

Agenda

Meeting: Programmes and Investment Committee

Date: Wednesday 6 December 2023

Time: 10:00am

**Place: Conference Rooms 1 and 2,
Ground Floor, Palestra, 197
Blackfriars Road, London, SE1
8NJ**

Members

Dr Nelson Ogunshakin OBE (Chair)
Peter Strachan (Vice-Chair)
Seb Dance

Mark Phillips
Dr Lynn Sloman MBE

Government Observer

David Coles

Copies of the papers and any attachments are available on [tfl.gov.uk How We Are Governed](https://tfl.gov.uk/How-We-Are-Governed).

This meeting will be open to the public and webcast live on [TfL YouTube channel](#), except for where exempt information is being discussed as noted on the agenda.

There is access for disabled people and induction loops are available. 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.

Further Information

If you have questions, would like further information about the meeting or require special facilities please contact: Zoe Manzoor, Secretariat Officer;
Email: y_ZoeManzoor@tfl.gov.uk.

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

Andrea Clarke, Interim General Counsel
Tuesday 28 November 2023

**Agenda
Programmes and Investment Committee
Wednesday 6 December 2023**

1 Apologies for Absence and Chair's Announcements

2 Declarations of Interests

Interim 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 5 October 2023
(Pages 1 - 10)**

Interim General Counsel

The Committee is asked to approve the minutes of the meeting of the Committee held on 5 October 2023 and authorise the Chair to sign them.

4 Matters Arising and Actions List (Pages 11 - 14)

Interim General Counsel

The Committee is asked to note the updated actions list.

5 Use of Delegated Authority (Pages 15 - 18)

Interim General Counsel

The Committee is asked to note the paper.

6 Forthcoming Key Procurement Activities (Pages 19 - 22)

Chief Finance Officer

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

7 Investment Programme Report - Quarter 2, 2023/24 (Pages 23 - 100)

Chief Capital Officer and Director of Investment Delivery Planning

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

8 Independent Investment Programme Advisory Group Quarterly Report (Pages 101 - 104)

Interim General Counsel

The Committee is asked to note the Independent Investment Programme Advisory Group's quarterly report and the exempt supplementary information on Part 2 of the agenda.

9 TfL Project Assurance Update (Pages 105 - 108)

Interim General Counsel

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

10 Bakerloo line Upgrade Stage 1 (Pages 109 - 116)

Chief Capital Officer and Director of Investment Delivery Planning

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

11 iBus2 Contract Award (Pages 117 - 122)

Chief Capital Officer and Director of Investment Delivery Planning

The Committee is asked to the paper and the exempt supplementary paper on Part 2 of the agenda and, subject to approval of the revised TfL Business Plan to be considered by the TfL Board on 13 December 2023 approve Procurement Authority in the amount set out in the exempt supplementary paper on Part 2 of the agenda.

12 Safe and Healthy Streets Programme (Pages 123 - 154)

Director of Investment Delivery Planning

The Committee is asked to note the paper and the exempt supplementary information on Part 2 of the agenda and subject to approval of the revised TfL Business Plan to be considered by the TfL Board on 13 December 2023: approve additional Programme and Project Authority of £42.2m, and approve unbudgeted Financial Authority.

13 DLR Rolling Stock Replacement Programme (Pages 155 - 164)

Chief Capital Officer and Director of Investment Delivery Planning

The Committee is asked to note the paper and the exempt supplementary information on Part 2 of the agenda and subject to approval of the revised TfL Business Plan to be considered by the TfL Board on 13 December 2023 approve additional Procurement Authority, for the amount set out in the paper on Part 2 of the agenda.

14 Elizabeth Line: Service Frequency Increase for High Speed 2 (Pages 165 - 172)

Chief Capital Officer and Director of Investment Delivery Planning

The Committee is asked to note the paper and the exempt supplementary paper on Part 2 of the agenda and, subject to HM Government agreeing to provide the capital funding for the acquisition of additional rolling stock for the Elizabeth line and related services and enabling works: approve unbudgeted Financial Authority, Programme and Project Authority and Procurement Authority, for the amount set out in the paper on Part 2 of the agenda.

15 High Speed 2 Programme: TfL Resources (Pages 173 - 176)

Chief Capital Officer and Director of Investment Delivery Planning

The Committee is asked to note the paper and the exempt supplementary information on Part 2 of the agenda and, subject to the Board's approval of the revised Business Plan due to be considered by it in December 2023 approve additional Programme and Project Authority of £4.8m, bringing the total Project and Programme Authority to £43.0m.

16 Members' Suggestions for Future Discussion Items (Pages 177 - 180)

Interim 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.

17 Any Other Business the Chair Considers Urgent

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

18 Date of Next Meeting

Wednesday 28 February 2024 at 10:00am

19 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

20 Forthcoming Key Procurement Activities (Pages 181 - 186)

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

21 Investment Programme Report - Quarter 2, 2023/24 (Pages 187 - 206)

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

22 Independent Investment Programme Advisory Group Quarterly Report (Pages 207 - 246)

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

- 23 TfL Project Assurance Update** (Pages 247 - 252)
Exempt supplementary information relating to the item on Part 1 of the agenda
- 24 Bakerloo line Upgrade Stage 1** (Pages 253 - 258)
Exempt supplementary information relating to the item on Part 1 of the agenda
- 25 iBus2 Contract Award** (Pages 259 - 278)
Exempt supplementary information relating to the item on Part 1 of the agenda
- 26 Safe and Healthy Streets Programme** (Pages 279 - 290)
Exempt supplementary information relating to the item on Part 1 of the agenda
- 27 DLR Rolling Stock Replacement Programme** (Pages 291 - 298)
Exempt supplementary information relating to the item on Part 1 of the agenda
- 28 Elizabeth Line: Service Frequency Increase for High Speed 2** (Pages 299 - 306)
Exempt supplementary information relating to the item on Part 1 of the agenda
- 29 High Speed 2 Programme: TfL Resources** (Pages 307 - 310)
Exempt supplementary information relating to the item on Part 1 of the agenda

Transport for London

Minutes of the Programmes and Investment Committee

Conference Rooms 1 and 2, Ground Floor, Palestra,
197 Blackfriars Road, London, SE1 8NJ
10:00am Thursday 5 October 2023

Members

Dr Nelson Ogunshakin OBE (Chair)

Peter Strachan (Vice-Chair)

Seb Dance

Mark Phillips

Dr Lynn Sloman MBE

Government Observer

David Coles

Executive Committee

Andy Lord Commissioner

Andrea Clarke Interim General Counsel

Stuart Harvey Chief Capital Officer

Other Staff

Helen Cansick Head of Investment Delivery Planning, Healthy Streets Local Schemes

Bruno Carr Head of Investment Delivery Planning, London Underground and Elizabeth line

Justine Curry Interim Director of Legal

Isabel Coman Director TfL Engineering, Asset Strategy

Michael Cooper Director, Project Management Office

Nick Fairholme Director of Capital Delivery, Systems, Project and Programme Delivery

Lorraine Humphrey Director of Risk and Assurance

Zoe Manzoor Senior Committee Officer

Peter McNaught Director of Operational Readiness

Robert Niven Head of Investment Delivery Planning, Major Projects

James Norris Head of Project Assurance

David Rowe Director of Investment Delivery Planning

Rachel Sherry Finance Director Capital Finance

Independent Investment Programme Advisory Group (IIPAG)

Simon Collins IIPAG Member

Phil Threlfall IIPAG Member

52/10/23 Apologies for Absence and Chair's Announcements

An apology for absence had been received from Councillor Kieron Williams. The meeting was quorate.

Alison Munro, Chair of the Independent Investment Programme Advisory Group was unable to attend. Alison was represented by Simon Collins and Phil Threlfall from the group.

The Chair welcomed everyone to the meeting including Mark Phillips, who was attending his first meeting of the Committee following his appointment by the Board.

The meeting was being broadcast live to TfL's YouTube channel, to ensure the public and press could observe the proceedings and decision making.

The Chair reported that this was his first meeting as Chair and Peter Strachan's first meeting as Vice Chair of the Committee. They were grateful for the advice and support they have received, in particular, from his predecessor as Chair, Ben Story, and from Committee Members and key staff.

The Chair reminded those present that safety was paramount at TfL and encouraged Members to raise any safety issues during discussions on a relevant item, or with TfL staff after the meeting.

53/10/23 Declarations of Interests

Members confirmed that their declarations of interests, as published on tfl.gov.uk, were up to date. There had been one update since the last meeting of the Committee: Dr Nelson Ogunshakin OBE had been appointed as a Non-executive Board member of High Speed 2 (HS2) Limited, effective from 1 October 2023. Consequently, he had resigned his position as a Non-executive Director on Connected Places Catapult with effect from 30 September 2023. Given the potential conflict of interest, the Chair reported that he would excuse himself from all TfL discussions and decisions in relation to the HS2 project.

There were no interests to declare that related specifically to items on the agenda.

54/10/23 Minutes of the Meeting of the Committee held on 19 July 2023

The minutes of the meeting of the Committee held on 19 July 2023 were approved as a correct record and the Chair was authorised to sign them.

55/10/23 Matters Arising and Actions List

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

The Committee noted the updated actions list.

56/10/23 Use of Delegated Authority

Andrea Clarke introduced the item. Since the last meeting of the Committee on 19 July 2023, there had been three uses of Chair's Action, in consultation with the Committee, in relation to the London-wide Ultra Low Emission Zone and Scrappage Scheme, the Connectivity Asset and Renewal Programme – Future Operational Network and the London Underground Bank Station Capacity Upgrade.

There had been one approval of Procurement Authority by the Commissioner in relation to the High Voltage Power Batch C contract award.

There had been no other approvals of authority by the Commissioner or Chief Finance Officer, nor any Mayoral Directions to TfL, within the Committee's remit.

The Committee noted the paper.

57/10/23 Investment Programme Report Quarter 1: Periods 1, 2, 3 and 4, 2023/24

Stuart Harvey and David Rowe introduced the Investment Programme Report for Quarter 1 of 2023/24, covering the period 1 April to 24 June 2023, and the related supplementary information on Part 2 of the agenda.

On safety, there were two incidents reported under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR), and three lost time injuries (LTI) in Quarter 1. While the number of RIDDOR incidents had increased, they remained significantly below the industry standard. The rates of LTIs remained the same. The long-term trends in workforce injury had significantly reduced. The project teams were working hard to address this and had launched new initiatives to prevent issues occurring. Members welcomed these measures.

Five of the 28 strategic milestones had been met during the quarter, either early or on time.

Regarding the Four Lines Modernisation Programme, the main focus was now on completing the software development. Signalling Mitigation Area 8 (covering the Metropolitan line between Finchley Road and Preston Road) was the next signalling area to be completed, and this remained a complex and challenging area of work, which was progressing well. The two software related issues had been resolved.

On the DLR, good progress continued to be made with the manufacturing of trains, with 19 completed and the mainline testing continuing. The 11 additional trains had been purchased through the Housing Infrastructure Fund. The work on the northern sidings at Beckton had been paused (due to the insolvency of the contractor) and work was ongoing to consider options to take this forward. The work at the southern sidings was progressing, following the appointment of a new contractor.

At Elephant & Castle, the procurement for the new tunnels linking the station box was progress well. The team was exploring options regarding Stage 2 of the works. At Surrey Quays, the contractor had mobilised on-site. This station upgrade would create a range of benefits.

Following the announcement in July 2023 naming 10 London Underground stations for step-free access work, eight of these stations were being taken through feasibility studies. The designs for two of the stations, at Burnt Oak and Northolt, were being refreshed to identify options to move these forward in 2024. Business cases for further improvements to Leyton and Colindale stations had been submitted to, and favourably received by, the Department for Transport (DfT). TfL was also working with the London Legacy Development Corporation, Network Rail and the London Borough of Newham on enhancements to Stratford station including the provision of step-free access.

The Committee welcomed the work to provide step-free access particularly at London Underground stations. This work addressed inequalities and removed barriers to the use of the network and was considered very important for customers and would help reduce the gap in the customer care score between certain groups. TfL would continue to work to maximise these opportunities as they were a priority for the Mayor. The Government had recently announced funding to provide step-free access on the national rail network and officers would engage with the DfT about access to that funding. TfL recognised the importance of providing information to customers on the assistance available, in addition to providing physical adaptations, and would continue to look at ways of enabling this. Steps were also being taken to review the layout of stations to ensure they were secure by design and that women and girls felt safe. It was suggested that details of this work along with the lessons learnt from the successful roll out of the 5G mobile connectivity and the internet across the network should be shared with other rail providers.

[Action: David Rowe/Peter McNaught]

Other key achievements included the continued delivery of cycleways, lower speed limit routes with public awareness campaigns and measures to improve bus reliability and the provision of zero emission buses. In August 2023, the Mayor had announced that TfL had reached the milestone of having more than 1,000 lower emission buses.

Good progress continued to be made with delivering the technology programme and critical renewals. TfL was waiting to hear back from the DfT on business cases for the major road programme. The redevelopment of Kingston bus station had commenced in August 2023, providing a range of improvements, including energy efficiency initiatives.

A report on the Ultra Low Emission Zone would be published in October 2023. There had been a significant increase in compliant vehicles, and it was anticipated that it would deliver cleaner air benefits.

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

58/10/23 Independent Investment Programme Advisory Group Quarterly Report

James Norris introduced the item, setting out the Independent Investment Programme Advisory Group's (IIPAG) quarterly report for October 2023 and the related supplementary information on Part 2 of the agenda. The report set out work undertaken by IIPAG since the last report to the Committee in July 2023.

Simon Collins and Phil Threlfall presented the Appendix, summarising IIPAG activities in July – August 2023. IIPAG had undertaken three programme level reviews in this period

covering Silvertown Tunnel, London Underground Renewals and the Piccadilly Line Upgrade, and had carried out an assurance review of step-free access at Colindale station. IIPAG's review had identified common themes around programme slippage, increasing reliance on overprogramming and the monitoring of actual delivery against annual baselines.

Progress continued to be made by management in addressing the areas identified by IIPAG.

IIPAG was also carrying out cross-cutting reviews on the delivery of renewals, and was finalising its Terms of Reference for its annual review of the effectiveness of the first and second lines of defence. It was also preparing for a review of progress, with improvements in Procurement and Commercial.

Members discussed the use of overprogramming. While TfL recognised the advantages of this approach, to ensure budgets were fully utilised and the continued delivery of projects, they were also aware of the potential downsides. The teams had been working together to control and restrict the use of any overprogramming more selectively to effectively manage in-year delivery and spend, in line with TfL priorities. The Committee expressed support for this approach.

The Committee noted the Independent Investment Programme Advisory Group's quarterly report and the exempt supplementary information on Part 2 of the agenda.

59/10/23 TfL Project Assurance Update

James Norris introduced the paper, which provided an update on the project assurance work undertaken between 28 May and 19 August 2023 (Period 3 to 5 of 2023/24) and the related supplementary information on Part 2 of the agenda.

Two programme reviews were undertaken, with the Independent Investment Programme Advisory Group (IIPAG) involved in both. In the same timeframe 12 project assurance reviews were undertaken, with IIPAG involved in 10 of these. These reviews gave rise to a total of 79 recommendations, which reflected the scale of the activities. Of these, six were considered to be critical issues.

The paper also highlighted the status of IIPAG and Project Assurance recommendations. The closure rates of recommendations continued to be good, and the number of overdue recommendations were within the range expected.

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

60/10/23 Safe and Healthy Streets Programme – Lambeth Bridge

David Rowe introduced the paper, and the supplementary information on Part 2 of the agenda, on the delivery of the Lambeth Bridge project.

This paper had been brought to the Committee as a separate request from the main Safe and Healthy Streets Programme. This was because the scheme would continue

beyond the scope of the annual programme, due to be submitted to the Committee in December 2023, and due to the need for authority approvals now for pre-construction enabling works to take place in 2023/24. The project would deliver much needed highway safety improvements.

The scheme was supported by the London Borough of Lambeth and Westminster City Council and there had been extensive consultation with relevant authorities, including the London Fire Brigade, and public engagement.

The Committee noted the results of the most recent traffic modelling, which showed that there had been a significant reduction in traffic at Lambeth Bridge north and south junctions. Consequentially, the Benefits to Cost Ratio (BCR) had been reassessed and demonstrated an increase in the BCR, due to the reduction in the amount of journey time dis-benefit. The operation of the scheme and the forecast benefits would be closely monitored post-implementation, to confirm whether the objectives and forecasts outcomes were being achieved.

James Norris reported that the Project Assurance (PA) team had carried out an assurance review and good progress was being made in responding to the recommendations. PA would be carrying out a further assurance review and a full project review of the Safe and Healthy Streets Programme.

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

- 1 approved additional Programme and Project Authority of £11m to enable the construction of the Lambeth Bridge project, giving a total Programme and Project Authority at the sum set out in the exempt supplementary information on Part 2 of the agenda; and**
- 2 noted the matters for which Programme and Project Authority was sought above, including commitments that extend beyond the current Business Plan and budget, accepting that provision would need to be made for those commitments in future business plans and budgets.**

61/10/23 Silvertown Tunnel

Stuart Harvey introduced the paper, and the supplementary information on Part 2 of the agenda, which provided an update on the Silvertown Tunnel project, following completion of the main tunnelling works in July 2023.

Safety was a top priority for TfL. TfL continued to work with the contractor, Riverlinx, to manage the safety of the project and the quality of the scheme. There was confidence that the estimated financial cost could be brought back in line with budget.

Most of the design was now complete. The tunnel boring machine had completed its final leg of its journey ahead of schedule. Preparations were underway for the fit-out testing and commissioning phase of the works.

Following a consultation exercise, TfL had awarded contracts to Go-Ahead London for the operation of the cross-river bus services, and was working with it to prepare for the scheme's opening in 2025 to include zero emission vehicles. TfL was in the process of

reviewing the results of the consultation on the proposal for a bespoke “cycle shuttle service” before deciding next steps.

TfL also continued to monitor air quality and traffic monitoring and this information would be used to inform the setting of user charges. TfL remained committed to achieving the benefits forecast in the environmental assessment. A decision would be sought from the Board in autumn 2024 regarding the user charging regime and further information would be shared with Members nearer the time.

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

- 1 approved additional unbudgeted Financial Authority and Programme and Project Authority each of £2.7m for associated bus infrastructure improvements, bringing the total Financial Authority to £178.8m and the total Programme and Project Authority to £176.2m;**
- 2 noted the matters for which Financial Authority and Programme and Project Authority was sought above include commitments beyond the period of the 2023/24 Budget and provision would, therefore, need to be made for those commitments in future budgets; and**
- 3 noted that Procurement Authority for the various initiatives would be sought at officer level in accordance with Standing Orders.**

62/10/23 Piccadilly Line Upgrade - Stage 1 Progress Update

Stuart Harvey introduced the paper, and the supplementary information on Part 2 of the agenda, which provided an update on progress with delivery of Stage 1 of the London Underground Piccadilly line Upgrade.

Stage 1 involved infrastructure upgrades and enabling works to support the introduction of 94 new trains to replace the existing rolling stock fleet. Stage 2 would involve the replacement of the existing signalling system and the procurement of 18 additional trains.

Safety remained a key priority and focus. The project teams had worked to manage the cost pressures, due to a range of circumstances. Despite these challenges, the introduction of the new trains to service remained on target for 2025.

Mitigations had been put in place to manage the misalignment between the train delivery and the infrastructure programme. Both were now showing improved alignment.

Steps had been taken to ensure that TfL was operationally ready for the move to the new line-wide platform modifications, required to meet Rail Vehicle Accessibility Regulations.

James Norris advised that the Project Assurance (PA) team was fully aware of the complexities of the Programme and had undertaken a targeted review in support of the submission to the Committee. PA was continuing to work closely with the project team and would continue to undertake reviews.

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

63/10/23 London Underground Renewals

David Rowe presented the update on the London Underground (LU) Renewals Programme. The Programme maintained the safety, operability and reliability of LU assets through a prioritised programme of renewals.

The Programme included several major project renewals to address high priority asset risks. The paper set out the impacts of the reduced investments in assets, due to the funding constraints. It also set out the achievements to date and the future plans and provided examples of energy efficiency projects within the Renewals Programme.

The Committee discussed the approach to prioritising renewals, and the risks associated with the delivery of the Programme. It was noted that the proposals had been carefully considered, in accordance with the asset management prioritisation framework. The teams then carefully weighed the proposals against the asset management objectives, and these were then each scored to identify relative priorities. There were no safety implications to the Programme.

James Norris reported the views of the Project Assurance (PA) team, which had carried out an Integrated Assurance Review of the Programme. Generally, it was of the view that the Programme was running well. No concerns had been raised about the spend, however, PA had noted the challenges around the deterioration in the asset base and the skills sets required to manage this.

Simon Collins reported the views of the Independent Investment Programme Advisory Group on the increasing reliance on the Operations team to keep the network running safely. These skills would become more important in the future.

There had been engagement with the Office of Road and Rail (ORR) about the categorisation of items and the programme. The ORR was of the view that TfL had made good progress in understanding the asset base and delivering the Programme. They were fully on board with the Programme.

The Committee noted the paper and:

- 1 approved increased Programme and Project Authority of £559m for the London Underground Renewals Programme, bringing the total Programme and Project Authority to £3,721m; and**
- 2 noted that matters for which authorities are sought above include commitments that extend beyond the period of the 2023/24 Budget and provision would, therefore, need to be made for those commitments in future budgets.**

64/10/23 Members' Suggestions for Future Discussion Items

Andrea Clarke introduced the current forward plan for the Committee.

The Committee noted the forward plan.

65/10/23 Any Other Business the Chair Considers Urgent

There was no other urgent business to discuss.

66/10/23 Date of Next Meeting

The next scheduled meeting of the Committee would be held on Wednesday 6 December 2023 at 10.00am.

67/10/23 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 1: Periods 1, 2, 3 and 4 2023/24; Independent Investment Programme Advisory Group Quarterly Report; TfL Project Assurance Update; Safe and Healthy Streets Programme – Lambeth Bridge; Silvertown Tunnel; and Piccadilly Line Upgrade - Stage 1 Progress Update.

The meeting closed at 1.00pm.

Chair: _____

Date: _____

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Programmes and Investment Committee



Date: 6 December 2023

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: Andrea Clarke, Interim General Counsel
Email: Andrea.Clarke@tfl.gov.uk

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Programmes and Investment Committee Action List (to be reported to the meeting on 6 December 2023)

Actions from the meeting held on 5 October 2023

Minute no.	Item/Description	Action by	Target Date	Status Note
57/10/23	<p>Investment Programme Report Quarter 1: Periods 1, 2, 3 and 4, 2023/24</p> <p>Steps were also being taken to review the layout of stations to ensure they were secure by design and that women and girls felt safe. It was suggested that details of this work along with the lessons learnt from the successful roll out of the 5G mobile connectivity and the internet across the network should be shared with other rail providers.</p>	David Rowe/Peter McNaught	October 2023	Completed. Information shared via partnership networks that TfL is a member of with organisations such as Network Rail and the TOCs.

Actions from the previous meetings

39/07/23	<p>Independent Investment Programme Advisory Group Quarterly Report: Green Initiatives</p> <p>Management was in the process of developing plans on the delivery of green initiatives, with a focus on ensuring that TfL secured the maximum returns on green investments in terms of the aggregate impact. An update on this work would be brought back to the Committee.</p>	Stuart Harvey/ Michael Cooper	December 2023	Green Agenda content has been added to the Quarterly Investment Programme Report.
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Programmes and Investment Committee



Date: 6 December 2023

Title: 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 5 October 2023, there have been:
- (a) no uses of specific authority delegated by the Board;
 - (b) no uses of Chair's Action;
 - (c) no approvals of Programme and Project Authority by the Commissioner nor by the Chief Finance Officer;
 - (d) three approvals of Procurement Authority by the Commissioner in relation to: DLR Station Controller Replacement; the Framework Agreement for the Supply of Electrical Consumable Goods; and the DLR Northern Sidings Contract;
 - (e) one approval of unbudgeted Financial Authority by the Commissioner in relation to the Superloop; and
 - (f) no Mayoral Directions within the Committee's remit.
- 1.3 A similar report is submitted to the Finance Committee and the Land and Property Committee in respect of the use of Chair's Action and of Authorities granted by the Commissioner and the Chief Finance Officer and of relevant Mayoral Directions that fall within the remit of those Committees.

2 Recommendation

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

3 Use of authority delegated by the Board

- 3.1 There has been no use of authority delegated by the Board since the last meeting of the Committee.

4 Use of Chair's Action

- 4.1 Under Standing Order 112, 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 no use of Chair's Action since the last meeting of the Committee.

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 and Chief Finance Officer

- 5.4 Since the last meeting of the Committee, neither the Commissioner nor the Chief Finance Officer has approved any Programme and Project Authority requests within the Committee's remit.

6 Procurement Authority Approvals

- 6.1 Procurement Authority is the authority to make a binding or contractual commitment with a supplier for the purchase of goods, services, land or works or to receive income arising from TfL Group activities in the areas of goods, services, land or works.

Approvals by the Commissioner and Chief Finance Officer

- 6.2 Since the last meeting of the Committee, the Commissioner has approved:
- (a) DLR Station Controller Replacement: Procurement Authority of £66m, to replace safety critical infrastructure;
 - (b) Extension of the Framework Agreement for the Supply of Electrical Consumable Goods: Procurement Authority of £38.1m; and

- (c) DLR Northern Sidings Contract: Procurement Authority of £6.8m in relation to the termination of an existing contract following insolvency of the Contractor.

7 Financial Authority Approvals

- 7.1 Financial Authority is the authority to spend money, receive income, incur a financial liability or redistribute funds to relevant third parties in respect of their respective allocated budgets. Financial Authority is automatically granted to the extent that an activity or Programme or Project is 'budgeted'. This paper reports on any use of unbudgeted Financial Authority.
- 7.2 Since the last meeting of the Committee, the following Financial Authority has been approved:
 - (a) **Superloop:** Unbudgeted Financial Authority of £2.3m was approved by the Chief Finance Officer, with costs to be recovered from the Greater London Authority (GLA).

8 Mayoral Directions to TfL

- 8.1 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.
- 8.2 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.
- 8.3 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>.
- 8.4 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.
- 8.5 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.
- 8.6 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. That page will be updated as and when further Directions are made.

8.7 Mayoral Directions to TfL related to projects and programmes are reported to this Committee. There have been no Mayoral Directions to TfL within the Committee's remit since the last meeting.

List of appendices to this report:

None

List of Background Papers:

Minutes from previous meetings of the Committee.
Greater London Authority Decision Making Database.

Contact Officer: Andrea Clarke, Interim General Counsel
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Programmes and Investment Committee



Date: 6 December 2023

Item: Forthcoming Key Procurement Activities

This paper will be considered in public

1 Summary

- 1.1 This paper sets out a summary of the major new procurements or contract extensions planned over the next 24 months and decisions that are anticipated to be required from the Committee by way of Chair's Action between this meeting and the next planned meeting in March 2024. It also highlights significant forthcoming procurements that require approval at officer level during that period. A similar paper is submitted to the Finance Committee on matters within its remit.
- 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 financial and 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 on Part 2 of the agenda.**

3 Background

- 3.1 There is a recognised need to provide this Committee and other decision makers in TfL with a forward look on the pipeline of major procurements requiring decisions.
- 3.2 The Procurement and Commercial (P&C) function within TfL has worked to improve its forward planning, for example by consolidating multiple sources of data regarding the plans for contract renewals and new procurements. This has enabled P&C to establish a pipeline of activities over the next 24 months.
- 3.3 While TfL has a current funding agreement with the Government until the end of March 2024, there is a pressing need for the Government to confirm the £500m that TfL needs in 2024/25 to support the delivery of critical in-flight projects. The Government has consistently recognised in the funding settlements that TfL is not expected to fund major capital projects from its operating incomes. This is consistent with other transport authorities.

- 3.4 Failure to confirm this funding well in advance of March 2024 would force TfL to have to reprioritise its Business Plan, undoing the progress made under the current funding agreement and mean TfL would again need to start making difficult choices relating to asset renewals and delaying non-committed investment. While no agreement has been reached yet, we are having productive conversations with DfT Ministers and officials to make the case set out above.
- 3.5 P&C's ability to plan the necessary governance and approval timescales, in conjunction with meetings of relevant committees, where appropriate, is improving and will continue to improve. This will not entirely remove the possible need for out of cycle approvals that require Chair's Action, either because of the conclusion of a procurement which falls naturally in timing between meetings, or because of an urgent requirement.
- 3.6 This paper sets out the approvals anticipated to be required from the Committee over the next six months and highlights significant forthcoming procurements that require approval at officer level during that period.

4 Two year look ahead

- 4.1 A two year look ahead is summarised below, including only those projects with an estimated value of £1m or over. The pipeline covers 247 contracts with an estimated total value of £14.7bn, and equivalent annual spend of £2.7bn. This is broken down as follows:

P&C Division	Team	No	Estimated Contract Spend	Equivalent Annual Spend
Capital and Technology	Capital Infrastructure (including Highways)	21	£1,740m	£267m
	Capital Systems	9	£147m	£34m
	Technology	32	£1,838m	£289m
Operations and Professional Services	Fleet	49	£292m	£98m
	Facilities Management	17	£2,900m	£615m
	Indirects (support goods and services)	23	£3,874m	£738m
	Infrastructure	49	£1,706m	£262m
	Rail and Sponsored Services	25	£732m	£144m
	Track	22	£1,504m	£220m
Total		247	£14,733m	£2,667m

5 Planned procurement activity in the next six months

- 5.1 There are two business units within the P&C function, and the key forthcoming procurement activities for both are summarised below. Further details of these procurement activities are provided within the related paper on Part 2 of the agenda.
- 5.2 In Operations and Professional Services, most authority decisions are within the remit of the Finance Committee, rather than this Committee. There are currently no contracts forecast to need approval from this Committee between now and the next planned meeting.
- 5.3 In Capital and Technology, we are currently forecasting that Procurement Authority for one contract may require Committee approval by Chair's Action in the next six months.

6 Improving Visibility of the Procurement Pipeline

- 6.1 To date, the following steps have been taken by P&C to provide greater visibility on the pipeline of procurement activity:
 - (a) an initiative to improve the quality of data captured in the Ariba Source to Contract system with guidance and processes flow provided by our P&C Central Enabling team;
 - (b) obtaining visibility of the Central Project List (held by the Programme Management Office) to ensure P&C's view of the pipeline is aligned with data held elsewhere in TfL. Further work in this area will be necessary to enable P&C to expand the forward look of the pipeline beyond two years; and
 - (c) the Pipeline and Planning team within P&C is now at full complement: bringing all activities on pipeline visibility, savings tracking, data quality and resource planning under one central function.
- 6.2 P&C's work on improving the visibility of the procurement pipeline will enable TfL to be prepared to meet a requirement in the Procurement Act 2023 for all contracting authorities to publish a pipeline notice within 56 days of the start of each financial year. The pipeline notice will need to set out details of all procurements over £2m in value due to take place within that year. The Act received Royal Assent on 26 October 2023; the date on which it comes into force is not yet settled but is widely expected to be from October 2024.
- 6.3 A paper will on the Act and how TfL will comply with it and related regulations will be submitted to the next meeting of the Finance Committee, in March 2024, and shared with members of this Committee.

List of appendices to this report:

Exempt supplementary information is included in the paper on Part 2 of the agenda.

List of background papers:

None

Contact Officer: Rachel McLean, Chief Finance Officer
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Programmes and Investment Committee



Date: 6 December 2023

Item: Investment Programme Report Quarter 2, 2023/24

This paper will be considered in public

1 Summary

- 1.1 The Investment Programme Report describes the progress and performance in Quarter 2, 2023/24 (25 June to 16 September 2023) 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 2 2023/24

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

List of Background Papers:

None

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Investment programme report

Quarter 2 2023/24
(25 June to 16 September 2023)

Appendix I

Contents

3 Introduction

- 4 Purpose and scope
 - 5 Investment programme delivery structure
-

7 Our performance

- 8 Safety performance
 - 9 Strategic milestones
 - 11 Schedule performance
 - 12 Milestones forecast to be late
-

13 Major projects

- 14 Elizabeth line – Rolling stock
 - 15 Four Lines Modernisation
 - 17 DLR rolling stock and systems integration
 - 19 Piccadilly line upgrade
 - 21 Silvertown Tunnel
 - 23 Bank station capacity upgrade
-

25 Rail and station enhancements

- 27 High Speed 2
 - 28 Elephant & Castle
 - 29 East London line
 - 30 Surrey Quays
 - 31 Tram replacement rolling stock
 - 32 DLR
 - 33 London Underground
-

34 Safe and healthy streets

- 36 Old Street station and roundabout
 - 37 Cycling infrastructure
 - 38 Vision Zero
 - 39 Bus priority
 - 40 Bus safety
-

41 Environment

- 43 London-wide Ultra Low Emission Zone
 - 44 Direct Vision Standard phase two
 - 45 Electric vehicle infrastructure
 - 46 Zero-emission bus fleet
 - 47 Waste heat
 - 48 Solar private wire
 - 49 Building decarbonisation
-

50 Technology

- 52 Operations technology
 - 54 Technology and data
-

56 Street, bus and rail-sponsored services renewals

- 58 Streets
 - 59 Bus
 - 60 River services
 - 61 London Overground
 - 62 DLR
 - 63 London Trams
-

64 London Underground renewals

72 Appendix: Our safety performance data

Introduction

Our investment programme comprises projects to maintain the reliability of the network and support growth in the capital



Purpose and scope

Purpose

Transport for London (TfL) is part of the Greater London Authority (GLA) family led by Mayor Sadiq Khan. We are the integrated transport authority responsible for delivering the Mayor's aims for transport.

We run most of London's public transport services, including London Underground, London Buses, the DLR, London Overground, Elizabeth line, London Trams, London River Services, London Dial a Ride, Victoria Coach Station, Santander Cycles and the IFS Cloud Cable Car. The quality and accessibility of these services is fundamental to Londoners' quality of life. By improving and expanding transport, we can make people's lives easier and increase the appeal of sustainable travel.

We are moving ahead with many of London's most significant infrastructure projects, using transport to unlock growth. Supporting the delivery of high density, mixed-use developments that are planned around active and sustainable travel will ensure that London's growth is good growth. We also use our own land to provide thousands of new affordable homes and our supply chain creates tens of thousands of jobs and apprenticeships across the country.

Scope

The report gives a progress update on the programmes and major projects that seek authority each year from the Programmes and Investment Committee. It includes programmes of renewals and enhancements to maintain reliability and support growth. Renewing and replacing our assets is our required baseline to maintain our current performance in terms of safety, reliability, capacity and asset

condition. Additional enhancements can unlock new capacity and enable us to use our existing network more intensively.

This report covers Quarter 2, which runs from 25 June to 16 September 2023. For each key project or programme, the financial and milestone data represent the position at the end of Quarter 2, with commentary on key achievements, progress and challenges. It also updates on notable progress since the last report.

The data displayed differs depending on whether the programme or portfolio has a finite scope to deliver:

- For projects with a finite scope, financial records of spend to date, authority and estimated final cost (EFC) are provided, which represent the entire duration of the programme or portfolio except where stated. For these projects, a completion date is also provided, indicating the year and which quarter the specified event will occur
- For ongoing portfolios that aggregate a number of projects, financial records of spend to date and forecast cost are provided for a discrete period of time

Numbers in brackets represent a deficit in the figure or a decrease since the last report; numbers without brackets represent a surplus in the figure or an increase since the last report. Where financial information is commercially sensitive, it has been redacted. The performance over time graphs illustrate financial performance over the last four quarters. The commentary alongside the graph explains any specific trends or changes to trends over a snapshot in time.





Investment programme delivery structure

Our investment programme is delivered by the areas of business set out below. This is reflected in the structure of the report

During Quarter 2 2022/23, on 1 September 2022, we created a new director structure. The changes saw the majority of capital works fall under Capital, the area overseen by the Chief Capital Officer. From Quarter 1 2023/24, the new structure was established. However, there may be further small changes to refine parts of the structure. The structure is set out below.

Major projects

This includes our largest and most complex projects. It comprises line upgrades such as the Piccadilly line upgrade and the Four Lines Modernisation programme, as well as network extensions, major station upgrades and the Elizabeth line.

Rail and station enhancements

This brings together the London Underground enhancements programme and surface-related enhancements from the Public Transport programme such as the East London line Housing Infrastructure Fund and DLR Royal Docks, in particular where there are links to third-party developments and funding, recognising the similarities in the activities involved and the outcomes that they deliver.

Safe and healthy streets

This is largely unchanged from the previous Healthy Streets programme. The addition of the Bus action plan from the existing Public Transport programme alongside bus priority brings together interconnected activities to deliver the Bus action plan.

It recognises the importance of holistic investment in the bus network, alongside cycling and walking, to increase travel by sustainable modes. Similarly, the addition of bus safety schemes such as intelligent speed assistance alongside the Safer Junctions and Lowering speed limits programmes would align activities to improve safety on London's road network.

Environment

This mainly retains the structure of the Environment programme while also reflecting the new green project pipeline that is being developed.

Technology

This merges the three technology-focused programmes – London Underground technology, Surface technology and Technology and data – with a small number of rail and sponsored-services technology projects currently in the Public Transport programme. These have separate governance despite sharing common resources, stakeholders and delivery of strategic outcomes.

Streets, bus and rail-sponsored services renewals

This groups together renewals that are currently split across the Surface assets and Public Transport programmes. These programmes share a common approach to work-bank management and by combining associated activities such as bus-focused renewals, we can improve investment prioritisation and efficiency.

London Underground renewals

This merges the two existing London Underground renewals programmes – Train systems and Infrastructure. Grouping these projects will enable more holistic oversight and prioritisation in managing renewals across programmes. In addition, this programme will incorporate Railway systems enhancement (formerly World class capacity).



Grouping projects helps provide a more holistic view

Our performance

We measure the safety and milestones progress of our investment programmes schemes



Safety performance

Capital

Capital includes activity under the Chief Capital Officer as well as maintenance activity for which the Chief Operating Officer is responsible. In Quarter 2, our Capital teams worked a combined total of 1.8 million hours; a decrease of 0.1 million hours from the previous quarter.

Quarterly performance

In Quarter 2, there were three incidents which reached the threshold for more than seven days' absence and they were reported under the Reporting of Injuries Diseases and Dangerous Occurrences Regulations 2013 (RIDDOR). As a result, the RIDDOR accident frequency rate for the Capital area has risen from 0.10 to 0.12 at the end of Quarter 2.

There were three lost-time injuries (LTIs) reported, which are injuries that cause an employee to be absent for one or more shift. This is the same number reported during the previous quarter, resulting in the LTI frequency rate remaining stable at 0.22.

There were 11 injuries reported during Quarter 2, with manual handling incidents the most prevalent. Common root causes included lack of communication, poor task design and incorrect use of equipment. Although one more injury was reported compared with the previous quarter, the long-term trend of workforce injuries in Capital continues to decline as we work towards our zero-harm ambitions.

In addition to identifying specific actions in response to each incident, common learnings and key themes from the quarter have been shared across our Capital teams to ensure the systemic root causes are fully addressed.

Significant incidents and near misses

The following section summarises significant incidents that have occurred during the quarter, along with updates and safety initiatives from our Capital team.

Violence, aggression and antisocial behaviour

Unfortunately, this quarter has witnessed a significant number of incidents involving violence or aggression against our employees, or antisocial behaviour, including at our Ultra Low Emission Zone (ULEZ) sites. Our teams are encouraged to report all such incidents so they can be followed up appropriately by our teams and the police. We are working with our suppliers to facilitate the sharing of good practice, and we have also made our Urban Safety training available to our suppliers to ensure all colleagues know how to deal with such incidents.

Safety, health and environment culture assessment

This quarter, the Capital Delivery, Construction and Programme Management teams completed the safety, health and environment culture assessment, which provided colleagues with an opportunity to have their say. More than 500 employees completed the assessment as part of the improvement plan initiative, with the results indicating that the high level of responsibility they feel for managing our safety, health and environment culture.

During the next quarter, workshops will be run within each department to targeted improvement plans to improve our culture. The Engineering and Asset Strategy team will also be completing the assessment in the coming months.

Four Lines Modernisation

The programme has now worked more than two million hours since its last RIDDOR reportable incident. With such a range of activities over a variety of locations this is a notable achievement.

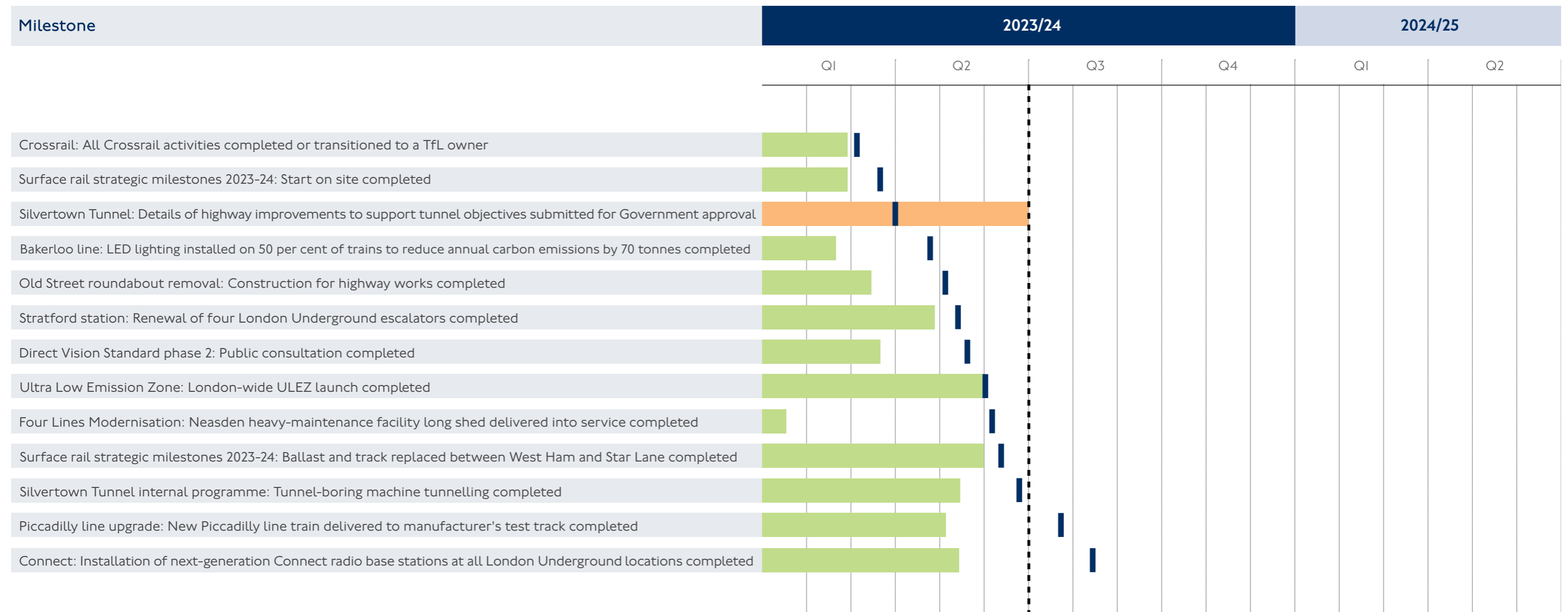
Renewing track and protecting our assets

Following track renewal and bridge component replacement at a bridge over Regent's Canal on the Metropolitan line, inspection of the underside of the bridge was required. Eliminating risks from work on water in a manned boat, our Engineering team took an innovative approach and engaged a contractor with a remote-controlled boat fitted with high-resolution cameras to take videos and images, all operated from the towpath. The operation was completed in under an hour, minimising disruption to canal traffic and risk to colleagues.

