

# Agenda

## Meeting: Programmes and Investment Committee

**Date: Wednesday 19 May 2021**

**Time: 10.00am**

**Place: Microsoft Teams**

### Members

Prof Greg Clark CBE (Chair)

Dr Nelson Ogunshakin OBE (Vice-Chair)

Heidi Alexander

Mark Phillips

Dr Nina Skorupska CBE

Dr Lynn Sloman MBE

Ben Story

The 2020 regulations that provided the flexibility to hold and take decisions by meetings held using videoconference expired on 6 May 2021.

While lockdown and social distancing measures remain in place to manage the coronavirus pandemic, Members will attend a videoconference briefing held in lieu of a meeting of the Committee. Any decisions that need to be taken within the remit of the Committee will be discussed at the briefing and, in consultation with available Members, will be taken by the Chair using Chair's Action. A note of the decisions taken, including the key issues discussed, will be published on [tfl.gov.uk](https://tfl.gov.uk).

As far as possible, TfL will run the briefing as if it were a meeting but without physical attendance at a specified venue by Members, staff, the public or press.

- Papers will be published in advance on [tfl.gov.uk How We Are Governed](https://tfl.gov.uk/How-We-Are-Governed)
- Apart from any discussion of exempt information, the briefing will be webcast live for the public and press on [TfL's YouTube channel](https://www.youtube.com/channel/UCR6B3jN7qV99pD5vY1oXV0).
- A guide for the press and public on attending and reporting meetings of local government bodies, including the use of film, photography, social media and other means is available on [www.london.gov.uk/sites/default/files/Openness-in-Meetings.pdf](https://www.london.gov.uk/sites/default/files/Openness-in-Meetings.pdf).

## **Further Information**

If you have questions, would like further information about the meeting or require special facilities please contact: Jamie Mordue, Senior Committee Officer; email: [v. JamieMordue@tfl.gov.uk](mailto:JamieMordue@tfl.gov.uk).

For media enquiries please contact the TfL Press Office; telephone: 0343 222 4141; email: [PressOffice@tfl.gov.uk](mailto:PressOffice@tfl.gov.uk)

Howard Carter, General Counsel  
Tuesday 11 May 2021

**Agenda  
Programmes and Investment Committee  
Wednesday 19 May 2021**

**1 Apologies for Absence and Chair's Announcements**

**2 Declarations of Interests**

General Counsel

**Members are reminded that any interests in a matter under discussion must be declared at the start of the meeting, or at the commencement of the item of business.**

**Members must not take part in any discussion or decision on such a matter and, depending on the nature of the interest, may be asked to leave the room during the discussion.**

**3 Minutes of the Meeting of the Committee held on 3 March 2021  
(Pages 1 - 14)**

General Counsel

**The Committee is asked to approve the minutes of the meeting of the Committee held on 3 March 2021 and authorise the Chair to sign them.**

**4 Matters Arising and Actions List  
(Pages 15 - 18)**

General Counsel

**The Committee is asked to note the updated actions list.**

**5 Use of Delegated Authority  
(Pages 19 - 22)**

General Counsel

**The Committee is asked to note the paper.**

## **6 Investment Programme Report - Quarter 4 2020/21**

(Pages 23 - 76)

Director Major Projects, Managing Director London Underground and TfL Engineering,  
and Managing Director Surface Transport

**The Committee is asked to note the paper and exempt supplementary information on Part 2 of the agenda.**

## **7 Independent Investment Programme Advisory Group Quarterly Report**

(Pages 77 - 82)

General Counsel

**The Committee is asked to note the Independent Investment Programme Advisory Group's Quarterly Report and the Management Responses and exempt supplementary information on Part 2 of the agenda.**

## **8 TfL Project Assurance Update**

(Pages 83 - 86)

General Counsel

**The Committee is asked to note the paper and exempt supplementary information on Part 2 of the agenda.**

## **9 London Underground Four Lines Modernisation**

(Pages 87 - 90)

Director Major Projects

**The Committee is asked to note the paper and exempt supplementary information on Part 2 of the agenda.**

## **10 London Underground Enhancements**

(Pages 91 - 104)

Managing Director London Underground and TfL Engineering

**The Committee is asked to note the paper and approve Authority.**

## **11 Members' Suggestions for Future Discussion Items**

(Pages 105 - 110)

General Counsel

**The Committee is asked to note the forward plan and is invited to raise any suggestions for future discussion items for the forward plan and for informal briefings.**

## **12 Any Other Business the Chair Considers Urgent**

**The Chair will state the reason for urgency of any item taken.**

## **13 Date of Next Meeting**

Wednesday 21 July 2021 at 10.00am

## **14 Exclusion of the Press and Public**

**The Committee is recommended to agree to exclude the press and public from the meeting, in accordance with paragraphs 3 and 5 of Schedule 12A to the Local Government Act 1972 (as amended), in order to consider the following items of business.**

### **Agenda Part 2**

## **15 Investment Programme Report - Quarter 4 2020/21**

(Pages 111 - 122)

**Exempt supplementary information relating to the item on Part 1 of the agenda.**

## **16 Independent Investment Programme Advisory Group Quarterly Report**

(Pages 123 - 144)

**Exempt supplementary information relating to the item on Part 1 of the agenda.**

**17 TfL Project Assurance Update**

(Pages 145 - 150)

**Exempt supplementary information relating to the item on Part 1 of the agenda.**

**18 London Underground Four Lines Modernisation**

(Pages 151 - 158)

**Exempt supplementary information relating to the item on Part 1 of the agenda.**

# Agenda Item 3

## Transport for London

### Minutes of the Programmes and Investment Committee

**Teams Virtual Meeting**  
**10.00am, Wednesday 3 March 2021**

#### **Members**

Professor Greg Clark CBE (Chair)  
Dr Nelson Ogunshakin OBE (Vice-Chair)  
Heidi Alexander  
Mark Phillips  
Dr Nina Skorupska CBE  
Dr Lynn Sloman MBE  
Ben Story (up to Minute 12/03/21, inclusive)

#### **Executive Committee**

Andy Byford	Commissioner
Howard Carter	General Counsel
Stuart Harvey	Director of Major Projects
Shashi Verma	Chief Technology Officer and Director of Customer Experience (for Minutes 12/03/21 and 13/03/21)

#### **Staff**

Alexandra Batey	Director of Investment Delivery Planning
Andrea Clarke	Director of Legal
Patrick Doig	Finance Director, Surface Transport and Major Projects
Lorraine Humphrey	Head of Project Assurance
Tony King	Group Finance Director
Rachel McLean	Finance Director, London Underground
Jonathan Patrick	Chief Procurement Officer
David Rowe	Head of Surface Major Projects and Renewals Sponsorship
Caroline Sheridan	Director of TfL Engineering Delivery
Shamus Kenny	Head of Secretariat
Jamie Mordue	Secretariat Officer

#### **Independent Investment Programme Advisory Group (IIPAG) Attendance**

Alison Munro	Chair, IIPAG
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## **01/03/21 Apologies for Absence and Chair's Announcements**

There were no apologies for absence from Members. Clare Moriarty DCB, Government Special Representative, was unable to attend the meeting. Simon Kilonback, Chief Finance Officer, Andy Lord, Managing Director London Underground and TfL Engineering, and Gareth Powell, Managing Director Surface Transport, were unable to attend the meeting.

The Chair welcomed everyone to the meeting. The meeting was being broadcast live on YouTube, except for the discussion of the information on Part 2 of the agenda, which was exempt from publication.

It was noted that Financial Authority was provided through the two-year Budget for 2021/2022 and 2022/23, approved by the TfL Board on 9 December 2020. In respect of Authority granted by the Committee at the meeting that related to commitments outside of this period, provision would need to be made in future Budgets and Business Plans.

On behalf of the Committee, the Chair wished Clive Walker, Director of Risk and Assurance, well in his retirement and thanked him for his significant contribution to TfL's robust governance processes.

To reflect TfL's focus on safety, the Chair invited Members to raise any safety issues within the remit of the Committee at the start of the item or under Matters Arising. Any other safety issues could be discussed with the General Counsel or an appropriate member of the Executive Committee after the meeting.

## **02/03/21 Declarations of Interests**

Subject to approval by the BAM Annual General Meeting (AGM) on 14 April 2021, Dr Nina Skorupska CBE would be appointed to the Royal BAM Group Supervisory Board. Her declaration had been updated on the TfL website and would be updated again, following the decision of the Royal BAM Group AGM. Dr Skorupska would not receive exempt papers, nor take part in any Committee of Board discussions, relating to members of the Royal BAM Group, which included Civil BAM Nuttall and BAM Construct UK.

Members confirmed that their declarations of interests, as provided to the Secretariat and published on [tfl.gov.uk](http://tfl.gov.uk), were up to date and there were no interests to declare that related specifically to items on the agenda.

## **03/03/21 Minutes of the Meeting of the Committee held on 11 December 2020**

**The Committee approved the minutes of the meeting held on 11 December 2020 as a correct record. The minutes would be provided to the Chair for signature at a future date.**



## **04/03/21 Matters Arising and Actions List**

Howard Carter introduced the paper, which set out progress against actions agreed at previous meetings of the Committee.

**The Committee noted the actions list.**

## **05/03/21 Use of Delegated Authority**

Howard Carter introduced the paper, which provided an update on the use of delegated authority by the Committee, through the use of Chair's Action or of Procurement Authority and Programme and Project Authority, in respect of matters within the Committee's remit, granted by the Commissioner and the Chief Finance Officer.

Since the last meeting of the Committee, there had been one decision taken by Chair's Action, relating to the Surface Transport Infrastructure Construction Framework.

The Commissioner had approved Procurement Authority for the Taxi and Private Hire Re-let and Modernisation programme, and for the DLR Beckton Depot Upgrade (Northern Sidings). The Chief Finance Officer had approved Procurement Authority for the Digital Traffic and Parking Enforcement Agreement, and for the purchase of components for the London Underground Fleet Heavy Overhaul.

There had been no Mayoral Directions to TfL within the Committee's remit.

**The Committee noted the paper.**

## **06/03/21 Investment Programme Report – Quarter 3 2020/21**

Stuart Harvey introduced the paper, which set out the progress and performance in Quarter 3 2020/21 of a range of projects that will deliver world-class transport services to London.

There was strong performance on safety and reporting, and TfL had worked well with its suppliers during the coronavirus pandemic to ensure there were strong control measures in place. Productivity levels had increased following the safe restart. The in-year performance against 2020/21 strategic milestones remained strong, with all complete and either green or amber RAG rated.

The next section of signalling in the Four Lines Modernisation Programme was on target to go live the following weekend, following the completion of a safety review. Good progress was being made on the later migration areas, in particular at Neasden. A deep dive on the estimated final cost (EFC) was underway and would be submitted to the next meeting of the Committee. There was close collaboration between London Underground and the Major Projects Directorate to factor in the risks to the operational budget.

Speed uplift work had been completed on the Northern Line Extension (NLE) at Kennington and Stockwell, where new track was laid and a transformer replaced, respectively. Key systems, such as escalators, lifts and CCTV, had been commissioned and system integration and trial operations were planned for summer 2021.

The EFC for the Docklands Light Railway (DLR) Rolling Stock and Systems Integration had been reduced, as a result of the award of the northern sidings contract and mitigation of associated risks. Good progress had been made on the new DLR trains and an agreement had been reached with Thales on the integration of the signalling.

The EFC for the Piccadilly Line Upgrade Programme had also been reduced, as more efficiencies were realised. There would soon be the final design freeze for the new Piccadilly line trains and Siemens had begun mobilisation of the production line at Goole.

All piling work on the Barking Riverside Extension had been completed and the project had been de-risked and had moved into the system integration phase. Signalling work planned for Easter 2020 was completed in January 2021, having been delayed owing to the coronavirus pandemic. TfL had a good relationship with Network Rail and there was confidence that the project would be completed within its EFC. Lessons were being learned from other projects, such as NLE, and the new commercial arrangement would help with further collaboration.

Alexandra Batey told the Committee that the London Underground Stations Programme was progressing well, most notably on the foundations and steel work at Tottenham Hale station and the enabling works at South Kensington station to implement and safeguard planning permission.

Step-free access would be delivered at a further six stations by the end of 2021. Most recently Amersham station became step-free in February 2021.

Five key milestones on Track Renewals had been achieved in the previous quarter and 2,700m of critical track reconditioning work had been completed, which would increase safety and reliability.

For Surface Transport, upgraded or new cycling infrastructure, pedestrian space and school streets continued to be provided through the Healthy Streets Programme and the London Streetspace Programme. Critical safety schemes that had been paused in March 2020 were being remobilised. Leaveeave to appeal was being sought in relation to the outcome of the judicial review on the A10 Bishopsgate guidance.

A traffic switch over was completed at Old Street Roundabout in January 2021, which enabled critical construction work for the new station entrance, passenger lifts and new public space.

Waterproofing and expansion joints had been replaced on Vauxhall Bridge at the end of 2020 and the final works at Ardleigh Green Bridge were completed over the Christmas 2020 period.

Members welcomed the updated format of the report and noted that enhanced tracking of EFC would be provided from the report on Quarter 1 of 2021/22.

The Committee noted that, as a result of the finalisation of the Mayor's Budget, an additional £4.2m had been made available for the van scrappage scheme and car and motorcycle scheme to aid compliance with the Ultra Low Emission Zone, which supported the Air Quality targets in the Mayor's Transport Strategy.

Members congratulated the team on the progress made in delivering the Direct Vision Standards Scheme and welcomed its implementation as an important step in making London's roads safer.

As part of the discussion on the decision items elsewhere on the agenda, the Committee noted that the organisational and governance changes in programmes was helping to align asset strategies across TfL to ensure there were synergies and appropriate investment decisions.

**The Committee noted the paper and exempt supplementary information on Part 2 of the agenda.**

## **07/03/21 Independent Investment Programme Advisory Group Quarterly Report**

Lorraine Humphrey introduced the paper and the supplementary information on Part 2 of the agenda. The paper provided an update on the work undertaken by the Independent Investment Programme Advisory Group (IIPAG) since the last meeting of the Committee on 11 December 2020.

IIPAG's scope now covered third line assurance for Crossrail and it was making appointments to a Sub-Group to lead this work. A review of Crossrail's first and second lines of defence had been initiated, and targeted enquiries were being made on preparedness for Trial Running.

Cross-cutting work progressed. The outcome of a review of the TfL Programme Management Office (PMO) and the plans for completing the PMO change programme would be reported to the next meeting. The review of Procurement and Supply Chain was being finalised. IIPAG was also finalising the scope of a review on the form of contract choice, tender outcomes and issues with contractors as part of contract management post award, with the aim of starting fieldwork in the next month.

IIPAG had begun its annual review on benchmarking, as part of the Efficiency pillar of the value for money workstream. The Terms of Reference for a follow up review on value for money were due to be agreed.

Members noted the IIPAG recommendation that submissions to the Committee report how scope, schedule, cost and outcomes compared with what was forecast and approved at the previous annual submission and how any changes affect the expected time and cost to complete the programme. This was being considered as part of the current management review of the submissions to the Committee, which

sought to ensure they provided useful information and included a clear focus on demonstrating value for money. A table would show in-year and lifecycle changes to costs and milestones in projects.

In a response to questions from Members, the Committee was advised that benefits management was part of the Effectiveness pillar of the value for money workstream; work was underway to look at how benefits from delivered programmes were monitored and assessed and how this could better inform future business cases and forward planning. The Director of Investment Delivery Planning would talk to the Chair of IIPAG to determine how IIPAG could support the development of this approach.

The recruitment of IIPAG members was moving ahead. Members were invited to submit nominations for longlisting.

The IIPAG work programme for 2021/22 would be submitted to the meeting of the Audit and Assurance Committee in June 2021, when the funding position and investment programme should be clearer. Suggestions from both the Committee and the Audit and Assurance Committee on areas for our cross-cutting work were welcomed.

The positive outcome and suggestions from the IIPAG survey of its stakeholders, including members of the Committee and the Audit and Assurance Committee, was noted.

**The Committee noted the report and the exempt supplementary information on Part 2 of the agenda.**

## **08/03/21 TfL Project Assurance Update**

Lorraine Humphrey introduced the paper and the supplementary information on Part 2 of the agenda, which provided an update on Project Assurance work undertaken between 15 November 2020 and 23 January 2021.

TfL Project Assurance had highlighted issues relating to resourcing, ensuring that value for money was consistently in business cases and the quantitative assessment of risks.

Members noted the good progress made in reducing the number of overdue recommendations from the Independent Investment Programme Advisory Group and Project Assurance. Two of the three outstanding critical recommendations, relating to new Routemaster refurbishment, had been closed since the publication of the papers and the final one was progressing, relating to commercial resourcing on the Barking Riverside Extension.

**The Committee noted the paper and the exempt supplementary information on Part 2 of the agenda.**

## **09/03/21 London Underground Renewals Programme**

Alexandra Batey introduced the paper, which provided an update on the progress on delivery of essential renewals across Buildings, Civils, Power and Electricals to ensure London Underground (LU) assets remained safe and operable, through the delivery of prioritised workbanks to improve asset condition.

Following a recommendation from the Independent Investment Programme Advisory Group, the paper requested the transfer of the relevant existing Programme and Project Authorities from the LU Station Renewals and Enhancements and Power Cooling and Energy Programmes to the new LU Renewals Programme. The LU Signalling and Control Programme would be included as part of the LU Renewals Programme at the next annual submission.

The new Programme structure would ensure greater clarity of reporting on the state of core assets and the asset renewals programme, which enabled alignment with the Long Term Capital Plan and delivery strategy.

Assets included in the Programme were safety critical and allowed TfL to operate the railway safely and reliably. The additional Authority requested would be targeted toward buildings and stations asset renewals and focus on staff welfare, depots, Platform Train Interface CCTV and critical extension of life works for Supervisory Control and Data Acquisition systems.

Work was prioritised on criticality and safety mitigations were in place for works that had been deferred, however degradation of assets did risk operational performance. The deferral of work owing to the coronavirus pandemic had an impact on achieving the desired level of investment, as set out in the Long Term Capital Plan, and future business plans would need to address the rising renewals requirement. It was noted that delays in investment in assets were compounded and it would take longer than the initial delay to recover.

There were opportunities to consolidate larger work packages to drive greater efficiencies and value for money.

Future submissions would include information on benchmarking, specifically the costs for required renewals compared to other networks around the world.

The Director of Investment Delivery Planning and Director of TfL Engineering Delivery roles operated on a pan-TfL basis and this allowed more joined up asset strategies. As a result, TfL was better able to articulate where risk was held. Better lines of sight from investment into renewals helped to create an asset database that would progressively mature.

The Safety, Health and Environment Directorate provided a focus on safety and the environment. Work related to the environment and sustainability would be focussed into a programme, to provide increased visibility. Environmental and sustainability outcomes formed a big part of all programmes and were taken into consideration in the Long Term Capital Plan.

The Committee noted the paper, and:

- 1 approved the creation the London Underground (LU) Renewals Programme;**
- 2 approved the transfer of the relevant existing £245.8m Programme and Project Authorities from the LU Station Renewals and Enhancements and Power Cooling and Energy Programmes to the new LU Renewals Programme;**
- 3 approved additional Programme and Project Authority of £39.4m for the LU Renewals Programme, to continue this essential renewal programme bringing total authority to £285.2m to 2024/25;**
- 4 noted that the matters for which Authorities are sought above include commitments that extend beyond the period of the Business Plan and Budget approved by the Board on 9 December 2020 and provision will, therefore, need to be made for those commitments in future Business Plans and Budgets; and**
- 5 noted that LU Signalling and Control will become part of the LU Renewals Programme at the next annual submission.**

## **10/03/21 London Underground Fleet and Access Programmes**

Alexandra Batey introduced the paper, which provided an update on the London Underground (LU) Renewal and Enhancements Fleet and Access Programmes (with the Access Programme incorporating projects from the former Engineering Vehicles Programme).

The Programmes ensured the compliance of passenger trains and engineering vehicles with safety standards and legislation, securing expected reliability and availability levels, and the capability to cater for future forecast demands of the network.

Since the last submission, the Programmes had performed well and met objectives, despite delays due the coronavirus pandemic. The Authority requested would help to deliver significant works across the Central line, Bakerloo line and Jubilee line fleets, in addition to works on the Metropolitan line Rail Adhesion Train.

The coronavirus pandemic continued to cause challenges, in terms of its impact on TfL staff and upon the supply chains, however there were opportunities to capitalise on close working with commercial teams for new vehicles, the mechanisation of processes and purpose design facilities that reduced maintenance.

