#### **CROSSRAIL SPONSOR BOARD**

**Date** 26 July 2018

Paper No SB95-04

**Title** Communications Briefing for Sponsors

#### **Purpose**

1. This paper updates Sponsors on planned communication activities and key upcoming issues that may need reactive handling.

#### **Action Required**

- 2. The Sponsor Board is asked to:
  - NOTE the paper and key upcoming events.

#### Overview

- 3. The recent main focus has been the transition of Crossrail Limited's (CRL) communications functions, including the Press Office and Stakeholder Relations, to TfL. A new set of monthly meetings have been set up for joint sponsors, CRL and Network Rail to meet to discuss communications issues and proactive opportunities.
- 4. TfL and DfT are due to sign-off a joint agreement on communications to clearly set out how the two organisations will continue to work closely together as the project is in the final stages ahead of opening. This is to ensure collaboration to jointly understand the upcoming challenges, agree handling to manage and mitigate risks, and ensure equal share of reputational benefits of the project as set out in the Heads of Terms of the Funding Agreement.
- 5. In May 2018, TfL took over Heathrow Connect services (Crossrail Stage 2 Phase 1). Communications were issued around the change in services. This was kept deliberately localised, with a press release, stakeholder emails, leaflets and poster campaign issued.
- 6. The last in a series of Year of Engineering open day events with Crossrail has been held. These included events at Farringdon and Tottenham Court Road (TCR). Selected media were invited for a tour of the station in order to demonstrate progress. Images and a press release highlighting the supply chain were issued after the TCR open day. Coverage appeared in City AM, as well as in blogs by Geoff Marshall and Ian Visits.
- 7. The DfT announced the appointment of Sir Terry Morgan to be Chairman of HS2. He will remain in place as Chair of Crossrail.

8. Sponsors have also handled a number of reactive press enquiries, including around the status of the latest Written Ministerial Statement (WMS), progress at Whitechapel station and the look and feel of the new Elizabeth line trains.

#### **Upcoming announcements**

- 9. DfT, TfL, CRL and Network Rail Communications teams have been working closely together to ensure lines are ready for when the latest WMS is published.
- 10. The TfL Press Office will continue to work with CRL to identify construction milestones and highlight these through press releases, images and media events as appropriate.
- 11. The latest list of key upcoming announcements throughout 2018 is set out in Appendix 1.

#### Challenges

- 12. The TfL Press Office has developed an extensive list of proactive opportunities to help educate and build awareness and excitement around the Elizabeth line to ensure customers are using the line from day one. Programme schedule pressures and operational issues can impact on this work and it is vital that Communications teams are aware of any changes so they can adapt the communications plans accordingly. Many opportunities require a relatively long lead time. One example of this was the planned activity with London Fashion Week which was scheduled for September and could not go ahead due to programme pressures.
- 13. A lot of the launch activity requires third parties to be advocates. Key organisations, including London First and Canary Wharf Group, are looking at ways to support the launch including hosting events to mark opening day. Venues and entertainment will be booked soon for a December launch. These organisations work closely with TfL on a number of projects and it is vital the Communications teams protect these relationships.
- 14. Marketing and wider communications activity is also being finalised ahead of media slots being booked to run for late November and throughout December.

#### **Reactive communications**

- 15. As the project approaches opening there will be increased scrutiny from both stakeholders and media. Key issues of interest will be around delivery dates and budget.
- 16. Any meeting or Board papers are read through in detail and often reported about. Public meetings are also either attended by media or watched via the weblinks.

#### Appendix 1: Upcoming events and planned activities

Please note all dates are subject to change

	Day	Milestone / event	Planned media activity
July	7 July	CRL open day: Whitechapel	Public viewing only, no media. Images will be available after the event
	9 July	CRL open day: Tottenham Court Road	Images and press release highlighting supply chain
	w/c 9 July	Oversite Development (OSD) announcement re Farringdon West	Press release
	July TBC	Written Ministerial Statement	Reactive lines and Q&A
	July TBC	First end-to-end 345 journey	Video release TBC (footage captured for £15bn Railway)
	July TBC	Incline lifts at Farringdon and Liverpool Street installed	Potential for social media
	Late July TBC	Bloomberg News to photograph the production of roundels at AJ Wells	Being arranged with AJ Wells
	Late July TBC	Commercial Development update	Press release TBC
	Late July	Liverpool street east oversite developer agreement	Press release
August	6 – 10 August	Potential closure of Goodmayes station for Network Rail work	Network Rail press release
	August	Two Elizabeth line engineering trains arrive at Plumstead Depot	Trade press release with photography
	Summer TBC	Potential event at the Tunnelling and Underground Construction Academy (TUCA)	Media event and press release
	Summer TBC	Gidea Park and Forest Gate ticket halls open	Joint NR / TfL release for locals in the east, with social media activity to follow
	August (Summer TBC)	New Tube map unveiled with the Elizabeth line 'coming soon' message	Press release with photography, potential event
September	September/October	Production Guild event at an Elizabeth line station	Event for location scouts, line producers and producers to visit an Elizabeth line station. Potential to also loop in Film London and FCO
	September	London Transport Musuem (LTM) Elizabeth line merchandise goes on sale	Work with LTM on joint press release, images and social media
	September	'Calling all Elizabeths' press release to be issued jointly with Museum of London	Press release and media activity
	September	State of the art rail-milling machine arrives at Plumstead Depot	Trade press release with photography
	September TBC	Training operations staff at Romford Control Centre	Trade media briefing, feature pitch to Rail Magazine/ RailStaff
	September	Borough Press "Underground: Tales for London" published	Collaborative press activity with the author James Smythe

	Day	Milestone / event	Planned media activity
	September TBC	Whitechapel green roof planted	Press release and photography
October	October TBC	Three months to go: first train with VIP passengers through tunnels	Potential for event with SoS and Mayor of London ahead of public testing
	October TBC	NR contract awards for stations in the west	Reactive lines. Network Rail to lead on comms
	I October onwards	Trial ops and trial running commence (Every Saturday 27 October- 24 November)	Exercise-style comms – various focus groups involved. Pre-brief to news media Media event, press release with photography Social media
	October	*Art installations across the line TBC	Press release & picture story for art press
November	November	Placement of travel features for London shopping	Work with NWEC to do 'Holiday shopping along the Elizabeth line' features with regional and international media, partnering with hotels
	November	Elizabeth line pocket Tube map	Announcement of artist, unveiling of artwork via social media
	w/c 13 November	Elizabeth line commemorative Oyster card released	Social media
	Mid-November	"One month to go" international media event at an Elizabeth line station, hosted by the FCO and Foreign Press Association.	Media event at a station. Working with FCO, around 30 journalists expected.
December	December	Museum of London press release issued - Museum of Elizabeths	Including a line from TfL
	December TBC	Mayor of London to meet staff with one week to go until the launch	'Behind the scenes' event for media, to mark one week to go
	December	Elizabeth line launch	Large-scale media and stakeholder event
		Launch of new Elizabeth line posters, designed by art students	Press release and social media

#### **Crossrail/ Elizabeth Line Joint Sponsor Communications Agreement**

**Context:** From July 2018, Crossrail Ltd Communications team will cease to lead on Crossrail / Elizabeth line communications, with the responsibility transitioning as planned to Transport for London (TfL). There continues to be a good working relationship between the DfT and TfL and this document recaps agreed ways of working in order to ensure the role and contribution of both the DfT and TfL are recognised within future communications.

**Objective:** To ensure collaboration between the sponsor's communications teams. To understand the upcoming challenges, manage and mitigate risks where possible, and ensure equal share of the reputational benefits of the project from now until the completion of Stage 5. This includes:

- DfT and TfL will ensure each organisation is fully consulted on planned communication/ public affairs activity (marketing, stakeholder engagement and press) around the Crossrail Project and the Elizabeth line through:
  - o A monthly communications planning meeting and regular conference calls,
  - Regular discussion to understand and track known and emerging communication risks, and
  - Updates to Sponsor Board every two months
- General overarching principles for joint working on communications:-
  - Significant, controversial and/or high-profile media enquiries are flagged to each Press Office for information as soon as possible.
  - Inclusion of DfT and TfL logos on all relevant publicity material relating to Crossrail and the opening/running of the Elizabeth line (the principles of this will be agreed by the Joint Sponsor Board).
  - Suitable wording in all press and marketing material setting out the joint sponsors funding/involvement in Crossrail and the Elizabeth line.
  - Ensuring early sight and agreement on handling of emerging issues and priority communication opportunities such as milestones and moments when key benefits of the investment or services are being delivered.
  - Advanced sight and agreement of proposed visits and stakeholder events including media handling.
  - In instances where announcements directly correlate to existing, previous or proposed DfT funding (i.e. Crossrail 2), both organisations are sighted on quotes and comms messaging in advance of publication.

Action: Once agreed between DfT and TfL the Joint Sponsor Board on 26<sup>th</sup> July is requested to note this agreement.

#### **Achieving coordinated communications:**

The existing monthly Crossrail/ Elizabeth line Comms Steering Group will continue with a refined membership and reviewed terms of reference.

**Objective:** To ensure collaboration to understand and agree handling of milestones, upcoming challenges and risks. Coordinating communications activity for the launch and profile of operational service of the central section and beyond to include Stages 4 and 5

**Created/ meeting schedule:** July 2018, a fortnightly comms call and meeting on a 4 week basis timed to inform updates to the Joint Sponsor Board

#### Purpose of group/terms of reference:

- Deliver a joint-sponsor Elizabeth line communication strategy including forward look/planners— updating Joint Sponsor Board on proposed communications activity.
- Develop and deliver joint-sponsor cross-industry communications plans to promote and publicise the Elizabeth line and impact of the Crossrail project on the wider UK effectively, using all available channels.
- To identify and share key themes for Elizabeth line: i.e. passenger benefits, jobs, apprenticeships, growth and regional investment and ensure that these are used consistently in all cross-industry communications.
- To identify and agree stakeholder engagement and wider communications opportunities to build advocates.
- To share excellence on internal/ external communications and to win support and endorsement from the staff of each delivery partner so that they act as ambassadors for Elizabeth line and projects like Crossrail.

#### Membership:

- Department for Transport
- Transport for London
- MTR Crossrail
- Network Rail
- Crossrail Limited

#### **Accountability:**

Members are accountable to their own organisations / boards of directors.

TfL Press Office will also present a communications update to the Sponsor Board on a two month basis.

#### Meetings

Meetings will be convened at member venues on a rotational basis between TfL and DfT.

The hosting member will facilitate and chair the meeting.

Items for the agenda will be agreed in advance, they will cover:

- Update on operational readiness.
- Current media profile and coverage

#### OFFICIAL -SENSITIVE

- Main launch activity / plans for the opening of central section.
- A six month forward look of communications activity across the range of channels
- Identify key challenges and risk and how they are being managed
- Ratify the next six months communication objectives and when they change.
- Discuss specific projects or opportunities to identify priorities, resources and deadlines.

#### Sharing of information and resources (including confidential materials)

- Members are responsible for cascading and sharing output from this group within their own organisation
- Any confidential or copyright matters will be handle in accordance with the correct procedures



