Appendix 3

TfL Capital Strategy 2023

11 Background

11.1 The Prudential Code for Capital Finance in Local Authorities (2017) requires all local authorities including Transport for London (TfL) to prepare and publish a Capital Strategy. This 2023 Capital Strategy supersedes TfL's Capital Strategy published in previous years.

11.2 On 30 August 2022, we reached agreement with the government on funding until 31 March 2024, which keeps us on track to reach operational financial sustainability by April 2023.The agreement with government means that across the funding period, we are able to deliver more capital investment than previously budgeted, although still below the long-term level necessary to meet the priorities of national and regional government.

11.3 TfL plays a crucial role in driving growth and jobs across London and the UK, and equally we can support the government's national priorities to progress to a carbon-free and climate change resilient future and create wealth and employment that will level up the national economy. In the short term, we are seeking to maximise the benefits we can deliver within a constrained capital envelope, but it remains important to look ahead and identify what investment is needed to renew and improve the transport network in line with the Mayor's Transport Strategy (MTS) and in support of national priorities. Even with the uncertainty of long-term planning, this Capital Strategy will support us in being resilient to a wide range of potential future economic and transport demand outcomes.

11.4 Our Capital Strategy sets out the investment required to maintain safety and operability in the short term as well as the level to which investment should over time increase to achieve the aims of the MTS. The MTS, published in 2018, aims to encourage a shift from cars to active, efficient and sustainable modes of travel, with the central aim for 80 per cent of all trips in London to be made on foot, by cycle or using public transport by 2041. This Capital Strategy covers a 20 year period until 2042.

11.5 We will continue to make the case to government for confirmed capital funding over the long term to support the level of investment described here. We have already recognised the new realities brought about by the pandemic and adapted our capital investment to defer major growth schemes such as Crossrail 2 and the Bakerloo Line Extension, so we can focus on protecting core assets and services. The Capital Strategy reiterates our preferred level of investment from 2030 onwards, as set out in the Policy Consistent scenario of our 2021 Long-Term Capital Plan. In the first five years, this Capital Strategy is aligned to our GLA Budget submission, with investment assumed to increase through the late 2020s towards the necessary long-term level to support key MTS goals.

11.6 The Capital Strategy forms part of TfL's financial planning process and is based on a number of assumptions including the likely cost of the future capital programme and expectations in terms of funding. It is a planning exercise that will need to evolve as TfL's long-term funding position becomes clearer, and the Capital Strategy will be reviewed and developed year on year.

12 Benefits

12.1 Our Capital Strategy enables clearer and more transparent long-term decisions to be made on the investment needs of London. Many transport schemes take a long time to develop and deliver. A long-term view that reflects the current realities and charts a trajectory towards supporting London's post-pandemic recovery is critical to ensure enhancements to London's transport network are delivered when they are needed.

12.2 Our Capital Strategy sets out a pipeline of investment for 20 years. Giving clear sight of our investment aspirations over this period, subject to funding, is useful for a variety of audiences, including customers, London's businesses and our supply chain, who will be able to resource accordingly to meet the demand for construction in London.

12.3 Investment in transport infrastructure benefits many different groups, and it is appropriate that the funding packages for these investments reflect these various beneficiaries. These beneficiaries range from central government, through increased taxation on economic activity and property, all the way to local businesses and residents, who most directly benefit from improved transport links. Formulating full funding packages for large schemes is complex and takes time, as was the case with Crossrail 1. This Capital Strategy identifies schemes in the longer term that require such funding packages and discusses some options for funding them. Developing this work further will help to ensure such schemes are funded in a fair and sustainable way.

12.4 It is not possible to commit to long-term projects unless and until there is long-term funding available to ensure they can be completed. Therefore, a lack of certainty of funding can delay the commencement of essential improvements. A key benefit of the Capital Strategy is that it enables these funding requirements to be identified in sufficient time for them to be addressed.

13 Approach and Updates this year

13.1 Our Capital Strategy reflects the long-term priorities set out in the MTS and other Mayoral strategies, including the need to run services safely and reliably. This is set in the context of significant uncertainty on the level of available funding to TfL which will be determined by the pace and level of recovery of passenger demand and the long-term level of government funding.

13.2 This strategy is based on previous Capital Strategy, which was approved by the TfL Board in December 2021. Last year's Capital Strategy was based on the 2021 Long-Term Capital Plan (LTCP), which was approved by the TfL Board in July 2021. The late agreement of a new funding settlement this year and the ongoing uncertainty about longer-term funding means we have not refreshed our LTCP in 2022. We plan to complete a more fundamental update to our LTCP and Capital Strategy in 2023. Therefore, this year's Capital Strategy is broadly similar to last year's, though updated in the early years to reflect this GLA Budget submission and the assumptions behind it, with minor changes to later years where needed to be consistent with this. We have also updated the outturn figures for the significant changes in inflation over the period, but this does not impact the strategy in real terms

13.3 In the first five years of the strategy, the first two years are covered by our funding agreement with government with the remaining three years seeing us maximise achievement of outcomes as far as possible within our funding constraints.