TfL Project Assurance noted that there was an increase in the estimated final cost of the Central Line Improvement Programme and further work would be undertaken on this to ensure there were no unknown issues.

The Committee noted that TfL had worked on prioritisation across the investment programme. Where TfL was required to make reductions to capital expenditure

(capex), funding for the safety critical renewals would be prioritised over enhancements. It was recognised that this would have an impact on long term strategic goals, such as improving air quality and capacity. Renewals formed a large part of the investment programme and any required reduction in capex scenario would result in a deferral of renewals.

The Long Term Capital Plan set out the minimum investment needed to establish a good position for risk management of assets. If TfL was unable to make this level of investment, there would be a build-up of renewals requirements and an increase in costs over the lifetime of the assets. An increase in the renewals requirement also meant it was more likely to have unplanned closures and service reductions. Tony King told the Committee that the criticality of the allocation of funding to renewals was being articulated to Government. The Commissioner reiterated that TfL would not agree to put safety of passengers and staff and the state of good repair of the existing network at risk.

**The Committee noted the paper and:**

- 1 approved additional Programme and Project Authority of £4.5m outturn including risk, for the Renewal and Enhancement Fleet Programme, bringing the total Programme and Project Authority to £626.6m, to complete a new train modification workshop in Acton and to begin a feasibility to address cracking of bogie underframes on the Jubilee line fleet;**
- 2 approved additional Programme and Project Authority of £8.5m (outturn including risk) for the Access Programme, bringing the total Programme and Project Authority to £76.0m, to progress the remote track monitoring project, bring into use a mechanised track renewals vehicle and to progress modification works at Ruislip depot; and**
- 3 noted that the matters for which Authorities are sought above include commitments that extend beyond the period of the Business Plan and Budget approved by the Board on 9 December 2020 and provision will, therefore, need to be made for those commitments in future Business Plans and Budgets.**

## **11/03/21 Surface Transport Asset Renewals Programme**

Alexandra Batey introduced the paper, which provided an update on the progress of the Programme since the last submission and future outcomes. The Programme maintained the safety, operability and reliability of highway, traffic, bus, coach and river assets through a prioritised programme of planned and reactive renewals.

There was a greater level of maturity in the Surface Transport Asset Renewals Programme than the London Underground Renewals Programme, in terms of the measurements of good state of repair.

The two-year reduction in asset renewals funding in Surface Transport had increased the number of temporary closures and interim measures on the network, such as the temporary traffic restrictions at the Rotherhithe Tunnel. In turn this

placed pressure on the operational budget and increased customer dissatisfaction level. TfL was able to reduce asset renewals funding because the Surface assets were in a good state of repair, but it was noted that it would take seven to eight years to reduce the number of interim measures needed to ensure the network was safe.

Planned investment was reduced in April 2020, in response to the coronavirus pandemic. Most programmes were paused but safety critical work continued, such as the fire systems renewal at Victoria Coach Station.

There were three options for Programme delivery in 2021/22: do minimum; moderate; and high ambition. The moderate option enabled TfL to achieve the Mayor's Transport Strategy themes and longer-term strategic goals but at a slower rate.

Members asked whether, in the event that a funding deal with Government did not allow TfL to fully invest in asset renewals across the Surface Transport Asset Renewals Programme, London Underground Fleet and Access Programmes, and London Underground Renewals Programme, funding could be moved between programmes. A pan-TfL investment prioritisation of investment had been conducted and safety would be at the forefront of every decision. The prioritisation process had become more refined and was underpinned by the work done to better understand asset conditions. The Commissioner acknowledged that TfL would likely need to make tough decisions but, as funding had still not been agreed, it was difficult to provide further information.

In relation to this and previous items on the agenda, Members discussed the importance of planned renewals to ensure both safety and the efficient use of resources, as deferral often built up greater costs. Members requested a Board briefing on the potential outcome of some of the capital funding scenarios being raised in the discussions with Government on TfL's long-term funding.

**[Action: Simon Kilonback]**

**The Committee noted the paper and:**

- 1 approved additional Programme and Project Authority of £198m for delivery of the Surface Transport Assets Renewal Programme through to 2022/23;**
- 2 noted that Procurement Authority in respect of the various elements of the Surface Transport Assets Programme will be sought at officer level in accordance with Standing Orders; and**
- 3 noted that the matters for which Authorities are sought above include commitments that extend beyond the period of the Business Plan and Budget as approved by the Board on 9 December 2020 and provision will, therefore, need to be made for those commitments in future Business Plans and Budgets.**



## **12/03/21 Surface Technology Programme 2021/22 and 2022/23**

Alexandra Batey introduced the paper, which provided an update on the activity in the Programme and the proposed activity in the coming years. Over 75 per cent of the Authority would fund renewals of existing systems used across Surface Transport, with the remainder funding new systems in priority areas like staff safety and road safety. While the Authority requested was for enhancements and renewals, the majority of enhancements were in relation to the replacement of critical assets.

The Programme had delivered well in the previous year, with some underspend due to accounting treatment and the removal of some projects. There was a high level of over programming, which would decrease further as the Programme matured.

The link between the technology strategy and the assets had become clearer. Fourteen new projects had been started and most projects would move from the planning stage to the delivery stage in the coming years. The projects would focus on the critical system requirements and allow TfL to enter into necessary contractual commitments. TfL Project Assurance would continue to look at the level of resource allocated to the new projects.

In 2021/22, an invitation to participate in dialogue around iBus2 procurement would be issued to provide back office support, allow greater real time information where a bus could not follow its normal route and to virtually link traffic lights at more junctions. TfL would also look to award contracts relating to deployable enforcement cameras, which could be flexibly deployed to improve enforcement coverage in order to improve safety, reduce collisions and improve bus reliability.

**The Committee noted the paper and exempt supplementary information in the paper on Part 2 of the agenda, and:**

- 1 approved £109.9m Programme and Project Authority for the Surface Technology Programme, of which £40.7m would fund activity in the Financial Year 2021/22 and £69.2m would fund commitments in subsequent years within the total £407.2m forecast cost for 2020/21 – 2024/25;**
- 2 noted that the matters for which Authorities are sought above include commitments that extend beyond the period of the Business Plan and Budget as approved by the Board on 9 December 2020 and provision will, therefore, need to be made for those commitments in future Business Plans and Budgets;**
- 3 approved the transfer of the iBus2 project into the Programme from the Technology and Data Programme, with Programme and Project Authority of £2.1m for 2021/22; and**
- 4 noted that Procurement Authority for the various initiatives will be sought at officer level in accordance with Standing Orders.**

## **13/03/21 Technology and Data 2021/22 and 2022/23**

Shashi Verma introduced the paper, which provided an update on the Technology and Data (T&D) Investment Programme. The past year had shown TfL's ability to use technology in challenging circumstances, with 16,000 staff working from home and using technology to maintain productivity.

In terms of value for money, the Programme had delivered strongly in the past, for example the cost of fare collection had reduced by nearly 50 per cent, which amounted to around £400m of annual savings. In addition, the Programme had helped to deliver a further £130m of operating costs. TfL's in-house technology capability allowed the delivery of capital projects at a lower cost than could be realised through the market.

Technology capital and operating costs were reduced in 2016, through cost reduction and delays to investment. Despite challenging funding discussions, technology expenditure could not be cut or delayed further, particularly as it could drive further efficiencies in other areas of TfL. As the digital transformation of TfL increased, the Programme would require an appropriate level of resource.

The total Programme and Project Authority temporarily exceeded Financial Authority for Financial Year 2021/22, due to changes to the phasing of the Programme since the 2020 TfL Budget was approved in December 2020; this was corrected in the 2021/22 Budget to be considered by the Board on 16 March 2021. Alignment of authorities would be achieved before entering the Financial Year 2021/22 and prior to drawing down any of the Programme and Project Authority approved for that year. The Authorities approved would be revisited if the 2021/22 Budget was not approved by the Board.

The Authority requests excluded activities where T&D was accountable for delivery but where authorities were secured separately; and the Home Office funded Emergency Services Network programme and TfL's Public Cellular Network project, which were approved separately by the Committee in December 2020.

TfL was working to treat data as more of an asset and to articulate the need for good systems infrastructure in the capital investment programme. It was acknowledged that TfL could do more in this area and that the value of data had come to the fore over the last year; TfL was able to take depersonalised data to better understand how, why and when certain groups of Londoners were using the network and this was used to aid national government decision making.

Members thanked staff for the impressive work to keep TfL technology systems functioning, as the majority of staff worked from home.

The Committee noted that TfL had a history of designing bespoke systems but that it was also important to try to leverage emerging off-the-shelf platforms and tools. Shashi Verma told Members that the Technology team had a strong understanding of what was available in the market and that TfL often had to combine various products to provide TfL specific solutions. Opportunities for the leverage of TfL's intellectual property were raised through a steering group with Commercial Development. TfL had sold its bespoke technology in the past, for example the

Oyster card technology, and would continue to look for further opportunities, such as the technology relating to road traffic signalling.

**The Committee noted the paper and exempt supplementary information on Part 2 of the agenda and:**

- 1 approved an increase in Programme and Project Authority of £9.1m in Financial Year 2021/22 (bringing the total up to £81.5m) and additional Programme and Project Authority of £104.8m in Financial Year 2022/23 resulting in total additional project spend Programme and Project Authority to £111.9m (which sums included estimated income of £2m in each of Financial Years 2021/22 2022/23), giving a total of £113.9m Programme and Project Authority;**
- 2 approved unbudgeted Financial Authority of £4m for anticipated income over Financial Years 2021/2022 and 2022/2023;**
- 3 noted that the matters for which Programme and Project Authority is sought above include commitments that extend beyond the period of the Business Plan and Budget approved by the Board on 9 December 2020 and provision will, therefore, need to be made for those commitments in future Business Plans and Budgets; and**
- 4 noted that Procurement Authority for the various projects in the T&D Investment Programme will be sought at officer level in accordance with Standing Orders.**

### **14/03/21 Members' Suggestions for Future Discussion Items**

Howard Carter introduced the item and the Committee's updated forward plan.

In addition to a Board Member briefing on the potential outcome of some of the capital funding scenarios being discussed with Government, Members requested that items relating to the Energy Programme be added to the forward plan.

**[Action: Secretariat]**

**The Committee noted the forward plan.**

### **15/03/21 Any Other Business the Chair Considers Urgent**

There was no other urgent business.

### **16/03/21 Date of Next Meeting**

The next scheduled meeting of the Committee would be held on Wednesday 19 May 2021 10.00am.

## **17/03/21 Exclusion of the Press and Public**

The Committee agreed to exclude the press and public from the meeting, in accordance with paragraph 3 of Schedule 12A to the Local Government Act 1972 (as amended), when it considered the exempt information in relation to the items on: Investment Programme Report – Quarter 3 2020/21; Independent Investment Programme Advisory Group Quarterly Report; TfL Project Assurance Update; Surface Technology Programme 2021/22 and 2022/23; and Technology and Data 2021/22 and 2022/23.

The meeting closed at 12:46pm.

Chair: \_\_\_\_\_

Date: \_\_\_\_\_

## Programmes and Investment Committee



**Date:** 19 May 2021

**Item:** Matters Arising and Actions List

---

### **This paper will be considered in public**

#### **1 Summary**

1.1 This paper informs the Committee of progress against actions agreed at previous meetings.

#### **2 Recommendation**

2.1 **The Committee is asked to note the Actions List.**

#### **List of appendices to this report:**

Appendix 1: Actions List

#### **List of Background Papers:**

Minutes of previous meetings of the Programmes and Investment Committee.

Contact Officer: Howard Carter, General Counsel  
Email: [HowardCarter@tfl.gov.uk](mailto:HowardCarter@tfl.gov.uk)

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## Programmes and Investment Committee Action List (reported to the meeting on 19 May 2021)

Actions from the meeting of the Programmes and Investment Committee held on 3 March 2021

Minute No.	Description	Action By	Target Date	Status note
11/03/21	<p><b>Surface Transport Asset Renewals Programme: capital funding scenarios</b></p> <p>Members requested a Board briefing on the potential outcome of some of the capital funding scenarios being raised in the discussions with Government on TfL's long-term funding.</p>	CFO	Ongoing	Briefing to be arranged following funding agreement with Government.
14/03/21	<p><b>Members' Suggestions for Future Discussion Items: Energy Programme</b></p> <p>Members requested that items relating to the Energy Programme be added to the Forward Plan.</p>	Secretariat	May 2021	Complete. Added to the Forward Plan. An item relating to energy procurement is on the Forward Plan for the Finance Committee.

## Actions from previous meetings of the Committee

Minute No.	Description	Action By	Target Date	Status note
63/12/20	<b>Investment Programme Report – Quarter 2 2020/21: EFCs</b> The Committee requested information on how cost movements in certain areas balanced against the headline EFCs, to better understand where there were cost pressures or technical issues.	Stuart Harvey	Ongoing	This has been incorporated into the Investment Programme Report and will continue to be refined.
64/12/20	<b>IIPAG Quarterly Report: gateway and performance review functions</b> Members requested information on how the gateway and performance review functions worked and best practice and the principles that guided this, including the work done to embed value for money within TfL.	Stuart Harvey / Alexandra Batey	July 2021	To be reported to a future meeting of the Committee.
72/12/20	<b>Healthy Streets Programme, H2 2020/21: monitoring</b> Further monitoring results were expected to be available in the next 12-18 months. Members asked that longer term assessment of the impacts of the Programme be conducted, with the results shared with the Committee, when available.	Alexandra Batey	Ongoing	This will be included in the Health Streets update, when available



## Programmes and Investment Committee



**Date:** 19 May 2021

**Item:** Use of Delegated Authority

---

### **This paper will be considered in public**

## **1 Summary**

- 1.1 This is a standing item on the agenda to inform the Committee of any use of delegated authority by the Committee, through Chair's Action or of Procurement Authority and Programme and Project Authority (in respect of matters within the Committee's remit) granted by the Commissioner and the Chief Finance Officer in accordance with delegated authorities under TfL's Standing Orders since the last meeting of the Committee. The paper also provides information on Mayoral Directions to TfL within the Committee's remit.
- 1.2 Since the last meeting of the Committee, on 3 March 2021, there have been:
- (a) no use of specific authority delegated by the Board;
  - (b) one decision taken by Chair's Action, in relation to the Healthy Streets 2021/22 Programme (Periods 1 and 2);
  - (c) no Mayoral Directions within the Committee's remit;
  - (d) one approval by the Commissioner, who approved Procurement Authority for the Taxi and Private Hire (TPH) Re-let; and
  - (e) no approvals by the Chief Finance Officer.
- 1.3 A similar report is submitted to the Finance Committee in respect of the use of Chair's Action and of Procurement Authority and Land Authority granted by the Commissioner and the Chief Finance Officer in respect of matters within the Finance Committee's remit, together with relevant Mayoral Directions.

## **2 Recommendation**

**2.1 The Committee is asked to note the paper.**

## **3 Use of authority delegated by the Board**

3.1 There have been no uses of authority delegated by the Board since the meeting of the Committee on 3 March 2021.

## **4 Use of Chair's Action**

4.1 Under Standing Order 113, in situations of urgency, the Board delegates to each of the Chair and the Chairs of any Committee or Panel the exercise of any functions of TfL on its behalf, including the appointment of Members to Committees and Panels. Any use of Chair's Action is reported to the next ordinary meeting.

4.2 There has been one use of Chair's Action since the meeting of the Committee on 3 March 2021.

### **Healthy Streets 2021/22 Programme (Periods 1 and 2)**

4.3 On 15 April 2021, the Committee was sent a paper which summarised delivery through the Healthy Streets Programme. The paper requested £19.2m of additional Programme and Project Authority for Healthy Streets delivery from 1 April 2021 to 18 May 2021, and beyond that to 30 May 2021 subject to a further settlement from the Department for Transport that allows for this. The paper has been published on [tfl.gov.uk](https://tfl.gov.uk).

4.4 On 19 April 2021, the Chair of the Committee, following consultation with Members;

- (a) granted Programme and Project Authority of £16.2m to support the delivery of the Healthy Streets Programme for the period of the existing settlement to 18 May 2021;
- (b) granted further Programme and Project Authority of £2.9m to cover the period of 19 to 31 May 2021, subject to a further funding settlement being received from Government, to manage the transition from the end of the current settlement while a further submission to the Committee is made;
- (c) noted the decision of the Chief Finance Officer to approve an increase in Financial Authority of £12.7m on 25 March 2021, to enable contract award for a temporary cross-river pedestrian and cyclist ferry service near Hammersmith Bridge; and
- (d) noted that the matters for which Authorities are sought above include commitments that extend beyond the period of the Business Plan and Budget as approved by the Board on 9 December 2020 (and revised on 22 March 2021) and provision will, therefore, need to be made for those commitments in future Business Plans and Budgets.

4.5 The use of Chair's Action was considered appropriate as additional Programme and Project Authority was needed to enable ongoing delivery of Healthy Streets priorities outside the planned meeting cycle; it was not practicable to submit the paper until Government funding was confirmed on 22 March 2021 as the scope and parameters of 2021/22 delivery had to be tailored in light of the funding provided. Procurement Authority would be agreed at officer level in accordance with Standing Orders.

4.6 The timing of the next Government funding settlement was anticipated to be 18 May 2021, so further authority may be sought through Chair's Action ahead of a further paper to the Committee in July 2021.

## **5 Programme and Project Authority Approvals**

- 5.1 To enable an appropriate level of governance, processes are in place for the authorisation, control and reporting of projects.
- 5.2 Programme and Project Authority will normally be granted by the Committee for all programmes and projects as part of the defined Programmes within the overall Investment Programme. Where individual programmes or projects have a value in excess of £50m and have not already received full approval as part of a Programme, requests will be submitted to the Committee for consideration. Those programmes and projects with an estimated final cost of £50m or below, which have been approved by the Commissioner or the Chief Finance Officer, will be reported to subsequent meetings of the Committee.
- 5.3 Where the main contract has not yet been awarded, the Financial Authority and Estimated Final Cost may not be stated because they are commercially confidential.

### **Approvals by the Commissioner**

- 5.4 Since the meeting of the Committee on 3 March 2021, the Commissioner has not approved any Programme and Project Authority requests within the Committee's remit.

### **Approvals by the Chief Finance Officer**

- 5.5 Since the meeting of the Committee on 3 March 2021, the Chief Finance Officer has not approved any Programme and Project Authority requests within the Committee's remit.

## **6 Procurement Approvals**

### **Approvals by the Commissioner**

- 6.1 Since the meeting of the Committee on 3 March 2021, the Commissioner has approved one Procurement Authority request for £31.3m on 14 April 2021, in respect of matters within the Committee's remit, relating to the TPH Re-let.

### **Approvals by the Chief Finance Officer**

- 6.2 Since the meeting of the Committee on 3 March 2021, the Chief Finance Officer has not approved any Procurement Authority requests in respect of matters within the Committee's remit.

## **7 Mayoral Directions to TfL**

- 7.1 The Greater London Authority Act 1999 (as amended), permits the Mayor to issue to TfL general directions as to the manner in which TfL is to exercise its functions or specific directions as to the exercise of its functions (or not to exercise a power specified in the direction). Directions are also often made in relation to the implementation of matters in respect of which the Mayor delegates statutory powers to TfL.
- 7.2 The Mayor makes Mayoral Directions through Mayoral Decisions. Papers for Mayoral Directions set out the financial and other implications. If those implications change over time, that will be reported to the GLA.

- 7.3 All Mayoral Decisions are issued in writing, with the information that is not exempt from publication included on the GLA's Decisions Database on its website: <https://www.london.gov.uk/about-us/governance-and-spending/good-governance/decisions?order=DESC>.
- 7.4 Mayoral Directions fall into three broad categories: those addressing technical issues relating to statutory powers; those related to commercial development activities; and those related to projects and programmes. Mayoral Directions relating to TfL are reported to the Board's Committees for discussion as soon as possible after they are received by TfL or published. Regular reports will list the relevant Directions for as long as they are applicable.
- 7.5 Annually the Audit and Assurance Committee considers the list as part of its consideration of the annual audit plan to ensure that appropriate audit resource is applied to assurance on TfL's work in implementing Mayoral Directions. This will also be kept under review at each quarterly meeting of that Committee.
- 7.6 A summary of current Mayoral Directions to TfL is maintained on the "How we are governed" page on our website, with links to the relevant Mayoral Decisions: <https://tfl.gov.uk/corporate/about-tfl/how-we-work/how-we-are-governed>. That page will be updated as and when further Directions are made.
- 7.7 Mayoral Directions to TfL related to projects and programmes are reported to this Committee. No Mayoral Directions to TfL within the Committee's remit have been published since the meeting on 3 March 2021.

