricity demand willlikely come from onsite / offsite EV charging requirements, and Solar PV rollout across the MPS sites.
MOPAC-P.4	Buildings	PSDS Phase IIIb (23-24 delivery); asset replacements, building fabric and heat decarbonisation	Heat decarbonisation and energy efficiencies measures covered by PSDS grant funding (£325 per carbon tonne)	PSDS grant funding	2023-2024	2024-2025	19,295	2024-2025	1,490		Real Estate Development	N/A	6,000	3,000		-	9,000	Capital	-	606	416	2,141	3,163	PSDS grant funding, applied for.	Immediate	PSDS Applicatiopn made Oct 2022. Grant award notification expected Dec 2022
MOPAC-P.5	Buildings	PSDS Phase IIIc (24-25 delivery); asset replacements, building fabric and heat decarbonisation	Heat decarbonisation and energy efficiencies measures covered by PSDS grant funding (£325 per carbon tonne)	PSDS grant funding	2024-2025	2024-2025	32,909	2025-2026	2,596		Real Estate Development	N/A		12,500		-	12,500	Capital	-	-	949	4,816	5,765	PSDS grant funding, planned application.	2-3y	Whilst programmed later (due to boiler age / site availability) the carbon benefits are higher for the PSDS IIIC proposal, than PSDS IIIB, as it happens heat decarbonisation saves more gas. Additionally there are more LED replacements due at PSDS IIIC sites, compared to PSPS IIIB sites. Number includes 25% OB. Projects need to be completed by end of 2024-2025 FY
MOPAC-P.6	Buildings	Delivery of remaining identified asset replacements, building fabric and heat decarbonisation	This programme covers all NZC Impact Assessment heat decarbonisation requirements, such as insulttation, solar PV, and heat pumps / electrified assets, as appropriate for each site.	Unidentified - grant or debt	2025-2026	2030-2031	122,553	2026-2027	6,218		Real Estate Development	N/A			24,410	122,040	146,450	Capital	-	-	-	7,334	7,334	Unidentified - grant or debt - to be confirmed	3y+	Number includes 40% OB split over 6 years. Note that the £168m identified for the summation of these three 'Construction- Building Emissions' items is an additional funding requirement above the costs already listed as 'funded / allocated' in the table above.
MOPAC-P.4	Transport	Electric Incident Response Vehicle (IRV) trial; fleet - enabling Project	Evaluate Incident Response Vehicle (IRV) BEV changing and vehicle performance, payload and the impact of police duty cycle on battery range and charging cycles.	Unidentified - grant or debt	2023-2024	2023-2024	Enabler	Enabler	Enabler		Met Fleet MO11	N/A	100	-	-	-	100	Capital	N/A	N/A	N/A	N/A	N/A	Unidentified - grant or debt - to be confirmed	Immediate	Detailed feasibility project is underway to understand the real-world limitations of EV in MET operational environment.
MOPAC-P.5	Transport	Acceleration of fleet vehicle replacement programme with easier adoption of Battery Electric Vehicles.	Reduce MPS Fleet carbon emissions through the use of zero emission vehicles displacing ICE vehicles which will be delivered as part of the MPS Replacement Programme. This line includes ICE, Hybrid and BEVs.	Unidentified - grant or debt	2028-2029	2033-2034	23,793	2027-2028	678	Air quality	Met Fleet MO11	N/A				16,176	27,889	Capital				1,630	1,630	Unidentified - grant or debt - to be confirmed	3y+	projected uplift in Capital requirements if accelerated decarbonisation programme based on Accenture analysis. This line also includes the revenue benefits from switching from fuel to DPSite EV charging.
MOPAC-P.6	Transport	Installation of Estates EV charging infrastructure.	This unfunded EV Charging infrastructure element provides the carbon reduction for the planned (funded) EV Fleet, and any unfunded acceleration to this Fleet. Noting that Salix PSDS funding does not include for any vehicle charging.	Unidentified - grant or debt	2027-2028	2031-2032	46,838	2027-2028	2,455	Energy Saving • in MWh = 50/yr /GWh (electricity)	Real Estate Development	N/A	-	-		128,622	167,567	Capital	-	-	-	3,638	3,638	Unidentified - grant or debt - to be confirmed	3y+	£167.5m Capital requirement for EV charging infrastructure requirements on MPS sites. The costs include OB, with the annual cost profile taken directly from NZC Impact Assessment model. Noting that the estimate is based on 100% provision of the charging infrastructure on MPS sites. This will be subject to review when the scale of and accessibility to public charging infrastructure is clearer. This revenue benefit includes the transition from Fuel to electricity charging (on site), and also includes increased management and maintenance costs of circ. £1m p.a. by 2030-2031 on the onsite charging infrastructure (which increases from 2032-2033, as more chargers are installed).
