

# Agenda

**Meeting: Elizabeth Line Committee**

**Date: Thursday 20 May 2021**

**Time: 10.00am**

**Place: Teams Virtual Meeting**

## Members

Heidi Alexander (Chair)

Anne McMeel (Vice-Chair)

Prof Greg Clark CBE

Dr Nelson Ogunshakin OBE

Mark Phillips

Kathryn Cearns 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).

## How decisions will be taken during the current social distancing measures

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

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

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

- Papers will be published in advance on [tfl.gov.uk How We Are Governed](https://tfl.gov.uk/How-We-Are-Governed)
- Apart from any discussion of exempt information, the briefing will be webcast live for the public and press on [TfL YouTube channel](https://www.youtube.com/channel/UCvK1L1k1k1k1k1k1k1k1k1k).

A guide for the press and public on attending and reporting meetings of local government bodies, including the use of film, photography, social media and other means is available on [www.london.gov.uk/sites/default/files/Openness-in-Meetings.pdf](https://www.london.gov.uk/sites/default/files/Openness-in-Meetings.pdf)

## **Further Information**

If you have questions, would like further information about the meeting or require special facilities please contact: Sue Riley; [sueriley@tfl.gov.uk](mailto:sueriley@tfl.gov.uk) .

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

Howard Carter, General Counsel  
Wednesday 12 May 2021

**Agenda  
Elizabeth Line Committee  
Thursday 20 May 2021**

**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 18 March 2021  
(Pages 1 - 6)**

General Counsel

**The Chair, following consultation with the Committee, is asked to approve the minutes of the meeting of the Committee held on 18 March 2021 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 Project Status Update** (Pages 15 - 18)

Chief Executive Officer, Crossrail

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

**7 Elizabeth Line Readiness** (Pages 19 - 20)

Chief Operating Officer, Elizabeth line

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

**8 Elizabeth Line Transition Programme Status Update** (Pages 21 - 24)

Chief Operating Officer, Elizabeth line

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

**9 Finance and Risk Update** (Pages 25 - 26)

Chief Finance Officer, Crossrail

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

**10 Project Representative Report** (Pages 27 - 28)

Chief Executive Officer, Crossrail

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

**11 Crossrail Programme Assurance Update** (Pages 29 - 46)

Chief Finance Officer, Crossrail

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

**12 Members' Suggestions for Future Discussion Items** (Pages 47 - 50)

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.**

**13 Any Other Business the Chair Considers Urgent**

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

**14 Date of Next Meeting**

Thursday, 15 July 2021 at 2pm.

**15 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**

**16 Project Status Update** (Pages 51 - 62)

**Exempt supplemental information relating to the item on Part 1.**

**17 Finance and Risk Update** (Pages 63 - 70)

**Exempt supplemental information relating to the item on Part 1.**

**18 Project Representative Report** (Pages 71 - 182)

**Exempt supplemental information relating to the item on Part 1.**

**19 Crossrail Programme Assurance Update** (Pages 183 - 194)

**Exempt supplemental information relating to the item on Part 1.**

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## Transport for London

### Minutes of the Elizabeth Line Committee

#### Teams Virtual Meeting 1.30pm, Thursday 18 March 2021

##### Members

Heidi Alexander (Chair)  
Anne McMeel (Vice-Chair)  
Sarah Atkins (non-voting Member)  
Professor Greg Clark CBE  
Dr Nelson Ogunshakin OBE  
Mark Phillips

##### Government Representative

David Hughes, Director General for Rail Infrastructure Group (deputising for Kathryn Cearns OBE).

##### Executive Committee

Andy Byford	Commissioner
Howard Carter	General Counsel
Andy Lord	Managing Director, London Underground and TfL Engineering
Mark Wild	Chief Executive Officer, Crossrail

##### Staff

Mushtaq Ali	Interim Head of Internal Audit
Maureen Kirk	Senior Internal Audit Manager
Rachel McLean	Chief Finance Officer, Crossrail and Divisional Finance Director, London Underground
Hannah Quince	Chief of Staff, Crossrail
Howard Smith	Chief Operating Officer, Crossrail
Stuart Westgate	Head of Programme Assurance, Crossrail (for Minute 26/03/21)
Sue Riley	Secretariat Officer

##### Other Attendees

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

#### 17/03/21 Apologies for Absence and Chair's Announcements

The Chair welcomed everyone to the meeting, in particular TC Chew, the newly appointed Chair of the Crossrail Independent Investment Programme Advisory Group Sub-Group and the Government Representative David Hughes, Director General for Rail Infrastructure Group, who was attending in the place of Kathryn Cearns OBE.

Members noted that Funmi Amusu, who was not in attendance, was leaving TfL at the end of March 2021. She had provided professional support to the Crossrail Board since March 2010, including as Assistant Company Secretary and Head of Secretariat. The Chair, on behalf of the Committee and former Crossrail Board and its Executive team thanked her for her service and wished her well for the future.

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

An apology for absence had been received from Kathryn Cearns OBE (Government Representative), for whom David Hughes was deputising.

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 and 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.

### **18/03/21    Declarations of Interests**

Members on the TfL Board confirmed that their declarations of interests, as published on [tfl.gov.uk](http://tfl.gov.uk), were up to date. Members, Sarah Atkins and David Hughes confirmed there were no additional interests that related specifically to items on the agenda.

### **19/03/21    Minutes of the Meeting of the Committee Held on 29 January 2021**

**The Committee approved the minutes of the meeting held on 29 January 2021 as a correct record. The minutes would be provided to the Chair for signature at a future date.**

### **20/03/21    Matters Arising and Actions List**

Howard Carter introduced the paper.

**The Committee noted the actions list.**

### **21/03/21    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.

Covid-secure measures put in place continued to be successful, with only six reported cases out of a workforce of 2,500 and rigorous controls continued to be closely monitored.



Overall safety on the project continued to be of the highest priority with excellent performance at all levels of monitoring, integrated across the supply chain, including during this critical Trial Running period and moving from construction to operational phases.

As the project transitioned into an operational train service, safety reporting would be migrated to the Railways and Other Guided Transport Systems (Safety) Regulations 2006 (ROGS) and via TfL's wider safety reporting mechanisms and target zero.

All staff would be trained in railway safety guidelines, with a clear focus on limited access to the track and infrastructure and a shift in safety culture and awareness, and close integration with Network Rail, London Underground and Rail for London.

**The Committee noted the paper.**

## **22/03/21 Project Status Update**

Andy Byford and Mark Wild presented the item and the supplementary information on Part 2 of the agenda.

The two critical paths for the project were currently moving into Trial Running and station completions; both were complex, safety critical processes which entailed a huge amount of documentation and detailed processes. The planned blockade in August 2021 would be utilised for synchronisation of the differing software systems and configuration of the passenger services.

Farringdon station had been handed over as complete on 5 March 2021, with a detailed plan for the commissioning of other stations including Custom House, Tottenham Court Road, Paddington, Liverpool Street and Canary Wharf.

A comprehensive refresh of the Delivery Control Schedule was planned for the next six weeks as part of the extensive safety assurance process of moving into ROGS.

The process for Trial Running would move from incremental testing after four weeks of four trains an hour to a full timetable of 24 trains an hour over of a period of a minimum of four months. The objective of Trial Running was to test and demonstrate that the timetable was sustainable, reliable and safe and would include simulated customer evacuations and customer flows at stations. The reliability growth in train frequency and maintained productivity was key to the success of Trial Running.