13.4 The following five years broadly align to the principles of the Financially Constrained scenario of our LTCP ramping up our investment towards the key MTS goals. In the later years, our investment spend transitions into the Policy Consistent LTCP scenario which delivers closest to the MTS vision by 2041.

13.5 Due to the need to combine different scenarios to show a transition from a low rate of investment in the next five years towards the Policy Consistent level by the 2030s, there are some instances of spend profiles that, in a more stable planning environment, could be smoothed. As a result, this document is a high-level planning exercise rather than a detailed guide to very specific investment plans for the next 20 years. TfL regularly revisits its future forecasts and our understanding of future capital investment needs will develop and improve as the future environment becomes clearer.

13.6 Risk allowances have been updated and funding assumptions in the longer term are particularly indicative at this time, being subject to future discussions with the government. We hope that future Capital Strategies will be able to present greater clarity in this area.

14 Influences

14.1 Our Capital Strategy is directly influenced by:

14.1.1 the Mayor's policies and statutory strategies for London, including the MTS, the London Plan, and the London Environment Strategy

14.1.2 the UK's infrastructure requirements, as set out in the National Infrastructure Assessment

14.1.3 our near-term delivery plans and financial position, in particular the funding and conditions that were part of the funding agreement we reached with government on 30 August 2022

14.1.4 the condition and lifecycle of our asset base; and

14.1.5 underlying behaviour trends in London, as analysed in documents such as our annual Travel in London report.

14.2 Our Capital Strategy will be directly or indirectly influenced over time by:

14.2.1 central government policy, in areas such as direct infrastructure funding and devolution, as well as other specific policies such as the Transport Decarbonisation Plan.

14.2.2 external events with the potential to impact on the national economy, London's growth and/or our financial position, such as the war in Ukraine, the cost-of-living crisis, climate and ecological change and rising inflation levels. and

14.2.3 the Mayor's future decisions on allocation of devolved business rates to functional bodies of the Greater London Authority.

14.2.4 Availability of finance through bodies such as the UK Infrastructure Bank may affect availability of financing for our projects.

14.3 This Capital Strategy continues to set out the level of capital expenditure required in the long term to deliver the MTS, which was written and approved before the pandemic. We are experiencing a steady but ongoing recovery on our transport network as a result of the pandemic with ridership now increasing to around 80 per cent of pre-pandemic levels. Demand on our network interacts with transport trends in the wider south east and rest of the UK, for example through demand for commuting to/from London, which has been affected by the pandemic. Although the long-term effects of the pandemic will be complex and wide-ranging and impossible to fully predict at this time, the broad objectives of the MTS are almost certain to remain applicable in all potential future circumstances. Strategic aims such as increasing the shift to more sustainable ways of travel and improving the quality of public transport are central to securing a green recovery for London and supporting the national priorities of decarbonisation and economic growth.

14.4 Our financial planning since the pandemic has considered a range of potential demand scenarios to recognise the uncertainty around future travel demand. How the Mayor's transport policies in the MTS are implemented will need to be considered as the longer-term impacts of the pandemic on travel demand become clearer. As these long-term impacts become clearer, we will keep our future investment programme under review, and future Capital Strategies will further reflect any necessary changes resulting from new forecasts of future travel demand.

15 Policies

15.1 Our Capital Strategy is fully aligned to the Mayor's policies, the MTS policies and TfL's submission to the GLA's Budget on which the Capital Strategy is in part based.

15.2 Any activity in delivering the Capital Strategy will be executed in accordance with our statutory functions and approved policies. The most important of these policies and functions are outlined here.

15.3 In adherence with the Prudential Code for Capital Finance in Local Authorities (the 'Prudential Code') issued by CIPFA and last updated in 2021, the Capital Strategy references key principles underpinning our approval and governance processes for capital expenditure, commercial activity (including long-term liabilities) and treasury management. For detailed aspects, the documents referenced below and TfL Standing Orders are published on our website.

15.4 Capital spend on transport infrastructure and commercial/investment activity is budgeted for and included in our financial plans covering both the near- and medium-term. These plans are produced at certain points throughout the year and are approved by the Board (or, under delegation, the Finance Committee). We typically produce a medium-term plan that aligns to delivery of the overall MTS, and a more detailed budget, reflecting our near-term targets.