MOPAC-P.7	Resilience	Provision of resiliant infrastructure - Fleet and Estates		Unidentified - grant or debt	2026-2027	2033-2034	Enabler	Enabler	Enabler		Real Estate Development	N/A	-	-	-	17,520	26,578	Capital	N/A	N/A	N/A	N/A	N/A	Unidentified - grant or debt - to be confirmed	3y+	This Capital requirement contains many assumptions on risk, as the 'Resilience Strategy' is in early stages of development.
	LFC																									
LFC-B.1	Buildings	Electrical supply upgrade	Increase electrical capacity all 102 buildings		2024-2025	2029-2030	N/A	N/A	N/A	Provides essential infrastructure for CNZ	Property	FP1568 carbon net Zero	11,463	11,463	11,463	11,463	45,852	Capital	-	-	-	-	-		Immediate	This is required at 99% of stations to be able to progress CNZ plans as the gas replacement plan focuses on electric alternatives
LFC-B.2	Buildings	Removing gas dependency	Replace Gas powered boilers at 103 fire stations		2024-2025	2029-2030	7,743	2,024	1,935	Reduction	Property	FP1568 c arbon net Zero	6,733	10,122	11,327	11,327	39,509	Capital								
LFC-B.3	Buildings	Removing gas dependency	Replace gas powered appliance bay heaters at 102 stations		2024-2025	2029-2030	100	2,024	25	Reduction	Property	FP1568 carbon net Zero	1,010	253	253	253	1,769	Capital								
LFC-B.4	Buildings	Renewable generation	Increase the solar PPV arrays		2024-2025	2029-2030	3,600	2,025	1,800	Reduction	Property	FP1568 figures need checking	3,624	3,624	3,624	3,624	14,496	Capital								The sites will require a deeper survey than presently carried to establish roof and ground space. This has been costed at £30k
LFC-B.5	Buildings	Remove gas dependency	Replace gas cooking equipment		2024-2025	2029-2030	1,990	2,024	166	Reduction	Property	FP1568 carbon Net Zero	248	N/A	N/A	N/A	248	Capital				-	-			
LFC-B.6	Buildings	Energy reduction	Environmental system re-design 169 Union Street		2024-2025	2029-2030	600	2,027	40	Reduction	Property	N/A	850	N/A	N/A	N/A	850	Capital				-	-			
LFC-B.7	Buildings	Salix funding match 5 buildings	Retrofit of 5 stations	Salix combined with LFC	2024-2025	2029-2030	N/A	2,025		Reduction	Property						-					-	-			
LFC-B.8	Transport	Smart Energy Use	Telematics fitted to vehicles		2022-2023	2023-2024	N/A	N/A	N/A	Smart information	LFB FLEET	Information gathering	2,000	N/A	N/A	N/A	2,000	Capital				-	-			
LFC-B.9	Transport	Asset Replacement Programme	Replacement of OSUs		2022-2023	2023-2024					LFB FLEET	Carbon reduction	1,320				1,320					-	-			OSU project is subject to approval based on operational demand and the potential to consider alternative operations and EV solutions. The uplift was not originally included in the LFB CNZ strategy.