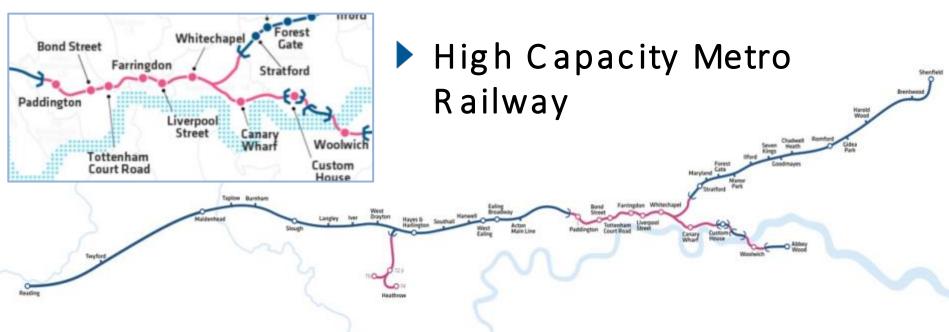
# **◆**CROSSRAIL PROJECT UPDATE

CBI Visit 24 August 2018

# Crossrail – enabling London to grow crossrail







118 km length

£42bn net benefit **42km** tunnels

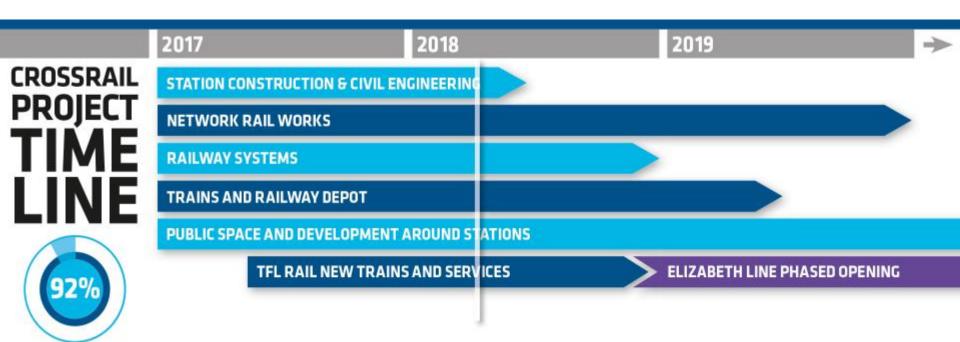
41 (10 new) stations

**24** Trains/hour

**200m** journeys pa

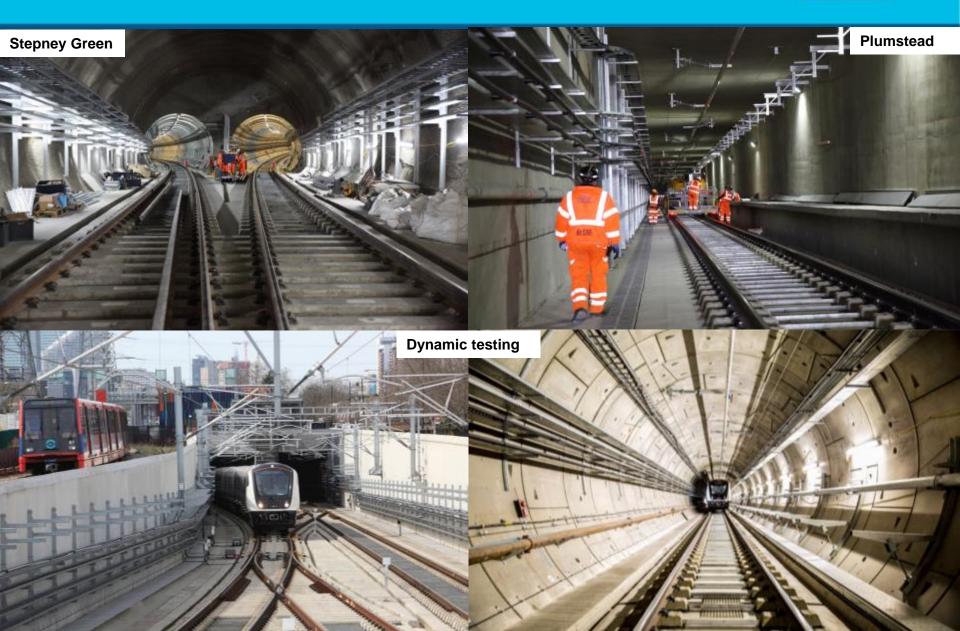
### Project progress





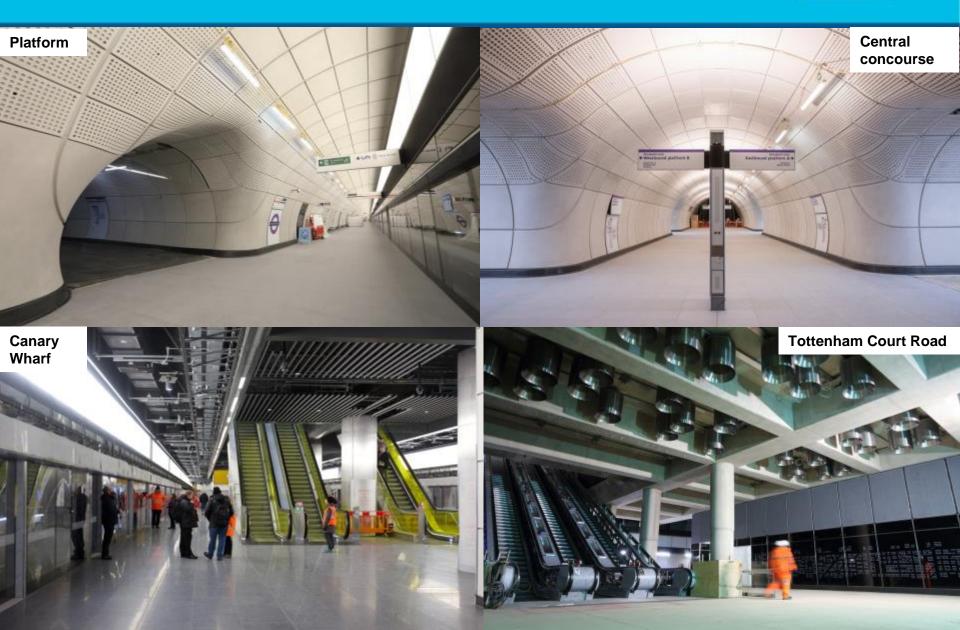
# Railway systems





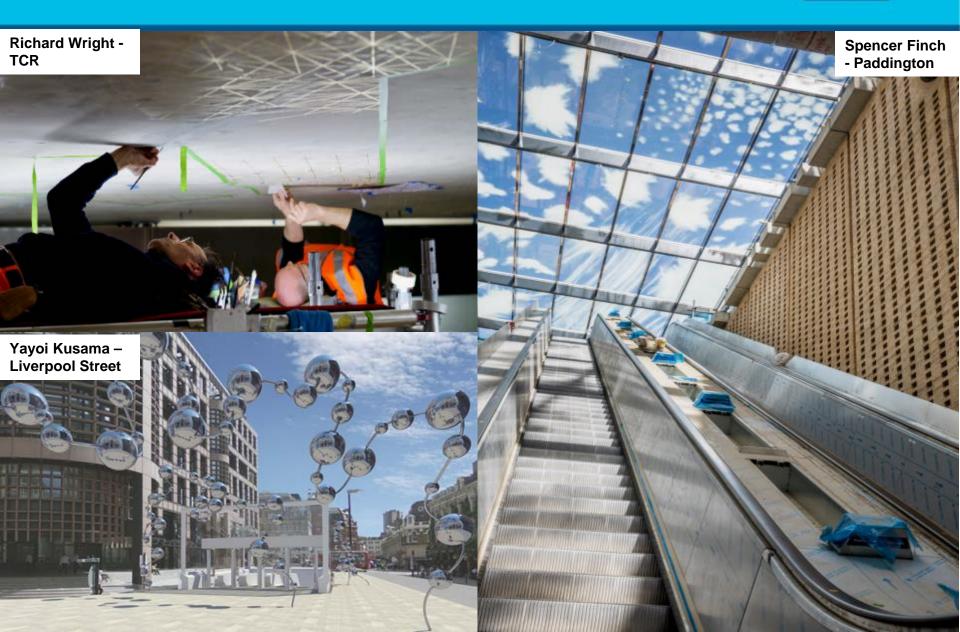
# Stations





# Art Programme





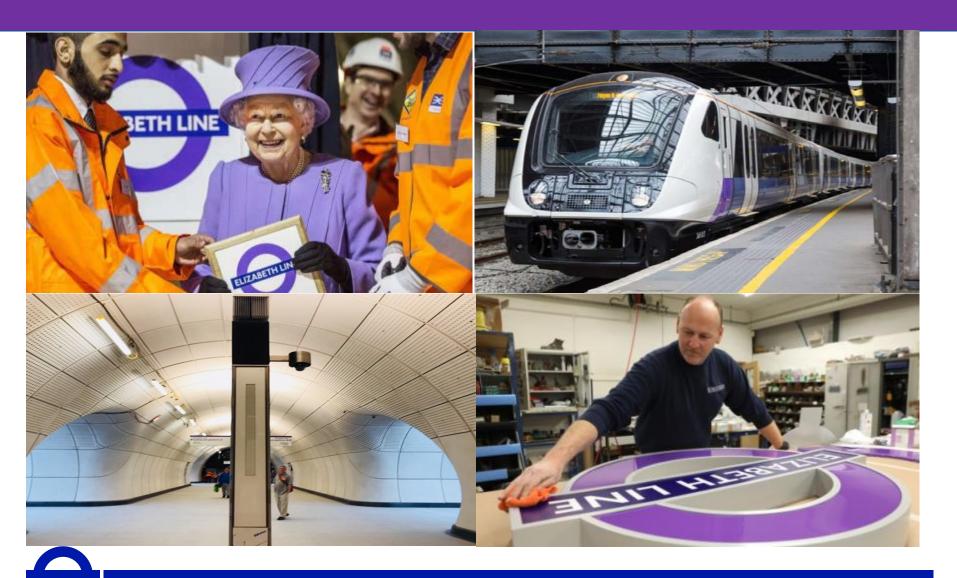
### Network Rail station upgrades





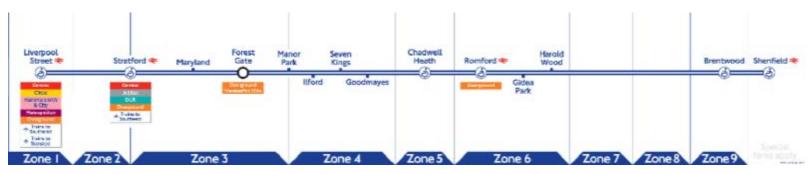
- New landmark station at Abbey Wood opened to passengers 22 October
- Complete rebuild of eight further surface stations and improvements at many others
- More than 40 lifts being installed and platform extensions at 16 locations to accommodate longer trains

### **OPERATIONAL UPDATE**



### June 2017: Introduction of new trains

#### TfL Rail: Liverpool Street to Shenfield



- Services transferred to TfL (branded TfL Rail) in May 2015
- New Elizabeth line trains introduced June 2017
  - Walk through carriages with wide doorways
  - Designated spaces for wheelchairs and additional multi-use spaces for luggage, buggies and bicycles
  - Capacity for 1500 customers, more standing space and mix of seating options
  - Air-conditioning, Wi-Fi and real-time information on trains
  - Dedicated wheelchair bays and 10 multi-use spaces

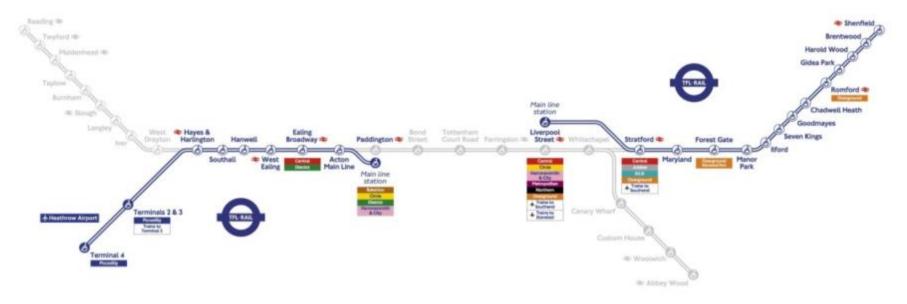






### May 2018: Start of Heathrow services

TfL Rail services: Heathrow to Paddington



- In December 2017, management of the majority of stations in the west transferred to TfL
- On 20 May 2018, TfL Rail services began between Paddington (National Rail) and Heathrow Terminals (2/3/4), replacing the Heathrow Connect service and part of the Great Western inner suburban service



# Heathrow services in pictures



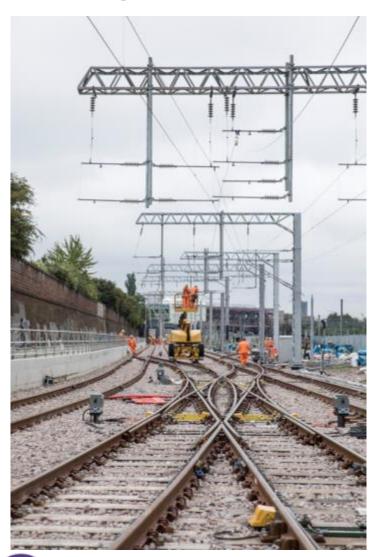








# Testing of infrastructure/systems









### December 2018: Launch of Elizabeth line



Three separate services will operate:

- Paddington (Elizabeth line station) to Abbey Wood
- Paddington (National Rail station) to Heathrow
- Liverpool Street (National Rail station) to Shenfield



### May 2019: Shenfield service extends to Paddington

Customers can travel directly from Shenfield all the way through central London





### December 2019: Elizabeth line fully open

Services run from Reading and Heathrow in the west to Shenfield and Abbey Wood in the east





### Improved accessibility





- 10 new stations with step-free access from street to train
- Lifts installed at stations in the east and west surface sections
- 'Turn up and go' service currently provided on the Tube and TfL Rail
- Help points on each platform and emergency call buttons on trains
- Fully accessible train fleet with dedicated wheelchair bays





### Property impacts



- Oversite developments 3m square feet of office, retail and residential above 12 Crossrail sites
- ▶ £10.6bn (previously £5.5bn) additional residential and commercial property value by 2021
- Support 90,000 (previously 55,000) new homes by 2021
- 4.4m (previously 3.25m) square feet of commercial office floor space by 2021





### Skills development



# Crossrail skills strategy

Maintaining safety

Inspiring future talent

Supporting local labour

Revitalising the skills base



### May 2018

1003 Apprentices

15,000 enrolled at TUCA

27% of apprentice intake in last 12 months female

4,544 jobs for local people

All figures are running totals bar 'employed on project'







◆ Programme schedule – communications approach

August 2018

### Timeline



- Following a decision by the Crossrail Board, an announcement would ideally be made in early September.
- External announcement and stakeholder activity will be led by Crossrail with the support of Sponsors. Announcement will not reference cost consequences.
- Timing issues include Adverse Event Notice issued by CRL to coincide with Sponsor Board on 3 Sep, Mayor's meeting also on 3 Sep, House of Commons returns on 4 Sep (rises 13 Sep), TfL Board meets on 19 Sep (papers published on 12 Sep).
- Sponsors have not formally agreed on a timeline for the announcement. DfT's preference is for an announcement following return of House of Commons on 3 Sep. TfL's preference is likely to be for an announcement following Sponsor Board on 3 Sep TfL also required to issue a markets update.
- Crossrail's preference is for an announcement following Sponsor Board and meeting with Mayor on 3 Sep, preferably 5 or 6 Sep.