15.5 TfL's financial planning is balanced, integrating capital spend inclusive of commercial activity and investment strategies with the financing strategy for planned expenditure. Short-term extraordinary financial and funding assistance was provided by the government during the coronavirus pandemic, culminating in the funding agreement of August 2022. The 2021 government Spending Review confirmed £1 billion annual investment funding for London's transport system to 2024/25 through Retained Business Rates.

15.6 TfL's commercial activity plans are produced reflecting the Investment Management Strategy (IMS) for non-financial assets, which is updated at least annually and considered by the Finance Committee prior to submission to the Board for final approval.

15.7 The IMS outlines the strategic objectives of the commercial activities, long term direction of the investment programme, metrics to inform decision making framework, risk management policies and the use of independent and specialist experts.

15.8 TfL manages its investments in financial assets and its debt financing in line with its Treasury Management Strategy (TMS), which is updated at least annually and approved by the Finance Committee.

15.9 TfL's treasury management is directed and governed by the TMS comprising the Investment Strategy, Borrowing Strategy, Liquidity Strategy, Risk Management Strategy and Counterparty Exposure Limits. The TMS is implemented, operated and administered in accordance with the Treasury Management Policies and the TfL Group Policy Relating to the Use of Derivative Investments, both of which are approved by the Finance Committee.

15.10 Within the year, unbudgeted activity is monitored by various means and is explicitly captured through monitoring of the Prudential Indicators which are aligned to the TfL Group Budget and TfL's submission to the GLA Budget, and define an operational boundary and authorised limit of external debt including borrowing and long-term liabilities for the following year. The Prudential Indicators set an expected estimate of capital financing costs and capital expenditure for the following year. The Prudential Indicators are considered by the Finance Committee prior to submission to the Board for approval annually.

15.11 Financial guarantees granted by TfL are subject to approval by the Chief Finance Officer or higher authority according to the approvals matrix approved by the Board, as set out in TfL Standing Orders. Under section 161 of the Greater London Authority Act 1999, details of all financial guarantees so granted are disclosed annually in TfL's Annual Report and Statement of Accounts.

15.12 Outturn performance against the Board approved Prudential Indicators is presented to the Finance Committee who also monitor treasury management by verifying the TMS has been implemented and administered appropriately and are responsible for regular in-year monitoring of outturn performance against the TfL Budget.

Financial Investment Strategy

15.13 TfL maintains a low risk appetite consistent with the good stewardship of public funds, the overriding principle being the prioritisation of security before liquidity and liquidity before yield.

15.14 TfL considers the risk of its overall portfolio as well as individual investments, seeking to diversify its investments and has regard to the exposure to any one counterparty, country, industry, investment type, and credit. TfL targets allocating a portion of the portfolio across sovereign exposures, government agencies, financial institutions, and corporate instruments, subject to investments available at the time. TfL will seek to invest cash responsibly by investing in counterparties with strong Environmental, Social and Governance (ESG) performance and policies.

15.15 The maturity profile of investments reflects the expected cash flow requirements of TfL and accommodates for potential forecast variances. The maximum tenor of cash investments is one year.

15.16 TfL seeks to achieve year-to-date returns greater than the year-to-date average benchmark of the Sterling Overnight Index Average (SONIA) which is widely regarded as the appropriate benchmark for short-term cash investments and is used by professional investors such as Money Market Funds.

Borrowing Strategy

15.17 TfL's objective is to manage its borrowing in a manner that is affordable, sustainable and prudent, combining flexibility, security of access to funds, diversity of funding sources and value for money.

15.18 We have historically used borrowing to help finance investment in London's transport network. All of our borrowing is conducted in line with the provisions of the Prudential Code for Capital Finance in Local Authorities issued by the Chartered Institute of Public Finance and Accountancy.

15.19 The total value of outstanding borrowing and other long-term liabilities is maintained within an Authorised Limit agreed by the Mayor and approved annually by the Board (as required by the Local Government Act 2003) through a separate Prudential Indicators document.

15.20 Given the reduction in our income during the pandemic, borrowing has not made up a significant source of our recent funding, although we have continued to refinance the majority of our maturing debt. Borrowing may continue to support our capital investment programme in future, when we reach and maintain financial sustainability. Our latest business plan assumes around £1.2bn of incremental borrowing is anticipated across 2024/25 and 2025/26, taking our outstanding borrowing to £14.0bn by the end of 2025/26, although this will be subject to a further assessment of affordability at that time. Borrowing will also be considered where the capital spend results in a clear increase in recurring operating surplus that can service the operating and financing costs.