LFC-B.10	Transport	EV Asset Replacement Programme	Replacement of the hybrid SOG cars		2023-2024	2024-2025	70	2,024	14		LFB FLEET	Carbon reduction		50			50	Capital					-			
LFC-B.11	Transport	EV Asset Replacement Programme	Replacement of the 6 hybrid commissioner cars		2024-2025	2025-2026	140	2,025	28		LFB FLEET	Carbon reduction			100		100	Capital					-			
LFC-B.12	Transport	EV Asset Replacement Programme	Replacement of 11 vans		2024-2025	2025-2026	406	2,025	58		LFB FLEET	Carbon reduction			225		225	Capital					-			
LFC-B.13	Combined	Charging Infrastructure	Install of chargepoints		2024-2025	2025-2026	N/A	N/A	N/A	Charging	LFB FLEET	Charging			2,700		2,700					-	-			Lifetime TBC based on new market engagement with charge providers
LFC-B.14	Transport	EV Asset Replacement Programme	Replacement of 29 vans		2025-2026	2026-2027	1,071	2,026	153		LFB FLEET	Carbon reduction				380	380	Capital					-			
LFC-B.15	Transport	EV Asset Replacement Programme	Replacement of 5 x Hose Layer Units		2025-2026	2026-2027	588	2,026	49		LFB FLEET	Carbon reduction				2,200	2,200	Capital					-			
LFC-B.16	Transport	EV Asset Replacement Programme	Replacement of 1 Cold Cut Vehicle		2025-2026	2026-2027	70	2026	10		LFB FLEET	Carbon reduction				440	440	Capital					-			
LFC-B.17	Transport	EV Asset Prototypes	Purchase of 5 x ZEPA2 vehicles		2025-2026	2026-2027	-	N/A	-	Determination of heavy vehicle and high power solutions	LFB FLEET	Carbon reduction				3,500	3,500	Capital				-	-			ZEPA 2 is an EV development project to expand EV appliances & de-risk broader rollout - it is not an existing asset replacement. After discussions it was suggested to feature as an expected uplift cost. Therefore, the uplift is £3.5million, which has been removed from the original position as a designated cost.
LFC-B.18	Transport	Charging Infrastructure	Install of chargepoints		2025-2026	2026-2027	N/A	N/A	N/A	Charging	LFB FLEET	Charging				2,700	2,700					-	-			
LFC-B.19	Transport	Charging Infrastructure	Install of chargepoints		2026-2027	2027-2028	N/A	N/A	N/A	Charging	LFB FLEET	Charging				2,700	2,700					-	-			
LFC-B.20	Transport	EV Asset Replacement Programme	Replacement of 18 vans		2026-2027	2027-2028	658	2027	94		LFB FLEET	Carbon reduction				149	149	Capital					-			
LFC-B.21	Transport	EV Asset Prototypes	Purchase of 5 x ZEPA2 vehicles		2026-2027	2027-2028	-	N/A	-	Determination of heavy vehicle and high power solutions	LFB FLEET	Carbon reduction				3,500	3,500	Capital				-	-			ZEPA 2 is an EV development project to expand EV appliances & de-risk broader rollout - it is not an existing asset replacement. After discussions it was suggested to feature as an expected uplift cost. Therefore, the uplift is £3.5million, which has been removed from the original position as a designated cost.
LFC-B.22	Transport	EV Asset Replacement Programme	Replacement of 50 electric pool cars		2027-2028	2028-2029	-	N/A	-		LFB FLEET	Carbon reduction				572	572	Capital					-			
LFC-B.23	Combined	Charging Infrastructure	Install of chargepoints		2027-2028	2028-2029	N/A	N/A	N/A	Charging	LFB FLEET	Charging				2,700	2,700						-			
LFC-B.24	Transport	EV Asset Replacement Programme	Replacement of 2 driver training cars		2028-2029	2029-2030	-	N/A	-		LFB FLEET	Carbon reduction				23	23	Capital								
LFC-B.25	Transport	EV Asset Replacement Programme	Replacement of the SOG cars		2028-2029	2029-2030	-	N/A	-		LFB FLEET	Carbon reduction				50	50	Capital								
LFC-B.26	Transport	EV Asset Replacement Programme	Replacement of 53 Dual Pump Ladders (DPL) - Year 1		2028-2029	2029-2030	6,336	2029	528		LFB FLEET	Carbon reduction				23,320	23,320	Capital								
LFC-B.27	Transport	EV Asset Replacement Programme	Replacement of 41 DPLs - Year 2		2029-2030	2030-2031	4,896	2030	408		LFB FLEET	Carbon reduction				18,040	18,040	Capital								
LFC-B.28	Transport	EV Asset Replacement Programme	Replacement of the Commissioner Cars		2029-2030	2030-2031	-	N/A	-		LFB FLEET	Carbon reduction				100	100	Capital								
LFC-B.29	Transport	EV Asset Replacement Programme	Replacement of 52 DPLs - Year 3		2030-2031	2031-2032	6,216	2031	518		LFB FLEET	Carbon reduction				22,880	22,880	Capital								
LFC-B.30	Transport	EV Asset Replacement Programme	Replacement of 42 DPLs - Year 4		2031-2032	2032-2033	5,016	2032	418		LFB FLEET	Carbon reduction				18,480	18,480	Capital								