### Context



- Multiple communications strands for CRL ranging from route MPs and local residents to Crossrail employees and tier 1 contractors. Direct communications with key stakeholders will be undertaken in parallel to external announcement.
- Announcement will generate significant media and stakeholder interest, defining the project short-term and lead to increased scrutiny
- Significant potential for a marked increase in information requests by external organisations, elected representatives, statutory bodies, FOIs etc.
- Tier 1 contractors, specifically Siemens, Bombardier and the three companies in the ATC JV will view as a major reputational risk
- Key to the delivery of the communications outputs will be an agreed narrative that explains the contributory factors in a concise way
- This narrative is under discussion with Sponsors and outlines how the programme became compressed
- No single event construction, railway systems and rolling stock this a complex integration story

### Risks overview



Risks	Mitigation
Revised schedule is leaked – information becomes known before formal announcement	Development of communications approach including reactive line
Community relations - local stakeholder response assumes prolonged impacts (construction fatigue) - boroughs, residents and businesses	Clear explanation of issue and new timelines, tailored to local area impacts
<b>Supply chain</b> – tier 1 contractors seek to protect their own reputations	CRL + TfL led media engagement
CRL workforce – uncertainty about indicative end dates and when they will be departing project	Internal communications
Politicisation of project – government, City Hall, elected representatives and Committees amplify issue / return of Parliament in September	<ul> <li>Work with S ponsors on engagement strategy / targeted stakeholder engagement</li> </ul>
Increased scrutiny — risk of significant increase in project scrutiny and requests for information	Review available resources
Wider relationship impacts - Key beneficiaries (CWG, NWEC, etc.), funders and institutions as well as media (BBC documentary) have tied plans to Stage 3 / December 2018 operations	Engagement plan to be developed

### Communications strands



- Liaison with Sponsors communications planning and stakeholder mapping
- ▶ **Media** development of agreed narrative, press notice, media Q&A
- ▶ Political stakeholders including National and Boroughs development of engagement plan including face-to-face meetings, drafting of template letters
- ▶ Community relations development of engagement plans for residents and local businesses with particular focus on stations in Westminster and Tower Hamlets. Engagement with Crossrail Complaints Commissioner and Planning Forum chair.
- ▶ Tier 1 contractors communication from CRL to tier 1 contractors and key suppliers.
- ▶ CRL employees development of internal bulletin and content for All Hands Briefings etc. to explain announcement and schedule priorities
- Other Key beneficiaries, funders and institutions engagement

### Outline timeline for announcement



- ▶ 09:00 TfL inform London S tock Exchange / C redit R ating Agencies
- ▶ 09:30 Pre-brief key journalists and top tier stakeholders
- ▶ 09:30 Internal CRL bulletin issued
- ▶ 10:00 Crossrail press notice issued
- ▶ 10:00 S takeholder briefings continue by Crossrail and TfL
- ▶ DfT and TfL currently propose that no media interviews should be undertaken. All media enquiries will be handled reactively.

# Key messages



Overarching

- Local
  - Most of the testing activity next year will take place within the stations and tunnels, and will not have a material affect on local communities.

# Media



- XXXX
- XXXX

## Key stakeholders



- Julian Bell Ealing Leader and London Councils
- Nickie Aiken leader City of Westminster
- Graham King City of Westminster and Borough lead SPOC
- Mike Gapes MP Chair Crossrail APPG
- Keith Prince Chair, London Assembly Transport Committee
- Caroline Pidgeon Deputy Chair, London Assembly Transport Committee
- Florence Eshalomi Labour Transport lead, London Assembly
- Lilian Greenwood Chair, Commons Transport Committee
- Andy McDonald Shadow Transport Secretary
- Amyas Morse Comptroller and Auditor General, the NAO
- Sir George lacobescu Canary Wharf Group
- Jace Tyrrell New West End Company
- ▶ John Holland-Kaye CEO, Heathrow Airport
- Network Rail
- Crossrail employees
- Key tier one contractors

### Political stakeholders



#### Central Government

- ◆ Liaison with key departments led by DfT No10, Treasury, Cabinet Office, HDCLG
- Follow up letters to key Ministers from CRL (?)

#### Route MPs

- Early calls to key route MPs: Mike Gapes
- Follow up letters to all route MPs

#### London Assembly Members

- Early calls to Transport leads
- Follow up letters to all AMs

#### Other key political stakeholders

 Follow up letters to other key political stakeholders including Transport Committee Chair, Comptroller of NAO, Shadow Transport Secretary, the IPA and Public Accounts Committee

# Community relations



#### All route Borough leaders

- Early call to City of London Corporation led by CRL
- Early calls to Westminster and London Councils led by CRL
- Early calls to other central section Borough leaders led by TfL
- Follow up letters to all leaders from CRL

#### All route Borough SPOCs

- Early call to Graham King (Westminster and HLP subgroup chair) led by CRL
- Early calls to all central section SPOCs led by TfL
- Follow up communications to all SPOCs and transport leads led by TfL

#### Mail out to central section local residents via CLP and CSD

Only to relevant central section stations and led by CRL

#### Oversight bodies

 Early calls to the Crossrail Complaints Commissioner and the Chair of the Planning Forum led by TfL

### Other stakeholders



#### Partner and funding organisations

◆ Early calls to — MTR, Network Rail, Canary Wharf Group, Heathrow Airport, Berkeley Homes led by CRL, DfT and TfL

#### Lobby groups

 Follow up engagement including London Travel Watch, Transport for All and Passenger Focus led by TfL

#### Business groups

Follow engagement including NWEC, LCCI, LDN First, CBI led by TfL

#### TOCs

 Follow up engagement including Govia Thameslink, South Eastern, FGW and Great Anglia led by TfL

#### Property developers

Follow up engagement with OSD developers led by TfL

# Tier 1 contractors + supply chain crossrail

- XXXX
- XXXX

# Internal



- XXXX
- XXXX

# Chairman



- XXXX
- XXXX

# Chief Executive



- XXXX
- XXXX



August 2018

### Introduction



- No announcement will be made before the Crossrail Board meeting on 29 August however news could enter into public domain at any time between now and the formal announcement date.
- ▶ The Crossrail Board meets on 29 August, CRL will issue an Adverse Event Notice to Sponsors on 30 August, Sponsor Board meets on 3 September, the Mayor's meeting is on 6 September, TfL Board papers publish on 12 September and next TfL Board meeting is on 19 September. House of Commons returns on 4 September and rises for conference season on 13 September.
- Likely dates for an announcement are 31 August (following the issuing of the Adverse Event Notice) or 7 September but otherwise will be early September. Planning underway to manage the communications activity, a priority is the development of the core narrative, press notice and media Q&A as well a reactive line should the news break prior to the CRL Board meeting on 29 August.
- Multiple communications strands for CRL focus will be on developing materials that can be activated at short notice but additional time enables more detailed preparation to be undertaken

### Context



- Sponsors are aware of the schedule issue. CRL has also informed Siemens, Bombardier Transportation and ATC JV.
- Announcement will generate significant media and stakeholder interest, defining the project short-term and lead to increased scrutiny
- Given the close proximity to the WMS, questions are likely to be raised about timing and whether this information was known in July
- Crossrail and Sponsors will need to align on the reasons for the delayed schedule
- Need to avoid risk of blame assignment − tier 1 contractors, specifically Siemens, Bombardier and the three companies in the ATC JV will view as a major reputational issue
- Significant potential for a marked increase in information requests by external organisations, elected representatives, statutory bodies, FOIs etc. and impact on resources

### Risks overview



Risks	Mitigation
Revised schedule is leaked — information becomes known before formal announcement	Development of communications approach including reactive line
Community relations - local stakeholder response assumes prolonged impacts (construction fatigue) - boroughs, residents and businesses	Clear explanation of issue and new timelines, tailored to local area impacts
Supply chain — tier 1 contractors seek to protect their own reputations	CRL + TfL led media engagement
CRL workforce – uncertainty about indicative end dates and when they will be departing project	Internal communications
<b>Politicisation of project</b> – government, City Hall, elected representatives and Committees amplify issue / return of Parliament in September	<ul> <li>Work with Sponsors on engagement strategy / targeted stakeholder engagement</li> </ul>
Increased scrutiny — risk of significant increase in project scrutiny and requests for information	R eview available resources
Wider relationship impacts - Key beneficiaries (CWG, NWEC, etc.), funders and institutions as well as media (BBC documentary) have tied plans to Stage 3 / December 2018 operations	Engagement plan to be developed

### Explaining the issue



- Key to the delivery of the communications outputs will be an agreed narrative that explains the contributory factors in a concise way
- This narrative will need to explain how the programme schedule became compressed
- No single event − construction, railway systems and rolling stock − this a complex integration story
- Narrative will need to be agreed with Sponsors and also align with the WMS and CRL media / stakeholder response

### CRL communications strands



- Liaison with Sponsors determine who will make the announcement and agree the external communications materials, specifically media + liaison re: stakeholder mapping
- ▶ Media development of core narrative, press notice, media Q&A and reactive line
- ▶ Political stakeholders including National and Boroughs development of engagement plan including face-to-face meetings, drafting of template letters and external briefing note
- ▶ Community relations development of engagement plans for residents and local businesses with particular focus on stations in Westminster and Tower Hamlets. Engagement with Crossrail Complaints Commissioner and Planning Forum chair.
- ▶ Tier 1 contractors communication from CRL to tier 1 contractors and key suppliers. Identification of issues likely to be raised and rebuttals prepared in event of suppliers briefing media.
- ▶ CRL employees development of internal bulletin and proposal for series of All Hands Briefings with leadership team at sites and offices to explain announcement and schedule priorities
- ▶ Other Key beneficiaries, funders and institutions engagement

## Comms priorities next steps



- Communications approach agreed with TfL and DfT
- Align communications activity with S ponsors including agreement on who leads announcement
- Finalise core narrative and draft press notice and media Q&A including statements
- Prepare CRL communications materials that will be required if announcement needs to be made at short notice draft internal bulletin, draft stakeholder letter, supporting materials and mailing lists etc.
- Further develop communications planning including detailed stakeholder mapping, who we talk to and the sequence, assign leads for each stakeholder and engagement output / coordination with TfL as required

#### **Jacob Gemma**

From: MacLennan Peter
Sent: 30 August 2018 12:45

**To:** @dft.gov.uk';

@dft.gov.uk'; ' @dft.gov.uk)'; Gray

James (Crossrail); Morley Vicky; Gasson Sarah; Prior Lois;

@dft.gov.uk)

**Subject:** Crossrail - press notice and reactive Q&A

Attachments: DRAFT - CRL press notice 30-08-2018.docx; DRAFT - Crossrail media QA - CRL

schedule 30-08-2018.docx (for sponsors).docx

#### ΑII

The Adverse Event Notice has now been issued to Sponsors.

Attached is a copy of the CRL press notice and supporting Q&A that will be used by CRL to respond to media enquiries.

Can Sponsors advise if there are any further comments.

Regards

Peter

Peter MacLennan | Media Relations

Crossrail | CS28/G4/17 | 25 Canada Square, Canary Wharf, London E14 5LQ

Direct: | Mobile @crossrail.co.uk

www.crossrail.co.uk

MOVING LONDON FORWARD

Click <u>here</u> to report this email as SPAM.

- Central section between Paddington and Abbey Wood will now open in summer 2019 instead of December 2018
- Additional time required to ensure a safe and reliable railway for customers from day one of passenger service
- New railway remains on track to fully open in December 2019 as originally planned

The Elizabeth line, which will redefine transport in London with quicker, easier and more accessible journeys, will now open through central London in summer 2019, Crossrail Limited and Transport for London announced today.

The hugely complex ten-year project, delivered by Crossrail Limited, brings together multiple infrastructure contracts, new rolling stock and three different signalling systems.

Crossrail Limited has been working hard to maintain the programme but there is now insufficient testing time available to introduce a railway that will be safe and reliable for services to commence in December. The central section between Paddington and Abbey Wood will now open in summer 2019 instead of December 2018.

The Elizabeth line remains on track to fully open from Reading and Heathrow in the west through the central tunnels to Shenfield and Abbey Wood in the east by December 2019 as originally planned.

Testing has started but further time is required to complete the full range of tests required for the highly complex signalling and train systems software. The railway can only open through the central section once full testing of the train and signalling system has been successfully completed and a sufficient level of system operational reliability has been achieved.

The programme has been impacted by a later than planned start to dynamic testing in addition to access delays for train testing caused by remaining tunnel fit-out activity and delays with software development for the new Elizabeth line trains.

**Simon Wright, Crossrail Chief Executive said (TBC):** "The Elizabeth line is one of the most complex and challenging infrastructure projects ever undertaken in the UK and is now in its final stages. We have made huge progress with the delivery of this incredible project but we need some more time to complete the testing of the new railway. We are working around the clock with our supply chain and Transport for London to complete and commission the Elizabeth line."

Mark Wild, London Underground and Elizabeth line Managing Director, said (TBC): XXX

DfT said: XXX

During the initial energisation of electrical equipment at Pudding Mill Lane substation on 11 November 2017, two voltage transformers failed. The cause of the failure was quality assurance. This delayed the start of energisation of power equipment in the tunnels by several months while extensive checks were completed.

The programme for testing has also been compressed by more time being needed by contractors to complete fit-out activity in the tunnels.

Rolling stock testing has been affected by delays with software development to allow the class 345 train to successfully operate across the three different signalling systems on the Elizabeth line. The testing process in the central section, when one and subsequently multiple trains are tested in the tunnels, relies on a certain level of software functionality to complete all the testing that must be undertaken.

