

Maintaining our assets: London Underground



Critical projects



Central & desirable projects

LU Capital account:

Revised budget £281m

Critical Schemes - £220m

Central Schemes - £61m

Critical - Scheme	Total £m
Victoria Line Heavy Overhaul	20
Piccadilly Line Life Extension	11
Metropolitan Line Heavy Overhaul	9
Bakerloo Line Heavy Overhaul	7
Jubilee Line Heavy Overhaul	3
Fleet Overhaul Total	50
Central Line Renewals	12
Mechanised Renewals Vehicles	5
Engineering Vehicles Fleet	7
Bakerloo Rail Vehicle Accessibility	4
Fleet Renewals Total	28
Connect Radio System Upgrade	12
Station security works	5
Body Worn Cameras	4
Technology & Network Total	21
Bridges and structures renewals	12
Bridges and Structures Total	12

Critical - Scheme	Total £m
Power network renewals	5
Power control system upgrade	4
Central Line Signal Renewals	4
Northumberland Park Depot Signal	2
Platform/Train CCTV Systems	1
Bakerloo Line Signal Renewals	1
Power, Signals & Systems Total	17
Ballasted Track Renewals	30
Deep Tube Renewals	21
Points & Crossings	15
Track modernisation and depots	4
Boundary fencing	2
Hazardous materials removal	1
Re-railing projects	1
Track Total	74
Network wide L&E works	11
Jubilee Line Lift Programme	3
Marylebone Escalators	2
Belsize Park Lift Refurbishment	1
Liverpool Street Escalators	1
Lift & Escalator Total	18

Central - Scheme	Total £m
Harrow on the Hill	3
Debden	3
Ickenham	3
Sudbury Hill	2
Wimbledon Park	2
Osterley	2
Amersham and other	4
Step free Access Total	19
Social Distancing	10
Additional scope requirements	11
Tottenham Hale	7
Paddington Station Capacity Upgrade	3
Knightsbridge	1
Crossrail	1
South Kensington	1
Train Maintenance Workshop	6
Train Security	2
Capacity upgrade and other enhancements Total	42



Surface Investment Programme (capex)



Critical projects



Central & desirable projects

Surface Capital account:

Revised budget £348m

Critical Schemes £158m

Central schemes £190m

Critical - Scheme	Total £m	Central - Scheme	Total £m
TLRN infrastructure renewals	34	Hammersmith Bridge stabilisation & strengthening	17
Bus, coach and river infrastructure renewals	11	Surface Assets Total	17
Asset Management Information Systems	9	ULEZ Expansion	49
Major asset programme: A40 Westway	5	Dial-a-Ride vehicles (Euro VI)	12
Major asset programme: Vauxhall Bridge	4	Hydrogen buses	9
Major asset programme: : Rotherhithe Tunnel	2	Bus electrification: 'grid to gate' garage upgrade	6
Major asset programme: Brent Cross Structures	1	Direct Vision Standard implementation	6
Assets other	14	Low Emission Zone Stronger implementation	5
Surface Assets Total	80	Bus opportunity charging trial	2
See separate slide	2	Fleet ULEV roll out	1
Surface Healthy Streets Total	2	Other	7
DLR renewals	22	Overprogramming	(15)
Trams renewals	16	Surface Air Quality and Environment	81
DLR CGLR (Lewisham branch) PFI handback	14	See separate slide	78
Overground renewals	12	Surface Healthy Streets	78
Cycle Hire renewals	8	Station Upgrades – DLR (eg Custom House)	3
Trams Sandilands upgrades	3	East London Line Enhancement Programmes (London Overground)	3
Overprogramming	(24)	Station Upgrades – London Overground (eg West Hampstead)	1
Surface Public Transport Total	52	Rail Devolution	2
SITS	9	Bus safety programme	1
Highways Annualised programme	2	PT Other	9
Taxi & Private Hire Contract Relet	1	Overprogramming	(6)
Roads Technology	1	Surface Public Transport Total	14
Tech other	10		
Surface Technology Total	24		

Healthy Streets (capex)



Critical projects



Central & desirable projects

Capital expenditure:

Revised budget £80m

Critical Schemes £2m

Central schemes £78m



Schemes in 2020/21

Healthy Street schemes	H1 £m	H2 £m	Total £m	Category
LSP Permanent Schemes - TLRN	-	2	2	Critical
Sub-total critical	-	2	2	
Cycleway 4	1	4	4	Central
Cycleway 9	1	5	6	Central
Cycling Future Route 5	0	4	4	Central
Cycle network development TLRN	0	1	2	Central
Other cycling	1	4	5	Central
Bus Priority Borough	0	7	7	Central
Bus Priority TLRN	2	5	7	Central
HS Local Schemes	1	4	5	Central
20 mph rollout	0	2	2	Central
Safer Streets	1	5	5	Central
ST-Holloway Road/ Drayton Park	0	3	3	Central
A23 Streatham High Road	0	1	1	Central
A316 Manor Circus Crossings	0	1	1	Central
Cycle Parking	0	2	2	Central
London Road Roundabout Crossings	0	1	1	Central
Peckham Town Centre	0	1	1	Central
Tooting Town Centre	0	2	2	Central
Old Street Roundabout Removal	14	13	27	Central
Major road schemes	4	4	8	Central
Other schemes	1	-	1	Central
Overprogramming	-	-15	-15	Central
Sub-total central	26	52	78	
Total	26	54	80	

We have initiated a cost reduction review of all our permanent Healthy Street schemes to transfer the learnings and good practice from Streetspace. This includes a review of materials, using a 'temporary plus' approach where appropriate and being more agile in delivery. The aim is to accelerate delivery of Healthy Street benefits whilst reducing costs of individual schemes.

Major road schemes in development

Major schemes	EFC*	3 rd party funding
Catford (MRN)	58	50
Gallows Corner (MRN)	63	50
Lodge Avenue (MRN)	52	45
Lombard Roundabout (MRN)	33	28
Old Kent Road	80	20
Parliament Square	80	80
Vauxhall Gyratory	56	13
Wandsworth Gyratory (MRN)	73	68
Waterloo City Hub	31	3

We are continuing the design and development of a number of major road improvement schemes. However, their implementation is dependent on receiving 3rd party funding, including funding from the DfT's Major Road Network (MRN) fund.

*The EFC quoted is prior to the current cost review which is underway to incorporate good practice from Streetspace schemes.

Surface Investment Programme (operating account)



Critical projects



Central & desirable projects

Critical - Scheme	Total £m
Healthy Streets – see separate table	92
Borough roads and bridges	9
Other	5
Total - IP opex	106

Central - Scheme	Total £m
Healthy Streets – see separate table	37
Bus Euro VI Retrofit (NOx Abatement)	23
Van Scrappage (funded by GLA)	18
Taxi delicensing (funded by GLA)	14
ULEZ Car & Motorcycle Scrappage (funded by GLA)	8
Other	32
Total - IP opex	132

Healthy Street schemes	H1 £m	H2 £m	Total £m	Category
LSP+ Temp schemes - Borough led	45	10	55	Critical
LSP+ Temp schemes - TfL led	8	14	22	Critical
LSP Permanent schemes – Borough	-	13	13	Critical
LSP monitoring & marketing	-	1	1	Critical
Sub-total critical schemes	53	38	92	
LIP Corridors	0	23	23	Central
LIPs top-slice funding	-	2	2	Central
LIP Major schemes	0	4	4	Central
Liveable neighbourhoods	-	9	9	Central
Cycle training	1	3	4	Central
Borough cycling support	-	2	2	Central
Crossrail complementary measures	-	1	1	Central
Other schemes	0	1	1	Central
Overprogramming	-	-8	-8	Central
Sub-total central schemes	2	37	37	
Total	55	75	129	

Surface IP Opex account:

Revised budget £238m

Critical Schemes £106m

Central schemes £132m



Investment Programme – Major Projects Capital account



Critical projects



Central & desirable projects

Major Projects

Critical Scheme	Total £m
Piccadilly line upgrade phase 1 – complete detailed design for Rolling Stock and PDO concept design, award OPO contract	94

Central – Scheme	Total £m
DLR – Rolling Stock final design complete, southern sidings contract award & complete site work	59
4LM – SMA 03 go live, software updates through to SMA 07, complete installation to SMA 08	122
Bank – complete number of installation on site	76
Bank Blockade	1
Bank SSIU	1
Elephant & Castle	2
Victoria	4
RSE – complete WTT58 and Morden Wheel Lathe	11
MPD Total	275

Desirable - Scheme	Total £m
Barking Riverside – commence construction of new station, Pier 13/14/15 redesign, complete Thames Water diversion at Pier 14	32
Northern Line Extension – Nine Elms Arch 42 complete, Test & commissioning of signalling system, completion of LU works (connect system, IM infrastructure & gateline ticketing systems)	109
Silvertown Tunnel – permanent land purchase	61
MPD Total	202