**List of appendices to this report:**

None

**List of Background Papers:**

None

Contact Officer: Howard Carter, General Counsel  
Email: [HowardCarter@tfl.gov.uk](mailto:HowardCarter@tfl.gov.uk)

## Programmes and Investment Committee



**Date:** 19 May 2021

**Item:** Investment Programme Report – Quarter 4, 2020/21

---

### **This paper will be considered in public**

#### **1 Summary**

- 1.1 The Investment Programme Report describes the progress and performance in Quarter 4, 2020/21 of a range of projects that will deliver world-class transport services to London.
- 1.2 A paper is included on Part 2 of the agenda which contains exempt supplementary information. The information is exempt by virtue of paragraph 3 of Schedule 12A of the Local Government Act 1972 in that it contains information relating to the business affairs of TfL. Any discussion of that exempt information must take place after the press and public have been excluded from this meeting.

#### **2 Recommendation**

- 2.1 **The Committee is asked to note the report and the exempt supplementary information on Part 2 of the agenda.**

#### **List of appendices to this report:**

Appendix 1: Investment Programme Report Quarter 4, 2020/21

Exempt supplemental information is contained in a paper on Part 2 of the agenda

#### **List of Background Papers:**

None

Contact Officers: Gareth Powell, Managing Director Surface Transport  
Email: [GarethPowell@tfl.gov.uk](mailto:GarethPowell@tfl.gov.uk)

Contact Officers: Andy Lord, Director London Underground and TfL Engineering  
Email: [AndyLord@tfl.gov.uk](mailto:AndyLord@tfl.gov.uk)

Contact Officers: Stuart Harvey, Director of Major Projects  
Email: [StuartHarvey@tfl.gov.uk](mailto:StuartHarvey@tfl.gov.uk)

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**Transport for London**

**Investment Programme Report**

**Quarter 4 2020/21**



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# Introduction

This report provides an update on a range of projects that will further enhance our world-class transport services in London. This report covers Q4 2020/21 (10 January 2021–31 March 2021).

For each major project or programme, the financial and milestone data represent the position at the end of the quarter, and we include commentary for key achievements and progress made. The report also contains, as far as possible, updates on notable progress made after the end of the quarter.

Financial records of spend to date, authority and Estimated Final Costs (EFC) represent the entire duration of each separate project or programme, except where stated in the date range. Where authority is significantly lower than EFC, it has been given for the current stage of works and further authority will be sought when appropriate.

We also include cumulative EFC movements for savings and efficiencies that have been embedded since the 2020 Budget, while protecting safety, services and reliability. Numbers in brackets represent an EFC decrease and numbers without brackets represent an EFC increase.

Commentary is provided for cumulative movements greater than £2m. This report does not contain commercially sensitive information and therefore some EFCs and authorities are marked with an asterisk until the main contract has been awarded. On schemes where there is commercial confidentiality, the EFC, authority and spend to date may also be withheld.

All financial figures are gross and may not appear to align with costs detailed in the 2020 budget, which are net of any third-party funding.

The total number of physical injuries over the past financial year stands at 101, demonstrating a 45 per cent decline on the previous year and continuing the year-on-year decline in the number of injuries across the Major Projects Directorate (MPD), Project and Programme Delivery (PPD) and London Underground Renewals and Enhancements (R&E). Despite this welcome news, injuries must be considered in the context of hours worked, which were significantly lower in 2020/21 than in previous years, standing at nine million (30 per cent lower than in 2019/20).

During Q4, there were 36 injuries in total, with the most common cause being slips, trips and falls (12). This represents a slight increase on the previous quarter but is not significant.

There were two Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 (RIDDOR) accidents in Q4, lower than the seven reported in the previous quarter. The two RIDDORS comprised one in MPD and one in LU R&E.

During Q4, there were seven Lost Time Injuries (LTIs), two in MPD and five in LU R&E (none were reported in PPD). This total figure was significantly lower than in Q3.

The leading cause of RIDDORs & LTIs over the past financial year was slips, trips and falls.

Every injury is subject to a local investigation to establish root cause(s) and put in place mitigations to help prevent re-occurrence. Where identified, lessons from local investigations are shared across capital delivery and, where appropriate, across the wider industry. Sharing is either via Safety, Health and Environment bulletins, our newly instigated capital lessons learnt process or a bespoke communication event.

The strategic milestones for the second half of 2020/21 – the key milestones listed in the 2020 budget – are detailed on page 47.

Our investment programme is delivered by the following areas of the business and the report structure reflects this.

### **Major Projects**

This is responsible for our largest and most complex projects. It comprises line upgrades, such as the Piccadilly line upgrades and the Four Lines Modernisation, network extensions, major station upgrades, the Elizabeth line and Crossrail, which are covered on pages 8 to 20.

### **London Underground**

This comprises stations, accessibility, track renewals, power, cooling and energy, rolling stock, and signalling and control, which are covered in pages 21 to 27.

### **Surface Transport**

This comprises Healthy Streets, air quality, public transport and asset investment. These are covered in pages 28 to 43.

### **Other**

This comprises technology and data and the TfL Growth Fund, which are covered in pages 44 to 46.

### **The impact of the coronavirus pandemic**

Following the temporary Safe Stop last year, each project had a full review of working practices in accordance with Public Health England guidelines. These were reviewed by construction managers before work recommenced.

There continues to be a knock-on effect from the coronavirus pandemic in terms of workplace requirements and the availability of our employees and the supply chain, however the main priority continues to be ensuring safe working practices for all.

Following the introduction of Tier Four measures and the subsequent third national lockdown, we reinforced safety measures further to address growing concerns regarding the transmissibility of COVID-19. The teams continue to plan and prepare for the risk of an outbreak on a site, including introducing limited flow testing using guidance from the Construction Leadership Council and from Public Health England.

# Performance at a glance

## Major Projects

### Line upgrades

#### Four Lines Modernisation

Forecast completion year	Spend to date (£m)	Programme and Project Authority (£m)	EFC (£m)	EFC movement post plan (£m)	Cost to Go (£m)
2023/24	5,009	5,412	5,394	0	386

\*to be updated in July 2021 following completion of ongoing EFC/Schedule reviews

On 7 March, the Four Lines Modernisation programme reached a significant milestone when the new signalling system went live in Signalling Migration Area 3 (SMA3) between Monument, Euston Square and Stepney Green. Reliability and performance of the new commissioned area have been very positive, learning the lessons of the past, and instils confidence in our approach for future SMA commissioning areas. This is the largest and most complex migration area commissioned to date and introduced the full complement of District line drivers to the new signalling system. Following the success of SMA3, we have now commissioned SMA4 between Sloane Square and Monument as planned on 24 April 2021. This paves the way for frequencies to be increased and service reliability to be further improved as soon as the rest of the route has been automated.

Following challenges linked to software development, installation and the impact of the pandemic, an extended programme and cost review are currently under way and will also accommodate the outputs and lessons learnt from delivering SMA3 and 4 into revenue service.

We are planning to complete this review by June 2021, which will result in a revised schedule and cost re-forecast.

We continue to make good progress across the entire programme and have successfully completed a number of key works undertaken during closures, including system testing of future signalling for migration areas 5, 6, 7 and 8.

Additional key works have also been completed during closures, including dynamic testing of the east end of the District line and the remaining migration areas that will in future complete the Circle line. On the Metropolitan line, significant work in the Neasden area has also advanced readiness for testing of the first section, extending future operation beyond Finchley Road.

Recent successes give us confidence in the near-term programme (migration areas 5 to 7). Beyond that, however, further complexity exists. Significant technical and risk analysis has been undertaken to ensure the joint programme team are in the best place to determine the roadmap ahead.

### Railway Systems Enhancements (formerly World Class Capacity)

Forecast completion year	Spend to date (£m)	Programme and Project Authority (£m)	EFC (£m)	EFC movement post plan (£m)	Cost to Go (£m)
2023/24	138	245	192	0	54

The EFC is £53m lower than the Programme and Project Authority, due to historical Jubilee and Northern line additional trains being taken out of scope, and scope transfer for high-voltage works at Stockwell station to another project.

We successfully completed the Northern Line Speed Improvement Works (Working Timetable 58 Project) commissioning of the enhanced signalling software. This is one of the final critical activities on the project to enable improved run times, reliability and functional improvements, and prepares the railway for the introduction of the new timetable when the Northern Line Extension opens in autumn 2021.

The Kennington speed uplift team has successfully completed all works on the northbound track and are due to complete works on the southbound track by the end of May 2021. This work improves the track condition and is on target to make all the necessary improvements in advance of the start of the Northern Line Extension revenue service.

The Northern line rolling stock team has completed the decommissioning of redundant legacy signalling assets from all 106 Northern line trains. This was an outstanding safety-related action from the Northern line upgrade project.

### DLR Rolling Stock and Systems Integration

Forecast completion year	Spend to date (£m)	Programme and Project Authority (£m)	EFC (£m)	EFC movement post plan (£m)	Cost to Go (£m)
2024/25	89	864	859	(4)	770

The EFC has reduced by £4m as a result of savings made on the contract award of the Beckton depot northern sidings works and mitigation of associated risks.

The aim of the programme is to manufacture and supply 43 new DLR trains, 33 to replace the life-expired fleet and 10 to increase capacity. It will also include an expanded depot to stable and service the new fleet and signalling modifications to the Thales Automatic Train Operation system to support the new trains. In addition, telecoms system modifications will provide enhanced customer-facing information and traction power capacity works.

Rolling stock manufacturing is under way with Construcciones y Auxiliar de Ferrocarriles. The first three new bodysells have been completed, with remote first article inspections successfully finished in lieu of visits to the manufacturer’s facilities. The first trains are due for delivery for testing on the DLR network in 2023.

The Beckton depot enabling works package is complete in line with programme. The Beckton depot northern sidings works have started on site to deliver the expanded stabling of the new fleet and are the first major works within the Beckton depot footprint. These works are scheduled for completion in early 2022.

Thales signalling software development for the route signalling modifications required for the introduction of the replacement trains has started. Power upgrade works have also begun on site and are expected to be completed in 2022.

Authority to enter into the grant agreement for the Housing Infrastructure Fund (HIF) works to deliver 14 additional trains and stabling capacity was approved in December 2020 and the grant agreement has now been signed.

**Piccadilly Line Upgrade – rolling stock (formerly Deep Tube Upgrade Programme)**

Forecast completion year	Spend to date (£m)	Programme and Project Authority (£m)	EFC (£m)	EFC movement post plan (£m)	Cost to Go (£m)
2026/27	273	3,294	2,911	1	2,638

The EFC is £383m lower than the Programme and Project Authority as the project is progressing, with efficiencies being implemented and programme level risk reducing.



We continue to collaborate with Siemens despite the shift to remote working, and together in March 2021 we unveiled the detailed design of the new-generation trains for the Piccadilly line. This is a significant milestone and we continue to work in partnership with Siemens towards our next strategic milestone, namely the start of train manufacture, planned for summer 2021.

At the beginning of March 2021, Siemens erected the first steelwork of the train manufacturing plant in Goole, East Yorkshire, where up to 50 per cent of the new Piccadilly line trains will be assembled. Site construction will be complete in 2022, in readiness for the manufacture and roll-out of the first train in 2023.

We also started on site with our depot upgrade works at South Harrow sidings. We will be introducing four additional stabling roads at this site.

These works are a key enabler for the upgrades of our main depot sites at Northfields and Cockfosters, as this additional stabling capacity will allow us to decommission existing roads within these depots without impacting fleet availability.

Further information can be found in the full [press release](#).

## Network extensions

### Northern Line Extension

Forecast completion year	Spend to date (£m)	Programme and Project Authority (£m)	EFC (£m)	EFC movement post plan (£m)	Cost to Go (£m)
2021/22	*	1,260	*	*	*

\* Data has been redacted due to commercial sensitivity

At Battersea station, we completed a 24-hour test run on escalators that will take our customers from the ticket hall to platform level. The glass balustrades on escalator banks 1 and 2 are complete. The central roof and western side of the Eastern Head House are also finished, enabling handover of another section of site to Battersea Power Station Development Company (BPSDC).

Gatelines at both Battersea and Nine Elms stations are nearing completion, and the first ticket-vending machines have been installed at Battersea station.

Over the Easter weekend, we carried out signal testing with passenger trains. We tested track-to-train CCTV and the tunnel ventilation fans with both static and moving trains to check air flow.

We have opened the four new cross passages at Kennington station, which will make transferring between different branches of the Northern line at Kennington much quicker and easier for our customers.

Our focus is now on the work packages and resources required to support the start of trial operations planned for July 2021, and revenue service planned for September 2021.

## Silvertown Tunnel

Forecast completion year	Spend to date (£m)	Programme and Project Authority (£m)	EFC (£m)	EFC movement post plan (£m)	Cost to Go (£m)
2024/25	56	180	197	(5)	140

Financial data includes direct capital costs to TfL, other than the early development costs incurred by TfL that have been reimbursed by the Private Finance Initiative contractor. It excludes construction costs being incurred by the concessionaire, as these will be funded through the availability payments once the tunnel is open.

The EFC reduction of £5m is due to a revised resource forecast, savings from early site handover and reductions in risk. Riverlinx is reviewing its design programme and will update on whether there are further opportunities in relation to the land access schedule.

The EFC is £17m greater than the Programme and Project Authority due to an increase in costs for implementation of road user charging infrastructure. The project is considering the transfer of scope and budget for this package of work to Project and Programme Delivery (PPD) in Q1 2021/22 to achieve synergies with TfL's other Road User Charging schemes. Sponsorship will remain with the MPD to ensure project objectives are met.

*Please note: All numbers shown as net of income and third-party contributions*

The site physical works have started to accelerate. We have completed the ground investigation and surveys to facilitate utilities mapping enabling, and have had positive engagement with the utility companies. Works have started on cabling and diversions to enable the power supply for the tunnel boring machine (TBM). Site works have begun in both Greenwich and Silvertown, including where the TBM launch chamber will be constructed.

Following demolition of existing buildings and site clearance, there are now several piling rigs working across the site.

The contract for the design and manufacture of the TBM continues to progress. Fire resistance tests on the tunnel lining segments are ongoing with the suppliers through to June 2021.

Contracts have also been placed for transport and traffic, socio-economic and environmental monitoring, which are part of our Development Consent Order obligations. Environmental monitoring has started, with the others planned to start later this year. This

data will enable us to carry out modelling to adequately plan and implement our strategies prior to tunnel opening. The tunnel permit-to-use date remains unchanged at 2025.

### Barking Riverside Extension

Forecast completion year	Spend to date (£m)	Programme and Project Authority (£m)	EFC (£m)	EFC movement post plan (£m)	Cost to Go (£m)
2022/23	252	329	331	3	79

The EFC increase of £3m is due to the associated costs of restaging for buried utility services, now resolved, and prolongation costs associated with COVID-19. This was formalised with the Joint Venture in Q4 by way of a Supplementary Agreement, providing much greater confidence in the main works schedule and associated cost.

The updated Programme and Project Authority of £328m was approved in December 2020 and we plan to update the Programmes and Investment Committee in July once there is greater certainty on securing Network Rail possessions and third-party recoveries.

On the viaduct, all piling, pile caps and pier walls have been completed and the remaining one deck span was successfully lifted into position over Easter 2021. This completes the construction of viaduct structures that support 4.5km of track slab and is a major milestone.

Following completion of concrete works on the south viaduct in December 2020, installation of finishes, drainage and handrails has continued. North viaduct works are ongoing to finish the ramp and remaining deck slabs, with final pours planned in May. The track slab is being delivered to site prior to its installation on the viaduct, which is now planned to start in June 2021.

At the new station, we have completed the main roof and platform canopy cladding and glazing, and progressed the installation of mechanical and electrical equipment, including the power supply and lifts.

In January 2021, we completed the major signalling stage that was cancelled at Easter 2020 due to the first wave of the coronavirus pandemic. Signalling stages 10 and 11 have since been completed successfully, together with preparations for stages 13 and 14, which are due to be commissioned in June and July 2021. Stage 12 was removed during re-planning of the rail systems delivery, which was required due to the pandemic.

We are currently working towards autumn 2022 for revenue service to begin, but this is dependent upon securing the required Network Rail possessions.

## Bank Station Upgrade

Forecast completion year	Spend to date (£m)	Programme and Project Authority (£m)	EFC (£m)	EFC movement post plan (£m)	Cost to Go (£m)
2021/22	570	701	700	(1)	130

The installation of new track has started this quarter. A small delivery tunnel between the existing and new southbound running tunnels was excavated to allow delivery of rail sections into the worksite to facilitate the installation of 100 metres of new track. Fit-out of new and existing parts of the station continues. Cabling works have started in all areas, while installation of primary cable management and ventilation systems are approaching completion.

Manufacture of 12 new escalators and two new moving walkways is complete. Preparatory works and installation have now started on site.

Planning for the temporary closure of the Northern line Bank branch and associated Northern line stations continues. This will allow the existing southbound Northern line to be connected into the new running tunnel and platform at Bank, allowing the old running tunnel to be transformed into a new larger passenger concourse.

## Elephant & Castle

Forecast completion year	Spend to date (£m)	Programme and Project Authority (£m)	EFC (£m)	EFC movement post plan (£m)	Cost to Go (£m)
2029/30	5	*	*	*	*

\* Data has been redacted due to commercial sensitivity

Negotiations with the developer continue and TfL remains supportive of the proposal. Subject to a development agreement being confirmed in the coming months, the developer will build the new station box, to be funded by TfL.

We continue to develop plans for early enabling works in order to take advantage of the temporary closure of the Northern line Bank branch. Tunnelling works to connect with the existing Northern Line platforms are due to commence once the station box has been handed over by the developer in 2024. In parallel, the team continue to identify cost reduction opportunities, in addition to logistical planning. This is reliant on funding confirmation.

The developer continues with the demolition of the existing Elephant & Castle shopping centre and has now reached the point of connection with the adjacent National Rail station.

## High Speed 2

Forecast completion year	Spend to date (£m)	Programme and Project Authority (£m)	EFC (£m)	EFC movement post plan (£m)	Cost to Go (£m)
2027/28	16	22	62	(16)	47

Programme and Project Authority is £40m lower than EFC as it is granted on an annual basis for the following year's spend. The EFC reduction is predominantly due to a descope of the Euston substation works and removal of bus mitigation works due to reduced demand during the coronavirus pandemic.

This project is fully refundable by HS2 Limited and the scope of works is dependent on third-party requirements. Enabling works are ramping up at Old Oak Common in readiness for piling and excavation works for the main station box, which are expected to start in May 2021. This is pending resolution of ground monitoring requirement issues, which have progressed substantially during this period.

We continue to work with several stakeholders around the affordability study of High Speed 2 in the Euston area. These stakeholders include HS2 Limited, Network Rail, the London Borough of Camden and Lendlease under the umbrella of the newly formed Euston Partnership. A decision on the high-level proposal is imminent.

We collaborate with HS2 Limited and its supply chain in reviewing and assuring their designs and works where there is a potential impact on our assets or operations.

## Elizabeth line

### Liverpool Street

The Liverpool Street (mainline station) 'blockade' works were successfully completed over Easter. These works will provide platform extensions to accommodate full-length trains operating into the mainline station from Shenfield.

### On-Network Station Improvement Programme

Forecast completion year	Spend to date (£m)	Programme and Project Authority (£m)	EFC (£m)	EFC movement post plan (£m)	Cost to Go (£m)
2021/22	93	94	95	0	2

The On-Network Station Improvement Programme continues to deliver upgrades at the surface stations on what will form the future Elizabeth line route.

On both the eastern and western sections of the route, step-free project work continues to progress and secure the appropriate level of handover paperwork from the contractors involved. On the Great Eastern, final submissions have been made and are with TfL for review. On the Great Western, there are challenges around the handover programme due to a lack of resources for the review of documentation.

The station refurbishment programme, delivered in partnership with our operator Mass Transit Railway (MTR) Elizabeth Line, has continued. Platform canopy works have been completed at Manor Park, and new canopies are planned for Ealing Broadway and Hayes & Harlington in the coming months to complement the works being undertaken by Network Rail. Projects are also under way at Burnham and Taplow to improve the station buildings and refurbish customer facilities.

TfL/MTR's recent work at Hanwell has been recognised by Historic England and the London Borough of Ealing, with the station being removed from Historic England's 'Heritage at Risk' register.