The new Elizabeth line trains are already operating between Shenfield and Liverpool Street (mainline station) and between Paddington (mainline station) and Hayes & Harlington, in readiness for the full opening. The trains are also being tested in the Heathrow tunnels. Construction activity is drawing to a close with the completion of the remaining architectural fit-out in the new central section stations and will complete this year.

When the central section of the Elizabeth line opens in summer 2019, the railway will initially operate as three separate services as planned:

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- Paddington (mainline station) to Heathrow (Terminals 2, 3 and 4)
- Liverpool Street (mainline station) to Shenfield

The Elizabeth line will be fully open by December 2019 with services running from Reading and Heathrow in the west (including Terminal 5) through the central tunnels to Shenfield and Abbey Wood in the east.

The new railway, jointly sponsored by the Department for Transport and Transport for London with support from London's business community, will connect stations such as Paddington to Canary Wharf in only 17 minutes, transforming how Londoners and visitors move across the capital.

The Elizabeth line will increase central London's rail capacity by 10%. It will being an extra 1.5 million people to within 45 minutes of central London and more than 200 million passengers are expected to use it every year.

- Central section between Paddington and Abbey Wood will now open in summer 2019 instead of December 2018
- Additional time required to ensure a safe and reliable railway for customers from day one of passenger service
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The Elizabeth line, which will redefine transport in London with quicker, easier and more accessible journeys, will now open through central London in summer 2019, Crossrail Limited announced today.

The hugely complex ten-year project, delivered by Crossrail Limited, brings together multiple infrastructure contracts, new rolling stock and three different signalling systems.

Crossrail Limited has been working hard to maintain the programme but there is now insufficient testing time available to introduce the next phase of the railway – the central section between Paddington and Abbey Wood – in December in a way that can be guaranteed to be safe and reliable. The central section between Paddington and Abbey Wood will now open in summer 2019 instead of December 2018.

The Elizabeth line remains on track to fully open from Reading and Heathrow in the west through the central tunnels to Shenfield and Abbey Wood in the east by December 2019 as originally planned.

The final infrastructure work will be finished in the coming months, including the completion of essential communication equipment which links to key functions at the stations, including escalators, lifts, platform edge doors and emergency exits.

The original programme for testing has also been compressed by more time being needed by contractors to complete fit-out activity in the central tunnels. Testing has started but further time is required to complete the full range of integrated tests required to ensure a safe and reliable railway. The railway will open through the central section once full testing of the train and signalling system has been successfully completed and a sufficient level of system operational reliability has been achieved.

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**Simon Wright, Crossrail Chief Executive said (TBC):** "The Elizabeth line is one of the most complex and challenging infrastructure projects ever undertaken in the UK and is now in its final stages. We have made huge progress with the delivery of this incredible project but we need some more time to complete the testing of the new

railway. We are working around the clock with our supply chain and Transport for London to complete and commission the Elizabeth line."

Mark Wild, London Underground and Elizabeth line Managing Director, said (TBC): "We are on the cusp of opening the Elizabeth line which will redefine transport in London. Allowing more time for the completion of construction and integrated testing will enable us to run a safer and reliable railway from day one. We will continue to work closely with Crossrail Limited on the delivery of the end-to-end railway which remains on schedule to fully open as planned in December 2019."

**DfT said:** [they have indicated they will probably not want to include a comment]

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#### TfL version

The original programme for testing has been compressed by more time being needed by contractors to complete fit-out activity in the central tunnels and delays in the development of rail systems software. Testing has started but further time is required to complete the full range of integrated tests required to ensure a safe and reliable railway.

TfL advise this follow-on text has been deleted: "The railway will open through the central section once full testing of the train and signalling system has been successfully completed and a sufficient level of system operational reliability has been achieved."

#### CRL version (to be communicated to TfL as latest CRL position)

The original programme for testing has been compressed by more time being needed by contractors to complete fit-out activity in the central tunnels and delays in the development of the train software than allows operation across the three different signalling systems. Testing has started but further time is required to complete the full range of integrated tests required to ensure a safe and reliable railway. The railway will open through the central section once full testing of

the train and signalling system has been successfully completed and a sufficient level of system operational reliability has been achieved.

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Mark Wild, London Underground and Elizabeth line Managing Director, said (TBC): "We are on the cusp of opening the Elizabeth line which will redefine transport in London. Allowing more time for the completion of construction [CRL suggestion – replace 'construction' with 'remaining rail infrastructure work'] and integrated testing will enable us to run a safer and reliable railway from day one. We will continue to work closely with Crossrail Limited on the delivery of the end-to-end railway which remains on schedule to fully open as planned in December 2019."

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The original programme for testing has been compressed by more time being needed by contractors to complete fit-out activity in the central tunnels and in the development of railway systems software. Testing has started but further time is required to complete the full range of integrated tests.

The focus remains on opening the full Elizabeth line, from Reading and Heathrow in the west to Shenfield and Abbey Wood in the east, as soon after the central tunnels open as possible.

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#### **DfT said: XXXXXXXX**

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#### PROPOSED CRL NARRATIVE: SCHEDULE - 17 AUGUST 2018

The Elizabeth line's central section between Paddington and Abbey Wood will now open in summer 2019 instead of December 2018. The Elizabeth line remains on track to be fully open by December 2019 as originally planned.

The Elizabeth line is one of the most complex and challenging infrastructure projects ever undertaken in the UK. Construction is now in its final stages with a huge effort underway to complete and commission the new railway which brings together multiple contracts, new rolling stock and three different signalling systems.

We have been working hard to maintain the programme but there is now insufficient testing time available to introduce a railway that will be safe and reliable for services to commence in December 2018.

The programme has been impacted by a later than planned start to dynamic testing combined with access delays caused by remaining tunnel fit-out activity and delays with software development for the new Elizabeth line trains.

Testing has started but further time is required to complete the full range of tests required for the highly complex signalling and train systems software.

The railway can only open through the central section once full testing of the train and signalling system has been successfully completed and a sufficient level of system operational reliability has been achieved.

During the initial energisation of electrical equipment at Pudding Mill Lane sub-station on 11 November 2017, two voltage transformers failed. The cause of the failure was quality assurance. This delayed the start of energisation of power equipment in the tunnels by several months while extensive checks were completed.

The programme for testing has also been compressed by more time being needed by contractors to complete fit-out activity in the tunnels.

Rolling stock testing has been affected by delays with software development to allow the class 345 train to successfully operate across the three different signalling systems on the Elizabeth line. The testing process in the central section, when one and subsequently multiple trains are tested in the tunnels, relies on a certain level of software functionality to complete all the testing that must be undertaken.

The new Elizabeth line trains are already operating between Shenfield and Liverpool Street (mainline station) and between Paddington (mainline station) and Hayes & Harlington, in readiness for the full opening. The trains are also being tested in the Heathrow tunnels.

#### CONFIDENTIAL DRAFT - PROPOSED CRL NARRATIVE: SCHEDULE

The Elizabeth line's central section between Paddington and Abbey Wood will now open in summer 2019 instead of December 2018. The Elizabeth line remains on track to be fully open by December 2019 as originally planned.

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#### PROPOSED CRL NARRATIVE: SCHEDULE - 22 AUGUST 2018

The Elizabeth line's central section between Paddington and Abbey Wood will now open in summer 2019 instead of December 2018. The Elizabeth line remains on track to be fully open by December 2019 as originally planned.

The Elizabeth line is one of the most complex and challenging infrastructure projects ever undertaken in the UK. Construction is now in its final stages with a huge effort underway to complete and commission the new railway which brings together multiple contracts, new rolling stock and three different signalling systems.

We have been working hard to maintain the programme but further integrated testing time is required to introduce the next phase of the railway – the central section between Paddington and Abbey Wood – in a way that can be guaranteed to be safe and reliable.

The original programme for testing has been compressed by more time being needed by contractors to complete fit-out activity in the tunnels and delays in the railway systems software.

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The railway will open through the central section once full testing of the train and signalling system has been successfully completed and a sufficient level of system operational reliability has been achieved.

The new Elizabeth line trains are already operating between Shenfield and Liverpool Street (mainline station) and between Paddington (mainline station) and Hayes & Harlington, in readiness for the full opening. The trains are also being tested in the Heathrow tunnels.

Construction activity is drawing to a close with the completion of the mechanical, electrical and communications systems along with the remaining architectural fit-out in the new central section stations and will complete this year.

When the central section of the Elizabeth line opens in summer 2019, the railway will operate as three services as planed:

- Paddington (Elizabeth line station) to Abbey Wood via central London
- Paddington (mainline station) to Heathrow (Terminals 2, 3 and 4)
- Liverpool Street (mainline station) to Shenfield

#### Additional information if required:

The programme for testing has also been compressed by more time being needed by contractors to complete the fit-out, testing and commissioning of the railway infrastructure.

Testing has been affected by delays with the railway systems software that allows operations across the new railway including the three different signalling systems on the Elizabeth line.

During the initial energisation of electrical equipment at Pudding Mill Lane sub-station on 11 November 2017, two voltage transformers failed. This delayed the start of energisation of power equipment in the tunnels by several months while extensive checks were completed.

#### PROPOSED CRL NARRATIVE: SCHEDULE - 24 AUGUST 2018

The Elizabeth line's central section between Paddington and Abbey Wood will now open in summer 2019 instead of December 2018. The Elizabeth line remains on track to be fully open by December 2019 as originally planned.

The Elizabeth line is one of the most complex and challenging infrastructure projects ever undertaken in the UK. Construction is now in its final stages with a huge effort underway to complete and commission the new railway which brings together multiple contracts, new rolling stock and three different signalling systems.

We have been working hard to maintain the programme but further integrated testing time is required to introduce the next phase of the railway – the central section between Paddington and Abbey Wood – in a way that can be guaranteed to be safe and reliable.

The original programme for testing has been compressed by more time being needed by contractors to complete fit-out activity in the tunnels and delays in the railway systems software.

Testing has started but further time is required to complete the full range of integrated tests required to ensure a safe and reliable railway.

The railway will open through the central section once full testing of the train and signalling system has been successfully completed and a sufficient level of system operational reliability has been achieved.

The new Elizabeth line trains are already operating between Shenfield and Liverpool Street (mainline station) and between Paddington (mainline station) and Hayes & Harlington, in readiness for the full opening. The trains are also being tested in the Heathrow tunnels.

Construction activity is drawing to a close with the completion of the mechanical, electrical and communications systems along with the remaining architectural fit-out in the new central section stations and will complete this year.

When the central section of the Elizabeth line opens in summer 2019, the railway will operate as three services as planed:

- Paddington (Elizabeth line station) to Abbey Wood via central London
- Paddington (mainline station) to Heathrow (Terminals 2, 3 and 4)
- Liverpool Street (mainline station) to Shenfield

#### Additional information if required:

The programme for testing has also been compressed by more time being needed by contractors to complete the fit-out, testing and commissioning of the railway infrastructure.

Testing has been affected by delays with the railway systems software that allows operations across the new railway including the three different signalling systems on the Elizabeth line.

During the initial energisation of electrical equipment at Pudding Mill Lane sub-station on 11 November 2017, two voltage transformers failed. This delayed the start of energisation of power equipment in the tunnels by several months while extensive checks were completed.

#### PROPOSED CRL NARRATIVE: SCHEDULE - 28 AUGUST 2018

The Elizabeth line's central section between Paddington and Abbey Wood will open in autumn 2019 instead of December 2018.

The Elizabeth line is one of the most complex and challenging infrastructure projects ever undertaken in the UK and brings together multiple contracts, new rolling stock and three different signalling systems.

We have been working hard to maintain the programme but further integrated testing time is required to introduce the next phase of the railway – the central section between Paddington and Abbey Wood – in a way that can be guaranteed to be safe and reliable.

The original programme for testing has been compressed by a delayed start and more time being needed by contractors to complete fit-out activity in the tunnels and delays in the railway systems software.

Testing has started but further time is required to complete the full range of integrated tests required to ensure a safe and reliable railway.

The railway will open through the central section once full testing of the train and signalling system has been successfully completed and a sufficient level of system operational reliability has been achieved.

The new Elizabeth line trains are already operating between Shenfield and Liverpool Street (mainline station) and between Paddington (mainline station) and Hayes & Harlington, in readiness for the full opening. The trains are also being tested in the Heathrow tunnels.

Construction activity is drawing to a close with the completion of the remaining mechanical, electrical and communications systems along with the architectural fit-out in the new central section stations and will complete this year.

When the central section of the Elizabeth line opens in autumn 2019, the railway will operate as three services as planed:

- Paddington (Elizabeth line station) to Abbey Wood via central London
- Paddington (mainline station) to Heathrow (Terminals 2, 3 and 4)
- Liverpool Street (mainline station) to Shenfield

The focus remains on opening the full Elizabeth line, from Reading and Heathrow in the west to Shenfield and Abbey Wood in the east soon as possible after the central section opens.

#### CROSSRAIL PRESS OFFICE MEDIA Q&A - SCHEDULE - 22 AUGUST 2018

The Elizabeth line's central section between Paddington and Abbey Wood will now open in summer 2019 instead of December 2018. The Elizabeth line remains on track to be fully open by December 2019 as originally planned.

The Elizabeth line is one of the most complex and challenging infrastructure projects ever undertaken in the UK. Construction is now in its final stages with a huge effort underway to complete and commission the new railway which brings together multiple contracts, new rolling stock and three different signalling systems.