Strategic milestones

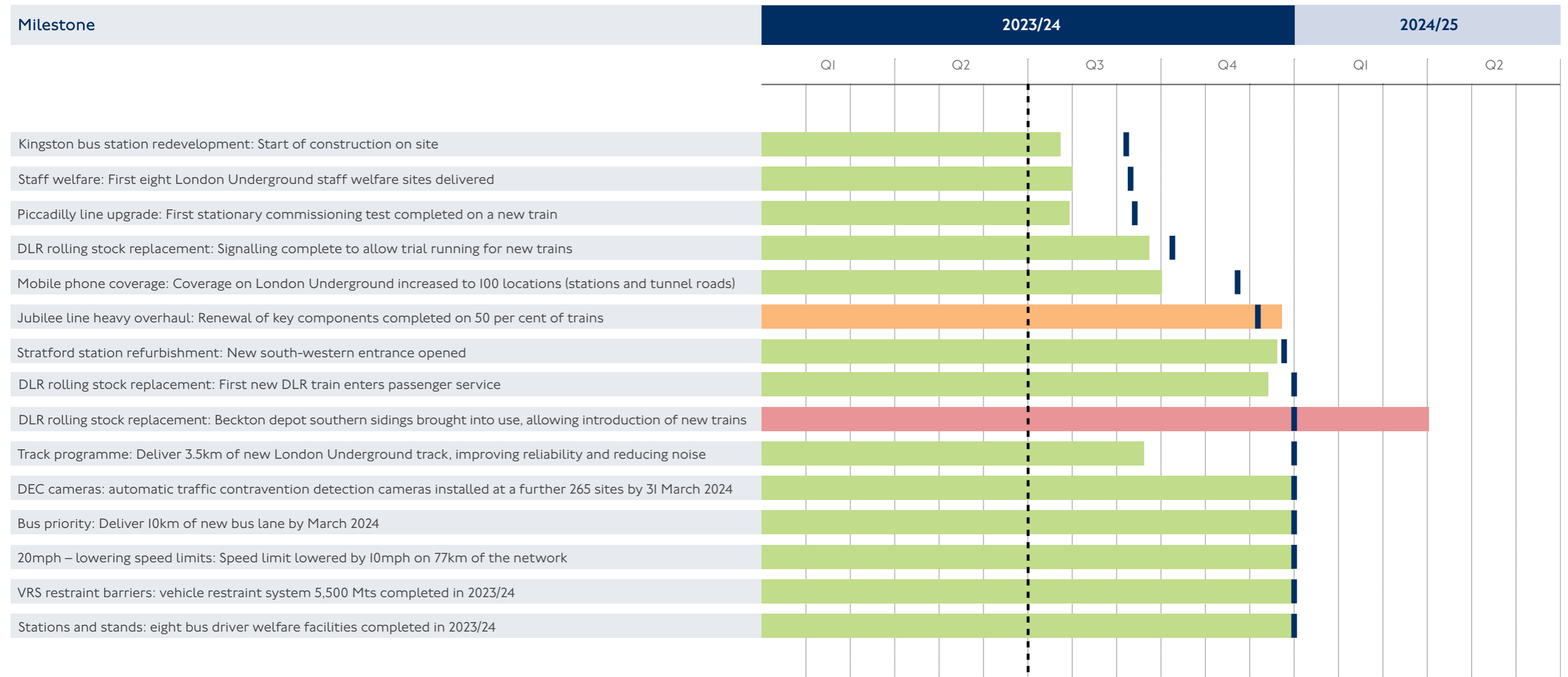
We delivered seven out of 28 strategic milestones either on time or early in Quarter 2, and this year we have delivered 12 out of 28 milestones to date

These are our strategic milestones for 2023/24. The solid blue bar shows when the milestone was due to be met, while the green, amber and red blocks show when it was achieved, or is forecast to be achieved.



■ Delivered on time or earlier than planned
 ■ Delivered less than 90 days later than planned
 ■ Delivered more than 90 days later than planned
 ■ Planned delivery date
 ⋮ Reporting period cut off by 16 September 2023

Strategic milestones 2023/24 (continued)



■ Delivered on time or earlier than planned
 ■ Delivered less than 90 days later than planned
 ■ Delivered more than 90 days later than planned
 ■ Planned delivery date
 ⋮ Reporting period cut off by 16 September 2023

Schedule performance

We have achieved a number of scheduled milestones during the quarter

Crossrail

In May 2023, all Crossrail activities were completed or transferred to us.

Surrey Quays station

In May, we began work on the Surrey Quays station upgrade to provide new step-free access and a spacious new ticket hall. These works will help support housing growth and regeneration projects in the local area. To meet the new passenger demand expected as a result of this work, we also started work in June to enhance our signalling and traction power systems to enable us to run 18 trains per hour on this section of the railway by 2025, and then 20 trains per hour beyond that to ensure we continue to meet the growing demand.

Bakerloo line fleet

By May we installed energy-saving LED customer lighting on 50 per cent of Bakerloo line trains to reduce annual carbon emissions by 70 tonnes.

Direct Vision Standard

In June, we completed phase two of the Direct Vision Standard public consultation.

Four Lines Modernisation

In April, the Neasden heavy-maintenance long-shed facility was brought into service.

Old Street roundabout

In June, we completed the construction for highway works at Old Street roundabout.

Connect radio base stations

We completed the installation of next generation replacement Connect radio base stations at all London Underground locations four and a half months ahead of schedule on 25 July 2023, improving reliability and ensuring that operationally-critical infrastructure is now supported into the 2030s.

Piccadilly line upgrade

We delivered the new Piccadilly line train to the manufacturer's test track four months ahead of schedule on 21 July 2023.

Silvertown Tunnel

The Silvertown Tunnel boring machine completed tunnelling 62 days ahead of plan on 23 July 2023.

Replacement of ballast and track

We replaced the ballast and track between West Ham and Star Lane ahead of schedule on 29 August 2023.

London-wide Ultra Low Emission Zone

The London-wide Ultra Low Emission Zone went live as planned on 29 August 2023.

Stratford escalator refurbishment

We completed the renewal of four escalators at Stratford station two months earlier than planned on 26 June 2023.





Milestones forecast to be late

Silvertown Tunnel programme

TfL submits to the Secretary of State for approval of wider highway improvements that support the traffic, environmental and socio-economic objects of the Silvertown Tunnel

Details of highway improvements to support tunnel objectives were intended to be submitted for Government approval in a submission to the Secretary of State for Transport. This has been deferred to ensure effective engagement with the boroughs on the planned highway improvements.

DLR – Beckton Depot and network infrastructure

Bring into use Beckton Depot southern sidings to enable the introduction of new DLR trains

This milestone will be impacted by the Principal Contractor for the Northern Sidings project, Buckingham Group, entering into administration as the Southern Sidings can only be commissioned following the Northern Sidings commissioning. We are currently investigating options to bring forward this milestone to facilitate the introduction of new trains and expect to baseline a programme for this next period.

London Underground renewals

Jubilee line (fleet overhaul and component renewal) – Completion of the renewal of key components on 50 per cent of Jubilee line trains

This strategic milestone target date is now expected to be missed by 19 days. The refurbisher of the train wheels has experienced a number of issues since the start of the programme, including inaccurate material estimates, shortage of employees and issues with quality. We are working closely with the supplier to mitigate the delay.

Major projects

This portfolio includes our largest and most complex projects. It comprises line upgrades such as the Piccadilly line upgrade, the Four Lines Modernisation programme and the Elizabeth line



Elizabeth line

Rolling stock

Forecast completion	Gross cost to date (£m)	Gross cost to go (£m)	Gross EFC (£m)	Programme and Project Authority (£m)	Variance: EFC versus authority (£m)
Q4 2024/25	1,002	5	1,007	1,149	142
Change since last Investment programme report					
No change	No change	No change	No change	No change	

Financial commentary

The movement of £2m since Q4 2022/23 in the cost to date relates to ongoing rolling stock work that will be completed in 2024/25.

Performance over time commentary

The forecast end date represents the delivery of the rolling stock and depot, including all additional changes. Since authority was awarded in 2013/14, the estimated final cost dropped from £1,090m to £1,007m because the trains have since been part of a sale and leaseback arrangement. They are now being leased and the costs charged as operational costs.

Programme update

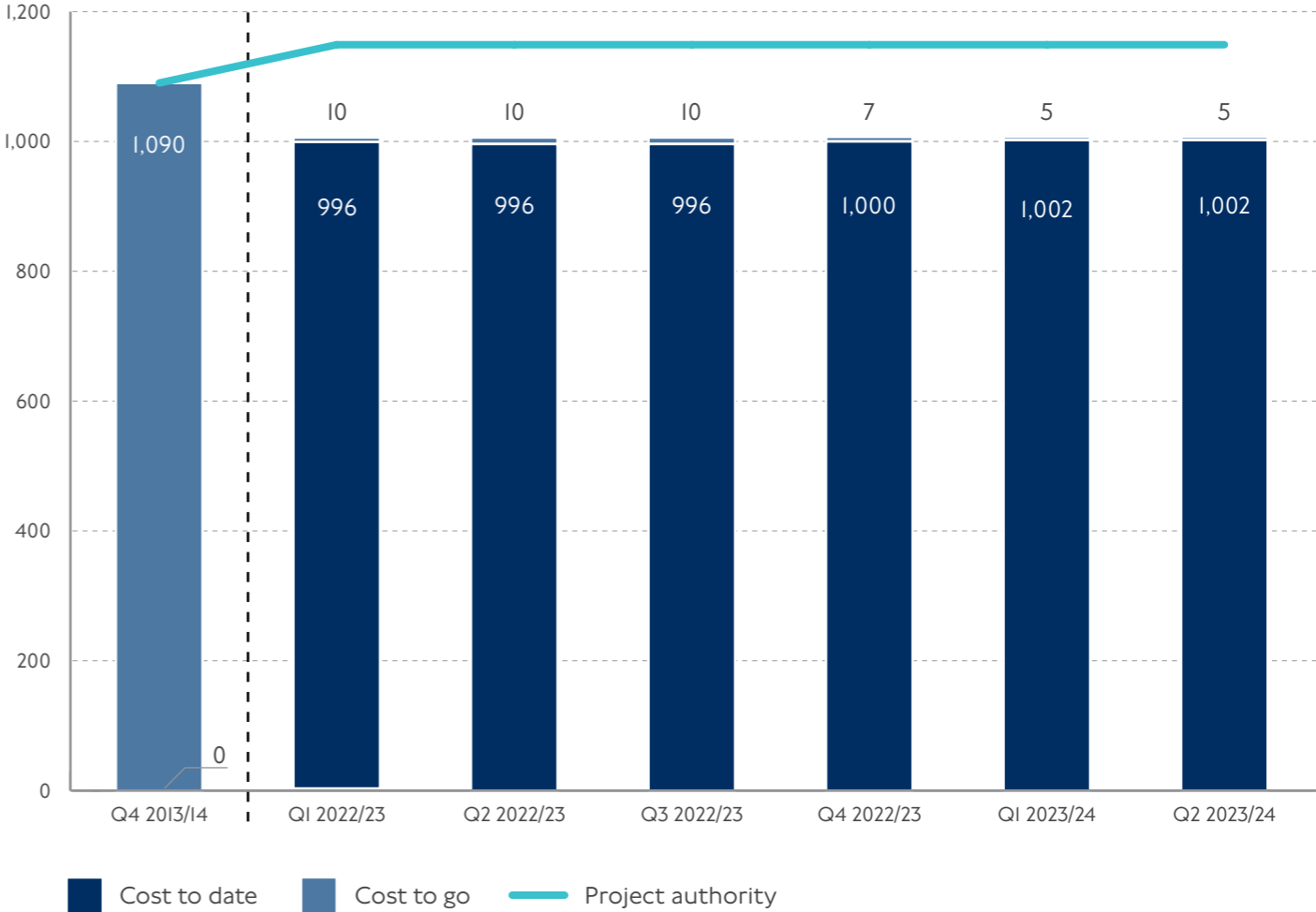
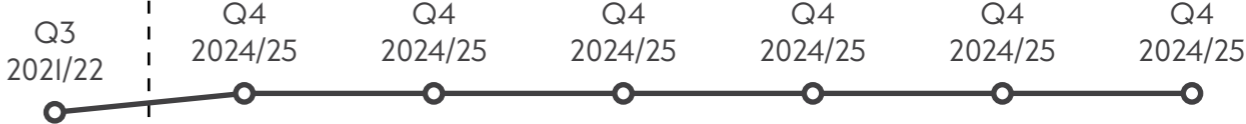
Class 345 trains
The Class 345 fleet has been operating the peak service of 24 trains per hour since 21 May 2023, consistently meeting the required daily availability level of up to 65 trains.

The manufacturers continue to implement a programme of upgrades to the train hardware and signalling system software to attain further fleet reliability increases.

This has been accounted for in the rolling stock project forecast through to 2025.

Estimated final cost performance over time (£m)

Forecast completion date



Line upgrades

Four Lines Modernisation

Forecast completion	Gross cost to date (£m)	Gross cost to go (£m)	Gross EFC (£m)	Programme and Project Authority (£m)	Variance: EFC versus authority (£m)
Q4 2024/25	5,305	181	5,486	5,520	34
Change since last Investment programme report					
No change	21	(21)	No change	No change	

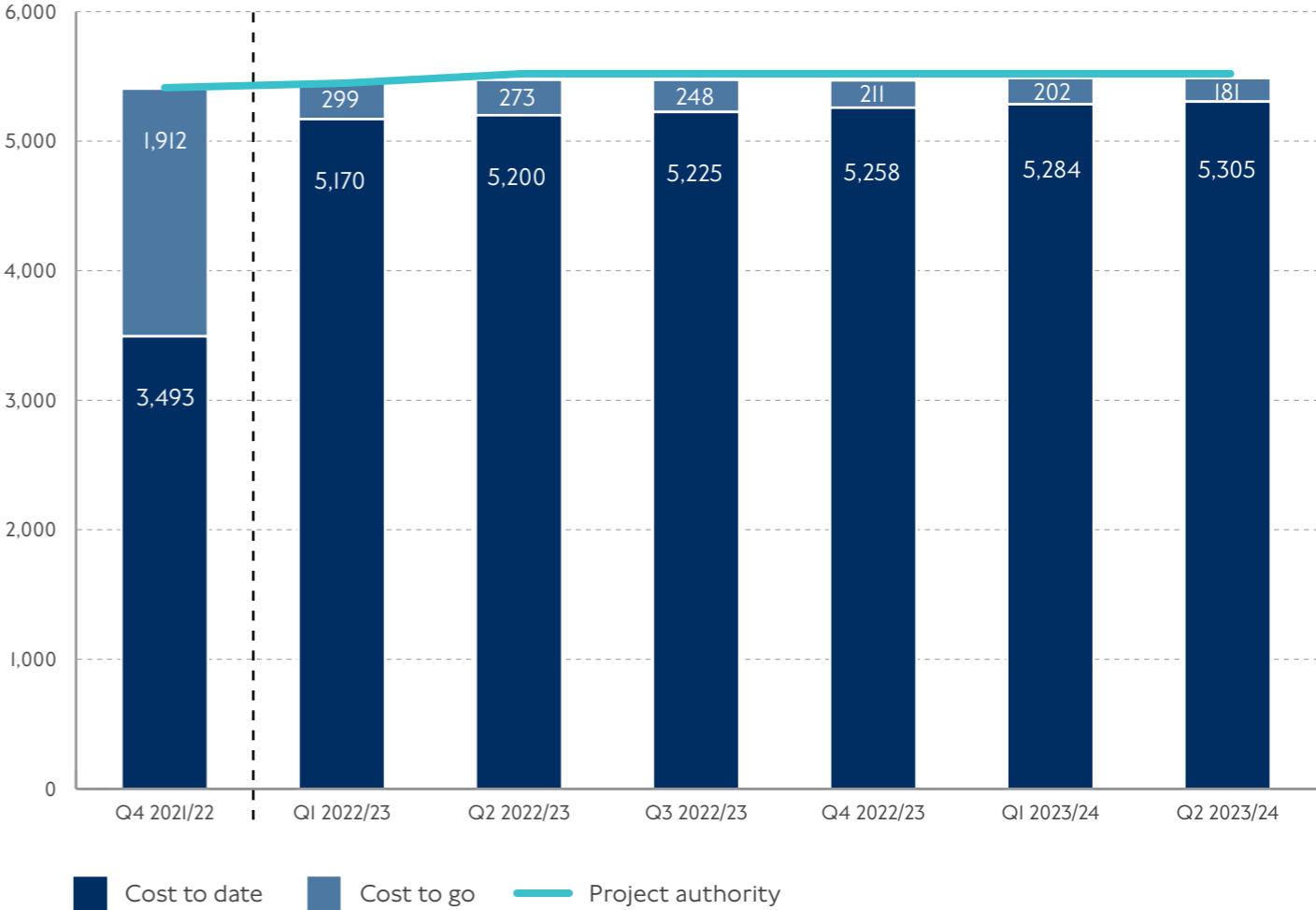
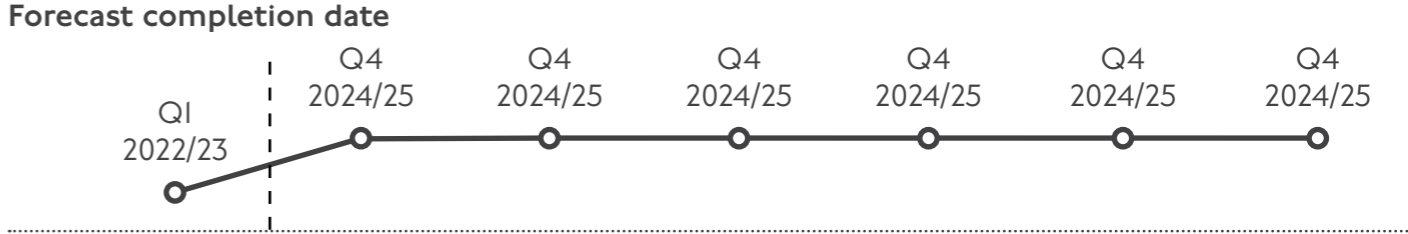
Financial commentary

Delivery of the programme continues to be challenging due to its scale and complexity and it continues to face both schedule and cost pressures. A detailed review of the signalling software schedule for the remaining signalling areas that are yet to go live is currently being undertaken in collaboration with our signalling supplier. A further update will be provided in the next report.

Performance over time commentary

The forecast completion date shows when the final signal migration area I4 between Rayners Lane and Uxbridge will be brought into service. The date has been delayed from the initial forecast made when the signalling contract was awarded in 2015. This is principally owing to challenges with complex software development, testing and commissioning, and closure availability alongside the impact of the pandemic.

Estimated final cost performance over time (£m)





We continue to upgrade our signalling systems

Programme update

We continue to make progress on the programme, which is delivered by progressively installing new signalling on sections of the railway called signal migration areas (SMAs).

The remaining areas still to go live with the new signalling system include the Metropolitan line north of Finchley Road (SMAs 8, 9, 13 and 14) and sections of the District line from Barons Court to Stamford Brook (SMA10) and Fulham Broadway to East Putney (SMA12).

Software development continues for the next SMA to be commissioned, covering the Metropolitan line between Finchley Road and Preston Road (SMA8) which is due to go live in 2024. SMA8 is the most complex area for integrating the new signalling system on the Metropolitan line with the Jubilee line and Neasden depot train control software, with significant testing challenges expected.

This has created challenges in determining with confidence the precise go live date for SMA8 in 2024, and this is currently being reviewed by the project team.

The team is committed to working collaboratively with our signalling supplier to meet the programme challenges and implement measures to minimise or mitigate the risks associated with the remaining migration areas.

In a significant step forward for the programme, we recently completed the second system test for SMA9 in Harrow, successfully testing the integration of Chiltern trains with the new signalling system for the first time. On 10 and 11 November, works were also successfully undertaken during a closure to test the connection between the control systems of the Jubilee and Metropolitan lines to ensure communication between them.

Unrelated to the commissioning of SMA7, we identified two significant software issues in the commissioned system which, following the implementation of corrective software on the 5 August 2023, have now been resolved. This has enabled the removal of the associated temporary mitigation measures.

Design and installation of trackside signalling assets continues in the areas which are yet to go live. Installation is on target to be substantially complete by the end of March 2024.

Works are progressing on the planned upgrades to the heavy-lifting shed at Neasden depot and the new employee accommodation block. When complete, this facility will enable the planned overhaul of Metropolitan line trains.

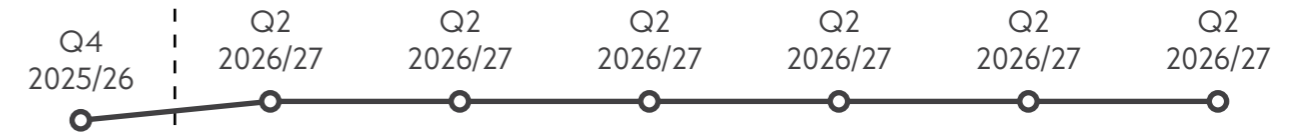
Line upgrades

DLR rolling stock and systems integration

Forecast completion	Gross cost to date (£m)	Gross cost to go (£m)	Gross EFC (£m)	Programme and Project Authority (£m)	Variance: EFC versus authority (£m)
Q2 2026/27	408	496	904	881	(23)
Change since last Investment programme report					
No change	41	11	52	No change	

Estimated final cost performance over time (£m)

Forecast completion date



Financial commentary

Since the last report, the EFC has seen significant increases following the insolvency of the Principal Contractor delivering infrastructure works at Beckton depot and the reassessment of the likely outturn cost of all remaining works across the entire programme, including estimates for unprocured scope and future inflationary allowances as well as opportunities to reduce costs.

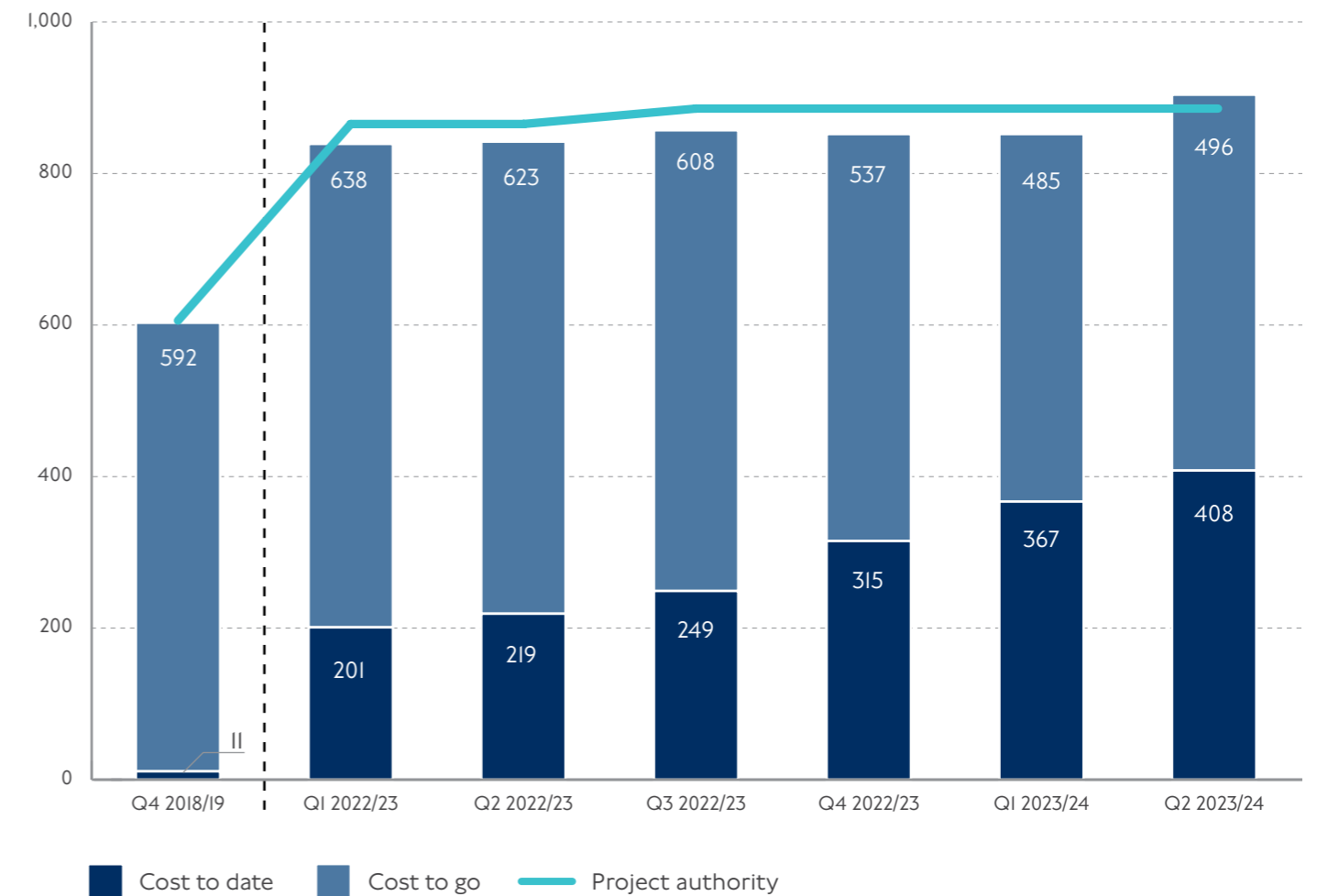
We continue to review options to mitigate these cost pressures where possible. A full paper detailing these cost pressures will be presented at the upcoming Programmes and Investment Committee meeting.

Performance over time commentary

Since the Programme and Project Authority was granted in 2019, we have received approval from the Government to purchase 11 additional trains funded through the Housing Infrastructure Fund.

The increase in EFC from Quarter 4 2018/2019 reflects the addition of £261m of grant funding from the Government to deliver the Housing Infrastructure Fund scope of works.

The EFC in Quarter 2 2023/24 reflects the insolvency of the Principal Contractor delivering infrastructure works at Beckton depot and the reassessment of the likely outturn cost of all remaining works across the entire programme, including estimates for unprocured scope and future inflationary allowances.



Programme update

Rolling stock delivery

The manufacture of the new rolling stock in Spain is continuing, with 22 trains completed. Main line testing is also progressing and signalling integration testing of the onboard vehicle signalling control system is under way. We expect the new trains to begin entering passenger service in early 2024.

Beckton depot and network infrastructure

On 17 August 2023, Buckingham Group Contracting Ltd, the principal contractor for the Beckton depot Northern Sidings contract, filed notice of intention to appoint administrators. Buckingham Group suspended works on site and stood down its subcontractors. We enacted a Safe Stop of the works to ensure the site was left in a safe and secure condition. Buckingham Group has now entered administration with no buyer found for this contract.

This will delay commissioning of the Northern Sidings and start of the main works on site for the new maintenance building but is not expected to impact the introduction of new trains into service in early 2024 as alternative stabling options are being explored. We are currently in the process of implementing alternative arrangements to complete these works.

Following the award of the contract for the maintenance facility building and southern sidings, our contractor has now fully mobilised and works are progressing in readiness for commissioning following the northern works completion.

Following the award of the design and build contract for the second entrance at Blackwall, intrusive surveys have been undertaken and detailed design is nearing completion.

The first power resilience contract has been awarded and design has begun. We have found synergies on the delivery of these works which will enable us to reduce the number of closures of the railway, minimising impacts to our customers.

Green agenda

Works are progressing to implement changes in the train control software to reduce the amount of fixed power assets required to support the new trains.

This will reduce embedded carbon in construction and provide an energy saving over the lifespan of the train.

Initial works have begun and a full quantification of carbon savings will be detailed in the next quarter.



We have built 22 new DLR trains

Line upgrades

Piccadilly line upgrade

Forecast completion	Gross cost to date (£m)	Gross cost to go (£m)	Gross EFC (£m)	Programme and Project Authority (£m)	Variance: EFC versus authority (£m)
Q4 2026/27	786	2,264	3,050	2,994	(56)
Change since last Investment programme report					
No change	67	58	125	No change	

Financial commentary

A full update was provided in the annual programme review submission to the October Programmes and Investment Committee, which highlighted the current risks and challenges faced in the delivery of the Piccadilly line upgrade programme and how we are responding to them.

In Quarter 2 2023/24, the EFC increased by £125m to £3,050m, which now exceeds the authority value of £2,994m. While a view has been taken of the known new risks and challenges, it is not proposed to seek an increase in Programme and Project Authority at present until the conclusion of extensive work that is under way on alternative delivery plans, mitigation measures and opportunity development to inform the Stage I EFC position. The outcome of this review will be reported to the Committee in March 2024.

Performance over time commentary

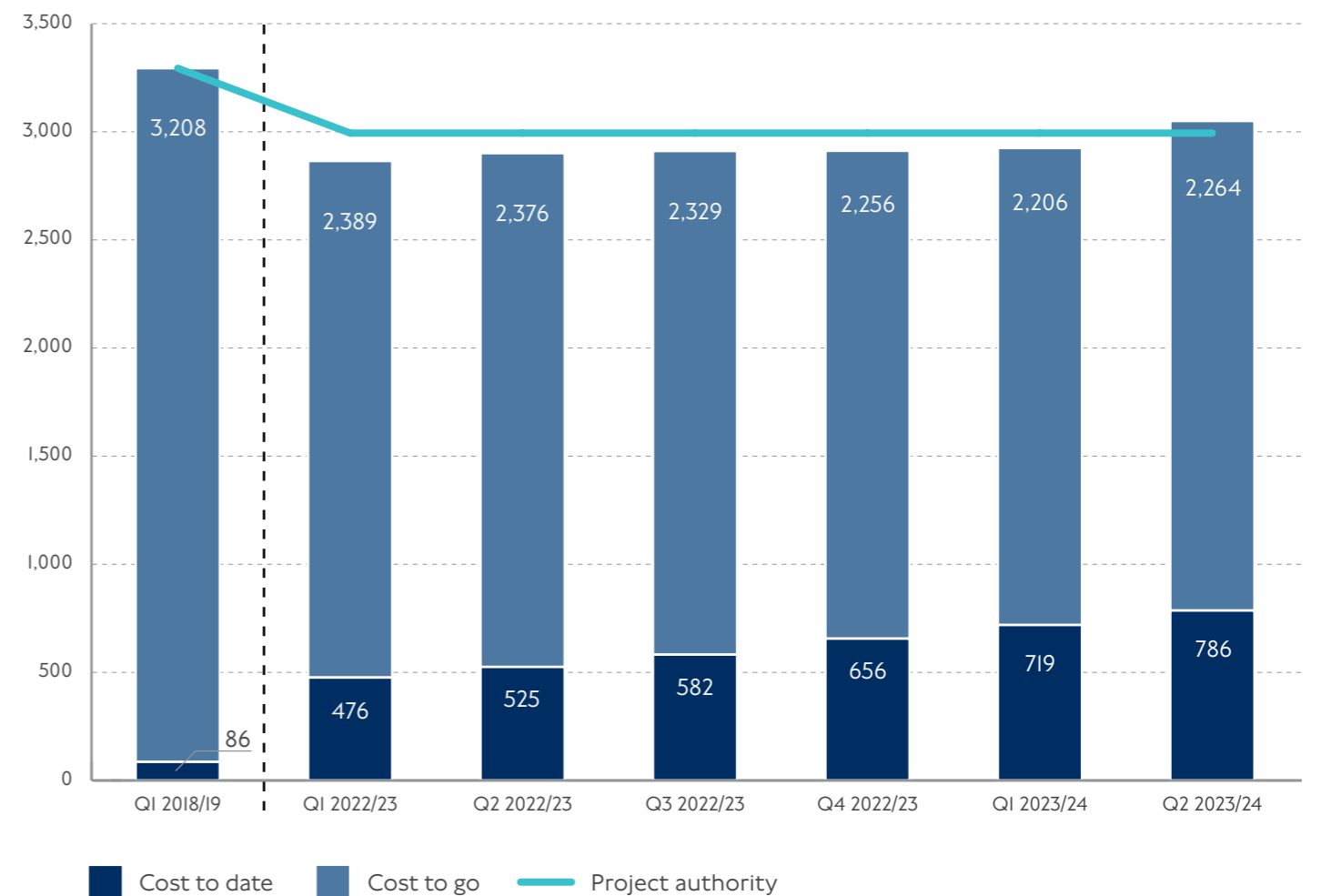
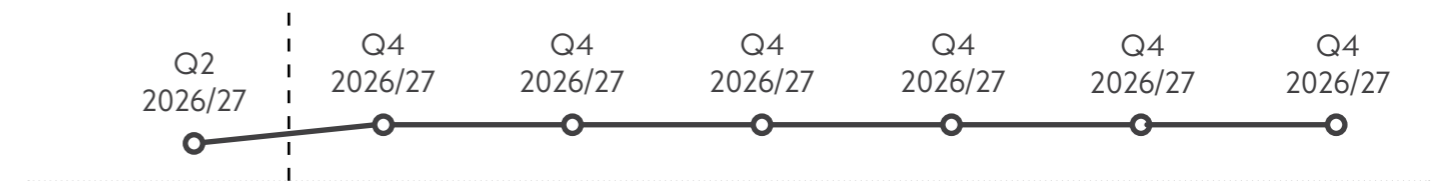
Since October 2022, the EFC has been under pressure from increasing base costs due to emerging scope in the depot upgrades, industry price increases and

indexation. Additionally, programme risk and uncertainty provisions have increased within the EFC to reflect schedule extensions in depots and the impact of resourcing challenges that we have experienced.

A range of opportunities have been identified which are expected to reduce pressure on the Stage I EFC including the revised delivery approach for the depot upgrades and improved risk management. A 'dynamic EFC' approach is being taken and a partially mitigated EFC of £3,050m is reported at the end of Quarter 2, 2023/24 (£56m above the current authority). Efforts are now focused on achieving greater certainty around the delivery schedule and costs, with no intention to see an increase in authority until after these activities have been completed. We have now completed a scheme re-baselining exercise and are reviewing the EFC in response to this.

Estimated final cost performance over time (£m)

Forecast completion date



Programme update

Rolling stock

The manufacturing contract with Siemens Mobility Limited is progressing well, with the assembly and formation of the first complete train in Vienna taking place in spring 2023. The first fully assembled train has been transferred to Siemens' test and validation centre in Westphalia, Germany, where it is undergoing a programme of testing and pre-delivery performance and reliability proving prior to series production.

Despite the delivery schedule challenges to the enabling works, the programme currently remains on target to receive the first train in London for system testing on the Piccadilly line in summer 2024.

The Siemens' UK train manufacturing facility in Goole, East Yorkshire, has been completed. This facility is creating a significant number of career opportunities across the UK and will be complemented by an innovation campus for rail industry research and development. It is expected that approximately 50 per cent of the new Piccadilly line trains will be assembled at the new UK facility in Goole.

Enabling works for high voltage (HV) power

The first major work packages started as part of the Piccadilly line upgrade high-voltage power framework. The design and delivery of the critical sub-station equipment and distribution of the network upgrades required to support new train introduction began in spring 2023.

Enabling works are also under way at Manor House and Cobourg Street sub-stations in readiness for new high voltage equipment installation. Procurement of further batches of power system upgrade works within the supply framework has also started.

One-person operation closed circuit

System development of digital software and train equipment is progressing for the new one-person operation closed circuit TV system. Station system design and installation works are under way across the Piccadilly line, including the building of new equipment rooms. This system will improve safety through transmission of high-quality digital images of the platform-train interface to both the train operator and the line control centre to ensure the safe departure of the train from the platform.

Depots

The first stage of the train maintenance depot upgrades at Northfields and Cockfosters has begun, with the construction of three new sidings to the west of Northfields station. This will strengthen stabling capacity on the line and facilitate the extensive upgrade works to train maintenance facilities at Northfields depot, for which supply chain procurement is under way.

Following extensive site clearance, work is under way at Cockfosters depot to provide a new wheel turning facility for the new trains. This new construction is the first stage of the upgrade works for the depot to provide the maintenance, servicing and stabling facilities needed for the new fleet.

Good progress has been made with procuring the Tier I supply chain to support us with the detailed design and build of the end state maintenance facilities at both Northfields and Cockfosters.

Green agenda

The project team has set key performance indicators across the programme, focusing on how they will reduce carbon, the values of which are reported. Top carbon risks and opportunities are reported in our internal programme performance report.

Objectives have been set for all employees to attend carbon literacy training courses to support the delivery of carbon savings within the programme. Work continues on revising the carbon baseline to reflect a developing understanding of programme scope and design.

Network extensions

Silvertown Tunnel

Forecast completion	Net cost to date (£m)	Net cost to go (£m)	Net EFC (£m)	Programme and Project Authority (£m)	Variance: EFC versus authority (£m)
Q2 2025/26	118	57	175	173	(2)
Change since last Investment programme report					
No change	1	(5)	(4)	No change	

Financial commentary

Following the full update at the October Programmes and Investment Committee meeting, the EFC is currently £2m over the approved Programme and Project Authority of £173m, owing to inflation increases and the agreed Safe Stop undertaken because of the coronavirus pandemic. The EFC has decreased by more than £4m since the last report owing to several significant risks being reduced after the successful completion of the main tunnelling works. We continue to seek opportunities to reduce cost and risk exposure, which should be achievable to bring us back in line with authority.

Performance over time commentary

The forecast end date is when the permit from an independent assessor to use the new Silvertown Tunnel is obtained. Following the full update at the October Programmes and Investment Committee meeting, the planned permit to use

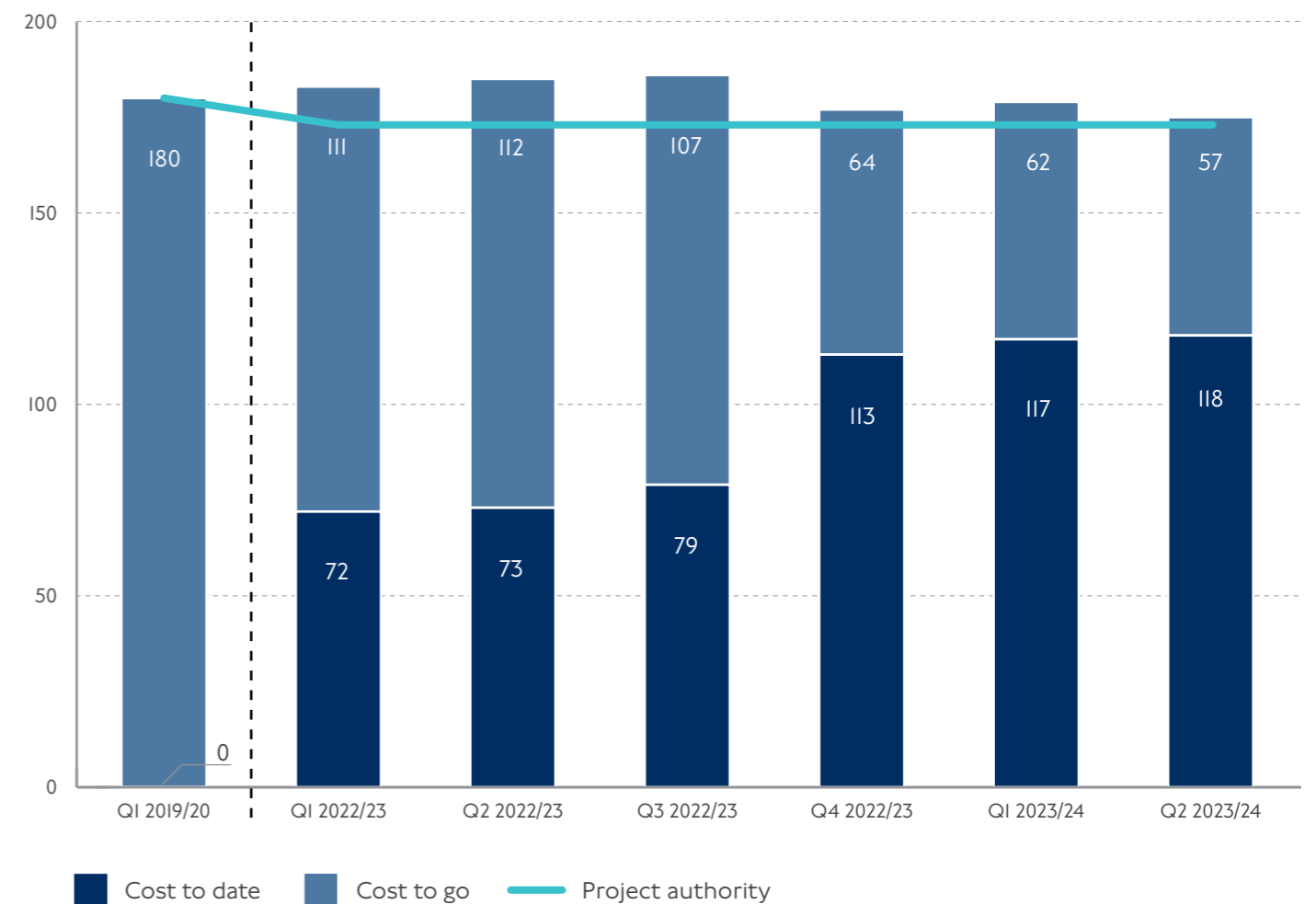
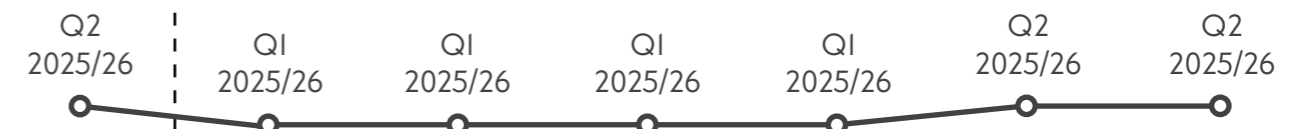
remains in Quarter 2 2025/26, but together with Riverlinx, we continue to review this with the aim of bringing the date back to Quarter 1 2025/26.

Programme update

The tunnel-boring machine completed its drive on 23 July, 62 days ahead of plan. This was a significant achievement for the programme as it represents successful completion of a complex machine manoeuvre and is the first time this technique has been used in the UK. In October, the Riverlinx consortium won the Temporary Works Initiative of the Year at the 2023 British Construction Awards for this solution. The tunnel-boring machine has now been dismantled and it was removed in September.

Estimated final cost performance over time (£m)

Forecast completion date



All numbers are shown as net of income and third-party contributions

The new Boord Street walking and cycling bridge across the A102 was opened to the public on 20 June 2023 with a temporary ramp on the northside, which will be in place until the bridge is completed by December 2023. The new bridge provides a safe and easily accessible crossing on the Greenwich Peninsula for people walking and cycling, including cargo bikes, and it will accommodate future neighbouring development proposals. The demolition and removal of the old bridge was completed in early August 2023 and work is now progressing to install the permanent ramp on the northside.

Works continued on the A102 road following several productive weekend closures and the southbound overbridge, which crosses over the new tunnel approach road, came into effect in October 2023.

Green agenda

The introductory cross-river bus network for Silvertown Tunnel was finalised in March 2023 and following a competitive tender process over the summer was awarded to Go-Ahead London in September 2023. The network includes routes 108 (the existing service using Blackwall Tunnel), 129 and SL4, which forms part of the wider Superloop network.

They will begin operating when the Silvertown Tunnel opens in 2025. We will be working to deliver a zero-emission bus fleet across all three routes. The consultation for the cross-river cycle provision closed on 10 September 2023 and we received more than 680 responses. We are in the process of analysing those responses before deciding on the next steps.