15.21 In addition to the Public Works Loan Board being a readily available source to raise funds, TfL seeks to maintain access to a range of other financing sources.

15.22 Transport Trading Limited Properties (TTLP), a subsidiary of TfL, has secured a £200m three-year revolving credit facility and will draw on this facility as required to support its capital programme. Since 1 April 2022, TTLP has been financially independent of TfL and the revolving credit facility is non-recourse to TfL.

15.23 The TMS sets a limit on the level of variable debt exposure acceptable to TfL. As debt service represents a relatively significant part of TfL's annual expenditure, a high level of certainty over the interest payment amounts is desirable to meet the balanced budget requirement.

16 20 Year Capital Ambition

16.1 Our Capital Ambition over the long term is to deliver the outcomes of the MTS, including supporting the three pillars of that strategy: Healthy Streets and healthy people, a good public transport experience, and new homes and jobs.

16.2 In the later years of this Capital Strategy, we hope to improve our funding position to enable an increase in the level of investment towards what is required to improve the reliability, capacity and resilience of London's transport network, supporting London's development into a safer and greener city.

16.3 We estimate that delivering this Capital Ambition beyond the next five years would require an average annual spend of £4.9bn in outturn terms (including inflation), of which £3.3bn is the required cost to renew and replace existing assets. The remainder is required to deliver the enhancements and extensions that will support quality of life in the city as well as critical improvements such as making progress on decarbonising the transport network, eliminating death and serious injury from the transport network and cleaning London's air. The impact of inflation over 20 years is significant, and this is a large driver of the higher costs shown here compared to the first five years of this Budget.

16.4 Our Capital Ambition can be divided into three substantial categories, detailed below. Average annual costs in outturn terms for years 6-20 are shown for each category.

Rolling Stock and Signalling replacement (*£1.2bn pa*)

16.5 Across our rail services, TfL owns more than 800 trains, as well as signalling systems across each rail service and line. Underground trains have a design life of around 40 years and require replacing towards the end of this period, although in some cases it is possible to extend this life depending on asset condition. Light rail vehicles have a shorter life. We are already contractually committed to replacement programmes on the Piccadilly line and DLR. Like trains, signalling systems also degrade over time and require replacing when the costs of maintaining them are no longer efficient compared to the costs and benefits of replacing them.

16.6 To optimise whole-life cost, rolling stock should be replaced at the end of its design life or as close to it as reasonably possible. Over the course of the next 20 years, this will mean replacing the rolling stock on the Piccadilly, Bakerloo, Central, Waterloo & City, Jubilee and Northern lines, as well as rolling stock on Trams and more recent DLR vehicles. We will require funding support to enable this programme of replacements to progress, as set out in our funding agreement with government.

16.7 When TfL replaces life-expired assets, the new rolling stock and signalling typically provide much greater functionality than the older assets being replaced. This category assumes that we replace our assets with modern equivalents – which would perform at a higher level than the assets they are replacing, some of which date back to the 1970s or earlier.

16.8 Rolling stock for London Overground and the Elizabeth line is leased and not owned by TfL, so is not included here.

16.9 For signalling, costs are included for a replacement system on the Piccadilly line by the early 2030s, replacement Bakerloo line signalling, incremental replacement projects across the Central line and DLR, and ongoing management of existing systems on all other lines. These investments would deliver performance, reliability and capacity benefits, supporting communities all along these important routes.

Renewals *(£2.1bn pa)*

16.10 Separate from the large-scale projects to renew and replace rolling stock and signalling, our ongoing capital renewals cover the remaining investment in our existing asset base to maintain its condition and performance. This covers assets ranging from London Underground track, stations, power and other enabling assets to highways, bridges, cycle routes, IT systems and many others.

16.11 We continually assess asset condition to ensure we can maintain safe and reliable services. Our latest funding agreement has allowed us to increase the level of renewals of our assets compared to our previous Budget, although this is still below the rate we need to achieve in the long term. Beyond the early years of this strategy, we have increased renewals spend towards what is required for a more stable long-term investment rate.

16.12 Investing in maintaining the condition of all of our assets is crucial to the long-term sustainability of London's transport network. It supports the high standards of safety, reliability and environmental performance that we must deliver, as well as enabling the best whole-life cost for maintaining assets to be achieved. Failing to renew assets at an acceptable level will lead to reduced operations to maintain safety which will impact the reliability of our services, our revenue and financial sustainability. It will also lead to more inspections, maintenance and higher costs in the long term for emergency works and sub-optimal repairs. This strategy sets out a path to returning renewals investment to a sustainable level in the long term.