We have been working hard to maintain the programme but sufficient testing time is required to introduce the next phase of the railway – the central section between Paddington and Abbey Wood – in a way that can be guaranteed to be safe and reliable.

The original programme for testing has been compressed by more time being needed by contractors to complete fit-out activity in the central tunnels, a later than planned start to dynamic testing and delays in the development of the train software that allows operation across the three different signalling systems.

Testing has started but further time is required to complete the full range of integrated tests required to ensure a safe and reliable railway.

The railway will open through the central section once full testing of the train and signalling system has been successfully completed and a sufficient level of system operational reliability has been achieved.

The new Elizabeth line trains are already operating between Shenfield and Liverpool Street (mainline station) and between Paddington (mainline station) and Hayes & Harlington, in readiness for the full opening. The trains are also being tested in the Heathrow tunnels.

Construction activity is drawing to a close with the completion of the remaining architectural fit-out in the new central section stations and will complete this year.

When the central section of the Elizabeth line opens in summer 2019, the railway will operate as three services as planed:

- Paddington (Elizabeth line station) to Abbey Wood via central London
- Paddington (mainline station) to Heathrow (Terminals 2, 3 and 4)
- Liverpool Street (mainline station) to Shenfield

#### Crossrail statement (proposed reactive / if asked before wider announcement):

"The Elizabeth line will be opened by Transport for London. Construction of the Elizabeth is line is now in its final stages with a huge effort underway to complete and commission the new railway. Everyone involved in the Crossrail project remains focussed on completing the remaining works and supporting the testing phase."

#### **Key Q&A (for reactive use):**

## How did the Crossrail programme get this bad so quickly? Who is to blame for this situation?

The Elizabeth line is one of the most complex and challenging infrastructure projects ever undertaken in the UK.

We have been working hard to maintain the programme but sufficient time is required to introduce the next phase of the railway – the central section between Paddington and Abbey Wood – in a way that can be guaranteed to be safe and reliable.

The original programme for testing has been compressed by more time being needed by contractors to complete fit-out activity in the central tunnels, a later than planned start to dynamic testing and delays in the development of the train software that allows operation across the three different signalling systems.

Testing has started but further time is required to complete the full range of integrated tests required to ensure a safe and reliable railway.

The railway will open through the central section once full testing of the train and signalling system has been successfully completed and a sufficient level of operational reliability has been achieved.

#### Did station construction delays affect railway systems testing?

Construction activity is drawing to a close with the completion of the remaining architectural fit-out in the new central section stations and this will complete as planned this year.

While there have been some delays in the station construction programme this has not directly impacted the testing and commissioning of the railway systems.

# What was the impact of the electrical explosion at Pudding Mill Lane on the opening of the Elizabeth line?

During the initial energisation of electrical equipment at Pudding Mill Lane substation on 11 November 2017, two voltage transformers failed.

The cause of the failure was quality assurance – aspects of the wiring at the substation had been completed incorrectly.

This delayed the start of energisation of the power equipment in the tunnels by several months while extensive checks were completed, and thus delayed the start of testing.

#### What are the three signalling systems that will be used on the Elizabeth line?

CBTC or Communications Based Train Control was selected for the central section as it is technically and operationally proven and is successfully used by many metro systems around the world.

TPWS or Train Protection Warning System operates on the Great Western Mainline and Great Eastern Mainline.

ETCS or European Train Control System operates in the Heathrow tunnels.

### What is the current status of construction activity?

Construction activity is drawing to a close with the completion of the remaining architectural fit-out in the new central section stations and this will complete as planned this year.

#### Will the Elizabeth line open in summer 2019, could it be later?

Everyone involved in the Crossrail project remains focused on completing the remaining testing and commissioning works to enable the central section of the Elizabeth line to open in summer 2019.

#### Will all the new central section stations open in summer 2019?

Yes. Paddington, Bond Street, Tottenham Court Road, Farringdon, Liverpool Street, Whitechapel, Canary Wharf, Custom House, Canary Wharf and Abbey Wood will all be served by the Elizabeth line when services through the central section commence in summer 2019.

#### Could a preview / partial service be operated this December?

No. It is not possible to operate a limited or partial service through the central section without it impacting testing.

### Could the Elizabeth line open in the central section before summer 2019?

The intention is that the central section will open in summer 2019.

#### When exactly will the Elizabeth line open?

The Elizabeth line will be opened by Transport for London. TfL will confirm an opening date in 2019.

### What is the revised opening strategy for the Elizabeth line?

When the central section of the Elizabeth line opens in summer 2019, the railway will initially operate as three services as planned:

- Paddington (Elizabeth line station) to Abbey Wood via central London
- Paddington (mainline station) to Heathrow (Terminals 2, 3 and 4)
- Liverpool Street (mainline station) to Shenfield

## When the Crossrail project complete?

The project will complete as originally planned in December 2019.

#### What will be the final cost of the Elizabeth line?

The funding envelope for completion of the Elizabeth line is now £15.4 billion and reflects additional funding requirements by both Network Rail and Crossrail Limited.

The final cost will be confirmed when the programme completes.

# Was it known that the Elizabeth line would not open in December 2018 at the time the WMS was published?

No. This situation only became apparent as we progressed through the dynamic testing phase progressed and was not known beforehand.

## Have long has it been known that the Elizabeth line would not be ready to open in December 2018?

A final view was formed in August on the basis of current testing progress and technical input from our supply chain leading the signalling and train systems testing.

## When did CRL inform Sponsors that it was no longer possible to open in December 2018?

Crossrail formally notified the Department for Transport and Transport for London on XX following a formal decision by the Crossrail Board on XX.

### When was the final decision taken and by whom?

Crossrail Limited Board.

## What was the trigger that made a December 2018 opening no longer possible?

Lack of sufficient progress with the dynamic testing phase.

#### FOR BACKGROUND - CRL MEDIA Q&A - ADDITIONAL FUNDING

#### **Crossrail statement (approved):**

"A number of factors have meant that additional investment is needed by both Crossrail Limited and Network Rail during this final stage of the programme covering both the new build central section and upgrades to the existing railway. These cost increases are disappointing but additional funding is critical to the delivery of this vital project. £300m will be made available to Crossrail Limited for its remaining programme of works in the central section. Both Crossrail Limited and Network Rail remain focused on managing costs through to project completion."

#### <u>Information for journalist:</u>

The Secretary of State has announced on 24 July 2018 that the overall funding envelop for the delivery of the project has increased from £14.8 billion to £15.4 billion.

The original budget for the project was £15.9 billion, including a large contribution from London businesses. Following the Comprehensive Spending Review in 2010, a revised funding envelope of £14.8 billion was agreed. Crossrail Limited is responsible for £12.5 billion of works with Network Rail responsible for £2.3 billion of upgrade works.

Cost pressures have increased on both the Crossrail Limited and Network Rail parts of the project. As we get closer to the opening of the railway, the challenge of delivering a major infrastructure project of this scale and complexity has increased, with fewer opportunities to mitigate these pressures.

Additional funding is being provided to both Crossrail Limited and Network Rail.

£300 million is being made available to Crossrail Limited for its remaining programme of works in the central section, specifically the complex systems installation and testing, prior to the opening of the railway for reliable passenger service.

Around £290 million additional investment is required by Network Rail to complete its upgrades to the existing railway.

#### **Crossrail Limited**

Cost pressures in the central section have resulted from a number of factors.

Increased time and resource has been required for the installation and testing of the multiple systems needed to operate the new railway including track, communications, power and signalling and worse than expected ground conditions during station construction. These have prolonged works and compressed the delivery schedule. Some construction costs are higher than was originally budgeted

## Network Rail

The need for around £290 million additional funding for Network Rail to complete their programme of works for the Elizabeth line, including those enhanced ticket halls at surface stations, relates to a number of factors.

These include the complexity of integrating new systems onto the national rail network such as a new driver only operation camera system and the poor underlying condition of some of the Victorian infrastructure.

#### CROSSRAIL PRESS OFFICE MEDIA Q&A - SCHEDULE - 28 AUGUST 2018

#### Narrative:

The Elizabeth line's central section between Paddington and Abbey Wood will open in autumn 2019 instead of December 2018.

The revised schedule is required to complete the final rail infrastructure and extensive testing required to ensure the Elizabeth line opens as a safe and reliable railway.

The Elizabeth line is one of the most complex and challenging infrastructure projects ever undertaken in the UK and brings together multiple contracts, new rolling stock and three different signalling systems.

We have been working hard to maintain the programme but further integrated testing time is required to introduce the next phase of the railway – the central section between Paddington and Abbey Wood – in a way that can be guaranteed to be safe and reliable.

The original programme for testing has been compressed by a delayed start and more time being needed by contractors to complete fit-out activity in the tunnels and the development of railway systems software.

Testing has started but further time is required to complete the full range of integrated tests required to ensure a safe and reliable railway.

The railway will open through the central section once full testing has been successfully completed and a sufficient level of system operational reliability has been achieved.

The new Elizabeth line trains are already operating between Shenfield and Liverpool Street (mainline station) and between Paddington (mainline station) and Hayes & Harlington, in readiness for the full opening. The trains are also being tested in the Heathrow tunnels.

Construction activity is drawing to a close with the completion of the remaining mechanical, electrical and communications systems along with the architectural fit-out in the new central section stations and will complete this year.

When the central section of the Elizabeth line opens in autumn 2019, the railway will operate as three services as planed:

- Paddington (Elizabeth line station) to Abbey Wood via central London
- Paddington (mainline station) to Heathrow (Terminals 2, 3 and 4)
- Liverpool Street (mainline station) to Shenfield

The focus remains on opening the full Elizabeth line, from Reading and Heathrow in the west to Shenfield and Abbey Wood in the east, as soon after the central tunnels open as possible.

Crossrail will now work closely with Transport for London and Department for Transport to establish whether the revised schedule has any potential additional impact on funding.

#### **Key Q&A (for reactive use):**

## 1. How did the Crossrail programme get this bad so quickly? Who is to blame for this situation?

The Elizabeth line is one of the most complex and challenging infrastructure projects ever undertaken in the UK.

Crossrail has been managing a number of schedule and cost pressures as this enormously complex project comes to an end.

The revised schedule is required to complete the final rail infrastructure and extensive testing required to ensure the Elizabeth line opens as a safe and reliable railway.

We have been working hard to maintain the programme but sufficient time is required to introduce the next phase of the railway – the central section between Paddington and Abbey Wood – in a way that can be guaranteed to be safe and reliable.

The original programme for testing has been compressed by more time being needed by contractors to complete fit-out activity in the central tunnels and the development of railway systems software.

Testing has started but further time is required to complete the full range of integrated tests required to ensure a safe and reliable railway.

The railway will open through the central section once full testing has been successfully completed and a sufficient level of operational reliability has been achieved.

# 2. Was it known that the Elizabeth line would not open in December 2018 at the time the WMS was published in July?

No. The extent of the situation became apparent as we progressed further through the testing phase. A final view was formed in August following a comprehensive review of the remaining programme.

Testing has started but more time is needed by contractors to complete fit-out activity in the central tunnels and in the development of railway systems software.

The revised schedule is required to complete the final rail infrastructure and extensive testing required to ensure the Elizabeth line opens as a safe and reliable railway.

# 3. Have long has it been known that the Elizabeth line would not be ready to open in December 2018?

A final view was formed in August following a comprehensive review of the remaining programme.

# 4. When did CRL inform Sponsors that it was no longer possible meet the central section opening date for December 2018?

Crossrail formally notified the Department for Transport and Transport for London 30 August following a formal decision by the Crossrail Board on 29 August.

### 5. When was the final decision taken and by whom?

The final decision was taken by the Crossrail Limited Board on 29 August.

6. What was the trigger that made a December 2018 opening no longer possible? Only a few weeks ago you said the railway would open this year, why is there now a 9 month or more delay?

Following a comprehensive review of the remaining programme we have concluded that the central section will no longer be ready to open in December 2018.

There is no one single element. The Elizabeth line is one of the most complex and challenging infrastructure projects ever undertaken in the UK and brings together multiple contracts, new rolling stock and three different signalling systems.

The revised schedule is required to complete the final rail infrastructure and extensive testing required to ensure the Elizabeth line opens as a safe and reliable railway.

Testing has started but further time is required to complete the full range of integrated tests required to ensure a safe and reliable railway.

#### 7. Why will it take until autumn 2019 before the central section can open?

This will give the programme the remaining time needed to complete the rail infrastructure and the extensive testing required to introduce the next phase of the railway.

# 8. What remaining rail infrastructure works are still to be completed? When will this complete?

The remaining rail infrastructure works will complete this year. This ranges from removal of temporary services to completing the remaining installation of the permanent lighting and drainage pumps in the tunnels.

#### 9. What is the current status of construction activity?

Construction activity is drawing to a close with the completion of the remaining mechanical, electrical and communications systems along with architectural fit-out in the new central section stations and will complete this year.

## 10. Did station construction affect railway systems testing?

While there have been some delays in the station construction programme this has not directly impacted the testing and commissioning of the railway systems.

### 11. What is railway systems software?

Railway systems cover the integrated systems and associated software that are required to operate the railway including signalling, tunnel ventilation, communications and power (traction and non-traction).

# 12. Why is more time needed by contractors for railway systems software? Is there an issue with the signalling system on the Elizabeth line?

Railway systems cover the integrated systems that are required to operate the railway including signalling, tunnel ventilation, communications and power (traction and non-traction).

We have been working hard to maintain the programme but further integrated testing is required.

The railway will open through the central section once full testing has been successfully completed and a sufficient level of operational reliability has been achieved.