## Rolling stock

Forecast completion year	Spend to date (£m)	Programme and Project Authority (£m)	EFC (£m)	EFC movement post plan (£m)	Cost to Go (£m)
2024/25	986	1,149	1,006	0	20

We are introducing the new Elizabeth line train fleet and have built a depot to provide train maintenance facilities.

### Central operating section

System integrated dynamic testing (running a maximum of eight trains testing system performance in the Trial Running entry configuration and allowing traffic managers and infrastructure managers to gain early experience) concluded on 16 March. The Class 345 sub-fleet allocated to the central operating section is ready to support the entry into Trial Running.

### Reading and Heathrow

The nine-car Full Length Units with new software introduced in December 2020 to the Reading route have driven the expected improvements in fleet reliability during the quarter. The next software update is now being introduced to service on the Reading and Heathrow routes and is showing a further increase in reliability.

### Stratford to Shenfield

Seven-car Class 345 trains continue to operate on this service. For Stage 4a (from May 2021), seven-car services on this route will be augmented with nine-car Class 345 trains (replacing a number of TfL Rail Class 315 trains). Full transition of the Stratford to Shenfield service to nine-car services will take place from September 2021.

## Crossrail

Forecast completion year	Spend to date (£m)	Programme and Project Authority (£m)	EFC (£m)	EFC movement post plan (£m)	Cost to Go (£m)
2022/23	*	18.4	*	*	*

\* Data has been redacted due to commercial sensitivity

On 27 March 2021, the project transitioned from a construction environment to an operational environment, operating under the Railways and Other Guided Transport Systems (Safety) Regulations 2006 rulebook. As part of this move, TfL's service and infrastructure managers are now accountable for the safety, operation and maintenance of the 'live railway'.

On 28 March, the Great Western Main Line transition was commissioned. The central section infrastructure is now connected to the Great Western route to trial run trains across that route.

Work is continuing at our stations to complete the remaining works necessary for the railway to enter passenger service. Custom House and Farringdon have already been handed over to TfL and London Underground. Tottenham Court Road and Paddington are both in the process before handover, focused primarily on extensive testing and commissioning of systems. It is still anticipated that the railway will open for passenger service in the first half of 2022.

Acton Main Line and West Ealing were handed over by Network Rail to the operator of the Elizabeth line (MTR Elizabeth Line) on 16 March and 25 March, respectively. These stations now provide crucial step-free access to passengers. The focus now shifts to Ealing Broadway, with the delivery of step-free access expected in the spring. West Drayton, Hayes & Harlington and Southall stations remain forecast to be step-free by the summer of 2021.

# London Underground

## Stations

Forecast completion year	Spend to date (£m)	Programme and Project Authority (£m)	EFC (£m)	EFC movement post plan (£m)	Cost to Go (£m)
2022/23	100	345	884	0	784

The stations programme includes a wide range of projects, including large station capacity upgrades. The structure of the programme has recently undergone a review with the aim of simplifying the portfolio of projects – an update will be presented at the next Programmes and Investment Committee.

### Paddington

At Paddington we continue to work with Great Western Developments on a co-funded scheme that will deliver substantial benefits to customers accessing the Bakerloo line. The development scheme provides an enlarged ticket hall and step-free access to the Bakerloo line platforms. Demolition of the old half of the ticket hall is now complete. This will enable piling works to take place to create the new lift shaft. Work on the new station structures to extend the Bakerloo line ticket hall is well under way and is due for completion in early summer 2022.

### Tottenham Hale

Critical roofing works have been completed and external glazing and cladding works are in progress. The internal fit has now begun.

### Knightsbridge

Work to fit out the new Hooper's Court and Brompton Road entrance has begun and manufacture of the three lifts to make the station step free has been instructed.

### South Kensington

The enabling works to implement and safeguard planning permission for works on the station were completed in Q3. Meanwhile, works started in Q4 on replacement of the life-expired escalators. This will involve the non-stopping of Piccadilly line trains until 2022, however the Circle and District line platforms remain open.

## Colindale

A detailed design contract was awarded in September 2020 and is due to be completed during Q1 2021/22. The design is progressing well.

## Stratford

A new south-western station entrance is forecast to open during 2023 and will provide new ticket gates and an improved public area. The project received approval to undertake and complete concept design. It is a collaborative venture with London Legacy Development Corporation and the London Borough of Newham who are funding the capital works. Procurement of concept design is under way and due to commence in Q1 2021/22.

## West Ham

Enabling works adjacent to the Jubilee line track are ongoing, preparing the area for piling which is due to begin later in 2021.

## Accessibility

Forecast completion year	Spend to date (£m)	Programme and Project Authority (£m)	EFC (£m)	EFC movement post plan (£m)	Cost to Go (£m)
2023/24	92	176	175	0	83

We are making 12 stations accessible as part of the London Underground accessibility programme. We have delivered step-free access at seven stations since 2018, with the remaining five to be delivered by the end of 2021. Debden is the most recently delivered station, achieved on 1 April. Main works and lift installations continue at Osterley, Ickenham, Wimbledon Park, Harrow-on-the-Hill and Sudbury Hill, and are due for completion by the end of 2021.

## Track renewals

Forecast completion year	Spend to date (£m)	Programme and Project Authority (£m)	EFC (£m)	EFC movement post plan (£m)	Cost to Go (£m)
Annual	76	81	81	0	5

At the start of the last quarter of 2020/21, the track programme had the challenging task of delivering 1.5km of new ballasted mainline track, which amounts to more than a third of new track delivered in 2020/21. The ballasted track renewal works were spread across six weekend closures on the District, Central, Hammersmith & City and Bakerloo lines. Our Integrated Track team successfully completed the works during planned line closures in February and March. The Epping train arrestors work remains outstanding due to cold weather on the planned weekend in February.

Our Track Delivery Unit team installed 0.9km of new deep tube track, and 0.2km of new ballasted track at Ruislip depot. In total, 2.6km of new track was installed in Q4 2020/21.

## Rolling stock

Forecast completion year	Spend to date (£m)	Programme and Project Authority (£m)	EFC (£m)	EFC movement post plan (£m)	Cost to Go (£m)
2026/27	232	703	1,049	0	818

We have commenced the Rail Vehicle Accessibility Requirement project on the Bakerloo line fleet and are currently working through the design and early parts manufacturing processes. A Bakerloo line train is currently at Acton maintenance shed having the first wheelchair bays installed. A second train, with new LED lighting throughout, is scheduled to enter service in May 2021. The Central Line Improvement Programme is progressing, with detailed design validation through the installation and testing of all prototype systems.

The first Metropolitan line S8 stock train has been lifted into heavy overhaul and the first bogies built. The Victoria line fleet overhaul is continuing to plan and is now 75 per cent complete. The Piccadilly line fleet overhaul of seating and flooring work has continued as planned and the pneumatic control module overhaul has re-started with Alstom.

The host wagons used for the Mechanised Renewal Vehicle (MRV) prototype have been refurbished, fitment of track renewal equipment to the wagons has begun and preparations are being made for initial testing of the system. The MRV is designed to mechanise track renewals in the deep tube to improve installation efficiency and reduce manual handling. Trials are planned to start in the spring.

Four pre-production wagons arrived in the UK from China, but dynamic testing is behind schedule due to build quality issues that need rectifying prior to testing.

Remote Track Monitoring (RTM) is undergoing an internal project assurance exercise prior to procuring the train measurement asset through competitive tender. The RTM will replace the life-expired track recording vehicle, which is being modified to operate on the new signalised sub-surface railway.

We are engaging with the market to replace our engineering locomotive fleet, which hauls engineering vehicles around the network. Feasibility for replacement locomotives is progressing well.

## Renewals

Forecast completion year	Spend to date (£m)	Programme and Project Authority (£m)	EFC (£m)	EFC movement post plan (£m)	Cost to Go (£m)
2024/25	134	285	341	0	207

The purpose of the LU Renewals Programme is to ensure LU assets remain safe and operable in perpetuity, through the delivery of prioritised workbanks to improve asset condition. The workbanks are created through the outcome of annual asset condition reviews. Assets that pose a risk to safety and reliability are prioritised; these are identified through multi-discipline assessment and are ranked based on safety, compliance, reliability and obsolescence threat. The LU Renewals Programme brings together a number of programmes: Buildings and Stations, Civils, Power, Electricals and Cooling. Power, Electricals and Cooling initiatives under the LU renewals programme are essential works and are aimed at ensuring compliance, safety and reliability.

Work continues to replace communications equipment across key stations, including King's Cross St Pancras and the Jubilee line extension stations.

We have installed and commissioned One-Person Operation CCTV cameras on platforms across Leytonstone, Stratford, West Ham and Holborn stations on the Central line. We have also prioritised works at Waterloo to address safety concerns and to provide safer access to and from the trains.

Platform to Train Interface improvement works on the Jubilee line have successfully met physical completion and the project is now being closed out.

Passenger to Train Interface improvement works on the Bakerloo line have commenced on site at Oxford Circus.

Embankment strengthening works between Grange Hill and Chigwell have commenced on site as scheduled.

The Uninterruptable Power Supply equipment at Wood Lane Control Centre was successfully replaced, removing a critical risk to the railway.

The Central line signalling and control system life extension project has completed conceptual design and is progressing towards contract award.

The Incremental Signalling Upgrade Programme has been initiated. In the first five-year tranche, critical obsolescence issues will be addressed by replacing both the Bakerloo line control system and key components of the Jubilee and Northern line signalling systems, with the first upgrades being planned for the Central line signalling system.

## Power and Cooling

As part of the Mayor’s Transport Strategy zero carbon target, we have completed converting traditional fluorescent lights to low energy LED lighting at 17 stations, improving efficiency and reducing ongoing maintenance costs. Two stations remain to be converted out of the initial 19 planned – this is due to the temporary Safe Stop implemented as a result of the pandemic, and subsequent budget restrictions. The conversion work has now been included in the delivery programme for the next financial year 2021/22.

We are completing the equipment manufacture and software development for the system-wide power control system replacement project to improve safety and reliability. This important step will enable us to proceed with the factory acceptance testing and installation. Unfortunately, the coronavirus pandemic has impacted these works, leading to delay of factory acceptance testing. We are forecasting achievement of this activity by June in line with the Government’s current coronavirus restrictions.

As part of the Four Lines Modernisation line upgrade works across the London Underground network, existing substations are being upgraded to accommodate the associated increase in power loads. The upgrades result in increased heat emissions within several substations which, if left untreated, could have a detrimental effect on the operation of equipment and, in extreme cases, on train service.

The Tranche 3A sub vents construction works continue to progress following Safe Stops due to the pandemic. Shepherd’s Bush and Earl’s Court are undergoing final commissioning following a Safe Start and will be completed in May. Victoria and Notting Hill Gate are awaiting Safe Starts, which are due for completion in Q2 2021/22. The Tranche 3B works are now in delivery following a comprehensive tender process. Acton is in the advanced design stage, with works on site planned for June. Works are targeted to commence on site at Embankment in Q2 2021/22 ,followed by Bouverie Place in Q3.

## LU Technology

Forecast completion year	Spend to date (£m)	Programme and Project Authority (£m)	EFC (£m)	EFC movement post plan (£m)	Cost to Go (£m)
2024/25	74	95	205	0	131

## Networks and connectivity

We are upgrading key components of London Underground’s operationally critical Connect radio system, which provides communication links between trains, stations and control rooms. We have achieved a significant milestone by successfully completing a two-year



programme of work to deliver wide-ranging upgrades to key radio hardware and software and are now working on a second phase to roll out new radio hardware base-stations across the LU network. This second phase will continue through financial year 2021/22 and is expected to be complete in mid-2023. As a result of this work, the Connect system will be able to function into the 2030s.

We have completed installation of public and operational Wi-Fi facilities at Canary Wharf station on the Elizabeth line. We have also begun the roll-out of new staff devices to customer service staff across London Underground, which will enable us to continue to provide the expected level of customer service as passenger numbers increase on our network in 2021.

### **Asset management**

To improve our approach to asset management and long-term investment planning, we are consolidating our Asset Management Information Systems (AMIS) into a single platform for London Underground and Trams. In Q4 we successfully completed the development of our new platform and are now in the process of migrating LU assets onto this new single platform. This work will continue through financial year 2021/22 and is anticipated to complete in late 2022. The London Underground AMIS project is part of a pan-TfL initiative to streamline our approach to asset management, with Surface Transport and other modes all migrating to the same single asset management platform over the coming years.

# Surface Transport

## Healthy Streets

Forecast year range	Spend to date (£m)	Programme and Project Authority (£m)	Five-year expenditure forecast (£m)	Expenditure movement post plan (£m)
2020/21 - 2024/25	154	230	1,085	(16)

The Healthy Streets Programme and Project Authority was last updated at the November 2020 Programmes and Investment Committee. This includes all spend to 31 March 2021 and contractually committed expenditure beyond this point.

The Healthy Streets Programme is forecasting an increase in expenditure of £16m against the GLA budget. This is mainly driven by the £20m Active Travel Fund (ATF) received from the Department for Transport (DfT) to deliver projects that support the Government's response to the pandemic. The increased expenditure on the ATF has been partially offset by fewer scheme claims being submitted by boroughs in the financial year, as a result of the coronavirus lockdown.

In the quarter, £9.5m Programme and Project Authority has been granted to deliver the Hammersmith Temporary Ferry project.

A PIC chairs action was approved in April to ensure that Healthy Streets can continue with projects in construction, and can maintain support of the boroughs through Local Implementation Plan funding through our short-term funding period.

In the first half of 2020/21, a significant amount was delivered under the Streetspace for London programme in response to the coronavirus pandemic. This included more than 60km of new or upgraded cycle infrastructure, more than 22,000 square metres of extra pedestrian space across 35 locations on the TfL Road Network (TLRN) with a further 180 schemes at town centres and transport hubs on borough roads, 320 School Streets, 88 Low Traffic Neighbourhoods (LTNs) delivered and 86km of bus lanes on the TfL Road Network, with operational hours extended to 24/7 operation across London.

In the second half of the year, we have continued to deliver Healthy Streets and active travel programmes.

Q4 highlights include:

- TfL and the boroughs are committed to improving active travel options as part of our continued response to the coronavirus pandemic, therefore a further 30km of upgraded and trial cycle routes are now open, with another 14km in construction. The boroughs have delivered a further 15 School Streets, with 50 more committed, and another 18 LTNs, with 40+ more in design. This is a continuation of temporary scheme delivery built around new guidance on monitoring, consultation and the use of experimental schemes
- The continued delivery of safety measures on the TLRN, including Safer Junctions and Lower Speed Limit projects
- The remobilisation of borough delivery across a range of Healthy Streets projects
- Detailed work continues for Waterloo City Hub, along with progressing work on major schemes at Vauxhall, Lambeth Bridge and for a new Cycleway along Lea Bridge Road
- Cycleway 10 (formerly known as Quietway 1), which runs between Waterloo and Greenwich on mainly quieter streets, is being upgraded with new wayfinding signage as part of a programme to bring consistency to the design and installation of on-street signage. The purpose is to unlock the cycling network by making navigation simple and clear

### **Old Street roundabout**

Construction work continues to progress on both the highway and station roof strengthening elements. The final traffic switch was successfully completed over the weekend of 16-17 January 2021, which permanently closed the north west arm of the roundabout. The demolition works for the new main station entrance and the new goods lift in the peninsula area were completed on 2 March 2021. The new main station entrance substructure works are currently in progress ahead of the superstructure works commencing from early July 2021. Upgrade and refurbishment of the existing stairs at the north-west entrance to the station is also currently in progress ahead of the adjacent subway 4 ramp closure and passenger lift works commencing from early July 2021.

The other new station entrance at Cowper Street is also progressing and on track to be opened in August 2021. Installation of the precast concrete elements, including the side walls, stairs and landings, was successfully carried out during long weekend traffic closures on 20-21 February and 13-14 March 2021, with the final roof sections to be installed in early May.

Installation of the critical fire safety systems works in the below-surface shopping arcade, in both public and retail areas, began on 13 April 2021. The scheme will substantially improve safety for people walking and cycling at this major junction. Completion is scheduled for autumn 2022.

### **Cycleway 4**

Works along Creek Road within the Royal Borough of Greenwich restarted on 7 December 2020 and are progressing well, with completion due in June. To the east, trial cycling

infrastructure is being progressed to help more people walk and cycle during the coronavirus pandemic. The start of construction on Evelyn Street in Lewisham has been temporarily paused until Government funding beyond 18 May is confirmed.

## **Cycleway 9**

In West London, 2.4km of new temporary cycle track on Chiswick High Road opened in December as part of the Cycleway 9 route between Olympia and Brentford. Works to complete the Kew Bridge and Wellesley Road sections of Cycleway 9 restarted on 4 January 2021. Other sections of the route are progressing well and a safer cycling corridor between Olympia and Gunnersbury has been created.

## **Safer Streets**

We are working on more than 100 vital projects delivering measures to address historical collisions and reduce road danger on the TLRN. Measures include new and upgraded crossing points, improved pedestrian and cycle facilities, speed limit reductions and innovative pedestrian crossing technology.

In 2020/21, we achieved the Vision Zero action plan target of completing 41 Safer Junctions schemes. This success was achieved in spite of the Safe Stop in March 2020 due to the coronavirus pandemic, and included the following:

- Completed construction of a number of Safer Junctions schemes, including Camberwell Green, Edgware Road/Harrow Road, Edgware Road/George Street, East India Dock Road/Canton Street, Britannia Junction, Dalston Junction and Clapham Road/Union Street
- Delivered cycle safety improvements on the A23 Brixton Hill between New Road and Jebb Avenue, and pedestrian improvements on the A10 Stoke Newington Road between Shacklewell Road and Amhurst Road
- Installed measures to improve the safety of pedestrians on the A12 slip roads and at the A2 Amersham Road/Parkfield Road following pedestrian fatalities
- Completed improvements on the A302 Grosvenor Place to eliminate the risk of right-turn collisions
- Introduced 20mph speed limit on 15km of the TLRN, including the A102 Homerton High Street, A4202 Park Lane, A400 Hampstead Road, A501 Euston Road, A21 Lewisham High Street – Molesworth Street, Peckham town centre, A3205 York Road – Battersea Park Road and A3212 Grosvenor Road
- Delivered 29 new and upgraded crossing points, addressed 22 conflict points, widened footways at six junctions, and installed new dedicated cycle signals at three junctions

In Q4, we have:

- Commenced construction of safety improvements at Camden Road/Camden Street – completion of the scheme is expected in June 2021. We continue to work with the

London Borough of Camden to provide mitigation measures on their network as a result of the prohibited left-turn from Camden Street into Camden Road

- Started footway works on Holloway Road. The Safer Junctions upgrade works and carriageway resurfacing are taking place in the new financial year
- Introduced a new 20mph speed limit on Homerton High Street between Ponsford Street and Kenworthy Road, in Peckham town centre and on the A3205 and A3212 corridors as part of the CS8 upgrade
- Safety measures have been introduced on the A20 Amersham Road/Parkfield Road following a pedestrian fatality, and on the A10 Stoke Newington Road between Shacklewell Road and Amhurst Road.

Design work has started to install a new signal-controlled crossing point over Battersea Bridge at the junction with Grosvenor Road, after the tragic fatality of a male jogger. Phase one of the project, delivering a new crossing over the bridge and introducing a 20mph speed limit, is expected to be delivered by the autumn. We plan to consult on the second phase of the scheme, to introduce a new crossing point on the western arm of the junction, in early summer.

### **Responding to the coronavirus pandemic**

We are continuing to work with the London boroughs to rapidly deliver a series of trial interventions implemented in response to the coronavirus pandemic. All activity is being kept under review as appropriate. In addition to the TfL-led programme, £20m has been allocated to borough schemes from the DfT Active Travel Fund Tranche 2 (this is separate from any funding agreement from the DfT with regard to other TfL activity). We met our milestone target for the second half of the financial year, delivering more than 30km of new or improved temporary cycle facilities.

Q4 highlights include works starting on delivery of further sections of the extension to Cycle Superhighway 4 between Aldeburgh Street and Anchor and Hope Lane in January. Upgrades to substantial sections of Cycle Superhighway 8 between Wandsworth and Battersea were delivered during February and March, providing protected cycle lanes along this popular route. In addition, upgrades to Cycle Superhighway 7 were delivered between Oval and Elephant & Castle and works started on the A23 Oval to Streatham cycle scheme. Borough-led delivery continues to make good progress. Greenwich launched consultation on two further routes (Greenwich to Shooters Hill, and Eltham to Greenwich Park). Barking and Dagenham have started construction of their cycle route between Barking town centre and Barking Riverside, as have Camden on an extension to the popular York Way cycle route, which will extend the route to Agar Road. Hackney completed their 2km cycle route along Green Lanes between Woodberry Grove and Petherton Road.