During Trial Running, Crossrail remained the lead system integrator and design authority before becoming part of Rail for London.

The Committee congratulated staff for the success in completing Farringdon station and the continued hard work to progress the project successfully.

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

## **23/03/21 Elizabeth Line Readiness**

Andy Lord 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.

**The Committee noted the paper.**

## **24/03/21 Finance Update**

Rachel McLean introduced the paper and the supplementary information on Part 2 of the agenda. The paper provided an update on financial performance on the Crossrail project.

Budgeted spending of risk and contingency was below what was anticipated but this was due to phasing and outturn of Anticipated Final Direct Cost was stable, with no significant movement from previous periods.

It was agreed that the Finance and Risk Management updates would be combined in a single report for future meetings. **[Action: Rachel McLean]**

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

## **25/03/21 Elizabeth Line Risk Management**

Rachel McLean introduced the paper and the supplementary information on Part 2 of the agenda. The paper provided an update on the risk management approach in Crossrail, assurance over the risk management methods on the project and highlighted areas of focus.

Cyber risk was confirmed as included in the programme and operational risks.

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

## **26/03/21 Project Representative Report**

Mark Wild introduced the paper and the supplementary information on Part 2 of the agenda. The paper presented the periodic reports from the Project Representative (P-Rep) on the Crossrail project for Periods 9, 10 and 11 and the management responses to these reports.

The exempt Period 11 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 and the Period 11 report would be published shortly.

Stephen Hill recognised the positive work across the programme but highlighted the inconsistent productivity and the need to build on train reliability, and control scope and costs within the limited time frame.

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

### **27/03/21 Crossrail Programme Assurance**

Rachel McLean introduced the paper which provided an update on progress with Crossrail Programme Assurance activity.

TC Chew presented the Independent Investment Programme Advisory Group (IIPAG) update. Significant challenges were posed in the Trial Running and transition phases and several critical risks were highlighted, including software programming and adequate personnel training.

It was agreed that the management response to the IIPAG (Appendix 4) report be circulated to Members. **[Action: Rachel McLean]**

**The Committee noted the paper.**

### **28/03/21 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. Other suggestions included a review of the refreshed Delivery Control Schedule and operational Stages 4&5, Bond Street and the Alternative Delivery Modal, which could be discussed at informal briefings.

**The Committee noted the forward plan subject to the updated changes.**

### **29/03/21 Any Other Business the Chair Considers Urgent**

There was no other urgent business.

### **30/03/21 Date of Next Meeting**

The next scheduled meeting of the Committee would be held on Thursday 20 May 2021 at 10am.

## **31/03/21 Exclusion of the Press and Public**

The Committee agreed to exclude the press and public from the meeting, in accordance with paragraph 3 of Schedule 12A to the Local Government Act 1972 (as amended), when it considered the exempt information in relation to the items on the: Project Status Update; Finance Update; Elizabeth Line Risk Management; and Project Representative Report.

The meeting closed at 3.55pm.

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

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

## Elizabeth Line Committee



**Date:** 20 May 2021

**Item:** Matters Arising and Actions List

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### **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

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**Elizabeth Line Committee Actions from 18 March 2021 (reported to 20 May 2021 meeting)**

<b>Minute No.</b>	<b>Item/ Description</b>	<b>Action By</b>	<b>Target Date</b>	<b>Status/ Note</b>
<b>24/03/21</b>	<b>Finance Update</b> The Finance and Risk Management updates to be combined in a single report for future meetings.	Rachel McLean	20 May 2021 meeting.	Changes reflected in joint report on agenda. Complete.
<b>27/03/21</b>	<b>Crossrail Programme Assurance</b> The management response to the Independent Investment Programme Advisory Group (Appendix 4) report be circulated to Members.	Rachel McLean	20 May 2021 meeting.	Information circulated. Complete.

**Actions from previous meetings:**

**Elizabeth Line Committee Actions from 29 January 2021**

<b>Minute No.</b>	<b>Item/ Description</b>	<b>Action By</b>	<b>Target Date</b>	<b>Status/ Note</b>
<b>07/01/21</b>	<b>Elizabeth Line Readiness</b> Provide an update on handover to trial operations to a future meeting of the Committee.	Howard Smith	20 May 2021 meeting.	Item on agenda. Complete.
	Provide more information to the Committee on non-operational Information Technology processes and how these are being integrated into TfL.	Howard Smith	20 May 2021 meeting.	Item on agenda. Complete.

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## Elizabeth Line Committee



**Date:** 20 May 2021

**Item:** Safety Update

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

#### **1 Summary**

1.1 This paper provides an update on safety.

#### **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 Crossrail Programme and Infrastructure Manager, Rail for London (Infrastructure) Limited (RfL(I)) for Periods 12 and 13.

3.2 Accident Performance in Period 12:

- (a) there were no reportable or lost time accidents on Crossrail; and
- (b) there were no RfL(I) employee or contractor accidents.

3.3 Accident Performance in Period 13:

- (a) there was one reportable accident on Crossrail:

on 12 March at the Bond Street Project a security operative tripped on plywood floor protection, resulting in an ankle fracture. The floor protection has been removed; and

- (b) there were no RfL(I) employee or contractor accidents.

3.4 High Potential Near Miss (HPNM) events are summarised below:

- (a) during train testing, a Platform Screen Door (PSD) remained open when the train was preparing to leave the station. After receiving incorrect information from the driver that PSDs were all closed, the Test Train Manager gave permission to change the train to Staff Accountable mode, to allow the train to acquire movement authority. The evidence showed that the driver had an indication in his cab to say that the PSDs were, in fact, not closed. The initial PSD fault was a software issue that has been fixed and upgrades installed to ensure no further failure can occur. The communication of misinformation between the train and the signaller meant that a command to override the system was put in place to enable a route to be set out of the platform, with

the PSD left open. There was no risk of harm as there is an exclusion zone on the platform during train testing. The control systems worked correctly but the operating procedures were incorrectly applied by those involved; The process was changed and briefed to ensure physical checks were done on doors where any discrepancy in information was identified;

- (b) at the Whitechapel Station project during routine temporary works inspections, an item of scaffolding, a double coupler, was found in an unsecured state on top of a ladder beam at height above Platform 5. It was removed immediately and the circumstances investigated. The scaffold clip was undone as part of works the previous days but missed and not removed. It was mistakenly left in situ. The positive safety culture ensured this observation was reported and investigated; and
- (c) during train testing, there was an incident of a marker board passed at danger and a Signal Passed at Danger. Neither resulted in any harm or damage to infrastructure. The railway safety systems operated as required. Following investigations, the Dynamic Testing Team and Systemwide Contractor initiated a full and thorough review and safety stand down. There were no further incidents through the remaining testing phase.

3.5 In response to the recent HPNM events several improvement actions were initiated:

- (a) the Whitechapel project held an event to highlight the importance of reporting any unsafe conditions and conducted hazard inspections across the site. They also ran a back to basics safety campaign. This has resulted in a decrease in incidents;
- (b) the Systemwide team initiated a safety review, taking forward learning from events into an improvement plan for the remaining testing phase; and
- (c) the working environment at the Route Control Centre (RCC) was improved and floor walkers introduced to support the operators.