LFC-B.31	Transport	EV Asset Replacement Programme	Replacement of 1 Alt Wheel Drive (4x4t)		2031-2032	2032-2033	70	2032	10		LFB FLEET	Carbon reduction				440	440	Capital								
LFC-B.32	Transport	EV Asset Replacement Programme	Replacement of 1 Detect, Identify and Monitor vehicle		2031-2032	2032-2033	70	2032	10		LFB FLEET	Carbon reduction				440	440	Capital								
LFC-B.33	Transport	EV Asset Replacement Programme	Replacement of 11 vans		2031-2032	2032-2033	-	N/A	-		LFB FLEET	Carbon reduction				225	225	Capital								
LFC-B.34	Transport	EV Asset Replacement Programme	Replacement of 18 Fire Rescue Units (FRU)		2032-2033	2033-2034	2,148	2033	179		LFB FLEET	Carbon reduction				7,920	7,920	Capital								
LFC-B.35	Transport	EV Asset Replacement Programme	Replacement of 1 Cold Cut vehicle		2032-2033	2033-2034	-	N/A	-		LFB FLEET	Carbon reduction				440	440	Capital								
LFC-B.36	Transport	EV Asset Replacement Programme	Replacement of 50 electric pool cars		2032-2033	2033-2034	-	N/A	-		LFB FLEET	Carbon reduction				572	572						-			
LFC-B.37	Transport	EV Asset Replacement Programme	Replacement of 2 driver training cars		2033-2034	2034-2035	-	N/A	-		LFB FLEET	N/A	TBC	TBC	N/A	23	23	Capital								
LFC-B.38	Transport	EV Asset Replacement Programme	Replacement of 29 vans		2032-2033	2033-2034	N/A	N/A	-		LFB FLEET	Carbon reduction				380	380						-			
LFC-B.39	Transport	EV Asset Replacement Programme	Replacement of 9 Command Support Units (CSU)		2033-2034	2034-2035	1,068	2,034	89		LFB FLEET	Carbon reduction				3,960	3,960						-			
LFC-B.40	Transport	EV Asset Replacement Programme	Replacement of 3 Operational Support Units (OSU)		2033-2034	2034-2035	360	2034	30		LFB FLEET	Carbon reduction				1,320	1,320						-			
LFC-B.41	Transport	EV Asset Replacement Programme	Replacement of 5 Heavy Distribution Units (HDU)		2033-2034	2034-2035	62	2034	50		LFB FLEET	Carbon reduction				2,200	2,200						-			
LFC-B.42	Transport	EV Asset Replacement Programme	Replacement of the SOG cars		2033-2034	2034-2035	-	N/A	-		LFB FLEET	Carbon reduction				50	50						-			
LFC-B.43	Transport	EV Asset Replacement Programme	Replacement of 18 vans		2033-2034	2034-2035	-	N/A	-		LFB FLEET	Carbon reduction				149	149						-			
LFC-B.44	Transport	EV Asset Replacement Programme	Replacement of 12 32m Turntable Ladders (TL)		2034-2035	2035-2036	1,785	2035	119		LFB FLEET	Carbon reduction				5,280	5,280						-			
LFC-B.45	Transport	EV Asset Replacement Programme	Replacement of 3 64m TLs		2034-2035	2035-2036	450	2035	30		LFB FLEET	Carbon reduction				1,320	1,320						-			
LFC-B.46	Transport	EV Asset Replacement Programme	Replacement of the Commissioner Cars		2034-2035	2035-2036	-	N/A	-		LFB FLEET	Carbon reduction				100	100						-			
LFC-B.47	Transport	EV Asset Replacement Programme	Replacement of 5 x Hose Layer Units		2037-2038	2038-2039	-	N/A	-		LFB FLEET	Carbon reduction				2,200	2,200	Capital								
LFC-B.48	Transport	EV Asset Replacement Programme	Replacement of 50 electric pool cars		2037-2038	2038-2039	-	N/A	-		LFB FLEET	Carbon reduction				595	595						-			
	LLDC																								Amber - Late 2023 TBC	
LLDC-B.1	Buildings	Energy Efficient Lighting	London Aquatic Centre Interior lighting replacement. Main (competition) pool	TBC	2024-2025	2024-2025	1,281	2024-2025	183	Energy Saving • in MWh = 27/yr /GWh (electricity)	Park Operations and Venues	Replacement of existing metal halide flood lights with LED floodlights and new controls. lighting manufacturers initial scope review prior to Atkins energy savings and costs feasibity study complete. Approximately 300 luminers to be replaced.	-	510	-	-	510	Capital	-	40	79	393	511			Red
LLDC-B.2	Infrastructure	District Energy Network decarbonisation	Likely to include a range of different technologies. Early interventions are very likely to be focussed around heat pumps, including Water Sourced Heat Pumps & other industrial heat recovery systems being considered. Deep closed-loop geopthermal also being considered.	Debt (TBC)	2024-2025	2026-2027	TBC	2024-2025	TBC	Energy Saving • in MWh/GWh (electricity) - details TBC	Development	This project fall into "level 2" scope of reporting.	-	50,000	-	-	50,000	Capital	-	-	-	-	-		Amber mid - 2023	Depends on the type of investment, if no details are available industry benchmark to be used.