On the borough side, all funds are now allocated, and new guidance has been issued reflecting the change in circumstances across London since May 2020 when the original interim guidance was issued. New guidance on consultation (December 2020), on delivery using temporary and experimental schemes, and on monitoring scheme impacts (both March 2021) has also been issued. Tranche 2 funding is delivering new temporary

schemes, but also enabling changes and improvements to existing schemes, reflecting feedback received. Perhaps the most obvious example of the changes made is the wider use of camera-enforced modal filters by boroughs, reflecting emergency services feedback. Interim monitoring reports on some LTNs are indicating reductions in traffic both within LTNs and on some boundary roads, as well as a growth in walking and cycling. An interim report by the London Borough of Islington indicates no increase in emergency services response times, which builds on a previous long-term study in Waltham Forest (both using London Fire Brigade data), as well as no increase in anti-social behaviour (an academic study of a similar scheme in Waltham Forest showed a 10 per cent reduction in recorded street crime). The GLA has also published a study showing positive impacts on air quality outside schools that have received School Streets interventions.

The Active Travel Fund programme is funded for 2021/22, and delivery is continuing at a pace that reflects the balance of the public health imperative, and an increased emphasis on consultation and engagement.

TfL is appealing the judgment in the judicial review challenge brought on behalf of two industry groups from the taxi trade in relation to the making of a temporary traffic scheme in Bishopsgate (A10) and the issuing of our interim guidance to boroughs. The Court of Appeal has given permission for the appeal to proceed, and it will be heard on 15 and 16 June 2021.

## Air quality

Forecast year range	Spend to date (£m)	Programme and Project Authority (£m)	Five-year expenditure forecast (£m)	Expenditure movement post plan (£m)
2020/21 - 2024/25	153	255	640	(46)

The Air Quality Programme and Project Authority was increased at the December 2020 Programmes & Investment Committee. This includes all spend from 2020/21 to 2022/23.

The Air Quality Programme is forecasting an increase in expenditure of £46m against the Business Plan, mainly due to the acceleration of bus electrification. Subject to Government funding, our ambition is to have a zero-emission bus fleet by 2030, which will be delivered by enabling appropriate power supply at bus garages for overnight charging ('grid to gate' – £17m) in the current forecast view.

Additional funding of £4.6m has been provided by the GLA for the London Vehicle Scrappage Schemes, supporting small businesses and lower income individuals in efforts to scrap and/or replace existing vehicles to comply with the Ultra Low Emission Zone (ULEZ) standards.

### ULEZ expansion

Since the central London ULEZ was introduced, we have already seen significant air quality improvements, including a reduction of roadside concentrations of NO<sub>2</sub> by more than 40 per cent. By toughening the Low Emission Zone (LEZ) standards and expanding the central ULEZ, it is predicted that more than 100,000 fewer Londoners will be living with levels of air pollution above the legal limits in 2021 than would otherwise be the case. Improvements will continue in future years, both inside and outside the zone.

After the ULEZ is expanded to the North and South Circular Roads and tougher LEZ standards are introduced London-wide, 96 per cent of roads in outer London will comply with legal NO<sub>2</sub> limits by the end of 2021.

Progress on ULEZ expansion schemes is on track. The installation of enforcement cameras has progressed, with around 550 cameras installed to the end of April. Installation of infrastructure for the boundary signs is nearing completion, with 12 out of 14 boroughs completed. Planning for the next phase of signage installation is well under way, with the start of sign and post installation planned to begin in June.

Build of the new Siemens camera data processing systems is complete and now progressing through testing cycles. Migration of the back office processing systems to the Cloud is under way, with two of the four tranches already migrated to the new Cloud Platform.

The ULEZ expansion is scheduled to launch on 25 October 2021.

### **LEZ and Direct Vision Standard**

The LEZ, which covers most of Greater London, encourages the most polluting heavy diesel vehicles driving in the Capital to become cleaner by setting minimum standards for emissions. These standards were tightened on 1 March 2021 for buses, coaches and lorries, in line with the requirements for the central London ULEZ.

Our Direct Vision Standard (DVS) categorises HGVs depending on the level of the driver's direct vision from their cab. The DVS requires all HGVs more than 12 tonnes to hold a safety permit to enter or operate in Greater London from 1 March.

Final system testing and pre-Go live preparations completed on 16 February 2021. Following a weekend of system cutover, testing and assurance, the LEZ and DVS schemes were launched to the public on 1 March 2021.

Pre-launch, the LEZ compliance was at 90.6 per cent, with the preliminary compliance rate shortly after Go live at 93.2 per cent. As of 25 March 2021, we have issued a total of 112,732 DVS permits.

### **Vehicle scrappage and support schemes**

We have been operating the scrappage schemes, which help drivers scrap their older, more polluting vehicles to meet required emissions standards. To date, the schemes have supported the scrapping of in excess of 8,900 vehicles, with more than £41m of grant payments issued.

We have recently agreed the transfer of an additional £4.2m from the GLA, to increase the overall scrappage budget from £48m to £52m. This funding is proposed to be allocated across two scrappage schemes: £1.7m for the Van and Charity Minibus Scrappage Scheme; and £2.5m for the ULEZ Car and Motorcycle Scrappage Scheme (UCMSS).

The Van and Charity Minibus Scrappage Scheme supports small businesses (those with up to 50 employees) and charities to replace older, more polluting vehicles that do not meet the LEZ and ULEZ emissions standards. It has provided grants of between £7,000-£9,500 per vehicle. This scrappage scheme has been extremely popular and due to high demand and limited funds the scheme was suspended to vans in August 2020. More than 1,700 payments were made and around 1,400 applications were held in a queue. The extra funding will allow us to make offers to nearly a third of eligible van applicants in the queue.



UCMSS is a grant available to any London resident who receives certain means-tested or non-means-tested disability benefits. They can apply for a £1,000-£2,000 grant to scrap cars and motorcycles that do not meet the ULEZ emissions standards. The extra funding of £2.56m will allow the scheme to continue to offer support to these target groups who would be disproportionately affected by the ULEZ expansion.

### **Rapid charging**

To support the growing number of zero-emission capable taxis and wider take-up of electric vehicles, we have invested £18m to build a network of electric vehicle rapid charging points (RCPs). Despite delays caused by the pandemic, we achieved our original target of installing 300 RCPs by 31 December 2020, and now have a total of 311 units in operation. Work continues on the delivery of two hub sites at Baynard House in the City of London and Glass Yard in Greenwich, which will add a further six and eight points, respectively.

### **Greener fleet**

The core bus fleet meets or exceeds the Euro VI emission standard. We continue to add zero-emission buses into service, with now more than 480 electric buses in the fleet. The number of zero-emission buses is expected to grow to 700 by the end of the year, including the introduction of 20 hydrogen double-deck buses. All buses operating in our Dial-a-Ride fleet now comply with the Euro VI emission standard, which ensures they meet the requirements associated with our planned expansion of the ULEZ.

## Asset investment

Forecast year range	Spend to date (£m)	Programme and Project Authority (£m)	Five-year expenditure forecast (£m)	Expenditure movement post plan (£m)
2020/21 - 2024/25	97	494	994	10

Asset Investment Programme and Project Authority was increased at the March 2021 Programmes and Investment Committee. This includes all spend from 2020/21 to 2022/23.

In 2020/21, £16m of activity was accelerated from 2021/22 given the urgent need to improve asset condition. This included the acceleration of Thames navigational lights in the Structures Programme and the undertaking of eight additional carriageway schemes. The reduction compared to the Business Plan is due to £3m savings realised in the year, including risk releases on the delivery/completion of the Ardleigh Green and Vauxhall Bridge projects and Surface Asset Management Information Systems. There is also a forecast £7m reduction in third-party funded signal modernisation in 2021/22 to reflect a more realistic delivery programme.

The five-year forecast reflects the Long-Term Capital Plan. This option will enable TfL to address high-risk assets (in particular bridges and tunnels) as well as the large backlog of works over the next five years. This will also see gradual improvements in the state of good repair, including carriageways, footways and bridges.

Work is under way on ensuring the safety and operability of our highest priority assets that are in need of urgent renewals, including critical tunnels (Rotherhithe and Blackwall) and structures (A40 Westway, Brent Cross, Croydon Flyover and Gallow's Corner).

By 31 March 2021, the Asset Capital Programme delivered the modernisation of 81 traffic signal sites, 195 new lighting columns, six new bus driver facilities, 405 new bus shelters, renewal of 40 safety cameras and 240,000 square metres of carriageway resurfacing. Five structures were also built: A406 Colney Hatch Lane Underpass, A2 Danson Road Bridge Flyover, A406 Ilford Viaduct over Rail, A406 Barking Viaduct over Rail and A406 Barking and Ilford Viaducts over Rail.

Notable progress in Q4 included:

- Completion of the refurbishment works, including bearing replacement, at the Colney Hatch Lane structure, over the A406 North Circular Road

- Completion of the renewal of the navigational lighting at six TfL bridges to ensure the safety of vessels passing underneath the structures, as well as ensuring the safety of the bridges themselves
- Works commenced at Walthamstow bus station, due to complete in 2021/22
- Design work is progressing to plan on the bridge expansion joint scheme on the A40 Westway, with the works forecast to begin in late summer 2021. The detailed design for protective security measures at Westminster Bridge is progressing well and works are scheduled to begin on site in late 2021
- The major project to upgrade fire systems to the Rotherhithe Tunnel is progressing through the concept design phase as scheduled and is due to complete in June 2021. Advance critical works were completed to repair the fire main, install additional CCTV, and correct faults to the tunnel equipment controller, to ensure the continued safe operation of the tunnel in advance of the major renewal
- Feasibility works have begun on the Blackwall Tunnel systems and Brent Cross structures
- Exploratory works to remove the pedestal casings and blast clean the pedestals on Hammersmith Bridge have been completed, and discussions are ongoing regarding the next stage of works with the DfT Taskforce, London Borough of Hammersmith and Fulham, and stakeholders

## Public transport

Forecast year range	Spend to date (£m)	Programme and Project Authority (£m)	Five-year expenditure forecast (£m)	Expenditure movement post plan (£m)
2020/21 - 2024/25	67	121	784	26

The Public transport Investment Programme and Project Authority was increased at the March 2020 Programmes & Investment Committee. This includes all spend from 2020/21 to 2022/23.

The Public transport programme is forecasting a decrease in gross expenditure of £26m from the Business Plan.

The portfolio is strongly supporting the delivery of new infrastructure and housing in London as part of the Housing Infrastructure Fund schemes over the next five years. This includes the commercial development for the Poplar depot (+£20m) which has now been transferred out of Public Transport to Commercial Development, to align with the business delivery.

Expenditure on the City Greenwich Lewisham Rail PFI contract for the DLR Lewisham extension is related to passenger volumes, which have been higher than forecast in the Business Plan, in addition to investment in the Woolwich Ferry, which has recently transferred into TfL as an asset.

This expenditure is offset by the delayed start for rail devolution, savings released on the new Routemaster buses refurbishment programme and an efficiency target applied to the portfolio, which have further reduced planned expenditure.

## London Overground

Since signing the Grant Determination Agreement with the Ministry of Housing, Communities and Local Government and the GLA in August 2020 to begin work on the East London line project, TfL has taken the design work through option selection and commenced concept design. The current forecast for conclusion of the concept design stage is autumn 2021. Works have finished on site at White Hart Lane, West Hampstead and Crossrail stations, with close-out of handover documentation ongoing. Additionally, early design work has been completed on the Seven Sisters Access-for-All project, where the option selection report has been completed.

London Overground has completed the migration to the new asset management information system, Maximo, which is aligned with our corporate asset management

approach. We have completed documentation, training and end-to-end user acceptance testing, and we are now archiving the old system.

A variety of minor route-way infrastructure renewals are on programme for completion by the end of the financial year to further improve resilience on the core route.

A further eight Class 710 trains will be delivered later in 2021. These will be used on the Barking Riverside Extension as operational spares and to provide additional capacity to meet forecasted growth on the London Overground network.

### **Elizabeth line fleet**

We are installing a safety system on the eastern and western Network Rail sections of the Elizabeth line to guard against inadvertent incorrect side-opening of doors at stations. This will complement the automatic correct side door control provided by Crossrail in the central section. The system uses new trackside equipment that verifies location so that the train knows the next station and position of the platform. Installation is in phases, with the eastern section (Liverpool Street to Shenfield) substantially complete in February 2021. Installation on the western section (Paddington to Heathrow and Reading) is in progress, and the system is planned to be brought into use in June 2021.

### **DLR**

In Q4, construction activity continued at pace for our renewal projects, with the DLR team working closely with our contractors to monitor the coronavirus control measures in place at our construction sites and ensure they are mitigating the spread of the disease.

The Vehicle Control Centre borders (handover points from one control computer to another on the automatic train control system) signalling project achieved substantial completion following operational testing and successful commissioning of the new system configuration at Poplar Control Centre.

Procurement activity continued with contractors appointed for several DLR renewal projects such as replacement of critical power substation equipment at Bow Church and Royal Mint Street, renewal of platform stairs, station surfaces and a number of key lighting surveys contracts.

The lift system upgrade project completed the strategic milestone of successfully refurbishing and commissioning six lifts back into service before 1 March 2021.

City Airport took a leap forward with design approvals and works commencing, with the majority of the works completed this quarter.

The first phase of track fixing was successfully finished and has provided some valuable information for future phases. Designs and procurement of long lead items for future track work continues.

Another strategic milestone was achieved with two station buildings at Woolwich Arsenal being fully stripped and new waterproofed membrane installed within three months.

The GLA-funded Royal Docks stations programme continued, with concept designs now approved for Royal Victoria and Beckton Park. The programme was on track to complete concept design and enter the construction phase upon GLA agreement, however in March the GLA put the programme on hold due to funding uncertainty pending a decision at its June board.

## **London Trams**

The Tram Replacement Rolling Stock programme will replace the life-expiring CR4000 fleet, which are experiencing declining reliability and have one of the lowest states of good repair categorisations across TfL's fleets. Within the last quarter, the programme has continued to learn lessons from internal and external fleet replacement programmes and developed project requirements through engagement with key stakeholders. It is now in the process of commissioning an infrastructure feasibility and tram market study to ascertain infrastructure constraints and their impacts on the current tram market offerings.

Work progresses on a Correct Side Door Enable (CSDE) technical solution for the fleet to mitigate the risk of tram doors opening on the wrong side of the platform. Roll-out has commenced on the Stadler Variobahn trams and is due to complete in Q1 2021/22. A contract has been awarded for upgrading the wayside tram communication equipment necessary to enable CSDE on the Bombardier CR4000 trams and the site work will commence in early Q1.

Our renewals programme continues across seven asset groups, including fleet, power, civils, systems and permanent way infrastructure. The design was carried out for the Lower Addiscombe Crossing track renewal which was completed in April 2021 and the design has progressed for the third phase of the Reeves Corner track renewal, planned for August 2021. The installation phase for the additional CCTV cameras on the Stadler fleet (Stadler Equipment Overhaul) has commenced and a contract has been let to undertake condition assessment and repair work on Tram 2547. Designs have been completed and tenders prepared for the Birkbeck Retaining Wall and Morden Road Staircase projects, and the OLE Parafil Replacement and Substation Battery Charger Replacement projects continue to progress well.

## **Santander Cycles**

The programme to modernise cycle hire continues to progress, with Cubic developing the back-office upgrade through the design stages. There is ongoing engagement with Serco to explore measures to ensure Santander Cycles benefits from the latest market functionality for bicycle sharing systems.

Work has progressed on the cycle hire expansion element of the programme, with plans being developed to help contribute towards the business case. These will be further developed to form a recommended priority list of areas that would benefit from expansion.

## **London River Services**

Work has been completed on installing a new belting system on the side of the ferries to help prevent wear when mooring to the pontoons. This was complemented by the installation of new fenders, which were installed over the Easter period in April 2021.

Optioneering and design work have progressed on various renewals to help support the reliability of the Woolwich Ferry. These include modification to the North and South Terminal approaches, upgrades to the link-spans and investigations into alternative berthing.

## Surface technology

Forecast year range	Spend to date (£m)	Programme and Project Authority (£m)	Five-year expenditure forecast (£m)	Expenditure movement post plan (£m)
2020/21 - 2024/25	17	128	292	20

The Surface Technology Programme and Project Authority was increased at the March 2021 Programmes and Investment Committee. This includes all spend (2020/2021–2021/2022) and expected contracted spend (2022/2023–2024/2025) required before March 2022.

The five-year expenditure has reduced by £20m from the Business Plan. The majority of this movement is the transfer of budgets of Taxi and Private Hire projects to the Professional Services portfolios (£15m). The remainder of the reduction is a blend of minor cost savings and scope changes across a large number of projects.

## Roads technology

We are leading the way in delivering innovative road traffic management systems to make journeys by walking, cycling and on buses, as well as essential emergency services and freight trips, as efficient as possible. In March 2021, we successfully deployed the second release of the Common Operational View Incident Management System (COV IMS) into live use in the Network Management Control Centre (NMCC) within Surface Transport. This second release is a significant milestone, as it introduces new data sources and map layers to enable the NMCC to focus its response to incidents on our network around the Healthy Streets framework. The 4Ps (pedals, passengers, pedestrians and protection) are the foundation for incident management in COV IMS.

## Operational safety and compliance

This area includes initiatives to improve staff safety using technology, including introducing body-worn video cameras for more front-line colleagues. Cameras have now been rolled out to 6,000 colleagues across London Underground stations, staffed bus stations, Victoria Coach Station, Woolwich Ferry, and to front-line officers within compliance and policing on street. These cameras have already been used to capture footage of incidents of aggressive behaviour towards front-line colleagues, which help our people feel safer.

Work is also continuing to deliver deployable enforcement cameras. Each year more than 4,000 people are killed or seriously injured in collisions on London's roads. Seventy-six per



cent of collisions happen at junctions – many of which involve moving vehicles contravening road traffic rules. Driving in bus lanes or waiting in yellow box junctions also negatively impacts bus reliability. These cameras can be flexibly deployed at locations not covered by existing CCTV cameras, which will greatly improve enforcement coverage, reduce collisions and support bus reliability. The tender process to select a camera supplier is well under way. The deadline for tender responses was 1 March 2021 and evaluation is in progress. We are on track to roll cameras out from late 2021.

### **Public transport technology**

We are maintaining and developing technology to improve operation of our public transport networks and enhance customer experience. This includes replacing the booking and scheduling system for Dial-a-Ride, which will enable us to book and deliver more trips with the same number of vehicles. Procurement for this system is on track, with supplier selection questionnaire responses recently issued.

This area also includes replacing the iBus system. This back-office system is vital to ensure buses continue to operate effectively in London. Refreshing it gives an opportunity to improve bus passenger experience, with targeted enhancements including providing real-time information when a bus cannot follow its normal route and linking virtually to traffic lights at more junctions to help buses travel more quickly. We are preparing to commence the procurement process for the replacement iBus2 system.

## Other

### Technology and data

Forecast completion year	Spend to date (£m)	Programme and Project Authority (£m)	EFC (£m)	EFC movement post plan (£m)	Cost to Go (£m)
2022/23	137	320	314	(5)	177

The Programme and Project Authority and EFC shown are for financial years 2019/20 to 2022/23 as per the approval given by the Programmes and Investment Committee on 6 March 2021. Values shown are for Technology & Data-funded projects only and exclude the Emergency Services Network, Public Cellular Network and Telecoms Commercialisation Project.

Net telecoms spend is included from financial year 2021/22 as it was included within the latest Programmes and Investment Committee approval.

iBus2 spend is excluded from financial year 2021/22 as it transfers to Surface Transport from 1 April 2021.

### Payments

We received 19 responses to the early market engagement questionnaire in relation to the re-procurement of the Integrated Revenue Collection Contract, which expires in 2025. This was followed up by eight one-to-one discussions with interested parties. The information gathered will inform our procurement options analysis, with a view to a pre-procurement strategy being settled in the summer. On 1 March, the most extensive fares revision for five years was successfully implemented. This included changing fares that had previously been held as part of the Mayor's fares freeze commitment, and involved extensive testing and assurance processes, which were completed despite the pandemic.