Professional Services

Critical Scheme	Total £m
Payments - Pipeline	1
DC(a) Network Tech Refresh	3
Hosting - Pipeline	4
Interoute Surface Transport	3
Strong Customer Authentication	2
Service Delivery Assets	8
PS Tech & Data Total	22

Central - Scheme	Total £m
Emergency Services Network	29
Networks & Telecommunications	5
PCN Pilot	5
Future Bus Systems	5
End User Computing - Evergreen	4
Digital workplace - New Investment for additional WFH user equipment	4
Network Projects	3
Hosting- Compute Refresh	3
Hosting	3
Payments	3
Hosting- Operating Systems Database	2
Other	14
Overprogramming increase	(9)
PS Tech & Data	74



Total AQE Portfolio

AQE portfolio continued during the COVID-19 lockdown due to the ability to remote work, and the important deliverables in the near-term

- This portfolio includes::
 - Ultra-Low Emission Zone (Central & Expansion),
 - Rapid Charging Network and working with boroughs to deliver a range of projects under the Mayor's Air Quality Fund and the Go Ultra Low City Scheme (GULCS).
 - Primary objectives are to improve air quality through deterring the use of polluting vehicles and supporting the growth in electric vehicles/sustainable modes.
- What has changed since the original budget?
 - The majority of these schemes continued without pause during the COVID-19 lockdown, as the work could be continued remotely.
 - TfL has recently finalised a fixed price proposal with Capita (the supplier delivering large elements of ULEX, Direct Vision Standard and the recent Congestion Charge changes), which has given greater certainty and clarity on projected costs, but has brought forward costs from future years into 2020/21.
 - We have delivered Congestion Charge changes within a short timescale (which were a result of COVID-19, and thus unbudgeted), and this has had an impact on the overall programme timings.

Project £m	Original Budget £m	Revised Budget £m
Bus Euro VI Retrofit (NOx Abatement)	23	23
Van Scrappage	3	16
ULEZ Car & Motorcycle Scrappage Scheme	8	6
Go Ultra Low City Scheme	4	4
Rapid Charge Point Network	4	3
Mayors Air Quality Fund	3	3
Hydrogen Buses	1	1
Other	3	5
Overprogramming	-8	-6
Subtotal Opex	41	54
ULEZ Expansion 2021	50	60
DaR Vehicle Purchase from 18/19	12	12
Hydrogen Buses	8	9
Congestion Charge (CC) Changes	5	4
Direct Vision Standards	6	4
Grid to Gate	8	4
Low Emission Zone Stronger	7	3
Bus Opportunity Charging	1	0
Other	2	2
Overprogramming	-20	-11
Subtotal Capex	81	88
Total AQE Portfolio	122	142

Walking and cycling schemes

Subtitle

- The walking and cycling projects within our investment programme include:
 - Streetspace, a new programme designed in response to the COVID-19 crisis
 - The cycling programme within Healthy Streets, which delivers high quality schemes with TfL branding (e.g. CS4, CS9)
 - Road safety schemes which support safety for our pedestrians and cyclists
 - A number of other specific schemes within Healthy Streets, plus an allocation of the transformational programme (e.g. Old Street) and the remaining schemes, where a percentage of the costs of the scheme are assumed to carry walking and cycling benefits
 - Hammersmith bridge, the intervention is designed to ensure continued walking and cycling access across the river
 - Direct Vision Standard will offer safety benefits to pedestrians and cyclists.
 - The Cycle Hire Scheme renewals and enhancements from the Public transport portfolio
- Our investment in walking and cycling has increase by £36m since the original budget, driven by the ambition and delivery within the Streetspace programme.
- We are restarting a large number of cycling schemes in H2 following an in-depth review of the programme between the Deputy Mayor and the MD of Surface Transport

Project £m	Original Budget	Revised Budget
	£m	£m
London Streetspace	-	94
Cycling Programme	81	20
Cycle Parking	1	2
Road safety schemes	15	6
Transformational schemes (25%) allocation	10	11
Cycleways Rebranding	0	1
Borough Cycling Support	2	2
Other schemes (20% allocation)	12	4
Overprogramming	-21	-8
Healthy Streets schemes	100	132
Hammersmith Bridge	15	24
Direct Vision Standard	6	4
Cycle Hire Capital Renewals	7	8
Other Cycling from Public Transport portfolio	0	1
Cycle Hire Modernisation	11	5
Overprogramming (other)	-2	-2
Other portfolios	37	41
Total Walking and Cycling	137	173



Investment in borough assets – Local Implementation Plans (LIPs)

TfL allocates money to the London boroughs to spend on projects that support the Mayor's Transport Strategy through a Local Implementation Plan (LIP), and other funding sources.

