

Agenda

Meeting: Elizabeth Line Committee

Date: Thursday 24 March 2022

Time: 10:00am

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

Members

Heidi Alexander (Chair)
Anne McMeel (Vice-Chair)
Prof Greg Clark CBE
Seb Dance
Dr Nelson Ogunshakin OBE

Mark Phillips
Kathryn Cearn OBE (Department for
Transport Observer)
Sarah Atkins

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](https://www.youtube.com/watch?v=Uj8vYUgU8p4), 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: Sue Riley, Secretariat Officer; Email: sueriley@tfl.gov.uk.

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

Howard Carter, General Counsel
Wednesday 16 March 2022

**Agenda
Elizabeth Line Committee
Thursday 24 March 2022**

1 Apologies for Absence and Chair's Announcements

2 Declarations of Interest

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 any 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 26 January 2022
(Pages 1 - 6)**

General Counsel

The Committee is asked to approve the minutes of the meeting of the Committee held on 26 January 2022 and authorise the Chair to sign them.

4 Matters Arising and Actions List (Pages 7 - 10)

General Counsel

The Committee is asked to note the updated actions list.

5 Safety Update (Pages 11 - 14)

Chief Executive Officer, Crossrail and Chief Operating Officer, Elizabeth line

The Committee is asked to note the paper.

6 Elizabeth Line Readiness (Pages 15 - 18)

Director, Elizabeth line

The Committee is asked to note the paper.

7 Project Status Update (Pages 19 - 24)

Chief Executive Officer, Crossrail

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

8 Finance and Risk Update (Pages 25 - 28)

Chief Finance Officer, Crossrail and Divisional Finance Director, London Underground

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

9 Project Representative Report (Pages 29 - 30)

Chief Executive Officer, Crossrail

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

10 Elizabeth Line Programme Assurance Update (Pages 31 - 44)

Director of Risk and Assurance

The Committee is asked to note the paper and the supplementary information in Part 2 of the agenda and approve the Integrated Audit and Assurance Schedule set out in Appendix 4.

11 Members' Suggestions for Future Discussion Items (Pages 45 - 48)

General Counsel

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

12 Any Other Business the Chair Considers Urgent

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

13 Date of Next Meeting

Wednesday, 25 May 2022 at 10.00am.

14 Exclusion of Press and Public

The Committee is recommended to agree 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), in order to consider the following items of business.

Agenda Part 2

15 Project Status Update (Pages 49 - 52)

Exempt supplemental information relating to the item on Part 1.

16 Finance and Risk Update (Pages 53 - 62)

Exempt supplemental information relating to the item on Part 1.

17 Project Representative Report (Pages 63 - 132)

Exempt supplemental information relating to the item on Part 1.

18 Elizabeth Line Programme Assurance Update (Pages 133 - 152)

Exempt supplemental information relating to the item on Part 1.

Transport for London

Minutes of the Elizabeth Line Committee

Microsoft Teams
9am, Wednesday 26 January 2022

Members

Heidi Alexander (Chair)
Anne McMeel (Vice-Chair)
Sarah Atkins (non-voting Member)
Prof Greg Clark CBE (from Minute 06/01/22)
Dr Nelson Ogunshakin OBE
Mark Phillips

Government Representative

Kathryn Cearns OBE

Executive Committee

Andy Byford	Commissioner
Howard Carter	General Counsel
Mark Wild	Chief Executive Officer, Crossrail

Board Member also in attendance

Sebastian Dance	Deputy Chair of TfL
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Staff

Joan Buszewska	Head of Programme Assurance, Crossrail
Lorraine Humphrey	Director of Risk and Assurance
Rachel McLean	Chief Finance Officer, Crossrail and Divisional Finance Director, London Underground
Hannah Quince	Crossrail Chief of Staff
Niraj Shah	Senior Internal Audit Officer
Howard Smith	Chief Operating Officer, Elizabeth line
Sue Riley	Secretariat Officer

Other Attendees

TC Chew	Chair of Crossrail Independent Investment Programme Advisory Group Sub-Group (for part)
Stephen Hill	Jacobs, Project Representative
Alison Munro	Chair, Independent Investment Programme Advisory Group

01/01/22 Apologies for Absence and Chair's Announcements

The Chair welcomed everyone to the meeting.

The flexibility of meetings regulations, which applied to TfL from August 2020 and enabled it to take decisions via videoconference, expired on 6 May 2021. As the Committee was unable to meet in person, any decisions required would be taken by Chair's Action, following the discussion of the item with Members.

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

The Chair advised the Committee that although she had stood down as Deputy Mayor for Transport and Deputy Chair of TfL at the end of December 2021, she had agreed to continue as a Member of the Board and Chair of this Committee. She welcomed the newly appointed Deputy Mayor for Transport and Deputy Chair of TfL, Seb Dance, to the meeting and wished him every success in his new role. Subject to approval by the Board on 2 February 2022, Seb Dance would become a Member of the Committee.

The Chair had been notified that TC Chew needed to leave the meeting early and therefore had agreed to vary the order of the agenda in the Part 2 to allow him to speak to Item 18 (Elizabeth Line Programme Assurance Update) before he left, otherwise Alison Munro would cover the item in his absence.

The Chair also congratulated Rachel McLean on her appointment as interim Chief Finance Officer, from April 2022, until Simon Kilonback's replacement was appointed.

TfL maintained a priority focus on safety. The Chair highlighted that there was a specific agenda item on safety which would be the first item considered at the meeting. She invited Members to raise any safety issues either under the specific agenda item or with the appropriate member of the Executive Committee after the meeting.

There were no apologies for absence but Prof Greg Clark CBE had given apologies for lateness.

02/01/22 Declarations of Interests

Members on the TfL Board confirmed that their declarations of interests, as published on tfl.gov.uk, were up to date. Members, Sarah Atkins and Kathryn Cearn's OBE confirmed there were no additional interests that related specifically to items on the agenda.

03/01/22 Minutes of the Meeting of the Committee Held on 25 November 2021

The Chair, in consultation with Committee Members, approved the minutes of the Elizabeth Line Committee meeting held on 25 November 2021.

The minutes would be signed by the Chair at a later date.

04/01/22 Matters Arising and Actions List

Howard Carter introduced the paper. It was agreed that a brief summary on health and safety executive governance arrangements would be circulated to Members, following the last meeting of the Safety, Health and Environment Leadership Team.

[Action: Mark Wild]

All other actions from previous meetings had been completed or were scheduled for completion.

The Committee noted the actions list.

05/01/22 Safety Update

Mark Wild introduced the paper, which provided an update on safety on the Crossrail project, TfL Rail (MTR EL) and the Infrastructure Manager, Rail for London (Infrastructure) Limited.

There were no significant operational safety incidents during Period 9, 2021/22 covered by the report and work continued safely at Bond Street station, within Covid-19 guidelines.

Two recent incidents were orally reported to the Committee, which included one severe incident, resulting in a broken ankle at Bond Street station. Both cases had been reviewed and preventative measures put in place.

The Committee was informed of further details of the revised arrangements since the ending of the Safety and Health Executive Leadership Team in November 2021, including a dedicated Health and Safety Forum made up of Tier 1 contractors. The health and safety regime would continue to adapt to reflect the stage of the project and safety remained the highest priority for senior staff.

An integrated team of TfL health and safety assurance officers supported the Elizabeth line programme, with a clear focus on operational safety and maintenance.

The Committee noted the recent reports of a member of the public accessing an Elizabeth line train at Abbey Wood station and exiting at Paddington, at which point MTR staff identified the member of the public and escorted him out of the station. It was confirmed that access was possible because of a gate being left unlocked at Abbey Wood station. MTR had carried out an investigation and action had been taken to ensure this could not happen again.

The long-term safety improvement plan implemented at Bond Street station continued to be effective and updated.

The Committee noted the paper.

06/01/22 Elizabeth Line Readiness

Howard Smith introduced the update on the performance of the TfL Rail operational service and the status of the readiness of the Infrastructure Managers for the operations and maintenance of the railway after handover from Crossrail.

This item had been moved further up the agenda to reflect the importance of operational readiness at this stage in the programme.