We are ensuring that multiple bus routes can use the tunnel

Network extensions

Bank station capacity upgrade

Forecast completion	Gross cost to date (£m)	Gross cost to go (£m)	Gross EFC (£m)	Programme and Project Authority (£m)	Variance: EFC versus authority (£m)
Q4 2022/23	693	8	701	702	1
Change since last Investment programme report					
No change	6	(5)	1	No change	

Financial commentary

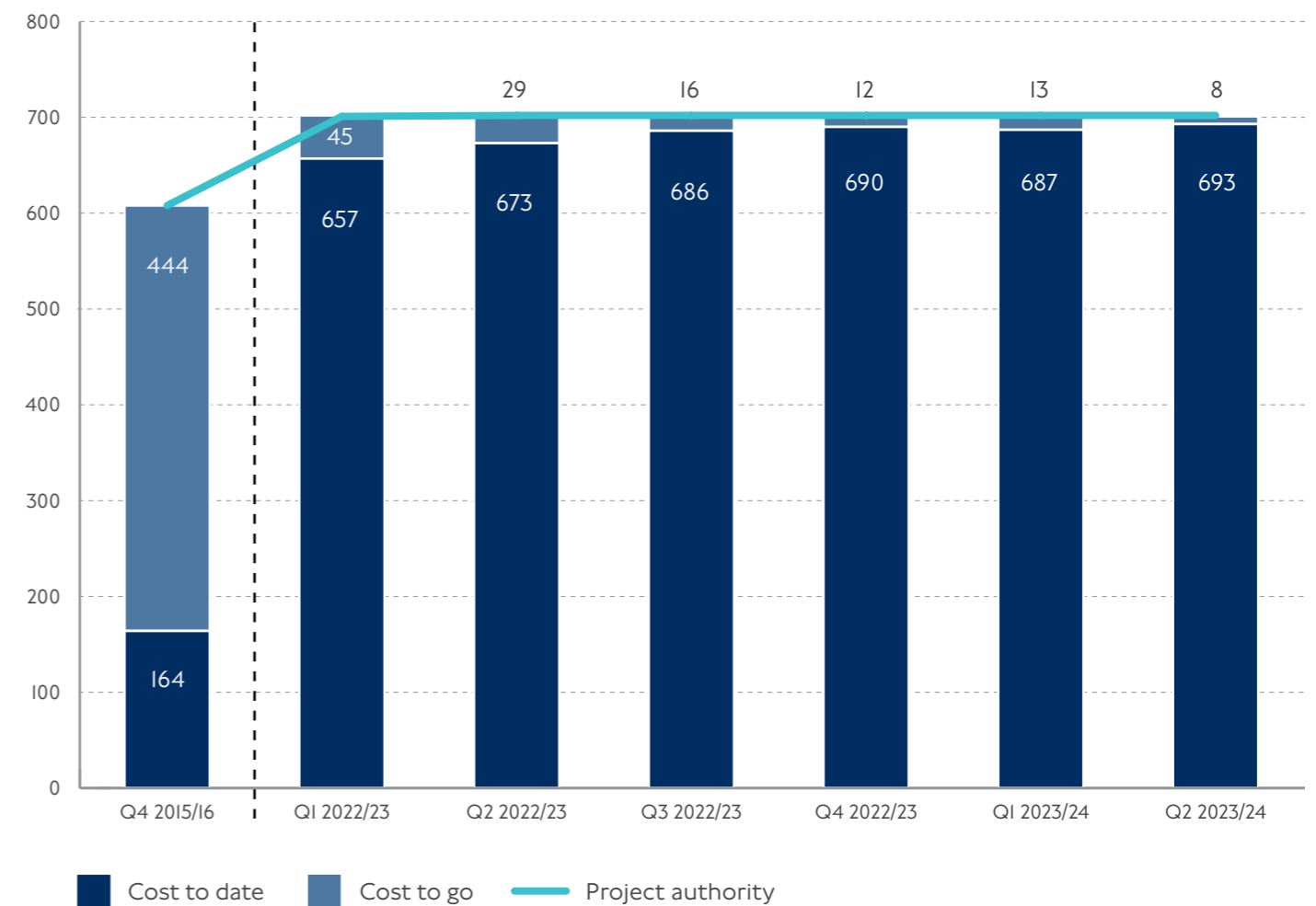
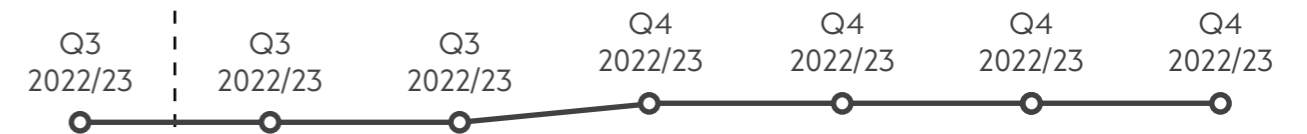
The EFC has remained stable during the last year with only minor movements associated with a dynamic EFC. Remaining spend remains in line with current forecasts, and within Programme and Project Authority of £702m.

Performance over time commentary

The forecast end date represents the opening of the new Cannon Street ticket hall entrance at Bank station, which was achieved on 27 February 2023. Our estimated final cost has increased since the authority award in 2016, owing to site works being disrupted by the impact of the terrorist attack at London Bridge, the need for additional scope following the discovery of asbestos, and the impact of the coronavirus pandemic. In addition, the final phase of the programme was delayed by around three months owing to issues relating to the manufacture and installation of cladding panels and commissioning of safety-critical systems.

Estimated final cost performance over time (£m)

Forecast completion date



Programme update

This project has increased the station's capacity by approximately 40 per cent. It has also resulted in improved passenger flows and reduced journey times, enhancing the overall customer experience. Improvements include step-free access to and from the Northern line, improved access to and from DLR platforms, two new moving walkways, 12 new escalators and two new lifts to serve the Northern line and DLR. There are more direct routes within the station and a new station entrance on Cannon Street.

Since opening the new entrance on Cannon Street in February 2023, the project continues to progress through snagging, close-out works and finalising the assurance and handover process. Negotiations with the City of London Corporation continue. We are moving closer to securing the terms of a lease agreement to enable the backfill of the Arthur Street shaft to begin. Planning consent will be required prior to the backfill and we are engaging with the Corporation on this. An S278 agreement has been signed between parties for the City of London to carry out works on the crossing. Further works associated with the junction modifications between Arthur Street and both King William Street and Upper Thames Street continue to progress through design.

Green agenda

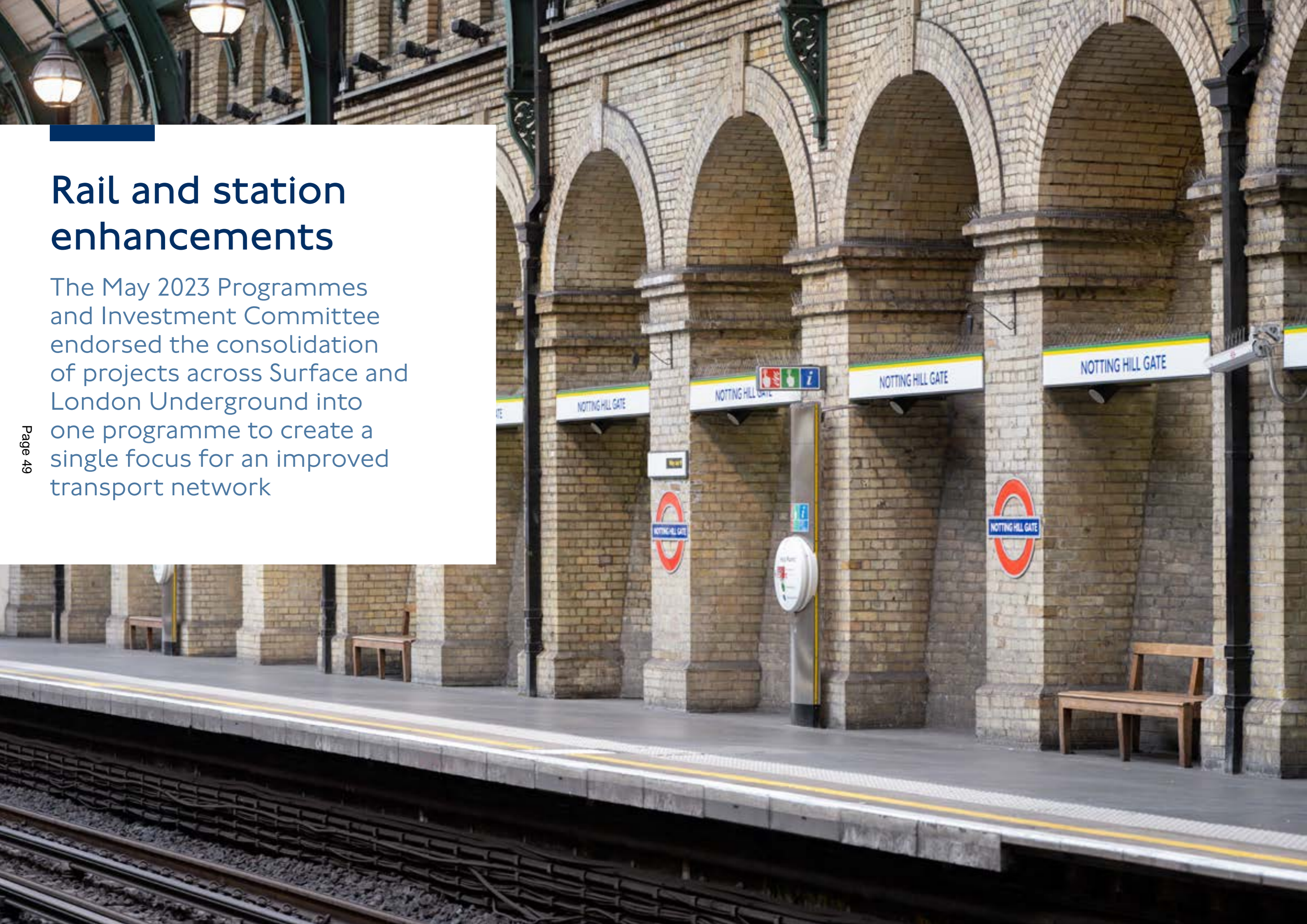
The project is nearly finished and will assist in sharing initiatives and output data to support developing and refining strategies and aims of our green agenda. Strategies undertaken around environmental requirements and carbon-reduction targets will be reviewed and shared.



Step-free access is a key part of our infrastructure

Rail and station enhancements

The May 2023 Programmes and Investment Committee endorsed the consolidation of projects across Surface and London Underground into one programme to create a single focus for an improved transport network



Rail and station enhancements

Forecast period	Gross cost to date (£m)	Gross cost to go (£m)	Gross EFC (£m)	Programme and Project Authority (£m)	Variance: Forecast cost v. authority (£m)
2022/23 to 2025/26	78	237	315	1,022	707
Change since last Investment programme report					
No change	6	(21)	(15)	20	

Financial commentary

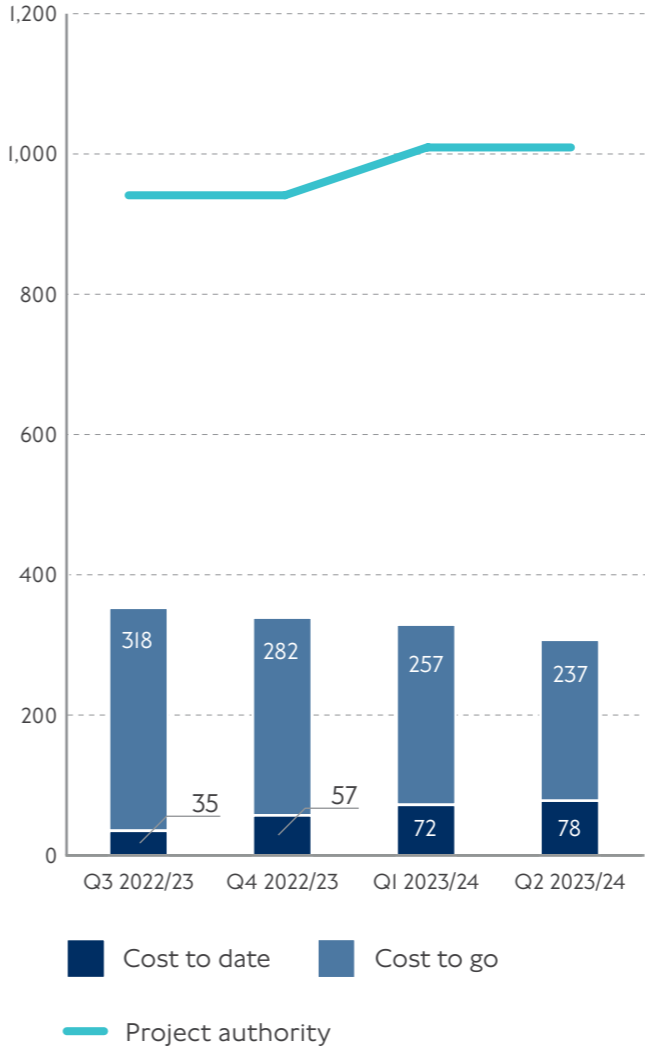
A £20m additional authority was approved at the July Programmes and Investment Committee meeting allowing us to carry committed enhancements work across the portfolio. The forecast between 2022/23 and 2025/26 has increased by £16m, predominantly driven by rephasing of tram replacement costs due to delay to the award of the depot concept design. This is partially offset by the East London line Housing Infrastructure Fund (phase one) programme with an estimated final cost increase of £4.4m following a deep dive of the risk on the Surrey Quays station upgrade.

There has not been any change in the spend or completion dates for delivery across other areas.

Performance over time commentary

The total cost shows little movement from the previous quarter but there has been good progress in conversion of the £5m of cost to go into spend to date., when compared with Quarter I. Some delays have resulted in spend moving into later years. Increased authority recognises the longer-term forecast for the portfolio.

Rail and station enhancements performance over time (£m)



Rail and station enhancements

High Speed 2

Since the Department for Transport's (DfT) announcement in March that it will pause construction at Euston station and 'rephase' its delivery, we have engaged collaboratively with High Speed 2 (HS2) Ltd and other Euston Partnership members, including Network Rail, DfT, London Borough of Camden, GLA and Lendlease, as the masterplan development partner, to look at options to reduce costs. This resulted in HS2 Ltd delivering a high-level feasibility report to the DfT with several options for further investigation. However, on 4 October 2023 the Prime Minister announced that while HS2 would continue to Euston, a smaller and privately funded station was proposed, together with provisions for up to 10,000 new homes. A document was then issued by the DfT later that day entitled Network North which provided some additional detail, including the following statements:

'We will not provide a tunnel between Euston and Euston Square Underground station or design features we do not need.'

'We will deliver a six-platform station which can accommodate the trains we will run to Birmingham and onwards.'

'We will appoint a development company, separate from HS2 Ltd, to manage the delivery of this project. We will also take on the lessons of success stories such as Battersea Power Station and Nine Elms, which secured £9 billion of private sector investment and thousands of homes.'

The document goes on to state that the full £6.5 billion saved through the Government's rescoped approach at Euston will be reinvested across the country.

The Prime Minister's announcement and the DfT publication was made without prior engagement with us or the GLA. We are therefore seeking urgent clarification on a number of matters, in particular the implications on our operations, assets and passengers. It will also impact the protective provisions agreement that we have in place with the DfT that safeguards our requirements for matters such as the provision of a London Underground station and Euston Square link to accommodate forecasted passenger demand.

With Old Oak Common becoming a terminus for HS2 services for up to a decade, we have made the case to the Government to procure additional class 345 Elizabeth line trains to ensure sufficient capacity for passengers coming from HS2 services to continue their journey into central London. In addition, we are engaging with HS2 Ltd, Network Rail and the DfT to try to resolve the issues of level boarding for Elizabeth line rolling stock and those discussions are ongoing.

Green agenda

Our environmental requirements and carbon reduction targets for new or altered assets are already incorporated into the functional requirements in the Programme and Project Authority and have been cascaded to the HS2 Ltd supply chain.



Rail and station enhancements

Elephant & Castle

A new station entrance and Northern line ticket hall will support the creation of 5,000 new homes and 10,000 new jobs in the area around Elephant & Castle station. This new entrance will significantly increase the station's capacity to meet both existing and new demand for Tube services.

We are progressing with the procurement arrangements for the new tunnels, with four companies receiving an invitation to tender in July 2023, after a successful pre-qualifying exercise. A contract for essential pre-tunnelling ancillary works was awarded and works are progressing well on site. Other enabling works have been undertaken and proved cost effective due to using specialist in-house resources.

These works, plus the station box, are known as stage one works and are fully third-party funded. Construction of the station box by the developer continues, with station-box piling completed and works on the slab have started. The developer has completed the construction to Basement Level 5, and we are considering the provision of 'soft eye' construction (a soft eye provides an easier way to break through than traditional concrete and steel piles) to enable a future Bakerloo line extension through this new facility. Handover of the station box by the developer remains set for spring 2025, as planned.

We have concluded the package of works to determine the options for the eventual fit-out of the station box and tunnels, and for bringing the new station entrance into use. These works are known as stage two and are, as yet, unfunded. A plan has been developed to ensure this critical aspect of the project is considered as part of our future funding decisions.

Green agenda

Environmental requirements have been incorporated into tunnelling package contract documents, supported by the Environmental team.



Our Environmental team helps inform our planning



Rail and station enhancements

East London line enhancement programme

Balfour Beatty have been procured to deliver the signalling enhancement to the East London line Housing Infrastructure Fund programme, and the detailed design for this work is complete. Procurement of the necessary TfL power infrastructure reinforcement has concluded, with works scheduled to begin in late 2023. We continue to collaborate with Network Rail on reinforcing their power infrastructure to provide further resilience to the East London line to support future increased train frequencies.

Rail and station enhancements

Surrey Quays

Our main contractor, Morgan Sindall Infrastructure, continues to progress the detailed design of the Surrey Quays station upgrade with the detailed design recently achieving 90 per cent completion. Enabling works, including the diversions of utilities both inside and outside the rail corridor, have begun. Modification of site welfare, project offices and the construction compound began in October 2023. While the project teams continue to work collaboratively and are co-located in our offices, the focus is on the safe delivery of essential railway closure works in November and December 2023.





Rail and station enhancements

Tram replacement rolling stock

Our rolling stock replacement programme will replace the life-expired Bombardier CR4000 trams, which are experiencing declining reliability and have one of the lowest states of good repair categorisations across our fleets.

Following a recent assurance review, the intention is to release a contract notice to the market by the end of the calendar year. Design development for the depot and power interventions will continue this financial year.

Rail and station enhancements

DLR

DLR Thames Wharf

Feasibility and value engineering have now concluded for a new station at Thames Wharf in line with the revised masterplan for the Thameside West development.

The next phase of work on the scheme would be to tender for and complete concept design, but this is dependent on further discussions with the GLA as the project is currently third-party funded by the Royal Docks Enterprise Zone. We will seek further Programme and Project Authority from the Committee when further third-party funding is secured.

DLR Royal Docks

The GLA-funded Royal Docks station programme is aligned with the emerging aspirations of the Royal Docks and Beckton Riverside Opportunity Area Planning Framework. This framework aims to improve accessibility and reduce congestion to enable the delivery of an additional 3,000 homes.

The programme has completed concept design for capacity enhancements at Pontoon Dock. We are undertaking elements of redesign to mitigate increasing costs to realise value engineering savings.



We are improving accessibility at Royal Docks station

Rail and station enhancements

London Underground

The London Underground enhancements and station developments project covers a range of improvements, mainly to stations and depots. We continue to improve stations by carrying out capacity upgrades and delivering projects that increase and improve accessibility and relieve congestion. Throughout Quarter I, we made good progress, achieving notable milestones such as completing the demolition and sterilisation of a derelict warehouse at Acton depot.

Step-free access

A prioritised list of stations to undertake feasibility and design for step-free access has been developed and was formally announced on 11 July 2023. The stations are Alperton, Arnos Grove, Burnt Oak, Eastcote, Finchley Road, Northolt, North Acton, Rayners Lane, West Hampstead and White City. These are in addition to the schemes at Colindale and Leyton already in progress. Both Burnt Oak and Northolt previously had design and construction work paused during the pandemic and so the focus is on updating the costs and construction programmes to inform deliverability.

We have written the scope of works for the next phase of design. The procurement of this next stage has concluded and supply chain partners have started the design process, including asset surveys, construction planning and providing cost information.

A preliminary study into the provision of step-free access on the southern end of the Northern line has also begun. Outputs from this and the 10 stations listed above will be available in early 2024 to inform investment decisions for 2024/25. We also continue to

actively engage local authorities, developers and businesses in other areas of London to explore what options are available to introduce further step-free access to stations. Feasibility work at other stations could be progressed should the right amount of investment be provided by these organisations.

Waterloo – Elizabeth House

We continue to finalise legal agreements to ensure step-free access to the Northern line platforms is secured before the redevelopment of Elizabeth House is completed. This would involve constructing lift shaft structures and connections to the northbound platforms during the development works. The work would enable the future fitout of the lift shafts.

Paddington – Bakerloo line

We are working with a third-party developer to deliver a new step-free ticket hall at the Bakerloo line. Installation of cabling, services and finishes for the new ticket hall and step-free access areas continues to take place.

Colindale

Following the announcement in January 2023 that the GLA was successful in provisionally securing funding from the Government's Levelling Up Fund, we have submitted draft business case documents to the DfT for feedback and are aiming for final submission by mid-November 2023. Programme and access requirements, and the associated preconstruction and governance processes, are being updated ahead of getting project authority to proceed with letting the construction contract in December 2023. Work is programmed to begin on site in early 2024.

Knightsbridge

The project is currently forecast to deliver step-free access from the new Hoopers Court entrance by spring 2024. We are actively working to accelerate the remaining delivery sequencing, and successfully utilised the recent track closures to undertake critical works that interface with the existing station.

London Bridge

We have been notified that the Secretary of State has turned down the planning appeal by the developer of the New City Court site, which would have included a new station entrance at Borough High Street. As a result, the developer will not be proceeding with the scheme and therefore all our further engagement will cease other than to allow the project to be closed.

West Ham

We are working with a third-party developer, Berkeley Homes, to build a new ticket hall to serve the Twelve Trees Park housing development, comprising 3,847 units delivered in four phases. The main construction works associated with the new entrance started in summer 2022. Progress in 2023 has been slow due to complexities in closing out several design matters which could only be addressed once Berkeley Homes appointed their principal contractor. Good progress has now been made in resolving these design matters and the superstructure works are expected to begin in January 2024. It is anticipated that the new ticket hall will open in July 2025, however this is dependent on the wider site works.

Stratford

Construction works are under way in delivering the urban realm and new southwestern station entrance. Piling for the new entrance is completed and we have begun works to convert the existing Tube car park to an urban area.

We remain in close communication with funders of the scheme, London Legacy Development Corporation and London Borough of Newham as the works proceed. The project is forecasted to finish in March 2024 and we are working to identify actions to complete it ahead of schedule.

The project continues to liaise closely with the Network Rail project to deliver a new customer lift connecting the Jubilee line concourse to the western subway. An agreement has been signed for the provision of technical assurance to London Underground by Network Rail to support delivery of the project. Network Rail is in the process of final planning and procurement for the delivery phase of these works.

Leyton

Following the announcement in January 2023 that the GLA was successful in provisionally securing funding from the Government's Levelling Up Fund, we have submitted draft business case documents to the DfT for feedback and are targeting final submission by mid-November. The project began the detailed design stage in July 2023 as planned, using an initial £2.6m grant from the Government. Construction is due to start in Quarter I 2024/25, subject to Government approval of the business case.

Safe and healthy streets

This programme includes bus enhancement projects that were previously part of the Public Transport portfolio and Healthy Streets projects. It provides a single focus for investment in Healthy Streets and enhancements for bus users



Safe and healthy streets

Forecast period	Cost to date (£m)	Cost to go (£m)	Forecast cost (£m)	Programme and Project Authority (£m)	Variance: Forecast cost v. authority (£m)
2022/23 to 2025/26	203	477	680	817	137
Change since last Investment programme report					
No change	40	(58)	(18)	44	

Financial commentary

Our Safe and healthy streets capital programme continues to be in line with the funding settlement conditions agreed with Government over the two-year period for 2022/23 and 2023/24. We will continue to provide funding to London boroughs for investment in their streets, although this is accounted for as operating expenditure. The total investment in active travel, across both operating and capital expenditure, is an average of £150m per year net of income across our Business Plan 2022/23 to 2025/26.

Investment in Quarter 2 was £40m, which represented an eight per cent acceleration in investment since Quarter 1 although still slightly below Budget for the quarter owing to slower than expected remobilisation of resources and our supply chain following the coronavirus pandemic. We are closely monitoring our delivery and fully expect to meet our commitments.

While forecast costs over the period to 2025/26 have reduced by £18m as some projects have been delayed beyond this timeframe due to prioritisation or external factors, the overall scope of the portfolio remains unchanged.

Performance over time commentary

Following the Government funding settlement and the TfL Board agreement of the 2022/23 to 2025/26 Business Plan, investment in Safe and healthy streets has continued to increase each quarter. This includes continued investment and commitment to deliver the walking and cycling, bus and Vision Zero action plans.

Programme update

The Safe and healthy streets programme continues to reduce road danger in line with the Mayor's Vision Zero goal, as well as making it easier to walk, cycle and travel by bus across London. It will also accelerate progress towards mode shift, decarbonisation, economic recovery and tackling health inequalities.

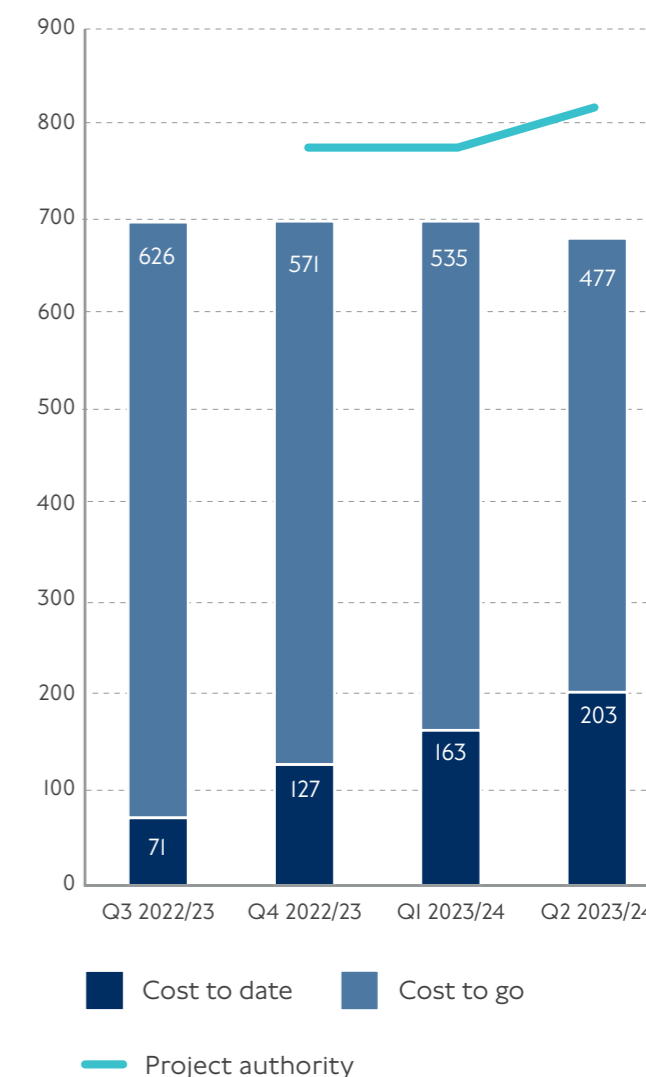
Recent highlights across the programme include completion of works to upgrade the temporary schemes installed as part of London's response to the coronavirus pandemic. These include the replacement of the temporary blue barriers with a trial of semi-permanent materials on Borough High Street and the A21, and improvements along the route of Cycleway 9 on King Street and Chiswick High Road. We also decided to retain the trial upgrades to Cycleway 8 permanently.

Work carries on with a transformational scheme at Tolworth, where improvements will make better provision for cyclists, pedestrians and bus passengers, while also supporting the growth in travel associated with a new housing development and Lidl's new European headquarters.

Construction carries on with an experimental cycling scheme (Cycleway 50) on the A503 Nag's Head gyratory, to connect cyclists to a route in Camden. We also continue to construct cycle lanes around Lea Bridge roundabout as part of Cycleway 23 and the final section of Cycleway 4 in Southwark, with these schemes completing over the winter.

Construction has been completed on the next section of Cycleway 9 linking Kew Bridge to Watermans Park. We have also begun a project to deliver critical safety improvements on the A4 Bath Road, and along Holloway Road.

Safe and healthy streets performance over time (£m)



Safe and healthy streets

Old Street station and roundabout

The Old Street roundabout project will bring safety improvements for cyclists and pedestrians by providing new and improved crossings, fully segregated cycle lanes and a new public space with an accessible main entrance to Old Street Underground station and the sub-surface shopping arcade.

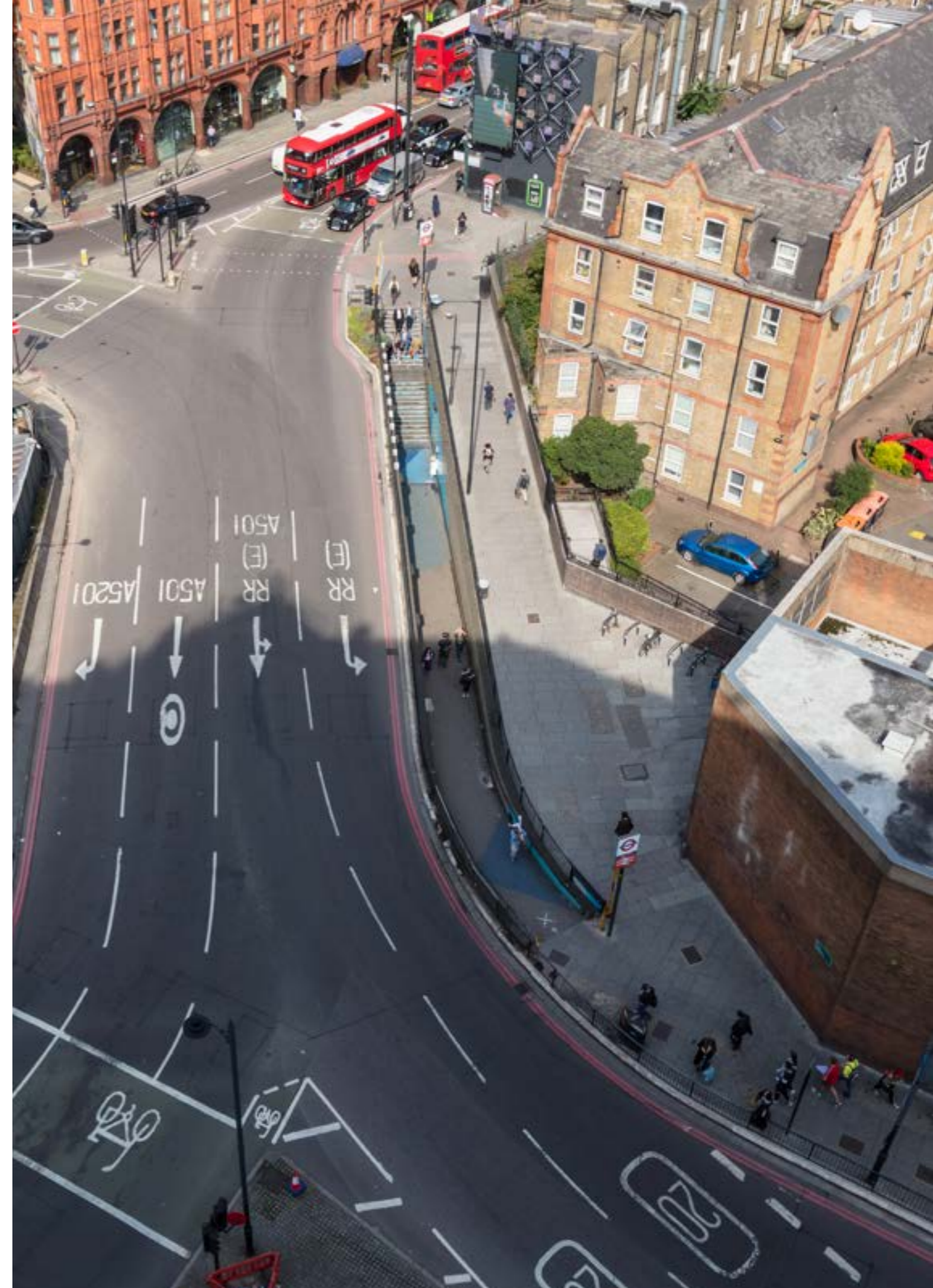
Construction of the superstructure for the new London Underground main station entrance has continued with the ceiling installation and stairs tiling completed, including removal of the temporary scaffolding. Works are now progressing on the internal finishes. Completion of the superstructure works is scheduled for January 2024.

Works have also continued in the peninsula area with installation of new sustainable drainage systems and hostile vehicle mitigation bollards completed.

Final paving and urban realm works have also started and are progressing well. Cladding of the existing clerestory building structure and replacement of the roof skylights continues. All works will be completed by early 2024.

Construction of the new passenger and goods lifts have been completed ahead of standalone testing from January 2024. Refurbishment continues of the subsurface concourse area with installation of new mechanical, electrical and communications equipment. Delivery and installation of the new fire doors and shop fronts is expected to be completed by January 2024, but the team are looking at opportunities to bring this forward.

Construction completion is forecast for early 2024.



The new roundabout prioritises the safety of cyclists



Safe and healthy streets

Cycling infrastructure

Cycleway 4 - London Bridge to Greenwich

The London Borough of Southwark is continuing to construct the temporary scheme for Lower Road between Rotherhithe roundabout and Surrey Quays Road, which will complete the final section of a protected cycling route between London Bridge and New Charlton.

Cycleway 9 - East Kensington Olympia to Brentford

The construction work for a new segregated cycleway between Kew Bridge and Waterman's Park is now complete and connects the area with Chiswick, Gunnersbury and Hammersmith.

The next section, Watermans Park to Brentford Magistrates Court, started on 23 October 2023 as planned (both are under delivery by the London Borough of Hounslow's contractor).

Cycleway 23 - Lea Bridge to Dalston

Construction of segregated cycleways around Lea Bridge roundabout began on 13 March 2023 and works are progressing well with all islands and significant utility diversions completed. Construction of Lea Bridge Road started as planned on 24 July 2023 and is being delivered by the London Borough of Hackney.

Cycleway 37 - Mile End to Westferry Lane

Work to deliver the permanent scheme at Mile End Road junction was due to begin in February but the London Borough of Tower Hamlets does not agree with elements of the proposals and consequently has not signed a section 8 agreement permitting the works. We are in ongoing discussions with Tower Hamlets to find a suitable resolution for this safety critical scheme. Until this is resolved, construction is delayed. The deliverability of the remaining sections, including the temporary-to-permanent scheme on Burdett Road, is being reviewed.

Cycleway 50 - Finsbury Park to Tottenham Hale

Construction of the section on our roads from Caledonian Road to Finsbury Park started on 20 February 2023 and is progressing well. Works on Isledon Road are complete and work is under way on Tollington Road and Seven Sisters Road.

Safe and healthy streets

Vision Zero

Lowering speed limits

Lowering the speed of vehicles in London is key to reducing both the likelihood of a collision occurring and the severity of the outcome. The second phase of the programme is under way, and as detailed in the Vision Zero progress report published in 2021, aims to provide a 20mph speed limit on 220km of our roads by May 2024. To date, we have delivered a 20mph speed limit on 144km of our roads.

In Quarter 2, we completed works to deliver raised crossing points in the City of Westminster to complement the 20mph speed limit in the borough; a new 40mph speed limit came into force on 1.8km of the A4 Bath Road in Hillingdon; and pedestrian safety measures and a new 20mph speed limit was introduced in West Wickham town centre in Bromley.

Works are now under way to lower the speed limit to 20mph on sections of our roads in the boroughs of Kensington and Chelsea, Greenwich and Lewisham. We will soon be starting speed limit reduction works in Southwark, Lambeth, Wandsworth, Merton and Ealing.

Mounted banners on lamp columns have now been installed across these corridors to help raise driver awareness of the new 20mph speed limit and a radio and digital advertising campaign has been launched to complement the changes.

Detailed design is under way to lower the speed limit to 20mph on selected roads in the boroughs of Greenwich, Newham, Wandsworth, Richmond, Sutton and Merton, and on the A312 Harlington Road in West Hounslow. A new 30mph speed limit is proposed on the A4 Great West Road in Hounslow. A new 40mph speed limit will also be introduced on the A406 North Circular Road in Enfield and Waltham Forest. These projects are scheduled for delivery by March 2024 and will complete phase two of our Lowering speed limits programme.

Outcome definition work is taking place on identifying where complementary speed reducing features such as green infrastructure, lane reallocation and raised crossing points can be installed to provide a self-enforcing speed limit where it has recently been introduced, in line with DfT guidance on setting speed limits.

Safer Junctions programme

In April 2017, the Safer Junctions programme highlighted 73 of the most dangerous junctions on our roads, defined as those with some of the highest rates of collisions involving vulnerable road users. We have made improvements at 44 of these junctions. Construction work continues on the Holloway Road/Drayton Park Safer Junction scheme. The first phase of these works at the junction of Hornsey Road/Hornsey Street was completed in early September. Works now continue at the Drayton Park/Palmer Place junction, with the scheme due to be completed in spring 2024.

Further design and survey work is continuing at pace on the Battersea Bridge Safer Junction scheme following the tragic cyclist fatality on the bridge in August 2023.

We are continuing with design and outcome planning work on the remaining Safer Junctions and are committed to public engagement on potential changes to 10 further Safer Junctions by the end of 2024.

Pedestrian safety

Design work continues on more than 40 schemes across London, at locations where there is an identified road safety concern.

Construction was completed in early September on a scheme on the A10 at Edmonton County School in Enfield to improve the safety of entrance and exit movements.

Construction began in early October at the junction of A205/Lancaster Avenue in Lambeth to improve a pedestrian crossing and reduce vehicle speeds. Construction of a new pedestrian crossing in Grosvenor Place in Westminster is planned for delivery in January 2024.

In 2024/25, we plan to deliver safety improvements at a number of locations, including Kings Cross, A23 in Lambeth, Redcliffe Gardens in Kensington and Chelsea, A5 Edgware Road in Westminster. All of these are subject to further design, funding and approvals.

Safe and healthy streets

Bus priority

We continue delivery of new bus lanes, contributing to a target of 10km by spring 2024. To date, 4.4km has been delivered on borough and TfL roads, with further schemes moving to construction in autumn 2023. Signal timing reviews have been completed at a total of 712 sites to provide additional priority for buses, exceeding a target of 700 for the year well ahead of schedule. As of March 2023, 68 per cent of buses approaching traffic signals either arrive on a green signal or receive some form of bus priority.

More than £10m of funding has been allocated to London boroughs to deliver enhanced bus priority on their local borough road networks. As well as new bus lanes, this investment will deliver other bus priority features such as new bus gates, the removal of pinch-points and changes to the operating hours of bus lanes. The London Borough of Newham is now on site constructing a scheme that will provide 700m of new bus infrastructure, and the London Borough of Barking and Dagenham recently completed the delivery of more than 200m of new bus lane at Wood Lane.

We have identified a suite of activities to improve bus priority across the ten proposed Superloop routes. Improvements include traffic signal upgrades, new and improved bus lanes, and removing pinch-points. In some locations, a holistic corridor-based investigation is being progressed to focus on end-to-end bus priority. Signal timing reviews have already been reprioritised to include Superloop corridors.

Transformational schemes

We have been working in partnership with Lewisham Council to support their ambition to transform Catford town centre and improve transport in the area. We want to help the council create a greener town centre and ensure Catford is a pleasant place for people to live, work and visit.

To achieve this vision, we are proposing changes to the South Circular Road, which is part of the TfL Road Network, to make it easier and safer to walk, cycle and use the bus. The main change would involve moving Catford Road (part of the South Circular) to a new position on the site of the Canadian Avenue car park. We would also make the road system around Plassy Island two-way. These changes would provide improvements for all road users, including cyclists and pedestrians.

To fund this scheme, we are applying for finance through the DfT's Major Road Network fund. A business case was submitted at the end of last financial year, and we await the outcome of the DfT and HM Treasury's assessment of our proposals and case for change. We undertook public consultation on the proposals between 24 April and 5 June 2023.

Borough funding

We support boroughs to deliver a range of healthy streets improvements on local roads, including bus priority. We have allocated £63m funding for delivery in 2023/24. Recent achievements include:

- Westminster City Council has launched 11 School Streets
- Lambeth has completed 30 rain gardens in Low Traffic Neighbourhoods to provide floodwater drainage and support biodiversity
- Three cycleways through low-traffic streets in Ealing, Lambeth and Islington were introduced in April, with 10 being launched as part of the Summer of Cycling marketing campaign
- Cycle parking hubs at Highams Park, Chingford and Blackhorse Road stations have been installed by the London Borough of Waltham Forest
- A suite of bus stop accessibility improvements has been implemented in Brent, Ealing and Richmond
- More than 30km of new bus lanes have been identified for delivery on borough roads in 2023 and beyond

Safe and healthy streets

Bus safety

We published our Bus safety strategy on 7 September 2023, which sets out our vision for a safe and attractive bus network and aims to ensure that nobody is injured or killed on our bus network by 2041. We have successfully reached the milestone of having more than 1,000 buses in London's fleet meeting the Bus Safety Standard and we are continuing to make good progress with retrofitting technology onto the fleet.

We are now focusing on the next stages of the programme, introducing several safety features from the Bus Safety Standard onto vehicles that entered the fleet before they were mandatory, but still have a substantial number of years of London service ahead. This will enable them to deliver safety benefits which were not available at the point of manufacture. These upgrades include intelligent speed assistance, which automatically restricts bus speeds to local limits, and a camera monitoring system, which replaces mirrors with high-performance cameras to improve driver visibility and reduce blind spot.

Bus action plan

We published our Bus action plan in March 2022, which outlines how we will build and broaden the appeal of the bus service. This includes delivering a step change in customers' perceptions and experiences of bus travel, which can be achieved through offering better information and meeting expectations of a modern and comfortable experience at bus stops and on buses. We are currently developing our plans for the next stage of this work and will be establishing targets and milestones in the coming periods.



Our vision is for a safe bus network

Environment

This programme retains the structure of the Environment programme and includes the new green project pipeline that is being developed



Environment

Forecast period	Cost to date (£m)	Cost to go (£m)	Forecast cost (£m)	Programme and Project Authority (£m)	Variance: Forecast cost v. authority (£m)
2022/23 to 2025/26	228	367	595	954	359
Change since last Investment programme report					
No change	89	(216)	(127)	No change	

Financial commentary

The forecast cost has reduced overall by £127m since the last quarter, which is driven largely by a reassessment of requirements surrounding road user charging schemes.

In conjunction with this change, additional funding for £50m scrappage customer payments has been included. This follows the Mayor's announcement to open the scrappage scheme to all London households and additional scope identified within the delivery of the business operations in house for phase two of the Direct Vision Standard, as well as further reprofiling across the portfolio.

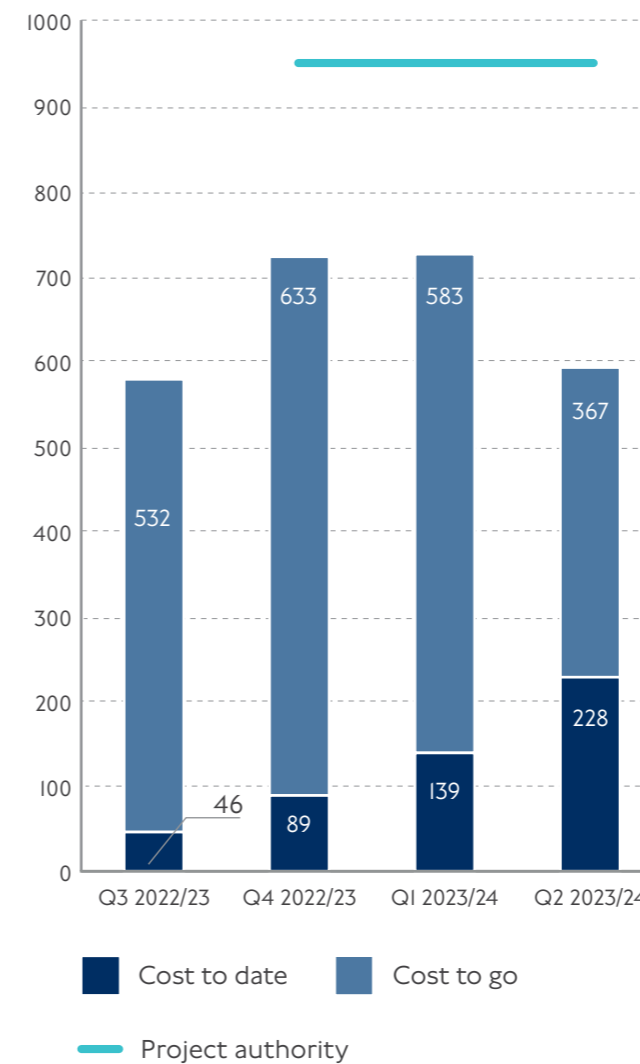
The Programme and Project Authority variance to forecast reflects the portfolio holding authority for known commitments which extend beyond the current forecast dates (2022/23-2025/26).

Performance over time commentary

Since Quarter 3 2022/23, the full allocation of renewals and Road User Charging schemes such as the re-let of contracts and the delivery of business operations systems in-house has been included. A paper was approved by the Programmes and Investment Committee in December 2022 for £170m and March 2023 for £77m to increase the Programme and Project Authority in line with the forecast and future known commitments.

Over the last two financial quarters, our underlying forecast cost has remained stable. However, since Quarter I 2023/24 the forecast has reduced owing to a reassessment of requirements surrounding road user charging schemes.