### Content and collaboration/Evergreen programme

The Evergreen programme is closing at the end of Q4, having successfully met its objectives of updating all obsolete PCs, moving all 32,700 users to Windows 10/Office 365, and all 44,323 e-mailboxes and archive data to Exchange Online. Legacy infrastructure is now in various stages of being de-commissioned. The consolidation of all legacy versions of Microsoft SharePoint sites onto SharePoint Online continues to progress ahead of schedule, with a total of 1,009 of 1,225 sites already completed. This project will give a common, online data platform for all TfL SharePoint sites, giving

improved accessibility and eliminating the cost and complexity of managing the obsolete infrastructure.

### **Hosting – data centre rationalisation and Cloud migration**

We continue to transform our data centre Compute platforms and have now completed 80 per cent (up from 60 per cent in Q3). We have also addressed dilapidations and handed the lease back on two legacy data centre spaces, thereby avoiding the renewal cost of £4.6m.

### **Networks**

We continue to deliver infrastructure to support the Home Office's national Emergency Service Network (ESN) communications system; in tunnels we are focusing on fixing the leaky feeder cable, with 342km fixed (81 per cent, up by seven per cent) and the same amount of fibre installed (342km). We have completed around 84 per cent of the required station cabling works (up from 51 per cent) at the first 70 stations and started work at two further stations. We have reached agreement with the Home Office to fund further works in 2021/22 up to a value of £30m to mitigate any impact on the overall ESN schedule of the delay in awarding the Telecoms Commercialisation Project concession and are currently planning this work.

### **Technical service operation**

We have delivered the IT infrastructure to enable transition of the Woolwich Ferry Service to direct management by TfL, as part of the project funded from Rail and Sponsored Services. Projects continue to improve the resiliency of business IT services and management of our software licence requirements. We have also begun several projects to support the GLA's office moves, with installation of the required infrastructure, and submitted a proposal to manage GLA's IT services.

### **Enterprise resource planning**

The SAP hosting project successfully migrated the SAP service used to run our Finance, HR and Procurement processes onto the Amazon Public Cloud on 11 January. This was a significant milestone as it brought our SAP enterprise resource planning infrastructure back into a supportable state while also creating the technical foundation for an SAP upgrade in the future. Importantly, this was achieved without any unplanned business disruption and will save us approximately £1.7m a year over the next 10 years.

### **Contact Centre operation**

We continue to undertake projects to maintain the quality and efficiency of the Contact Centre services. These include re-tenders of contracts to outsource the handling of ticketing-related customer enquiries, and the replacement of the system used to manage our Lost Property operation.

## Growth Fund

Forecast completion year	Spend to date (£m)	Programme and Project Authority (£m)	EFC (£m)	EFC movement post plan (£m)	Cost to Go (£m)
2029/30	0	284	284	(20)	251

As the Growth Fund schemes have developed, and costs and potential funding have become clearer, it has been possible to identify savings in required Growth Fund contributions.

The revised Budget classifies all Growth Fund schemes as fully meeting the Mayoral objectives but 'contingent on additional funding'. This means that, although all Growth Fund projects have already secured a strong commitment and a significant degree of third-party funding for their delivery, a further commitment by Government or other third-party sources is needed to complete their funding packages.

Over the last quarter, the Growth Fund has contributed to TfL's Financial Sustainability Plan processes and begun a review of the programme objectives considering the most recent funding agreement with Government and the emerging strategic priorities around economic recovery. The programme team are working to identify additional funding streams while continuing to support all urgent Growth Fund projects by providing case-making and programme-level support. We are working closely with the GLA, central Government and other partners to discuss further third-party funding for Growth Fund schemes.

## 2020/21 Strategic Milestone performance

Our 2020/21 strategic milestones for the projects or programmes covered in this report are listed below. The RAG status indicates delivery forecast against the current plan date in line with this key:

■ On time or early     
 ■ 1-89 days late     
 ■ 90+ days late

Commentary is provided on milestones that are forecast to be delivered more than 90 days late. These milestones also indicate the history of forecast date movements by showing the RAG status and variance (the number of days' difference) between the plan date and the forecast date at each quarter end.

Milestone description	Plan date	Actual/ forecast date	Status
<b>Major Projects</b>			
<b>Four Lines Modernisation <span style="color: orange;">■</span></b>			
Completion of foundation for train maintenance access platform at Neasden depot	26 August 2020	16 July 2020	Complete <span style="color: green;">■</span>
SMA03 Ready for revenue	31 January 2021	19 February 2021	Complete <span style="color: orange;">■</span>

The SMA03 Ready for revenue milestone enables 4LM to commission the SMA03 area, which was planned and achieved in early March 2021. This Ready for revenue milestone included all the necessary work required in order for SMA03 to be considered ready for commissioning.

The milestone was initially set as of January 2021 to allow time for all the works and the Go live which, as mentioned, was achieved on time in March 2021. The delay to the milestone was due to some software fixes that needed to be applied. This resulted in this milestone being delayed by a couple of weeks, but within the range of the March 2021 planned commissioning date for SMA03.

Although this milestone was completed later than planned, it had no impact on the SMA03 commissioning date.

### **DLR Rolling Stock and Systems Integration ■**

Detailed train design complete.	9 December 2020	9 November 2020	Complete <span style="color: green;">■</span>
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<b>Piccadilly Line Upgrade programme</b> ■			
One-person operation CCTV (design and build) approved by TfL for contract award	14 July 2020	14 July 2020	Complete ■
New passenger trains – Complete the detail design of the new Piccadilly line train	31 March 2021	5 March 2021	Complete ■
<b>Network extensions</b>			
<b>Northern Line Extension</b> ■			
Completion of 22kv installation, necessary for providing full traction power for the new extension to Battersea	1 September 2020	1 September 2020	Complete ■
First test train to run on the Northern Line Extension	25 December 2020	19 December 2020	Complete ■
<b>Silvertown Tunnel</b> ■			
Completion of pump test boreholes and all geotechnical surveys for the north site of the Silvertown Tunnel	15 September 2020	24 August 2020	Complete ■
Contractor compound set up to commence piling operations	29 March 2021	18 January 2021	Complete ■
		<b>Actual/ forecast date</b>	<b>Status</b>
<b>Barking Riverside Extension</b> ■			
Completion of Thames Water works to divert sludge main at Pier 14	23 July 2020	12 August 2020	Complete ■
Cadent Gas site attendance delays. Traffic management delay on the first day of the works and slower progress due to safety restriction measures.			
Completion of piling on all piers	23 December 2020	20 October 2020	Complete ■

## Major stations ■

Bank station – Completion of the tunnel primary lining for the new DLR triple escalator

1  
September  
2020

5  
September  
2020

Complete ■

Concept design was prepared using generic loading information. It was subsequently established that specific bollard loading information would be required to confirm the structural element of the concept design. As the bollards are patented products, a commercial arrangement with the manufacturer is required to obtain the necessary information. This has taken a number of months to progress, but the arrangement is now in place. The loading information will now be assessed by our engineers to confirm the preferred design.

New transformer room complete and power on for supply to the new station ticket hall.

22  
February  
2021

18  
December  
2020

Complete ■

## London Underground

### Stations renewals and enhancements ■

Stations – Restart of construction activities at 12 sites (Amersham, Harrow-on-the-Hill, Osterley, Cockfosters, Mill Hill East, Debden, Ickenham, Wimbledon Park, Tottenham Hale, Acton Train Maintenance Shed, Bromley-by-Bow and Finsbury Park)

31 July  
2020

29 July  
2020

Complete ■

Accessibility – Step-free access available at six more London Underground stations

31 March  
2021

21 June  
2021

■

In 2020/2021, the Accessibility programme delivered three step-free stations, and three additional sites are currently still in progress at Osterley, Ickenham and Wimbledon Park. Testing and commissioning, and lift installation delays at Wimbledon Park are causing the slippage against the milestone target from Q4 2020/21 to Q1 2021/2022. Delays at Osterley and Ickenham were due to testing and commissioning activities, however Osterley is expected to be brought into use at the beginning of May.

Track renewal – 52-hour possession on the Piccadilly line to re-rail track between

6 July  
2020

6 July  
2020

Complete ■

Heathrow Terminals 1, 2 & 3 and Hatton Cross on the eastbound tunnel			
Track renewal – 2.7km of renewed track delivered	9 January 2021	7 December 2020	Complete <span style="color: green;">■</span>

Power, cooling and energy – Factory acceptance test of the new London Underground power control system comprising hardware, software and functionality	22 February 2021	4 June 2021	<span style="color: orange;">■</span>
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The amount of works required to achieve a fully assured design prior to the factory acceptance test exceeded expectations. In addition, the pandemic and associated travel restrictions have significantly impacted productivity of the engineering activities. The supplier is based in Sweden, making end user training and on-site system development extremely difficult.

### Healthy Streets ■

Old Street roundabout removal – Permanent traffic switch complete	31 March 2021	18 January 2021	Complete <span style="color: green;">■</span>
Streetspace for London – Complete 40km of improved cycling infrastructure	31 Mar 2021	31 Mar 2021	Complete <span style="color: green;">■</span>

### Air quality ■

Congestion Charge changes – Go live	22 June 2020	18 June 2020	Complete <span style="color: green;">■</span>
Direct Vision standards – Go live	1 March 2021	1 March 2021	Complete <span style="color: green;">■</span>
Low Emission Zone stronger – Go live	1 March 2021	1 March 2021	Complete <span style="color: green;">■</span>
Rapid Charge Point network – 300 Rapid Charge Points installed	30 December 2020	17 December 2020	Complete <span style="color: green;">■</span>

### Assets ■



Victoria Coach Station infrastructure – Complete fire system works on site	17 October 2020	22 September 2020	Complete ■
<b>Public transport ■</b>			
Trams: Reeves Corner – Embedded rail track renewal. Section one complete	14 September 2020	31 August 2020	Complete ■
DLR – Six lifts refurbished across the DLR network and brought into use	1 March 2021	28 February 2021	Complete ■

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## Programmes and Investment Committee



Date: 19 May 2021

Item: **Independent Investment Programme Advisory Group  
Quarterly Report**

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### **This paper will be considered in public**

#### **1 Summary**

- 1.1. This paper presents the Independent Investment Programme Advisory Group (IIPAG) quarterly report for April 2021. It describes the work undertaken since the last report presented to the Committee in March 2021.
- 1.2. A paper is included on Part 2 of the agenda which contains exempt supplementary information. The information is exempt by virtue of paragraphs 3 and 5 of Schedule 12A of the Local Government Act 1972 in that it contains information relating to the business affairs of TfL and legal advice. Any discussion of that exempt information must take place after the press and public have been excluded from this meeting.

#### **2 Recommendation**

- 2.1 **The Committee is asked to note the Independent Investment Programme Advisory Group's quarterly report, the management response set out below and the exempt supplementary information on Part 2 of the agenda.**

#### **3 IIPAG Quarterly Report**

- 3.1 Under its Terms of Reference, IIPAG is required to produce quarterly reports of its advice on strategic and systemic issues, logs of progress on actions and recommendations and the effectiveness of the first and second lines of project and programme assurance. IIPAG's quarterly report for April 2021 is included as Appendices 1 and 2 to this paper.

#### **4 Management Response to IIPAG Quarterly Report**

- 4.1 In its report, IIPAG makes reference to its review of the Procurement and Supply Chain Improvement Programme. We welcome the updated review conducted by IIPAG in February 2021 as it has highlighted the significant progress made in a short space of time.
- 4.2 We note IIPAG's update on the strategic recommendations and the progress made within the business to address them. We will continue to work with IIPAG on these.

**List of appendices to this report:**

Appendix 1: Independent Investment Programme Advisory Group - Quarterly Report  
April 2021

Appendix 2: IIPAG Strategic Recommendations Update

A paper containing exempt supplemental information is included on Part 2 of the agenda.

**List of Background Papers:**

None

Contact Officer: Howard Carter, General Counsel  
Email: [HowardCarter@TfL.gov.uk](mailto:HowardCarter@TfL.gov.uk)

## Independent Investment Programme Advisory Group – Quarterly Report April 2021

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### 1. Introduction

- 1.1. This report to Committee describes IIPAG's activities in the period from March to April 2021. It contains no new strategic recommendations.

### 2. IIPAG activity

- 2.1. Given the current uncertainties over TfL's longer term financial settlement with Government, a number of programme reviews have been deferred until the position is clearer. We have undertaken only one programme review ahead of the May meeting of the Committee – London Underground Enhancements. We have also engaged in a few focussed reviews to support decisions on drawdown requests mainly at executive governance bodies.
- 2.2. We have also continued to engage with the Four Lines Modernisation Project. We have attended a deep dive briefing on the schedule and expected cost of the Barking Riverside Extension, and a further deep dive briefing on the extension of the Ultra Low Emission Zone is planned after submission of this report.
- 2.3. The accompanying paper from TfL Project Assurance describes management progress in implementing IIPAG's recommendations from sub-programme and project reviews.

### 3. IIPAG and Crossrail

- 3.1. The IIPAG CRL Sub-Group is now operational under the Chairmanship of TC Chew with the appointment of Keith Winder, who has extensive rail operational experience, as an additional panel member. The Sub-Group has undertaken a review of Crossrail's first and second lines of defence, which was presented to the Elizabeth Line Committee (ELC) in March. The Sub-Group has held meetings with a number of personnel involved in the delivery of the Elizabeth line and will present its proposed workplan for the next six months to the May ELC. This will have a particular focus on preparedness for entry to Trial Operations.

### 4. Cross-cutting work

- 4.1. We completed our review of Procurement and Supply Chain (P&SC), previously referred to as 'Commercial Transformation'. This was originally prepared in November 2020 and then updated in February 2021 to reflect action that had already been taken in the P&SC Transformation programme, which addressed most of IIPAG's initial recommendations. The report was presented to the Audit and Assurance Committee in March 2021.
- 4.2. As noted in our last Quarterly Report, in late 2020 we undertook an in-depth review of the TfL Programme Management Office (PMO), three years after it was brought together in its current form. Despite progress on many fronts, we felt that

opportunities remain to add more value by taking further strides towards common processes and systems for project controls and project reporting. We recommended reinvigorating the PMO improvement programme in order to improve project control support to project managers, provide more insightful information for stakeholders, and save on administrative effort.

- 4.3. We are finalising the annual benchmarking review and a review of asset information. Work is underway the review which will look at the form of contract chosen, tender outcomes and issues with contractors as part of contract management post award, and on a review of TfL's progress with our recommendations on value for money.
- 4.4. We have reviewed TfL's progress on all our strategic recommendations that are at least six months old. This assessment is provided at Appendix 2. Whilst there has been some progress in all areas, we are yet to see the implementation of improvements in project reporting that we have recommended.

**List of appendices to this report:**

None

**List of background papers:**

None

Contact Officer: Alison Munro, Chair of IIPAG  
[AlisonMunro1@tfl.gov.uk](mailto:AlisonMunro1@tfl.gov.uk)

## IIPAG Strategic Recommendations Update

	Recommendation	Progress
1	IIPAG recommends that those governing and assuring projects and sub-programmes should be provided with information which shows clearly how the Estimate Final Cost, spend versus budget, spend versus delivery, and expected completion dates have evolved over the life of the projects and sub-programmes. TfL Project Assurance / TfL Programme Management Office (PMO) should advise on what information should be routinely provided.	This information is not yet consistently provided. In response to IIPAG reviews on Project Reporting (recommendation 4 below) and the PMO (recommendation 7 below), the Capital Delivery Improvement Group (CDIG) is supporting defining clear project baselines, which will help to achieve this recommendation.
2	IIPAG recommends that TfL establishes a rigorous and consistent approach to the quantification and valuation of economic development and housing benefits associated with transport investments, with a central source of expertise to provide guidance and to ensure consistency of its application across all projects and programmes	TfL Investment Appraisal has produced a guidance note clarifying what needs to be done. We have not recently reviewed any projects which used this new guidance.
3	IIPAG recommends that, to the extent that work is not already underway, TfL should review its key areas of resource risk, and identify a plan to mitigate and manage these, starting with engineering resource.	Engineering resources were previously reviewed and action taken by the Engineering function to address shortages. The original concerns being raised in 2019 are being raised again in some recent reviews but this could of course be a consequence of COVID and the "new way of working" over the last twelve months. The engineering resource situation certainly requires another in-depth review to ascertain if the problem raised on recent project reviews is actually an engineering resource shortage or a problem that has developed as a consequence of the current and very different working environment.

	Recommendation	Progress
4	IIPAG found that project reporting was inconsistent, burdensome and inefficient, and did not systematically present leaders with the information that they require to make the best decisions. We recommended that, as a first step, TfL agreed a single format for reporting the health of the most important projects, including a judgement of delivery confidence, and began to use this format in governance meetings.	This recommendation has not yet been achieved. The response to recommendation 7 below, on the PMO, is likely to subsume this recommendation for improved project reporting.
5	After reviewing the effectiveness of assurance, IIPAG recommended improved assurance planning and more compliance with standard tools and methods in the first line of defence.	We will review progress on this recommendation when we reassess the effectiveness of first and second line assurance early in financial year 2021/22.
6	Project Initiation: It is recommended that all investment for projects should have to pass Pathway Stage 0 and those with a capital value above £50M should require senior independent Stage 0 review.	IIPAG worked closely with PMO and TfL Investment in early 2020 to agree enhanced management and authorisation around project initiation including such additions as Pathway Stage 0. However, as a consequence of COVID-19 there has been no project initiation to test any of the enhanced controls.
7	IIPAG found that the full benefits of creating a single PMO organisation for the enterprise had not yet been delivered and recommended that the PMO Change Programme should be re-launched and re-energised.	The Capital Delivery Improvement Group (CDIG) is overseeing the management response to the IIPAG review of the PMO. It is expected that the response will simplify the change agenda and focus on the most critical enablers of good project control. It should also address how the delivery organisations grasp the opportunity of more common processes and systems.
8	IIPAG found that TfL's approach to value for money (vfm) needed to be strengthened with respect to the quality of business cases and how they were used in decision making, the treatment of vfm in prioritisation at programme level, and capability.	A number of work streams have been established and are overseen by the Strategic Investment Improvement Group. IIPAG is currently undertaking a fuller review of progress which will report in the summer.



## Programmes and Investment Committee

Date: 19 May 2021

Item: TfL Project Assurance Update



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### This paper will be considered in public

## 1 Summary

- 1.1 This paper provides an update on the project assurance work undertaken between 23 January and 12 April 2021. One programme review was undertaken during this time, with the Independent Investment Programme Advisory Group (IIPAG) involved in this review. In the same time frame, 10 project assurance reviews were undertaken, with IIPAG involved in three of these.
- 1.2 These reviews gave rise to a total of 52 recommendations being made, of which four were considered to be critical issues. Critical issues are those that the TfL Project Assurance team or IIPAG believe should be addressed before projects proceed to the next stage.
- 1.3 Key findings from the reviews undertaken are:
  - (a) evidence of increasing resource availability and capability issues across a number of projects; and
  - (b) a need to ensure that business cases are consistently of a high quality, cover all five cases and allow value for money assessments to be made.
- 1.4 A paper is included on Part 2 of the agenda which contains exempt supplementary information. The information is exempt by virtue of paragraph 3 of Schedule 12A of the Local Government Act 1972 in that it contains information relating to the business affairs of TfL. Any discussion of that exempt information must take place after the press and public have been excluded from this meeting.

## 2 Recommendation

- 2.1 **The Committee is asked to note the paper and the exempt supplementary information on Part 2 of the agenda.**

## 3 Background

- 3.1 The TfL Project Assurance update provides the Committee with a summary of the second line assurance, provided by TfL's Project Assurance team, and third line assurance, provided by IIPAG.

## 4 Summary of Project Assurance Activity

- 4.1 From the reviews undertaken, a total of 46 recommendations were made by TfL Project Assurance. These consisted of 42 general recommendations and four critical issues. All general recommendations and critical issues have been agreed with the respective project teams. Appendix 1 shows the four critical issues and the management responses to these.
- 4.2 From the assurance reviews undertaken, IIPAG made six general recommendations, with all of these agreed with the respective project teams. IIPAG made no critical recommendations.
- 4.3 The following graphs show the number of open recommendations, the number that are overdue, and the number closed in the time period shown. Of the overdue recommendations there is one critical issue raised by TfL Project Assurance which is overdue. This became overdue at the end of March 2021; it relates to London Underground Signalling and Control and the need to ensure a business case including options analysis and a robust cost estimate is available prior to drawing down funds. There are no overdue IIPAG critical issues.