3.6 Since the last report to the Committee, the Accident Frequency Rate has reduced from 0.11 to 0.09. The Lost Time Index has decreased from 0.16 to 0.12. The HPNM rate has increased to 0.30. The industry recognised frequency rates are calculated over a rolling 13 periods.

3.7 On 26 March 2021, Crossrail successfully handed over the central section infrastructure to the Infrastructure Manager, RfL(I), who became accountable for the railway in compliance with the Railways and Other Guided Transport Systems (Safety) Regulations 2006 (as amended) (ROGS).

3.8 Leading up to the handover of Duty Holder responsibility to RfL(I) under ROGS, there was an extensive campaign to communicate the rules, procedures and changes to everyone across the programme. This was successful overall, providing clarity of changes and provoking discussion at all levels.

- 3.9 However, despite this enormous effort, some incidents have occurred which can be attributed to familiarisation with the new arrangements. This is being managed with immediate actions and learning being shared, with a focus on prevention of reoccurrence, including a very recent joint campaign.
- 3.10 One of these incidents related to a work party (group), made up of various stakeholders, moving beyond Network Rail managed infrastructure and associated possession limits to RfL(I) managed infrastructure without the necessary applications for access or adequate protection. The intruder/CCTV alarms activated, alerting the RCC operators and enabled an immediate intervention. An RfL(I) Incident Response Manager was dispatched and the work party advised to leave and return to the limits of the Network Rail possession. This is subject to an ongoing investigation; a Safety Alert has been issued for awareness and interim findings formed part of the campaign pack.
- 3.11 Briefing campaigns have continued since entering ROGS to ensure that conversations continue, and all learning opportunities are taken. There have been some frustrations with teams being refused access through stations to conduct work which have been addressed due to the positive reporting culture and collaborative working across stakeholders. A positive observation is that the behaviours and culture across the Programme remains one of 'fail safe' e.g. people default to stopping and re-planning and not carrying on regardless.
- 3.12 There has been extensive work on ensuring the safe and efficient access to the railway since ROGS with the Integrated Access Planning team. All access requirements to the Elizabeth line infrastructure are coordinated centrally through an Integrated Access Planning function. There are multiple parties accountable for the infrastructure which are all represented in the planning meetings where applications are assessed, deconflicted and access granted. The procedures have been formalised in the RfL(I), London Underground, Crossrail and Network Rail rules. There is also a united Safety Arrangements Plan that summarises the requirements for access to enable safe ways of working. An extensive and thorough communications and briefing process has been delivered.
- 3.13 The Passenger Service Steering Group (PSSG) has mobilised in the period. Also, the revised format for the Safety and Health Executive Leadership Team (SHELT) has been implemented. There are three SHELT working groups with terms of reference focused on learning, improvement and reviewing future risks. The groups are organised into Operations and Stations with a Data and Risk group providing trends and insight for consideration. SHELT is chaired by the Chief Operations Officer RfL(I) and Programme Director Crossrail.
- 3.14 The programme continues to manage the coronavirus pandemic risk with the measures implemented by the supply chain remaining in place, with no intention to reduce the controls at this time. Controls are assured weekly by independent inspections. The success of this has resulted in a period of zero affected cases. The impact of the route map out of the coronavirus pandemic is evaluated by the programme and scenarios for future ways of working are being prepared.
- 3.15 The next phase and focus for planning is the successful completion of Trial Running and readiness to enter Trial Operations safely.

**List of Appendices:**

None

**List of Background Papers:**

None

Contact Officer: Mark Wild, Crossrail Chief Executive  
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## Elizabeth Line Committee



**Date:** 20 May 2021

**Item:** Project Status Update

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### **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 website<sup>1</sup>. 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 the delivery of the Elizabeth line. Work continues across the project at pace and there is a real desire to deliver passenger services at the front end of the opening window (first half of 2022). Although this is an incredibly tough challenge, it will drive focus and impetus in the programme.
- 3.2 On 27 March 2021, the railway transitioned from a construction environment to an operational environment, operating under the Railways and Other Guided Transport Systems (Safety) Regulations 2006 (ROGS) rule book. This was achieved in line with the deterministic baseline and represents a significant milestone for the project.
- 3.3 The move into ROGS is perhaps the biggest step in the Crossrail journey so far and has provided an opportunity to gain experience of using the new Rule Book

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

and for operational and maintenance staff, the experience of managing a “live railway”. This important milestone has meant that Rail for London (Infrastructure) Limited (RfL(I)) has taken control of the railway as infrastructure manager, and now manage the railway during the Trial Running phase.

- 3.4 Following the transition to the ROGS environment, the planned controlled start period was enacted. This allowed maintenance activities and processes to bed in and stabilise before commencing timetable train running. Several train movements have been completed for train maintenance purposes and we have now commenced a trial running timetable service, initially at four trains per hour and building up gradually to twelve trains per hour over a period of a couple of months. The ramp up to four trains per hour in May 2021 is in line with Stage 3 opening in the first half of 2022.
- 3.5 To enable multiple trains operating in the central tunnels, and in addition to the completion of the maintenance works, a number of milestones across the routeway needed to be achieved. On 28 March 2021, the Great Western Main Line transition was commissioned and on 25 April 2021 the Great Eastern Main Line fringes took place, meaning that Crossrail infrastructure is now connected and ready for test trains across the route. System Integrated Dynamic Testing concluded on 16 March 2021, which has built train mileage and helped test the system. In addition, RfL(I) has taken control of the Route Control Centre, which is providing valuable opportunity for the operators to gain experience and confidence.
- 3.6 Entry into ROGS and train movements in the Central Operating Section demonstrates the collaborative effort between all parties involved, which is imperative to get the Elizabeth line into passenger service. This has seen the completion of the required assurance work through closure or structured engineering judgements, and the completion of assurance deliverables that have enabled the railway to enter into an operational environment.
- 3.7 As work progresses with Trial Running, the project is also preparing for entry into the succeeding phase, Trial Operations. Trial Operations will involve exercises to confirm that the railway is passenger ready. It will comprise staff and volunteer exercises to make sure that all systems and procedures work effectively. Completion of Trial Operations will mark the final step before passenger services can commence in the first half of 2022.
- 3.8 The existing Delivery Control Schedule is currently being refreshed and the new version will build upon the existing logic. It will also provide an opportunity to consider lessons that were learnt during entry into Trial Running, strengthening previous planning assumptions on assurance processes and define the conditions required for the successful transition into Trial Operations and Revenue Service.
- 3.9 In support of entering Trial Operations, the central section stations need to achieve a number of additional, interim states of completion. These works continue with all stations, with the exception of Bond Street and Canary Wharf, having achieved their Substantial Completion 3 (SC3) state, which represents the substantial completion of construction works, enabling the final complex systems integration and assurance activities.