Environment performance over time (£m)



London-wide Ultra Low Emission Zone*

Programme update

On 29 August 2023, the ULEZ was expanded to cover all London boroughs. A report published on 31 October 2023 showed that vehicle compliance in outer London increased by 10 per cent, from 85 per cent when the Mayor announced the consultation for the proposed expansion in May 2022, to 95 per cent. In addition, the number of non-compliant vehicles seen driving in London on an average day has decreased by 77,000 compared to June 2023, which is a reduction of 45 per cent.

Since 30 January 2023, the largest vehicle scrappage and support scheme of its kind in the UK has been available to assist Londoners with adapting their non-compliant vehicles. Since launching, it has provided support for Londoners on lower incomes, disabled Londoners, charities, sole traders and businesses with 10 or fewer employees to replace or retrofit their older, polluting vehicles and make sustainable travel choices.

Successful scrappage applicants receive a grant to scrap or retrofit their vans and minibuses. Successful car and motorcycle scrappage applicants can opt to receive a smaller grant accompanied by up to two free annual bus and tram passes, which would give them a higher-value package.

On 4 August 2023, the Mayor announced changes to the scrappage scheme, extending support to all Londoners with a non-compliant vehicle. Grant payments were increased for scrapping a wheelchair-

accessible vehicle, van or minibus and it was also announced that businesses would be allowed to scrap up to three vehicles. The changes were successfully delivered on 21 August 2023 in advance of the ULEZ expansion on 29 August 2023. As well as these changes, a further £50m provided by the Mayor of London was announced for the scrappage scheme, making the total funds available £160m.

The announcement on 4 August also extended the ULEZ grace periods for sole traders, microbusinesses, small businesses and registered charities with non-compliant vehicles that have ordered new compliant ones which will not arrive in time.

In addition, to further help disabled Londoners, there are two new grace periods under the ULEZ scheme that will allow the use of non-compliant vehicles, which will apply until October 2027. One is for recipients of certain disability benefits (or their nominated driver). The other is for all wheelchair-accessible vehicles and some vehicles with other adaptations. People must register for these grace periods, and applications opened on 30 January.

The London-wide information campaign, launched in January 2023, has continued to raise awareness of the ULEZ expansion. This has continued past the launch date, encouraging Londoners to check their vehicle and emphasising the health benefits of the scheme. We are also working with stakeholders, including London boroughs and home counties, MPs and

London Assembly members, businesses, community groups and organisations representing disabled people, as well as a wide range of other Londoners to raise awareness of the ULEZ expansion and the scrappage scheme.

We have installed an extensive camera network to support the effective operation of the scheme. Installation initially focused on assets such as traffic signals and the TfL Road Network where we are the highway authority. Up until 2 October 2023, we had installed more than 2,000 new cameras with a total of more than 3,500 cameras enforcing road user charging schemes in London. We have also installed 2,579 signs, of which 940 are boundary signs.

Unfortunately, there have been incidences of vandalism on the ULEZ cameras and signs. All incidents are reported to the police and some arrests have been made. We are working closely with our contractors and the police. Where necessary, cameras are being repaired or replaced.

The London-wide ULEZ back-office system successfully went live on 29 August 2023 and is performing well. It is processing the anticipated increase in data volumes from the additional vehicles in the expanded zone, as well as the higher volume of associated transactions and enquiries.

*This includes other road user charging schemes

Direct Vision Standard phase two

Since March 2021, all heavy goods vehicles (HGVs) that are more than 12 tonnes are required to obtain a safety permit to operate in London as part of the London HGV Safety Permit scheme. This scheme is safety focused and contributes to the Mayor's Vision Zero strategy by improving HGV drivers' visibility, thereby reducing the risks HGVs present to vulnerable road users. It is run in partnership with the boroughs through London Councils. Vehicles that do not meet the minimum one star on the Direct Vision Standard rating, introduced in 2019, are required to fit additional 'safe system' measures to the vehicle. Since March 2021, the scheme has been enforced by a penalty charge notice.

From 29 October 2024, the minimum rating to operate without fitting additional safety measures raises to three stars, marking the beginning of phase two of the scheme. A consultation ran between 14 February and 3 April 2023 seeking views on the proposed Progressive Safe System, which enhances the current system to reflect technological development since it was originally designed. London Councils approved this and other scheme changes in June 2023, and operator guidance and specifications for the Progressive Safe System were published on 4 September 2023.

These changes will build on the safety improvements from the current scheme, including the following outcomes and benefits published in our One year on report (June 2022):

- The number of fatal collisions involving an HGV where visibility was cited as a contributory factor has halved from 12 in 2018, the year before the scheme was introduced to six in 2021. The number of serious injuries fell from 48 in 2017 to 17 in 2021
- The average daily compliance rates are very high, with more than 94 per cent of HGVs in London now operating with a Safety Permit and hauliers reporting that they are building Direct Vision Standard requirements into future purchasing decisions



We are reducing the risks posed by HGVs



We are helping London achieve its net-zero targets

Environment

Electric vehicle infrastructure

It is expected that London will need between 40,000 and 60,000 electric vehicle charging points by 2030, including up to 4,000 rapid chargers. Estimates show that a quarter of these could be accommodated by public sector land. This infrastructure could help support a reduction of carbon dioxide emissions of between 1.5 and 2.6 million tonnes per year. The Mayor has committed to supporting the continued roll out of charging points alongside the private sector, to help meet exponential growth in demand and contribute towards achieving a net zero carbon London by 2030.

The first tranche of our Electric vehicle infrastructure delivery programme will provide rapid and ultra-rapid charging points across 100 parking bays on our roads. Following the signing of the first contract with charge point operator Zest for an initial batch of 39 charging bays across 24 sites in early May, two further batches of 25 sites were released to the market in June. Tenders are being evaluated and it is expected that contracts for these two batches will be awarded in November.

We have completed a preliminary assessment of more than 2,400 sites across the GLA estate which has allowed us to accelerate the release of further batches to the market. In addition, we have reviewed current assessment criteria, to bring forward new sites across our land and wider GLA land.

As we will soon have contracts in place for all three tranche one batches, we are now agreeing scope for a second tranche of delivery. This will aim to identify a pipeline of sites to be delivered on both our own and GLA Group member land.

In addition to the roll out of rapid electric vehicle charging points, the Office of Zero Emission Vehicles has recently announced that London will receive almost £39m of capital funding through the DfT's Local Electric Vehicle Infrastructure fund. This will primarily be used to accelerate the delivery of low-powered charging infrastructure on borough highways, including for residents without access to off-street parking, and builds on the 400 fast-charging points that will be delivered by London boroughs by March 2024 using £9.7m of the Local Electric Vehicle Infrastructure pilot funding and additional borough delivery funded by the Government's On-street Residential Charge Point scheme.

Environment

Zero-emission bus fleet

Since celebrating the milestone in August of having more than 1,000 zero-emission buses – we now have more than 1,200 zero-emission buses in the fleet and are progressively adding more. We have a target to reach a total of 1,400 by the end of the financial year.

The milestone was marked by a Mayoral launch at Edgware Bus Garage, showcasing a wrapped electric bus, operated by the bus operator Metroline. We also celebrated the introduction of up to 100 new zero-emission buses in Sutton on routes 93, 154, 164, 213 and 80. This large addition to Sutton's fleet means that more than half of the journeys taken by bus in Sutton are now via zero-emission buses, thereby further improving local air quality.

Currently, more than 13 per cent of our bus fleet operates with zero-emission buses, including hydrogen, battery electric and 'opportunity charged' electric buses. This progress is key as it contributes to our wider ambition to transform TfL to become the strong, green heartbeat of London.

Work continues on the route 358 electric 'opportunity charging' trial, which is expected to go live in the coming months. Once completed, the trial will use pantograph charging infrastructure at either end of the bus route in Bromley, one of the longest routes in the bus network, alongside the introduction of 20 new single-deck electric buses with enhanced customer and safety features.

We are currently on track to transition to a fully zero-emission bus fleet by 2034 but, with additional Government funding, this target could be achieved by 2030.

Since 2016, the number of fully zero-emission bus routes has increased from five to 54, with a further 15 routes using a mixture of zero-emission and low-emission buses. The number of zero-emissions buses on London's roads has seen an increase of more than 3,000 per cent since 2016, growing from 30 to more than 1,000 buses.

Zero-emission buses help Londoners breathe cleaner air and further contribute to the decarbonisation of the transport network, which is crucial to our work to meet the Mayor's mission for London to be a net zero carbon city by 2030. Through the decarbonisation of London's bus network, we will save an estimated 4.8m tonnes of carbon by 2034 or an estimated 5.5m tonnes of carbon by 2030 with Government funding.

Our zero-emission bus fleet is the largest in western Europe and has the lowest carbon dioxide emissions per passenger kilometres compared to other global cities such as New York, Sydney, Paris and Vancouver. All new buses joining the fleet will have enhanced customer features, such as improved flooring, seating, lighting and customer information, and will meet the industry-leading Bus Safety Standard.

In addition to this, the investment in zero-emission buses supports around 3,000 jobs across the UK, in locations such as Ballymena, Falkirk and Yorkshire. By creating capacity and certainty for a wider zero-emission bus market, this investment is paving the way for green national economic growth. Our funding pipeline for zero-emission buses also lowers costs for other local authorities by creating economies of scale.



Helping Londoners to breathe cleaner air

Environment

Waste heat

Waste heat from London Underground ventilation shafts is a constant and reliable source of energy. Much of it is simply released into London's air. This project will capture thermal energy of the ventilated air to feed to local users, powering heating and hot water in nearby buildings. Feasibility studies have been conducted for six ventilation shafts, to explore the scale of opportunity. This project could contribute to serving thousands of residential premises, plus commercial and public buildings such as schools. The proposed supply of waste heat would reduce a requirement for gas combustion and could therefore be associated with improved air quality through a decrease in carbon emissions.

Current activity is focused on accelerating the delivery of an initial ventilation shaft site, and to identify an appropriate energy supplier. Following their appointment and a need to progress contracts and design work at this first location, work will continue in parallel to identify future waste heat opportunities across our estate. Other sites may not be limited to ventilation shafts, as options for harnessing heat from alternative sources, including pumped water systems, are being explored across the London Underground network. We also continue to receive significant interest from the market at a variety of locations.

The market engagement relating to the initial site is currently being used to finalise the procurement strategy and compile a delivery schedule.

Environment

Solar private wire

As London's single largest consumer of electricity, it is our responsibility to identify and utilise renewable energy sources.

The Solar private wire project presents an opportunity to directly receive zero-carbon (solar-generated) electricity from decentralised sources, bypassing the national grid and distribution network operators and associated charges. This has the twin benefits of guaranteeing renewable energy, while also offering financial savings.

Initial investigations suggest that our power network can accommodate 64 megawatts of renewable energy, equivalent to five per cent of the annual load.

The intention is for a solar collaborator to carry out detailed project identification and development. We would ultimately purchase the energy to assist with powering the London Underground network. Following an extensive market engagement exercise, a procurement strategy has been developed, with endorsement received at our Commercial Assurance Meeting on 12 September.

The project has also achieved the major milestone of identifying a single preferred option for our delivery model. This provides an opportunity to finalise tender documentation, with a focus now on accelerating efforts to secure a contract with a delivery partner.



We're investing in renewable energy sources



We are working to reduce our carbon footprint

Environment

Building decarbonisation

We are one of London's largest landowners, with roughly 6,000 registered structures of a wide variety of building types in our estate that we own and operate. These include stations, depots, river piers, head offices and approximately 3,000 rental properties and housing developments. We are also the single largest energy consumer in London with a total aggregate electricity consumption of 1.6TWh across traction and non-traction power and bus demand per annum (equivalent to roughly 457,000 domestic consumers).

Some of this energy consumption in our buildings comes from burning natural gas, which results in emissions of air pollutants such as nitrogen oxide and particulate matter. Considering our contribution to London's emissions, we must take significant steps to address and reduce all sources of our emissions and accelerate a switch to ultra-low and zero-emission technologies.

The strategic objective of the building decarbonisation programme is set out in our Corporate Environment Plan, published in 2021. This states our ambition to achieve net zero carbon across all operations, including head office buildings, by 2030.

Desktop modelling of decarbonisation initiatives was produced as part of a deep-dive report completed in 2022. This study focused on our buildings estate to create a carbon baseline for our entire property portfolio and assessed the potential costs, benefits and business case of a package of decarbonisation interventions rolled out at many sites across the network. Following the report, further studies were completed at eight priority sites that were considered to have an opportunity to achieve significant savings in carbon emissions.

Work is currently under way to develop plans at these eight sites and coordinate a delivery schedule that maximises value for money, while delivering on decarbonisation goals. A further tranche of feasibility studies that will cover 23 buildings across 14 sites was commissioned on 23 October, with the intention to create a rolling programme of interventions to reduce the carbon footprint of the estate in the coming years.

Technology

This Technology programme merges the three technology-focused programmes - London Underground technology, Surface technology and Technology and data - with a small number of new rail and sponsored services technology projects previously in the Public transport programme



Technology

Forecast period	Cost to date (£m)	Cost to go (£m)	Forecast cost (£m)	Programme and Project Authority (£m)	Variance: Forecast cost v. authority (£m)
2022/23 to 2025/26	265	636	901	1,082	181
Change since last Investment programme report					
No change	44	(51)	(7)	167	

Financial commentary

The increase in Programme and Project Authority since Quarter I reflects the July Programmes and Investment Committee submission which was where the Technology portfolio was presented as one for the first time. This sought authority for projects such as iBus, Deployable enforcement cameras, cycle hire re-let, Connect and London Underground's asset management information systems projects.

The £110m forecast versus authority is due to Programme and Project Authority for all existing commitments and future known commitments within the portfolio that are required.

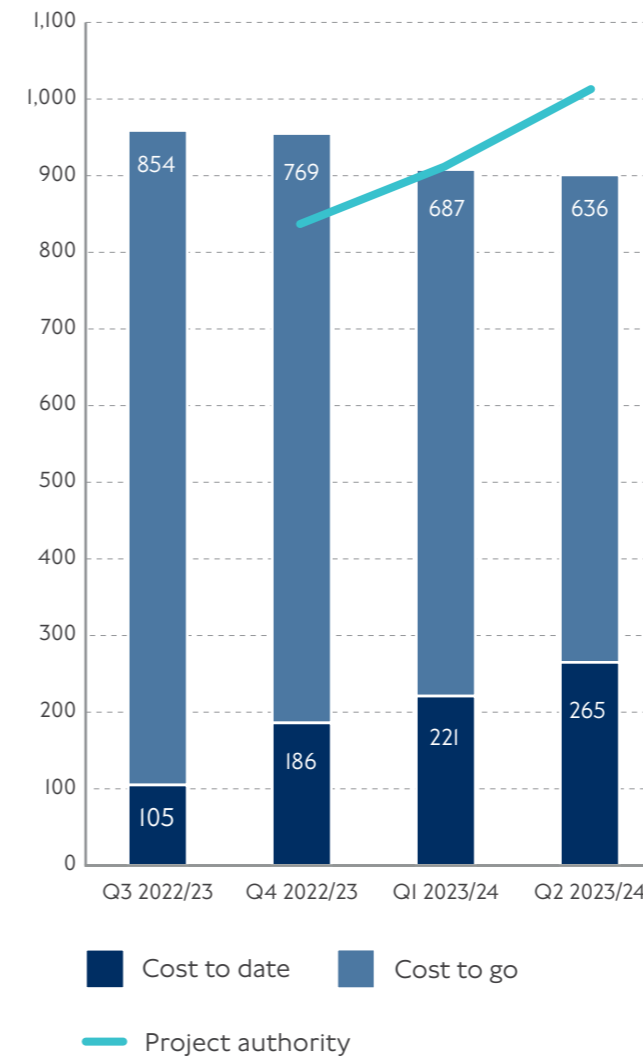
Performance over time commentary

The main spend in the last quarter was on payments projects, including Project Hina, Oval and the Performance Assurance Fund.

Since forming the portfolio in Quarter I 2023/24, the forecasts have continued to perform well with a one per cent change in the forecast since last quarter.

Key forecast movements reflect the revised schedule to the i-Bus2 programme to provide a more robust schedule of activities and contract award dates, this still fits in line with overall completion but will be reviewed once tender evaluation is complete. This, combined with reductions in cyber security, payments and other technology and data programmes, have been partly offset by acceleration of connectivity obsolescence, increases in Digital Workplace, Enterprise Resource Planning, Digital, Technology Services Operations and overprogramming.

Technology performance over time (£m)



Operations technology

Programme update

Compliance, enforcement and safety technology

Work continues on the roll out of deployable enforcement cameras on our road network, enabling us to target specific safety and non-compliance hotspots and make a significant contribution to meeting our Vision Zero goal. They are currently operational at 43 high-priority locations, selected on the basis of recent safety and compliance records. We are now closely monitoring changes in driver behaviour and road safety, with early indications suggesting that the cameras have already delivered significant benefits with improved compliance at multiple sites.

To build on this early success, we have begun a second phase of camera installations, aiming to further expand their use across London. We have already identified sites for several cameras to be installed in 2023/24 and have started site-enablement work and installations. We are constantly reviewing our approach to ensure that site selection maximises safety and public transport benefits.

Any money recovered from the penalty charge notices will be reinvested in maintaining a safe and efficient road network for everyone travelling in London. The cameras are used for enforcement of civil traffic rules only and are fully compliant with data protection legislation.

On average, we manage 10,000 cases of work-related violence and aggression every year. As part of delivering the work-related violence and aggression strategy, the operational employee safety programme has rolled out an additional 200 body-worn video cameras to employees at risk of work-related violence and aggression who work in areas where they have the most frequent contact with members of the public. Body-worn video cameras are part of essential equipment. Significant progress has been made to distribute 300 emergency communication devices by the end of 2023.

As part of the Station security technology improvement programme, we have started the design of critical incident management functionality for 40 stations. The delivery of this functionality in 2024 will enable us to manage these stations during a critical incident and other key events. We are rolling out safety improvements to our CCTV estate and we now can remotely view CCTV at a further seven stations. Finally, we are improving the routing of public help points, to make sure emergency calls are handled promptly by those best able to help. We aim to deliver improvements to 15 stations by December 2023, with further improvements planned in 2024.

Network and public transport management

We are leading the way in delivering innovative new road management systems that will enable a multi-modal approach to managing the road network. The programme continues to deliver the two core replacement systems, including the real-time optimiser to manage traffic lights more effectively, and the common operating view incident management system to enable more effective and efficient management of the road network and incidents. These systems will reduce delay, improve journey times and encourage a modal shift to more sustainable modes of transport.

In February 2023, we completed all the code required for the final release of phase one of the common operating view incident management system, and we continue to receive positive feedback on the system from users. It's due to be finished in January 2024.

We will complete the development of the real-time optimiser system in 2023 and will begin migration to live operation of the system in Quarter 4 2023/24. This will optimise traffic signals and respond to multiple modes of traffic, improving network performance. Further enhancements to the system are planned for 2024.

The requirements for video analytics are nearing completion. This project aims to provide improved real-time modal count data for all modes, enabling us to make better decisions on road space allocation.

We are maintaining and developing technology to operate our public transport networks and improve the customer experience. This includes upgrading the critical technology systems that underpin the bus network, such as the iBus system, which provides real-time information on bus locations.

The past few months have concluded the tender process for iBus2 with the Contract Award Recommendation being published in September. Our focus has been on evaluating supplier bids in order to choose a preferred supplier.

Procurement has progressed for the new Countdown 3 system. Recent changes to the strategy have meant that suppliers are able to respond with an option to replace the entire asset if this proves better value for money. The Invitation to Submit Initial Tender was released to market on 4 August after which an evaluation period will then begin, alongside business case development to appraise the best option ahead of contract award in March 2024.

The contract was signed with Via in November 2022 to deliver the replacement of the booking and scheduling system for Dial-a-Ride, which will give passengers the option to book online and enable us to deliver more trips with the same number of vehicles. Delivery began in March 2023. Works are progressing well, and delivery is anticipated to complete in late 2023.

Cycling and micromobility

The London e-scooter rental trial has been operating for more than two years, with 10 participating London boroughs making up a continuous trial area. In the period ending 22 October 2023, 75,000 trips were made with a total fleet size of 4,200 vehicles. This brings the total to 3.1 million trips for the trial to date.

In response to updated DfT guidance that allows e-scooter trials across the UK to be extended until 31 May 2024, we have awarded contracts to Dott, Lime, and Voi to operate the next phase of the London trial, after a competitive procurement process.

The trial extension will build on learnings from the current trial and provides operators with opportunities to test new onboard technologies, including pavement-riding detection, tandem-riding detection and acoustic vehicle alerts. This will ensure that London can continue to learn about e-scooters and the role that they can play in London's transport network.

In the 2022 Queen's speech, the Government proposed legislation to legalise e-scooters and grant powers to strategic authorities to manage rental operations for micromobility. The King's Speech in 2023 confirmed, however, that there would be no legislation on this in the next parliamentary session. Despite this, we continue to advocate for this legislation to enable us, working closely with London councils and boroughs, to apply the same approach we have taken with e-scooter rental to all micromobility rental services in London, specifying standards and how operations should work in London, including parking.

Preparation is under way to procure a new operating contract for the Santander Cycles scheme, as the existing contracts expire from 2025. A contract notice was issued on 14 July 2023, ahead of schedule.

More member hires have taken place so far in 2023 than at this point in any previous year, meaning we're on track to have a record year. In total, more than 4.1m annual member hires have taken place already this year, and these hires are a combination of legacy annual membership and the new annual membership introduced in September 2022. In addition, a total of 1,631 hires have been made at the new Clapham South hiring station since it opened in August 2023.

Connectivity

We have progressed towards awarding a contract for the delivery of our renewal of operating networks system, which will renew critical communications infrastructure on the London Underground prior to obsolescence. This work will ensure that critical information like signalling, CCTV and radio continues to be transmitted, facilitating continued operation of the London Underground network. As it rationalises multiple existing systems, it will be cheaper to operate and reduce our carbon footprint. We recently completed a detailed external assurance review of our proposed contract and intend to award the contract later this year.

Digital asset management

We are continuing works to consolidate our asset management systems into a single platform. This will enable us to better manage the performance of our key operational assets across London Underground and improve how we plan and deliver critical maintenance works.

We are now in the latter stages of delivery and are migrating the final packages of asset information onto the new system. We plan to complete transition of London Underground areas in February 2024.

We are also embarking on a programme of works to fully digitise our asset management capabilities across our estate, enabling us to continue to improve how we manage our assets, ensuring our data is fully accurate and up to date and allowing us to introduce next-generation tools to support our investment decision-making.

Tools for planning, automation and employees

This theme delivers the technology tools needed to support our planning, automation and colleagues. We are preparing to replace devices for employees, including iPhones, prior to obsolescence, as well as renewing the system used to manage access to the London Underground network during engineering hours. More than 4,000 people per night work on the network, and ensuring access is appropriately controlled and managed is critical to supporting their safety.

Technology and data

Programme update

Payments

KPMG undertakes an annual audit of our processes to allocate revenue between the train operating companies and us. This audit is an obligation under the pay as you go agreement to validate that revenue between the operators participating in London's pay as you go revenue collection facility is being apportioned correctly. Once again, in July, KPMG returned an unqualified audit, which confirms that our revenue allocation processes are accurate, and the controls are robust.

Digital workplace

During this quarter, we have finalised the requirements for our Future Desktop, the next suite of Desktops that will follow on from Windows 10, and issued a Request for Proposal for a technology partner to assist with the detailed design collateral for the Future Desktop.

We have completed a detailed gap analysis of our information governance policies and our ability to manage and govern those policies with our current technology and processes. The results of the gap analysis will highlight any areas that require focus, with an action plan and business case (if required) due to be completed in Quarter 3.

Further deployments of the 'enhanced audio' solution for our smart meeting rooms has continued. This is a targeted roll-out to larger meeting rooms which will benefit from superior microphones and speakers located in/on the ceiling.

Networks

Work to extend mobile coverage on the Tube has added four stations and eight tunnel sections this quarter, including the Oxford Circus to Tottenham Court Road tunnel and Euston station. The network now comprises 24 stations (19 per cent) and 20 tunnel sections (10 per cent) now live at the end of Quarter 2. Ahead of schedule, the first Elizabeth line stations will go live this year, with the public coverage completed by the end of spring 2024.

The Connect programme has replaced all 295 of London Underground's operational radio base stations, ensuring this operationally critical radio infrastructure is now supported into the 2030s.

Our project to replace the end-of-life data network services that underpin virtually all surface services continues to progress. To date, we have migrated 4,319 of 4,606 (94 per cent) sites to the new network delivered by Capita. Of the 4,606 sites, 87 are currently operating on an interim 4G-based solution.

Technology services operations

The reseller framework is a key commercial framework managed by our Technology services operations and it provides a compliant and competitive route to market for commonly used IT products and services. The current contract is due to expire in September 2024 and we are working to retender and award a new reseller framework from then and provide a new IT Product Catalogue in 2025. Work continues on an internal IT service management solution, reviewing requirements for a long-term strategic solution. We expect to run an early market

engagement exercise this year. We are also taking on other projects to improve our processes and maintain our networks and data centres with support from our third parties such as Capita.

In our role as a central part of the GLA family, we are also continuing through 2023/24 with the strategic initiative for the GLA IT shared service programme, which will see us assume responsibility for agreed IT systems and services for the GLA, the Mayor's Office for Policing and Crime, and the Old Oak and Park Royal Development Corporation. We are about to start an important phase of the project where they will start using our service and devices. Technical migration activities are progressing well.

We also investigated a similar IT shared service initiative with the London Legacy Development Corporation. The findings from the feasibility study were presented to the GLA Group Collaboration Board in October. It was agreed that the work will continue to the next phase, noting a risk around resources.

Enterprise resource planning

We successfully implemented the new general ledger function to our SAP finance system on 14 July. This delivered improved financial management capabilities, including a divisional profit-and-loss and balance sheet to support the making cash count programme. This is a key element of the ERP programme and supports our finance strategy to grow our income and control our costs.

The replacement of the expiring SAP HR system continues with further development. We have had to defer the payroll module until 2025/26 as we must first replace the legacy SAP shift planner module, which rosters and schedules frontline colleagues. This will be achieved by the Operations Workforce Management project, which will provide accurate payroll data for rostered colleagues.

In turn, great progress has been made scoping and planning the implementation of the operations workforce management project. We contracted the software vendor UKG in early September and the project launch event organised for 100 colleagues took place on 3 October.

Contact centre operations

All five suppliers on the contact handling lot of the contact centre operations outsourcing framework provided competitive bids for the contactless payment card contact handling re-tender. A contract award recommendation has been made and was approved by the commercial board on 16 October. Internal resources have also been onboarded to help build resilience and internal knowledge of contact handling processes in this key area. The re-tender of the Street Faults reporting tool has concluded, with the incumbent supplier, MySociety, being awarded a further four-year contract to continue operating this service. The re-tender of the interactive voice response service is also under way; the current contract expires in June 2024.

We are defining the scope for the re-tender of our concessions services contract. We will be seeking separate suppliers for the contact handling and technology/fulfilment elements of the service.

Data analytics

We have almost concluded a series of data maturity assessments across the organisation, using the Government's model as a framework. Some common themes have emerged in terms of areas of strength and areas that we will need to prioritise when developing the data strategy delivery roadmap. We have established two working groups to help set our direction for data, our corresponding capabilities and our ways of working. We are meeting regularly with these groups to test design options and emerging priorities, and we are targeting the end of the calendar year for submission of a strategy draft.

Our Safety, health and environment data storage has entered the user acceptance testing phase after many months of development. This is the first time users have had hands-on experience with their new data platform and represents a significant milestone. Our Irregular Travel Analysis Platform, which tracks fare evasion and where it occurs more frequently, continues to be re-platformed to production following successful prototypes. This offers users greater confidence in the overall quality of the data and an improved, formal support wrapper.

Digital

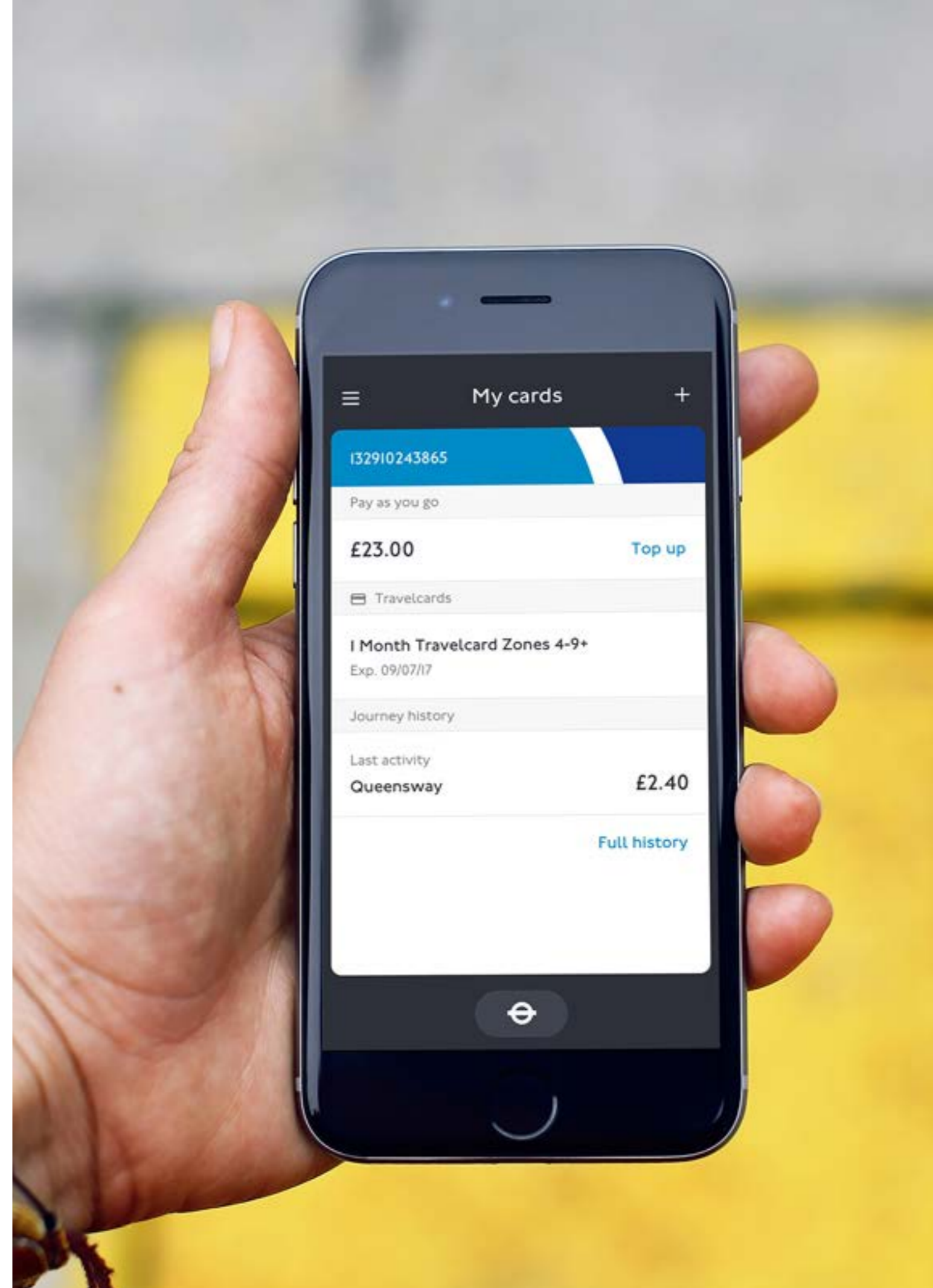
The TfL Go app has now been downloaded more than 4.7 million times and was used by more than 758,000 customers in August 2023. The app was a partner in the London Design Festival in September and featured content celebrating our rich design heritage.

We continue to release regular app updates, including detailed information about stops and interchanges on all bus routes, and more comprehensive information about the expected quieter times to travel. We have made good progress with developing push notifications both for line disruptions and network-wide disruptions, with a launch planned before the end of the financial year.

Our plans to augment our back-end delivery capability via the Crown Commercial Services framework are pending business plan approval of funds in December 2023. Once work can start, this will help accelerate delivery in line with business ambition.

Technology challenges

Global semi-conductor supply issues have distorted our delivery due to long lead times and pricing that increases at short notice. Though the worst of this is now behind us it has impacted our ability to procure and implement new IT infrastructure and increased project costs. We now have mitigations in place for our pipeline and live projects, however, we are still exposed to risk on ad hoc projects, small works or short-notice changes – including emergency works.



We are working to enhance the customer experience

Street, bus and rail-sponsored services renewals

This programme groups together renewals from the Surface assets and Public Transport programmes. These programmes share a common approach to work-bank management and through joining together associated activities such as bus-focused renewals, improved investment prioritisation and efficiencies can be applied



Street, bus and rail-sponsored services renewals

Forecast period	Cost to date (£m)	Cost to go (£m)	Forecast cost (£m)	Programme and Project Authority (£m)	Variance: Forecast cost v. authority (£m)
2022/23 to 2025/26	241	507	748	1,137	389
Change since last Investment programme report					
No change	31	(31)	No change	201	

Financial commentary

In May 2023, the Programmes and Investment Committee endorsed the creation of the Streets, bus, rail and sponsored services programme. This new portfolio includes renewal projects previously reported in the legacy Assets and Public Transport portfolio. This consolidation of projects will provide a single focus to maintain a good state of repair on the surface transport network.

The forecast does not reflect any material change since the last quarter.

Performance over time commentary

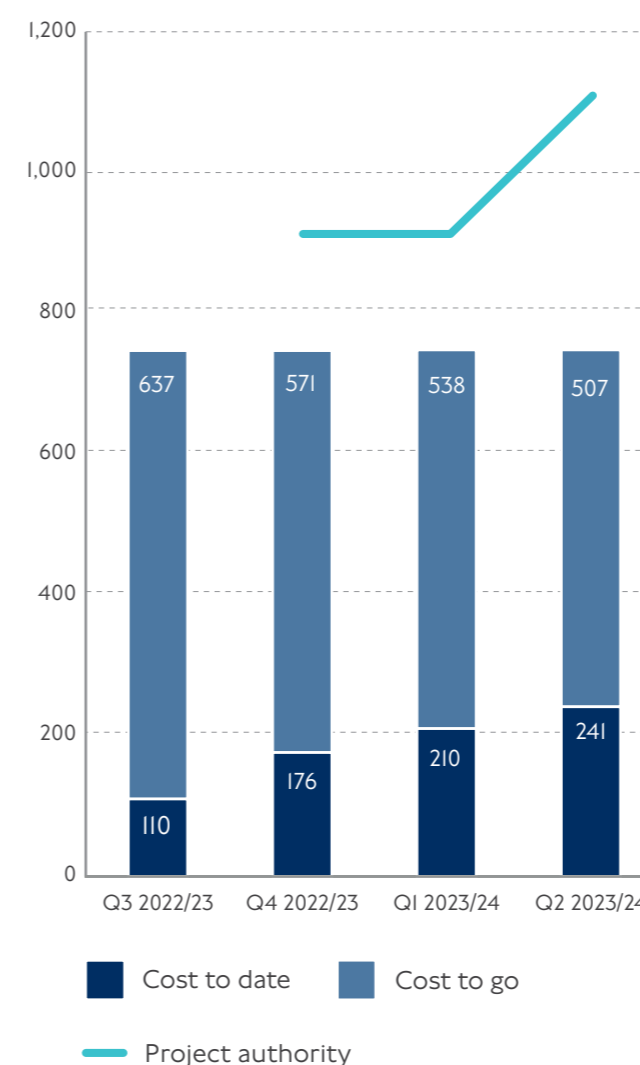
Over the last six financial quarters, our forecast cost has seen a generally decreasing trend, driven by funding challenges following the coronavirus pandemic. This has resulted in several projects being deferred. An increase in Programme and Project Authority to cover spend up to the end of 2025/26

was approved at the Programmes and Investment Committee meeting on 17 May 2023 and 19 July 2023.

Programme update

The programme brings together renewals that were split across our Surface assets and public transport programmes. These programmes share a common approach to workbank management and through joining together associated activities, such as bus-focused renewals, improved investment prioritisation and efficiencies can be applied. The Surface assets programme consists of a capital programme, surface operations assets, surface major assets and Local Implementation Plan Bridges and Roads. The remainder of the portfolio consists of renewals as bus, rail and sponsored services renewals, and supports investment needed to maintain the safety, performance and reliability of the DLR, London Trams, London Overground, cable car, cycle hire, new Routemaster buses and Woolwich Ferry.

Street, bus and rail-sponsored services performance over time (£m)



EFC reflects forecast starting 2022/23 vs authority which includes legacy Public Transport portfolio starting 2017/18

Renewals

Streets

Blackwall Tunnel southbound

This project aims to renew critical systems that support tunnel operation, including lighting, concrete repairs and CCTV. Following detailed modelling assessments, we have selected a preferred construction option: a series of weekend and night closures to minimise impacts on people and goods needing to cross the river. We appointed Tarmac Kier JV as design and build contractor in April and have now begun the design and build stage of the project. Subject to budgets and value for money, we plan to start the works from May 2024.

Gallows Corner

The Gallows Corner flyover in Romford is one of our highest priority assets for renewal due to its age, condition and the current restrictions in place. Following the completion of feasibility work, we have selected a preferred option to fully refurbish and strengthen the flyover. We have briefed external stakeholders who are supportive of the selected option. The option selected has 30 per cent of the scheme carbon compared to the alternative of a full replacement.

The concept design using the existing foundations to support the new deck structure has been completed and signed off. A final version of the outline business case was submitted to the DfT in May 2023 for approval. We are now in the middle of tender period following which the design and build element will be awarded in January 2024 subject to DfT approval of the funding.

A40 Westway

Following successful completion of work package one, which consisted of the major joint replacement, the project is now focused on delivering the remaining scope and work packages. This includes further joint replacements, parapet renewals and repairs to concrete deterioration. The remaining scope has been prioritised and divided into further sub-packages based on asset risk to ensure it is affordable within current budget constraints.

Concept design work for the remaining elements has been completed and accepted. We have now awarded the first tranche of work package 2A, involving seven expansion joints, to the same contractor as the first work package. Detailed design has begun for phase one, with a plan for implementation in summer 2024. The design for the second phase will begin in January 2024 with a plan for implementation in early 2025. We will also be progressing with the design of work package 2B (three expansion joints) to establish the earliest opportunity to replace these remaining vital components. The progress of work package 2C (concrete repairs and other works) will start at a future date subject to budget availability.

Rotherhithe Tunnel

We have completed the design work and preparation of tender documents for the detailed design and build procurement stages of the refurbishment project. However, due to the need to retain sufficient cross-river travel opportunities while the works take place at the Blackwall Tunnel, the next-nearest road crossing in the east, we now expect that the full refurbishment of the Rotherhithe Tunnel will not take place until after the Silvertown Tunnel opens in 2025.

We are putting in place a series of short-term capital interventions to ensure the tunnel remains safe and operable until the main refurbishment project is progressed. We have completed the feasibility work for some of the short-term capital interventions, including the fire main and tunnel lighting, and are finalising the options to take forward for delivery in 2024.

Hammersmith Bridge

We released our third of the share of the costs for the stabilisation works, which meant the London Borough of Hammersmith and Fulham started works in 2022. The majority of stabilisation works are now complete and we expect completion of the remaining works by the end of 2023, ensuring the bridge is safe and can remain open to pedestrians and cyclists in the short-term. Alongside the DfT we continue to support the borough in developing a business case for the longer-term strengthening works to fully restore the bridge.

Carriageway renewal

Plans are currently in place to deliver 208,000 square metres of resurfacing against a target of 127,900 square metres. The overprogramming allows for any slippage on the programme but will also enable acceleration if required and should funding be made available. In the last quarter we have delivered schemes at A205 Dulwich Common (Lordship Lane to Freemans Alley), A312, the Parkway, A316, Chertsey Road (between London Road and St Margarets Road), A316, Chertsey Road (between Whitton Road and London Road). This contributes to an overall output of 77,835 square metres and a total of 15 schemes implemented so far. In the next quarter we plan to deliver significant schemes on A406 North Circular Road Westbound (Melville Gardens to Green Lane), A12 Colchester Road and A205 Upper Richmond Road (Carlton Drive to Kendal Place). We also continue to plan the remaining resurfacing schemes for the rest of the year.

Renewals

Bus

Kingston Cromwell Road bus station

The major redevelopment of Kingston Cromwell Road bus station will significantly improve the bus experience for our customers. The works will deliver a bus station that offers a better customer experience, is easier to navigate, and is greener and more energy efficient.

The new bus station includes the introduction of energy efficient lighting, energy efficient buildings with a low environmental impact, a new sustainable urban drainage system, new vegetation including a green bus station canopy edge, and the introduction of solar panels.

We have completed detailed design for the project and instructed the build, which started in August 2023. The works are planned to complete by summer 2024.

New Routemaster refurbishment

This programme is the mid-life refurbishment of 998 of our new Routemaster buses. During Quarter 1 2023/24, 51 new Routemaster buses were refurbished across four operators. This takes the total of completed refurbishments to 329 at the end of this quarter. The target for this financial year is to complete 616 refurbishments.



Our buses use state-of-the-art technology



We regularly test our vessels

Renewals

River services

The Woolwich Ferry resilience and renewals programme is made up of schemes spread across several disciplines, which are all currently at various stages of the project delivery lifecycle.

We have completed our five-year maintenance cycle on both vessels, in line with our regulatory obligation. Both vessels have now received Lloyds Class approval, now that the licence for both vessels is due to end. Testing has been completed and the vessels are now available for operational use. South Layby Berth options continue to be reviewed with the opportunity to utilise existing assets instead of building new ones. Auto-mooring option studies have also begun with the review started on project requirements.

Telent have been selected to install our help points and live information schemes.

Work is ongoing on the Linkspan. Our contractor has undertaken surveys and is producing designs and has started renewing some of the critical elements.

Renewals

London Overground

Notable updates on the complex renewal schemes include:

- Renewal of the East London line signalling control system is undergoing a procurement strategy change to provide the opportunity to use Network Rail expertise in renewing this asset
- A total of 3,000 insulated track baseplates for the Thames Tunnel installation have been dispatched this period on time to deliver this vital safety-related renewal work over the 2023 Christmas period. The Main Works Contractor was awarded the contract on 30 October 2023
- The installation phase of Class 378 train cab simulator renewal is nearing completion. Delivery has progressed well, and the renewed asset was brought into use one month ahead of plan in October 2023



We have delivered renewals ahead of schedule

Renewals

DLR

Procurement activities for the renewal portfolio continue, with priority given to critical and safety-related projects. We are looking into combining workstreams to achieve efficiency where possible. This has meant early engagement with our contractors to understand where value can be achieved. Retaining key employees is a concern, with several engineers having left the business this quarter.

The replacement bogie frame project for the B92 train type is progressing well. Wheel slip protection trials have been completed. Software installation has begun for the plan to upgrade all I10 train units.

Long-line public address system installation is continuing at four stations. This system is used for station announcements, which are essential for evacuations as the majority of DLR stations are unstaffed.

Station controllers are an integral part of the DLR signalling system and the equipment is becoming obsolete. A replacement contract is due to be awarded by late November 2023, following a successful negotiation with Thales. This is the biggest signalling infrastructure renewal project the DLR will undertake in its lifetime over the next five years. The existing first-generation station controllers will be replaced with fourth generation controllers which will support the roll-out of the new DLR trains in 2024 and expansion of the DLR network.

High-voltage projects

High-voltage projects were impacted by the UK Power Networks sub-station fire at Poplar in March 2022. As a result, UKPN completion of power supply has been delayed until December 2023, requiring some key projects to be re-programmed so as not to impact services. The Poplar DC switchgear has been commissioned into service. Works have begun on shore supply at Beckton and Poplar depots which provides power in the workshops to move trains about the third rail traction system. Poplar depot power supply has been sectionalised and works have started on Royal Mint Street additional low-voltage supply to the substation.

Low-voltage renewals

Canary Wharf and Heron Quays low-voltage renewals works are going well. An opportunity has arisen to change the ceiling tiles at Canary Wharf which we have completed the scope for and is ready for tender. Low voltage distribution upgrade works continue with 50 per cent of the works completed. The remaining LED renewals work has been tendered and are being reviewed ready for appointment in February 2024.

Platform resurfacing

The second phase of platform resurfacing has started to make sure the following stations are compliant with slip-resistance standards: All Saints, Royal Albert and Prince Regent.

Track fixing

Track-fixing works continue, and we completed more than 1,000 baseplates in Quarter 2. Switch and crossings renewals are being planned for the Christmas shutdown at West India Quay. We are also installing the remaining six structural expansion joints at various locations around the transport network.