Enhancements (£1.6bn pa)

16.13 Our latest funding agreement will allow us to deliver additional enhancements compared to our previous Budget. This, however, is still below the rate we need to achieve in the long term. Beyond the early years of this strategy, we hope to be able to build up activity to accelerate progress towards making London a safer city, with cleaner air and greener, more inclusive environments. This long-term investment will also be aimed at delivering a transport network that will unlock growth and support future housing and jobs growth, to maintain London's competitiveness as a world-leading city for living, working and visiting.

16.14 The Enhancements category includes investment priorities that are required to deliver the wide range of improvements set out in the MTS. This includes progressing towards London's ambitious goal of making London's transport network zero-carbon; increasing mode shift to walking, cycling and public transport; our Vision Zero ambition to eliminate death and serious injury from London's roads; and providing step-free access at London Underground and rail stations. Improving the transport network will also require investment in our technology to increase productivity and improve customer experience.

16.15 As well as the capital investment on TfL's own assets included in this category, TfL contributes to improvements on London's street network through its operating account, which funds work on borough roads through the Local Implementation Plans. As TfL cannot capitalise such costs due to them occurring on non-TfL assets, these sums are not included here.

16.16 This category also covers new-build schemes to extend existing lines or build completely new routes. We have been developing several such schemes that will unlock housing and growth across London, relieve crowding on the existing network and stimulate development in opportunity areas. None of these have been expected to commence construction in the next five years. We have adapted our capital plans to respond to our funding challenges by deferring these schemes and this presents a level of risk to delivery. Many schemes have developer and borough funding committed towards scheme development and/or delivery and delaying them will likely result in developers choosing to invest elsewhere, potentially outside London, losing significant third-party income to maximise economic growth in opportunity areas.

16.17 It remains crucial to focus on long-term demand and not solely on the volatility of our current circumstances. Network extensions require input from multiple stakeholders including the Mayor, developers, boroughs and other third-parties and due to their size and complexity they require bespoke delivery plans that take a long time to implement. We must plan now for longer-term enhancements that will enable us to prepare for a level of regeneration that will support recovery across London and the wider UK. It is not possible to commit to long-term projects unless and until there is long-term funding available to ensure they can be completed. Therefore, a lack of certainty of funding can delay the commencement of highly beneficial improvements.

16.18 The schemes included here are subject to funding becoming available to progress them. The schemes considered are a DLR extension to Thamesmead supporting up to 20,000 new homes along with bus transit links, the Bakerloo line extension to Lewisham which is assumed to commence in the 2030s and is aimed at improving connections within southeast London and into central London and the West London Orbital, a new rail service that would be part of the London Overground and improve connectivity across west and northwest London.

16.19 All planned schemes in this area will be dependent on third-party funding to support their affordability, reflecting the various beneficiaries such schemes deliver.

16.20 Many of these schemes would be likely to be delivered in cooperation with other organisations, but we have included the full estimated capital cost of each scheme at this stage as well as an assumption about funding (either from grant or other sources) that may be available to support such schemes. It is possible that TfL will not eventually incur the full capital cost as and when these schemes proceed to delivery.

16.21 There continues to be a strong case for developing Crossrail 2 as a major scheme for the longer-term development of London. At this stage TfL expects construction work on Crossrail 2 to commence outside the period covered by this Capital Strategy, but it remains an important long-term scheme for London. We continue to safeguard the route and are working with government to update this safeguarding. If a funding package can be identified, work on the scheme could be brought forward to begin within the period of this Capital Strategy.

17 20-Year Capital Investment Plan

17.1 All projects included in the Capital Ambition are included within the Capital Investment Plan.

17.2 While the MTS deliverables are clear, it is not always possible to be precise about the exact schemes being undertaken, particularly towards the later years of the Capital Strategy. Where specific projects and cost estimates are not available, costs have been included based on appropriate comparator projects. This means the costs outlined in this Capital Investment Plan are not precise and will be expected to change over time.

17.3 The Capital Investment Plan covers work on TfL's existing network and anticipated extensions to it. Other investment in London's transport infrastructure not owned by TfL would be required to accomplish the outcomes of the MTS, but such investment is not included here, as it would not be classified as TfL's capital investment. TfL will continue to make the case for all investment required to deliver the MTS to be progressed, regardless of who owns the assets. If there is any transfer of responsibility for assets in future, then future Capital Strategies would reflect any required investment in this new asset base.

17.4 Increasing activity from the current level to the levels of investment proposed for later years of this strategy would require increasing our delivery capacity. This would be best supported by confirmation of long-term funding that would allow us to commit to planning and developing schemes with our supply chain to allow us to achieve the level of delivery necessary to support a larger capital programme.