- 3.10 Custom House was the first of the stations to be handed over to TfL and it has since completed the final hooking up of the communications and control systems. It is now fully integrated with the Route Control Centre in Romford. The experience and knowledge gained from the handover of Custom House and Farringdon to TfL are being incorporated into the works at the remaining stations.
- 3.11 Tottenham Court Road station was recently handed over to TfL earlier this month, on schedule, and brings the total number of central section stations handed over to three. This represents a significant achievement for the project and the stations completion team.
- 3.12 Woolwich station and Liverpool Street station have recently entered into the T-12 process and good progress is being made. The T-12 milestone means that the station is considered to be 12 weeks away from being ready for handover to TfL. Work at the stations will now be primarily focused on the extensive testing and commissioning of systems ahead of the Elizabeth line opening. Reaching this important milestone allows the contractor to commence demobilisation across the site and enables Crossrail to commence the process of handing the station over to TfL. Paddington station is also in the T-12 process; however, there is considerable pressure at the station, and it looks likely that it will require more time to complete the necessary works before it is handed over to TfL.
- 3.13 The engineering works at Liverpool Street are now complete with the platforms lengthened to accommodate the Full Length Units (FLUs) ahead of operations from the mainline station to Shenfield. Other works in anticipation of the introduction of the FLU trains to the eastern route are taking place, including new staff accommodation at Gidea Park, opening of platform extensions and Driver Only Operation system readiness.
- 3.14 Network Rail's major upgrade works to surface stations on the eastern and western section of the railway continue to progress. Acton Main line and West Ealing were handed over to the operator (MTR) on 16 March and 25 March 2021, respectively. These stations now provide crucial step-free access to passengers. The focus now shifts to Ealing Broadway and completing the first phase of works at the station that will provide step-free access. West Drayton, Hayes & Harlington, and Southall stations remain on forecast to be step-free by the summer of 2021. The works at Ilford and Romford stations are ongoing with the roof complete at Ilford, while lift shaft structures are progressing at Romford.

**List of Appendices:**

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: 20 May 2021

Item: Elizabeth Line Readiness

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### 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 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 ended the year 2020/21 positively with the Public Performance Measure (PPM) achieving 96.1 per cent of trains meeting their reliability target in period 13, the four-week period between 7 to 31 March 2021. Overall the Moving Annual Average trend continues to improve and at 96 per cent is the highest since TfL Rail took over operations. This was the third best annual PPM in the country.
- 3.2 Although the signalling (European Train Control System) related defects have significantly reduced, in line with the prediction for the new train control software, a number of electrical /mechanical defects have depressed the growth of train reliability and ALSTOM is investigating.

#### 4 Central Section Reliability

- 4.1 Ahead of the railway entering Railways and Other Guided Transport Systems (Safety) Regulations 2006 (ROGS) and TfL standing up as the Infrastructure Manager, all readiness activities necessary to enable the transfer of management of the central operating section were completed. They included the development and implementation of the safety management system and the recruitment and training of sufficient competent operators and maintainers.
- 4.2 System Integrated Dynamic Testing concluded on 16 March 2021, which has built train mileage and helped test the system. In addition, it has also provided a valuable opportunity for the operators to gain early experience and confidence in the Romford Route Control Centre.

## 5 Operational Readiness

- 5.1 On 27 March 2021, we achieved a major milestone with the Central section of the railway transitioning from a construction environment to an operational environment, operating under the ROGS rule book. As part of this move, Rail for London Infrastructure and London Underground are now accountable for the safety, operation and maintenance of the railway. Operating under ROGS will provide an opportunity for operational and maintenance staff to gain the experience of using the new rule book and managing a 'live railway'. Although a number of stations remain with the Project team pending transfer later in the year.
- 5.2 Following a successful controlled start to the Trial Running phase, we have now commenced a Trial Running timetable service, initially at four trains per hour, but building up gradually to 12 trains per hour over the next couple of months. The controlled start following entry into ROGS, allowed our operations and maintenance teams to mobilise and transition in a seamless manner, completing with the Crossrail project teams the input of asset information, minor outstanding works and maintenance activities. There have been challenges in assembling the specialist skills and equipment necessary for some of these tasks but these were managed closely and prioritised as part of the countdown towards timetabled trial running.
- 5.3 We have now recruited and trained the minimum number of maintenance technicians required to meet our statutory obligations. All classroom training is now complete, allowing us to focus on familiarisation within the live environment, enabling all our staff to be prepared for passenger service – plans are in place to track progress.
- 5.4 In preparation for Stage 4a starting in May 2021, the first nine-car Class 345 train has been transferred from Old Oak Common Depot to the Liverpool Street – Shenfield route for Operational Proving (ie checking the interfaces between the train and the station infrastructure).
- 5.5 The next major signalling software release, which brings significant improvements in functionality, will be installed close to Trial Operations.

## 6 Residual Works Programme

- 6.1 Work continues agreeing the most efficient way to deliver the residual works for the post revenue service scope. Discussions to finalise scope, organisational and commercial arrangements to enable this continue to progress.

### List of Appendices:

None

### List of Background Papers:

None

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## Elizabeth Line Committee



**Date:** 20 May 2021

**Item:** Elizabeth Line Transition Programme Status Update

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

## **1 Summary**

- 1.1 Since the suspension of the initial transition arrangements in 2019, following the delays to the public opening of the Elizabeth line, the Elizabeth Line Transition Action Plan was prepared and submitted to the Department for Transport in June 2020 as required by the Extraordinary Funding and Financing Agreement dated 14 May 2020. The Action Plan details how we plan to define and manage the Elizabeth Line Transition Programme and options for the transition of the current project structures, oversight and governance as the Crossrail project moves forward to completion.
- 1.2 The initial transition activities focussed on the governance arrangements and following consultation with all Members of the Board, the Chair of TfL exercised Chair's Action on 30 September 2020 to move responsibility for the Crossrail project to TfL. Crossrail is currently implementing a Financial Commitment Oversight Group style change control process and the reporting line of the Chief Operations Officer is now directly to the Commissioner to support the transition to operations.
- 1.3 The purpose of this paper is to provide the Committee with an overview of the Elizabeth Line Transition Programme and an update on the status of the current activities to transition Crossrail delivery to Elizabeth line operations.

## **2 Recommendation**

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

## **3 Programme Overview**

- 3.1 The Elizabeth Line Transition Action Plan identified four principal workstreams:
  - (a) Asset Transition: handover between Crossrail (and other delivery partners) to infrastructure managers (mainly Rail for London (Infrastructure) Limited (RfL(I)) and London Underground Limited (LU)). The asset transition is well defined and in progress. The handover of assets is managed by Crossrail's Programme and Operations teams in line with the Delivery Control Schedule. On 26 March 2020, the central operating section assets necessary to support Trial Running (routeway rather than station assets) were successfully handed over to RfL(I). Custom House and Farringdon stations have also been handed over to RfL(I) and LU respectively. For each

of these handovers there is an agreed list of further assets and information that are to be transferred to RfL(I)/LU to enable their full completion.