Lift upgrades

The lift system upgrade project has been completed on all 30 lifts and works have started on the next phase of 46 lifts. Cutty Sark escalators three and four are refurbished and have returned to service, while escalator two will return to service in December. South Quays escalators three and four will return to service following refurbishment this period. Works have started on lift renewals at Westferry and Stratford International.

Renewals

London Trams

Installation work for both the wayside and on-tram upgrades to communications equipment are now complete, and we have begun deployment of a correct-side door-enabling system on the Bombardier CR4000 trams, with completion currently forecast for January 2024. Our renewals programme continues across five asset groups: rolling stock, power, civils, systems and permanent way infrastructure.

Track renewals

The first phase of the Mitcham-to-Mitcham Junction ballasted track renewal was completed as planned during a 10-day part closure of the tramway from 4 to 13 April 2022. The second phase was delivered during another 10-day part-closure of the tramway from 22 August to 1 September 2022. The final phase was delivered during a planned 12-day closure from 8 to 20 February 2023.

The follow-up tamping and drainage works at Mitcham Junction and Wimbledon re-railing works were also completed during a 10-day closure from 4 August 2023. The nine-day part closure of the tramway began on 21 October as planned for drainage renewal works between Sandilands and Addiscombe tram stops.

The Church Street track renewal was completed in April 2023 under the new embedded track renewals framework contract. The next package under this contract is the East Croydon and George Street truck renewal which is currently planned to be completed in two track closures, one in February 2024 and another one in April 2024. Shirley Hill road crossing renewal, which was initially planned for delivery in October 2023, has now been deferred to summer 2024 to allow time for additional design options to be considered.

Birkbeck tram stop

We completed site investigations to replace the retaining wall and step-free access ramp at Birkbeck tram stop, and identified that an updated design is needed. The design plans have been issued to the contractor for pricing and the works are planned to finish in Quarter 4 2023/24.

London Trams depot

In May 2022, we awarded a contract to start planned works to replace fire doors at the London Trams depot and ensure compliance with current fire safety standards. However, due to supplier delays, works restarted in October 2023 as planned to enable completion by February 2024.



We have upgraded our communications equipment

London Underground renewals

This programme delivers critical renewals across multiple asset groups that form an integrated transport system, including whole life asset interventions on our train systems and our wider infrastructure. The programme also includes the renewals for the Elizabeth line and our colleague welfare projects



London Underground renewals

Forecast period	Cost to date (£m)	Cost to go (£m)	Forecast cost (£m)	Programme and Project Authority (£m)	Variance: Forecast cost v. authority (£m)
2022/23 to 2027/28	503	2,972	3,475	3,158	317
Change since last Investment programme report					
No change	86	(233)	(147)	No change	

Financial commentary

Our Quarter I report excluded track forecast in the years 2025/26 to 2027/28. The adding of these missing years has increased the overall forecast cost by £468m. Previous quarters have been restated so commentary is able to focus on performance-related movements.

Quarter 2 continued the strong performance observed in Quarter I, including maintaining delivery of the Elizabeth line renewals programme, further embedding of an expanded colleague welfare programme, identification and embedding of 45 per cent of our annual efficiency target and roll out of metrics to further improve forecasting accuracy across the capital spend programme.

Key movements since the last report include a cost-to-date increase of £86m reflecting strong performance in the quarter by Fleet overhauls accounting for £26m and Track accounting for £26m with the balance delivered by rest of asset areas. Cost to go and forecast cost reduced £233m and £147m respectively primarily due to

reduction to heavy haulage forecast, and rephasing of fleet heavy overhauls beyond the reporting horizon.

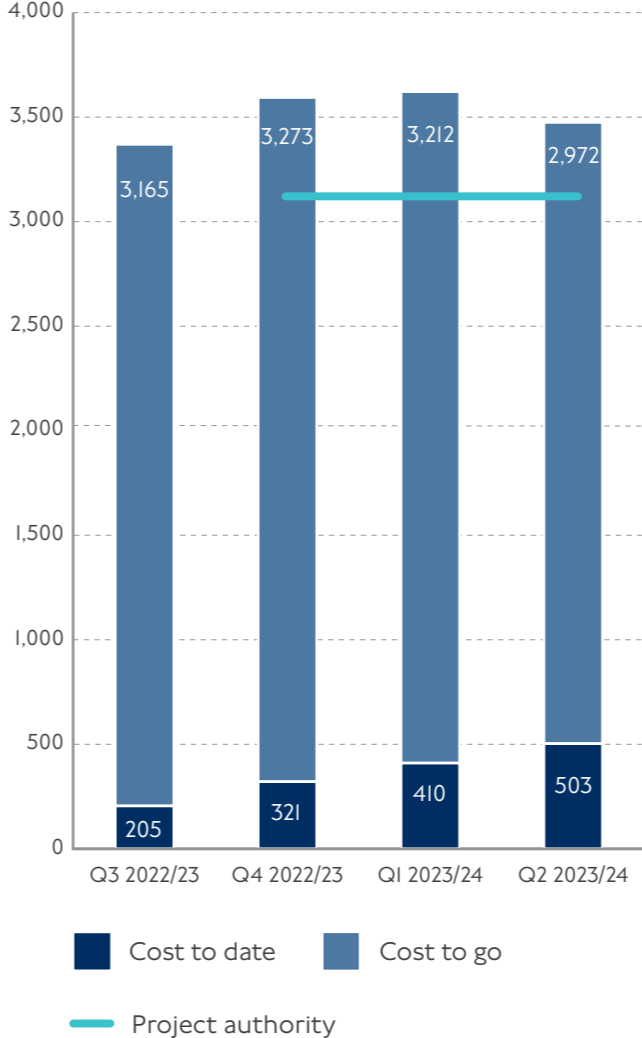
Performance over time commentary

Quarter 3 2022/23 – Quarter I 2023/24 has been restated to include track forecast in years 2025/26 to 2027/28.

2022/23 full year to Quarter 2 2023/24 London Underground renewals have delivered spend to date of £503m. Year to date, £9m of cost savings and efficiencies have been delivered.

The accelerated performance in the quarter was assisted by continued performance reviews across the asset areas to enable us to focus on key issues such as identifying cost savings, resourcing and supplier performance. Delivery confidence in achieving current year budgeted spend remains high, with planned increases in volumes of fleet overhauls and track. Furthermore, we are moving to the main delivery phases on projects such as the Central line improvement programme and incremental signalling renewal projects.

London Underground performance over time (£m)



Programme update

Key successes this quarter

The programme has had a successful quarter with strong progress towards our track renewal milestone delivered during track possessions. Highlights also include completion of the Victoria line fleet door overhauls, live testing of the first train on the Central line improvement programme and reaching 70 per cent LED lighting conversion on the Bakerloo line fleet. In addition, the programme completed safety testing on the mechanised renewal vehicle, and it was used in live track works for the first time at Wood Green. London Underground renewals remains on track for a strong performance against budget across the whole year, with a clear asset condition workbank in place should additional funding become available.

Network wide track renewals

Our track assets are an essential component of a safe and reliable railway. Track is continually degrading and needs rolling maintenance and renewals to maintain performance. Each section of track may have a residual life of 40 to 60 years, meaning we must renew two to three per cent of our track every year, as well as targeted component replacements. Where possible, we also aim to progressively install high-integrity, low maintenance, flat-bottomed rail on concrete sleepers, replacing bullhead rail on timber sleepers, some of which has been in service since the early 1900s.

This modern track is more stable and reliable. Between July and September 2023, we converted 1,451 metres of bullhead rail with the more modern flat-bottom form. In addition, we completed 408 metres of deep Tube renewal reconditioning works, thereby improving reliability and reducing noise.

Weekend possessions this quarter delivered the following:

- The renewal and plain line of points, re-railing one and removing two roads between Oakwood and Cockfosters on the Piccadilly line
- 300 metres of ballasted track renewal through Hammersmith platform 3, Piccadilly line
- Installing posts and 200 metres of fencing and access staircases along embankments at Northfields sidings
- 180 metres of ballasted track renewal running between Gloucester Road and South Kensington on the Circle and District lines

Track renewals is currently on target to deliver 3,500km of renewal.

Victoria line (fleet overhaul and depot control system renewals)

Phase one of the door overhauls is now complete on all 47 trains. The pressurised ventilation system upgrade and coupler overhaul have also been completed across the fleet. Trailer wheelset overhaul has been completed on 26 of the 47 trains, air filter overhaul on 21 trains and battery cells on 31 trains.



We've made strong progress on track renewals

The Northumberland Park depot control system project has been paused to allow a strategic depot control strategy to be implemented, based on the good practice developed for Piccadilly line upgrade. The project documentation for the depot control system has been completed (for this stage), ready for the project to re-start. Opportunity works within the depot are being reviewed to look at the point lock and detection equipment replacement.

Metropolitan line (fleet overhaul)

Bogies overhauls continue to plan with works on 44 of 60 trains completed. We are on-track to complete all the bogie overhauls of the Metropolitan line fleet in Quarter 2 2024/25. Negotiations with door supplier have been completed, governance arrangements put in place and components ordered.

Metropolitan line (Liverpool Street escalators)

Electrical enabling works were completed prior to the start of works on site. Hoardings have been erected for escalator works and site setup is now completed. Removal of the escalators and civils works started on 10 September 2023.

District line (fleet overhaul)

Preparations continue to start the overhaul of the S7 fleet (Circle, District and Hammersmith & City lines) in Quarter 2 2024/25 immediately after the Metropolitan train (S8 fleet) overhauls.

Jubilee line (fleet overhaul and component renewal)

Programme lift completed on three trains, taking the total to 13. Increased materials usage rate has impacted ability to ramp up to four trains per period which is now forecast to be achieved in February 2024 and revised completion in Quarter 3 2025. Trials on alternative supplier parts to address material bottlenecks have been successfully completed.

Tender evaluations on the underframe modification project have completed with best and final offer requests issued to bidders. Early investigations on door interlocking controls and drivers' CCTV systems have also concluded to address obsolescence issues and Office of Rail and Road concerns.

Jubilee line (station communication and ventilation systems)

Station communication systems renewals are progressing to plan with works on site at West Ham and Canary Wharf completed in the last quarter. We are now progressing with the handover into maintenance. Installation works continue to plan at the remaining four sites on the Jubilee line extension. Communications installation work at all sites is scheduled for completion in March 2024.

We are progressing with works to upgrade the obsolete tunnel ventilation control panels and refurbish the fans of the staircase pressurisation system at Jubilee line extension stations (Southwark to Canning Town) and intermediate shafts. Replacement of the ventilation management system is progressing to programme with 90 per cent of sensor works completed. The replacement of the local control panel of the tunnel ventilation system has now begun. The replacement of the pressurisation systems is also progressing to programme. The overall ventilation programme is scheduled to finish in September 2026.

Jubilee line (escalators)

This rolling programme of escalator refurbishments has delivered one further refurbishment in Quarter 2 at Stratford station in line with the programme. Works are continuing on the next three refurbishments at the Waterloo, Bank and London Bridge stations to complete in Quarters 3 and 4 2023/24.

Jubilee and Northern lines (incremental signalling upgrade)

The design stage of replacement of central computers for the Northern line is progressing well, with key enabling works and the concept design now completed. Installation works started in October 2023 for the first pair of computers (data transmission and temporary fibre racks). The concept design for the project to replace the train operator displays on both lines is under way, with an estimated completion date of February 2024.

Northern line (Kentish Town escalators)

Works have continued to schedule for the replacement of both escalators and station improvement works under a station closure. This closure is running for 12 months to June 2024. We have completed removal of the escalators and civils works are in progress. Ticket office and ticket hall strip out is complete.

Piccadilly line (fleet overhaul and signalling renewals)

Programme lifts, door overhauls and wheel overhauls all continue to plan. Lift-cycle two is due to finish in December 2023.

Piccadilly line (Holloway Road lifts)

The construction of the new lift car has begun and factory acceptance testing of the new controller was successful. However, due to delays in approving the mechanical and controller designs there has been a slippage in bringing lift one into use from December 2023 to January 2024.

Central line (fleet and signalling renewals and incremental signalling)

An annual Independent Investment Programme Advisory Group review was conducted on the Central line improvement programme with no critical issues. It identified strong management team and a steady recruitment profile at Acton Works. The live testing on the first Central line refurbished train is almost complete and the train returned to the depot for snagging works in October 2023. Operational readiness reviews have also stepped up this quarter to prepare for employee training and customer service. Overhaul of motors is back up to the rate of 20 per week following the delivery of key components.



We've increased station capacity at Marylebone

Feasibility and planning for the first tranche of the incremental upgrade to the signalling interlocking computers on the east end of the line continues. We are still on plan to enter the early contractor involvement phase which will complete in October 2024 and then award full contract in the last quarter of 2025.

As part of our Ending violence against women and girls programme, we are upgrading the Central line station CCTV systems. Surveys taken with our Security team suggest building a viewing room at the Hainault and Ruislip depots.

Bakerloo line (fleet overhaul, LED lighting conversion and signalling upgrade)

A total of 12 programme lifts, four heavy overhauls and five mini-overhauls have been completed. Approximately 70 per cent of the Bakerloo line fleet is now fitted with LED lighting, equivalent to reducing 120 tonne CO² carbon emissions annually. Work is on target to achieve 75 per cent conversion by November 2023 and completion by March 2024.

The procurement of signalling equipment and design works is continuing for the Bakerloo line control room fit-out works and the control system upgrade. We continue to install the key signalling and control interface equipment in lineside rooms on the Bakerloo line. Ten out of 16 sites have been completed, with Lambeth North recently completed as planned.

Bakerloo line (Marylebone escalators)

The work was finished on the final escalator replacement and it was brought back into service in late September 2023. The completion of the wider station gateline and an additional escalator will provide increased station capacity to support future customer demand. The gateline works are still planned to finish in December 2023.

Bakerloo, Central and Waterloo & City lines (accessibility)

Bakerloo line has fitted wheelchair bays on the sixth train and we have started engaging with Government's Disabled Persons Transport Advisory Committee and our own Independent Disability Advisory Group ahead of our application to extend its existing rail vehicle accessibility regulations exemptions. Our Independent Disability Advisory Group has also been consulted on Central line accessibility works in August 2023 and they provided positive feedback. This was followed by a DfT visit to Acton Works in September 2023.

Rail adhesion trains

Overhaul of the second Central line rail adhesion train is continuing to plan and is nearing completion. Preparations in parallel to begin overhaul of District line rail adhesion train on the completion of Central line.

Mechanised track renewal vehicle

Safety trials of the mechanised renewal vehicle are now complete, and it was used to complete works at Wood Green siding in September 2023. The work included installation of a new train arrester with associated sleeper replacement. The vehicle performed well, significantly reducing the manual handling required for the works and avoiding the need to transport materials through the station. We will continue to roll out the use of this new vehicle for planned track renewal and will carry out a formal benefit assessment in due course once work teams have become fully accustomed to operating it and it has been used enough to enable comparisons.

Modular points and crossings

Following open section approval in July 2023, work to complete safety assurance approval for use of the Kirow cranes in sub-surface environments is now under way. Remaining open and tunnel sections tandem lift approvals are due to be delivered in July 2024.

Remote track monitoring

The project is delivering new equipment which will be installed on two wagons to enable track condition recording, which will replace the existing track recording vehicle once commissioned. A feasibility study to assist the detailed design production has been commissioned and is expected to finish in April 2024. These two new vehicles will increase service reliability and provide critical data to keep the network safe.

Engineering vehicle overhauls

Engineering teams are still working on the battery locomotive bogie frame repair process after successfully completing trials. This will be integrated into the overhaul programme of traction and other works. Preparation for procurement of bespoke parts required to overhaul our spoil and ballast wagons, used to carry materials to and from work sites, is ongoing. A contract for overhaul work on our second Matisa tamper has been awarded, and work is due to start in February 2024. A strategy for in-house overhaul of the Plasser tampers is being developed.

Network-wide water ingress remediation

Contract award for delivery of the selected option at Mayor Sworder's Arches sub-station in London Bridge is still scheduled for February 2024. Options were agreed in October 2023 for remedial works at St Paul's and Chancery Lane stations and mobilisation has started for concept design. Concept designs at Liverpool Street and Charing Cross were finalised in August 2023.

Network-wide cutting and embankments

Works continue to stabilise the cutting between Grange Hill and Chigwell stations on the Central line to ensure the continued safe running of the railway. Currently, the strengthening works at the N31 footbridge have started and are due to finish in late 2023. In other areas of the site, final regrading and reprofiling continues. The full project completion is due in March 2024.

Concept design for the enabling works has been completed for the Canons Park to Queensbury embankment stabilisation project; it has now been agreed that

detailed design for it will be undertaken by the main contractor. The project is now starting the tender process for the enabling works and main works, and we are planning to be in contract in early 2024 and targeting to start construction works in early 2025.

Feasibility work continues on further embankment/cutting stabilisation projects (Finchley Central to Mill Hill East, Triangle Sidings, Northolt to South Ruislip) with a continued focus on efficiency of delivery. Tender evaluation has been completed for the ground investigation works between Northolt to South Ruislip stations to support option development.

Plaistow station and power sub-station

The roof works are complete. The colleague welfare improvements are due to be completed in mid-November 2023, with final snagging works for the site to be completed following this. We have undertaken an assessment of a leak in the station roof and are exploring the possibilities to remediate this.

Station platform remediation works

Remedial works at ten quick-win low-complexity sites requiring no design will start in January 2024 and are scheduled to be completed in March 2025. Design of the remaining selected remediation options began in July 2023, and site works are scheduled for June 2026.

Platform tactile replacement works at Osterley station were completed in April 2023. Platform remedial works at Plaistow station began on site in September 2023.

Welfare facility renewals

There is a notable difference in the provision and access to colleague welfare throughout our organisation, with several locations falling under acceptable standards. Consequently, this project aims to enhance our welfare facilities. We are obligated by the Workplace Regulations 1992 to ensure high-quality welfare for our colleagues, as well as bound by the Equality Act 2010 to prevent workplace discrimination. Colleague welfare facility improvements include mess rooms, kitchens, locker rooms, changing rooms and shower and toilet facilities.

We are working to improve the condition of welfare facilities and environment for our colleagues across London Underground. Five sites have been completed and site works are continuing at a further four locations. Work at three more locations started in October 2023. We aim to complete eight sites by the end of March 2024. Due to unexpected site conditions identified during an intrusive survey, such as the discovery of hazardous materials, progress was slower than expected in 2022/23. However, these lessons have been applied to the new tranches of work and more thorough investigative surveys are planned for future sites.

Smoke and heat exhaust ventilation systems

We are replacing and refurbishing the life-expired components that form part of the smoke and heat exhaust ventilation systems located in the roofs of Bermondsey station and Stratford Market depot. The designs of Bermondsey new actuators have now been completed. The refurbishment of both systems is scheduled for completion in October 2024.

Secondary lifts (supporting step-free access)

On-site works at one of the Green Park lifts has been delayed due to a clash with other planned works and is now planned to start on site in January 2024. One of the lifts at Bermondsey is on plan to start on site on 3 December 2023 and another at Hounslow East started with relative place of safety works and the main lift works are due to start in November 2023.

Due to funding constraints, we have not been able to start manufacture of the next three lifts in the programme which will impact delivery of the 2024/25 workbank.

Uninterruptable power supply

We awarded a new contract in December 2022 to continue the replacement of 31 life expired uninterruptable power supply units to ensure a continuous power supply to critical signalling assets on the railway. The works are on plan, with detailed design complete and site works began in September 2023 for the first batch being installed on the Victoria line. The first of these at Walthamstow has been commissioned to start a rolling programme.

Offline battery power inverters

An offline battery power inverter is a battery system present on all sub-surface stations to power emergency lighting in the event of a power loss. There are around 260 located across the transport network and they are a critical asset as failure could result in station closures as emergency evacuation is compromised.

During Quarter 2, we successfully commissioned the last of the 20 units planned in tranche one of the replacement programmes. The procurement for a second tranche of 40 was awarded in October 2023. This contract includes product development changes and recycling of key components which will help mitigate the obsolescence risk of the remaining units. Internal scoping and market engagement is in progress for further units as part of the strategy work on the longer-term solution.

Traction power

Design work is in progress for the replacement of traction isolation switches located in sidings on Central and Bakerloo lines, continuing the programme to address equipment non-compliances and removal of operational restrictions. The works are planned to begin in 2024/25.

The construction of a new room to house a replacement switchboard at Holborn was completed to plan in April 2023. These complex works are being implemented under special access arrangements which have progressed well. New equipment was delivered to site under this arrangement and has been installed in Quarter 2, ready for site testing and start of commissioning in December 2023.

LED lighting

Good progress has been made across the delivery programme with works nearing completion at Hainault depot, in progress at Ruislip depot, and designs being developed for the continuation at Stonebridge Park. The conversion of lighting at Oxford Circus started in April 2023 and is ahead of planned completion by February 2024. We have also completed scoping

surveys at King's Cross St Pancras station in readiness for a contract award in Quarter 3 2023/24, with delivery to start on site in early 2024. Conversion of lighting at smaller stations is being delivered internally, with a team mobilised to deliver 22 priority stations during 2023/24. In Quarter 1 we delivered 5.5 stations. This quarter, we delivered at the same rate of 5.5 stations.

East Ham wall rebuild

Negotiations continue with property holders regarding access to the wall though local gardens. This is required as the railway is adjacent on the opposite side with cables and other services occupying the safe area next to the track. The access agreements are to enable us to carry out the required temporary works, including propping, ahead of a permanent solution being installed.

Optioneering proposals for the permanent solution have matured, and they include challenges such as the location of welfare facilities within a very constrained site. There is a strong focus on reviewing and mitigating the key risks regarding our assets, the public and residents.

The project is planning for approval of the procurement strategy in November 2023. Once the procurement strategy is approved the project team will engage with a delivery partner to jointly mature the base designs and undertake critical activities ahead of the main works. Initial priority is to replace the current temporary heras fencing, which has been on the site for the past three years since the walls collapsed. A secure boundary fence around the site runs between the properties and the running rail to form a secure perimeter for the worksite. This will require complex temporary works

and is currently forecast for completion by September 2024, while supporting the rebuild of the main wall. It is forecast to start the complex enabling works ahead of the new wall construction by December 2024. A forecast completion date of the new modular replacement wall and other remedial works is June 2026.

Elizabeth line renewals

During Quarter 2, the Elizabeth line asset renewal programme has continued to progress and is on track in terms of actual and forecast spend. The workbank is developing and new projects are being added with change control in progress. Key possessions for delivery in 2023/24 were completed in October 2023, and others remain planned for November 2023 and February 2024, with a dedicated team coordinating interfaces with Network Rail.

In Quarter 2, contracts were awarded for condition surveys at Great Eastern stations to inform design and required works, such as on Ilford station handrail, which are planned to be delivered in the Network Rail February 2024 possession. Enabling works using the Flashbutt welder have begun for the Connaught Tunnel re-railing with our Track Delivery team fully mobilised to support the re-railing. The eastbound re-railing was completed in October, and the westbound is planned to complete in November. In October, Eleanor Street lighting works and voltage transformer renewals at six locations were completed, including Westbourne Park and Pudding Mill Lane. Custom House points work and Chevron lighting to improve safety are both on schedule to complete in the November possession.

Railway systems enhancements

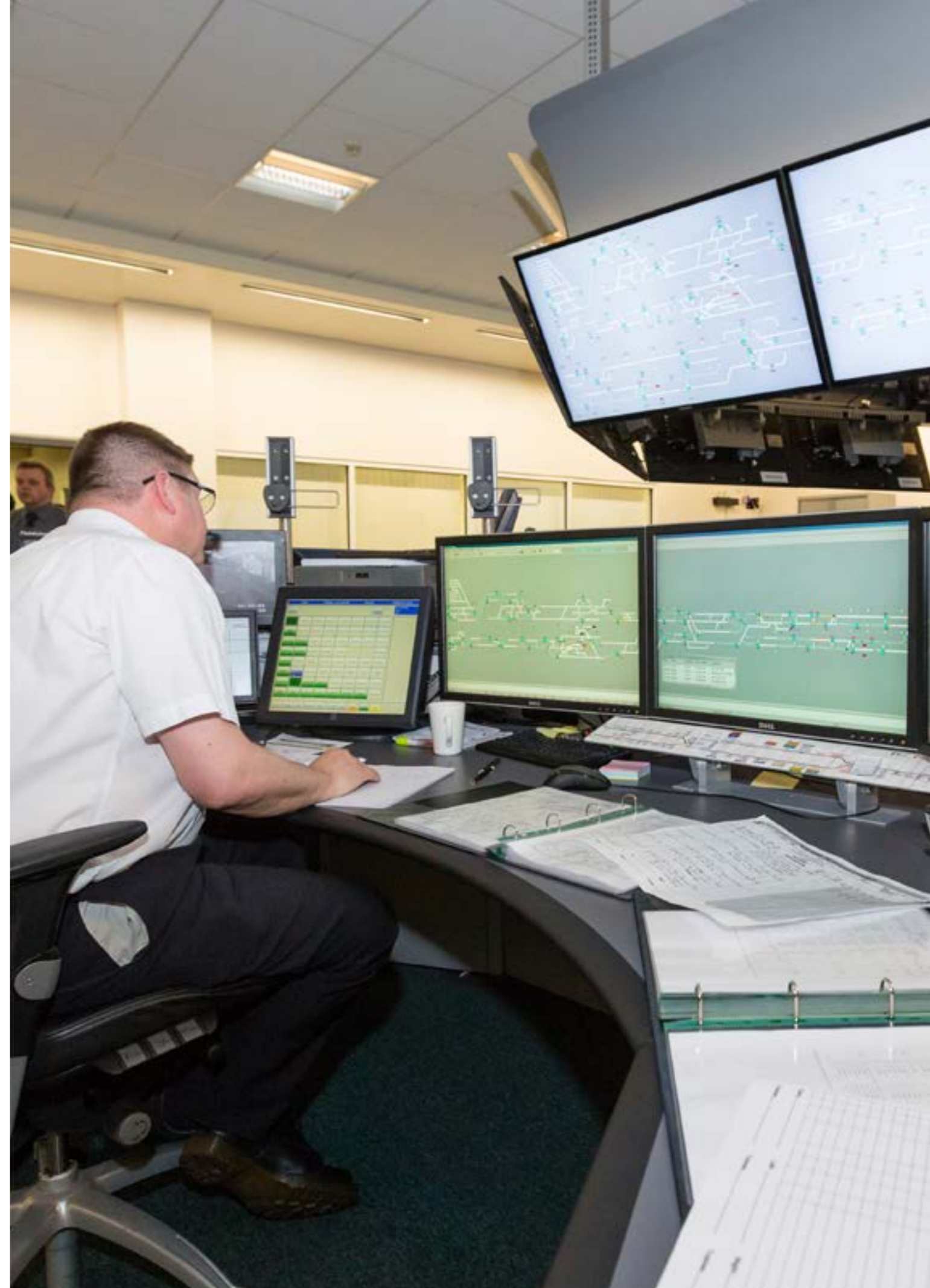
Delivery of the scheduled Northern line signalling software updates continues, with the first release commissioned on the railway at the end of October 2023. This was delayed from July 2023 due to the need to correct two safety concerns with the user controls at Highgate Service Control Centre and the train operator displays. The patch to address these issues is now complete and ready for roll out.

The final Northern line signalling software release is scheduled for Quarter 2 2024/25, which has been rephased to accommodate other projects that are dependent on the same supplier key resources. These priorities include the Four Lines Modernisation and DLR rolling stock replacement programmes. The Northern line software updates address residual issues and requirements following completion of the Northern line extension and the Bank station closure works.

Delivery of the Jubilee line signalling software updates also continues, with the updates addressing residual issues. The first software release was commissioned in Quarter 3 2022/23, and the final release is currently scheduled for Quarter 1 2025/26. This is heavily dependent on the Four Lines Modernisation programme and when SMA8, which touches the Jubilee line within the programme, is delivered (currently scheduled for Quarter 2 2024/25).

The first phase of the second stage of enhancement work for the Northern line power supply has now been let to a contractor, which will provide system capacity and resilience for reliable services during planned or unplanned outages.

The rolling stock works to enable an increase in entry and exit speeds at Neasden depot were successfully completed with full fleet roll out achieved in Quarter 2 2023/24. These support Metropolitan line service uplifts being delivered as part of the Four Lines Modernisation programme.

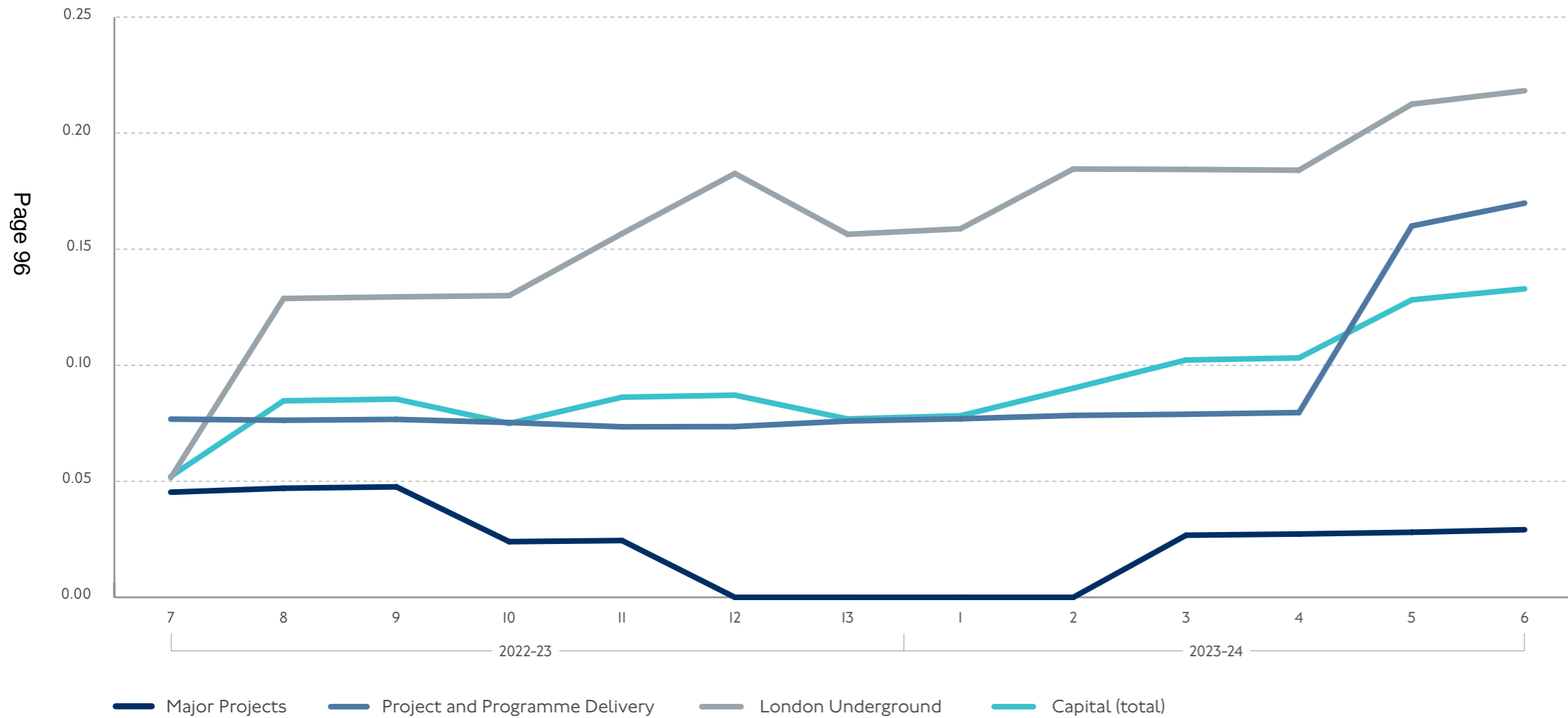


We continue to update our signalling software

Our safety performance data

We track the number of injuries among our workforce to show our progress towards our safety ambitions

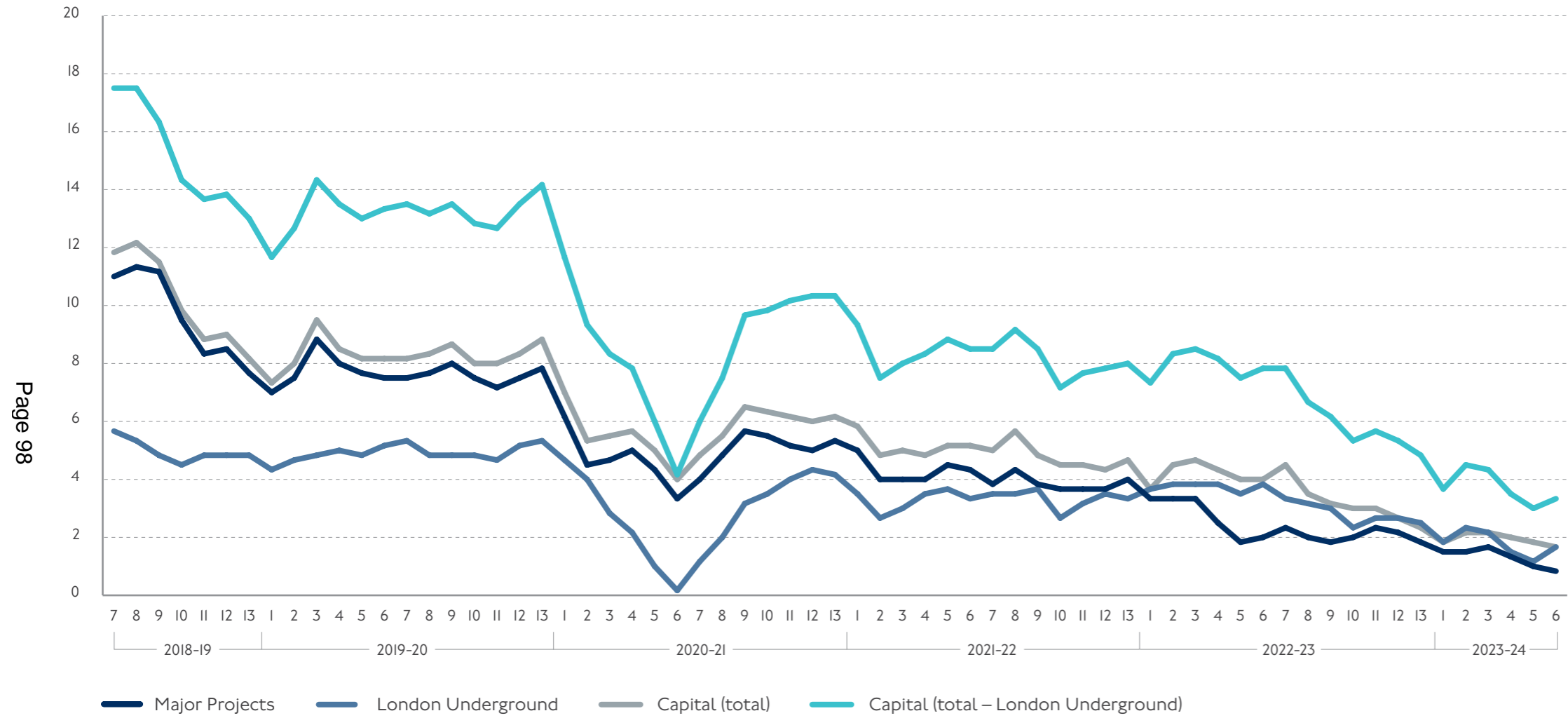
RIDDOR accident frequency rate
(per 100,000 hours worked)



Lost time injury frequency rate
(per 100,000 hours worked)



Total Capital workforce injuries
(six-period average since 2018/19)



About us

Part of the Greater London Authority family led by Mayor of London Sadiq Khan, we are the integrated transport authority responsible for delivering the Mayor's aims for transport. We have a key role in shaping what life is like in London, helping to realise the Mayor's vision for a 'City for All Londoners' and helping to create a safer, fairer, greener, healthier and more prosperous city. The Mayor's Transport Strategy sets a target for 80 per cent of all journeys to be made by walking, cycling or using public transport by 2041. To make this a reality, we prioritise safety, sustainability, health and the quality of people's experience in everything we do.

We run most of London's public transport services, including the London Underground, London Buses, the DLR, London Overground, Elizabeth line, London Trams, London River Services, London Dial-a-Ride, Victoria Coach Station, Santander Cycles and the IFS Cloud Cable Car.

We manage the city's red route strategic roads and are responsible for the maintenance, management and operation of more than 6,000 sets of traffic lights across the capital. The London boroughs are responsible for all the remaining roads within their boundaries. The experience, reliability and accessibility of our services are fundamental to Londoners' quality of life. Safety remains our number one priority and we continue to work tirelessly to improve safety across the network for both colleagues and customers.

Our vision is to be a strong, green heartbeat for London. We are investing in green infrastructure, improving walking and cycling, reducing carbon emissions, and making the city's air cleaner. The Ultra Low Emission Zone, and fleets of increasingly environmentally friendly and zero-emission buses, are helping to tackle London's toxic air. We are also improving public transport options, particularly in outer London, to ensure that more people can choose public transport or active travel over using their vehicles.

That is why we are introducing the outer London Superloop bus network, providing express bus routes circling the entire capital, connecting outer London town centres, railway stations, hospitals and transport hubs.

We have constructed many of London's most significant infrastructure projects in recent years, using transport to unlock economic growth and improve connectivity. This includes major projects like the extension of the Northern line to Battersea Power Station and Nine Elms in south London, as well as the completion of the London Overground extension to Barking Riverside and the Bank station upgrade.

The Elizabeth line, which opened in 2022, has quickly become one of the country's most popular railways, adding 10 per cent to central London's rail capacity and supporting new jobs, homes and economic growth. We also use our own land to provide thousands of new affordable

homes and our own supply chain creates tens of thousands of jobs and apprenticeships across the country.

We are committed to being an employer that is fully representative of the community we serve, where everyone can realise their potential. Our aim is to be a fully inclusive employer, valuing and celebrating the diversity of our workforce to improve services for all Londoners.

We are constantly working to improve the city for everyone. This means using information, data and technology to make services intuitive and easy to use and doing all we can to make streets and transport services accessible and safe to all. We reinvest every penny of our income to continually improve transport networks for the people who use them every day. None of this would be possible without the support of boroughs, communities and other partners who we work with to improve our services. By working together, we are creating brighter journeys and a better city.

Programmes and Investment Committee



Date: 6 December 2023

Item: Independent Investment Programme Advisory Group
Quarterly Report

This paper will be considered in public

1 Summary

- 1.1 This paper presents the Independent Investment Programme Advisory Group's (IIPAG) quarterly report for December 2023. It describes the work undertaken since the last report presented to the Committee in October 2023.
- 1.2 A paper is included on Part 2 of the agenda which contains exempt supplemental information that is exempt from publication 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 Independent Investment Programme Advisory Group's quarterly report 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 December 2023 is included as Appendix 1 to this paper.

4 Management Response

Programme Structure

- 4.1 We appreciate the input of IIPAG in identifying these common themes relating to the new programme structure. We are actively working with stakeholders across the business to ensure the effective implementation of the new programmes, with a particular focus on the migration and integration of new elements. New governance structures are in place with agreed terms of reference and identified roles and responsibilities. Relevant teams have also identified programme leads to support their implementation and overall management.
- 4.2 The new structure will enable improved prioritisation and ability to report against over-arching strategies. Programmes have established an approach to delivering enhanced benefits management with plans in place to develop a 'golden thread'

providing a clear linkage of the investment through to achievement of the overarching strategies. An ongoing review of investment governance will drive further enhancements, including consideration of programme business cases, and we will review their use as appropriate.

- 4.3 We have also undertaken an end-to-end review of the investment lifecycle and have identified a number of portfolio management improvement initiatives, with a working group established to develop common portfolio level metrics and reporting. A key driver is to ensure informed decisions around portfolio optimisation and tracking the delivery of portfolio value.
- 4.4 A review of the new governance arrangements is planned for the new year to assess their effectiveness in maximising the value of the new structure.

Cross Cutting Reviews

- 4.5 We welcome the work IIPAG is undertaking on cross cutting reviews and will provide the necessary management responses to the recommendations made.

IIPAG Delivery of Renewals Cross Cutting Review

- 4.6 We value the input of IIPAG, and the recommendations made in the delivery of renewals review.
- 4.7 We welcome the views expressed regarding continuing performance improvements and the recognition of the teams responsible, but we agree that further opportunities exist for improvement.
- 4.8 We will consider IIPAG's observations around the ways teams work together and opportunities to improve this. The need to improve monitoring and output performance data is a recognised area for improvement, which we are actively working to address.
- 4.9 Procurement and Commercial aims to deliver value for money and support an effective delivery model and we will adopt the most appropriate delivery routes. We will consider options to review current delivery routes and develop a plan based on feedback from IIPAG.
- 4.10 All recommendations have been accepted and are being actioned.

List of appendices to this report:

Appendix 1: Independent Investment Programme Advisory Group - Quarterly Report December 2023

Exempt supplementary information is included in a paper on Part 2 of the agenda.

List of Background Papers:

None

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Independent Investment Programme Advisory Group – Quarterly Report December 2023

1. Introduction

1.1. This report to the Committee describes the Independent Investment Programme Advisory Group (IIPAG) activities in September 2023 – November 2023. We have made no new strategic recommendations.

2. IIPAG Activity

2.1. We have undertaken two programme level reviews and a Contract Award review in this period covering:

- (i) Safe and Healthy Streets;
- (ii) DLR Rolling Stock Replacement Programme (DLR RSRP);
- (iii) iBus2 Project.

2.2. We also continue to provide third line assurance for the Elizabeth line and we are currently undertaking an assurance review of a software installation for the new rolling stock.

2.3. The accompanying paper from Project Assurance describes management progress in implementing IIPAG's recommendations from programme and project reviews.

2.4. From our reviews we have a number of observations relating to the overall management of the new programmes – some of which now contain a larger and more diverse number of projects – and how to maximise any opportunities that the new structure offers. Key reflections are:

- (i) The need for a conscious management effort to embrace and integrate new elements into the overall management of a portfolio, with appropriate governance and clarity of roles and responsibilities;
- (ii) The need for an over-arching strategy or plan for programme or portfolios to provide clarity of objectives and outcomes, and a golden thread that connects down through the elements of the programme. It should demonstrate how priorities are established, and how synergies and interdependencies are managed. This could be through a programme-level business case or similar strategy document;
- (iii) For portfolios with a large number of diverse projects, the development of Key Performance Indicators (KPIs) which will provide a high-level and consistent basis for measuring the performance of the portfolio, including measures of the percentage of projects delivered to time and cost, and output and outcome indicators.

3. Cross-cutting work

Delivery of Renewals

- 3.1. Our report on the Delivery of Renewals has been completed. We were impressed by the dedication of delivery teams to drive performance improvement and their enthusiasm for this important area of TfL activity. We identified some good ongoing practices which drive efficiency, and we strongly support the drive to invest in longer-term mature workbanks. We also found a number of fundamental practices that offer significant opportunities for improvement. Funding for renewals is constrained, and in this context the search for process improvements will have direct impacts on efficiency and value for money.
- 3.2. The organisation of renewals delivery varies between asset groups. We saw pockets of improving teamwork which are bringing performance advantages, but more commonly the different asset groups tend to take a siloed approach. We found a general lack of monitoring and output performance data. More should be done to measure the efficiency of delivery, and to spread good practice and lessons learned from one area to others.
- 3.3. We recommended that an urgent analysis be undertaken to better understand existing delivery routes and contracts, to identify areas where efficiency can be improved, and to prepare a plan for improvement. Our report identifies some key universal “enablers of success” which could serve as the basis for an improvement plan. We identified the Procurement and Commercial (P&C) team as being fundamental to providing strategic commercial leadership and to further improving efficiency and value for money.
- 3.4. We made eight recommendations, covering commercial leadership and strategies; data capture; performance monitoring and improvement; renewals governance; Pathway for renewals; and delivery routes and KPIs.

4. Progress with other cross-cutting work

- 4.1. Our reviews of the Pathway process for projects and of the effectiveness of the first and second lines of defence are underway.
- 4.2. We have recently started a review of progress with improvements in P&C which have been derived from the earlier P&C Improvement Programme and the ongoing business improvement workstreams.