Volunteers had been contacted to assist with mass evacuation trials in February through to March 2022. Trial Operations Phase 2 would begin on 29 January 2022 with a focus on reliability and customer service.

The aborted Trial Operations before Christmas 2021 had had no significant impact on the programme. Auto-reverse trialling had begun once again but required track access which made planning more complex. All staffing and personnel required for the operation of the Elizabeth line were largely in place although training continued to be an ongoing challenge and staffing resource was being continually assessed during Trial Operations testing.

Train reliability continued to improve but there remained significant technical challenges. Each day of Trial Operations was reviewed in detail and weekly meetings were held with the Chief Officers of all the critical suppliers.

The Commissioner's decision when the Elizabeth line would open would be based on informed data, including reliability information.

The Committee noted the paper.

(Prof Greg Clark CBE joined the meeting at this point).

07/01/22 Project Status Update

Mark Wild presented the item and the supplementary information on Part 2 of the agenda, setting out an update on the status of the Crossrail project.

The Commissioner congratulated Mark Wild and his team on achieving all the deterministic dates within the project. The Committee endorsed the Commissioner's thanks. It was agreed that an item on the planning for achieving Stage 5b, while protecting revenue, would be discussed at a future meeting. **[Action: Mark Wild]**

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

08/01/22 Finance and Risk Update

Rachel McLean presented the update on the financial performance at Period 9, 2021/22 and on risk management progress.

As part of the funding regime, quarterly review meetings were held with the Department for Transport and the Treasury and a successful meeting had been held yesterday with no outstanding actions or issues raised.

It was anticipated that the budget for the final stage of the programme would be presented to the next meeting.

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

09/01/2022 Project Representative Report

Stephen Hill introduced the paper on the periodic reports from the Project Representative (P-Rep) on the Crossrail project for Period 9, 2021/22 and the management responses to these reports.

The exempt Period 9 report had been accepted as a late appendix, and had been circulated in advance of the meeting, as it was important for the Committee to consider the most up to date information. In line with the commitments made by the Mayor for greater transparency on the Crossrail project, copies of the reports were available on the TfL website, with the commercially sensitive material redacted.

Risks in relation to railway reliability and critical software updates were highlighted as well as a need for attention to focus on process and people.

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

10/01/22 Elizabeth Line Programme Assurance Update

Lorraine Humphrey and Joan Buszewska introduced the paper, which provided an update on progress with Elizabeth line Programme Assurance activity.

TC Chew welcomed the plan to improve train reliability, signalling and command systems. Line of Defence 3 would continue to review and assess the state of readiness of the operations team and further assurances on the progress of managing the digital assets long term would be sought.

(TC Chew left the meeting at this point).

Management responses to Independent Investment Programme Advisory Group recommendations, with clear deadlines, would be included in future reports, and tracked.

The Committee discussed the importance of ensuring that assurance on the project was proportionate, avoided duplication and was not over burdensome on managers during this critical phase, but provided added value to both senior officers and Committee Members.

It was agreed that the Audit and Assurance Plan would be reviewed to ensure it continued to be fit for purpose. **[Action: Lorraine Humphrey]**

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

11/01/22 Members' Suggestions for Future Discussion Items

Howard Carter introduced the item and the Committee's forward plan. Suggested future agenda items captured during the meeting would be included on the forward plan.

The Committee noted the forward plan.

12/01/22 Any Other Business the Chair Considers Urgent

There was no other urgent business.

13/01/22 Date of Next Meeting

The next scheduled meeting of the Committee would be held on Thursday 24 March 2022, at 10.00am.

14/01/22 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 the: Project Status Update; Finance and Risk Update; Project Representative Report; and Elizabeth Line Programme Assurance Update

The meeting closed at 11.30am.

Chair: _____

Date: _____

Elizabeth Line Committee

Date: 24 March 2022



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 Elizabeth Line Committee

Contact Officer: Howard Carter, General Counsel
Email: HowardCarter@tfl.gov.uk

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Actions from the meeting held on 26 January 2022:

Minute No.	Item/ Description	Action By	Target Date	Status/Note
04/01/22	Matters Arising and Actions List A brief summary on health and safety executive governance arrangements to be circulated to Members, following the last meeting of the Safety, Health and Environment Leadership Team.	Mark Wild	Following the meeting.	Information circulated. Complete.
07/01/22	Project Status Update An item on the planning for achieving Stage 5b, while protecting revenue, to be discussed at a future meeting.	Howard Smith	25 May 2022 meeting.	Scheduled. On Forward Plan.
10/01/22	Elizabeth Line Programme Assurance Update The Audit and Assurance Plan to be reviewed to ensure it continues to be fit for purpose.	Lorraine Humphrey	24 March 2022 meeting.	Update included in report on agenda. Complete.

Actions from previous meetings:

Minute No.	Item/ Description	Action By	Target Date	Status/Note
88/11/21	Members' Suggestions for Future Discussion Items An informal briefing on Bond Street station to be arranged.	Mark Wild/ Secretariat	24 March 2022 meeting.	Update in the report on agenda and oral update to be provided at the meeting.
56/07/21	Crossrail Complaints Commissioner's Report Ahead of the office of the Commissioner closing, the Chair to be engaged in discussions on how outstanding complaints were either closed out or who they were assigned to.	Chair/Mark Wild	25 May 2022 meeting.	Scheduled. On Forward Plan.

Elizabeth Line Committee



Date: 24 March 2022

Item: Safety Update

This paper will be considered in public

1 Summary

- 1.1. This paper provides an update on safety for Periods 10 and 11 2021/22.

2 Recommendation

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

3 Safety Update

- 3.1 This paper includes a performance update for the Infrastructure Manager, Rail for London (Infrastructure) Limited (RfL(I)) and the Crossrail Programme. In summary, safety performance continues to see an overall positive improvement compared to previous years, which has been attributed to continued safety leadership and engagement across the Elizabeth line.
- 3.2 During this period there were two significant incidents. The first resulted in the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) and lost time case (LTC) due to the injured person fracturing their ankle. This incident occurred at Bond Street when a traffic marshal tried to prevent a load falling from a flatbed lorry during a loading activity. The second incident was recorded as a high potential near miss (HPNM) and was as a result of unauthorised works taking place in the tunnel ventilation system at Canary Wharf.
- 3.3 Rail for London (Infrastructure) had one significant incident resulting in a Lost Time Injury (LTI) reportable under RIDDOR. An operative slipped whilst putting out protection. Despite the fall, the operative continued his shift but felt discomfort and pain the following day, this resulted in being placed on light duties for a period of more than seven days.
- 3.4 Since the last report to the Committee, the Crossrail HPNM rate has continued to decrease, with Period 10's rate being 0.33 and a further reduction to 0.30 for Period 11. There has been a steady reduction in the HPNM rate over the last few periods and this will continue if the current level of safety performance is maintained.
- 3.5 Crossrail RIDDOR and LTC Accident Frequency Rates (AFRs) reached historical lows during Period 10 – RIDDOR 0.04 and LTC 0.06. These are the lowest rates recorded since Period 7 2011/12. As a result of the significant injury in Period 10

(RIDDOR specified injury) the AFRs increased by 0.02 to 0.06 for RIDDOR and 0.08 for LTC. Further data on Period 10 and Period 11 performance is available in the Health and Safety Executive (HSE) storyboard at Appendix 1 and 2.

- 3.6 The RfL(I) Accident Frequency Rate remains at 0.39, Fatality Weighted Index 0.014 and Lost Time Injuries 0.289.
- 3.7 The industry recognised frequency rates are calculated over a rolling 13 periods.
- 3.8 In January 2022, Crossrail enacted its revised HSE governance structure with commencement of the Programme HSE performance review and the HSE forum. The revised arrangements continue to focus on HSE performance, safety leadership and contractor engagement and provide assurance to the executive as Crossrail heads towards demobilisation and conclusion. The revised structure will dovetail into the Elizabeth line periodic Executive Safety Review.
- 3.9 The Programme continues to manage the coronavirus pandemic risk with measures implemented by the supply chain remaining available to implement at short notice should there be a change to the risk profile and data.