LLDC-B.3	Buildings	London Stadium Solar PV Installation	Applying a solar PV membrane to the roof of the stadium.	Debt (TBC)	2023-2024	2024-2025	7,480	2023-2024	374	Education and behaviour change opportunity amongst employees and operations team. Annual renewable energy procured in offices • in MWh/GWh (electricity) • GJ/TJ (other energy)	London Stadium	Feasibility cost circa £60k. Number of cells TBC. Project designed in phases P1 ready in mid 2023.	1,000	3,000	-	-	4,000	Capital	300	1,000	1,000	5,000	7,300		2024-2025	
LLDC-B.4	Buildings	Energy efficient refrigeration systems	Replacement of the London Aquatics Centre ammonia chillers with packaged chiller (cooling generation and heat pump to recover exhaust heat) & upgrade of the CRAC chillers to lower Global Warming Potential (GWP) refigerant.	Grant/ debt TBC	2024-2025	2024-2025	4,900	2024-2025	245	Energy Saving • in MWh/GWh (electricity) - TBC	Park Operations and Venues	Atkins appointed to carry out a feasibility study and advise on energy savings and costs. Investment for the feasibility survey is secured via existing budget lines. Investment required for the actual works is partially secured via existing budget lines.	-	650	-	-	650	Capital	-	105	105	525	735		2023-2024 TBC	
LLDC-B.5	Buildings	Energy efficient lighting.	Copper Box Arena Broadcast Lighting Replacement	TBC	2024-2025	2024-2025	196	2024-2025	28	Energy Saving • in MWh = 50/yr /GWh (electricity) -	Park Operations and Venues	Details on the calculation of carbon saving - see note at H1.	-	12	-	-	12	Capital	-	6	12	60	78			Further details required on the cost calcualtions for this project, as there is a discrepency between the annual and lifetime savings attributed to the luminaires. Estimated 28% ROI over the lifetime of the luminair's (8yrs +)
LLDC-B.6	Buildings	London Stadium lawn maintenance equipment emissions reduction	London Stadium replacement of petrol/ diesel lawn maintenance equipment with electric powered lawn mainteance equipment	TBC	2023	2023	TBC	2,023	TBC	Reduction in noise and local air pollution. Improved working conditions for staff.	London Stadium	Details on the calculation of carbon saving. See note at H1. Number of equipment replaced? Three previously replaced. Two remaining to be replaced.	19	-	-	-	19	Capital	5	5	5	25	40			
LLDC-B.7	Buildings & Public Realm	London Stadium Solar PV installation	Ticket Office & Shop	TBC	TBC	TBC	TBC	TBC	TBC	Renewable Energy Annual renewable energy • in MWh = 92/yr /GWh (electricity) • GJ/TJ (other energy)	London Stadium	How carbon reduction is calculated? See H1. Number of solar PV? TBC Stakeholder permissions required prior to final approval.	-	81	-	-	81	Capital	-	15	15	73	102		2023-2024	
LLDC-B.8	Buildings	London Stadium LED lighting installation	Replacing back of house lights in stadium with LED	Debt (TBC)	2024-2025	2025-2026	7,628	2024-2025	191	Educational opportunities for staff, visitors and green skills development opportunities Energy Saving - awaiting further data	London Stadium	Investment for the feasibility survey is secured via existing budget lines.	178	237	237	237	889	Capital	-	31	124	618	773			
LLDC-B.9	Buildings	London Stadium update to Building Energy Management System	Technical equipment and behaviour change initiative to improve energy use at London Stadium	Debt (TBC)	2024-2025	2024-2025	1,239	2024-2025	124	Education and behaviour change opportunity amongst employees and operations team.	London Stadium	Further information required to quantify the Capital/ revenue mix and how savings are attributed.	200	-	-	-	200	Mixed	318	318	318	1,590	2,544			

Appendix J

Mayor's Consultation Budget 2023-2024
Climate Budget Measures (Unfunded and Uncommitted)

LLDC-B.10	Transport	London Stadium vehicle emission reduction	London Stadium replacement of diesel/petrol vehicles with electric vehicles.	TBC	TBC	TBC	TBC	TBC	TBC	Clean Transportation Final and/or Primary Energy Use • kWh/m² of GBA p.a.; • % of energy use reduced/avoided vs local baseline/building code; • % of renewable energy (RE) generated on site - awaiting further details	London Stadium	Number of vehicles considered? TBC Further details required regarding availability of electric vehicles considering a potential 18-month lead time fr new electric vehicles	-	100	-	-	100	Capital	-	15	15	75	105						