Alison Munro
Chair, IIPAG

November 2023

Programmes and Investment Committee

Date: 6 December 2023

Item: TfL Project Assurance Update



This paper will be considered in public

1 Summary

- 1.1 This paper provides an update on the Project Assurance (PA) work undertaken between 20 August and 11 November 2023 (Period 6 to Period 8 of 2023/24). Two programme reviews were undertaken during this time, with the Independent Investment Programme Advisory Group (IIPAG) involved in both. In the same timeframe 12 project reviews were undertaken, with IIPAG involved in four of these.
- 1.2 These reviews gave rise to a total of 36 recommendations being made, of which none were considered to be critical issues. Critical issues are those that the PA team or IIPAG believe should be addressed before projects proceed to the next stage.
- 1.3 A paper is included on Part 2 of the agenda which contains exempt supplemental information that is exempt from publication 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 This update provides the Committee with a summary of the second line assurance, provided by TfL's PA team, and third line assurance, provided by IIPAG.

4 Summary of Project Assurance Activity

- 4.1 From the reviews undertaken, PA made 24 general recommendations and raised no critical issues, with all of these being agreed with the project teams concerned.
- 4.2 IIPAG made 12 general recommendations and raised no critical issues. The recommendations were all agreed with the respective project teams.

5 Status of IIPAG and Project Assurance Recommendations

5.1 The following graphs show the number of open recommendations, the number that are overdue, and the number closed at the end of Period 2 (ending 27 May 2023), Period 5 (ending 19 August 2023) and Period 8 (ending 11 November 2023) of 2023/24.

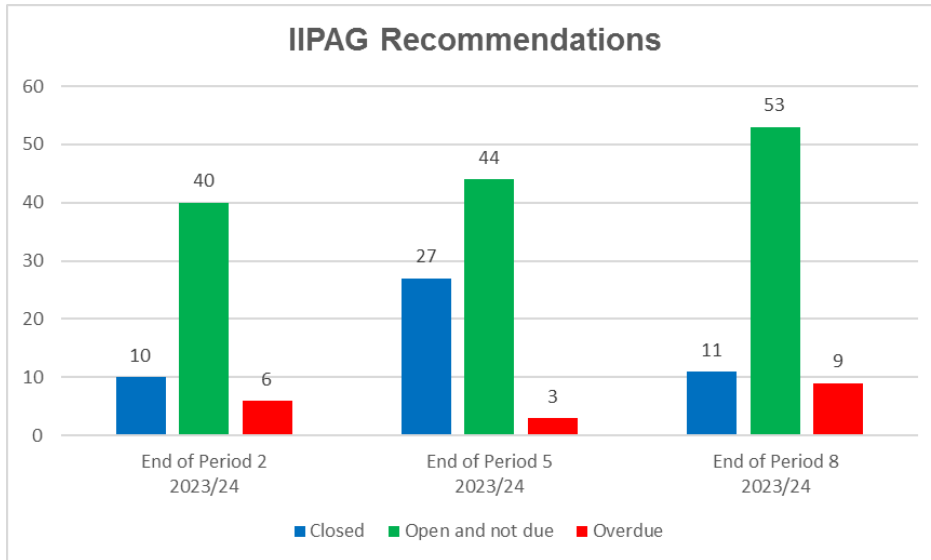


Figure 1: IIPAG Recommendations

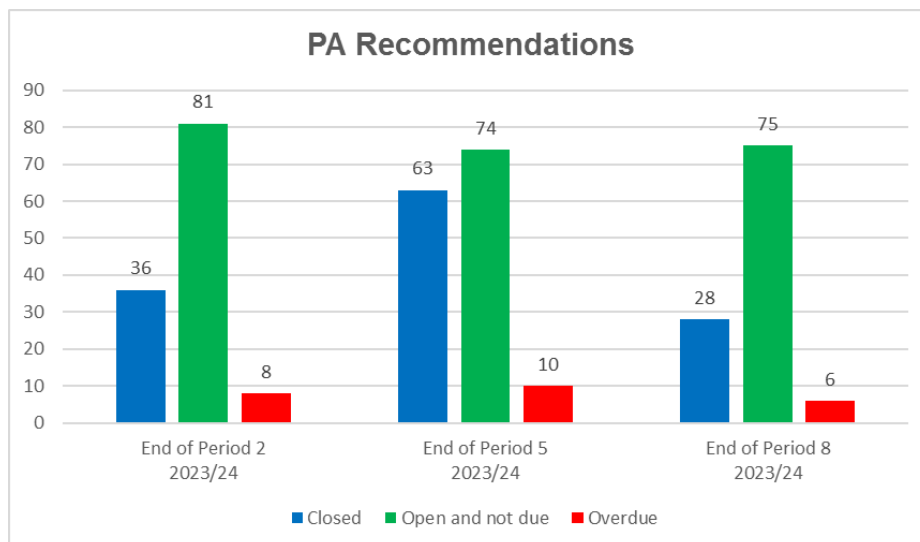


Figure 2: Project Assurance Recommendations

5.2 The following graphs show the length of time that the overdue PA and IIPAG recommendations have been overdue by, as at the end of Period 8, and the Chief Officer area responsible for addressing the recommendations.

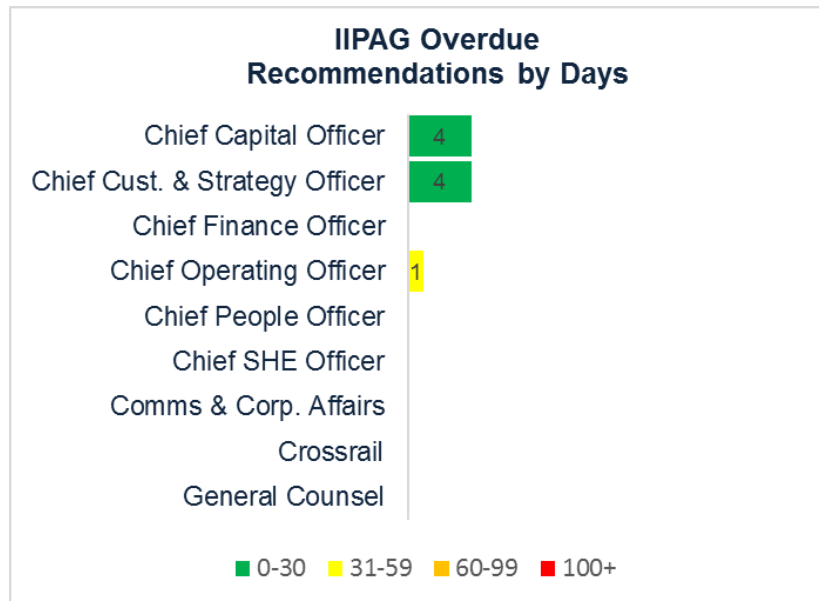


Figure 3: Overdue IIPAG Recommendations

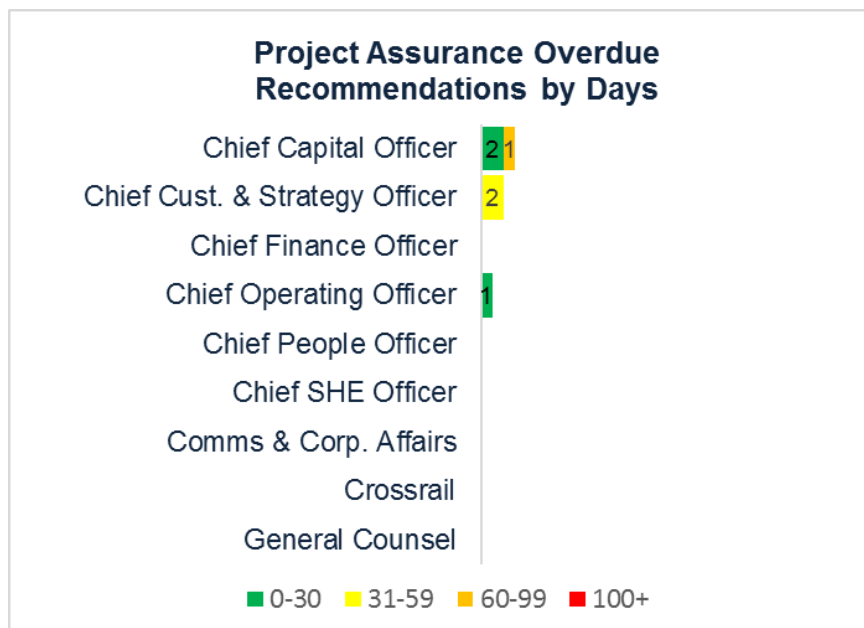


Figure 4: Overdue Project Assurance Recommendations

5.3 The following graph shows the number of recommendations made over the last four quarters grouped by recommendation topic. This is shown against the number of recommendations made in the previous year.

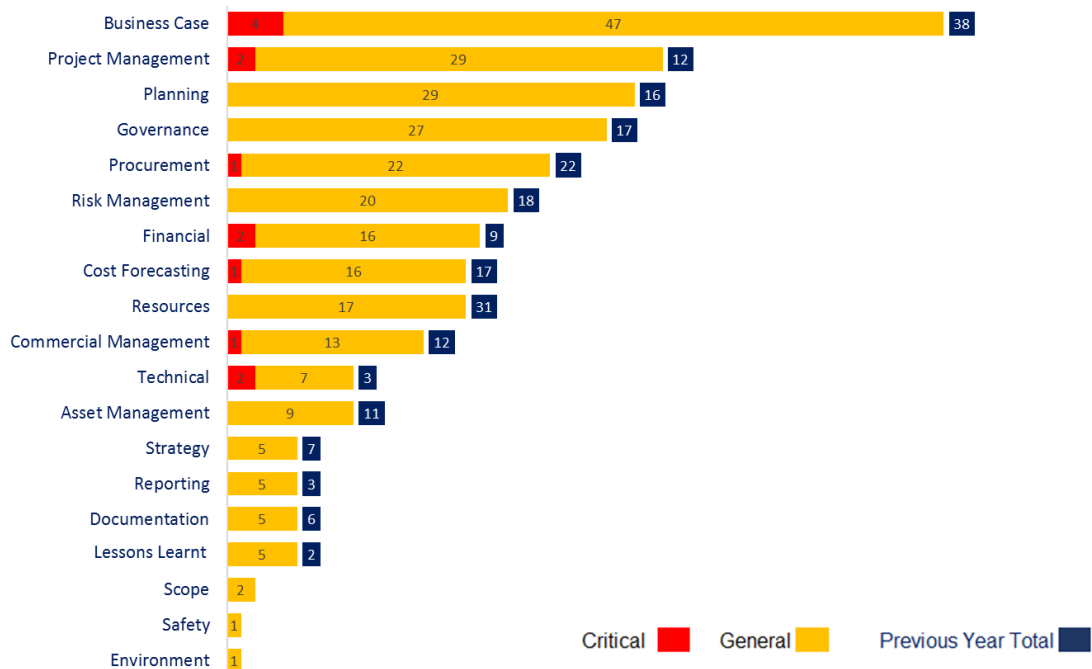


Figure 5: Project Assurance Recommendations by Topic (Totals over last four quarters versus previous year)

List of appendices to this paper:

Exempt supplementary information is included in a paper on Part 2 of the agenda.

List of background papers:

None

Contact Officer: Andrea Clarke, Interim General Counsel
 Email: AndreaClarke@tfl.gov.uk

This paper will be considered in public

1 Summary

Bakerloo line Upgrade Stage 1				
Existing Financial Authority	Estimated Final Cost (EFC)	Existing Programme and Project Authority	Additional Authority Requested	Total Authority
£2.4m	£1,572 to £1,627m	£2.4m	£0m	£2.4m

- 1.1 This paper provides an update on the Bakerloo line Upgrade (BLU) Programme, notably the case for investment to replace the life expired 1972 tube rolling stock (72TS), delivery planning, the contract option with Siemens Mobility Limited (Siemens) and implications of not being able to exercise the option due to constrained capital funding.
- 1.2 Supplementary information is included in Part 2 of the agenda. This information is exempt and is therefore not for publication to the public or press 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 paper on Part 2 of the agenda.**

3 Background

- 3.1 Originally, the intention to upgrade the Bakerloo line formed part of the Deep Tube Upgrade Programme (DTUP) which was established in 2012. It sought to replace life-expired trains and signalling systems across the Piccadilly, Bakerloo, Central and Waterloo & City lines as a combined programme.
- 3.2 The DTUP was disbanded as part of the 2019/20 Business Plan to solely focus on the Piccadilly line. Consequently, the Bakerloo line Upgrade was combined with the Bakerloo Line Extension (BLE) to create an integrated Bakerloo Line Upgrade and Extension (BLUE) Programme.

- 3.3 With the significant financial challenges faced by TfL, it is not feasible to fund the BLE in the near term. Therefore, while it remains a longer-term priority, it has proved necessary to decouple BLU from the BLUE Programme. As set out further below, the 72TS is beyond its design life and operating at an unprecedented age of over 50 years old. There are significant daily challenges to keep the fleet available for service. If the fleet is not replaced, there would be an increasing risk that an endemic failure could force the withdrawal of the 72TS from operation. Therefore, given the criticality of fleet replacement on the Bakerloo line, the upgrade element of the BLUE Programme was set up as a standalone BLU Programme.
- 3.4 The BLU Programme is formed of two stages: Stage 1 is seeking to safeguard the future operation of the Bakerloo line through replacing the life-expired rolling stock currently operating. Stage 2 would upgrade the line's signalling and control systems, enabling an uplift in service frequency.
- 3.5 The BLU Stage 1 is critical and requires Government capital funding support to be able commit to it, including the trains from Siemens (as explained in paragraph 3.7). The 72TS (as shown in Figure 1) is the oldest passenger train in daily operation in the UK. Designed for a 36-year life, the fleet is increasingly unreliable given its age, with its maintenance becoming ever more challenging and costly. Consequently, the number of trains available for service each day has started to decline. As a result, the frequency on the Bakerloo line has recently been reduced from 22 to 20 trains per hour.
- 3.6 There is considerable doubt over whether the fleet will be able to operate beyond the next decade. Maintaining and overhauling the fleet into the next decade will cost hundreds of millions of pounds, with no tangible benefit other than maintaining the status quo. Moreover, in doing this there would still be an increasing risk of a fleet-wide failure that could force a withdrawal from service, due to the unprecedented age at which the 72TS is operating. Replacement would offer better value for money and a better whole life cost solution.
- 3.7 The intention is to replace the Bakerloo line fleet of 36 trains using a time limited option for fleet replacement in the 2018 rolling stock contract with Siemens, which is currently being used to replace the Piccadilly line fleet (also shown in Figure 1). Exercising this option would see the benefits of the multi-line strategy developed under the DTUP realised. These include key benefits linked with more standardised fleet across lines, such as more efficient maintenance and use of specialist resources like rolling stock and depot engineers. This option also benefits from the significant design, development testing and facility set-up that has already been incurred as part of the Piccadilly line order. However, the option and its benefits are at risk of being timed out with the latest contractual date for exercising it being in November 2026.



Figure 1: 72TS in operation on Bakerloo line and proposed 24TS being delivered for the Piccadilly line

- 3.8 The BLU Stage 1 also includes all necessary infrastructure enabling works to introduce a new fleet of trains including depots, stabling, power, track, legacy signalling, CCTV and comms. The depot and power workstreams have long lead times and have been identified as the critical path to ensure TfL is ready to receive a new Bakerloo line fleet from Siemens.

The Case for the Bakerloo line Upgrade

- 3.9 The Bakerloo line plays a key role in keeping London moving, acting as one of the primary services used by businesses, visitors and tourists to access London and the UK. The line serves areas of north-west London including Harrow and Wembley, providing links to central London and main line terminals at Marylebone, Paddington, Charing Cross and Waterloo stations. The Bakerloo line is a nationally important line, connecting key cultural and educational sites, with over 113 million journeys made in 2019/20. Additionally, in 2023 it is estimated that the line is the 14th busiest passenger railway in the UK (Figure 2).
- 3.10 Tyne and Wear Metro, Glasgow Subway and Merseyrail are all in the process of replacing their fleets – none of which is as old as the 72TS, and with significantly less patronage than the Bakerloo line.

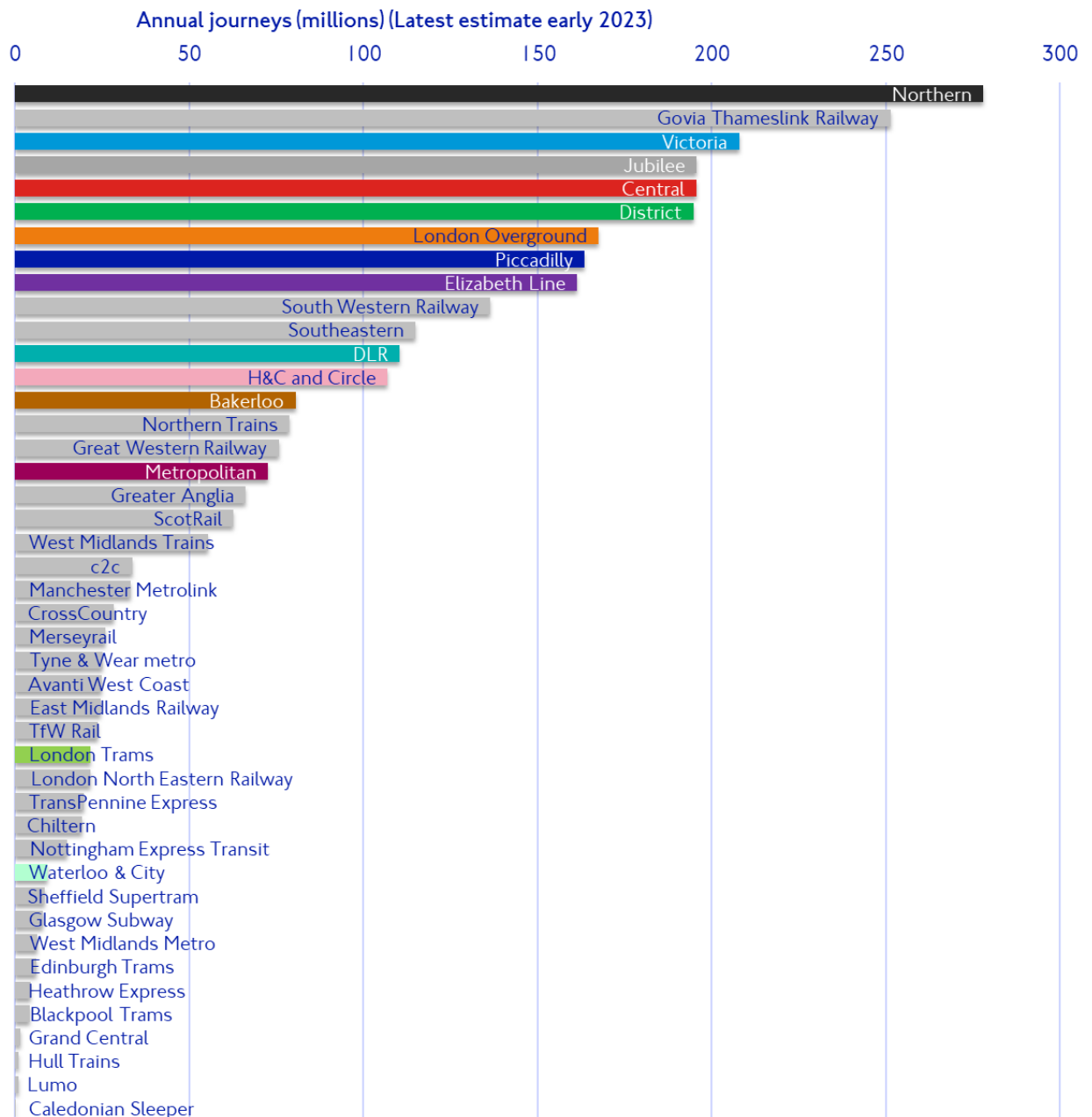


Figure 2: Estimated 2023 annual journeys (millions), TfL & Office of Rail and Road quarterly demand data

- 3.11 The Bakerloo line also serves some of the most deprived locations in England, as is demonstrated by Appendix 1. Upgrading the line also lays the foundation for the delivery of BLE, which will greatly improve public transport connectivity in south-east London and will enable a significant number of new jobs and homes along the corridor.
- 3.12 Due to the age of the fleet, reliability performance has declined in recent years and is projected to deteriorate further in the remaining years of asset life as it becomes more challenging to sustain reliability and availability whilst addressing an increasing volume of repairs. Furthermore, the unreliability of the current fleet constrains the Bakerloo line from delivering its full potential. Replacement would enable a significant improvement in the line’s reliability as well as the uplift of the

service frequency in the line's core (Elephant & Castle – Queens Park) to 22-24 trains per hour with the existing signalling. A signalling upgrade (Stage 2) could increase that to 27 trains per hour.

- 3.13 In policy terms, the BLU delivers on the Mayor's Transport Strategy (MTS) proposal to improve the capacity and reliability of the Underground network. More broadly, through the provision of a reliable, high quality public transport experience, it contributes to the MTS aim for 80 per cent of all trips in London to be made on foot, by cycle or using public transport by 2041 by providing an attractive alternative to using the car. The Programme also aligns with TfL's organisational priorities: winning back our customers; empowering and supporting our colleagues; rebuilding our finances; and protecting and improving our environment.
- 3.14 Table 1 sets out strategic objectives which have been developed specifically for the BLU. These objectives align with wider TfL strategies such as aiming for a smoother profile of spend on fleet replacements as well as the reduction of whole life costs achievable through standardising fleets, where practicable, across LU.

Strategic objective
Safeguard the operation of the Bakerloo line for future decades
Reduce the maintenance and operation cost of the Bakerloo fleet
Improve the service offering and customer experience for passengers of the Bakerloo line corridor
Better accommodate current and forecasted passenger demand
Increase the reliability of line's service
Improve the environmental performance and contribute towards carbon neutrality

Table 1: BLU programme - Strategic objectives

4 Current Progress

- 4.1 To inform the scope for the BLU, Sponsor Programme Requirements (SPR) have been developed. The requirements provide an initial foundation from which more detailed technical and delivery requirements will be developed. The SPR cover a wide range of areas including rolling stock, stabling, maintenance facilities, infrastructure modifications, environment and carbon, and future-proofing considerations for the BLU Stage 2 (new signalling) and for the BLE.
- 4.2 The BLU Programme has also started to undertake a feasibility study to help define a preferred delivery strategy for Stage 1. The range in the EFC outlined in the summary section reflects the fact that a single delivery strategy has not yet been defined. This work will include identifying and assessing various options to deliver fleet replacement on the line. There will undoubtedly need to be trade-offs between costs, operational impact and customer impact.

- 4.3 Work has also started to develop an up-to-date understanding of gauging and infringements along the line. This work will support early engagement with Siemens should the contract option be exercised.

5 Lessons Learnt

- 5.1 Multiple sessions have been held to learn lessons from a variety of internal and external programmes such as the Piccadilly line Upgrade (PLU) and DLR fleet replacement. Furthermore, regular engagement with programmes that have overlapping or interdependent scope with the BLU has been established and assisted in the early development of scope and Programme requirements.
- 5.2 Owing to the natural similarities between the PLU and BLU as rolling stock renewal programmes, particular effort has been given to learning lessons from this programme. Key lessons include gauging work, understanding the complexities within the PLU depots workstream, and robustly testing key assumptions.

6 Benefits and Value

- 6.1 Aside from securing the long-term future of the line's operation, replacement of 72TS with the Siemens rolling stock would enable the provision of a modern fleet of rolling stock, enhancing the passenger experience through provision of air-cooled, fully walk-through, accessible trains with advanced passenger communication systems. It will provide a better whole life cost solution, with standardisation of fleet across several deep Tube lines.
- 6.2 As part of the economic case within the Programme's Strategic Outline Business Case (SOBC), appraisal of numerous options has been undertaken, drawing together the benefits, costs, and overall value of the Programme. The assessment of fleet replacement using the option within the rolling stock contract with Siemens (our preferred option) has a strong benefit to cost ratio of 5.1:1.
- 6.3 Aside from service frequency, capacity and journey time benefits, several other benefits have also been calculated and factored into the appraisals within the SOBC. These include, but are not limited to, ambience benefits of the new rolling stock, benefits to road users and carbon benefits.

7 Equalities Implications

- 7.1 An initial Programme-level Equalities Impact Assessment (EqIA) was produced for Pathway Stage A. This document will evolve with the Programme and it is anticipated that more detailed EqIA(s) may need to be produced for the individual projects (once they are defined) and/or particular elements of the Programme (e.g. the delivery strategy).

8 Financial Implications

- 8.1 TfL is continuing to make the case to the Government for longer term funding which would enable commitment to the BLU.

8.2 Without this commitment, TfL will not be able to exercise the option with Siemens that provides price certainty for the cost of the trains. Not being able to exercise this option will result in the materialisation of the risks set out in section 3. This could delay the replacement of the 72TS by a decade and, in so doing, force substantial expenditure on continual overhaul of the fleet to maintain its safe operation.

9 Assurance

9.1 Continuous assurance has been undertaken on the Programme as well as specific assurance activities.

9.2 Regular meetings are held with TfL's internal Assurance team to update on progress and co-ordinate reviews. The BLU is currently in the final stages of an Independent Assurance Review (IAR) which was initiated following the passing of Stage Gate A. The IAR is reviewing several areas of the programme, including commercial, engineering, programme management and governance.

9.3 In addition, the SOBC for BLU is currently being informally reviewed by IIPAG ahead of its submission to the Department for Transport.

10 Next steps

10.1 The BLU team is working to achieve the strategic milestone: "Agreed Stage 1 scope and delivery strategy" by 31 March 2024.

10.2 To achieve this milestone further work is required to determine feasibility through working across the TfL value chain to determine an agreed delivery strategy. Once an agreed delivery strategy and programme scope have been determined, the programme will progress to Pathway Stage Gate B (Define Tranches).

10.3 Engagement will also continue with Government and HM Treasury about funding along with reviewing the BLU business case. This engagement will cover both short-term funding required to continue programme development, as well as longer term funding decisions in relation to future planned procurements and contract commitments.

List of appendices to this report:

Appendix 1: Map showing the Bakerloo line and deprivation levels of surrounding areas, measured using Index of Multiple Deprivation (2019)

Exempt supplementary information is included in a paper on Part 2 of the agenda.

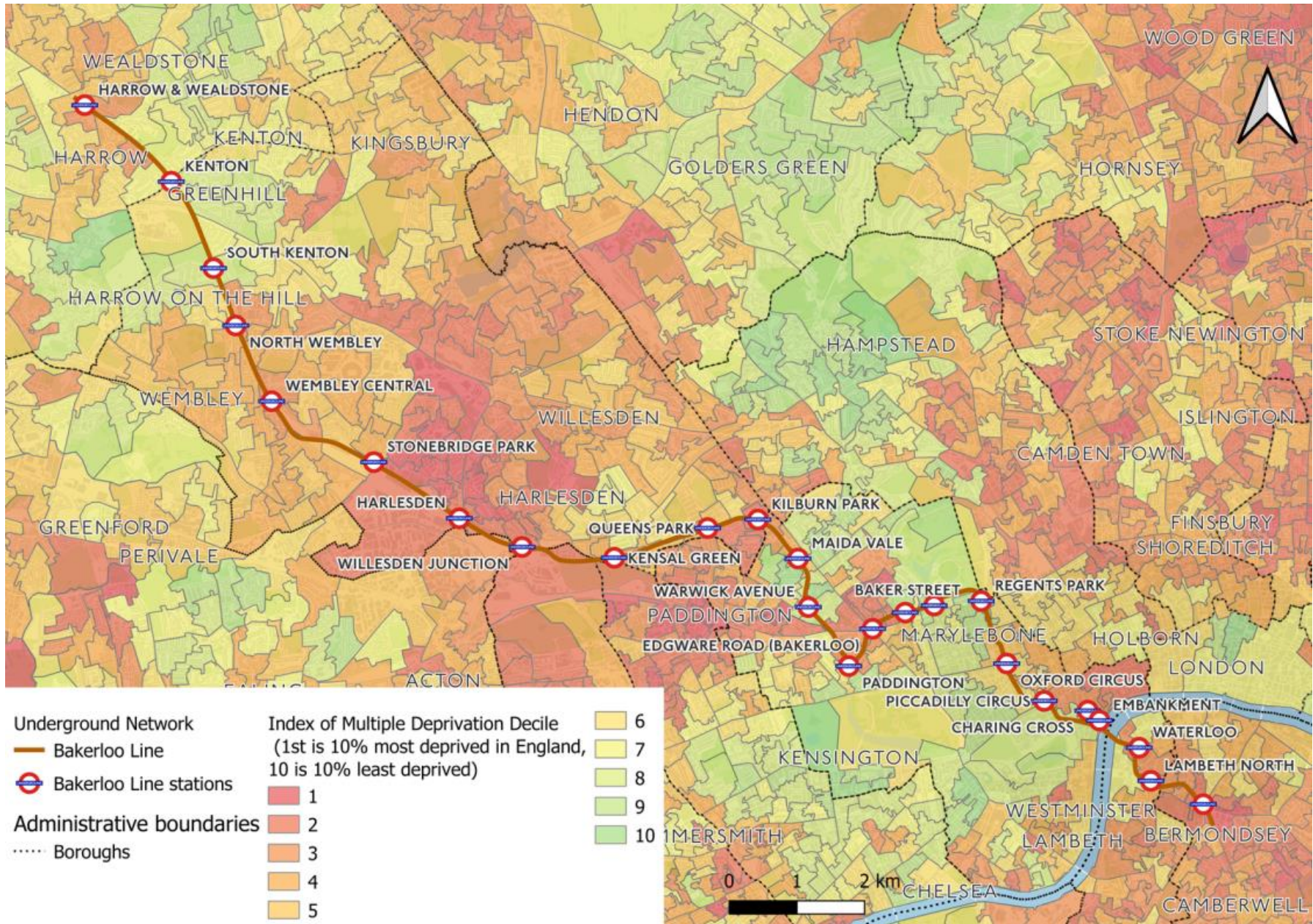
List of Background Papers:

None

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Appendix 1: Map showing the Bakerloo line and deprivation levels of surrounding areas, measured using Index of Multiple Deprivation (2019)



Programmes and Investment Committee



Date: 6 December 2023

Item: iBus2 Contract Award

This paper will be considered in public

1 Summary

- 1.1 iBus is the automatic vehicle location system for the London bus network and London Trams and is critical to the safe and efficient operation of these services. This paper seeks Procurement Authority to enter into agreements relating to the iBus2 services, including the On-bus Services and the Back Office Services.
- 1.2 A paper is included on Part 2 of the agenda which contains exempt supplementary information. The information is exempt from publication 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 that is legally privileged. Any discussion of that exempt information must take place after the press and public have been excluded from this meeting.

2 Recommendations

- 2.1 **The Committee is asked to note the paper and the exempt supplementary information on Part 2 of the agenda and, subject to approval of the revised TfL Business Plan to be considered by the Board on 13 December 2023:**
 - (a) **approve Procurement Authority in the amount set out in the exempt supplementary paper on Part 2 of the agenda for entry into the iBus2 contracts described in this paper; and**
 - (b) **note that matters for which Procurement Authority is sought above extend beyond the current TfL Business Plan and Budget (a revised version of which is to be considered by the Board on 13 December 2023) and provision will, therefore, need to be made in future Business Plans and Budgets.**

3 Background

- 3.1 Bus Operations currently manages its requirements to support its business activities of managing and monitoring bus services across around 8,850 vehicles, 700 routes and 19,000 stops through a single contract. The system allows us to provide real-time customer information, respond effectively to incidents, make appropriate payments to operating companies based on tracked performance

measures and helps ensure the safety of both our customers and operational colleagues on the Bus network.

- 3.2 The existing contract for the iBus services has been in place since 2005 and will expire on 2 May 2027. Transition and rollout of the iBus2 services will take approximately three years to complete.
- 3.3 This decision is critical to secure the timely replacement of the aging iBus system currently installed on TfL's bus fleet. While the iBus system currently remains operational, TfL must commence the iBus2 project to ensure that a viable replacement solution is ready for deployment before the current system becomes obsolete and impacts upon the quality of passenger services.
- 3.4 iBus2 ensures legal compliance through the continued provision of on-bus audio-visual passenger information, which has recently become a requirement under the Public Service Vehicle (Accessible Information) Regulations 2023.
- 3.5 The existing iBus system uses 2G internet, which is likely to be retired from 2028. The flexibility of the iBus2 solution will allow us to meet existing demand; using 4G (and 5G where available) and the robust product roadmap will ensure that future technologies can be harnessed.
- 3.6 TfL has undertaken a procurement using the Competitive Dialogue procedure under the Public Contracts Regulations 2015 in relation to the iBus2 On-bus Services and Back Office Services contracts described below which are intended to replace the current iBus services. The iBus2 On-bus Services and Back Office Services are business-critical contracts. The proposal is for contracts to be awarded for the supply, installation, maintenance and disposal of each of the following:
 - (a) **On-bus Services:** installation of the on-bus solution on around 8,850 buses and trams across London in order to provide: location information for use in Real Time Passenger Information (RTPI) and performance management of bus operators; geospatial information to service controllers and drivers to track and manage services including diversions; on-board visual and audio next stop announcements; and safety systems such as a driver alerts for low height structure warnings and radio communications for code red calls; and
 - (b) **Back Office Services:** implementation of the back office system to enable TfL, the Network Management Control Centre and bus operators to:
 - (i) track and manage live services including diversions;
 - (ii) provide RTPI to customer channels as well as to around 3,000 signs; consolidate bus operating information provided by other TfL systems and send this to vehicles; and
 - (iii) provide performance management information to TfL and bus operators for use in calculating bus operator payments.
- 3.7 The objectives of the procurement included:
 - (a) deliver the services which allow TfL to comply with legal obligations;

- (b) support the Mayor's Vision Zero goal for a safe transport network;
- (c) support the Mayor's Transport Strategy to improve the customer experience and increase mode share; and
- (d) reduce TfL's operating costs.

4 Benefits

- 4.1 iBus2 will ensure the continuation of benefits provided under the current iBus contract, such as improved reliability and reduced journey times, which are both key aspects of the Mayor's Transport Strategy and Bus Action Plan. These benefits can be attributed to the remote service control function allowing effective performance management from 42 service control centres across London and performance incentive payments for bus operators calculated using iBus data. Bus journey times at junctions will also improve upon the launch of iBus2, enabled by the Surface Intelligent Transport System Real-Time Optimiser project, allowing bus priority at all 5,000 signalised junctions across London.
- 4.2 Other customer benefits include the continued provision of audio-visual next stop information on-bus and real-time next bus information online and at stops through Countdown displays. The reliability and accuracy of both functions will improve under iBus2, notably information provided in times of disruption, which has been highlighted as a key driver for increased bus patronage in recent research.
- 4.3 iBus2 will improve safety for drivers, colleagues, passengers and other road users, helping to facilitate Vision Zero. Diversions will be shown on the driver's screen, making it easier for drivers to navigate diversions. Furthermore, diversion announcements for passengers will be automated, allowing drivers to focus on their principal role keeping passengers safe. Improvements to location accuracy will reduce the number of false low height structure alarms which should improve responsiveness to the alarms. iBus2 will take a pro-active approach to fatigue management, highlighting potential driver's hours breaches to service controllers in advance of the situation. The new system will maintain the provision of communications between drivers, service controllers, and the Network Management Control Centre, which keeps the network running smoothly and enables a quicker incident response.

5 Procurement Summary

Packaging Strategy

- 5.1 Following extensive analysis, it was determined that a different approach to the iBus contract structure was required to support the iBus2 product strategy of adopting a more modular approach and open architecture. The scope of the iBus contract was therefore split into multiple lots: Lot 1 – On-bus Services; and Lot 2 – Back Office Services.
- 5.2 Due to the size and scale of Lot 1 – On-bus Services, this was divided further into Lot 1A and Lot 1B.
- 5.3 The packaging strategy for iBus2 is set out in Table 1:

Services	Lot	Scope	Awarded Suppliers
On-bus Services	Lot 1A	Supply, installation, and maintenance of 50 per cent bus fleet and Trams	One Supplier
	Lot 1B	Supply, installation and maintenance of 50 per cent bus fleet	One Supplier
Back Office Services	Lot 2	Supply, installation and maintenance of the Back Office Solution	One Supplier

Table 1: iBus2 Packaging Strategy

- 5.4 Bidders were permitted to submit a combined bid across some or all of Lots 1A, 1B and 2 based on their satisfaction of procedural requirements set out in the applicable procurement documents. Therefore, it was possible for a single bidder to be awarded all Lots. If a single bidder won both Lot 1A and Lot 1B then a single contract would be awarded for Lot 1, but a separate contract would be awarded for Lot 2.
- 5.5 The iBus2 contract term for Lots 1A, 1B and 2 is for an initial term of 10 years from its operational commencement date, with options for TfL to extend for up to an additional 10 years. Therefore, the maximum possible term is for 20 years from the operational commencement date. This is to ensure that the return on investment of the initial installation can be maximised.

Evaluation and Supplier Selection

- 5.6 Bidders were required to submit initial tender submissions in November 2021. Bidders' initial tender submissions were discussed with them during dialogue held between June and October 2022 and bidders were requested to submit final tenders in April 2023. The outcome of the evaluation and recommendations is included in the exempt paper on Part 2 of the agenda.

Mobilisation and Contract Readiness

- 5.7 The iBus2 contracts for all Lots are due to commence in February 2024. Transition will take approximately 24 months to ensure that the iBus2 services have been appropriately implemented and tested to minimise any potential disruption to bus operations. Rollout is anticipated to take approximately 12 months to complete from the conclusion of transition.

6 Financial Implications

- 6.1 Financial Authority for iBus2 is included in the draft Business Plan until financial year 2026/27, due to be considered by the Board in December 2023.
- 6.2 Programme and Project Authority was approved by the Committee at its meeting in July 2023, as part of the Technology Programme 2023/24 and 2024/25.

7 Assurance

- 7.1 Second line assurance review of Business Case for iBus2 has been undertaken by an Investment Appraisal Finance Partner from the Investment Appraisal team.
- 7.2 An Integrated Assurance Review was undertaken by TfL Project Assurance and the Independent Investment Programme Advisory Group after the contract award recommendation was made, in September and October 2023, with no critical recommendations made.

List of appendices to this report:

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

List of Background Papers:

Independent Investment Programme Advisory Group (IIPAG) Report and Management Response

TfL Project Assurance Report and Management Response

Contact Officer: Rebecca Bissell, Director of Information Technology
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Date: 6 December 2023

Item: Safe and Healthy Streets Programme

This paper will be considered in public

1 Summary

	Existing Financial Authority	Estimated Final Cost	Existing Programme and Project Authority	Additional Authority Requested (to end 2025/26)	Total Authority	Programme and Project Authority to be requested in future years
Gross	£ 762.2	£ 703.9	£ 545.8	£ 42.2	£ 587.9	£ 115.9
Income	-£ 40.1	-£ 51.1	-£ 40.1	-£ 11.0	-£ 51.1	£ 0.0
Net	£ 722.1	£ 652.8	£ 505.7			

Financial Authority and Programme and Project Authority covers financial years 2022/23 to 2025/26 and aligns the Bus Safety Programme to the rest of the Safe and Healthy Streets Portfolio.

The Estimated Final Cost (EFC) covers financial years 2022/23 to 2025/26 only.

Approval is sought for additional Programme and Project Authority for £42.2m of project spend and £11m of additional income which covers commitments entered into this year and early next year.

A detailed breakdown of additional Programme and Project Authority requested is shown in Table 6 of this paper.

- 1.1 This paper requests additional Programme and Project Authority for continuation of the Safe and Healthy Streets Programme (the Programme) and updates the Committee on the Programme's progress to date since March 2023 and sets out indicative milestones planned for 2024/25 subject to our Business Plan funding confirmation.
- 1.2 This paper provides an update about the Catford Town Centre project. The Committee are asked to note that we will be entering into a funding agreement with the London Borough of Lewisham (LB Lewisham) to receive £10m of Housing Infrastructure Fund (HIF) funding, in addition to £3m previously approved directly from LB Lewisham towards delivery of the Catford Town Centre project. Approval is sought to receive this funding. Approval is also sought to receive £1m from Westminster City Council for traffic modelling and engineering support associated with projects in the City of Westminster. Unbudgeted Financial Authority of £11m is therefore requested to receive this third party income.

- 1.3 The paper on Part 2 of the agenda contains supplementary information, exempt from publication by 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.
- 1.4 The paper on Part 2 of the agenda contains supplementary information, exempt from publication by 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 Recommendations

- 2.1 The Committee is asked to note the paper and the exempt supplementary information on Part 2 of the agenda and subject to approval of the revised TfL Business Plan to be considered by the TfL Board on 13 December 2023:**
- (a) approve additional Programme and Project Authority of £42.2m to support delivery of the Safe and Healthy Streets Programme over financial years 2022/23 to 2025/26, bringing the total Safe and Healthy Streets Programme and Project Authority to £587.9m; and**
 - (b) approve unbudgeted Financial Authority for Transport for London (TfL) to receive £10m of funding from the Department for Levelling Up, Housing and Communities' Housing Infrastructure Fund Marginal Viability fund towards the delivery of the Catford Town Centre Highway Realignment project, and £1m from Westminster City Council giving a total of £11m unbudgeted Financial Authority.**

3 Background

- 3.1 Since the last update to the Committee, in March 2023, the Programme has made strong progress against strategic targets for the year – exceeding the target for cycling infrastructure kilometres, and on track for the Vision Zero target relating to Lower Speed Limits. Some challenges have hampered progress on the Bus Priority programme, largely relating to securing stakeholder support for reallocating road space from private vehicles to buses. Across TfL and the London boroughs, some post-pandemic mobilisation challenges persist – for example, in securing skilled project staff and coordinating the work associated with this programme with a backlog of utility company road space requests for maintenance. Nonetheless, we remain world-leading in our approach to creating healthy streets for London – and have successfully made permanent the majority of beneficial trial schemes which were delivered at pace during the pandemic.
- 3.2 The background to the Programme and a summary of the key outcomes are set out in the March 2023 submission to the Committee. As part of the simplification of the Investment Programme governance agreed by the Committee in May 2023, the Programme now includes projects associated with the Bus Customer Action Plan (BCAP). This means that the BCAP now reports to the Safe and Healthy Streets

Programme officer-level meeting alongside existing healthy streets and active travel projects.

3.3 We have recently completed analysis of the common outcomes proposed across projects within the Programme and aligned these to our strategic roadmap outcomes. Table 3 shows that the Programme continues to have a strong focus on improvements to public transport services, active travel and safety for our customers, in addition to delivering strong 'green' outcomes.

Strategic Road Map Outcomes		Healthy streets Portfolio Outcomes
 Customer	Public Transport Service Reach 4.3bn annual journeys (through reliability and capacity)	<ul style="list-style-type: none"> Quality Public Transport
	Wider customer experience At least 66 per cent of Londoners actively agree we care (beyond reliability)	<ul style="list-style-type: none"> Accessible Public Transport
	Active travel 80 per cent mode share by 2041 (active travel contribution)	<ul style="list-style-type: none"> Mode Share: More and safe walking and cycling
	Accessibility Halve additional time compared to 2016	<ul style="list-style-type: none"> Footway accessibility and reduced pedestrian severance
	Growth and connectivity 36 per cent of London population living in high Public Transport Accessibility Level (PTAL) areas	<ul style="list-style-type: none"> Enable and support good growth Connected public transport
 Safety & Security	Colleague Safety No colleagues Killed or Seriously Injured (KSI)	
	Road Safety 70 per cent reduction in road Killed or Seriously Injured (KSIs) from 2010-2014 baseline	<ul style="list-style-type: none"> Road danger reduction and reduced casualties
	Customer Safety 50 per cent reduction of customer KSIs from 2022/23	<ul style="list-style-type: none"> Road danger reduction and reduced casualties
	Risk of Crime Reduce the risk of being a victim by a third, from 2022/23	<ul style="list-style-type: none"> Reduced crime and risk of crime
 Green	TfL's Carbon Emissions Our operations are net zero carbon	
	London's transport CO₂ London's transport carbon emissions – net zero	<ul style="list-style-type: none"> Mode share: More and safe walking and cycling
	Climate Adaptation Sustainable drainage – Add 40,000 square metres of catchment area	<ul style="list-style-type: none"> Increase Surface Water Capture via Sustainable Drainage Systems


Strategic Road Map Outcomes		Healthy streets Portfolio Outcomes
		<ul style="list-style-type: none"> • Provide urban cooling via increased canopy cover
	Green Infrastructure and biodiversity 260,000m ² wildflower verges by 2024	<ul style="list-style-type: none"> • Increase green infrastructure
	Air Quality Reduce nitrogen dioxide concentrations to <19-26 µg	<ul style="list-style-type: none"> • Efficient use of streets and road space
 Finance	Not an ultimate outcome – an enabler of rest of our plan	Reduced TfL Costs <ul style="list-style-type: none"> • Expenditure • Net Costs
		Increased Income <ul style="list-style-type: none"> • Income • Avoid Lost Income
		Regulatory Compliance <ul style="list-style-type: none"> • Avoidance of fines, legal compliance

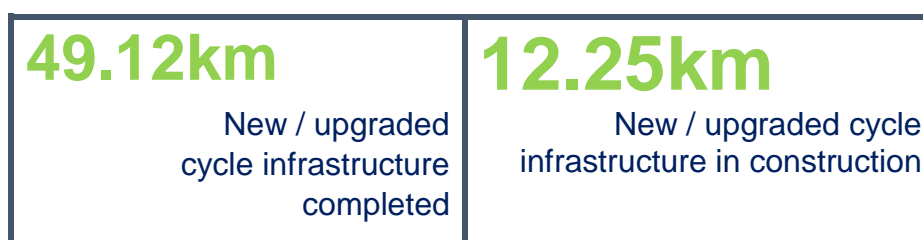
Table 3 – Safe and Healthy Streets Portfolio outcomes aligned with our strategic roadmap outcomes.