- (b) Organisations and Functional Transition: demobilisation of project personnel and migration of outstanding responsibilities (as required to complete the programme more efficiently) to TfL. The Elizabeth Line Operations Team (which includes RfL(I) appointed personnel as well as a number of TfL contracts for maintenance support services) is already established and in place, in line with the current Budget and Business Plan, within LU. TfL support is already in place directly with the Operations Team for a range of services including all the operational management systems which are supported by TfL's Technology and Data team as well as management of Finance, Human Resources, Health Safety and Environment, Commercial and Engineering activities that have staff allocated from the relevant directorate within TfL. Some support functions (for example land and property) were previously transitioned in 2018 to TfL, but substantial remobilisation of the programme was necessary from 2019 to support the completion of the railway. The Trial Running organisation is currently in place and a workforce plan has been established which sets out the personnel requirements through Trial Operations, the start of revenue service and full end-to-end operations.
  - (c) Obligations and Liabilities Transition: allocation of responsibility for adherence to environmental minimum requirements including the undertakings and assurances that were made by the Secretary of State during the Crossrail Bill process. The Secretary of State will remain accountable to the beneficiaries for compliance. Many of the obligations have already or are expected to be discharged by Crossrail and remaining obligations will be managed through the asset handover and completion process to agree responsible parties.
  - (d) Governance Transition: includes both project and corporate governance. The initial transition phase focussed on changes to top level governance to simplify decision making and allow TfL greater control over its risk exposure. The more detailed programme governance for Trial Running is in place and operational activities are already managed via LU for TfL Rail services.
- 3.2 Alignment between the principal workstreams is essential to ensure that the right transition activities are carried out at the right time. Transition activities are heavily dependent on the programme to complete the Elizabeth line, which has a declared opening window for the central section of the first half of 2022. Transition arrangements also need to take account of the on-going TfL-wide change activities to ensure that the arrangements are fit for the receiving group.
- 3.3 Until recently, Crossrail was leading the development of the transition plan. To ensure full alignment to TfL's requirements, it was considered that there should be a "pull" to lead this activity and that this should come from the Chief Operating Officer Elizabeth Line supported by the Chief Finance Officer – Crossrail. A Transition Team has been appointed to develop and integrate a transition plan, which will provide regular reports to the Elizabeth Line Delivery Group.

## **4 Look Ahead**

- 4.1 The transition programme is being developed in parallel with the updated programme baseline that Crossrail is developing
- 4.2 The following sections provide an update on the planned transition activities.

### **Asset Transition**

- 4.3 Work continues to complete the work and its assurance at the central stations and on the routeway. Crossrail is in the process of updating the Delivery Control Schedule as part of the new programme baseline, which will include the transition of assets to RfL(I) and LU that complete the end to end railway. Achievement of the programme in line with the updated baseline, including the completion of the routeway assets/information and the central stations, will drive the timeline for all other transition activities.

### **Organisational and Functional Transition**

- 4.4 Two priorities have been identified for this workstream. The first is to identify the personnel who have critical and scarce skills that are required to support completion of remaining activities to complete the Elizabeth line and develop robust contingency arrangements that support the programme.
- 4.5 The second priority is to develop the organisational transition plan for Trial Operations and beyond. This will include the “folding in” of various departments under the Programme Directorate as the programme completes and personnel are demobilised in line with the workforce plan.
- 4.6 Other particular items that will be considered are:
  - (a) which activities (and personnel) potentially should report through the Operations rather than the Programme Team to provide efficiencies or because their outputs are more operationally relevant (for example they strongly influence reliability of the train service); and
  - (b) which activities/functions could more efficiently be provided and led by TfL. There are already a number of personnel that have been seconded to the Programme from TfL and the Transition Team is engaging with colleagues to identify transition functions and activities which could transfer earlier than the demobilisation assumptions captured in the workforce plan for the support functions (including Communications, Finance, Human Resources, and Commercial).
- 4.7 In addition to the priorities noted above, a People Strategy is proposed to be developed to champion engagement for the Elizabeth Line Operations Team as the team operating the Elizabeth line is relatively small (300 to 350 TfL personnel) and new. This strategy will be aligned to TfL priorities and pillars.

## **Obligations and Liabilities Transition**

- 4.8 Crossrail established some years ago a system to manage and close out the various obligations made during the consents process. Whilst the vast majority of those are captured via the handover process for the assets (to RfL(I) and LU), there are some which will require continued active management within TfL and the Transition Team will oversee this activity.

## **Governance Transition**

- 4.9 New project meetings have been set up for Trial Running. As the programme progresses to the next phases the meetings and governance will need to support a progressively more operationally focused agenda and these will need to be designed in good time to support the next phase.

## **5 Assurance**

- 5.1 TfL Internal Audit recently carried out an audit to provide assurance on the effectiveness of controls for managing the transfer of the Crossrail programme to TfL. The scope of the audit included the following key areas of risk: governance systems, roles and responsibilities, terms of reference, progress reporting, documentation of management decisions, and identification of transition risk. Project level transitional governance and non-CRL management systems were excluded.
- 5.2 No major issues were identified by the review that management were either not already aware of or beginning to address. The review concluded that the control environment governing the transfer of the Crossrail programme to TfL is adequately controlled.

### **List of Appendices:**

None

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

Board Chair's Action: Crossrail - Governance Transition (approved 30 September 2020)<sup>1</sup>

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<sup>1</sup> <https://content.tfl.gov.uk/20200930-board-chairs-action-crossrail-governance-transition-web.pdf>

## Elizabeth Line Committee



**Date:** 20 May 2021

**Item:** Finance and Risk Update

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

#### **1 Summary**

- 1.1 This paper provides an update on the financial performance at Period 13 2020/21 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 Funding**

- 3.1 In December 2020, a funding and financing agreement was reached between TfL, GLA and the Government providing £825m of additional funding for the Crossrail Programme.
- 3.2 Following the funding and financing agreement of December 2020 and the TfL Board's approval of Programme and Project Authority, as at Period 13, Programme and Project Authority is £15,425m.
- 3.3 Of the additional £825m funding, £369m has been drawn down as at Period 13.

#### **4 Financial Performance**

- 4.1 Spend in Period 13 was £57m and is £732m for the full year. The period spend was £10m below the Delivery Control Schedule 1.1 (DCS1.1) Budget and is £81m below the DCS1.1 Budget for the full year.
- 4.2 The number of Full Time Equivalent employees is 838, which was 60 lower than had been forecast in the January 2021 workforce plan.
- 4.3 The current Anticipated Final Crossrail Direct Cost (AFCDC) is £15,910m, a £12m increase from the prior period.

- 4.4 The P50 Anticipated Final Crossrail Direct Cost (AFDC) is currently £121m above the additional funding of £825m, which is an increase of £12m from the period. The £1.1bn of additional funding that was estimated to be needed in 2020 remains consistent with current estimates at higher levels of probability.
- 4.5 A refreshed baseline, known as DCS 1.2, is being developed which may result in changes to the AFDC. The Programme has commissioned a thorough review and challenge of all central cost and risk provisions in order to remove unnecessary components of cost forecast and to identify opportunities to resolve uncertainty and risk.

## **5 Risk**

- 5.1 There is one Level 0 Programme Risk, and 10 Level 1 Programme Risks at Period 13.
- (a) For Level 0 Programme Risks, there are seven interventions, of which one is complete (14 per cent).
  - (b) For Level 1 Programme Risks, there are 106 interventions, of which 45 are complete (42 per cent).
- 5.2 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:** 20 May 2021

**Item:** Project Representative Report

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### **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 12 and 13. The P-Rep report for Period 13 has been received but there has not been enough time since its receipt and the publication of this paper for the report to be considered and a management response agreed. As provided for under section 100B(4)(b) of the Local Government Act 1972, the Chair has agreed to the late submission of the P13 report and management response to enable Members to consider the most up to date information. The exempt appendix will be sent to Members ahead of the meeting and a public redacted copy will also be published.
- 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 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 website<sup>1</sup>.
- 3.3 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 have been included in the paper on Part 2 of the agenda.