LLDC-B.11	Buildings, Public Re	Climate Action	Climate Emergency Response Officer. The officer will support development and delivery of identified zero carbon projects through data management, reporting, liaise with stakeholders, and support the carbon monitoring and analysis of proposed and implemented projects.	TBC	2023-2024	2030-2031	TBC	2023-2024	TBC	TBC	TBC		50	50	50	250	400	Revenue	TBC	TBC	TBC	TBC	TBC						
LLDC-B.12	Infrastructure	Renewable Energy	Purcase of renewable energy through a power purchase agreement.	TBC	TBC	TBC	69,150	TBC	TBC	2,766	Park Operations & Venues and Development	Process of aggreeing PPA in collaboration with GLA FB's under way. Awaiting further information and next steps.	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC				
	OPDC																											
OPDC-B.1	Energy	Net Zero energy production	The project objective is to recycle waste heat from data centres to provide zero carbon, affordable and resilient heating, hot water and cooling to residents (up to 12,00 homes) and businesses in a cost-effective way following approval of a Strategic Outline Case which tested the cost and benefit of a heat network vs BAU (ie leaving developers to deliver zero carbon)	Mayor	2023-2024		150,000	2025	3,750	Reduced local heating, increased resilience, affordability for households	Development		2	60	60	60	182	Capital	N/A	N/A	N/A	N/A	N/A		Immediate - 2023 (subject to the outcome of the OBC and GHNF funding	2-3y	OPDC has engaged with the GLA Environment team, GLA Group Finance and London Treasury Limited in developing the proposals, as well as updating the Mayor's Chief of Staff and key stakeholders at regular GLA/OPDC liaison meetings. The application for GHNF funding in Feb 2023 is subject to the outcome of the Outline Business Case.
OPDC-B.2	Transport	Old Oak West Access and Active Travel Strategy	The design and implementation of new local infrastructure and public realm to support access, walking and cycling.	TBC: Old Oak West funding and delivery strategy	TBC	TBC	TBC	TBC	TBC	Improved health and wellbeing Supports housing delivery and employment investment	OPDC Development		TBC	TBC	TBC	95	95	Capital	N/A	N/A	N/A	N/A	N/A		2-3y	OBC in production for anticipated government decision in Summer 2023	
OPDC-B.3	Transport	Willesden Junction Station Improvements	Improvements to capacity, access and integration with development at Old Oak	TBC: Old Oak West funding and delivery strategy	TBC	TBC	TBC	TBC	TBC	Access to public transport Air quality Reduced congestion and improved environment	OPDC Development		TBC	TBC	TBC	93	93	Capital	N/A	N/A	N/A	N/A	N/A		2-3y	OBC in production for anticipated government decision in Summer 2023	
OPDC-B.4	Transport	Improvements to North Acton Station	Delivery of step-free access and enhanced capacity	TBC: Old Oak West funding and delivery strategy	TBC	TBC	TBC	TBC	TBC	Access to public transport Air quality Reduced congestion and improved environment	OPDC Development		TBC	TBC	TBC	31	31	Capital	N/A	N/A	N/A	N/A	N/A		2-3y	OBC in production for anticipated government decision in Summer 2023	
OPDC-B.5	Biodiversity	Creation of a new 2ha public park in Old Oak	Development of a new 2ha park in Old Oak including integration with potential access and biodiversity improvements to the Grand Union Canal.	TBC: Old Oak West funding and delivery strategy	TBC	TBC	TBC	TBC	TBC	Biodiversity Reduction in local heating Health and wellbeing Active transit	OPDC Development		TBC	TBC	TBC	6	6	Capital	N/A	N/A	N/A	N/A	N/A		2-3y	OBC in production for anticipated government decision in Summer 2023	
	TfL																											
TfL-B.1	Bus fleet	Zero emission vehicles	Zero emission fleet 2030	TBC	2023-2024	2030-2031	296,775	Ongoing	18,930	Air quality	Bus Operations		-	-	19,000	270,000	516,000	Revenue	-	-	-	-	-		TBC	Cost estimates are indicative and would require further review to reflect iterative cost relative to TfL's new Business Plan. Early years would be likely to change - TfL's Business Plan keeps open the possibility of 2030 completion in the early years, but a smoother profile would likely increase costs in these years in order to save more in later years. Note that total cost of this initiative is higher than the cost to 2030-2031, as higher leasing costs would continue through the 2030s. total cost shown is estimated cost to end of 2036/37. Carbon savings are additional saving as a result of getting to fully zero emission fleet by 2030 instead of 2034. Assumes the electricity supply for charging the buses is from 100% renewables.