4 Summary of Healthy Streets Investment since March 2023 against plan

- 4.1 Delivery has taken place across the Programme in line with the commitments made in the March 2023 submission to the Committee, including significant progress on cycle network expansion, delivery of safety schemes, and new bus lane infrastructure.
- 4.2 A summary of highlights achieved against our original plan are included below, alongside our strategic targets for 2023/24. Further detail is provided in Appendix 1.

Safer Cycling

- 4.3 The cycling programme is ahead of target in delivering new kilometres of cycle route infrastructure. As of October 2023, 61km of cycle infrastructure was delivered or in construction against a target of 39km. Figure 1 below shows this progress.



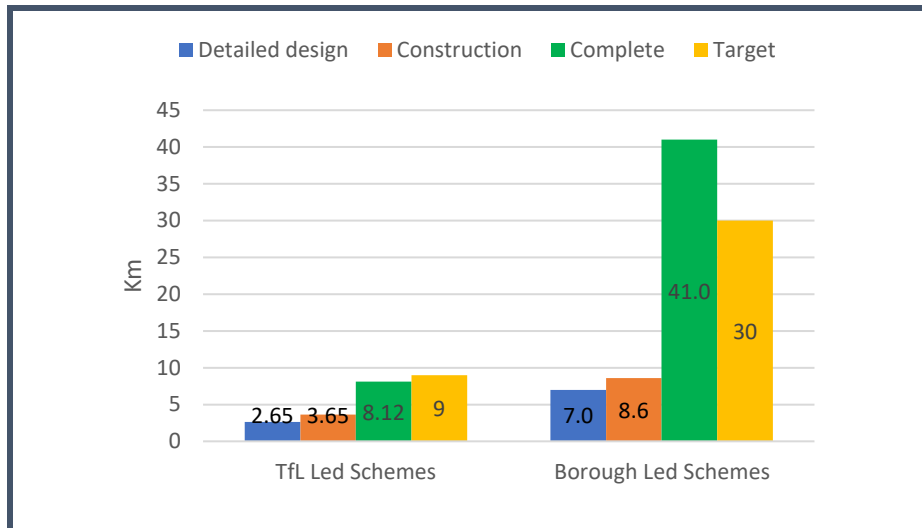


Figure 1 – A graph showing kilometres of cycleways in design, construction and complete against target

- 4.4 As of 2022, 22 per cent of Londoners lived within 400m of the strategic cycle network, up from 8.8 per cent in 2018 (updated analysis is due to report in December 2023). Our aim is to expand the network at pace so that 40 per cent of Londoners live within 400m of the strategic cycle network by 2030, rising to 70 per cent by 2041.
- 4.5 In addition to the main cycle routes, since April 2023, working with the London boroughs, we have launched 17 new Cycleways on lower traffic streets. Many of these capitalise on the investment made in Low-Traffic Neighbourhoods, and fill gaps to connect existing local cycle routes to enable more people to access high quality cycling facilities. The nature of this work is low-cost, involving clear on-street signage (both at height and on the carriageway) and some junction treatments. The benefit is in connecting communities to their local amenities, so that less confident or new cyclists can undertake shorter journeys with confidence. Figure 2 below shows an example of an extension to Cycleway 1 in Enfield.
- 4.6 In October 2023 the section of Cycleway 9 between Kew Bridge junction and Waterman’s Park opened (Figure 3 below), with another section starting construction between Waterman’s Park and Brentford Town Centre in the same month. Construction works on Cycleway 50 between Caledonian Road and Finsbury Park, the Lower Road section of Cycleway 4, and Cycleway 23 at Lea Bridge Roundabout are progressing well, with works planned to finish before April 2024.
- 4.7 We are currently consulting on sections of Cycle Future Route 23 between Wembley and Harlesden. We have further consultations planned on a section of the extension for Cycleway 4 from Charlton to Woolwich and Cycleway 34 (Holland Park roundabout section) in early 2024.



Figure 2 – Cycleway 1 Bull Lane



Figure 3 – Cycleway 9 Kew Bridge junction to Waterman's Park

Bus Priority

- 4.8 The Bus Priority programme is on target to deliver the planned 10km of new bus lanes in 2023/24. Figure 4 shows an example of investment in Wealdstone Town Centre. However, there is a significant emerging risk to this target following slippage of the 2.4km Cowley Road scheme in the London Borough of Hillingdon into 2024/25 and potential slippage of 1.5km of new bus lanes at Woodford Avenue due to stakeholder concerns. We are engaging with the local community to understand these concerns, and provide reassurance on mitigations. The remaining work bank is c.1km (that is, we are working on 11km to achieve a target of 10km). As of October 2023, 4.1km has been delivered. The signal timing review programme – which seeks to amend traffic signals to deliver more green time for buses and pedestrians – has exceeded its target, with 736 reviews completed against a target of 700. This programme has been dynamically refocused in-year to ensure new Superloop services receive additional bus priority.



Figure 4 - Construction recently completed on major bus infrastructure in Wealdstone Town Centre (Harrow), including new footways, cycle parking and greening

Bus Customer Action Plan

4.9 We have published a Bus Action Plan, which outlines how we will broaden the appeal of London's buses. Within this plan, the chapter on Customer sets out detailed actions that make up the Bus Customer Action Plan. These are focused on delivering a step-change in customers' perceptions and experiences of bus travel. This can be achieved through offering better information, and meeting customer expectations of a modern and comfortable experience at bus stops and on buses. We are currently developing our plans for the next stage of this work and will be establishing targets and milestones in the coming months.

Borough Local Implementation Plans: Safer Corridors and Neighbourhoods

4.10 In 2022/23 boroughs planned for £59m of delivery following agreement with the Department for Transport (DfT) to carry forward £10m of the original £69m funding into 2023/24. This was to reflect the late notice of the available funding that was confirmed in the letter from the Secretary of State dated 30 August 2022 and the individual allocations that were agreed in October 2022. While in-year progress is not reported within this paper on a scheme-by-scheme basis due to the high volume of projects in the Programme, end of year results for 2022/23 have been collated. This shows that borough partners delivered significant outputs against their funding allocation (below) – with the entire £59m claimed at year end.







Safe & Healthy Streets Outputs	Summary of Borough Delivery 2022/23
<p>Outcome 1: London's streets will be healthy and more Londoners will travel actively</p> 	<ul style="list-style-type: none"> • Crossing facilities: 104 new controlled crossing points added; 197 new uncontrolled crossings • Footways: 3.6km of footway widened • New Cycle Parking: 2,866 publicly accessible; 4,016 residential; 906 school spaces
<p>Outcome 2: London's streets will be safe and secure</p> 	<ul style="list-style-type: none"> • Education: 12,223 adults and 48,323 children given cycle training (levels 1-3) • School Streets: 131 new school streets introduced in 23 boroughs • Lowering speed limits: Three additional boroughs now have 20mph borough-wide road networks bringing the total to 17 • Road safety: 320 safety schemes completed
<p>Outcome 3: London's streets will be used more efficiently and have less traffic on them</p> 	<ul style="list-style-type: none"> • Cycle infrastructure: 26km of new permanent cycle routes, 10km of upgraded routes and 13km of temporary segregated routes introduced • Low Traffic Neighbourhoods - 3 new LTNs introduced, and 34 experimental schemes made permanent
<p>Outcome 4: London's streets will be clean and green</p> 	<ul style="list-style-type: none"> • Electric vehicle charge points: 5046 new on street points • Sustainable urban drainage: 43,065 sqm introduced to reduce flooding and increase green infrastructure
<p>Outcome 6: The public transport network will be safe, affordable and accessible to all</p> 	<ul style="list-style-type: none"> • Accessible Bus Stops: 23 upgraded
<p>Outcome 7: Journeys by public transport will be pleasant, fast and reliable</p> 	<ul style="list-style-type: none"> • Bus Lanes: 1.4km of new permanent bus lane delivered

Table 4 – Summary of Borough Delivery 2022/23 against Safe and Healthy Streets Outcomes

Multi-modal projects – Transformational

4.11 Construction work to remove the roundabout, create cycle facilities and a new public space, and modernise the sub-surface retail arcade and station entrances at Old Street has continued to progress, with the completion of construction expected to be early 2024. Highway works are substantially complete, with two key pedestrian crossings opening to connect the main station entrance and new public space to Old Street east. The remaining works focus on completion of the public

space (including the opening of the final pedestrian crossings), station structure and sub-surface retail arcade, including a new lift from street-level to the retail area. Figures 5 and 6 show progress at October 2023.



Figure 5 – Old Street public space and rain garden (October 2023)



Figure 6 – Old Street highway works substantially complete

- 4.12 Construction began at Tolworth in March 2023, with works progressing well so far and completion expected in March 2024. This scheme is funded predominantly by third party developer contributions and supports the growth in that location associated with 1300 new homes and a new head office building that will bring up to 750 jobs to this outer London location. The scheme includes improvements for people walking and cycling and ensures that bus performance is protected in the face of increased traffic associated with the growth as shown in Figures 7 and 8.



Figure 7 – Tolworth progress: Barnsbury Road raised table



Figure 8 – Kingston Road cycle lanes

- 4.13 The next schemes in the Programme planned to start construction are Lambeth Bridge and the eastern section of the Nine Elms Healthy Streets corridor. Detailed design is currently ongoing for Lambeth Bridge, with enabling works planned to start from autumn 2023 and main construction starting in 2024. The Committee approved Programme and Project Authority for Lambeth Bridge at its meeting in October 2023.

- 4.14 The project is forecast to start on site in 2025, with construction lasting around two years. Further information on the scheme is set out in Appendix 3 of this paper.

Safer Junctions

- 4.15 We completed construction on the York Road roundabout scheme in Wandsworth in April 2023, delivering safety improvements for motorcycle users and pedestrians. Construction on the Holloway Road / Drayton Park junction started in April 2023, delivering safety improvements for pedestrians, with new and improved crossings as shown in Figure 9. The first phase of the project at the junction of A1 / Hornsey Road / Hornsey Street was completed in September. Construction is now underway at the junction of A1 / Drayton Park / Palmer Place and is due to complete in spring 2024.
- 4.16 In June 2023, we published the consultation report on the proposed safety improvements in the area around Battersea Bridge. We received 983 responses to the consultation and we intend to proceed with the scheme as proposed, with some changes to bus lane hours following consultation feedback. Further design and survey work is continuing at pace to inform future phases of work, following the tragic cyclist fatality on Battersea Bridge in August 2023.
- 4.17 We are also continuing with design and outcome planning work on the remaining Safer Junctions projects and are committed to public engagement on potential changes at 10 further Safer Junctions project sites by the end of 2024.



Figure 9 - Construction underway on Holloway Road Safer Junction

Local Road Safety Projects

- 4.18 Design work is underway on over 40 schemes across London, at high priority locations where there is an identified road safety concern. Projects are identified through analysis of a variety of factors including Prevention of Future Death reports; Safety, Health and Environment team recommendations following a fatal collision; risks identified by stakeholders; and periodic collision data analysis. Prioritisation of the Programme is determined by the 'Excess Harm' rating for the area (which is an indication of relative risk compared to other locations on the

network); deliverability of the project; stakeholder interest following a fatal collision; and the index of deprivation in the local area.

Safer Speed Limits

- 4.19 In March 2023, we introduced a 20mph speed limit on 33km of our roads in the London Boroughs of Camden, Islington, Hackney, Tower Hamlets and Haringey, providing a consistent 20mph speed limit on almost all roads within the boroughs. Lamp column mounted banners have also been installed across these corridors to help raise driver awareness of the new speed limit and a radio and digital advertising campaign was launched to complement the changes.
- 4.20 In October 2023, a 20mph speed limit was introduced on the A205 corridor in the Royal Borough of Greenwich and across the Royal Borough of Kensington and Chelsea. We are on track to finalise Phase 2 of the Lowering Speed Limits programme in March 2024, completing the distances and town centre targets specified in our 2018 Vision Zero Action Plan.

5 Benefits of the investment

- 5.1 An update on the benefits in each programme against the intended outcomes was reported to the Committee in March 2023. Since the March 2023 Committee meeting, we have published the second Cycling Action Plan – with our latest cycling volume estimates showing an 18 per cent increase in cycling kilometres in 2022 compared to the 2019 pre-coronavirus pandemic baseline – with the largest increase in central London at 27 per cent, followed by 18 per cent in inner London and 16 per cent in outer London. Monitoring and evaluation of other Safe and Healthy Streets schemes continues in line with the report to the Committee in March 2023.
- 5.2 While the paper to the meeting of the Committee in March 2023 set out a strong case for future investment, further work is needed to establish the extent to which Safe and Healthy Streets contributes to longer term goals – Vision Zero, the 80 per cent mode share target, net zero for Carbon, and improved bus speeds – relative to other contributing initiatives, such as ULEZ and the congestion charge, behaviour change projects, freight management strategies, and bus service route and frequency changes. An action to further develop this link was discussed during the October 2023 Programme Assurance Review, with additional work planned with our Transport Strategy and Planning and Business Strategy teams to develop the strategic picture. Additionally, the sponsor team will develop a programme-level business case, to help bring together the strategic priorities, targets and other information presented in a number of disparate documents and briefings and demonstrate the alignment of the programme with these priorities and targets.
- 5.3 A snapshot of recent benefits data collected from the London Streetspace Plan is provided in Appendix 2.

6 Key challenges, opportunities and lessons learnt

- 6.1 The key challenges set out in the paper to the Committee in March 2023 remain to some extent – exacerbated by continuing uncertainty regarding future capital contributions from central Government. The lack of funding certainty beyond March 2024 hampers the ability of us and our delivery partners, including the London boroughs, to plan ahead with confidence and mobilise resources accordingly. However, some progress has been made to bring in consultant resources to both our sponsor and engineering teams, and the project management team is now fully resourced for the current workload.
- 6.2 Securing road space to deliver planned projects has proved more challenging post-pandemic. This is due to an increase of major capital activity by utilities and the works associated with fibre optic rollout across London. There has also been an increase in high impact traffic management used by utility companies for urgent maintenance works across London. This has presented an increasing works coordination challenge for us, driven by the need to protect bus operations as far as practicable. We are working with London Councils, the Greater London Authority (GLA) and boroughs to develop a new, data driven framework to coordinate the 400,000 roadworks applications works across London each year. After a promising pilot with six boroughs, we will be working with more boroughs as part of this Network Operating Strategy to help coordinate complex roadworks programmes and support capital delivery.
- 6.3 Further challenges are set out in the related paper on Part 2 of the agenda.

7 Financial Implications

- 7.1 This paper seeks additional Programme and Project Authority of £42.2m to deliver the Safe and Healthy Streets Programme (Table 5 below). Commitments for this funding will be entered into following drawdown approval from Investment Group. See also Table 6 for a detailed breakdown of the £42.2m calculation. The Programme and Project Authority sought includes receipt of £10m for the Catford town centre highway realignment scheme and £1m from Westminster City Council for design and traffic modelling activity; unbudgeted Financial Authority is also sought for this income.
- 7.2 This additional Programme and Project Authority requested reflects the latest delivery plans, including those where income is received from third party funded projects, and forecast spend in 2024/25 and commitments we are expecting to make in 2024/25 for the following year for ongoing projects in line with the our Business Plan.

Table 5 – Authority requested for the Safe and Healthy Streets portfolio

Description	22/23	23/24	24/25	25/26	Total
Current Authority	137.5	192.3	183.5	248.9	762.2
This request	0.0	0.0	0.0	0.0	0.0
Financial Authority	137.5	192.3	183.5	248.9	762.2
Current EFC	136.5	189.8	196.3	180.2	702.9
This request	0.0	0.0	0.0	0.0	0.0
EFC	136.5	189.8	196.3	180.2	702.9
Financial Authority	(10.0)	(17.7)	(12.5)	(0.0)	(40.1)
Forecast Income	(10.0)	(9.9)	(25.7)	(5.5)	(51.1)
Income	(10.0)	7.7	(13.2)	(5.5)	(11.0)
Current Authority	136.5	190.3	183.5	35.5	545.8
This request	0.0	0.0	12.8	29.4	42.2
Programme and Project Authority	136.5	190.3	196.3	64.9	588.0
Increase/decrease since last Committee Meeting in March 2023	0.0	0.0	12.8	29.4	42.2

Table 6 – Breakdown of the Programme and Project Authority requested for the Safe and Healthy Streets Programme

Authority associated with Projects:	£m	Comments
New Scope	6.7	Authority associated with Lea Bridge Crossing, Green Infrastructure/SUDs and work to upgrade some cycle infrastructure at bus stops
Transformational projects	15.4	Authority associated with Nine Elms, Catford and projects in the City of Westminster
Cycling	18.2	Authority associated with work to upgrade temporary materials used during the pandemic on some experimental schemes, the borough cycling programme and TfL led cycling schemes, including investment in data to support benefits realisation for cycling projects
Safety	4.4	Authority associated with Streatham Hill Road, A316 Manor Circus, and other safety schemes
Total new Authority	44.7	
Handback of existing Authority	(2.5)	Authority associated with reduction of work bank Management and hand back of authority no longer required in the timeframe
Total Authority request	42.2	

7.3 Procurement Authority for contracts to deliver the Programme will be sought at officer level in accordance with Standing Orders.

8 Assurance

8.1 IIPAG and TfL Project Assurance undertook a full assurance review in October 2023. There are no critical issues, and five general recommendations are made. The assurance reports and management response are included in the background papers. The review also highlights examples of good practice and the team's ability to deliver a large volume of schemes, sometimes exceeding delivery targets.

List of Appendices to this report:

Appendix 1: Progress and Planned Milestones

Appendix 2: Spotlight on Benefits from the London Streetspace Plan

Appendix 3: Catford Town Centre Highway Realignment scheme

Exempt supplementary information is included in a paper on Part 2 of the agenda.

List of background papers:

TfL Investment Group 11 January 2023: Catford Town Centre - business case submission to DfT

Independent Investment Programme Advisory Group (IIPAG) Report and Management Response

TfL Project Assurance Report and Management Response

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Appendix 1 – Progress and Planned Milestones (2023/24 and 2024/25)

Table 1: Summary of proposals as part of this funding submission (2023/24)		
Delivery scope:	Target	Progress
<p>Safer Cycling:</p> <ul style="list-style-type: none"> • Complete construction of the 0.4km of cycleways currently on site • Continue design and commence construction of up to 14km of cycleways, including sections of C9 East, C23, C34, C37 and C50 • Continue design of 16km of cycleways, including sections of C9 West, C4 Extension, C50 and CFR23 • Implement signage on 15 remaining lower traffic routes. These include C48 between Herne Hill and Brixton and C16 between Wanstead Flats and Victoria Park • Provide a further £9.8m in 2022/23 and £16m in 2023/24 to the boroughs as part of the borough Cycle Network Development programme to support them to continue and initiate design and build schemes. Design includes, but is not limited to, Westminster Bridge Road, C51 Marylebone to Kilburn and Strawberry Vale to Twickenham. Construction includes, but is not limited to; C1 missing link in Enfield, Kew Road to Lion Gate and upgrades to C1 in Hackney 	<p>October 2023</p> <p>March 2024</p> <p>March 2024</p> <p>March 2023</p> <p>March 2023 and March 2024</p>	<ul style="list-style-type: none"> • Achieved: Cycleway 9 Kew Bridge junction to Waterman’s park opened in October 2023 • Achieved: <ul style="list-style-type: none"> ➢ Construction completed on C9 east (Kew to Watermans Park). Construction started on C9 Brentford, C23 Lea Bridge, C50 Nags Head ➢ Construction start planned on section of C34 by end of March 2024, subject to coordination with A40 emergency asset works. Construction paused for C37 as borough have withheld consent ➢ Design works progressing on C9 East, C9 West, C4 Extension, C34, C50 and CFR23 • Achieved: We have exceeded this target and have implemented 17 new lower traffic cycle routes across London • On track: Construction is progressing well with over 50km complete or under construction. C51 is currently being consulted on, Strawberry Vale section 1 is substantially complete, The C1 missing link has been completed. Upgrades of C1 in Hackney will start imminently and C23 Dalston to Lea Bridge will open in spring 2024. The full year budget is forecast to be delivered, with boroughs preparing for 24/25 delivery
<p>Safer Streets:</p>		

Table 1: Summary of proposals as part of this funding submission (2023/24)		
Delivery scope:	Target	Progress
<ul style="list-style-type: none"> Start detailed design for three to six schemes, to improve vulnerable road user safety 	March 2024	<ul style="list-style-type: none"> Achieved: Detailed design is now complete on four schemes: A4 Bath Road by Compass Centre, A10 Edmonton County School, A205 Thurlow Park Road/Lancaster Avenue and Grosvenor Place
<ul style="list-style-type: none"> Start construction of the Holloway Road/Drayton Park Safer Junction 	March 2023	<ul style="list-style-type: none"> Slipped: Construction of the Safer Junction at Holloway Road/Drayton Park started in April 2023 with the first phase of works at Hornsey Road/Hornsey Street completed in September 2023
<ul style="list-style-type: none"> Commence construction of Safer Junction at York Road roundabout 	December 2023	<ul style="list-style-type: none"> Achieved: Construction of the Safer Junction at York Road roundabout commenced in January 2023 and completed in April 2023
<ul style="list-style-type: none"> Construct improvements at five locations to improve the safety of vulnerable road users 	March 2023	<ul style="list-style-type: none"> On track: to complete construction at five locations to improve safety of vulnerable road users (A4 Bath Road by Compass Centre, A205 Thurlow Park Rd junction with Lancaster Avenue, Grosvenor Place, A10 by Edmonton County School and York Road roundabout)
<ul style="list-style-type: none"> Complete consultation for further improvements to Battersea Bridge/Cheyne Walk Safer Junction 	March 2024	<ul style="list-style-type: none"> Achieved: Consultation on the improvements to the Battersea Bridge/Cheyne Walk junction completed in January 2023 and the consultation report was published in June 2023
<ul style="list-style-type: none"> Complete engagement for safety improvements at King's Cross gyratory and start construction in 2024 on one section 	March 2023	<ul style="list-style-type: none"> Achieved: Consultation on the first phase of improvements at Kings Cross completed in May 2023, with the consultation report published in October 2023. Construction on track to start in 2024
<ul style="list-style-type: none"> Complete detailed design at Lambeth Bridge and concept design of Angel Safer Junction 	April 2024	<ul style="list-style-type: none"> Slipped: Option Selection stage for Angel Junction to be complete by June 2024. Detailed design for Lambeth Bridge due for completion by May 2024. Enabling works at Lambeth Bridge start in autumn 2023.
<ul style="list-style-type: none"> Start construction of pedestrian and cycling improvements at Streatham High Road and Manor Circus 		

Table 1: Summary of proposals as part of this funding submission (2023/24)		
Delivery scope:	Target	Progress
<ul style="list-style-type: none"> Complete design and introduce a new 20mph speed limit on 140km of Transport for London Road Network (TLRN) by March 2024 	<p>March 2024</p> <p>March 2024</p>	<ul style="list-style-type: none"> On track: Construction of safety improvements at Manor Circus started in August 2023. Construction on Streatham High Road is due to commence in early 2024 On track: We remain on track to deliver the target of 140km in advance of the March 2024 Vision Zero Action Plan deadline.
<p>Bus Priority:</p> <ul style="list-style-type: none"> Construction complete on 10km of new bus lanes across London Completion of 150 Bus Kit Moves, relocating Bus Priority signal infrastructure to sites where it can be used more effectively 700 traffic signal timing reviews to enable faster bus progression at junctions Provide £11.98m to the London boroughs as part of the Local Improvement Plan (LIP) Bus Priority Programme to deliver bus journey time improvements and sections of new bus lane, contributing to the 25km of new bus lane by March 2025 target 	<p>March 2024</p> <p>March 2024</p> <p>March 2024</p> <p>March 2024</p>	<ul style="list-style-type: none"> On track: 4.39 km of new bus lane has been delivered thus far, with a further 6.42km planned for delivery by 31 March 2024. Schemes with the potential to deliver an additional c.30km of new bus lane are currently being developed, with a view to being implemented by 31 March 2025 On track: 65 bus priority signal infrastructure moves have been completed to date with a further 85 currently planned for delivery by 31 March 2024 Achieved: 736 traffic signal timing reviews completed to date helping to prioritise bus movements through junctions On track: A pan-TfL assessment to identify potential bus priority interventions on proposed Superloop routes has been undertaken with a view to beginning feasibility design on priority schemes in 2024/25
Future of temporary London Streetspace Programme (LSP) schemes:		

Table 1: Summary of proposals as part of this funding submission (2023/24)		
Delivery scope:	Target	Progress
<ul style="list-style-type: none"> Nearly all schemes on the Future of Temp Programme have now transitioned to permanent traffic orders, or been removed, following extensive monitoring and engagement activity to inform decision-making Schemes have been reviewed on site, and recommendations made to ensure they are suitable for permanence Only Cycleway 4 Extension – Greenwich to Charlton remains as an experimental scheme, where ongoing monitoring and engagement activity is taking place 	<p>Continues to March 2024</p> <p>Continues to March 2024 and beyond</p>	<ul style="list-style-type: none"> Achieved: Permanence upgrades have been completed on CS7 Oval to Elephant and Castle, and Tooley Street schemes. Decisions have been taken on all schemes, with comprehensive monitoring and engagement reports compiled, except for Cycleway 4, which is currently an experimental scheme being led by the Royal Borough of Greenwich. On track: Design work is ongoing for upgrades, including at Park Lane, CS8 Lambeth Bridge to Chelsea Bridge, and A21 Lewisham to Catford
<p>Continue supporting London’s long-term growth and progress design work at:</p> <ul style="list-style-type: none"> Nine Elms sustainable transport corridor (third party funded) Complete detailed design for Nine Elms East Tolworth roundabout – construction Vauxhall Gyratory, Catford Town Centre and Wandsworth Town Centre major schemes – progress to next stage gate 	<p>March 2024</p> <p>March 2024</p>	<ul style="list-style-type: none"> On track: Nine Elms: Detailed design for eastern section of the Nine Elms Healthy Streets corridor is complete and detailed design for the western section will be started in early 2024. Construction of the eastern section of the Nine Elms Healthy Streets corridor will start in early 2024. Additional Programme and Project Authority is required to commit to build the eastern section, included in this paper. Further Programme and Project Authority will be required to construct the western section by late 2024/25, and will be requested when a more accurate cost estimate for this section is known. On track: Construction works on Tolworth Roundabout to complete in spring 2024 (delayed due to unplanned utility works)

Table 1: Summary of proposals as part of this funding submission (2023/24)		
Delivery scope:	Target	Progress
	Ongoing	<ul style="list-style-type: none"> • Work continues to develop schemes at Catford and Wandsworth. Catford Strategic Outline Business Case (SOBC) submitted to DfT for Major Road Network funding in March 2023. Wandsworth Outline Business Case (OBC) to be submitted to DfT. • Funding discussions ongoing to enable Vauxhall to progress to detailed design • The Catford Town Centre scheme submitted a SOBC to the DfT in March 2023, and the Wandsworth Town Centre is due to submit an OBC to the DfT imminently. Project development is ongoing while the DfT review the case for both schemes to move to the next stage. Catford Town Centre is progressing through concept design having completed a public consultation in the spring. A detailed overview of the project is set out in Appendix 3.
<p>Borough funding:</p> <ul style="list-style-type: none"> • Continue to provide LIP funding for boroughs to convert temporary LSP schemes to permanent (subject to consultation where appropriate, and borough decision making), securing the benefits for active travel and health. Complete the rollout of new Low-Traffic Neighbourhoods (LTN) and School Streets schemes funded via the Active Travel Fund • Formula-led LIP funding for boroughs, to enable them to continue scheme design and delivery across c.700 Healthy Streets schemes on borough roads • Support LB Camden to continue the design of both interim works at Holborn gyratory, and the development of a Feasibility report (Gate 2) for 	<p>All schemes funded by SC&N to be complete by April 2024 with no carry over expected</p> <p>Review 24/25 schemes and confirm funding in Dec 2023</p>	<ul style="list-style-type: none"> • LIP funding has been released to all boroughs with the exception of LB Tower Hamlets who are in the process of removing Low Traffic Neighbourhood schemes that were previously funded by us. • The Safer Corridors and Neighbourhoods programme is currently funding c.700 individual schemes including School Streets, new crossings, LTNs, VZ safety enhancements and 20mph zones. • Borough funding submissions for 2024/25 are currently being assessed with a view to confirming their allocations by the end of 2023 in order to plan resources

Table 1: Summary of proposals as part of this funding submission (2023/24)		
Delivery scope:	Target	Progress
<p>the wider Holborn Liveable Neighbourhood project</p> <ul style="list-style-type: none"> • Restart Liveable Neighbourhood schemes in Camden, Ealing, Enfield, Greenwich and Waltham Forest. All are at various stages of development; however the expectation is to make significant progress towards completion: <ul style="list-style-type: none"> ○ Coppermill Village (Walthamstow) – complete scheme and commence benefit monitoring ○ West Ealing (Ealing) and Enfield Town Centre (Enfield) – complete Concept Design ○ Holborn Gyrotory (Camden) – complete engagement and Feasibility Design ○ Greenwich Town Centre (Greenwich) – complete Feasibility Design • Complete the delivery of Crossrail Complementary Measures (CCM) at West Drayton, Ealing Broadway, West Ealing, Southall and Acton Mainline • Funding for greater levels of cycle safety training • Continuing the cycle parking programme on borough roads. Providing funding for safe and secure residential hangars at strategic locations 	<p>Holborn Feasibility report: May 2023. Construction of the interim project will complete in summer 2023.</p>	<ul style="list-style-type: none"> • Good progress is being made by the five Liveable Neighbourhood funded projects. The final phases of Coppermill Village scheme will be delivered in the remainder of this financial year • LB Enfield is progressing detailed design activities for Enfield Town as the project nears construction of initial phases next financial year • For Liveable Neighbourhood projects that are in design stage, the Programme continues to work with the respective boroughs to bring forward interventions that deliver Safe and Healthy Street benefits early. Through this approach we will see green infrastructure and some cycling improvements delivered in the West Ealing Liveable Neighbourhood this year • Holborn interim scheme completed construction in summer 2023 as planned • The Crossrail Complementary Measures programme is funding the completion of five Stations this financial year; Ealing Broadway, West Ealing, Ilford, Southall and Acton. A potential sixth Station (West Drayton) may also be completed pending cooperation with Network Rail due to delays caused by a collapsed sewer
<p>High Speed 2:</p> <ul style="list-style-type: none"> • Review the scope of regeneration opportunities for Euston and Old Oak Common. Following decision to terminate HS2 at Old Oak Common • Protect our interests and mitigate against risks posed by HS2 Ltd (as a third-party programme) 	<p>Ongoing support</p>	<p>Supporting the delivery of HS2 while managing the impacts and risks posed by HS2 Ltd including:</p> <ul style="list-style-type: none"> • Contributing to DfT Euston Reset Programme, which is seeking to reduce overall cost pressures and develop new arrangements for the HS2 programme

Table 1: Summary of proposals as part of this funding submission (2023/24)		
Delivery scope:	Target	Progress
<p>on our infrastructure, operations and passenger services</p> <ul style="list-style-type: none"> Recover all costs, losses and expenses incurred by us resulting from HS2 Ltd, including staff time, under the terms of the Protective Provisions Agreement 		<ul style="list-style-type: none"> Design assurance to ensure stations meet our operational requirements and include suitable provision for interchange in line with the Healthy Streets approach Ensuring key requirements, undertakings and assurances given to us in the Act remain protected Continuing to influence HS2 designs to embed the Healthy Streets principles including on the TLRN Hampstead Road temporary road design Traction Sub-Station (TSS) civils construction completed, with mechanical and electrical fit out in progress Continuous improvement of the “Blue Book” management processes setting out our ways of working with HS2 Ltd and their supply chain to ensure our interests are protected Applying agreed mechanisms for recovering all costs, losses and expenses including TSS commercial agreement signed by us
<p>GLA Green Infrastructure Fund</p> <ul style="list-style-type: none"> This programme forms part of a wider Green, Healthy and Resilient Infrastructure programme led by the Greater London Authority, which will support the delivery of the Green New Deal Mission to <i>“tackle the climate and ecological emergencies and improve air quality by doubling the size of London’s green economy by 2030 to accelerate job creation for all”</i> On 15 July 2022 £3m was awarded to 11 boroughs covering 18 projects. It is anticipated 	<p>The majority of TLRN delivery is planned for the first half of 2023/24.</p>	<ul style="list-style-type: none"> The 11 boroughs with funding have all developed their proposals up to detailed design and many have now consulted on their proposals. Most are still on track to commence construction on or before December, which was a key GLA expectation, and all expect to fully claim their costs by the end of the financial year (with the exception of permitted activities such as first year watering/maintenance and post-construction safety audits) Work continues apace with the TLRN schemes. The design for the Rain Gardens at Joe Strummer

Table 1: Summary of proposals as part of this funding submission (2023/24)

Delivery scope:	Target	Progress
<p>that the majority of funds will be allocated by end of March 2023</p> <ul style="list-style-type: none">• The remaining £1m funding will be used to promote measures on the TLRN including water gardens at the Joe Strummer underpass on Edgware Road, and green infrastructure at Manor Circus in Richmond		<p>underpass is complete and planning for the works is underway. Manor Circus in Richmond also looks to complete within the financial year. Due to the scope of SuDs work at Streatham, implementation will not commence until next year, but design work is well underway</p> <ul style="list-style-type: none">• A new strategic walking route is also planned with part of these funds and work with a number of London boroughs is underway to launch this in spring 2024

Table 2 below includes indicative scope for 2024/25 (subject to further prioritisation):

Project	Indicative milestone to be delivered in 2024/25
Safer Cycling	
Cycleway 4: London Bridge to Greenwich	Commence design of permanent upgrades on the Lower Road section which is currently being delivered in temporary materials.
Cycleway 4 Extension: Greenwich to Woolwich	Continue design of section 2 (Anchor and Hope Lane to Woolwich Ferry Roundabout). Complete consultation by March 2024 and commence Concept Design stage in autumn 2024 on section 3 (Woolwich Ferry Roundabout to Burrage Road). Work with the Borough to provide cycling connections through Greenwich Town Centre (linked to Liveable Neighbourhood improvements).
Cycleway 9 East: Kensington Olympia to Brentford	Complete construction of the Brentford section in summer 2025 and start construction on Hammersmith Road in early 2026. Deliver amendments to the Chiswick High Road section as required following the borough's decision to make the scheme permanent, subject to as assessment of affordability and bus service impacts.
Cycleway 9 West: Brentford Town Centre to Hounslow	Commence detailed design work of this route following the second public consultation in spring 2024.
Cycleway 23: Lea Bridge to Dalston	Complete construction of this route along Lea Bridge Road by October 2024
Cycleway 34: Wood Lane to Notting Hill Gate	Continue construction of section 2 (Wood Lane to Shepherds Bush). Complete detailed design of section 3 (Holland Park Roundabout).
Cycleway 37: Mile End to Westferry Lane	Scheme remains on pause as required consents for constructing the Mile End junction have not been approved by borough.
Cycleway 50: Camden to Tottenham Hale	Continue design of the fourth and fifth phases of this route (between Finsbury Park and Tottenham Hale respectively).
CFR23*: Wembley to Fulham <small>*Cycleway number to be allocated later</small>	Review consultation responses and commence concept design for Wembley to Harlesden section in spring 2024. Continue design of the remaining route in phases.
Cycle Parking	Continue delivery of new cycle parking spaces including cycle hangars.
Safer Streets	
Lambeth Bridge safety scheme – including Safer Junction	Start construction in August 2024. Advance works planned winter 2023/24.
Safer Speeds	Introduce further mitigations on lower speed roads following initial monitoring. Various dates.
King's Cross Gyratory	Progress Phase 1 safety improvements to construction; continue design and engagement on future phases. August 2024.

Project	Indicative milestone to be delivered in 2024/25
Safer Junctions	Engage and progress design on ten further projects by the end of 2024, including Monument junction, Hogarth roundabout and A10 Woodberry Grove. Complete Option Selection on Angel Safer Junction by July 2024. Complete construction of Holloway Road by April 2024. Start construction of Battersea Bridge Phase 2 Safer Junction by September 2024.
Tulse Hill Gyratory	Progress with delivering interim safety measures at Tulse Hill Gyratory, while Outcome Definition work is undertaken on a potential longer-term scheme.
Bus Priority	
Complete 15km of new bus lanes, working towards March 2025 target of 25km total	Complete programme by March 2025.
Bus-focused Healthy Streets Pipeline schemes, including the Sutton to Morden Bus Corridor scheme	Subject to resource availability, commence feasibility design of schemes completing outcome definition which have the potential to deliver significant improvements for end-to-end bus journey times on these strategically important corridors, which will also include measures to expand the safe cycle network in these areas.
Operational Hours	In support of a key Bus Action Plan commitment, continue to work with London Boroughs to increase the operational hours of existing bus lanes, while ensuring optimal operational hour coverage for any new bus lane delivered.
Signal timing reviews	Annualised - continue traffic signal timing reviews, delivering significant improvements at junctions for relatively low investment.
Pinch point removal	Annualised - continue targeted schemes across the network that remove bus pinch points at key congestion locations, based on priorities identified through our Strategic Bus Analysis.
Multi-modal/pedestrian-focused	
Vauxhall Cross	Complete feasibility design subject to confirmation of third-party funding contributions.
Nine Elms Healthy Streets corridor	Commence construction of the eastern section in March 2023 and complete detailed design for the western section by January 2025, to align with the developers' construction phasing. Scheme mostly funded from third-party contributions.
Pedestrian and road safety improvements outside a local school in East Sheen	Construction start by November 2024.
Pedestrian improvements along Camden High Street	Feasibility Design completed by September 2024.

Project	Indicative milestone to be delivered in 2024/25
Continue green person priority programme, with progression of new sites	Target number of sites to be confirmed.
London Road roundabout – new signalised pedestrian crossings on all arms of the roundabout	Start construction by August 2024.
Wandsworth Town Centre	Progress project through detailed design stage subject to securing funding from the DfT’s Major Road Network fund.
Catford Town Centre	Progress project through detailed design stage, subject to securing funding from the DfT’s Major Road Network fund. Further detail is set out in Appendix 3.
A2 Old Kent Road	Progress feasibility and concept design work to undertake public consultation.
Stoke Newington	Complete Option Selection for updated Stoke Newington proposals to deliver safety and Healthy Streets benefits, support bus services, and are affordable.
Lower Lea Crossing	<p>This scheme will deliver safety and active travel improvements across the Lower Lea Crossing, Leamouth Circus and Leamouth Road in the London Boroughs of Newham and Tower Hamlets. Significant regeneration is underway and planned in this area and the route will form a strategic link between the northern portal of the new Silvertown Tunnel and the A13.</p> <p>The scheme will improve assets, lower speed limits, and improve walking and cycling facilities. The scheme will provide a continuous, direct, and uniform cycle route between the Royal Docks and Cycleway 3. Concept Design is complete, with public consultation and detailed design due to start in early 2024. Subject to the outcome of that consultation, we plan to commence construction during 2024 and complete the scheme prior to the Silvertown Tunnel opening in 2025.</p>
Borough funding – demonstrated through the Business Plan, we intend to allocate £75m for boroughs to invest in their roads, subject to funding.	
Holborn gyratory Liveable Neighbourhood	<p>Proposed Modelling testing completed: December 2024</p> <p>Base and Future Base modelling completed (including TfL audit): May 2024</p> <p>Designs signed off November 2024</p> <p>Gate 2 submission February 2025</p> <p>Complete public consultation by May 2025</p>
Enfield Town Centre Liveable Neighbourhood	Support LB Enfield to progress scheme to construction in Quarter 4 2024/25.

Project	Indicative milestone to be delivered in 2024/25
Borough Safe Cycling	Investment for boroughs to take forward safe cycle route connections on local roads, contributing to strategic network targets.
Borough Bus Priority	Borough-led bus lane schemes that contribute to the 25km total by March 2025, as well as targeted pinch-point removal schemes and the extension of bus lane operational hours.
LIP Safer Corridor and Neighbourhoods funding	To enable boroughs to continue projects set out in their two-year LIP proposals.
Healthy Streets Activation	
Cycle training	Further funding for London Boroughs to continue cycle training.
Behaviour Change	Further marketing communications to bring about behaviour change, focused on road safety and active travel mode shift

Appendix 2 – Spotlight on Benefits from the London Streetspace Plan

The London Streetspace Plan (LSP) was initiated in spring 2020 in response to the coronavirus pandemic, with experimental and trial schemes introduced using temporary designs and materials to support social distancing and to encourage active travel. As London has emerged from the pandemic, we have been analysing detailed monitoring data, undertaking public consultations and reviewing each scheme to decide whether to retain permanently, amend, or remove the scheme through our Future of Temporary schemes programme (FoT). Comprehensive reports for each scheme are compiled to inform the decision. A full summary of the benefits and outcomes across the programme will be compiled when the final decisions are taken on the remaining temporary schemes in the programme.



Figure 1 – Mansell Street cycle lane



Figure 2 – Park Lane cycle lane

Following the analysis of the data and feedback collected during the scheme experiments, most schemes are being retained on a permanent basis. Some of the schemes require some immediate remedial work to resolve issues associated with the temporary nature of the changes made, including resurfacing, line-markings and replacing temporary barriers with more permanent materials. In some cases, our monitoring has indicated that a further iteration of a scheme design is needed to address public feedback and make operational improvements. This upgrade work is critical to safeguard the benefits that these schemes have delivered and will be progressed in future years.

As these schemes were conducted as experiments and trials, a comprehensive set of monitoring criteria were agreed at the start of each scheme. Data was gathered covering safety, cycling numbers, bus performance, wider road network performance and public views through engagement and consultation.

The monitoring of these schemes has shown that in the majority of locations, cycling numbers have grown since the schemes were introduced. Some examples include;

- On Grosvenor Road during the trial upgrade of Cycleway 8 between April – December 2022, cycle flows increased by 15 per cent
- At Park Lane, the introduction of a separated two-way cycle track has led to cycling levels increasing to up to 2,400 per day, with pre-pandemic cycling levels averaging 512 per day

- The new bi-directional cycle connection between Cycleway 2 and Cycleway 3, along Mansell Street in Aldgate saw cyclists increase from an average of 1,000 per day to an average of 3,000 per day
- The combined impact of segregated cycle lanes and traffic restrictions on London Bridge and Borough High Street has seen cyclist numbers peak at over 14,000 in July 2022, compared with 10,500, which was the highest recorded pre-pandemic number of cyclists using the route

As well as high levels of cycling, our consultation surveys have indicated that pedestrians and cyclists are also feeling safer using the routes than before the schemes were introduced. For example, at Mansell Street 66 per cent told us it felt safer to walk or cycle along the road with the trial scheme in place. Similarly, at Tooley Street on Cycleway 4, 63 per cent of respondents to the consultation said they felt safer to walk or cycle since the scheme changes were made.

Safety was measured through an analysis of collision data. Figure 3 below shows the example of the scheme on Mansell Street where collisions have been reviewed over a five-year period to assess the impact of the changes made on street. So far, the scheme is having a positive impact on safety.