List of appendices to this report:

Appendix 1: Crossrail Health, Safety and Environmental storyboard Period 10

Appendix 2: Crossrail Health, Safety and Environmental storyboard Period 11

List of Background Papers

None

Contact Officer: Mark Wild, Chief Executive Officer, Crossrail
Email: markwild@tfl.gov.uk

HSE Period Performance P10 21/22 Appendix 1

Significant Incidents

There have been four Significant Incident free periods during the last thirteen periods – P4, 5, 9 and 10.

RIDDOR & LTC

No recorded RIDDORs or LTCs in the period.

Over 13 periods, we have had 3 RIDDORs and 4 LTCs.

HPNM

Zero HPNMs for the second successive period.

Over 13 periods there have been 22 HPNMs reported.

CRL Injury Trend

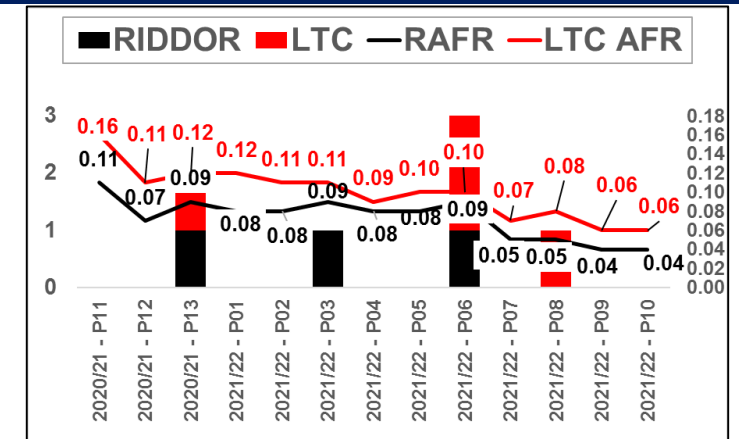
During 2021 93% of days were harm free.

Period Overview Significant Incidents

H&S CALENDAR 2021/22-P10						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
12 Dec	13 Dec	14 Dec	15 Dec	16 Dec	17 Dec	18 Dec
19 Dec	20 Dec	21 Dec	22 Dec	23 Dec	24 Dec	25 Dec
26 Dec	27 Dec	28 Dec	29 Dec	30 Dec	31 Dec	01 Jan
02 Jan	03 Jan	04 Jan	05 Jan	06 Jan	07 Jan	08 Jan

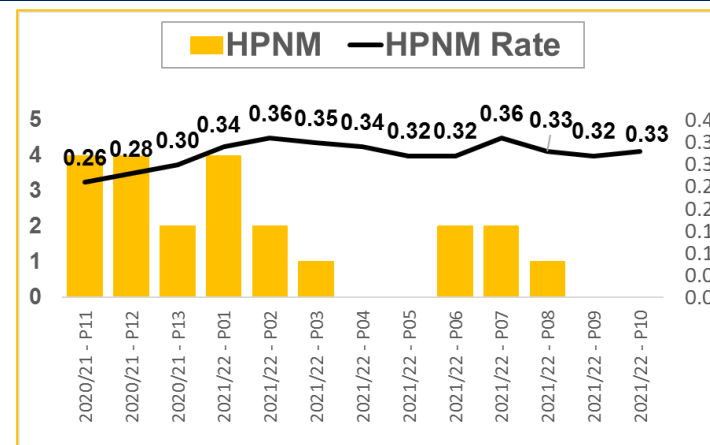
Zero Significant Incidents were reported during P10.

RIDDOR and LTC



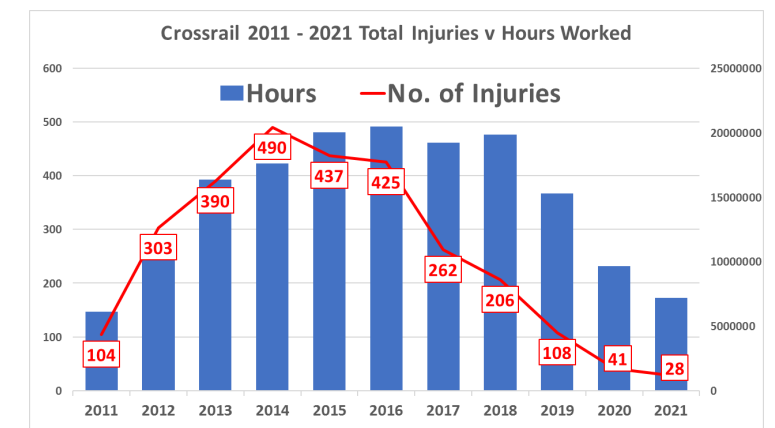
RIDDOR and LTC AFRs remained at 0.04 and 0.06 respectively, and are at their lowest levels since P07 2011/12.

High Potential Near Miss



Rate increase by 0.01 to 0.33. Five HPNMs recorded during the last six periods compared to seventeen in the previous six.

Crossrail Injury Trend



The number of Injuries continue to trend down with twenty-eight during 2021 compared to forty-one the previous year.

HSE Period Performance P11 21/22 Appendix 2

Significant Incidents

Following no significant incidents in periods 9 and 10 we have had 2 significant incidents in period 11.

RIDDOR & LTC

There was an incident reported at Bond St. on 13th January where a Traffic Marshall's ankle was fractured during the loading of a flat-bed lorry which resulted in a RIDDOR and Lost Time Case.

Over the last 13 periods there has been four RIDDORs and five LTCs.

HPNM

One HPNM was recorded during the period at Canary Wharf where contractors were working in the Shafts without the correct permission.

Over thirteen periods there have been nineteen HPNMs reported.

HSPI SMART

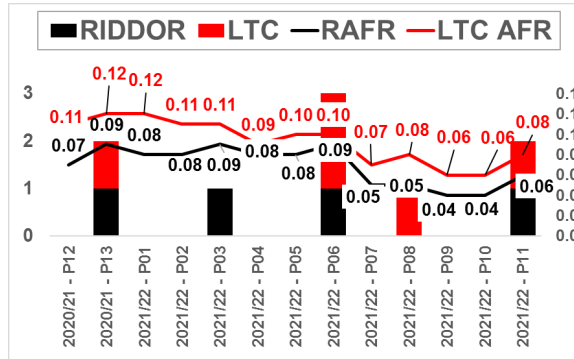
We have introduced a new HSPI 'SMART' index this period which has caused some issues with reporting. This score is not representative of the site safety activity and the new process is being re-briefed and was reviewed at Programme HSE Performance Review.

Significant Incidents Overview

HSE CALENDAR 2021/22-P11						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
09 Jan	10 Jan	11 Jan	12 Jan	13 Jan Bond St. RIDDOR & LTC	14 Jan	15 Jan
16 Jan	17 Jan	18 Jan	19 Jan	20 Jan	21 Jan	22 Jan
23 Jan	24 Jan	25 Jan	26 Jan	27 Jan	28 Jan	29 Jan
30 Jan	31 Jan	01 Feb	02 Feb	03 Feb CRL CWF HPNM	04 Feb	05 Feb

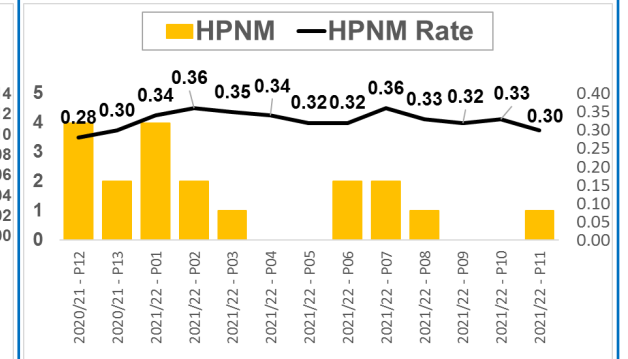
Two Significant Incidents occurred during the period. One resulting in a RIDDOR and LTC at Bond St. and a HPNM Canary Wharf.

RIDDOR and LTC AFRs



RIDDOR and LTC AFRs increased to 0.06 and 0.08 respectively, this is due to the incident at Bond St. on 13th January.