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

- 3.4 In the Period 13 report (8 March – 1 April 2021), the P-Rep highlighted the following key areas of concern:
- (a) focus on short term milestones resulting in a lack of strategic planning;
  - (b) implications of delay to the start of Timetable Running are still emerging and are yet to be fully understood by Crossrail Limited (CRL);
  - (c) start of Timetable Running is at risk;
  - (d) there is a risk of missing the start of Trial Operations;
  - (e) until the drivers of cost are finalised in the Delivery Control Schedule (DCS) v1.2, the Anticipated Final Crossrail Direct Cost forecast cannot be reliably underpinned; and
  - (f) until DCS v1.2 is finalised, a change to CRL's forecast probabilistic dates is unlikely.

The delay to the start of timetable running was for a planned controlled start period, following the transition to the Railways and Other Guided Transport Systems (Safety) Regulations 2006 Regulations environment, to allow maintenance activities and processes to bed in and stabilise before commencing timetable train running.

- 3.5 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 (with an unredacted version being 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

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## Elizabeth Line Committee



Date: 20 May 2021

Item: Crossrail Programme Assurance Update

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### This paper will be considered in public

#### 1 Summary

- 1.1 This paper reports on progress with programme assurance activity across the Crossrail Three Lines of Defence (3LoD) Integrated Assurance Framework (IAF) discussing: confidence of delivery, adequacy of assurance coverage and exceptional risks requiring escalation.
- 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 Recommendations

- 2.1 **The Committee is asked to note this paper and the exempt supplemental information on Part 2 of the agenda and endorse the LoD3 IIPAG-CRL sub-group plan described in this paper and at Appendix 1.**

#### 3 Background

- 3.1 The Crossrail IAF was established in June 2019, based on a 3LoD model:
  - (a) Line 1 - Crossrail management controls functions;
  - (b) Line 2 - Crossrail's Project Programme Assurance (PPA) team; and
  - (c) Line 3 - TfL Internal Audit and (as of January 2021) a sub-group of the Independent Investment Programme Advisory Group (IIPAG-CRL).
- 3.2 Reporting of Crossrail management controls (Line 1) is subject of separate papers on this agenda.
- 3.3 This paper reports specifically on Line 2 (PPA), Line 3 (Internal Audit) and Line 3 (IIPAG-CRL) assurance progress.

#### 4 Line 2 (PPA) Assurance

- 4.1 Line 2 assurance continues to be undertaken, principally, on a real-time, continual assurance basis, through participation in project meetings and related activities, and providing real-time feedback to the project teams. Formal reporting is through the LoD2 Periodic Assurance Review (PAR) Reports.

- 4.2 Since the last meeting of the Committee, LoD2 has issued PAR Reports covering Period 12 and Period 13, which have provided input to the periodic Integrated Assurance Report to the Elizabeth Line Delivery Group.
- 4.3 Based upon our Period 13 assessment, it is the opinion of Line 2 assurance that the schedule and cost for completing Crossrail are under significant pressure but the publicised opening timeframe of 'first half of 2022' currently remains intact and the application in Period 12 of the Railways and Other Guided Transport Systems (Safety) Regulations 2006 represents a significant milestone.
- 4.4 Planned Line 2 assurance activity is set out as part of the 3LoD Assurance Forward Look provided in Appendix 2 to this paper.

## **5 Line 3 (TfL Internal Audit) Assurance**

- 5.1 The Crossrail Internal Audit Plan for 2021/22 was approved by the Audit and Assurance Committee at its meeting on 17 March 2021 and formed part of the TfL Integrated Assurance Plan.
- 5.2 The Line 3 (TfL Internal Audit) assurance plan is delivering a programme of seven audits in 2021/22. The plan is at Appendix 3.
- 5.3 Line 3 (TfL Internal Audit) meet periodically with Crossrail Assurance, the Project Representative, and the Crossrail risk team to share assurance information and ensure that assurance activity is coordinated, and duplication of effort is avoided.
- 5.4 Progress up to the end of Quarter 4 has seen the completion of two memorandums and one audit report which was rated as adequately controlled.
- 5.5 Details of the audit reports issued are included in Appendix 4. Work in progress is set out in Appendix 5, audits planned to start during Quarter 1 in Appendix 6 and changes to the plan in Appendix 7.

### **Audit Delivery**

- 5.6 TfL Internal Audit issued one audit report and two memorandums (memos) during Quarter 4. The two memos related to the Risk Management and Organisational Effectiveness. The audit report covered the transfer of the Crossrail Programme Governance to TfL and was rated as adequately controlled.
- 5.7 In addition, three audits are in the reporting phase, due to report in the next period and two audits are in progress. One audit from the 2021/22 plan is scheduled to start in Quarter 1.

### **Management Actions**

- 5.8 Currently there are no actions overdue.

## **Changes to the Plan**

- 5.9 Line 3 (TfL Internal Audit) regularly review and update the plan throughout the year, in liaison with management, to reflect changing business priorities. There were four changes to the plan in Quarter 4.
- 5.10 Three audits were cancelled in Quarter 4 as they are no longer relevant due to: changes to the Crossrail programme; removal of assurance duplication; or actions taken by Crossrail to mitigate the risk. One audit was renamed to better reflect the scope.

## **6 Line 3 (IIPAG-CRL) Assurance**

- 6.1 The terms of reference of the IIPAG-CRL sub-group require the group to provide a look ahead of its proposed areas of interest and work. The work plan should be integrated into the overall Integrated Audit and Assurance Plan, which is maintained by the second line of assurance. The attached paper sets out its three areas of interest for the coming six months. They are:
  - (a) Baseline 1.2 (BL1.2) – the project is currently undertaking a planning refresh of the schedule and associated control documents, the output of which will be BL1.2. The sub-group will seek to understand from LoD2, the Project Representative and other stakeholders what assurance will be provided to BL1.2 to ensure its robustness. In particular, the group is interested in the transition period between trial running and trial operations;
  - (b) supporting the work of Rail Assurance Board (Crossrail) and its successor, the Integrated Technical Assurance Panel (ITAP) – the sub-group will engage with RAB-C and ITAP to understand the planning and implications for closing out the remaining assurance dependencies; and
  - (c) digital railway – the programme is often described as one of the most complex and novel major projects of its kind and therefore it is vital that this area can stand up to scrutiny as the project moves closer to running passenger services.
- 6.2 Work in these areas does not seek to duplicate other assurance that is happening elsewhere, but to provide and establish a degree of confidence in these critical areas for getting the railway into passenger service.
- 6.3 The sub-group is seeking the Committee's endorsement of the plan, attached as Appendix 1 to this paper.

## **7 Infrastructure and Projects Authority (IPA) Critical Friend Review**

- 7.1 The Infrastructure and Projects Authority is the Government's centre of expertise for infrastructure and major projects reporting to the Cabinet Office and HM Treasury. The IPA conducts regular independent reviews of selected major UK projects.
- 7.2 In November 2020, the IPA conducted a follow-up critical friend review of Crossrail and made seven recommendations.

- 7.3 Of the seven recommendations, five relate to the effectiveness works delivery of the Crossrail project and are currently being addressed as part of the Crossrail's delivery programme.
- 7.4 Two recommendations relate to the breadth of Crossrail's 3LoD assurance framework following the transition to TfL governance and are currently under review by TfL and are due to be considered under separate action by the Committee.