Mansell Street Collisions		
60-month period to April 2023		
	Before (March 2018 – 2020)	After (March 2021 – 2023)
Fatal	0	0
Serios	3	0
Slights	19	12

Figure 3 - Collision analysis on Mansell Street before and after the experimental scheme

The final core measure included as part of the experimental assessment was the impact of the scheme on bus performance. Nearly all schemes had a neutral impact upon journey times, or an impact that was within the agreed threshold of one standard deviation from the mean average. Certain schemes had a positive impact upon bus journey times, including at London Bridge and Bishopsgate, where traffic restrictions have reduced the flow of other motor vehicles and bus journey times have seen an improvement of around two minutes per kilometre. The cycle scheme on Euston Road had the most significant negative impact on bus journey times. This impact, considered alongside the need to allocate road space on Euston Road to utility works associated with the development of Euston station, resulted in the decision to remove the scheme.

The plan is to close the FoT programme before the end of the 2023/24 financial year. Those projects requiring remedial work and further changes on street will each transition to one of our existing programmes of work in Safe and Healthy Streets to ensure the benefits achieved by these experimental schemes are sustained and enhanced.

Appendix 3 – Catford Town Centre Highway Realignment

1 Summary

- 1.1 Approval is sought within this paper for additional unbudgeted Financial Authority of £10m to receive third party funding towards the delivery of the Catford Town Centre Realignment scheme, as described below, and for Procurement Authority to enter into a funding agreement with London Borough of Lewisham (LB Lewisham).
- 1.2 The realignment of the A205 South Circular through Catford Town Centre and removal of the gyratory will improve pedestrian and cyclist safety and support good growth. The project also includes reconfigured crossings, segregated cycle lanes and placemaking to support active travel as the main transport choice in LB Lewisham’s wider regeneration of Catford. The project intends to start on site in 2025 with construction lasting around two years. The scheme has an estimated final cost of £60m, with details of the funding contributions set out in the main body of the approval paper.
- 1.3 The scheme will help transform a major south London civic centre from a traffic-dominated place to one that encourages more people to walk, cycle, access public transport and live in the area. It will have the additional benefit of unlocking land to support the regeneration of Catford Town Centre, delivering new homes and supporting sustainable travel, as well as providing a significant uplift in green infrastructure to make the town centre an attractive destination.

2 Background

- 2.1 Catford is a major town centre in LB Lewisham. It is located on the junction of two major roads: the A205 (part of the national MRN), and the A21 (a key radial route). We are the highway authority for both roads. Figure 1 shows the location of Catford in London and Figure 2 shows the project location.

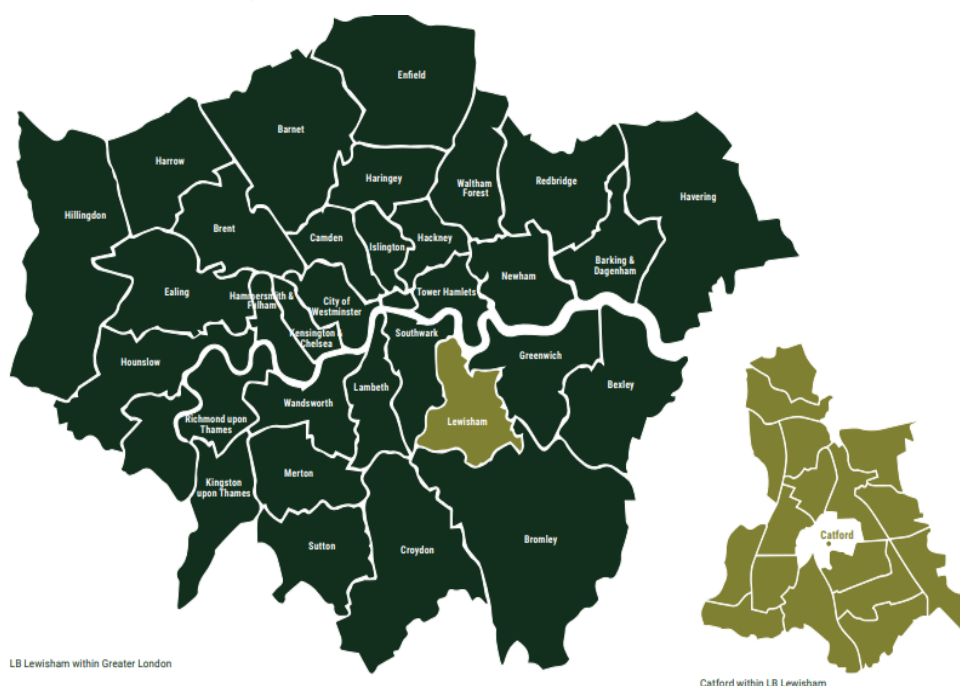


Figure 1: Location of Catford in London



Figure 2 – Location and physical scope of Catford Town Centre scheme

- 2.2 We have been working in partnership with LB Lewisham to support its ambition to improve transport in the area and to transform and regenerate Catford Town Centre. In Catford, some local wards are categorised in the top 20 per cent of national deprivation levels.
- 2.3 The proposals support the wider regeneration of Catford and include the realignment of the A205 South Circular Road to the south of LB Lewisham’s offices at Laurence House across currently owned council land. This releases the space between Laurence House and the Civic Suite which is currently dissected by the South Circular and provides an opportunity to refocus the whole town centre around a new public space. The proposals encompass a comprehensive array of enhancements to prioritise the needs of people walking, cycling and enjoying the town centre. Together, these initiatives are set to transform Catford into a more appealing and sustainable urban destination.



Figure 3: Catford Road looking eastwards towards Eltham, and the proposed alignment of the road to the south of Laurence House

- 2.4 The proposals align with the Mayor’s Transport Strategy (MTS) by supporting London’s sustainable growth and promoting active travel by making it easier and safer to walk, cycle and use the bus and public transport in Catford. The proposals also support LB Lewisham and the Mayor of London’s good growth ambitions to deliver up to 2,400 new homes and 33,470 sqm of commercial space in Catford Town Centre.
- 2.5 A public consultation was held on the proposals from 24 April 2023 to 5 June 2023. 1,503 responses to the consultation were received, including 19 from stakeholders. The proposals were largely supported and the response to issues raised is scheduled for publication in November 2023.

3 Key Challenges

- 3.1 One key challenge is the requirement for land from third parties due to the realignment of the A205, in particular an access road and the tip of privately owned school playing fields located to the south of the A205 between the railway and Canadian Avenue. There are no properties on the required land as it is designated as Metropolitan Open Land. The project team is engaging with affected landowners to reach voluntary agreements where possible. These agreements are progressing positively and are agreed in principle; however, to deliver the scheme in a timely manner it will be necessary to run the process for a Compulsory Purchase Order in parallel to the discussions with landowners. This is subject to approval from the Board in December 2023.
- 3.2 A vital element of the funding package for the scheme is TfL securing £44m from the DfT’s MRN scheme. In January 2023, TfL Investment Group gave approval to submit the Strategic Outline Business Case (SOBC) to the DfT for review and the business case was submitted to DfT in spring 2023. We understand that the proposals will be taken to DfT’s Investment Committee in January 2024. The timing of the approval from the DfT is becoming increasingly critical as there is an MRN

requirement that projects start on site by March 2025 to secure funding. In the interim the scheme is proceeding at pace and at some risk to ensure that it is given the best opportunity to secure the £44m.

- 3.3 While the project is proceeding through design using HIF and our funding, the costs incurred are done so at risk until the MRN funding is secured. In addition, if the MRN funding is not secured and the scheme does not proceed, under the terms of the HIF agreement, the GLA can request that all funding provided (up to £10m) under HIF be returned.
- 3.4 A full assurance review will be conducted at Gate 4 (end of detailed design) prior to a Programme and Project Authority drawdown request to our Investment Group to enable the main construction works to start in 2025.

4 Funding Agreement between TfL and LB Lewisham

- 4.1 The terms of the funding agreement between us and LB Lewisham are being finalised and approval of the final form of the funding agreement will be sought in accordance with Standing Orders; key points are:
 - (a) TfL is the delivery partner for the project;
 - (b) if we are in material breach of the funding agreement or in other specified circumstances where we are in default, then we may be required to repay all the funding we have received;
 - (c) if the project exceeds the available funding, there is a process for the parties to discuss and agree an alternative delivery plan or, failing that, to terminate, with each party sharing risk on an equal basis unless the cost overrun is due to the fault of one party;
 - (d) completion of the project is conditional upon us securing the MRN funding. If such funding is not secured, there is a process for the parties to discuss and agree an alternative delivery plan or, failing that, to terminate, with each party sharing risk on an equal basis unless the failure to secure the MRN funding is due to the fault of one party; and
 - (e) if we do secure MRN funding, but the project does not proceed for any reason, we will be at risk for any repayment of MRN funding if required under the terms of the agreement with DfT.

Programmes and Investment Committee



Date: 6 December 2023

Item: DLR Rolling Stock Replacement Programme

This paper will be considered in public

1 Summary

	Existing Financial Authority (£m)*	Estimated Final Cost (£m)	Existing Programme and Project Authority (£m)*	Additional Authority Requested (£m)	Total Authority (£m)
Gross Cost	809.5	907.0	882.2	0.0	882.2
Gross Income	344.8	245.2	244.7	0.0	244.7
Net Cost	464.7	661.8	637.5	0.0	637.5

Table 1: Summary of authority request

*existing Programme and Project Authority includes commitments beyond the timeframe covered by existing Financial Authority.

**previous updates to the Committee reported the Housing Infrastructure Fund (HIF) and base programme costs and incomes as separate authorities. These have now been merged to create a single authority to reflect how the programme is being delivered.

Authority Approval: The Committee is asked to note the paper and approve Procurement Authority to implement the revised contracting strategy for the Northern Sidings for the amount set out in the paper on Part 2 of the agenda.

Outputs and Schedule: The DLR Rolling Stock Replacement Programme (RSRP) will replace the life-expired B90/92 units, the oldest in the DLR fleet. This will support continued reliability of DLR services, optimise whole-life asset costs, and provide an improved customer offer including through greater capacity and service frequencies to support forecast growth in demand on the DLR network. We expect the first new train to enter passenger service from spring 2024, and to complete the full deployment of the new fleet during 2026.

- 1.1 This paper provides an update on the DLR RSRP (the Programme), including progress on train testing following delivery of the first new train in early 2023, depot upgrades, and other network infrastructure required for the introduction of the new trains. It also updates on next steps for managing remobilisation of the works to construct the Northern Sidings at Beckton depot, following our contractor, Buckingham Group Contracting Limited (BGCL), appointing administrators in September 2023.

- 1.2 Supplementary information is included in Part 2 of the agenda for Members. This information is exempt and is therefore not for publication to the public or press 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 Transport for London (TfL). Any discussion of this paper 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 on Part 2 of the agenda and subject to approval of the revised TfL Business Plan to be considered by the TfL Board on 13 December 2023 approve additional Procurement Authority, for the amount set out in the paper on Part 2 of the agenda, to enable officers to progress the immediate next steps of a revised contracting strategy for the Northern Sidings prior to seeking further Authorities from the Committee in 2024.**

3 Background and Case for the Scheme

- 3.1 A significant portion of the existing DLR fleet, the B90/92 stock, has reached the end of its design life. This presents significant challenges to sustaining reliable service performance for our customers, with the Mean Distance Between Service Affecting Failures continuing to reduce. While options were explored to “patch and repair” or “life-extend” these trains, the Programme’s business case demonstrates the significant whole-life cost savings, revenue generation and customer benefits that we expect to deliver through a fleet replacement.
- 3.2 The DLR saw stronger recovery from the coronavirus pandemic than the wider rail network and average weekly passenger numbers now exceed 80 per cent of pre-pandemic levels. This has been further strengthened by our optimisation of DLR timetables alongside the introduction of the Elizabeth line. DLR passenger numbers are now three per cent higher than before the opening of the Elizabeth line, where previously we were cautious in forecasting that the Elizabeth line would, at least initially, reduce demand for the DLR.
- 3.3 Beyond the effects of the Elizabeth line, growth continues to exceed expectations on the DLR network. The DLR also runs through areas expected to accommodate significant growth in housing and employment in the coming years, including major Opportunity Areas in the Isle of Dogs, Olympic Legacy, and the Royal Docks. We therefore need to plan for continued growth across the DLR, and we forecast demand will grow by 40 per cent above today’s levels by 2031.
- 3.4 The Programme is key to planning for this growth and will deliver a new fleet of trains and associated infrastructure improvements, including expansion of the existing Beckton depot. The new walk-through, air-conditioned trains will improve reliability, provide greater capacity, and offer an improved customer experience. We will also expand the fleet, replacing the equivalent of 32 life-expired trains with a total of 54 new trains, allowing significant capacity uplifts and more frequent services across the network.

- 3.5 Recognising the contribution of the scheme in supporting housing growth, the Department for Levelling Up, Housing and Communities (DLUHC), via the Greater London Authority, is funding 11 of the trains and associated infrastructure through its HIF.

4 Rolling Stock Manufacture and Testing

- 4.1 The Committee approved Programme and Project Authority and Procurement Authority for the Programme in December 2018, to enable DLR Limited to enter into the Manufacture and Supply Agreement and the Fleet Support Agreement with Construcciones y Auxiliar de Ferrocarriles S.A. (CAF) on 11 June 2019 for the design, manufacture and supply of 43 new trains. This includes the provision of fleet technical support services and spares supply for 35 years. This contract also included options for the purchase of additional trains.
- 4.2 We subsequently confirmed an order for 11 additional trains, funded by DLUHC through HIF, in June 2023. This was reduced from 14 additional trains in our original agreement with DLUHC, in response to challenges forecasting future passenger demand in the post-pandemic environment.
- 4.3 Work on rolling stock was not paused during the coronavirus pandemic – given the likely significant prolongation costs from a pause in the manufacturing process – and we have continued to see strong progress in this area of the Programme. CAF has now completed manufacture of 22 trains and delivered the first two trains to Beckton depot in January and February 2023.
- 4.4 Assembly and initial testing of the first two trains was completed to plan within our existing facilities at Beckton depot and we subsequently began testing on the network. We have successfully completed nine of eleven planned closures during 2023, alongside engineering hours activities, without any issues encountered that are expected to delay planned entry into service of the new trains, or any overruns that impacted on operational service.
- 4.5 Overall, testing is progressing well in identifying the issues we need to resolve to allow us to commence reliability proving during operational hours in early 2024, and to support the first train entering passenger service during spring 2024.
- 4.6 We undertook an Equalities Impact Assessment, supported by engagement with our Independent Disability Advisory Group, as part of the new train design and incorporated significant new accessibility features. We are revisiting and updating this as we deploy the new trains into passenger service, including through operational procedures to ensure we support customers with any changes.

5 Beckton Depot Expansion

- 5.1 Unlike rolling stock manufacture, we paused all depot works between March and November 2020 as part of our “Safe Stop”, and in response to financial uncertainty, resulting from the coronavirus pandemic. During this time, 60 per cent of the project team were placed on furlough and, with remobilisation, this resulted in a significant delay to our plans for Beckton depot compared to the original schedule, and our critical path shifting from rolling stock to depot works.

- 5.2 To maintain the schedule and secure the early benefits of the scheme, including through our ability to begin retiring the B92 fleet, we developed plans for early assembly, testing and maintenance of the new trains using existing space at Beckton prior to the completion of the planned phases of depot expansion. We have fostered excellent collaboration between the project team, TfL Operations and our franchise operator, Keolis Amey Docklands (KAD), to allow efficient use of the existing depot facilities and maintain the overall train delivery programme.
- 5.3 We have completed significant depot works during 2023, including substation works for the new Northern Sidings, and installation of a new low voltage modular building to supply power to the new Maintenance Facility Building (MFB).
- 5.4 Works on the first major stage of the depot expansion, the Northern Sidings, are now substantially complete, however, these works have experienced significant delays which were compounded by the contractor, BGCL, filing a Notice of Intention to appoint Administrators and ceasing all works on site on 17 August 2023. BGCL subsequently appointed administrators on 4 September 2023 and we have since been engaging with the administrators, as well as confirming alternative arrangements for completing the Northern Sidings.
- 5.5 We anticipate significant additional cost and delay because of this event, both in terms of direct impacts to the Northern Sidings scope of works, and wider impacts across the Programme. To indicate the scale of the challenge in terms of schedule, we now forecast completion of the northern sidings no earlier than March 2024, eight months later than planned.
- 5.6 We are, therefore, replanning our works to mitigate, where possible, the impacts on cost and schedule. We remain heavily reliant on contingency measures and collaborative working with operations teams using the existing facilities at Beckton depot to maintain the overall train delivery schedule until new stabling areas and the new MFB can be brought into use.
- 5.7 In January 2023, we awarded Morgan Sindall Infrastructure Limited (MSI) a contract to construct the new MFB and Southern Sidings. We saw good initial progress with mobilisation, site clearance and enabling activities but further progress with the MFB is restricted by delays to the Northern Sidings; construction of the MFB cannot start until the Northern Sidings are operational.
- 5.8 Progressing the Southern Sidings remains critical but we are making good progress to ensure sufficient sidings are operational such that we can continue uninterrupted with the train delivery schedule.
- 5.9 Despite challenges with our works at Beckton depot, we have been pleased to see a positive safety record. This is supported by close working with KAD, MSI and other contractors on site, including through initiatives such as geo-fencing to improve safety around people, plant and the operational depot.

6 Overall Programme Status

6.1 We have responded positively to significant challenges across the Programme to maintain the train delivery schedule and so remain on track to deliver the planned benefits of the scheme. This is supported by other activities outside of the main depot and rolling stock workstreams described above. The table below provides a summary of each of area of the Programme, including a commentary on performance since the last update to the Committee in October 2022, and expectations for the year ahead.

Area	Commentary
Rolling Stock	Performance last 12 months <ul style="list-style-type: none"> - first two trains delivered to UK and assembled for testing two months ahead of schedule - additional 11 HIF option trains order confirmed - 22 trains manufactured and ready for delivery once testing milestones have been satisfied
	Lookahead next 12 months <ul style="list-style-type: none"> - Third train delivered to UK in December 2023 - First new B23 train in passenger service by spring 2024 - steady-state acceptance into passenger service of two trains per period following the first train - Scrappage of old B92 trains commences from following introduction of 2024
Depot	Performance last 12 months <ul style="list-style-type: none"> - contract awarded for MFB and Southern Sidings - de-scope of Temporary Fit-Out Shed confirmed - six-month delay to Northern Sidings pre-BGCL administration with knock on impacts to MFB and Southern Sidings start of construction - further delay from administration event currently estimated at a further six to nine months
	Lookahead next 12 months <ul style="list-style-type: none"> - Bringing into use Northern Sidings from March 2024 - Commence MFB construction from spring 2024 - Bringing into use Southern Sidings by autumn 2024
Stations	Performance last 12 months <ul style="list-style-type: none"> - contract awarded for design and build of Blackwall station second entrance in December 2022
	Lookahead next 12 months <ul style="list-style-type: none"> - Blackwall station second entrance brought into use during autumn 2024
Power	Performance last 12 months <ul style="list-style-type: none"> - contract awarded for negative reinforcement
	Lookahead next 12 months <ul style="list-style-type: none"> - electric track equipment upgrades rolled out on route-by-route basis to support deployment strategy
Signalling	Performance last 12 months <ul style="list-style-type: none"> - network testing proceeding to plan
	Lookahead next 12 months <ul style="list-style-type: none"> - final contingency software drop in early 2024 to support

	revenue approval of signalling system and support first train entering service during spring 2024
Telecoms	Performance last 12 months <ul style="list-style-type: none"> - contract for design of lineside communications infrastructure awarded to Telent in May 2023. This was delayed but is not expected to impact on bringing first train into passenger service
	Lookahead next 12 months <ul style="list-style-type: none"> - detailed design instructions before end of 2023 - installation and commissioning of new telecoms assets in Beckton Control Centre by end of 2024
HIF Sidings	Performance last 12 months <ul style="list-style-type: none"> - feasibility design completed during summer 2023
	Lookahead next 12 months <ul style="list-style-type: none"> - issue Invitation to Tender for design and build of HIF sidings in early 2024 before awarding contract by summer 2024

Programme Estimated Final Cost (EFC)

- 6.2 Our work over the past year has secured significant opportunities and efficiencies to save cost, including through;
- (a) de-scoping the planned Temporary Fit-Out Shed by developing plans to assemble and test the new trains using existing depot facilities. This secured an EFC reduction of £7m against our previous plans as well as carbon savings equivalent to 1,200 tonnes of carbon dioxide;
 - (b) review of the depot sidings to optimise the design and required number of berths and operational facilities, delivering an EFC reduction of £26m;
 - (c) effective management and mitigation of risks within the rolling stock manufacture and testing, allowing release of £5m of risk; and
 - (d) challenging power requirements for very low-likelihood degradation scenarios, mitigating £6m cost increases and maintaining EFC.
- 6.3 Despite this, we forecast our EFC would exceed existing Financial Authority and Programme and Project Authority because of the significant challenges seen across the Programme, not least the direct and indirect impacts of BGCL going into administration. We will, therefore, require additional funding to complete the Programme and secure the benefits of the scheme for our customers, our revenues and east London's sustainable growth. This is being considered in the context of developing our revised Business Plan.
- 6.4 We launched a deep-dive review of the EFC during August and September 2023, but there remain significant uncertainties, risks and opportunities across the Programme. This includes within the HIF Sidings which represent the largest element of "uncommitted" works on the programme and where we continue to review the scope required to deliver planned benefits. Our deep-dive has informed development of our draft Business Plan which will be submitted to the Board for approval on 13 December 2023.

- 6.5 Given the uncertainty as we continue to replan the works, however, we are not currently requesting approval of an increase in Financial Authority or Programme and Project Authority from the Committee. We expect to return to the Committee during the summer of 2024 to request the relevant additional Authorities once we have greater confidence in the required amounts including reconciliation of income as we finalise our payments under the Grant Determination Agreement with the Department for Levelling Up, Housing and Communities.

Procurement Authority

- 6.6 Prior to the next meeting of the Committee on 28 February 2024, we will need to enter into contractual arrangements to complete the Northern Sidings and therefore require additional Procurement Authority to progress this. This additional Procurement Authority will enable officers to progress the immediate next steps of a revised contracting strategy for the Northern Sidings but are an interim step, and we expect to seek further authorities from the Committee in 2024. Further information on these contractual arrangements, the Procurement Authority required, and the current EFC for the Programme is provided in the paper on Part 2 of the agenda. The Procurement Authority is aligned to the existing Programme and Project Authority headroom, and additional Financial Authority which will be provided through the revised Business Plan, subject to its approval by the Board on 13 December 2023

Benefits and Value

- 6.7 Despite the potential for continued cost increases, we remain confident in the significant benefits this Programme will deliver in terms of improved whole life cost outcomes for the DLR fleet, improved passenger journey times, better customer facilities, and increased capacity and more frequent services to support continued growth in east London. Sensitivity tests undertaken during development of the Programme Business Case demonstrate that, even with the expected increase in costs, the Programme will deliver a financially positive outcome. A benefit:cost ratio is less relevant in this situation but this outcome represents very high value for money.

7 Project Assurance

- 7.1 In support of this submission, an integrated assurance review was undertaken by TfL Project Assurance and the Independent Investment Programme Advisory Group. This did not identify any critical issues with the Programme and we are actively responding to the recommended actions.

List of appendices to this report:

Appendix 1: progress photographs

Exempt supplementary information is included in a paper on Part 2 of the agenda.

List of Background Papers:

Project Assurance Report and Management Response

TfL Project Assurance Report and Management Response

Contact Officer: Stuart Harvey, Chief Capital Officer
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Appendix 1: Progress photographs

B23 train at Canary Wharf station during testing in a planned closure



Northern Sidings construction progress – works substantively complete



Programmes and Investment Committee



Date: 6 December 2023

Item: Elizabeth Line: Service Frequency Increase for High Speed 2

This paper will be considered in public

1 Summary

- 1.1 The Elizabeth line is a key dependency for High Speed 2 (HS2) to realise Old Oak Common (OOC) as a super-hub and the best-connected station in the UK by providing new journey options. It is crucial to supporting HS2 passengers interchanging from the Midlands and the north of England, as well as Great Western Railway (GWR) passengers arriving into London.
- 1.2 The investment in higher frequency is needed to relieve wait times at the station, reduce on-train crowding and provide shorter journey times for more customers using OOC station. Introducing connections and higher frequency in 2030 will maximise benefits, in particular during the period of HS2 terminus operation, and a compelling case remains for maintaining the higher frequency once HS2 services continue through to Euston.
- 1.3 The purpose of this paper is to seek unbudgeted Financial Authority subject to the provision of funding being agreed by HM Government, Programme and Project Authority to set up the programme within our management structures and Procurement Authority to order additional trains under the existing contract with Alstom for class 345 trains for the Elizabeth line.
- 1.4 Supplementary information is included in Part 2 of the agenda for Members. This information is exempt and is therefore not for publication to the public or press 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 and other parties.

2 Recommendations

- 2.1 **The Committee is asked to note the paper and the exempt supplementary paper on Part 2 of the agenda and, subject to HM Government agreeing to provide the capital funding for the acquisition of additional rolling stock for the Elizabeth line and related services and enabling works:**
 - (a) **approve unbudgeted Financial Authority, for the amount set out in the paper on Part 2 of the agenda;**
 - (b) **approve Programme and Project Authority, for the amount set out in the paper on Part 2 of the agenda for the activity described in this paper;**

- (c) **approve Procurement Authority, for the amount set out in the paper on Part 2 of the agenda to order additional trains under the existing contract; and**
- (d) **note that matters for which Authorities are sought above include commitments beyond the period of the 2023/24 Business Plan and provision will, therefore, need to be made for those commitments in future Business Plans (including that to be considered by the Board in December 2023).**

3 Background

HS2 programme aspirations for OOC

- 3.1 OOC will become one of the country's most vital transport super-hubs and is set to be the best-connected and largest new railway station ever built in the UK. The station will have 14 platforms, a mix of six high-speed and eight conventional service platforms and is expected to be one of the busiest railway stations in the country (up to 250,000 passengers per day).
- 3.2 Connections are expected between high-speed rail services to the Midlands, north of England and Scotland, with access to central London and Heathrow via the Elizabeth line and travel to Wales and the south west on GWR services.
- 3.3 The construction and operation of the station will drive the regeneration of the area around it in west London to provide up to 26,000 homes and 56,000 new jobs.

Elizabeth line is required to achieve outcomes

- 3.4 An effective connection to the Elizabeth line is critical to:
 - (a) encouraging use of HS2 services over other existing services into London and release capacity on the West Coast Mainline;
 - (b) providing onwards journeys at OOC that are required during the expected period of about 10 years when OOC will be the terminus of HS2 services and to reduce demand at Euston once the HS2 station is opened;
 - (c) providing an interchange route with the main line services into and out of London; and
 - (d) providing system resilience and operational flexibility to manage during network disruptions.
- 3.5 The Elizabeth line will also be an important link into central London for the local area to support Old Oak and Park Royal to deliver new homes and jobs to the opportunity area.
- 3.6 It is crucial that planning for HS2 considers the outcomes for the existing railway and travel network to ensure journeys remain reliable for all customers.

4 Need for investment and benefits

- 4.1 TfL modelled the impacts of using OOC as a terminus for HS2 services with a frequency of HS2 services of three trains per hour (tph) and six tph. This shows that with a 12 tph service on the Elizabeth line during the AM peak, levels of crowding on Elizabeth line trains will be comparable with Tube journeys in central London (greater than four passengers per square metre). This would be significantly at odds with our customers' expectations arriving from the new HS2 services.
- 4.2 The implications of this situation for customers would be significant and would continue to increase the longer Euston is delayed:
- (a) passengers trying to board the Elizabeth line at OOC across the peak period could face a wait time of over 10 minutes as multiple Elizabeth line trains may reach capacity before clearing the platform;
 - (b) crowd control measures at the station and additional platform staff may be required to maintain safe operations by holding customers at different parts of the station to avoid congestion on stairs, escalators and platforms; and
 - (c) overall, there will be a significantly degraded customer experience at OOC from station opening which will worsen over time, undermining the benefits of HS2. This is likely to lead to negative reputational impacts and a need to resolve the problem long after efficient and effective potential solutions have expired.
- 4.3 In addition, we would expect significant negative operational impacts to the reliability of the entire Elizabeth line that would also undermine the benefits of the joint London and Department for Transport (DfT) investment in Crossrail.
- 4.4 While there are currently limited opportunities to increase capacity to the west of OOC due to constraints on network capacity and availability of paths, the HS2 project unlocks the ability to turn Elizabeth line trains at OOC. This allows an increase in the peak service frequency from the current 12 tph to between 18 and 24 tph. This would be enabled by the purchase of five additional class 345 trains to supplement the existing fleet of 70 trains.
- 4.5 This solution would deliver multiple benefits for the travelling public and support wider regeneration and growth objectives. Increasing the frequency from 12 tph to between 18 and 24 tph would lead to:
- (a) a direct reduction in waiting times for HS2 and other passengers transferring onto the Elizabeth line, together with a significant reduction in on-train crowding levels described above, including much higher seating availability through the use of OOC as a starting station for a proportion of services;
 - (b) an end-to-end travel experience more commensurate with the expectations of the new HS2 service which would increase customer satisfaction, ridership and revenues for HS2; and
 - (c) realising the Government's ambitions for OOC to become a well-used super-hub and the best-connected station in the UK while supporting the delivery

of the regeneration and growth of the Old Oak and Park Royal Opportunity Area.

5 Options considered and preferred approach

5.1 The table below outlines the options considered to mitigate the impacts to the Elizabeth line of introducing OOC and realise the Government's desired outcomes for the HS2 project. Options considered include 'Do Nothing', 'Do Minimum' and 'Do Something' scenarios. The key considerations for each option are included.

	Option description	Key considerations
Do nothing	Elizabeth line does not call at OOC	<ul style="list-style-type: none"> No network connection benefits Precludes ability to operate OOC as terminus
Do minimum	Existing Elizabeth line services call at OOC	<ul style="list-style-type: none"> Unacceptable customer and performance impacts to existing Elizabeth line services Undermines benefits of HS2
	Elizabeth line calls at OOC and GWR does not call at OOC	<ul style="list-style-type: none"> No network connection benefits and interchange for GWR
Do Something: Investment in additional trains	Increase Elizabeth line services to 16 tph to OOC	<ul style="list-style-type: none"> Some additional capacity but may not align with HS2 services Does not provide flexibility to increase services in future
	Increase Elizabeth line services to 18 tph or above to OOC (Preferred)	<ul style="list-style-type: none"> Relieves crowding on trains and wait times at station Higher frequency maximises use of station and benefits Regular service interval minimises performance risk
	Increase Elizabeth line services beyond OOC	<ul style="list-style-type: none"> Capacity constraints on western route beyond OOC TfL assessing other investment options given wider pressures on network

5.2 We presented the case for additional trains at the OOC Industry Forum on 17 April 2023 hosted by Network Rail and attended by DfT and other industry stakeholders. Collectively it was agreed we should progress the funding discussions with the DfT for the investment in additional rolling stock to uplift the Elizabeth line services to 18 tph or above in preparation for the opening of OOC station in 2030. This reflects:

- (a) the need for a reliable route into central London during the period of OOC being the HS2 terminus;
- (b) the unacceptable customer and performance impacts to the existing Elizabeth line services without a service upgrade; and
- (c) the desire to provide the full connectivity benefits from the opening of the station in 2030.

5.3 It was also recognised at the Industry Forum that timetable and performance analysis is required to confirm the service frequency that can reliably be operated between 18 tph and 24 tph given the constraints on network capacity, availability of paths and performance on the western route. We are currently working with Network Rail to define the scope and timeframe of analysis.

6 Programme components

6.1 To enable higher Elizabeth line frequency, five class 345 trains added to the existing fleet of 70 will provide the flexibility to increase frequency to 18 tph and above, up to 24 tph (four in service and one maintenance spare).

6.2 A modification to Westbourne Park turnaround facility is required to enable stabling of the additional trains and additional operating costs are expected to account for train maintenance, station connection and additional distance travelled.

6.3 The programme will coordinate with our HS2 programme team who are managing our interfaces with the HS2 construction programme at OOC and our service planning teams who are leading with Network Rail the development of timetables to introduce and operate a reliable service to OOC.

7 Economic appraisal

7.1 The economic analysis shows that there is a high value for money case to connect GWR and Elizabeth line services at OOC and invest in additional trains to increase frequency of Elizabeth line services to 18 tph and above with a benefit to costs ratio of at least 3.45 to 1. The additional services will relieve wait times at the station, reduce on-train crowding and provide shorter journey times for more customers using OOC station.

7.2 The analysis shows that benefits are maximised by introducing the connections and higher frequency in 2030 as the highest annual social benefits are during the period of time when OOC station is the HS2 terminus.

8 Funding

8.1 Following the OOC Industry Forum on 17 April 2023, the DfT requested that TfL includes the case to fund the additional Elizabeth line trains required to support delivery of HS2 as part of our 2024/25 capital request. This reflects the collective agreement at the Industry Forum that we should progress the funding discussions with the DfT for the investment in additional rolling stock to uplift the Elizabeth line services to 18 tph or above in preparation for the opening of OOC station in 2030.

- 8.2 We have requested funding for the additional trains and enabling works as part of our current request to Government for capital funding in 2024/25; this request for Financial Authority, Programme and Project Authority and Procurement Authority is made subject to HM Government committing to meeting that funding request.

9 Commercial arrangements

- 9.1 The existing fleet of 70 class 345 trains was manufactured by Bombardier (now Alstom) between 2015 and 2019. The class 345 fleet was purchased from TfL by, and is leased back to TfL by, 345 Rail Leasing Limited. TfL sub-leases the trains to the Elizabeth line concession operator, MTREL.
- 9.2 The class 345 fleet is maintained and prepared for daily passenger service by Alstom under a long-term service agreement with TfL. Train maintenance payments to Alstom, which includes amortised amounts for overhauls and refurbishments are wholly funded by TfL.
- 9.3 We have discussed with Alstom the opportunity for additional trains to the class 345 design and they have informed us that a production window exists at their Derby manufacturing facility, which is where the engineering and manufacture of the current class 345 fleet was undertaken. This would provide the most efficient and effective manufacturing solution for TfL, which may be impossible to achieve elsewhere.

10 Management of Programme

- 10.1 We will build on the success of delivering the original order of 70 trains and will make use of the 'business as usual' Elizabeth line fleet management team to retain and extend key roles from the train delivery phase.
- 10.2 This means that the expertise and resource built up over time are retained and rolled from one project to another. This allows experience from the previous programme to be applied to manage risk, maximise value and minimise cost. This has proved a very effective way of managing risk and effective delivery.
- 10.3 We have a strong record of managing the delivery of rolling stock alongside other types of projects and all our projects and programmes follow 'Pathway', our project management and governance methodology.

11 Assurance

- 11.1 The Independent Investment Programme Advisory Group and TfL Project Assurance undertook a full assurance review in October 2023. There are no critical issues, and four general recommendations are made.

List of appendices to this report:

Exempt supplementary information is included in a paper on Part 2 of the agenda.

List of Background Papers:

TfL Project Assurance Report and Management Response

Contact Officer: David Rowe, Interim Director of Investment Delivery Planning
Email: David.Rowe@tfl.gov.uk

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Programmes and Investment Committee



Date: 6 December 2023

Item: High Speed 2 Programme: TfL Resources

This paper will be considered in public

1 Summary

High Speed 2 (HS2)				
Existing Financial Authority	Estimated Final Cost (EFC)	Existing Programme and Project Authority	Additional Authority Requested	Total Authority
£ 53.1m	£ 70.8m	£ 38.2m	£ 4.8m	£ 43.0m

Authority Approval: The Committee is asked to approve additional Programme and Project Authority for the HS2 project (fully third party funded) which will cover TfL staff costs, bus operational measures, minor works, specialist consultancy services and risk provision for the remainder of Financial Year 2023/24 and first quarter of Financial Year 2024/25. A financial summary is provided in Appendix 1.

Outputs and Schedule: The additional Programme and Project Authority requested enables the TfL programme team to fully support HS2 Limited in the delivery of its project. The Authority request is built on a resource schedule of staff needed to undertake governance, assurance, asset protection, project management, sponsorship and engineering activities, as well as to cover bus disruption mitigation measures and other specific items of work that may be instructed by HS2 Limited.

- 1.1 HS2 is a project being delivered by the Secretary of State for Transport's (SoS) nominated undertaker, HS2 Limited with significant TfL interfaces and impacts. The relationship between SoS/HS2 Limited and TfL is governed by a Protective Provisions Agreement entered into in 2014. This sets out high level roles and responsibilities, as well as protections secured by TfL during the Hybrid Bill process, including the ability to recover all costs, losses and expenses incurred including staff time.
- 1.2 Supplementary information is included in Part 2 of the agenda. This information is exempt and is therefore not for publication to the public or press by virtue of paragraph 3 of Schedule 12A of the Local Government Act 1972 in that it contains information relating to commercial negotiations, funding and strategic decisions to be taken by TfL.

2 Recommendations

2.1 **The Committee is asked to note the paper and the exempt supplementary information on Part 2 of the agenda and, subject to the Board's approval of the revised Business Plan due to be considered by it in December 2023:**

- (a) **approve additional Programme and Project Authority of £4.8m, bringing the total Project and Programme Authority to £43.0m, to enable the TfL team to continue the activities described in this paper; and**
- (b) **(b) note that the matters for which approval is sought above relates to matters which extend beyond the current Business Plan and Budget (and the revision due to be considered by the Board in December 2023) and provision will, therefore, need to be made in future Business Plans and Budgets.**

3 Background and Update

3.1 The HS2 project is a major railway infrastructure project aimed at creating a high-speed rail network connecting the south and north of England. HS2 is set to be the second high-speed rail line in the UK, following the High Speed 1 (HS1) which connects London to the Channel Tunnel.

3.2 HS2's primary objective is to release capacity on the West Coast Main Line and significantly reduce travel times between major cities, including London, Birmingham and potentially Manchester. Until recently, the project was divided into two phases:

- (a) Phase 1: which links London and Birmingham, with a new through station and temporary terminal at Old Oak Common and an upgraded terminal London Euston and a new Birmingham Curzon Street station. This phase is expected to be operational by the late 2020s between Old Oak and Birmingham;
- (b) Phase 2a: which would have extended the line from Birmingham to Crewe, designed to integrate with existing rail networks and provide faster travel times to the north of England, but is now cancelled as announced by the Prime Minister on 4 October 2023; and
- (c) Phase 2b: which would have extended the line from Crewe to Manchester via Manchester Airport but is now cancelled as announced by the Prime Minister on 4 October 2023.

3.3 Since the last paper in July 2023, as part of the Rail and Station Enhancements Programme, the following changes to the project have occurred which have necessitated this uplift:

- (a) Euston Pause and Reset Programme was underway, with significant redesign to the station at Euston under a "minimal viable product" scenario.

TfL was providing support and input to these designs to ensure compliance with our standards and interoperability of future stations. This included further work on the long-term use of Old Oak Common as a temporary terminus station and the impacts on the Elizabeth line;

- (b) in October 2023, the Government announced significant further changes to Euston with private sector funding being required and the proposal for a development corporation to be established to take forward the Old Oak Common to Euston section and Euston redevelopment;
- (c) this decision will place additional pressure on Old Oak Common, a key interchange station for HS2, the Elizabeth line, and other existing rail services. Old Oak Common is intended to serve as a major hub for passengers transferring between high-speed and conventional rail services but will act as a temporary terminus until HS2 reaches Euston. This has the potential to affect the Elizabeth line which connects Reading and Heathrow Airport in the west to Shenfield and Abbey Wood in the east, passing through central London. This is the subject of a separate paper to the Committee on this agenda;
- (d) TfL is working closely with the Department for Transport and HS2 Limited on a review to identify opportunities to reduce costs at Euston and TfL is providing advice and its experience of development corporations and enterprise zones. This work will be undertaken within parameters that will be acceptable against requirements and undertakings agreed through the Hybrid Bill; and
- (e) since the Committee approved additional Programme and Project Authority in July 2023, the TfL programme team has maintained robust cost management measures to ensure only the minimum essential resources are deployed on the programme with a reduction of around 50 per cent in resources. To date, we have recovered over 99.9 per cent of our submitted applications for payment with less than £5,000 outstanding and under discussion with HS2 Limited. We have supported the delivery programme across all areas with minimal impact on the HS2 Limited schedule, while continuing to protect TfL's interests in assets and operations.

3.4 This additional request excludes lost bus revenue which will continue to be recovered separately as agreed with HS2 Limited.

List of appendices to this report:

Appendix 1: Costs and Funding Table Summary

Exempt supplementary information is included in a paper on Part 2 of the agenda

List of Background Papers:

None

Contact Officer: David Rowe, Interim Director of Investment Delivery Planning
Email: DavidRowe@tfl.gov.uk

Appendix 1: Costs and Funding Table Summary

Costs and Funding (£m)		Prior Years	2023/24	2024/25	2025/26	2026/27	Future Years	Total
Cost (Period 6 2023/24 forecast)	Base costs	30.6	8.6	7.4	9.0	4.9	10.3	70.8
	Risks							
	Total	30.6	8.6	7.4	9.0	4.9	10.3	70.8
Funding (Financial Authority based draft Business Plan to be submitted for approval by the Board in December 2023)	TfL funding (=A)	0	0	0	0	0	0	0
	Third party funding (=B)	30.3	8.8	7.0	6.4	5.0	11.1	68.6
	Total Financial Authority (=A+B)	30.3	8.8	7.0	6.4	5.0	11.1	68.6
Programme and Project Authority Drawdown	Drawdown to date (=C)	33.7	4.5	0.0				38.2
	Additional Drawdown requested (=D)	-3.1	5.5	2.4				4.8
	Total Drawdown (=C+D)	30.6	10.0	2.4				43.0

Programmes and Investment Committee



Date: 6 December 2023

Item: Members' Suggestions for Future Discussion Items

This paper will be considered in public

1 Summary

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

2 Recommendation

- 2.1 **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.**

3 Forward Plan Development

- 3.1 The Board and its Committees and Panels have forward plans. The content of the plan arises 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, this is the quarterly Investment Programme Report.
 - (b) Programmes and Projects at a level requiring Committee approval. These include the annual review of the 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 Chair of this Committee will regularly review the forward plan 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 Plan

- 4.1 The current plan 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 Plan 2023/24

List of Background Papers:

None

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Programmes and Investment Committee Forward Plan 2023/24

Membership: Dr Nelson Ogunshakin OBE (Chair), Peter Strachan (Vice-Chair) Seb Dance, Mark Phillips, Dr Lynn Sloman MBE

Government Special Observer: David Coles

Abbreviations: CCO (Chief Capital Officer), CCSO (Chief Customer and Strategy Officer), CFO (Chief Finance Officer), COO (Chief Operating Officer), D IDP (Director Investment Delivery Planning), D SCTO (Director Strategy and Chief Technology Officer)

Standing Items		
Use of Delegated Authority	General Counsel	Standing item
Forthcoming Key Procurement Activities	Chief Finance Officer	Standing item
Quarterly Investment Programme Report	CCO and D IDP	Standing item
Independent Investment Programme Advisory Group Quarterly Report	General Counsel	Standing item
TfL Project Assurance	General Counsel	Standing item
Regular programme annual reviews		

28 February 2024		
Environment Programme – Air Quality and Environment	D IDP	Annual Update and Approval
Technology Programme – Technology and Data	CCSO and D SCTO	Annual Update and Approval
London Underground Step-Free Access Programme	D IDP	Update
Embedding Lessons Learnt from Recently Completed Projects	CCO	Update (Committee Action)

Regular Items:

- Streets, Bus and Rail and Sponsored Services Renewals Programme (IDP) (July)
- Safe and Healthy Streets Programme (IDP)
- Technology Programme 2023/24 and 2024/25 (IDP) (July)
- Four Lines Modernisation (4LM) Annual Update (CCO) (July)
- Enterprise Risk Update – Delivery of Key Projects and Programmes (ER8) (July)
- Silvertown Tunnel Annual Review (CCO) (October)
- Piccadilly Line Upgrade (CCO) (October)
- Environment Programme – Air Quality and Environment (D IDP) (February/March)
- Technology Programme – Technology and Data (CCSO and D SCTO) (February/March)

Items to be scheduled:

- London Overground future planning
- Rotherhithe Tunnel
- Fiveways Corner in Croydon
- London Underground Lifts and Escalator Contracts (IDP) (February 2024)

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