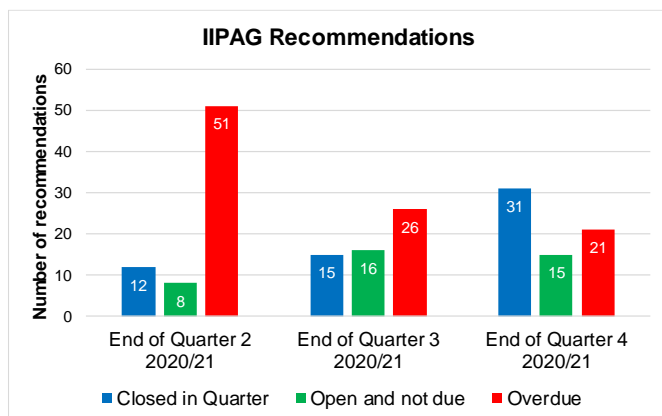


Figure 1: IIPAG Recommendations

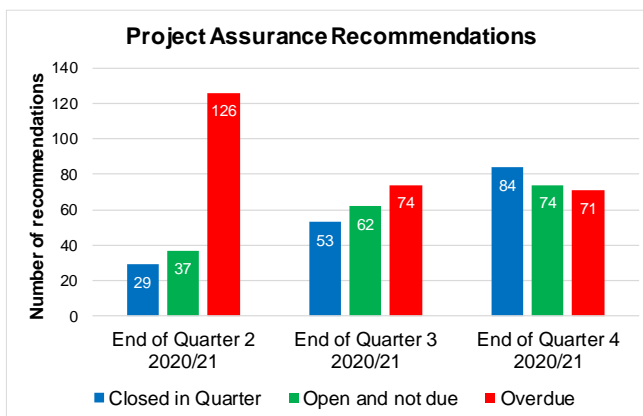


Figure 2: Project Assurance Recommendations

### List of appendices to this paper:

Appendix 1: Overview of Critical Recommendations

A paper containing exempt supplemental information is included on Part 2 of the agenda.

### List of background papers:

None

Contact Officer: Howard Carter, General Counsel  
Email: [HowardCarter@tfl.gov.uk](mailto:HowardCarter@tfl.gov.uk)

## Appendix 1: Overview of Critical Recommendations

Shown below are the critical issues that have been raised and agreed with the respective project teams.

Project: General Data Protection Regulation		
Raised by	Critical Issue	Management Response
Project Assurance	Estimate Final Cost (EFC) needs to be validated following: a) a full risk review including Quantified Risk Assessment (QRA) and risk mitigation strategy as a result of the current allowance; and b) review of all remaining scope being costed and phased.	This activity depends on the finalisation of the scope of work and also the structure of the work going forward, with reference to scope: a) EFC to be validated based on agreed scope as defined in the (newly, refined) scope document, i.e. SAP deletion/Technology and Data systems/Cubic design study and ongoing project cost; b) A revised run of QRA process and risk mitigation based on fully defined scope. The EFC for this phase (and authority sought) will also be based on the structure of the work. We are replacing “non-traditional” with the most fitting project/programme/portfolio model. Which one will depend on the agreed scope. The selection will be reflected in the revised project execution plan and programme.
Project Assurance	Business case to evidence value for money must be created and assured prior to passing Gate 3.	We are currently in the process of drafting a Business Case. This will be ready prior to going to Gate 3, which is anticipated to be June 2021.

Project: Trains Modification Unit Workshop (AC14)		
Raised by	Critical Issue	Management Response
Project Assurance	Project unaffordable. A source of funding for the shortfall should be identified now in the 2021/22 TfL budget.	Initially this will be managed within the Enhancements Programme as forecasts mature over the coming periods and risks are viewed. If appropriate, then funds within the Priority Works budget could be used to address any shortfall following the appropriate change control.

Project: Elephant and Castle Station		
Raised by	Critical Issue	Management Response
Project Assurance	TfL element of the cost is partially unfunded potentially jeopardising the project which is part of a E&C scheme.	Discussions are ongoing between TfL, the developer and key stakeholders to agree a means of deferring TfL funding until that becomes available, whilst allowing the project to proceed in the meantime. If agreed this approach will see the Development Agreement entered into on or around June 2021 alongside inter alia revised funding agreements.

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## Programmes and Investment Committee

**Date:** 19 May 2021

**Item:** London Underground Four Lines Modernisation Programme

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### **This paper will be considered in public**

#### **1 Summary**

- 1.1 The purpose of this paper is to update the Committee on the benefit delivery and programme of the London Underground (LU) Four Lines Modernisation (4LM) Programme.
- 1.2 A paper is included on Part 2 of the agenda, which contains exempt supplementary information. The information is exempt by virtue of paragraph 3 of Schedule 12A of the Local Government Act 1972 in that it contains information relating to the business affairs of TfL. Any discussion of that exempt information must take place after the press and public have been excluded from the meeting.

#### **2 Recommendation**

- 2.1 **The Committee is asked to note the paper and the exempt supplementary information included on Part 2 agenda.**

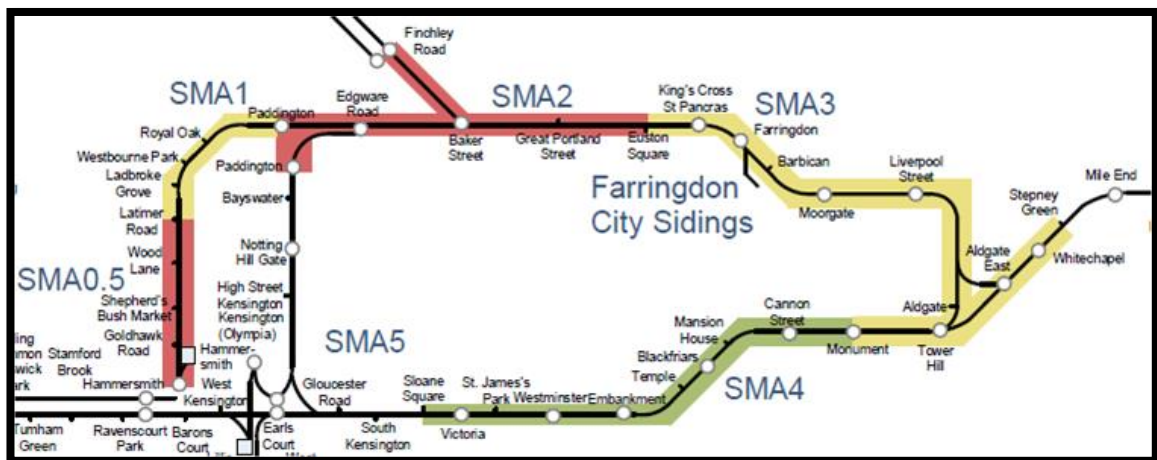
#### **3 Background**

- 3.1 The LU Sub-surface Railway (SSR) consists of four lines – the Metropolitan, District, Hammersmith & City and Circle lines. It carries (pre-pandemic) 1.3 million passengers per day, which represents a quarter of the overall LU ridership.
- 3.2 The 4LM Programme is in the process of replacing, modernising and integrating life-expired assets (Signalling, Rolling Stock, Track, Power and Depots) on the SSR. This will add capacity (through improved train frequency) and improve journey time. The 4LM Programme is the largest single upgrade in the history of the network. Due to its scale and interoperation with other LU lines, Train Operating Companies and Network Rail, it has a high level of complexity. Although we already have Automatic Train Control on the Victoria, Jubilee, Northern and Central lines on the LU network, the scale and complexity of upgrading these four lines in one programme is a global first and will transform the overall experience for our customers.
- 3.3 The programme has achieved recent success with the introduction of Automatic Train Control signalling in two further signalling migration areas (SMA3 and SMA4). The recent reliability performance has been exceptionally high. However, a combination of factors (linked to software development, installation and subsequent impact of the coronavirus pandemic) has delayed the planned roll out of the signalling and an intensive review of cost and time is underway and will be reported at the meeting of the Committee in July 2021.

## Signalling Progress

- 3.4 On 7 March 2021, the 4LM programme reached a major milestone when the new Automatic Train Control signalling system was brought into use in SMA3. This is a significant section between Monument, Euston Square and Stepney Green and builds on the previous areas to be brought into use between Hammersmith, Finchley Road and Euston Square.
- 3.5 A further major milestone was achieved on 25 April 2021, when the new signalling system was brought into use in SMA4. This extended the section of the District and Circle Lines from Monument to Sloane Square. The reliability of the new system in both Migration Areas has exceeded expectations since introduction and is considered a major success.
- 3.6 This means most of the central area of the SSR has been brought into use and paves the way for frequencies to be increased and reliability to be improved for our customers once the rest of the route has been automated. Figure 1 below shows the extent of the SSR now operating with Automatic Train Control signalling between Hammersmith/Finchley Road – Sloane Square/Stepney Green.
- 3.7 This area contains 35 stations, three complex junctions and stabling sidings at Hammersmith. By means of comparison, the Jubilee Line has 27 stations.

**Figure 1: map showing sections of the SSR now operating with ATC**



## Programme

- 3.8 As previously reported, the 4LM Programme has been under pressure and, in common with other TfL projects, it was delayed further in 2020 due to the impacts of the coronavirus pandemic. This included a safe stop from March to June 2020, in line with Public Health England guidelines, and the availability of operational staff who were prioritised for the running of services. The project restarted, following compliance to all coronavirus pandemic guidelines for working safely.
- 3.9 In line with the current programme of continued roll out of new signalling, we plan to progressively introduce timetable improvements. Current service levels are between 22 and 27 trains per hour (tph) on the central area (Circle line) of the SSR with the aim of reaching up to 32tph.

- 3.10 The Programme is currently on track to deliver journey time improvements by approximately 10 per cent on the north side of the Circle Line in September 2021 (originally planned for May 2021, when the project was authorised in 2015). This will be accompanied by a 1tph frequency increase during the morning and evening peak. As an example, this would mean a journey between Paddington and Moorgate would be reduced by 2 minutes. This will be the first key benefit to be delivered for our customers, utilising the capability of the new Automatic Train Control signalling.
- 3.11 After the first journey time improvements, planned in September 2021, a further interim timetable will be introduced in 2022 which will extend the improved passenger journey times throughout the entire Circle line. As there is no frequency increase associated with this timetable change, it can also be introduced independently from the regular May / December Network Rail timetable changes.
- 3.12 Beyond these initial journey time improvements, the timing for steadily increasing the frequency of up to 32tph will be later than envisaged when the project started in 2015 and will be determined following the completion of an extended programme and cost review which is currently underway. This review will also accommodate the outputs and lessons learnt from delivering SMA3 and 4. We are planning to complete this review in June and will report back to the Committee in July 2021. This will result in a revised schedule and cost re-forecast.
- 3.13 Accurate planning for the remainder of the Programme will be essential given the likely continued uncertainty as London recovers post coronavirus pandemic restrictions. The remaining complexity of software required for areas of the network which interact with other LU lines (e.g. Neasden with the Jubilee line, the Metropolitan line and Piccadilly line to Uxbridge and shared tracks between Metropolitan line trains and Chiltern Trains) will need careful migration. A roadmap for the remainder of the Programme will be provided to the Committee in July 2021, as set out in paragraph 3.12 above.
- 3.14 Due to the scale and complexity of the Programme, it was recognised in 2015 that over the life of the Programme there would be significant challenges to overcome. To mitigate this, cost savings of £150m have been delivered, achieved through efficiencies and changes to scope that do not impact customer benefits. This has created headroom for the Programme to absorb recent cost pressures.
- 3.15 Despite the challenges the Programme has faced, investing in the capability of the new signalling continues to represent good value for money. The business case remains strong and replacing life-expired signalling is key to achieving cost effective management of our asset base.

## 4 Benefits and Value

- 4.1 The introduction of the 192 new trains has delivered 25 per cent of the programme benefits which include:
- (a) the first step up in capacity while maintaining the current train service frequency as the new trains are longer and carry more passengers;
  - (b) an improved customer experience with walk through gangways, in-car CCTV, air conditioning, a Rail Vehicle Accessibility Regulations compliant saloon and improved Customer Information Systems; and
  - (c) the opportunity to recover energy through regenerative braking.
- 4.2 The introduction of the new signalling will deliver 75 per cent of the programme benefits, which include:
- (a) the ability to run trains closer together increasing service frequency up to 32tph; and
  - (b) speed increases which reduce journey times between stations.

### List of appendices to this report:

Exempt supplemental information is contained in a paper on Part 2 of the agenda

### List of background papers:

None

Contact Officer: Stuart Harvey, Director of Major Projects  
Email: [StuartHarvey@tfl.gov.uk](mailto:StuartHarvey@tfl.gov.uk)

Contact Officer: Alexandra Batey, Director of Investment Delivery Planning  
Email: [AlexandraBatey@tfl.gov.uk](mailto:AlexandraBatey@tfl.gov.uk)



## Programmes and Investment Committee



**Date:** 19 May 2021

**Title:** London Underground Enhancements Programme

**This paper will be considered in public**

### 1 Summary

2017/18 to 2022/23	Existing Financial Authority (£m)	Estimated Final Cost (EFC)* (£m)	Existing Programme and Project Authority** (£m)	Additional Authority Requested (£m)	Total Programme and Project Authority (£m)
Gross***	554.59	658.01	611.16	41.19	652.35
Income	280.79	312.18	238.14	35.72 <sup>1</sup>	273.86
Net	273.80	345.83	373.02	5.47	378.49

**Table 1: Programme and Project Authority requests up to and including 2022/23**

- \* The Estimated Final Cost includes spend outside the current business plan period
- Existing Programme and Project Authority includes spend outside the current plan period. Note: £611.16m is the Residual LU Enhancements baseline from 2019, following transfers to other programmes refer to Table 2
- \*\* Gross value is total TfL expenditure, including expenditure recovered from external parties and income from third parties
- \*\*\* 1 Re-statement of income gained since 2019 (see paragraph 3.11)

- 1.1 This submission details the request for £41.19m additional Programme and Project Authority up to and including 2022/23 for the London Underground (LU) Enhancements Programme this includes third party income of £35.72m.
- 1.2 Since the previous submission to the Committee, the LU Renewals programme is no longer part of the LU Enhancements programme. This change is shown in Appendix 1.
- 1.3 The purpose of the Programme is to deliver enhancements to safety, accessibility, reliability, capacity, sustainability and customer experience whilst reducing maintenance costs and extending the operating life of station assets.
- 1.4 This paper will:
  - (a) provide an update to the Committee on Programme delivery; and
  - (b) summarise planned delivery in 2021/22.
- 1.5 While lockdown and social distancing measures remain in place to manage the coronavirus pandemic, the Committee is meeting by videoconference. As the flexibility of meetings regulations that allowed decisions to be taken by

videoconference between August 2020 and May 2021 have now lapsed, the decision on this item will be taken under Chair's Action.

## **2 Recommendations**

**2.1 The Chair of the Committee, in consultation with Members, is asked to note the paper and:**

- (a) approve additional Programme and Project Authority of £41.19m for the LU Enhancements Programme, bringing the total Programme and Project Authority to £652.35m up to and including 2022/23, representing :**
  - (i) expenditure of:**
    - i. £16.98m (outturn including risk) for completion of the remaining stations in the Accessibility Programme (resulting total Authority of £120.47m),**
    - ii. £24.21m for all Stations Programmes, which includes £17.21m for construction of Colindale station works;**
- (b) note that the authority includes income of £35.72m from funding partners.**
- (c) approve the transfer of £56.58m of existing authority from LU Enhancements Programme to Major Stations Programme for Elephant and Castle and High Speed 2 schemes; and the transfer of Leyton within the Programme from Accessibility to Stations; and**
- (d) note that the matters for which Authorities are sought above include commitments that extend beyond the period of the Business Plan and Budget approved by the Board on 16 March 2021 and provision will, therefore, need to be made for those commitments in future Business Plans and Budgets.**

## **3 Background**

- 3.1 The purpose of the LU Enhancements programme is to improve LU assets primarily through improved accessibility and congestion relief. The programme consists of the Accessibility and Station Enhancements projects.**
- 3.2 A station enhancement usually includes renewed station assets, capacity enhancements, and where possible step-free access (SFA).**
- 3.3 Subject to future Government funding agreement, Accessibility plans to make 15 stations accessible by improving access to the network, reducing currently journey times and providing new travel opportunities across London.**
- 3.4 Station enhancements delivers opportunities to integrate station capacity and access improvements at stations across the LU network. These capacity and access improvements enable wider Mayoral policy objectives such as new homes whilst improving passenger experience. Station enhancements collaborates with public sector partners and private developers to unlock opportunities to enhance**

stations across the LU network. The programme has successfully leveraged these funding opportunities at several locations.

- 3.5 The Programme supports the Mayor's Transport Strategy (MTS) objective of 'providing a good public transport experience' and contributes to the aim within the MTS for 80 per cent of trips in London to be made on foot, by cycle or using public transport by 2041.
- 3.6 The Programme also supports LUs priorities for 'Safety and Reliability', 'Customer', 'People' and 'Affordability', and is aligned to both the Financial Sustainability Plan and the TfL Long-Term Capital Plan (LTCP).

### **Programme composition**

- 3.7 In line with the recommendations from TfL Project Assurance, the LU Enhancements Programme combines similar station enhancements and accessibility schemes to be reported together, achieving alignment to both the capital delivery structure and the LTCP.
- 3.8 The LU Enhancements Programme comprises station enhancements that are:
  - (a) LU funded and delivered;
  - (b) jointly funded, LU delivered;
  - (c) part LU funded, third party delivered; and
  - (d) fully third party funded and delivered.
- 3.9 In line with the recommendations from TfL Project Assurance in 2019, this submission proposes transferring Elephant and Castle and High Speed 2 schemes out of the LU Enhancements Programme to the Major Stations Programme.
- 3.10 The previous submission did not include the authority granted for Thameslink as it was due to close by that point. Commercial negotiations with Network Rail have however continued through 2020/21, meaning the granted authority has been re-entered to the baseline.
- 3.11 In relation to income received from third parties this paper re-baselines the existing authority to receive income in line with income received to date shown in Table 2 below. This paper requests authority to cover the income planned to be received until the end of 2022/23.

Item	Detail	£m	£m
Programme and Project Authority granted as LU Stations Programme 2019			589.59
Programme and Project Authority subsequently transferred from 2019 authority to other programs (-£255.42m)		-56.58	
Re-instatement of Thameslink Authority	Not closed as planned prior to 2019 paper	48.76	
In-year Programme and Project Authority adjustments	In-programme transfers or additional requests approved via Chair's Action	29.39	
Residual LU Enhancements baseline Programme and Project Authority from 2019			611.16
<b>Additional Programme and Project Authority requested for 2021-2023</b>		<b>41.19</b>	
resulting gross total for LU Enhancements 2021			652.35

**Table 2: Resulting Programme and Project Authority following changes to programme composition**

#### **4 Impact of the Coronavirus Pandemic**

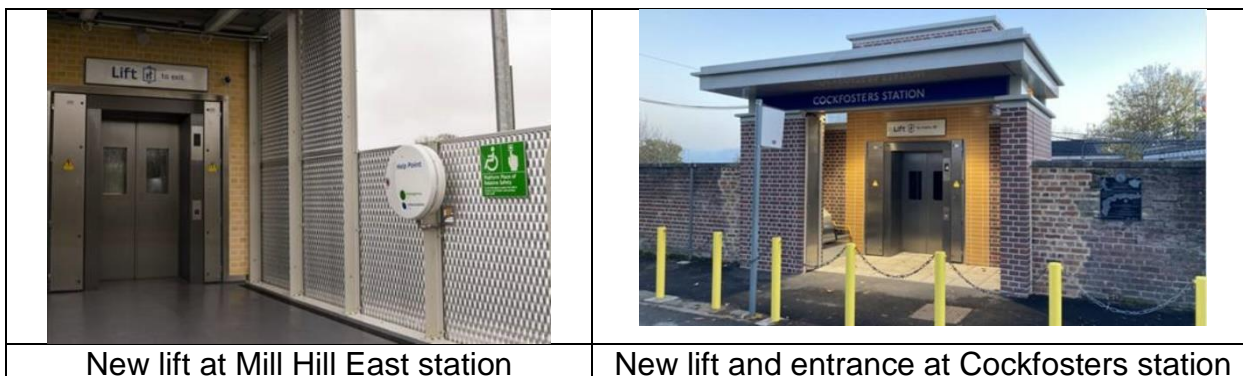
- 4.1 The LU Enhancements Programme stopped work on all sites through this period. This was followed by a re-start prioritisation process that deferred the delivery of some work to 2021.
- 4.2 Restarting projects was prioritised for safety related work, where third party commitments existed, and to keep open opportunities for collaborative enhancements with third parties. Since projects restarted on-site, they have all been subject to additional pandemic measures. These have included, but are not limited to, social distancing, extra hand sanitisation capability, face masks and additional personal protective equipment (PPE).
- 4.3 In addition, a significant proportion of project staff were furloughed as part of the Government's coronavirus job retention scheme. This has had a direct impact on progressing physical work such as at Bromley by Bow and Tottenham Hale, however some work has continued with suppliers.
- 4.4 Most projects within the Programme have now restarted either on site following implementation of coronavirus safe working processes or in their design development stages.