17.5 While we have a funding agreement with government taking us to March 2024, the uncertainty of funding over a longer period constrains TfL's ability to optimise investment delivery. It is also inconsistent with the commitments we need to make to projects that take many years to design and build and an asset portfolio that, in order to be efficient, requires a whole life approach to maintenance. Without a clear picture of future resources, TfL cannot plan for the future of the network, and the benefits it brings nationally, in an optimal way.

17.6 The combined Capital Investment Plan and Capital Funding Plan are presented in Table 7.

18 20-Year Capital Funding Plan

18.1 TfL is on course to reach a financially sustainable position by 2023/24. This will mean that capital renewals are funded by operating income. While the level of renewals will need to increase in later years of this strategy, our intention will be to continue to fund them within a balanced operating account.

18.2 The remaining categories contain the largest number of schemes, including all streets investment and much of our London Underground and Rail investment to renew, improve and grow the existing network. A steady and sustained level of capital improvements not only delivers efficiencies and reduces whole life costs but improves the reliability of our transport network.

18.3 A significant funding source for these enhancements is the capital element of retained business rates (formerly paid as an Investment Grant direct from central government). This is insufficient to cover all investment included here, particularly given the need to replace rolling stock and signalling on the Deep Tube lines dating back to the 1970s or earlier.

18.4 Our funding agreements with government have acknowledged that we would not be expected to fully fund the replacement of life-expired rolling stock and signalling. Accordingly, we have assumed some government contributions towards this investment during the years of our Business Plan, although we note there is no confirmation of this beyond March 2024.

18.5 We regularly review the amounts we can borrow, ensuring they are prudent, affordable and sustainable. We have not assumed any incremental borrowing until after we have reached financial sustainability. Around £1.2bn of incremental borrowing is anticipated across 2024/25 and 2025/26, which is subject to a further assessment of affordability at this time. We also plan to refinance the borrowing due to mature throughout the period of this plan. We have not included borrowing in later years of this strategy, as our operating account is not forecast that far into the future, so affordability is not able to be assessed.

18.6 Network extensions not only improve transport but also stimulate a step change in development in the areas they run through, and they are of strategic importance to the future of London and the wider South East. We must plan for the long-term demand and growth that London will need in the aftermath of the pandemic, to put it on the path to full economic recovery. Network extensions not only unlock growth, jobs and new homes but increase capacity and accessibility to jobs. They are a significant contributor to the national priorities of economic growth, levelling up and decarbonisation and not delivering them will likely put London and the wider UK's economic recovery at risk.

18.7 Due to the size, complexity and expense of these schemes, they require bespoke funding and delivery plans, as was the case for Crossrail 1 and the Northern Line Extension. Sources of funding for these projects could range from central government investment grant through to devolved income streams, contributions from developers and other forms of land value capture. Elements of some projects would be expected to be delivered by bodies other than TfL, such as Network Rail.

18.8 Given the early stages of development of these schemes, it is natural that their funding packages have not yet been fully agreed. This Capital Strategy includes funding where sources have already been identified.

18.9 Other possible funding sources towards this investment are considered in the next section.

Table 7: Capital Investment and Funding

All figures are adjusted for future forecasts of inflation

TfL's Capital Strategy £bn	2022/23 to 2026/27 £bn	2027/28 to 2031/32 £bn	2032/33 to 2036/37 £bn	2037/38 to 2041/42 £bn	Total Yrs 6-20	Average pa Yrs 6-20
Crossrail	(0.3)	-	-	-	-	-
Rolling Stock and Signalling Replacement	(4.5)	(4.7)	(7.3)	(6.2)	**(18.3)**	***(1.2)***
Enhancements	(1.7)	(5.0)	(7.6)	(11.1)	**(23.7)**	***(1.6)***
TTLP	(1.1)	(0.7)	(0.1)	(0.1)	**(1.0)**	***(0.1)***
Renewals	(3.9)	(8.4)	(10.7)	(11.9)	**(31.1)**	***(2.1)***
Total capital expenditure	**(11.5)**	**(18.8)**	**(25.8)**	**(29.3)**	**(74.0)**	***(4.9)***
Funding						
Capital Receipts	0.8	0.7	0.1	0.1	**1.0**	**0.1**
Revenue Contributions	8.5	14.3	17.2	19.1	**50.6**	**2.1**
Borrowing	1.5	-	-	-	-	-
Working Capital and Reserve movements	0.4	-	-	-	-	-
Capital Grants	0.0	1.5	0.1	0.8	**2.4**	**0.2**
Crossrail 1 Funding	0.3	-	-	-	-	-
Total funding	11.5	16.5	17.5	20.0	**54.0**	**3.6**
Overall additional funding required	**-**	(2.3)	(8.4)	(9.3)	**(20.0)**	(1.3)

19 Ambition Gap

19.1 Beyond the first five years, there is a gap between the Capital Ambition and identified funding sources. The long-term financial situation of TfL is uncertain and also subject to discussions with the GLA and the government, although in the longer term there is greater flexibility and the potential ability to identify new, sustainable sources of funding.