- Local Implementation Plans (LIPs) set out how each London borough will meet the objectives of the Mayor's Transport Strategy, and falls into 6 categories across 2 portfolios:
 - Healthy Streets portfolio:
 - Corridors, neighbourhoods and supporting measures
 - Liveable Neighbourhoods
 - Borough Bus Priority Programme
 - Assets portfolio:
 - Principal road maintenance
 - Bridge strengthening
 - Traffic signal modernisation for sites on borough roads
- Outside of the LIP funding, there are also a number of initiatives within the Air Quality and Environment (AQE) portfolio.
- In response to the coronavirus pandemic, in partnership with London's boroughs we introduced a new range of initiatives under the programme "Streetspace", which include temporary cycle lanes and wider pavements to enable social distancing whilst walking and cycling.
- For all TfL funding streams, boroughs submit their 'value of work done' through a bespoke 'Borough Portal' which tracks spend against budget and allows TfL to monitor deliver across all 33 London boroughs.

Funding stream – 2020/21 full year	Original Budget £m	Revised Budget £m
Assets portfolio	28	34
Healthy Streets portfolio	102	111
AQE portfolio	11	10
Total	140	155

Funding is allocated in a number of different ways:

- Formula funding for LIP Corridors, based on need, defined by public transport (e.g. buses running on time), road safety (KSIs), congestion & environment (vehicle delay and CO2 emissions), and accessibility (e.g. deprivation index). This ensures funding is targeted to the areas of London where the need is greatest.
- Bids – e.g. Streetspace and Liveable neighbourhoods. Boroughs bid to TfL, and are scored on a number of outcomes. Successful bids are often schemes which deliver the widest number of benefits across a range of outcomes

Borough funding in the revised budget

Borough funding for 2020/21 in our revised budget is in excess of the level in our original budget

- Following a detailed planning exercise across 3 portfolios we have defined an ambitious budget which supports a wide range of outcomes for London's boroughs.
- The majority of 'business as usual' programmes were paused in the first half of the financial year (H1) due to the coronavirus pandemic, and are not due to restart until October (government funding allowing). Where possible we have targeted higher levels of delivery in H2 to mitigate these delays, however it has not been possible in all cases.
- We introduced new programme "Streetspace", delivering temporary and permanent schemes on our borough roads (note there is further TLRN Streetspace funding not shown in these figures), and we plan to continue this funding into H2.
- Streetspace replaced LIP funding in H1, however we plan to re-introduce this funding stream in H2. Liveable neighbourhood work will also restart in H2.
- Hammersmith bridge included the temporary bridge only in the original budget, as we assumed that the main bridge strengthening would be funded from an alternative source. We are planning to take the full set of works (temporary and main bridge) to the government as part of our TfL bid for H2 later this year.
- The funding for boroughs within the TfL investment programme is £15m higher than the original budget

Funding stream – 2020/21 full year	Original Budget £m	Revised Budget £m
Principal road maintenance	4	4
Hammersmith Bridge*	15	24
Other borough bridge strengthening	2	4
Traffic signal modernisation	6	3
Subtotal Assets portfolio	28	34
LIP corridors	63	23
LIP top slice	4	2
LIP major schemes	7	4
Liveable Neighbourhoods	16	9
Crossrail Complementary Measures	2	1
Borough Bus Priority	9	7
Healthy Streets Supporting Measures	5	4
Borough Cycling Support	2	2
Mini Hollands	5	-
Streetspace - temporary schemes	-	55
Streetspace - permanent schemes	-	13
Overprogramming	-12	-8
Subtotal Healthy Streets portfolio	102	111
Rapids	4	3
Go Ultra Low City	4	4
Mayor's Air Quality Fund	3	3
Subtotal AQE portfolio	11	10
Total	140	155

* Hammersmith bridge revised budget includes an allowance to build a temporary bridge and begin work on the stabilisation of the main bridge. Cost assessments are at an early stage, and will be updated in August 2020, and may be subject to change. The temporary bridge will not receive planning permission unless the funding for the main bridge has been identified.