## 5 Delivery progress since last submission

5.1 Since March 2020, delivery progress has been impacted by the coronavirus pandemic. Updates and status of the individual projects are detailed in the sections below.

### Accessibility

- 5.2 Currently, 83 out of 270 Stations (31 per cent) have SFA on the LU Network. Since the last submission, five further stations have been completed (Osterley, Debden, Amersham, Cockfosters, Mill Hill East) bringing the total number of stations delivered under the accessibility programme to eight.
- 5.3 A further four stations (Harrow on the Hill, Ickenham, Sudbury Hill and Wimbledon Park) are currently in delivery and due to open by summer 2021 bringing the total to 12 additional accessible stations.
- 5.4 The financial impact of the coronavirus pandemic and additional cost increases on the completed accessibility projects has resulted in a 'pause' at three stations on site (Burnt Oak, Hanger Lane and Northolt). All sites were safely stopped and remain open for operational and customer use. In addition, the following stations currently in the design stages have also been paused: Boston Manor, North Ealing, Park Royal, Rickmansworth, Ruislip and Snaresbrook.
- 5.5 Subject to confirmation of the necessary government funding and prioritisation works aligned with TfL's LTCP, a decision will be made to restart works in 2021/22. If restarted, this would give a total of 15 additional accessible stations. The decision to re-start the works is subject to a commercial and deliverability review and is expected to be made in summer 2021.
- 5.6 There are also other stations where full SFA will be delivered outside the Accessibility Programme including: Battersea Power Station and Nine Elms (as part of the Northern Line Extension), Paddington (Bakerloo), Whitechapel and Ealing Broadway (as part of the Elizabeth line) and Knightsbridge, Leyton and Colindale in the Stations Programme.



## **Stations**

### **Bromley by Bow**

- 5.7 The enlarged ticket hall and new SFA at Bromley by Bow was brought into use as planned. The overarching project has however had challenges and delays meaning the project has not completed as anticipated in the last request. These challenges include incomplete asset and works information associated with external interfaces. An updated business case assessment has also been completed for this scheme and the benefit to cost ratio (BCR) has reduced due to the increase in cost. A value management exercise has been undertaken to minimise costs where possible. Completing in spring 2021, the project retains a benefit to cost ratio (BCR) of 1.6:1.

### **Colindale**

- 5.8 The station capacity enhancement and SFA scheme is nearing completion of detailed design. A final commitment to proceed to detailed design was paused in March 2020, due to coronavirus impact and uncertainty of funding at that time. Detailed design commenced in September 2020. The design process is following the principles of an updated Enhancements delivery strategy. This has focused on gaining a better understanding of the full scope and early contractor engagement to ensure cost certainty.
- 5.9 Additional Programme and Project Authority of £17.21m is requested to allow for third party income for scheme delivery, subject to confirmation of funding from Government. The EFC has increased by £0.9m since the last submission to the Committee to accommodate a greater risk allowance. Design efficiencies applied through the detailed design project have avoided further increases while retaining benefits. The project has a strong BCR of 6:1.

### **Finsbury Park**

- 5.10 A new ticket hall and SFA to the LU platforms have been delivered. This provides significant journey time improvements (saving up to 33 seconds for a customer journey modelled to deliver a social benefit of £2.3m a year) and reduced maintenance costs. The ticket hall was opened on programme. This delivery is in line with commitments made in the 2019 submission to the Committee for both programme and cost.

### **Stratford**

- 5.11 The proposed new South Western entrance has successfully enacted planning consent as programmed. The scheme has been brought in house to carry out value engineering and improve schedule performance. Additional external funding has been agreed to remove any capital cost to TfL. Concept Design work will begin in the coming months.

### **South Kensington**

- 5.12 The Station Capacity Upgrade project continues to be co-ordinated with the Around Station Development project, which is awaiting planning determination. A combined delivery programme and strategy will be prepared for consideration.

## Walthamstow Central

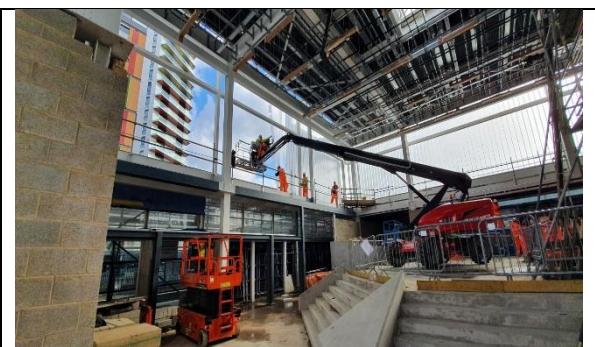
- 5.13 Planning consent was gained for a new station entrance, supporting a major regeneration scheme in the town centre.

## Tottenham Hale

- 5.14 The completion of Tottenham Hale's capacity enhancement has been delayed by a year, to late 2021, due to the coronavirus pandemic. In addition, temporary ticket gates were delivered later than planned because of the time taken to agree an acceptable outcome with Network Rail and the Train Operating Company. Key costs increases were also attributable to possession availability, access issues and changes in station change commitments. This has increased the gross EFC. The project BCR has reduced from 4.9:1 to 2.5:1. This continues to represent value for money.
- 5.15 To minimise cost increases on this project, several mitigations have been put in place, including an alternative possession strategy and design change review.
- 5.16 The project is now progressing as planned against a revised programme and EFC. An increase of £7.0m is requested including an adjustment not previously accounted for in authority of £3.1m to reflect income received. The revised EFC includes cost and time increases and is budgeted.



New station entrance at Finsbury Park



Construction work at Tottenham Hale

## Other developments

- 5.17 Agreements were entered into for externally funded works to provide a lift shaft for SFA to the Northern line at Waterloo and to provide a second entrance at West Ham.
- 5.18 A funding agreement was agreed with the Royal Borough of Kensington and Chelsea. The agreement provides external funding for a feasibility study into provision of SFA at Ladbroke Grove.
- 5.19 The developer of Belgrove House at King's Cross obtained planning consent for a scheme including SFA improvements to the station entrance on the south side of the Euston Road. A development adjacent to Notting Hill Gate station obtained planning consent for a scheme which includes provision of SFA at this station. Subject to ongoing legal discussions both these schemes are anticipated to be delivered at no capital cost to TfL.



	
<p>Proposed new SFA entrance to King's Cross St Pancras on the south side of the Euston Road</p>	<p>Proposed new entrance to Walthamstow Central providing capacity relief and SFA</p>

5.20 Following a review of recently and nearly completed projects along with historical information and lessons learnt reviews, TfL identified that awarding a design and build contract post LU Concept design stage does not resolve all the risks, design, scope and programme issues at the correct stage. This has a significant impact on programme and outturn cost.

5.21 TfL is moving to a design and build process utilising early Contractor involvement, based on the newly published Government Construction playbook and procurement routes currently being used in Thames Water, Highways England and Network Rail. This is aligned to a strong governance/gate/assurance process to mitigate the risks and learn the lessons from our historical projects.

## 6 Key deliverables for the Programme in 2021/22

6.1 Concept design will be completed for the southwestern entrance at Stratford Regional station and, subject to funding arrangements, Leyton. Analysis of the integrated programme at South Kensington will be concluded and, subject to affordability, detailed design will commence.

6.2 The new ticket hall at Tottenham Hale will be brought into use. Accessibility will deliver a further six schemes into use in this period.

6.3 Tables 3 and 4 (below) present the projects and associated financial impact to 2022/23 and key deliverables to May 2022.

Accessibility Programme Key Deliverables to May 2022	Financial Authority (£m)	EFC (£m)	Existing P&PA (£m)	This Request (£m)	Future Requests (£m)
<ul style="list-style-type: none"> <li>• Delivery of further four stations by summer 2021</li> <li>• Construction of 3 stations commences by spring 2022</li> </ul>	120.00	120.47 (Gross)	103.3	16.98	0.00

**Table 3: Summary of the Accessibility sub-programme**



Stations Programme Key Deliverables to May 2022	Financial Authority (£m)*	EFC (£m)	Existing P&PA (£m)	This Request (£m)	Future Request (£m)
<ul style="list-style-type: none"> <li>• Opening the new ticket hall and entrance at Tottenham Hale (£7m)</li> <li>• Complete programme Analysis at South Kensington</li> <li>• Complete Concept Design at Colindale</li> <li>• Complete Concept Design for the South Western entrance at Stratford</li> <li>• Complete Concept Design for Leyton</li> <li>• Income authority for Colindale station capacity enhancement (£17.2m)</li> </ul>	461.57	537.63 (Gross)	490.51	24.21	**

**Table 4: Summary of the Stations sub-programme**

(\* Financial Authority as at P12 2020/21. \*\*Future requests will be dependent on funding settlement).

## 7 Equalities Implications

7.1 The LU Enhancements Programme will be delivered in accordance with the Equality Act 2010. As projects progress, Equality Impact Assessments shall be completed as necessary.

## 8 Financial Implications

8.1 Table 5 shows the financial impact of the Programme by year. All cost figures include risk and inflation and illustrate plans up to and including 2022/23. This is the minimum authority required to continue these multi-year, predominantly in-flight projects across the Programmes.

8.2 The Financial Authority is based on the 2021 TfL Budget.

- 8.3 The amounts requested are in line with the Long-term Capital Plan. These numbers will be refined through 2021/22 before the next annual submission.

<b>Existing Programme and Project Authority</b>	£611.16m
<b>Additional Programme and Project Authority requested in this paper</b>	£41.19m
<b>Total Programme and Project Authority (Gross)</b>	£652.35m

**Table 5: Summary of costs and authority for the programme, including previously and fully approved projects** (\* Financial Authority as at P12 2020/21)

- 8.4 In total, £41.19m additional Programme and Project Authority, is requested bringing the total for the LU Enhancements Programme to £652.35m to 2022/23.

## 9 Challenges, Opportunities and Lessons Learned

### Challenges

- 9.1 In the short to medium term, the coronavirus pandemic is likely to impact staff and the supply chain to these programmes. This could affect delivery and have financial impacts in a cash constrained environment, meaning further re-prioritisation may be necessary. The known impact of coronavirus and recovery measures have been included within project EFCs and schedules.
- 9.2 Longer term, the risk of slow recovery from the impact of the coronavirus pandemic will have an impact on the timing of the need for capacity enhancements works.

### Opportunities

- 9.3 Where property developments create additional demand on the transport network mitigation for this impact can be sought through the town planning process. This can be in the form of developer funding or through works in-kind by the development. We also continue to work with external funding partners, such as London boroughs, to obtain funding for projects that meet their priorities.

### Lessons Learned

- 9.4 Since the last submission, comprehensive lessons learned reviews have taken place on the Finsbury Park and Tottenham Hale projects. Lessons identified have been shared across both Sponsorship and Delivery teams. Highlights of these lessons include closer operational engagement on interim project stages and readiness for them, ensuring adequate time is programmed for operational readiness activity, and better planning for Network Rail engagement and resulting programme risks and issues.
- 9.5 A review has been undertaken across the Enhancements Programme, to develop a more consistent delivery approach and stronger engagement with our supply chain. The key features of this new approach involve use of competitively procured framework contracts, encourages greater collaboration and earlier supply chain engagement. The model provides improved opportunity to realise efficiencies by focusing on developing the most economic and buildable design in line with requirements and to take a proactive approach to risk during the development of design, so there is a common understanding and agreed mitigations.

9.6 A progressive design-build approach is used incorporating appropriate decision points during the project life cycle. The outcome is that there is greater flexibility and control over costs in the current challenging financial environment. The methodology used has been taken from lessons learnt on all the enhancement type schemes procured/delivered over the last six years. The approach is aligned with the UK Governments construction industry playbook.

## **10 Assurance**

10.1 A TfL Assurance and Independent Investment Programme Advisory Group Integrated Assurance Review (IAR) of the programme took place in March 2021.

10.2 The review found no critical issues. The next assurance review is planned to take place in advance of the next submission to the Committee currently forecast for May 2022.

### **List of appendices to this report**

Appendix 1: Enhancements Programme in LU Programmes and Investment Committee structure

### **List of Background Papers:**

Independent Investment Programme Advisory Group (IIPAG) Report

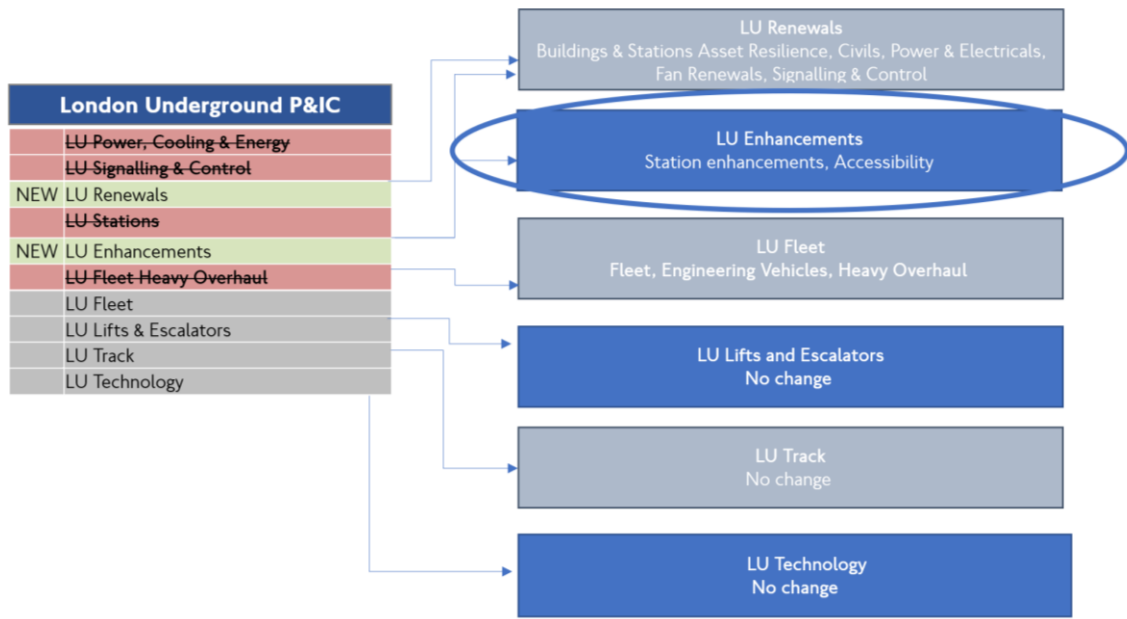
TfL Project Assurance Report

Management response to IIPAG TfL Project Assurance Report

Contact Officer: Alexandra Batey, Director of Investment Delivery Planning  
Email: [alexandrabatey@tfl.gov.uk](mailto:alexandrabatey@tfl.gov.uk)

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# Appendix 1: LU Enhancements Programme in LU Programmes and Investment Committee structure



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## Programmes and Investment Committee



**Date:** 19 May 2021

**Item:** Members' Suggestions for Future Discussion Items

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### **This paper will be considered in public**

#### **1 Summary**

- 1.1 This paper presents the current forward programme for the Committee and explains how this is put together. Members are invited to suggest additional future discussion items for the forward programme. Members are also invited to suggest items for future informal briefings.

#### **2 Recommendation**

- 2.1 **The Committee is asked to note the forward programme and is invited to raise any suggestions for future discussion items for the forward programme and for informal briefings.**

#### **3 Forward Programme Development**

- 3.1 The Board and its Committees and Panels have forward programmes. The content of the programme arise from a number of sources:
- (a) Standing items for each meeting: Minutes; Matters Arising and Actions List; and any regular quarterly or periodic reports. For this Committee these are the quarterly Investment Programme Report and the regular report on the Crossrail project.
  - (b) Programmes and Projects at a level requiring Committee approval. These include the annual review of the 20 sub-programmes in the Investment Programme and other approvals sought following advice from the operating businesses.
  - (c) Items requested by Members: The Deputy Chair of TfL and the Chairs of all of the Committees and Panels will regularly review the forward programme and may suggest items. Other items will arise out of actions from previous meetings (including meetings of the Board or other Committees and Panels) and any issues suggested under this agenda item.

#### **4 Current Programme**

- 4.1 The current programme is attached as Appendix 1. Like all plans, it is a snapshot in time and items may be added, removed or deferred to a later date.

#### **List of appendices to this report:**

Appendix 1: Programmes and Investment Committee Forward Planner 2021/22

**List of Background Papers:**

None

Contact Officer: Howard Carter, General Counsel  
Email: [HowardCarter@tfl.gov.uk](mailto:HowardCarter@tfl.gov.uk)



## Programmes and Investment Committee Forward Planner 2021/22

**Membership:** Prof Greg Clark CBE (Chair), Dr Nelson Ogunshakin OBE (Vice Chair), Heidi Alexander, Mark Phillips, Dr Nina Skorupska CBE, Dr Lynn Sloman and Ben Story

Abbreviations: Managing Director (MD), Customer, Communication and Technology (CCT), London Underground (LU), Surface Transport (ST), CFO (Chief Finance Officer), Investment Delivery Planning (IDP) and D (Director)

<b>21 July 2021</b>		
Use of Delegated Authority	General Counsel	Standing item
Quarterly Programmes and Investment Report	MD LU and TfL Engineering, MD ST and D Major Projects	To note high-level progress update against the 20 grouped Investment Programme and Major Project items and any specific approvals required in relation to programmes not on the deep-dive list for that meeting.
IIPAG Quarterly Report (appendix on Second line Assurance Activities)	Project Assurance	Standing item
TfL Project Assurance	Project Assurance	Standing item
Public Transport	MD ST	Update and approval
LU Lifts and Escalators	MD LU	Update and approval
LU Track	MD LU	Update and approval
Piccadilly Line Upgrade HV	D Major Projects	Update and approval
DLR HIF	D Major Projects	Update
AQE: Grid to gate	D IDP	Update and approval
Healthy Streets	D IDP	Update and approval
Elephant and Castle	D Major Projects	Update and approval
Four Lines Modernisation	D Major Projects	Update

Barking Riverside Extension	D Major Projects	Update and approval
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### 13 October 2021

Use of Delegated Authority	General Counsel	Standing item
Quarterly Programmes and Investment Report	MD LU and TfL Engineering, MD ST and D Major Projects	To note high-level progress update against the 20 grouped Investment Programme and Major Project items and any specific approvals required in relation to programmes not on the deep-dive list for that meeting.
IIPAG Quarterly Report (appendix on Second line Assurance Activities)	Project Assurance	Standing item
TfL Project Assurance	Project Assurance	Standing item
LU Track and Drainage	MD LU	Update and approval
East London Line HIF programme	MD ST	Update and approval

### 15 December 2021

Use of Delegated Authority	General Counsel	Standing item
Quarterly Programmes and Investment Report	MD LU and TfL Engineering, MD ST and D Major Projects	To note high-level progress update against the 20 grouped Investment Programme and Major Project items and any specific approvals required in relation to programmes not on the deep-dive list for that meeting.
IIPAG Quarterly Report (appendix on Second line Assurance Activities)	Project Assurance	Standing item
TfL Project Assurance	Project Assurance	Standing item

#### Regular items:

- Use of delegated authority by Chair, Commissioner and CFO.

As at 11 May 2021

- Quarterly Monitoring Report – to include:
  - high-level progress update against the 20 grouped Investment Programme and Major Project items;
  - specific approvals required in relation to programmes not on the deep-dive list for that meeting;
  - identification of programmes about to issue tenders so Members can input;
- Second Line Assurance Activities
- IIPAG Quarterly Report
- 4/5 deep dive papers each meeting from the rolling programme of Investment Programme / Major Project items. Papers to seek annual approval for the programme.
- Crossrail 2 – updates and authorities (if kept separate from the Major Project list).
- Innovation update (December)
- ER8: Delivery of key projects and programmes (March)

**Items to be scheduled:**

- London Overground future planning
- Rotherhithe Tunnel
- Fiveways Corner in Croydon
- Innovative Technology in Signalling

**Future items for Committee or Board:**

- How TfL investment programme is affected by:
  - Potential rail devolution
  - HS2
  - Heathrow expansion
  - Oxford Street pedestrianisation
  - Football stadiums/events

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