High Potential Near Miss



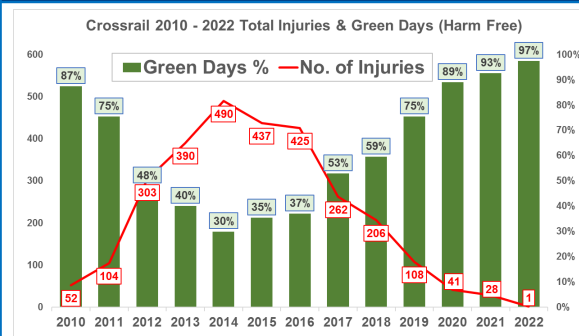
There was one HPNM during the period, at Canary Wharf. The HPNM rate has decreased to 0.30 from 0.33.

HSPI SMART - Engagement



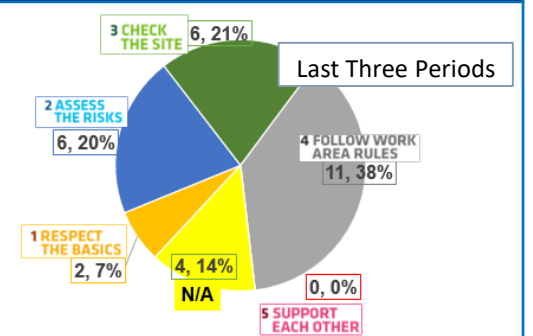
The HSPI SMART score for P11 is 1.40, this shows a reduction from the last period of the HSPI5.

Crossrail Injury Trend



Injuries continue to trend down with one injury so far during 2022 compared to three injuries during the same timeframe during 2021.

Behaviours - Golden Rules



Golden Rule 4 Follow Work Area Rules continues to be the most reported breach over the last three periods.



Elizabeth Line Committee



Date: 24 March 2022

Item: Elizabeth line Readiness

This paper will be considered in public

1 Summary

- 1.1 This paper provides an update on the performance of the TfL Rail operational service and the status of the transition and readiness of the Infrastructure Managers for the operations and maintenance of the railway after handover from Crossrail.

2 Recommendation

- 2.1 The Committee is asked to note the paper.

3 Performance of Operational Service

- 3.1 TfL Rail delivered an improved Public Performance Measure of 94.3 per cent during Period 11 (9 January – 5 February 2022). Performance on the east was 94.9 per cent, its highest since period 7 despite issues with the Class 345 full-length trains experiencing emergency brake applications approaching Stratford. The west delivered 93.5 per cent, and whilst down on last period, still remains higher than previous performance. The overall Moving Annual Average trend at 94.6 per cent remains ahead of target.
- 3.2 In the east, passenger services between Shenfield and Liverpool Street are now being operated by nine-car Class 345 trains. In the west, services to Heathrow are operated by nine-car Class 345 train, whilst services between Reading and Paddington are operated by a combination of nine-car and seven-car Class 345. The seven-car trains are progressively being converted at Old Oak Common Depot to nine-cars with this programme due to be complete in May for all but three residual seven-car trains which will remain in use until the start of through-running services into the Elizabeth line central section (Stage 5b).
- 3.3 The Class 345 fleet has been loaded with the latest train and signalling control software and reliability has improved, however the level of growth is below the forecast level. Train manufacturer Alstom is in the process of testing another train software release, for loading to the fleet starting in mid-April 2022.

4 Operational Readiness

- 4.1 The first of five large scale Trial Operations evacuation exercises took place on 13 February at Custom House involving 350 people. This was followed by an exercise at Farringdon on 19 February and at Limmo Peninsula on 26 February 2022. This phase involves collaboration with a number of organisations, including

Network Rail, British Transport Police, London Fire Brigade and the London Ambulance Services, demonstrating how they would respond to incidents on the network. All three exercises were conducted safely with no incidents recorded and were classified as passed with comments. Lessons learnt from each exercise have been captured and subsequent actions embedded to further improve the processes for the next phase of exercises. The fourth and final exercises took place at Canary Wharf and Paddington on 5 and 13 March 2022 respectively with over 2,000 colleague volunteers participating. In between the large scale exercises, smaller scale scenarios continued during the week as well as reliability and system testing.

- 4.2 Performance has generally been positive following the completion of the tunnel ventilation system works and commissioning of ELR110 signalling software. Although some systemic issues remain, further improvements in performance are expected when the next software upgrades are rolled out.
- 4.3 There are further upgrades planned to the trains and signalling software over the Easter period, including the commissioning of the ELR200 software and Alstom 5.6 and 5.7 software upgrade. These upgrades are expected to provide increased operational reliability of the trains, routeway and signalling systems.
- 4.4 Nine of the ten central stations are now under our control with Canary Wharf station handed over since the last update. Operational readiness continues to be a key focus and the operations training and assessment 'end to end' programme continues to plan. The recruitment for additional Traffic Managers resulted in several roles being filled with the successful candidates expected to join the organisation in the coming weeks. Further strengthening of Traffic Managers, Incident Response Managers and Service and Infrastructure Managers is also progressing.
- 4.5 Customers on the west of the central section have been benefitting from new station buildings and step-free access following the completion of Network Rail station enhancement works. The remaining construction activities and snagging works are forecast to be complete at the end of March 2022.
- 4.6 Network Rail enhanced station upgrade works on the east continue at Ilford and Romford. Ilford's entry into service is currently forecast for the Summer, although this is under review pending the resolution of the structural issue in relation to the ticket hall slab. Romford station remains on track to enter service in the coming months, but Network Rail continue to assess the programme for both stations and their entry into service.

5 TfL Residual Works Programme

- 5.1 The residual works team continue to progress a number of pre and post revenue service activities across the London Underground and Rail for London (Infrastructure) Limited estate. Weekly meetings attended by senior representation from all areas are occurring to finalise post revenue scope in addition to removing any blocks to pre revenue delivery.

List of Appendices:

None

List of Background Papers:

None

Contact Officer: Howard Smith, Director, Elizabeth line
Email: howardsmith@tfl.gov.uk

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Elizabeth Line Committee



Date: 24 March 2022

Item: Project Status Update

This paper will be considered in public

1 Summary

- 1.1 This paper provides an update on the status of the Crossrail project.
- 1.2 Following the initial phase of transition, the Elizabeth Line Delivery Group (ELDG) was formed to ensure appropriate oversight of the delivery of the Elizabeth line by Crossrail and TfL Executive. The ELDG is chaired by the Commissioner. In line with the commitments made by the Mayor for greater transparency of the Crossrail project, the minutes and actions from ELDG are available on our website¹. Available reports will be uploaded to correspond to the meeting of this Committee.
- 1.3 A paper is included on the Part 2 agenda which contains supplementary 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 supplementary paper on Part 2 of the agenda.**

3 Crossrail Update

- 3.1 Crossrail Limited is in the complex final stages of delivery of the Elizabeth line. The project remains aligned to the scheduled opening of the railway to passengers in the first half of 2022.
- 3.2 The first phase of Trial Operations commenced on 20 November, in line with the earliest forecast dates. The scenarios generally took place four days a week, allowing for reliability running and system testing on the other days. Over 150 scenarios were undertaken during this period including testing the response to an unwell passenger and an obstruction on the line. The majority of the exercises in this phase passed with comments, which have provided key learnings for the programme that will be ironed out ahead of passenger service.