TfL-B.2	Buildings	Removal of gas and energy efficiency - Tranche 2	Depots	TBC	2023-2024	2030-2031	85,455	2023-2024	2,223	Staff comfort, ambience, air quality.	IDP, TfL Operations, TfL Capital		3,000	9,000	12,000	84,000	108,000	Capital	180	830	1,600	8,000	10,610		TBC	Initial high level estimate
TfL-B.3	Buildings	Removal of gas and energy efficiency - Tranche 2	Stations	TBC	2023-2024	2030-2031	68,364	2023-2024	1,778	Staff comfort, ambience, air quality.	IDP, TfL Operations, TfL Capital		3,000	8,000	10,000	67,200	88,200	Capital	140	670	1,280	6,400	8,490		TBC	Initial high level estimate
TfL-B.4	Buildings	Removal of gas and energy efficiency - Tranche 2	Office	TBC	2023-2024	2030-2031	41,507	2023-2024	1,080	Staff comfort, ambience, air quality.	IDP, TfL Operations, TfL Capital		2,000	5,000	6,000	40,800	53,800	Capital	80	400	770	3,850	5,100		TBC	Initial high level estimate
TfL-B.5	Buildings	Removal of gas and energy efficiency - Tranche 2	Out of station retail	TBC	2023-2024	2030-2031	24,416	2023-2024	635	Staff comfort, ambience, air quality.	IDP, TfL Operations, TfL Capital		1,000	3,000	4,000	24,000	32,000	Capital	50	230	450	2,250	2,980		TBC	Initial high level estimate
TfL-B.6	Buildings	Removal of gas and energy efficiency - Tranche 2	Arches	TBC	2023-2024	2030-2031	4,883	2023-2024	127	Staff comfort, ambience, air quality.	IDP, TfL Operations, TfL Capital		1,000	1,000	1,000	4,800	7,800	Capital	10	40	90	450	590		TBC	Initial high level estimate
TfL-B.7	Buildings	Removal of gas and energy efficiency - Tranche 2	Other (e.g. accommodation, bus / coach station, signals/control centre, pier, tunnel building)	TBC	2023-2024	2030-2031	31,740	2023-2024	826	Staff comfort, ambience, air quality.	IDP, TfL Operations, TfL Capital		2,000	4,000	5,000	31,200	42,200	Capital	60	310	590	2,950	3,910		TBC	Initial high level estimate
TfL-B.8	Buildings	Removal of gas and energy efficiency - Tranche 3	Depots	TBC	2023-2024	2030-2031	85,455	2023-2024	2,223	Staff comfort, ambience, air quality.	IDP, TfL Operations, TfL Capital		9,000	27,000	36,000	252,000	324,000	Capital	180	830	1,600	8,000	10,610		TBC	Initial high level estimate
TfL-B.9	Buildings	Removal of gas and energy efficiency - Tranche 3	Stations	TBC	2023-2024	2030-2031	68,364	2023-2024	1,778	Staff comfort, ambience, air quality.	IDP, TfL Operations, TfL Capital		8,000	22,000	29,000	201,600	260,600	Capital	140	670	1,280	6,400	8,490		TBC	Initial high level estimate
TfL-B.10	Buildings	Removal of gas and energy efficiency - Tranche 3	Office	TBC	2023-2024	2030-2031	41,507	2023-2024	1,080	Staff comfort, ambience, air quality.	IDP, TfL Operations, TfL Capital		5,000	14,000	18,000	122,400	159,400	Capital	80	400	770	3,850	5,100		TBC	Initial high level estimate
TfL-B.11	Buildings	Removal of gas and energy efficiency - Tranche 3	Out of station retail	TBC	2023-2024	2030-2031	24,416	2023-2024	635	Staff comfort, ambience, air quality.	IDP, TfL Operations, TfL Capital		3,000	8,000	11,000	72,000	94,000	Capital	50	230	450	2,250	2,980		TBC	Initial high level estimate
TfL-B.12	Buildings	Removal of gas and energy efficiency - Tranche 3	Arches	TBC	2023-2024	2030-2031	4,883	2023-2024	127	Staff comfort, ambience, air quality.	IDP, TfL Operations, TfL Capital		1,000	2,000	3,000	14,400	20,400	Capital	10	40	90	450	590		TBC	Initial high level estimate