## **8 Integrated Audit and Assurance Plan**

- 8.1 The 3LoD IAF maintains an integrated plan of assurance activity coordinated through the Crossrail Programme Assurance Group forum. A summary of planned assurance activities is summarised in Appendix 2.

### **List of Appendices:**

Appendix 1 – IIPAG Crossrail Sub-Group Proposed Work Plan  
Appendix 2 – 3LoD Assurance Forward Look  
Appendix 3 – Line 3 (TfL Internal Audit) Rolling Elizabeth Line Audit Plan  
Appendix 4 – Line 3 (TfL Internal Audit) Reports issued in Quarter 4  
Appendix 5 – Line 3 (TfL Internal Audit) Work in progress at the end of Quarter 4  
Appendix 6 – Line 3 (TfL Internal Audit) Work due to start in Quarter 1 (2021)  
Appendix 7 – Line 3 (TfL Internal Audit) Changes to 2020/21 Audit Plan

### **List of background papers:**

None

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### Paper to; Elizabeth line Committee

**Meeting Date; Thursday, 20<sup>th</sup> May 2021**

**Author; Keith Winder**

**Subject; LOD3 – Proposed Work Plan**

#### **Introduction**

At the last ELC meeting, a commitment was given to formulate a work plan for the newly formed 3<sup>rd</sup> Line Independent Assurance sub-committee for Crossrail. In the intervening weeks, the sub-committee members have had, and continue to have, consultations and meetings with an extensive range of leaders and senior managers involved in the Crossrail project, to understand the current status of the project, and the plans to achieve staged implementation to the target dates. Our remit is wide, and engages with all the agencies involved in the project, including those not directly contracted to, or controlled by, TfL.

On the basis of these extensive discussions, we have formulated a proposed work plan enabling a high-level assessment of three key areas of activity, which will be fundamental to successful delivery of the forthcoming project stages. These assessments will not duplicate the work of others in TfL's assurance bodies, but will seek to establish confidence that these key activities and processes are fit for purpose and sustainable as the project moves into final stages of delivery.

#### **DCS 1.2**

Within the sub-committee terms of reference is a requirement for the independent 3<sup>rd</sup> line assurance body to oversee the work of the 2<sup>nd</sup> line assurance teams, to ensure that these are focused, relevant, and effective. The work of these teams in providing assurance input into the creation of a revised Delivery Control Schedule – DCS 1.2 - is key to establishing a safe, realistic, sustainable, resourceable and affordable completion of the Crossrail project, in line with the agreed and approved staged implementation strategy. DCS 1.2 is clearly at the core of project delivery planning, and there is a need for LOD3 to engage with Stuart Westgate's team to understand what 2nd LOD assurance is being carried out on DCS 1.2 (and what emerges from that), with P-Rep to get their perspective on DCS 1.2, and with KPMG's independent assessment work on cost and schedule. We anticipate that there will be key issues we will need to probe, and questions we will need to raise, to help establish a robust DCS 1.2, behind which all agencies engaged in the project will be able to stand. Initially, this will be vital to achieve a successful transition from Trial Running to Trial Operation, as this remains a major focus for us all over the coming weeks and months.

#### **Supporting the work of RAB-C (and successor ITAP)**

Crossrail's 1<sup>st</sup> Line assurance committee, RAB-C, has been a key body in helping the project deal with a number of challenging and difficult assurance issues, as the project has moved towards the Trial Running stage. An important part of this has been to give interim approvals based on Structured Engineering Judgements (StEJs) and Safety Justifications (SJs), and it is recognised that moving from interim status to full approval will require a substantial number of dependencies to be closed out.

We believe that LOD3 must seek to engage closely with RAB-C, and the successor committee, the Interim Technical Assurance Panel ITAP, to understand the plan and practicality of removing all the dependencies / StEJs etc between now and Trial Operations. There is no doubt that there needs to be assurance that the plan is realistic and achievable as it will require significant and key resources in the Crossrail team, and probably more challenging, in the supply chain, to support the Safety Case work needed to be completed before going into TO. There will certainly be some areas of concern coming out of this review that will require further work.

### **Digital Railway**

It appears that RFLI are relying on a number of third party contracts to provide the systems support that will be needed during operation. It is important that TfL can be assured that the necessary contracts are in place and the suppliers are able to respond as expected. As we know that TfL's T&D team have little or no involvement in this, there are understandable concerns and nervousness in some parts of TfL. Crossrail has been described by several senior leaders in the project as the most complex, digitally-connected transportation project ever created, and with the myriad of digital systems on Crossrail, there has to be an extensive and complex contract structure in place to provide the necessary support during operation and it is not clear to LOD3 what has been done to ensure this support will be in place. A thorough review is therefore proposed to help ensure that the overall arrangements are robust and sustainable, as the project moves towards the key TO stage.

### **Endorsement**

ELC is asked to review the subject matter proposed for the LOD3 IIPAG Crossrail Sub-Committee, and endorse the workplan for Quarter 1.



# Assurance Lookahead

Period	LoD1 Events	LoD2 - PPA	LoD3 - TFL (IA)	LoD3 - IIPAG (CRL)	Other / External
13	<i>Assurance inputs for Trial Running</i>	<i>Periodic Assurance Review P13 DCS Assurance Update TAR21 Technical Assurance Surveillance TAR25</i>	<i>(Quarter 1 plan in development) Operational Readiness for trial operations</i>	<b>Note: IIPAG(CRL) Plan in development, timing provisional / indicative only.</b>	NAO.
1	<i>T-4 Infra, Ops and Maintenance Ready for Trial Running</i>	<i>Periodic Assurance Review P11 RFLI TR Readiness TAR23 Coordination Support to NAO AUDIT</i>	<i>(Quarterly-based planning) 20 508 Demobilisation of Tier 1 contractors 20 505 Management of Staff cost 20 509 Risk Management</i>	<i>First IIPAG Meeting LoD2 and LoD1 Effectiveness Review Trial Running Readiness Review</i>	
2	<i>Trial Running in progress</i>	<i>Periodic Assurance Review P2 CRL Trial Running Readiness Review TAR25</i>	<i>20 503 Operational Readiness for trial running 20 500 Crossrail Complaints Commissioner 19 502 CRL HSE framework</i>	<i>DCS (Delivery Control Schedule) and periodic reporting (TBC)</i>	
3	<i>Trial Running in progress</i>	<i>Periodic Assurance Review P3 Stations Systems Integration Plan TAR26 Cost Pressures and Root Cause Review TAR 27</i>	<i>20 510 Transfer of CRL programme to TfL 20 506 Management of AFC 20 504 Alternative Delivery Model Strategy</i>	<i>(TBC)</i>	
4	<i>Stations SC3 Tranche 1 Complete</i>	<i>Periodic Assurance Review P4 Trial Running Progress Review TAR27</i>		<i>(TBC)</i>	
5		<i>Periodic Assurance Review P5</i>		<i>(TBC)</i>	



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Elizabeth Line Committee

Rolling Elizabeth Line Audit Plan (2021/22):

Appendix 3

There are 7 internal audits planned for delivery in 2021/22, of which one is planned to start in Q1:

Enterprise Risk No.	Enterprise Risk	Audit Title	Objective	Planned Quarter	Directorate/ Sponsor	Business Unit	Est. Budget (Days)
FC3	Crossrail may not be able to demonstrate sufficient commercial and/or financial control.	Crossrail Complaints Commissioner Accounts	Provide assurance on the accuracy of the Crossrail Complaints Commissioners Accounts for 2020/21	Q3	Crossrail	Crossrail	25
		Management of CRL direct contracts	To provide assurance that the controls around the management of CRL Direct Contracts are adequate and effective	Q2			40
		Employer's Completion Process	To provide assurance that the controls around the Employer's Completion Process are effective	Q1			35
OC3	Crossrail fails to retain key competence and leadership to complete the programme	Transition of CRL People	To provide assurance that the controls around the transition of CRL team are adequate and effective	Q4			35

## Transport for London Audit and Assurance Committee

<b>OC1</b>	Crossrail and TfL may fail to deliver on the transition plan to complete the programme	Information Management and Transfer	To review the effectiveness of controls around information management and transfer from CRL to TfL	Q2		35
		Network and Information Systems (NIS) regulations	To provide assurance on the adequacy of controls around adherence to the NIS regulations	Q3		45
		Organisational Effectiveness	To provide assurance that CRL organisation governance is adequate and effective	Q4		35

Elizabeth Line Committee

Reports issued during Q4

Appendix 4

- Two memorandums and one Internal Audit report were issued.

Enterprise risk	Directorate	Ref	Audit title	Summary of Finding	Conclusion	Priority		
						H	M	L
ER14 Opening of the Elizabeth Line	Crossrail	19 506	Governance and Organisational Effectiveness	<p>Governance, Visualisation and Programme Risk systems are not integrated to the extent they provide management with, or support, the assessment of a single version of the truth, often working in isolation of each other.</p> <p>Terms of reference are documented but need to be revisited to ensure outputs continue to reflect actual practice, and that the escalation process is clear;</p> <p>Management information is heavily focused on the presentation of statistical and schedule type metrics but a supporting narrative is often missing.</p> <p>Committees frequently use action logs as their main output, but these are not developed enough to offer an appropriate record of the management decisions made, or the direction being provided.</p> <p>Programme risk management needs to be re-incorporated into committee agendas, visibility and review of risk at committee level is currently poor.</p>	Memo	0	0	0

Elizabeth Line Committee

Enterprise risk	Directorate	Ref	Audit title	Summary of Finding	Conclusion	Priority		
						H	M	L
ER14 Opening of the Elizabeth Line	Crossrail	20509	Risk Management	External events including COVID-19 have significantly changed the operating environment for the Crossrail programme. Despite this, there have been areas where the risk management function has been able to make further improvements in Crossrail’s maturity, moving the average maturity from Level 1 (“Engaging”) to Level 2 (“Happening”) in the ALARM framework	Memo	0	0	0
ER14 Opening of the Elizabeth Line	Crossrail	20510	Transfer of CRL programme to TfL	Four issues were identified of which two were of medium and two low severity. The medium severity issues were: 1) Arrangements and timeline for developing and agreeing organisational structure post-Trial Running are not yet finalised. 2) Elizabeth Line planning considers a number of slippage scenarios, but formal contingency planning in the event Trial Running, Operations, & Passenger Service dates are not met is difficult to identify.	Adequately Controlled	0	2	2

Elizabeth Line Committee

Work in progress at the end of Q4 2020/21

Appendix 5

- Five audits were in progress at the end of Q4

Enterprise risk	Directorate	Ref	Audit title	Objective	Current Status
SC4 -Volume of residual works may impact operation and safety of the railway (ADM)	Crossrail	20 504	Alternative Delivery Model Strategy	To provide assurance that the alternative delivery model strategy is adequate	In reporting
FC3-Crossrail may not be able to demonstrate sufficient commercial and/or financial control	Crossrail	20 508	Demobilisation of Tier 1 contractors	To provide assurance that the controls around Tier 1 contractor demobilisation are adequate and effective.	In reporting
	Crossrail	20 505	Management of Staff costs	To provide assurance that the Crossrail organisation is managing indirect costs in line with Programme requirements	In reporting
HS4 Safety performance could be impacted by changing from the Crossrail programme rules to the IM operational rules.	Crossrail	20 507	CRL HSE framework	To provide assurance over the adequacy and effectiveness of the HSE framework	In progress
FC3-Crossrail may not be able to demonstrate sufficient commercial and/or financial control	Crossrail	20 511	Monitoring Professional Service and Framework Development Consultants (FDC's).	To provide assurance that PSC's and FDC's are being managed and monitored by CRL in an effective manner.	In progress

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## Elizabeth Line Committee

### Work planned to start in Q1 2021/22

### Appendix 6

- There is one audit planned to start during the quarter

Enterprise risk	Directorate	Ref	Audit title	Objective	Planned
FC3-Crossrail may not be able to demonstrate sufficient commercial and/or financial control.	Crossrail	21 049	Employer's Completion Process	To provide assurance that the controls around the Employer's Completion Process are effective	Q1

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## Elizabeth Line Committee

### Changes to the 2020/21 audit plan

### Appendix 7

- There were four changes to the plan since the last meeting of the Committee: three cancellations and one audit was renamed

Ref	Audit title	Status	Audit Comments
20 512	Readiness for Trial Operations	Cancelled	This audit was cancelled due to the introduction of IIPAG as an extra source of assurance and timing of the Crossrail Programme
20 503	Readiness for Trial Running		This audit was cancelled due to the introduction of IIPAG as an extra source of assurance and the short timescales leading to the start of trial running. An agreement was made to revisit this in April to discuss scope of any future work that will be needed. As the name and scope will change and it will take place in the 2021/22 financial year it was decided the most practical thing would be to cancel this audit and carry out any work under a new title and number
20 506	Management of AFC		Actions from previous audit had not yet been implemented - once the actions are in place the system will be robust -we will review whether any further audits are required in this area once the Targeted Assurance Review currently underway is completed
20 511	Monitoring Professional Service and Framework Development Consultants (FDC's).	Renamed	Renamed from Management of Indirect Costs to better reflect scope.

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## Elizabeth Line Committee



**Date:** 20 May 2021

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

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

### **1 Summary**

- 1.1 This paper presents the current forward 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

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

None

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

<b>Standing Items</b>		
Safety Update	Commissioner	
Project Status Update	Crossrail Chief Executive	
Elizabeth Line Readiness	Commissioner	
Project Representative Report	Crossrail Chief Executive	
Crossrail Programme Assurance Update	Chief Finance Officer, Crossrail	
Finance and Risk Update	Chief Finance Officer, Crossrail	
<b>15 July 2021</b>		
Complaints Commissioner for Crossrail Interim Report	Crossrail Chief Executive	
National Audit Office Report	Chief Finance Officer, Crossrail	
Delivery Control Schedule Review	Crossrail Chief Executive Managing Director, London Underground	
<b>25 November 2021</b>		
Enterprise Risk Update - Opening of the Elizabeth line (ER14)	Managing Director, London Underground	
<b>26 January 2022</b>		
Complaints Commissioner for Crossrail Final Report	Chief Finance Officer, Crossrail	

## **Elizabeth Line Committee Forward Planner 2021/22**

### **Items to be scheduled:**

Operational Transition Stages 4&5

### **Dates of Future Meetings**

15 July 2021

30 September 2021

25 November 2021

26 January 2022

23 March 2022