¹ <https://tfl.gov.uk/corporate/publications-and-reports/elizabeth-line-delivery-group>

- 3.3 The second phase of Trial Operations commenced on 28 January 2022. This phase involves a range of organisations, including TfL and London Underground, MTR Elizabeth line (as the operator), and Network Rail collaborating on the response to trial scenarios along with thousands of staff. Emergency services including the British Transport Police, London Fire Brigade and London Ambulance Service are also involved, demonstrating how they would respond to incidents on the network and in stations.
- 3.4 Four mass staff events have been completed, as part of this phase, with one more left to do before commencement of timetabled running. These have involved over 2,000 staff volunteers and have included the evacuation from a train at Custom House, evacuation from a train outside Farringdon station, and evacuation from a train into a tunnel via the emergency access shaft at Limmo Peninsula. The mass evacuations have been positive with all of the observations and learning informing subsequent exercises.
- 3.5 The final mass volunteer event has taken place at Paddington and involved the largest number of participants, with more than 2,000 staff volunteers taking part.
- 3.6 Following the completion of Trial Operations, there will be a period of time dedicated to timetabled running, closely mirroring the Elizabeth line service timetable. This will be the final stage before the railway will open and its duration will be determined by the ability to demonstrate improved reliability across the railway.
- 3.7 During Trial Operations, necessary works have been undertaken including the commissioning of the tunnel ventilation system software upgrades before Christmas, the latest signalling software update, the commissioning of the latest control and communications software and the replacement of voltage transformers.
- 3.8 There are further upgrades planned for the trains and signalling software over the Easter period, including the commissioning of the ELR200 software and Alstom 5.6 and 5.7 software upgrade. These upgrades are expected to provide increased operational reliability of the trains, routeway and signalling systems.
- 3.9 Work continues on completing the necessary final safety assurance documentation and relevant assurance activities to support Revenue Service. Progress is being monitored against the schedule on a weekly basis.
- 3.10 Canary Wharf became the latest station to be transferred to TfL, on 21 January 2022, meaning nine of the ten new central section stations are ready to support passenger service. The current configuration of stations under the responsibility of TfL is the minimum required to open the railway.
- 3.11 Bond Street, the remaining station to be transferred to TfL, has been decoupled from the opening of the railway. Good progress continues to be made at the station but it is unlikely that it will be fully operational until after the opening of Stage 3.
- 3.12 With the majority of central section stations now in an advanced state, Tier 1 contractors have demobilised from eight of the central section stations. Crossrail has been undertaking the role of Tier 1 contractor at Bond Street and will remain

until works are substantially complete. Crossrail Limited is also looking at the way it will continue to work on delivering the full capability of the railway, including reducing the size of the organisation that will deliver the final stages of the programme.

- 3.13 The dashboard at Appendix 1 of this paper provides detail on health and safety performance, forecast dates and milestones achieved.

List of Appendices:

Appendix 1: Crossrail Project Dashboard

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

List of Background Papers:

None

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ELIZABETH LINE
COMMITTEE: DASHBOARD

Data date: 28-Feb-22 –App 1

READER GUIDANCE:

HEALTH AND SAFETY

- A High Potential Near Miss (HPNM) is an incident that could have caused a significant injury but that did not in this instance.
- A Lost Time Case (LTC) is an incident that resulted in an individual or individuals suffering an injury that necessitated time off from working.
- A RIDDOR is an incident that is reportable under the RIDDOR 2013 regulations. For more detail on what is reportable, [click here](#) for the Health and Safety Executive guidance page.
- Health and Safety Smart Performance Index is a new system of measurement. It reflects most projects are in close out mode and indicates this in terms of targeting safety interventions based on volume of site activity.

Page 23
MILESTONE FORECAST SCENARIOS

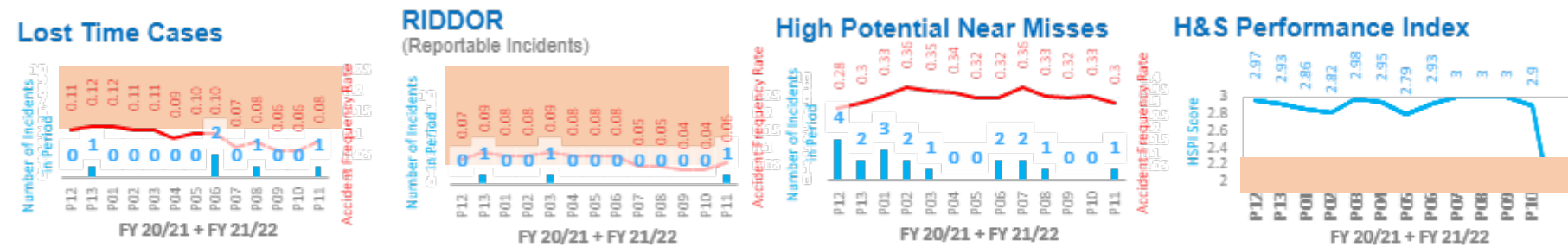
Forecast scenario dates are derived through the 4-weekly schedule and risk updates, with quantitative risk modelling building the P50 and P80 Scenario Dates. The QSRA modelling still supports the start of revenue service in the first half of 2022.

- The table identifies the earliest possible dates before risk assessment which is derived from the shortest path to completion, and the P50 and P80 dates (i.e. the date by which, through risk modelling, a milestone is achieved 50% of the time and 80% of the time respectively).
- Stage 3 Revenue Service remains as early as possible and the P50 (May 22) and P80 (June 22) forecast dates remain stable.

ACTIVITY SEQUENCING TO STAGE 3 REVENUE SERVICE

- The key risks remain completion of EOWL/Dependencies, completion of assurance and satisfactory reliability growth

1. HEALTH AND SAFETY

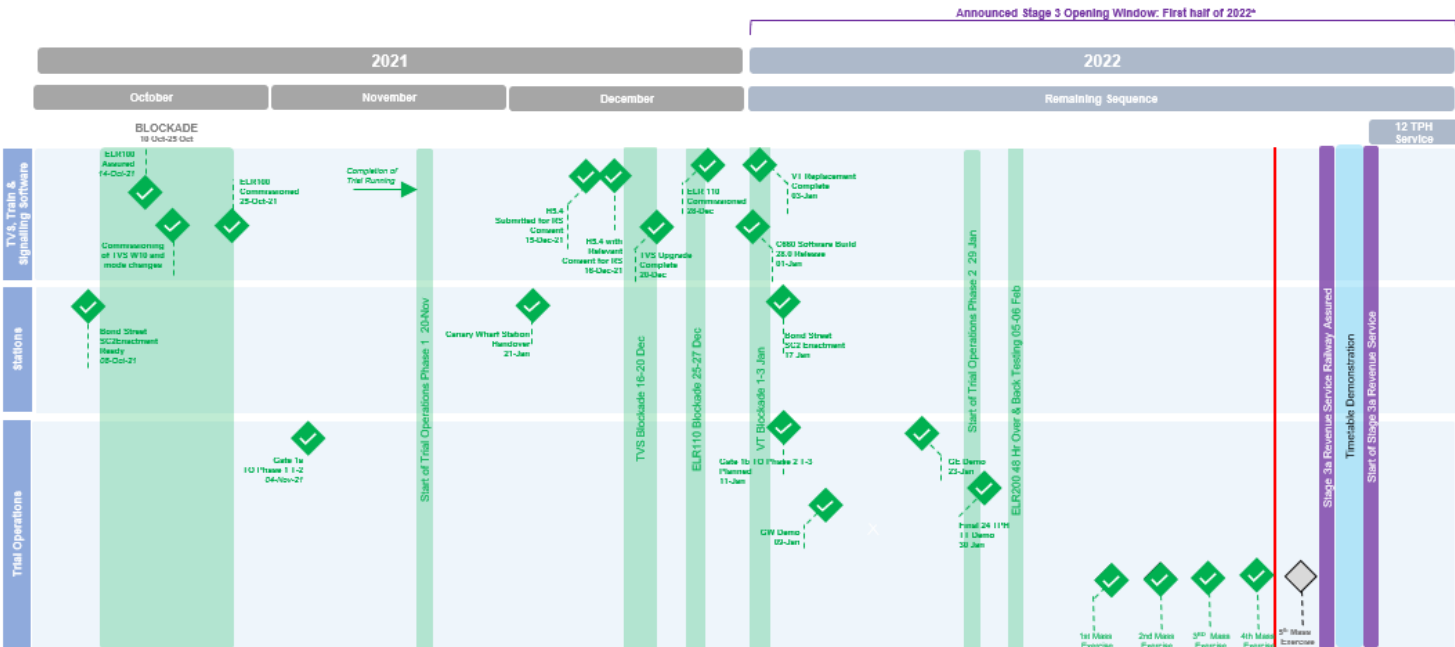


2. KEY MILESTONES – FORECAST SCENARIOS (BASED ON PERIOD 10 FY21/22 DATA)

Note: This forecast and performance to date aligns to the P50 Scenario Date that informed the August 2020 announcement that Crossrail expects the Elizabeth line to open within the first half of 2022.