TfL-B.13	Buildings	Removal of gas and energy efficiency - Tranche 3	Other (e.g. accommodation, bus / coach station, signals/control centre, pier, tunnel building)	TBC	2023-2024	2030-2031	31,740	2023-2024	826	Staff comfort, ambience, air quality.	IDP, TfL Operations, TfL Capital		4,000	11,000	14,000	93,600	122,600	Capital	60	310	590	2,950	3,910		TBC	Initial high level estimate
TfL-B.14	Solar	Installing solar on TfL buildings where technically feasible.	Directly connected renewables	TBC	2023-2024	2026-2027	7,046	2024-2025	516		IDP		1,000	1,000	1,000	-	3,000	Capital	228	436	536	426	1,626		TBC	Rollout of feasible rooftop solar (3MWp total)
TfL-B.15	Tracton	Tractoin efficency	regenerative braking (NL & CL), green CBTC, energy storage (Inverters)	TBC	2023-2024	2030-2031	15,000	2023-2024	600	Reliability of power supply	TfL Operations, TfL Capital		250	1,000	2,000	8,000	11,250	Capital	700	700	1,000	8,000	10,400		TBC	Carbon savings are as a result of improving the efficiency of the power systems used to drive trains on the TfL network - Scope 2 emissions. These savings are generaly made by a combination of: reducing the energy consumed to move trains around the network, recouping energy that would be currently lost as heat through braking, flattening our usage peaks through energy storage. There is also a secondary thread in this workstream around boosting our (and by proxy, the wider UK's) resilience to the energy crisis. Progressive increase in costing assumes maturity of our reasearch leading to small discrete opporunities across the duration of this budget period. Figures added are estimates based on experience & previous works completed.
TfL-B.16	Vehicle fleet	Zero emission vehicles	Switching all 20 HGVs in TfL's support fleet to zero emission	TBC	2026-2027	2030-2031	TBC	2,030	TBC	Air quality	TfL Operations, IDP		-	-	-	4,500	4,500	Capital	-	-	-	-	-		TBC	Initial high level estimate for vehicle and infrastructure cost. Assumed this would progress later in the decade as market for HGVs is immature.
TfL-B.17	Non building LEDs	Street Lighting	Complete conversion	TBC	2024-2025	2025-2026	TBC	TBC	TBC	Potential for reduced maintenance	TfL Operations- NMR, IDP		-	2,000	1,600		3,600	Capital	TBC	TBC	TBC	TBC	TBC		TBC	Initial high-level estimate. Further development required to identify carbon and cost savings
TfL-B.18	Non building LEDs	Traffic signals	Complete conversion	TBC	2023-2024	2025-2026	TBC	TBC	TBC	Potential for reduced maintenance	TfL Operations- NMR, IDP		300	5,300	8,900		14,500	Capital	TBC	TBC	TBC	TBC	TBC		TBC	Initial high-level estimate. Further development required to identify carbon and cost savings
TfL-B.19	Vehicle fleet	Zero emission vehicles	Switching entire Dial-a-Ride fleet to zero emission by 2030	TBC	2023-2024	2030-2031	14,676	2028-2029	1,223	Air quality, lower noise in residential areas, reduced fleet maintainence costs	Bus Operations		4,000	4,000	6,000	26,000	40,000	Capital				775	775		TBC	Costs based on project undertaken in 2019/2020, and thus should be considered approximations