## 13. What are the three signalling systems that will be used on the Elizabeth line?

CBTC or Communications Based Train Control was selected for the central section as it is technically and operationally proven and is successfully used by many metro systems around the world.

TPWS or Train Protection Warning System operates on the Great Western Mainline and Great Eastern Mainline.

ETCS or European Train Control System operates in the Heathrow tunnels.

# 14. What was the impact of the electrical explosion at Pudding Mill Lane on the opening of the Elizabeth line? Is this the reason why testing started late?

During the initial energisation of electrical equipment at Pudding Mill Lane substation on 11 November 2017, two voltage transformers failed.

The cause of the failure was quality assurance – aspects of the wiring at the substation had been completed incorrectly.

This delayed the start of energisation of the power equipment in the tunnels by several months while extensive checks were completed, and thus delayed the start of testing.

#### 15. Will this mean longer disruption for local communities around work sites?

No. Construction activity will complete this year.

# 16. The funding envelope has just been increased from £14.8 billion to £15.4 billion, what are the cost implications of today announcement?

Crossrail will now work closely with Transport for London and Department for Transport to establish whether the revised schedule has any potential additional impact on funding.

#### 17. Will the Elizabeth line open in autumn 2019, could it be later?

Everyone involved in the Crossrail project remains focused on completing the remaining testing and commissioning works to enable the central section of the Elizabeth line to open in autumn 2019.

#### 18. Will all the new central section stations open in autumn 2019?

Yes. Paddington, Bond Street, Tottenham Court Road, Farringdon, Liverpool Street, Whitechapel, Canary Wharf, Custom House, Canary Wharf and Abbey Wood will all be served by the Elizabeth line when services through the central section commence in autumn 2019.

### 19. Could a preview / partial service be operated this December?

No. It is not possible to operate a limited or partial service through the central section without it impacting testing.

#### 20. Could the Elizabeth line open in the central section before autumn 2019?

The intention is that the central section will open in autumn 2019.

#### 21. When exactly will the central section of the Elizabeth line open?

Full details will be announced in due course.

#### 22. When will the Elizabeth still be fully open in December 2019?

The focus remains on opening the full Elizabeth line, from Reading and Heathrow in the west to Shenfield and Abbey Wood in the east soon as possible after the central section opens.

### 23. What is the revised opening strategy for the Elizabeth line?

When the central section of the Elizabeth line opens in autumn 2019, the railway will initially operate as three services as planned:

- Paddington (Elizabeth line station) to Abbey Wood via central London
- Paddington (mainline station) to Heathrow (Terminals 2, 3 and 4)
- Liverpool Street (mainline station) to Shenfield

## 24. When the Crossrail project complete?

The focus remains on opening the full Elizabeth line, from Reading and Heathrow in the west to Shenfield and Abbey Wood in the east soon as possible after the central section opens.

#### 25. What will be the final cost of the Elizabeth line?

The final cost will be confirmed when the programme completes.

#### FOR BACKGROUND - CRL MEDIA Q&A - ADDITIONAL FUNDING

### **Crossrail statement (approved):**

"A number of factors have meant that additional investment is needed by both Crossrail Limited and Network Rail during this final stage of the programme covering both the new build central section and upgrades to the existing railway. These cost increases are disappointing but additional funding is critical to the delivery of this vital project. £300m will be made available to Crossrail Limited for its remaining programme of works in the central section. Both Crossrail Limited and Network Rail remain focused on managing costs through to project completion."

#### <u>Information for journalist:</u>

The Secretary of State has announced on 24 July 2018 that the overall funding envelop for the delivery of the project has increased from £14.8 billion to £15.4 billion.

The original budget for the project was £15.9 billion, including a large contribution from London businesses. Following the Comprehensive Spending Review in 2010, a revised funding envelope of £14.8 billion was agreed. Crossrail Limited is responsible for £12.5 billion of works with Network Rail responsible for £2.3 billion of upgrade works.

Cost pressures have increased on both the Crossrail Limited and Network Rail parts of the project. As we get closer to the opening of the railway, the challenge of delivering a major infrastructure project of this scale and complexity has increased, with fewer opportunities to mitigate these pressures.

Additional funding is being provided to both Crossrail Limited and Network Rail.

£300 million is being made available to Crossrail Limited for its remaining programme of works in the central section, specifically the complex systems installation and testing, prior to the opening of the railway for reliable passenger service.

Around £290 million additional investment is required by Network Rail to complete its upgrades to the existing railway.

#### **Crossrail Limited**

Cost pressures in the central section have resulted from a number of factors.

Increased time and resource has been required for the installation and testing of the multiple systems needed to operate the new railway including track, communications, power and signalling and worse than expected ground conditions during station construction. These have prolonged works and compressed the delivery schedule. Some construction costs are higher than was originally budgeted

## Network Rail

The need for around £290 million additional funding for Network Rail to complete their programme of works for the Elizabeth line, including those enhanced ticket halls at surface stations, relates to a number of factors.

These include the complexity of integrating new systems onto the national rail network such as a new driver only operation camera system and the poor underlying condition of some of the Victorian infrastructure.

#### CROSSRAIL PRESS OFFICE MEDIA Q&A - SCHEDULE - 30 AUGUST 2018

#### Narrative:

The Elizabeth line's central section between Paddington and Abbey Wood will open in autumn 2019 instead of December 2018.

The revised schedule is required to complete the final rail infrastructure and extensive testing required to ensure the Elizabeth line opens as a safe and reliable railway.

The Elizabeth line is one of the most complex and challenging infrastructure projects ever undertaken in the UK and brings together multiple contracts, new rolling stock and three different signalling systems.

We have been working hard to maintain the programme but further integrated testing time is required to introduce the next phase of the railway – the central section between Paddington and Abbey Wood – in a way that can be guaranteed to be safe and reliable.

The original programme for testing has been compressed by a delayed start and more time being needed by contractors to complete fit-out activity in the tunnels and the development of railway systems software.

Testing has started but further time is required to complete the full range of integrated tests required to ensure a safe and reliable railway.

The railway will open through the central section once full testing has been successfully completed and a sufficient level of system operational reliability has been achieved.

The new Elizabeth line trains are already operating between Shenfield and Liverpool Street (mainline station) and between Paddington (mainline station) and Hayes & Harlington, in readiness for the full opening. The trains are also being tested in the Heathrow tunnels.

Construction activity is drawing to a close with the completion of the remaining mechanical, electrical and communications systems along with the architectural fit-out in the new central section stations and will complete this year.

When the central section of the Elizabeth line opens in autumn 2019, the railway will operate as three services as planed:

- Paddington (Elizabeth line station) to Abbey Wood via central London
- Paddington (mainline station) to Heathrow (Terminals 2, 3 and 4)
- Liverpool Street (mainline station) to Shenfield

The focus remains on opening the full Elizabeth line, from Reading and Heathrow in the west to Shenfield and Abbey Wood in the east, as soon after the central tunnels open as possible.

Crossrail will now work closely with Transport for London and Department for Transport to establish whether the revised schedule has any potential additional impact on funding.

#### CROSSRAIL Q&A – SCHEDULE

## 1. How did the Crossrail programme get this bad so quickly? Who is to blame for this situation?

The Elizabeth line is one of the most complex and challenging infrastructure projects ever undertaken in the UK.

Crossrail has been managing a number of schedule and cost pressures as this enormously complex project comes to an end.

The revised schedule is required to complete the final rail infrastructure and extensive testing required to ensure the Elizabeth line opens as a safe and reliable railway.

We have been working hard to maintain the programme but sufficient time is required to introduce the next phase of the railway – the central section between Paddington and Abbey Wood – in a way that can be guaranteed to be safe and reliable.

The original programme for testing has been compressed by more time being needed by contractors to complete fit-out activity in the central tunnels and the development of railway systems software.

Testing has started but further time is required to complete the full range of integrated tests required to ensure a safe and reliable railway.

The railway will open through the central section once full testing has been successfully completed and a sufficient level of operational reliability has been achieved.

# 2. Was it known that the Elizabeth line would not open in December 2018 at the time the WMS was published in July?

No. The extent of the situation became apparent as we progressed further through the testing phase. A final view was formed in August following a comprehensive review of the remaining programme.

Testing has started but more time is needed by contractors to complete fit-out activity in the central tunnels and in the development of railway systems software.

The revised schedule is required to complete the final rail infrastructure and extensive testing required to ensure the Elizabeth line opens as a safe and reliable railway.

# 3. Have long has it been known that the Elizabeth line would not be ready to open in December 2018?

A final view was formed in August following a comprehensive review of the remaining programme.

# 4. When did CRL inform Sponsors that it was no longer possible to meet the central section opening date for December 2018?

Crossrail formally notified the Department for Transport and Transport for London 30 August following a formal decision by the Crossrail Board on 29 August.

### 5. When was the final decision taken and by whom?

The final decision was taken by the Crossrail Limited Board on 29 August.

6. What was the trigger that made a December 2018 opening no longer possible? Only a few weeks ago you said the railway would open this year, why is there now a 9 month or more delay?

Following a comprehensive review of the remaining programme we have concluded that the central section will no longer be ready to open in December 2018.

There is no one single element. The Elizabeth line is one of the most complex and challenging infrastructure projects ever undertaken in the UK and brings together multiple contracts, new rolling stock and three different signalling systems.

The revised schedule is required to complete the final rail infrastructure and extensive testing required to ensure the Elizabeth line opens as a safe and reliable railway.

Testing has started but further time is required to complete the full range of integrated tests required to ensure a safe and reliable railway.

## 7. Why will it take until autumn 2019 before the central section can open?

This will give the programme the remaining time needed to complete the rail infrastructure and the extensive testing required to introduce the next phase of the railway.

# 8. What remaining rail infrastructure works are still to be completed? When will this complete?

The remaining rail infrastructure works will complete this year. This ranges from removal of temporary services to completing the remaining installation of the permanent lighting and drainage pumps in the tunnels.

#### 9. What is the current status of construction activity?

Construction activity is drawing to a close with the completion of the remaining mechanical, electrical and communications systems along with architectural fit-out in the new central section stations. By the end of the year, construction will no longer impact testing, thereby allowing full testing to commence.

#### 10. What is railway systems software?

Railway systems cover the integrated systems and associated software that are required to operate the railway including rolling stock, signalling, tunnel ventilation, communications and power (traction and non-traction).

# 11. Why is more time needed by contractors for railway systems software? Is there an issue with the signalling system on the Elizabeth line?

Railway systems cover the integrated systems that are required to operate the railway including rolling stock, signalling, tunnel ventilation, communications and power (traction and non-traction).

We have been working hard to maintain the programme but further integrated testing is required.

The railway will open through the central section once full testing has been successfully completed and a sufficient level of operational reliability has been achieved.

## 12. What are the three signalling systems that will be used on the Elizabeth line?

CBTC or Communications Based Train Control was selected for the central section as it is technically and operationally proven and is successfully used by many metro systems around the world.

TPWS or Train Protection Warning System operates on the Great Western Mainline and Great Eastern Mainline.

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# 13. What was the impact of the electrical explosion at Pudding Mill Lane on the opening of the Elizabeth line? Is this the reason why testing started late?

During the initial energisation of electrical equipment at Pudding Mill Lane substation on 11 November 2017, two voltage transformers failed.

The cause of the failure was quality assurance – aspects of the wiring at the substation had been completed incorrectly.

This delayed the start of energisation of the power equipment in the tunnels by several months while extensive checks were completed, and thus delayed the start of testing.

#### 14. Will this mean longer disruption for local communities around work sites?

Construction activity is drawing to a close with the completion of the remaining mechanical, electrical and communications systems along with architectural fit-out in the new central section stations.

While it is hugely disappointing that the central section of the new railway will not open to passengers in December, the remaining construction schedule remains the same as most recently communicated to local residents and businesses.

# 15. The funding envelope has just been increased from £14.8 billion to £15.4 billion, what are the cost implications of today announcement?

Crossrail will now work closely with Transport for London and Department for Transport to establish whether the revised schedule has any potential additional impact on funding.

### 16. Will the Elizabeth line open in autumn 2019, could it be later?

Everyone involved in the Crossrail project remains focused on completing the remaining testing and commissioning works to enable the central section of the Elizabeth line to open in autumn 2019.

#### 17. Will all the new central section stations open in autumn 2019?

Yes. Paddington, Bond Street, Tottenham Court Road, Farringdon, Liverpool Street, Whitechapel, Canary Wharf, Custom House, Canary Wharf and Abbey Wood will all be served by the Elizabeth line when services through the central section commence in autumn 2019.

#### 18. Could a preview / partial service be operated this December?

No. It is not possible to operate a limited or partial service through the central section without it impacting testing. Crossrail looked at every possibility and could not offer London a safe and reliable railway by doing so.

#### 19. Could the Elizabeth line open in the central section before autumn 2019?

The intention is that the central section will open in autumn 2019.

## 20. When exactly will the central section open and will the railway be fully open in December 2019?

Full details of the opening strategy will be announced in due course.

The focus remains on opening the full Elizabeth line, from Reading and Heathrow in the west to Shenfield and Abbey Wood in the east soon as possible after the central section opens.

#### 21. What is the revised opening strategy for the Elizabeth line?

When the central section of the Elizabeth line opens in autumn 2019, the railway will initially operate as three services as planned:

- Paddington (Elizabeth line station) to Abbey Wood via central London
- Paddington (mainline station) to Heathrow (Terminals 2, 3 and 4)
- Liverpool Street (mainline station) to Shenfield

## 22. When the Crossrail project complete?

The focus remains on opening the full Elizabeth line, from Reading and Heathrow in the west to Shenfield and Abbey Wood in the east soon as possible after the central section opens.