Milestone	Earliest Date (Period 02 FY21/22)	P50 Scenario Date	P80 Scenario Date
Transition to a ROGS Environment		ACHIEVED – 27 March 2021	
Trial Running (with 4TPH) - Start		ACHIEVED – 10 May 2021	
Trial Operations Phase 1 - Start		ACHIEVED – 20 November 2021	
Trial Operations Phase 2 - Start		ACHIEVED – 28 January 2022	
Commencement of Stage 3 Revenue Service	March 2022	May 2022	June 2022

3. KEY ACHIEVEMENTS AND ACTIVITY SEQUENCING TO STAGE 3 REVENUE SERVICE



*Note: this is the sequence and is not reflective of timing

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Elizabeth Line Committee



Date: 24 March 2022

Item: Finance and Risk Update

This paper will be considered in public

1 Summary

- 1.1 This paper provides an update on the financial performance at Period 11 2021/22 and on risk management progress.
- 1.2 A paper is included on the Part 2 agenda which contains supplementary 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 and other parties. 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 supplementary information on Part 2 of the agenda.

3 Financial Performance

- 3.1 Spend in Period 11 was £37m and is £508m for the financial year to date. The period spend was £8m below the Delivery Control Schedule 1.2 (DCS1.2) Budget and the Programme is £54m below the DCS1.2 Budget for the year to date.
- 3.2 On average the Programme has seen an underspend of £10m a period over the past financial year. This average has reduced to £8m since DCS 1.2 was set in Period 5.
- 3.3 The number of Crossrail full time equivalent staff is 581 (note this excludes any consultancy resource). This was 78 higher than had been forecast in the DCS1.2 Workforce Plan, driven by deferred demobilisation of staff due to a delay in milestone dates being achieved, together with additional resources at Bond Street station where Crossrail is acting as the Tier 1 contractor.

4 Anticipated Final Crossrail Direct Cost (AFCDC)

- 4.1 The current P50 (50th percentile) AFCDC is £15,963m, £23m higher than DCS1.2, and £24m higher than previously reported in Period 9.
- 4.2 The P50 AFCDC is currently £174m above the additional funding of £825m, £23m higher than as at DCS1.2. When the £825m additional funding was confirmed, the funding package was £91m lower than the P50 AFCDC at the time.

- 4.3 At higher levels of probability, current estimates of up to £1.1bn additional funding are consistent with previous estimates.
- 4.4 Although potential new cost pressures are being prudently recognised in the AFCDC as they arise, the Programme continues to maintain significant risk and contingency budgets. Actions are ongoing across all areas to identify opportunities to reduce the AFCDC and mitigate cost pressures.

5 Funding

- 5.1 On 30 November 2020, a funding and financing agreement was reached between TfL, Greater London Authority and the Government providing £825m of additional funding for the Crossrail Programme.
- 5.2 Following the funding and financing agreement of November 2020 and the TfL Board's approval of Programme and Project Authority, as at Period 11, Programme and Project Authority drawn down is £15,702m.
- 5.3 This means of the additional £825m funding, £738m has been drawn down as at Period 11.
- 5.4 The authority currently drawn down by the Programme covers commitments over a number of future periods, and in some instances, particularly in relation to resources, for the remainder of the Programme.
- 5.5 Cost to date recognised on the Programme is £15,548m versus the total Programme and Project Authority available of £15,789m, indicating there is no short term concern that the Project will not be able to continue to meet its commitments.

6 Alternative Delivery Model (ADM)/Residual Works Team (RWT)

- 6.1 An ADM/RWT working group has been set up which has engaged senior management across TfL to ensure that appropriate agreements between future operators, maintainers and the Project have taken place in relation to scope delivery.
- 6.2 The focus continues to be on clarifying the requirement for the remaining items of scope and ensuring delivery timescales are aligned to key project milestones, particularly those items needed for Revenue Service.
- 6.3 The ability to accelerate the scope transfer to the ADM/RWT has been key to facilitating the demobilisation of the Tier 1 Station contractors which has now been achieved at all stations with the exception of Bond Street and Canary Wharf where Crossrail acts as the Tier 1 contractor.

7 Risk

- 7.1 There are 17 Level 1 Programme Risks at Period 11.
- 7.2 The Level 1 Programme Risks summarise the significant risks that face the Programme. The review and update of Level 1 risks is now a well-established part of the Executive Group cadence, with a substantive review of risks and

interventions on a bi-weekly basis. Risks are also tracked and monitored by the Elizabeth Line Delivery Group.

List of appendices to this report:

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

List of Background Papers:

None

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Elizabeth Line Committee



Date: 24 January 2022

Item: Project Representative Report

This paper will be considered in public

1 Summary

- 1.1 This paper provides an update on the periodic reports from the Project Representative (P-Rep) on Crossrail for Periods 10 and 11.
- 1.2 A paper is included on the Part 2 agenda which contains supplementary 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 report and the supplementary paper on Part 2 of the agenda.**

3 Project Representative

- 3.1 The P-Rep is in place to provide the Sponsors, TfL and the Department for Transport, with oversight of project delivery, advise and raise points of challenge to the Sponsors and scrutinise progress.
- 3.2 Sponsors are currently considering the transition arrangements for the P-Rep team to be implemented following the introduction of Stage 3. The transition arrangements are being developed in conjunction with the Elizabeth line Programme Assurance team to respond to the remaining risks on the programme, maintain an appropriate level of independent review and maintain our commitments to transparency.
- 3.3 In line with the commitments made by the Mayor for greater transparency of the Crossrail project, the most recent P-Rep reports are included as part of the regular update to the Committee and are available on our website¹. The reports include observations highlighted by the P-Rep for Sponsor attention.
- 3.4 The P-Rep observations are shared with Crossrail and are discussed in detail by Crossrail, P-Rep and the Commissioner at the regular meetings of the Elizabeth Line Delivery Group. Crossrail also produces a written response to the P-Rep report that is included with the P-Rep reports on our website.

¹ <https://tfl.gov.uk/corporate/publications-and-reports/crossrail-project-updates>

- 3.5 As with all the P-Rep reports, it has been necessary to make some redactions to the reports prior to publication to protect commercially sensitive material. We have sought to keep such redactions to a minimum. Unredacted versions of the P-Rep reports and Crossrail responses have been included in the paper on Part 2 of the agenda.

List of Appendices:

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

List of Background Papers:

None

Contact Officer: Mark Wild, Chief Executive Officer, Crossrail

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Elizabeth Line Committee



Date: 24 March 2022

Item: Elizabeth Line Programme Assurance Update

This paper will be considered in public

1 Summary

- 1.1 This paper reports on progress with programme assurance activity across the Elizabeth line during Quarter 3 of 2021/22 (Q3).
- 1.2 A paper is included on the Part 2 agenda which contains supplementary 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 supplementary information in Part 2 of the agenda and approve the Integrated Audit and Assurance Schedule set out in Appendix 4.**

3 Background

- 3.1 The Elizabeth Line Integrated Assurance Framework (IAF) is based on a Three Lines of Defence (3LoD) model comprising:
 - (a) Line 1 – Management functions of Crossrail, Rail for London (Infrastructure) Limited and key interfaces;
 - (b) Line 2 – Project and Programme Assurance Elizabeth line (PPA-EL); and
 - (c) Line 3 – TfL Internal Audit and a sub-group of the Independent Investment Programme Advisory Group (IIPAG-EL).
- 3.2 This paper reports specifically on Line 2 (PPA-EL), Line 3 (Internal Audit) and Line 3 (IIPAG-EL) assurance progress.
- 3.3 The teams meet periodically with a panel of advisers and the Project Representative to ensure that assurance is carried out by the right team, at the right time and to avoid duplication and minimise overlap of effort.
- 3.4 A risk based Integrated Audit and Assurance Schedule has been developed for the next six months and is attached as Appendix 4 to this report. This schedule has been submitted to the necessary groups and this Committee for approval.