19.2 The main funding source for investment before the pandemic was the capital element of retained business rates (formerly paid as an Investment Grant direct from central government). This is insufficient to cover all investment included here, particularly given the need to renew our existing assets while also investing to improve and expand our network. Delivering all of the investments London needs to replace and upgrade its infrastructure will require further funding beyond that currently identified.

19.3 Various mechanisms exist for raising this additional funding, including:

a. **Further government support beyond the current business rates arrangements.** This could include a larger allocation to London, reflecting its contribution to the national economy, and a longer-term settlement enabling us to plan with more certainty for investments that will take many years to deliver. We continue to make the case to government, for confirmed capital funding to support the investment described in this strategy.

b. **Devolution of financial powers to London (and other cities).** London controls relatively little of the tax raised within it. Devolving powers over taxes such as stamp duty and vehicle excise duty could allow the cities of the UK to better manage their own growth.

c. **Generating an operating surplus and devoting this to investment.** We intend to achieve operational financial sustainability in 2023/24 and then generate a growing operating surplus from 2024/25 onwards. Any such surplus would be used to fund further investment.

d. **Generating new commercial income.** We generate income from property development, management of our media and advertising estate, and leveraging our expertise and intellectual property in markets in the UK and overseas. Any new commercial income (beyond that already planned) could potentially be reinvested in capital investment.

e. **Funding from new income sources.** We are considering and implementing new sources of operating income as part of the latest funding agreement conditions. This income is included within this strategy. Further new income sources identified in future could address the funding gap.

f. **Bidding for targeted support from central government.** This could come from existing sources such as the Housing Infrastructure Fund, Major Road Network funding, Public Sector Decarbonisation Scheme, or from new sources.

g. **DfT funding for Major Rolling Stock and Signalling Replacements** as acknowledged in the Funding Agreement

h. **Private financing on a case-by-case basis where it delivers value for money.** Such financing would generally have to be paid back over time through the operating account, so this option should only be considered as a short-term financing solution where circumstances justify it.

i. **Borrowing.** The borrowing set out in this strategy has been assessed against rigorous affordability criteria and we have not assumed any incremental borrowing until after we have reached financial sustainability. If our operating revenues increase sufficiently, it may be possible in future to use further borrowing to close short-term financing gaps, but this would only be appropriate to fund projects that will in the long run generate sufficient operating surpluses to service the interest on this borrowing. Borrowing could take place against revenues/funding sources that continue or begin beyond the 20-year period covered by this Capital Strategy. We have included the provision for non-recourse borrowing as part of a proposed plan for TTLP to deliver 20,000 homes over 10 years and we are in ongoing discussions with the government.

j. **Funding contributions from developers and other third parties including boroughs.** We seek such funding for all appropriate projects.

20 Risks to the Capital Investment Plan

20.1 TfL manages an identified set of strategic risks through a defined framework. Risks are reviewed on a regular basis and reported to the relevant committee of the TfL Board annually. Some particular risks relevant to the capital account over a 20 year horizon are noted here.

20.2 The long-term impacts of the pandemic on travel demand remain to be fully understood. It is likely that travel demand on our network will remain lower than it was pre-pandemic for many years to come. This creates numerous risks for the delivery and funding of future capital investment. These are the subject of ongoing analysis and review and TfL will continue to revise its plans as needed in coming years as the future environment becomes clearer. This section focuses on more ongoing risks, which in many cases relate to the pandemic but would also be true regardless of it.

20.3 Lack of long-term certainty of funding: It is not practicable to enter into long-term contracts for major projects until funding is determined, so delay in agreement of long-term funding can result in a delay in projects commencing. This risk can be best managed by early identification and sharing of funding requirements with stakeholders.

20.4 Approvals and consents risk: Most projects require cooperation including approvals from other parties which may or may not be forthcoming. This includes Transport and Works Act 1992 powers / hybrid bills for many projects.

20.5 Delivery Risk: delivery of a significant capital programme contains many risks, particularly where cost estimates are being made many years in advance of when projects would commence and in some cases with little detail available on which to base an estimate. Developments in the construction industry could lead to increases or decreases in the ease of delivering projects included here.

20.6 Risk of estimating future costs: It is very difficult to predict cost inflation over 20 years, and TfL faces both general inflation and differential construction cost inflation. There are also material short term uncertainties. A two per cent increase in inflation for next year, flowing through the 20 year plan would increase costs by £1.7bn.