### 23. What will be the final cost of the Elizabeth line?

The final cost will be confirmed when the programme completes.

#### FOR BACKGROUND - CRL MEDIA Q&A - ADDITIONAL FUNDING

### **Crossrail statement (approved):**

"A number of factors have meant that additional investment is needed by both Crossrail Limited and Network Rail during this final stage of the programme covering both the new build central section and upgrades to the existing railway. These cost increases are disappointing but additional funding is critical to the delivery of this vital project. £300m will be made available to Crossrail Limited for its remaining programme of works in the central section. Both Crossrail Limited and Network Rail remain focused on managing costs through to project completion."

#### <u>Information for journalist:</u>

The Secretary of State has announced on 24 July 2018 that the overall funding envelop for the delivery of the project has increased from £14.8 billion to £15.4 billion.

The original budget for the project was £15.9 billion, including a large contribution from London businesses. Following the Comprehensive Spending Review in 2010, a revised funding envelope of £14.8 billion was agreed. Crossrail Limited is responsible for £12.5 billion of works with Network Rail responsible for £2.3 billion of upgrade works.

Cost pressures have increased on both the Crossrail Limited and Network Rail parts of the project. As we get closer to the opening of the railway, the challenge of delivering a major infrastructure project of this scale and complexity has increased, with fewer opportunities to mitigate these pressures.

Additional funding is being provided to both Crossrail Limited and Network Rail.

£300 million is being made available to Crossrail Limited for its remaining programme of works in the central section, specifically the complex systems installation and testing, prior to the opening of the railway for reliable passenger service.

Around £290 million additional investment is required by Network Rail to complete its upgrades to the existing railway.

#### **Crossrail Limited**

Cost pressures in the central section have resulted from a number of factors.

Increased time and resource has been required for the installation and testing of the multiple systems needed to operate the new railway including track, communications, power and signalling and worse than expected ground conditions during station construction. These have prolonged works and compressed the delivery schedule. Some construction costs are higher than was originally budgeted

## Network Rail

The need for around £290 million additional funding for Network Rail to complete their programme of works for the Elizabeth line, including those enhanced ticket halls at surface stations, relates to a number of factors.

These include the complexity of integrating new systems onto the national rail network such as a new driver only operation camera system and the poor underlying condition of some of the Victorian infrastructure.

#### CROSSRAIL PRESS OFFICE MEDIA Q&A - SCHEDULE - 28 AUGUST 2018

#### Narrative:

The Elizabeth line's central section between Paddington and Abbey Wood will open in autumn 2019 instead of December 2018.

The revised schedule is required to complete the final rail infrastructure and extensive testing required to ensure the Elizabeth line opens as a safe and reliable railway.

The Elizabeth line is one of the most complex and challenging infrastructure projects ever undertaken in the UK and brings together multiple contracts, new rolling stock and three different signalling systems.

We have been working hard to maintain the programme but further integrated testing time is required to introduce the next phase of the railway – the central section between Paddington and Abbey Wood – in a way that can be guaranteed to be safe and reliable.

The original programme for testing has been compressed by a delayed start and more time being needed by contractors to complete fit-out activity in the tunnels and the development of railway systems software.

Testing has started but further time is required to complete the full range of integrated tests required to ensure a safe and reliable railway.

The railway will open through the central section once full testing has been successfully completed and a sufficient level of system operational reliability has been achieved.

The new Elizabeth line trains are already operating between Shenfield and Liverpool Street (mainline station) and between Paddington (mainline station) and Hayes & Harlington, in readiness for the full opening. The trains are also being tested in the Heathrow tunnels.

Construction activity is drawing to a close with the completion of the remaining mechanical, electrical and communications systems along with the architectural fit-out in the new central section stations and will complete this year.

When the central section of the Elizabeth line opens in autumn 2019, the railway will operate as three services as planed:

- Paddington (Elizabeth line station) to Abbey Wood via central London
- Paddington (mainline station) to Heathrow (Terminals 2, 3 and 4)
- Liverpool Street (mainline station) to Shenfield

The focus remains on opening the full Elizabeth line, from Reading and Heathrow in the west to Shenfield and Abbey Wood in the east, as soon after the central tunnels open as possible.

Crossrail will now work closely with Transport for London and Department for Transport to establish whether the revised schedule has any potential additional impact on funding.

### FINAL DRAFT - CROSSRAIL MEDIA Q&A - SCHEDULE

## 1. How did the Crossrail programme get this bad so quickly? Who is to blame for this situation?

The Elizabeth line is one of the most complex and challenging infrastructure projects ever undertaken in the UK.

Crossrail has been managing a number of schedule and cost pressures as this enormously complex project comes to an end.

The revised schedule is required to complete the final rail infrastructure and extensive testing required to ensure the Elizabeth line opens as a safe and reliable railway.

We have been working hard to maintain the programme but sufficient time is required to introduce the next phase of the railway – the central section between Paddington and Abbey Wood – in a way that can be guaranteed to be safe and reliable.

The original programme for testing has been compressed by more time being needed by contractors to complete fit-out activity in the central tunnels and the development of railway systems software.

Testing has started but further time is required to complete the full range of integrated tests required to ensure a safe and reliable railway.

The railway will open through the central section once full testing has been successfully completed and a sufficient level of operational reliability has been achieved.

# 2. Was it known that the Elizabeth line would not open in December 2018 at the time the WMS was published in July?

No. The extent of the situation became apparent as we progressed further through the testing phase. A final view was formed in August following a comprehensive review of the remaining programme.

Testing has started but more time is needed by contractors to complete fit-out activity in the central tunnels and in the development of railway systems software.

The revised schedule is required to complete the final rail infrastructure and extensive testing required to ensure the Elizabeth line opens as a safe and reliable railway.

# 3. How long has it been known that the Elizabeth line would not be ready to open in December 2018?

A final view was formed in August following a comprehensive review of the remaining programme.

# 4. When did CRL inform Sponsors that it was no longer possible to meet the central section opening date for December 2018?

Crossrail formally notified the Department for Transport and Transport for London 30 August following a formal decision by the Crossrail Board on 29 August.

### 5. When was the final decision taken and by whom?

The final decision was taken by the Crossrail Limited Board on 29 August.

6. What was the trigger that made a December 2018 opening no longer possible? Only a few weeks ago you said the railway would open this year, why is there now a 9 month or more delay?

Following a comprehensive review of the remaining programme we have concluded that the central section will no longer be ready to open in December 2018.

There is no one single element. The Elizabeth line is one of the most complex and challenging infrastructure projects ever undertaken in the UK and brings together multiple contracts, new rolling stock and three different signalling systems.

The revised schedule is required to complete the final rail infrastructure and extensive testing required to ensure the Elizabeth line opens as a safe and reliable railway.

Testing has started but further time is required to complete the full range of integrated tests required to ensure a safe and reliable railway.

## 7. Why will it take until autumn 2019 before the central section can open?

This will give the programme the remaining time needed to complete the rail infrastructure and the extensive testing required to introduce the next phase of the railway.

# 8. What remaining rail infrastructure works are still to be completed? When will this complete?

The remaining rail infrastructure works will complete this year. This ranges from removal of temporary services to completing the remaining installation of the permanent lighting and drainage pumps in the tunnels.

#### 9. What is the current status of construction activity?

Construction activity is drawing to a close with the completion of the remaining mechanical, electrical and communications systems along with architectural fit-out in the new central section stations. By the end of the year, construction schedule will no longer impact testing, thereby allowing full testing to commence.

#### 10. What is railway systems software?

Railway systems cover the integrated systems and associated software that are required to operate the railway including rolling stock, signalling, tunnel ventilation, communications and power (traction and non-traction).

# 11. Why is more time needed by contractors for railway systems software? Is there an issue with the signalling system on the Elizabeth line?

Railway systems cover the integrated systems that are required to operate the railway including rolling stock, signalling, tunnel ventilation, communications and power (traction and non-traction).

We have been working hard to maintain the programme but further integrated testing is required.

The railway will open through the central section once full testing has been successfully completed and a sufficient level of operational reliability has been achieved.

## 12. What are the three signalling systems that will be used on the Elizabeth line?

CBTC or Communications Based Train Control was selected for the central section as it is technically and operationally proven and is successfully used by many metro systems around the world.

TPWS or Train Protection Warning System operates on the Great Western Mainline and Great Eastern Mainline.

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While it is hugely disappointing that the central section of the new railway will not open to passengers in December, the remaining construction schedule remains the same as most recently communicated to local residents and businesses.

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The final cost will be confirmed when the programme completes.

#### FOR BACKGROUND - CRL MEDIA Q&A - ADDITIONAL FUNDING

### **Crossrail statement (approved):**

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These include the complexity of integrating new systems onto the national rail network such as a new driver only operation camera system and the poor underlying condition of some of the Victorian infrastructure.

#### Draft Q&A on opening date - Shared with DfT

#### 1. Why didn't you announce this when you announced the additional funding?

DfT and TfL were formally made aware on 30th August, following a decision at the latest Crossrail Board which took place on the 29th August.

#### 2. How could you have been unaware of the potential for this delay?

As has been discussed on a number of occasions at the TfL Board, the Crossrail Limited team have been managing a number of schedule and cost pressures as this enormously complex project draws towards completion.

Crossrail Limited have now completed a formal and comprehensive review of the remaining schedule for the completion of the construction and integrated systems testing ahead of the line opening safely and reliably to passengers.

As a result of that, Crossrail Limited has now notified us that they can no longer meet the December 2018 date which means that the central section will now open in autumn 2019.

#### 3. Will this have a further impact on the already extended funding envelope?

As announced in July, an additional £300m of funding has been made available by the DfT and TfL, the joint sponsors of the project, to Crossrail Limited.

Crossrail Limited will advise of any additional costs arising from the revised opening date. If required, a revised funding package will be prepared between the DfT and TfL.

#### 4. How will you fund the December delay?

Crossrail Limited will advise of any additional costs arising from the delay. If required, a revised funding package will be prepared between the DfT and TfL. Full details will be announced as part of our annual business planning process in November.

#### 5. Is the funding for other projects now at risk?

Full funding details will be announced as part of our annual business planning process in November.

#### 6. What are the reasons for the delay?

#### SPEAKING TO CRL:

The original programme for testing has been compressed by more time being needed by contractors to complete fit-out activity in the central tunnels and delays in the development of railway systems software. Testing has started, and further time is required to complete the full range of integrated tests required to ensure a safe and reliable railway.

#### 7. When will the full railway open?

The DfT and TfL will continue to work closely with Crossrail Limited on the revised schedule. The focus remains on opening the full Elizabeth line, from Reading and Heathrow in the west to Shenfield and Abbey Wood in the east as soon after the central tunnels open as possible.

## 8. Doesn't this show an inability by Government and Transport for London to deliver major projects on time and on budget?

No. Crossrail is a world class infrastructure project that will transform travel in London and the South East and is delivering immense benefits to the whole of the UK through its vast supply chain, adding up to £42bn to the UK economy.

Major projects are integral to unlocking new housing, creating jobs, driving forward economic growth and provide communities across the country with the transport infrastructure we need for the future.

The delay is disappointing, but not uncommon in a project of this scale and complexity and delivering the Elizabeth line safely is of paramount importance. There is always the potential for unexpected pressures to emerge that can challenge opening dates.

#### 9. Why weren't these delays noticed earlier and mitigating action taken?

#### SPEAKING TO CRL:

Following a full review of the remaining delivery schedule we have been advised the central section of the railway will not be able to open in December 2018.

Although the major construction work has been broadly delivered to schedule, finalising the communications systems and bringing together and testing the complicated interfaces such as track, power, signalling and trains is the most complex phase of the Crossrail project and it is during this late phase of the project that Crossrail Limited has come up against delays.

The DfT and TfL will continue to push Crossrail Limited to manage any schedule pressures and mitigate these as much as possible. The focus remains on opening the full Elizabeth line, from Reading and Heathrow in the west to Shenfield and Abbey Wood in the east as soon after the central tunnels open as possible.

## 10. What was the impact of the electrical explosion at Pudding Mill Lane on the completion date and cost for the Elizabeth line?

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During the initial energisation of electrical equipment at Pudding Mill Lane substation on 11 November 2017, two voltage transformers failed.

The cause of the failure was quality assurance. This delayed the start of energisation of power equipment in the tunnels by several months while extensive checks were completed, and thus delayed the start of testing.

This was one a number of unexpected challenges that occurred during construction, and it highlights the complexity of delivering major projects.

## 11. What about the Network Rail works, are they also delayed?

The upgrade of existing stations in the west is the responsibility of Network Rail.

## 12. What is the revised timetable for opening?

Full details of opening dates will be announced in due course.

#### Draft Q&A on opening date - changes with CRL input and CRL Qs

#### 13. Why didn't you announce this when you announced the additional funding?

DfT and TfL were made aware of the change to the schedule on 30th August, following a decision at the latest Crossrail Board which took place on the 29th August.

#### 14. How could you have been unaware of the potential for this delay?

As has been discussed on a number of occasions at the TfL Board, the Crossrail Limited team have been managing a number of schedule and cost pressures as this enormously complex project draws towards completion.

Crossrail Limited have now completed a formal and comprehensive review of the remaining schedule for the completion of the construction and integrated systems testing ahead of the line opening safely and reliably to passengers.