4 Line 2 (PPA) Assurance

- 4.1 Excellent progress has been made since the last report and the Elizabeth line is progressing at pace, building confidence that the railway is nearing completion and getting closer to being ready for Revenue Service. The train and overall system performance continue to build and there are still additional software drops and other interventions to further improve operational performance.
- 4.2 Line of Defence 2 (LoD2) Assurance continues to provide assurance on an ongoing continuous assurance basis as well as carrying out a series of Targeted Assurance Reviews on key areas where there are risks identified, which may impact upon Revenue Service and beyond. Formal reporting continues to be through the LoD2 Periodic Assurance Review (PAR) Reports.
- 4.3 Since the last meeting of the Committee, LoD2 has issued PAR Reports covering Periods 10 and 11 of 2021/22, which have provided input to the periodic Integrated Assurance Report to the Elizabeth Line Delivery Group and the Committee.
- 4.4 In relation to the timeline to complete, based upon our Period 11 assessment, it is the opinion of LoD2 assurance that whilst the schedule for bringing the Elizabeth line into Revenue Service is under pressure, considering the balance of risks, it is currently most likely to still be on-track to open within 'first half of 2022'.
- 4.5 Regarding cost to complete, current costs and financial commitments are still within the approved budget. Costs to complete the works remain under pressure but cost reduction works are ongoing, and contract close out negotiations with the Tier 1 suppliers nears completion enabling all remaining costs to be fully understood and provisioned for.
- 4.6 On completion of the works, the project has continued to make significant progress since the last report, key progress highlights including:
- (a) the introduction of a new release of Siemens software ELR110 during December 2021, and new train software H5.4 improving the overall system reliability performance;
 - (b) Trial Running in the Central Operating Section continues with increasing periods of 12 trains per hour;
 - (c) stations progress continues with the transfer of responsibility for Canary Wharf to the Infrastructure Manager, RfL(I), leaving only Bond Street remaining;
 - (d) maintenance productivity and access continue the trajectory to support projected Revenue Service requirements; and
 - (e) Trial Operations phase 2 with the first mass evacuations exercises having been completed and lessons learned for the Operations teams.
- 4.7 Key indicators of maintenance performance are being monitored to provide greater clarity around the average fault identification and diagnosis interval and the overall fault-to-fix cycle time, both of which are improving week on week.

5 Line 3 (TfL Internal Audit) Assurance

- 5.1 This section covers the Internal Audit activities that were agreed in the Integrated Assurance and Audit Schedule shared at the last meeting,
- 5.2 In Q3 no audit reports were issued, four audits are in progress and three audits are planned to commence in Quarter 4 of 2021/22 (Q4).

Audit Delivery

- 5.3 A full list of audits in progress at the end of Q3 is included as Appendix 1, work planned to start in Q4 is included as Appendix 2, and details of changes to the Audit Plan are included as Appendix 3.
- 5.4 As part of the annual audit planning process, there has been a reprioritisation exercise of the Elizabeth line part of the Audit Plan to ensure assurance was being provided against the relevant risks. As a result, four audits have been cancelled and two audits added, all of which are detailed in Appendix 3.
- 5.5 There has been an evident shift in the accountability of audits moving from Crossrail to cover all of the Elizabeth line. These have been reflected in the focus of new audits in Q4.

Management Actions

- 5.6 There are currently seven open actions that have only recently gone overdue. All are in the process of being followed up and are of no cause for concern.

6 Line 3 (IIPAG-EL) Assurance

- 6.1 The terms of reference of the IIPAG-EL sub-group require the group to provide a look ahead of its proposed areas of interest and work. The previous work plan has been completed and a new list of areas of interest has been proposed as part of the revised Integrated Audit and Assurance Schedule. This schedule is maintained by LoD2 and reviewed within the Elizabeth Line Programme Assurance Group which is co-ordinated by LoD2/PPA. Progress with the IIPAG-EL's previous three main areas of focus is summarised as follows:
 - (a) Baseline 1.2 – the sub-group has received regular updates from LoD2, the Project Representative and other stakeholders, reviewing the logic and compliance to the programme. A number of suggestions have been put forward by IIPAG-EL to the Planning teams as they develop the next version of the baseline incorporating the detailed schedule to take us from Stage 3 (Revenue Service) to Stage 5b and 5c of the programme delivery;
 - (b) supporting the work of the Railway Assurance Board - the Integrated Technical Assurance Panel (ITAP) – the sub-group has engaged with ITAP, gaining an understanding of the planning arrangements and implications for closing out the remaining assurance dependencies. This continues to be a key area of focus for the Assurance team; and
 - (c) digital railway – the sub-group has completed its review of this area including an assessment of cyber security concerns.

- 6.2 The new targeted areas for IIPAG-EL are included in the Integrated Audit and Assurance Schedule in Appendix 4 below.
- 6.3 The overall assessment by LoD3 (IIPAG-EL sub-group) is that the overall assurance framework has continued to operate effectively over the last quarter.

List of Appendices:

Appendix 1: Line 3 (TfL Internal Audit) Work in progress at the end of Q3 2021/22
Appendix 2: Line 3 (TfL Internal Audit) Work planned to start in Q4 2021/22
Appendix 3: Line 3 (TfL Internal Audit) Changes to the 2021/22 Audit Plan
Appendix 4: Integrated Audit and Assurance Schedule

List of Background Papers:

None

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Elizabeth Line Committee

Work in progress at the end of Q3 2021/22

Appendix 1

- There were four audits in progress at the end of the quarter

Enterprise risk	Directorate	Ref	Audit title	Objective	Current Status
ER14 Opening of the Elizabeth line	Crossrail	20 507	Crossrail HSE Framework	To provide assurance over the adequacy and effectiveness of the Health, Safety and Environment framework.	In Progress
ER14 Opening of the Elizabeth line	Crossrail	21 048	Crossrail Complaints Commissioner Accounts	To provide assurance on the accuracy of the Crossrail Complaints Commissioner Accounts for 2020/21.	In Progress
ER14 Opening of the Elizabeth line	Crossrail	21 061	Demobilisation of Tier 1 Contractors -phase 2	To provide assurance that the controls around Tier 1 contractor demobilisation are adequate and effective.	In Progress
ER14 Opening of the Elizabeth line	Crossrail	21 062	Disposal of Temporary Assets	To provide assurance that the controls around the disposal of temporary assets are adequate and effective.	In Progress

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Elizabeth Line Committee

Work planned to start in Q4 2021/22

Appendix 2

- There are three audits planned to start during the next quarter

Enterprise risk	Directorate	Ref	Audit title	Objective
ER14 Opening of the Elizabeth Line	Crossrail	21 051	Information Management and Transfer	To review the effectiveness of controls around information management and transfer from Crossrail to TfL.
ER13 Governance and Controls Suitability	Crossrail	21 069	P&SC capacity to take on Elizabeth line procurement activities	To provide assurance that Procurement and Supply Chain have the capacity to effectively take on procurement activities for the Elizabeth line.
ER12 Asset Condition unable to Support TfL Outcomes	Crossrail	21 071	Obsolescence of Critical Operational Systems (new addition)	To provide assurance that adequate controls are in place to prevent critical operational systems becoming obsolete.

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Elizabeth Line Committee

Changes to the 2021/22 audit plan

Appendix 3

- There were six changes to the plan this quarter, four cancellations and two new audits

Ref	Audit Title	Status	Audit Comments
21 047	Management of Crossrail Residual works	Cancelled	Project Assurance are better placed to provide assurance as it becomes a regular programme. Sponsor will liaise with Project Assurance. Programme is in too early a state to gauge the effectiveness of how the programme is being managed.
21 049	Employer's completion process	Cancelled	This audit has been cancelled due to changes in risk and business priorities.
21 050	Management of Crossrail direct contracts	Cancelled	This audit has been cancelled to avoid duplication. KPMG are carrying out assurance work on the productivity and demobilisation of Bond Street and Canary Wharf, which will include elements of our scope.
21 053	Organisational Effectiveness	Cancelled	This audit has been cancelled to avoid duplication. This scope will be incorporated by LoD 2/IIPAG in a targeted review of the operational effectiveness of all parties to receive the Elizabeth line.
21 069	P&SC capacity to take on Elizabeth line procurement activities	New	To provide assurance that Procurement and Supply Chain have the capacity to effectively take on procurement activities for the Elizabeth line.
21 072	Scope allocation surgery process	New	To provide assurance on the adequacy of controls in place for allocating costs to outstanding works on the Elizabeth line prior to passing them across to TfL.