20.7 Risk that pressures on TfL's operating account require funding to be diverted away from capital expenditure. This could include for issues such as inflation or other drivers of higher operating costs for necessary staffing and maintenance levels.

20.8 Risk related to asset condition: Due to affordability constraints, investment in our asset base in recent years has been less than is required for a sustainable long-term rate. This means asset condition has declined. This creates risks to performance, which we will have to manage through maintenance, inspections and if necessary restrictions. In the long term, there will be ongoing risk that worse asset condition will lead to higher required spend in the future..

20.9 A PESTLE analysis of the Capital Strategy identifies a number of risks listed below. Many of these could impact on TfL either positively or negatively.

- Political risks: TfL is part of the regional government of London, and also works with political stakeholders at local (borough) and national levels. Different policy priorities between these groups will impact on TfL in different ways, including the availability of funding to achieve these policy priorities. This may alter the need for and funding available for TfL capital projects. Over 20 years changes in these different political stakeholders are hard to forecast, though many of the priorities towards which TfL projects contribute tend to have cross-party support.
- Economic risks: Over 20 years many economic conditions and factors could change demand for TfL services, and hence indirectly funding available and the need to invest. TfL's revenues are particularly closely linked to the size of the London economy.
- Social risks: Known risks include reductions in the requirement for travel such as increases in home working, internet shopping and alternatives to conventional public transport such as private hire apps, ride sharing, car clubs and new mobility solutions. Such trends if accelerated could require a re-prioritisation of the strategy
- Technology risks: Known risks include cyber security, the impacts of Artificial Intelligence, autonomous vehicle technology and increased ability to work remotely – but there may be others yet to be invented. These could have favourable or unfavourable impacts on TfL and might challenge today's public transport model
- Legal Risks: TfL may be compelled to undertake new activity as a result of changes in law, which may increase costs of projects or require additional ones. Legal challenges may delay TfL activity
- Environmental Risks: The climate and ecological emergency creates a significant challenge for TfL across adaptation, resilience and decarbonisation. Increase risk of flooding, extreme weather events, drought and storms all need to be considered on our assets (including our natural assets) and network. Wider impacts due to the climate and ecological emergency include supply chain disruption, human and species migration and social unrest. We are improving our understanding of this requirement, but future climate challenges cannot be predicted with high confidence. Addressing the climate and ecological emergency will require us to invest in decarbonising our services, adapting to a changing climate and protecting and regenerating nature on our assets and through our supply chains, which we are already including in this Capital Strategy, but the specific requirements of this could change.

21 Appraisal

21.1 TfL's financial planning process involves input from TfL's Executive Committee, the Finance Committee and TfL Board at numerous points through the financial year.

21.2 Similarly, the MTS underwent a thorough review and approval process. This included substantial stakeholder engagement during its development followed by a fifteen-week public consultation in the summer of 2017. An Integrated Impact Assessment and substantial evidence base were also developed and published alongside the strategy. Taking into account comments received during this consultation, the final MTS was approved by the Mayor in February 2018, then considered by the London Assembly in March 2018.

21.3 The Capital Strategy has been developed in part from the 2021 Capital Strategy that was published for consultation as part of the Mayor's Consolidated 2022/23 Budget and approved by the TfL Board in December 2021 Its development has been largely informed by the 2021 Long-Term Capital Plan process in consultation with the TfL Executive Committee and TfL Board.

21.4 The TfL project and programme management methodology "Pathway" allows for key governance intervention points to ensure effective governance oversight and control throughout the project lifecycle. This includes our three-line assurance system, part of which involves monitoring and advice from the Independent Investment Programme Advisory Group. At a strategic level, monitoring and evaluation are in place across the MTS to ensure that the desired outcomes are delivered.

Statutory Chief Finance Officer sign off

This Capital Strategy is a planning document reflecting a high-level view at a time of considerable uncertainty. As understanding of funding and requirements of the network evolve in coming years, it will need to be kept under review. Affordability of the Capital Strategy over 20 years is dependent on TfL obtaining significant additional funding which cannot be considered certain at this point in time. The characteristics of the funding source(s) could influence the timing, cost and capitalisation of projects within the Capital Strategy. The nature of these large projects is such that they require a certainty of funding over a number of years prior to commencement. The risks noted above are a comprehensive but not exhaustive list. Significant known risks have been listed, however, it is possible that unpredictable future events and opportunities would result in an amendment to the TfL Capital Strategy. Readers of the Capital Strategy should note the considerable risk in estimating costs up to 20 years into the future, especially for novel projects.