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Appendix 4

Integrated Audit and Assurance Schedule for Elizabeth line

March 2022



Audit and Assurance – Areas to be covered						
Priority	Topic	Evidence of Need	Targeted Review / Continuous Assurance	Who	When	Objectives
1	Reliability of Performance (System, Train, Integration)	<ul style="list-style-type: none">Rolling Stock - Evidence of mileage and reliability (MTIN / PPM) being significantly lower than planned going into Trial Operations phase two.Railway Systems – Significant number of Operational Restrictions. Understanding what ELR200 (signalling software upgrade) delivers and what the remaining delta is.Infrastructure Systems – Tunnel Vent System, Platform Screen Doors performing lower than required for Revenue Service.	Continuous Assurance (via the Executive reporting process)	LoD2/ IIPAG-EL	Up to Revenue Service and ongoing until Stage 5b	<p>To understand what management decisions / interventions are being taken to get Reliability to where it needs to be for 24 trains per hour (tph).</p> <p>What if any further interventions are required?</p>
2	<p>Elizabeth line Operational Capability to cope with 24tph. Resilience of team (numbers, training, capacity) to deal with busy operations and incidents (in view of additional pressure a 24tph will bring)</p> <p>Effectiveness of all parties within Elizabeth line to positively and collaboratively deliver an effective, efficient and seamless passenger experience</p>	<ul style="list-style-type: none">Sometimes disjointed relationships and unclear accountabilities.TfL managing direct contracts with Alstom and Siemens – MTR minimal opportunity to influence and together improve the service delivery.Workload of the Traffic Manager’s during disruption (alarms, operational restrictions).Complexity of multidimensional role (skillset)Driver numbers, capability and resilience.Mixed levels of experience of some of the business-as-usual railway operations team	Continuous Assurance (via the Executive reporting process)	LoD2 / IIPAG-EL	Up to Revenue Service and ongoing until Stage 5b	<p>To understand how effective the management interventions are in building collaboration across all aspects and parties involved in the delivery of an effective operation.</p> <p>To make recommendations via Executive reporting which will improve the long-term resilience of the team.</p>
3	Rail for London (Infrastructure) Limited-Maintenance effectiveness (people, process, systems, suppliers)	<ul style="list-style-type: none">Response and fix times required are much greater in a 24tph service than required during Revenue Service or 12tph.Metrics are only just being put in place to drive performance improvements.	Continuous Assurance (via the Executive reporting process)	LoD2 / IIPAG-EL	Up to Revenue Service and ongoing until Stage 5b	<p>To assess the metrics and management processes in place to drive an effective, robust and resilient 24tph maintenance service.</p> <p>To assure performance against the metrics is being achieved or interventions planned to address any issues.</p>

Audit and Assurance – Areas to be covered

Priority	Topic	Evidence of Need	Targeted Review / Continuous Assurance	Who	When	Objectives
4	Service Recovery - Operations	<ul style="list-style-type: none">The ability of the Operations teams to respond during service disruption for 12tph service has still to be proven. Trial Operations would attest to there being further work required in delivering a recovery performance acceptable in a live operations environment.	Continuous Assurance (via the Executive reporting process)	LoD2 / IIPAG-EL	Up to Revenue Service and ongoing until Stage 5b	<p>To identify what management interventions are underway to improve the service recovery capability across the Operational teams.</p> <p>To have visibility of metrics being used to measure the improvement in Service Recovery.</p>
5	DCS1.2/1.3 – Assurance of the Schedule and Cost of the revised schedule	<ul style="list-style-type: none">Previous scope change impacting on schedule delays and cost increase.Lack of visibility of detail for Stage 5b and 5c schedule.	Continuous Assurance (via the Executive reporting process)	LoD2 / IIPAG-EL	Up to Revenue Service and ongoing until Stage 5b	To monitor any schedule movement and impact on cost.
6	<p>Gate process for readiness assessment as we go into Revenue Service, Stage 5b, c</p> <p>Assurance of the plan to get into Stage 5b/5c</p>	<ul style="list-style-type: none">Evidence of entry into Trial Running and Trial Operations without the system being sufficiently reliable leading to a period of unproductive Trial Running and Trial Operations being split into two phases to enable infrastructure and systems upgrades to take place.	Continuous Assurance (via the Executive reporting process)	LoD2 / IIPAG-EL	Up to Revenue Service and ongoing until Stage 5b	To provide assurance to the Gate process for entry into Revenue Service, Stage 5b. 5c and the plan for getting into Stage 5b/5c, through a Readiness ‘RAG’ status update report.

Audit and Assurance – Areas to be covered

Priority	Topic	Evidence of Need	Targeted Review / Continuous Assurance	Who	When	Objectives
7	Information transfer – (excluding asset data), Emails, Contract documents (hard copies), Contract negotiation information	Ensure TfL has all documents and information in place to continue to run and manage the Elizabeth line.	Audit	Audit Team	TBC	To review the effectiveness of controls around information management and transfer from Crossrail to TfL.
8	Cost verification - Engie	To certify that spend is accurate and appropriate.	Audit	Audit Team	Q1	To certify that spend is accurate and appropriate.
9	Annual Complaints Commissioners Accounts 2021/22	To provide assurance on the accuracy of the Crossrail Complaints Commissioners accounts for 2021/22.	Audit	Audit Team	Q1	To provide assurance on the accuracy of the Crossrail Complaints Commissioners accounts for 2021/22.
10	Complaints Commissioners Accounts 2022/23	An independent Crossrail Complaints Commissioner was appointed by the Secretary of State for Transport. This will cease in September 2022 and this is a final review of the Complaints Commissioner's accounts to ensure figures are correct, and that the accounts comply with the Accounts Direction issued on behalf of the Crossrail High Level Forum.	Audit	Audit Team	Q2	To provide a final review of the Complaints Commissioner's accounts to ensure figures are correct, and that the accounts comply with the Accounts Direction issued on behalf of the Crossrail High Level Forum.
11	Crossrail Act Obligations	To provide assurance that obligations in the Crossrail Act have been met.	Audit	Audit Team	Q2	To provide assurance that obligations in the Crossrail Act have been met.
12	Gateway Review – IPA (Infrastructure and Project Authority) Gateway 4 and 5 reviews	Driven by external Stakeholder requirements.	Continuous Assurance	IPA / IIPAG-EL	Before Stage 5c	To assess readiness for Stage 5c.

Elizabeth Line Committee



Date: 24 March 2022

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.

2 Recommendation

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

3 Forward Plan Development

- 3.1 The Board and its Committees and Panels have forward plans. The content of the plans arises from a number of sources:
- (a) standing items for each meeting: minutes; matters arising and actions list; and any regular reports, including the Project Representative report;
 - (b) regular items which are for review and approval or noting;
 - (c) matters reserved for approval or review; and
 - (d) items requested by Members: The Chair of the 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 list of standing items is attached at 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: Elizabeth Line Committee Forward Plan 2021/22 – 2022/23

List of Background Papers:

None

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Elizabeth Line Committee Forward Plan 2021/22 – 2022/23

Appendix 1

Membership: Heidi Alexander (Chair), Anne McMeel (Vice-Chair), Seb Dance, Professor Greg Clark CBE, Dr Nelson Ogunshakin OBE, Mark Phillips, Sarah Atkins, Kathryn Cairns OBE (Department for Transport Representative)

Standing Items		
Safety Update	Commissioner	
Project Status Update	Crossrail Chief Executive	
Elizabeth Line Readiness	Commissioner	
Project Representative Report	Crossrail Chief Executive	
Elizabeth Line Programme Assurance Update	Director of Risk and Assurance	
Finance and Risk Update	Chief Finance Officer, Crossrail	
25 May 2022		
Complaints Commissioner for Crossrail Final Report	Chief Finance Officer, Crossrail	
Delivery of Stage 5b	Director, Elizabeth line	

Dates of Future Meetings

25 May 2022

14 July 2022

29 September 2022

24 November 2022

26 January 2023

16 March 2023

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