As a result of that, Crossrail Limited has now notified us that they can no longer meet the December 2018 date which means that the central section will now open in autumn 2019.

#### 15. Will this have a further impact on the already extended funding envelope?

As announced in July, an additional £300m of funding has been made available by the DfT and TfL, the joint sponsors of the project, to Crossrail Limited.

Crossrail Limited will advise of any additional costs arising from the revised opening date. If required, a revised funding package will be prepared between the DfT and TfL.

## 16. Why did you agree the funding package with the DfT in July, potentially leaving TfL to foot the bill for any remaining costs?

When the revised funding agreement was made in July, Crossrail Limited had not advised the DfT and TfL, the joint sponsors of the project, that the December 2018 opening date could no longer be met and the potential cost implications of this. We continue to work closely with Crossrail Limited and the DfT on the potential financial implications of this change.

## 17. What are the revenue implications of not beginning a service from this December?

Although there will be some revenue implications, we are experienced at managing our costs and are ahead of our savings target for the year. Full details of how we will manage the change in expected revenue will be announced as part of our annual business planning process in November.

If pressed: What was the predicted revenue from December 2018?

The business plan predicted circa £80m, but this includes revenue from TfL Rail services between Liverpool Street and Shenfield and Paddington and Hayes & Harlington / Heathrow which are already running as planned.

## 18. What are the revenue implications of not running a full service by December 2019?

The TfL business plan forecast £400m per annum in revenue following the opening of the full railway out to Reading. We will work through any cost and revenue implications of a revised opening date and report this through our annual business planning process.

#### 19. How will you fund the December delay?

Crossrail Limited will advise of any additional costs arising from the delay. If required, a revised funding package will be prepared between the DfT and TfL. We are experienced at managing our costs and are ahead of our savings target for the year. Full details will be announced as part of our annual business planning process in November.

#### 20. Is the funding for other projects now at risk?

Full funding details will be announced as part of our annual business planning process in November.

#### 21. What are the reasons for the delay?

The original programme for testing has been compressed by more time being needed by contractors to complete fit-out activity in the central tunnels and delays in the development of railway systems software. Testing has started, and further time is required to complete the full range of integrated tests required to ensure a safe and reliable railway.

#### 22. When will the full railway open?

The DfT and TfL will continue to work closely with Crossrail Limited on the revised schedule. The focus remains on opening the full Elizabeth line, from Reading and Heathrow in the west to Shenfield and Abbey Wood in the east as soon after the central tunnels open as possible.

#### 23. What is the regulatory sign off required to run the railway?

There are a series of safety reviews both TfL and MTR, the operator, need to complete ahead of the railway being ready for passenger service which is why full testing of all of the systems together is essential. The Office of Rail and Road then need to approve the railway as safe to operate before services can begin.

## 24. Doesn't this show an inability by Government and Transport for London to deliver major projects on time and on budget?

No. Crossrail is a world class infrastructure project that will transform travel in London and the South East and is delivering immense benefits to the whole of the UK through its vast supply chain, adding up to £42bn to the UK economy.

Major projects are integral to unlocking new housing, creating jobs, driving forward economic growth and provide communities across the country with the transport infrastructure we need for the future.

The delay is disappointing, but not uncommon in a project of this scale and complexity and delivering the Elizabeth line safely is of paramount importance. There is always the potential for unexpected pressures to emerge that can challenge opening dates.

#### 25. Why weren't these delays noticed earlier and mitigating action taken?

Following a full review of the remaining delivery schedule we have been advised the central section of the railway will not be able to open in December 2018.

Although the major construction work has been broadly delivered to schedule, finalising the communications systems and bringing together and testing the complicated interfaces such as track, power, signalling and trains is the most complex phase of the Crossrail project and it is during this late phase of the project that Crossrail Limited has come up against delays.

The DfT and TfL will continue to push Crossrail Limited to manage any schedule pressures and mitigate these as much as possible. The focus remains on opening the full Elizabeth line, from Reading and Heathrow in the west to Shenfield and Abbey Wood in the east as soon after the central tunnels open as possible.

## 26. What was the impact of the electrical explosion at Pudding Mill Lane on the completion date and cost for the Elizabeth line?

During the initial energisation of electrical equipment at Pudding Mill Lane substation on 11 November 2017, two voltage transformers failed.

The cause of the failure was quality assurance. This delayed the start of energisation of power equipment in the tunnels by several months while extensive checks were completed, and thus delayed the start of testing.

This was one a number of unexpected challenges that occurred during construction, and it highlights the complexity of delivering major projects.

#### 27. What about the Network Rail works, are they also delayed?

The upgrade of existing stations in the west is the responsibility of Network Rail.

#### 28. What is the revised timetable for opening?

Full details of opening dates will be announced in due course.

#### **29.** What is the revised opening strategy for the Elizabeth line?

Full details of the opening strategy will be announced in due course. When the central section does open the railway will operate as three separate railways.

30. How did it get so bad so quickly? Who was to blame for this situation?

CRL response: The Elizabeth line is one of the most complex and challenging infrastructure projects ever undertaken in the UK.

We have been working hard to maintain the programme but sufficient time is required to introduce the next phase of the railway – the central section between Paddington and Abbey Wood – in a way that can be guaranteed to be safe and reliable.

The original programme for testing has been compressed by more time being needed by contractors to complete fit-out activity in the central tunnels, a later than planned start to dynamic testing and delays in the development of the railway systems software that allows operation across the three different signalling systems.

Testing has started but further time is required to complete the full range of integrated tests required to ensure a safe and reliable railway.

The railway will open through the central section once full testing of the train and signalling system has been successfully completed and a sufficient level of operational reliability has been achieved.

31. What will be the final cost of the Elizabeth line?

SEE WMS ANSWER

**32.** CRL Q: Did station construction delays affect railway systems testing? CRL A: Construction activity is drawing to a close with the completion of the remaining architectural fit-out in the new central section stations and this will complete as planned this year.

While there have been some delays in the station construction programme this has not directly impacted the testing and commissioning of the railway systems.

**33.** What are the three signalling systems that will be used on the Elizabeth line? CBTC (Communications Based Train Control) was selected for the central section as it is technically and operationally proven and is successfully used by many metro systems around the world.

TPWS (Train Protection Warning System) operates on the Great Western Mainline and Great Eastern Mainline i.e. Liverpool Street to Shenfield and Paddington to Reading.

ETCS (European Train Control System) operates in the Heathrow tunnels.

**34.** What do you mean by railway systems software? ????????

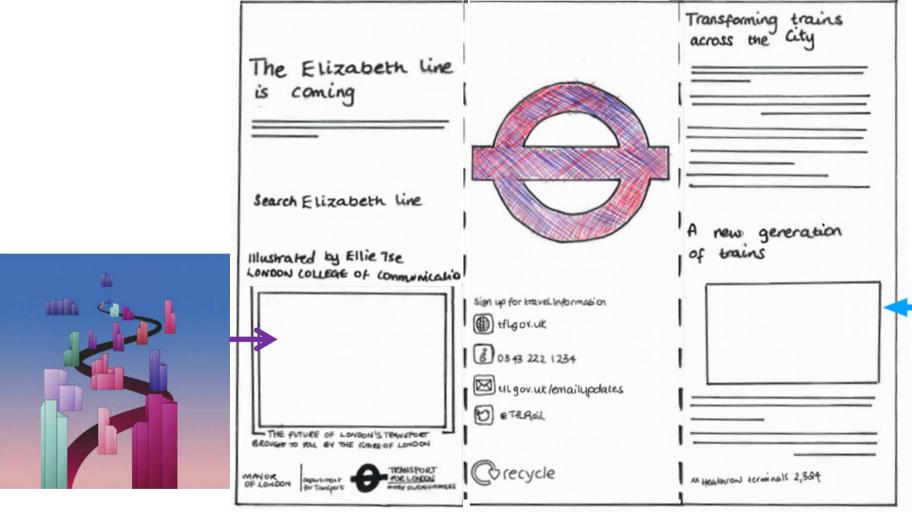
**Comment [V1]:** This isn't true to say 'as planned' it was planned to handover in July.

Comment [V2]: Not true.

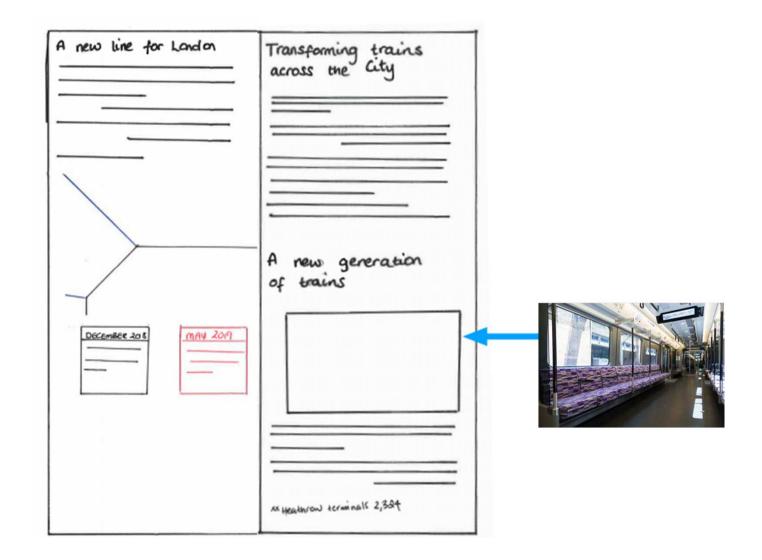
- **35.** What is the current state of construction activity? CRL A:
- **36.** When you finally open, will all the new stations open? CRL A: Yes.

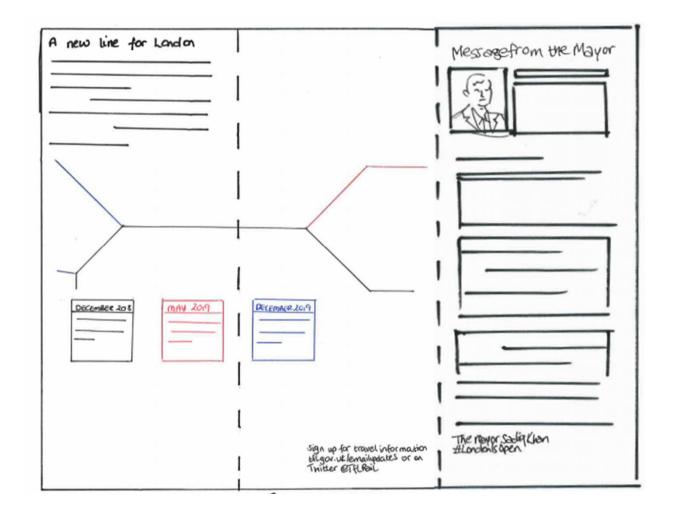
Comment [V3]: Remove

- 37. Could a preview / partial service be operated this December?
- CRL A: No, It is not possible to open a limited or partial service through the central section without it impacting on testing.
- CRL Q: Was it known that the Elizabeth line would not open in December 2018 at the time the WMS was published?
- CRL A: No. This situation only became apparent as we progressed through the dynamic testing phase progressed and was not known beforehand.
- CRL Q: How long has it been known that the Elizabeth line would not be ready to open in December 2018?
- CRL A: A final view was formed in August on the basis of current testing progress and technical input from our supply chain leading the signalling and train systems testing.









#### Copy

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§ Date:	7 <sup>th</sup> August 2018
Job Name:	Elizabeth Line Phase 3
Job Number:	TRANS0217
Version:	1

#### [PAGE 1]: FRONT COVER

**HEADLINE**: The Elizabeth line is coming

SUB- HEADLINE: Our A - new line for London will stretch more than < XX > miles

from London Heathrow to Abbey Wood

COPY: Search Elizabeth Line

Illustrated by Ellie Tse

London College of Communication UAL

**IMAGE:** The future of London's transport brought to you by the future of

London.

**Comment [a1]:** Feedback from presentation yesterday was to include the date of launch (9<sup>th</sup> December)

Comment [a2]: this could be misinterpreted that you can go direct between Heathrow and Abbey Wood (which you can't at Stage 3). Is there another way to say this? Otherwise consider an alternative sub-headline

**Comment [a3]:** Need to amend to actual name of student (VCCP to provide)

#### [PAGE 2 & 3]: INSIDE COVER - MAP & KEY

**HEADLINE**: A new line for London

**COPY:** The Elizabeth line arrives on December 9<sup>th</sup> to provide a <u>new</u>

and quicker routes across London. It will connect South East London with Central, West and Heathrow T2/3 and 4. You'll also be able to travel to Central London from Abbey Wood or Canary Wharf to Paddington in just 17 minutes.

See the map below to find out where your nearest Elizabeth line station is.

For more information on your IfL Rail services and the Elizabeth

line, search Elizabeth Line

CALL OUTS: DECEMBER 2018

The Elizabeth line launches; try one of the new services from Paddington, Abbey Wood, Liverpool Street or Shenfield.

**MAY 2019** 

Direct services begin between Paddington and Shenfield.

DECEMBER 2019

The whole Elizabeth line is up and running. Services between Heathrow Terminal 5, Reading and Abbey Wood will now be

fully operational.

Comment [a4]: This is unclear (makes it sound like Central to Abbey Wood is also 17 minutes) suggest revising to something like 'journey times will be significantly reduced – it will take just 17 minutes to travel between Paddington and Canary Wharf'

I think we need to make more of the journey times – was there no space to include a short comparison table? Or to mention more examples?

Comment [a5]: It's not just for people who live near to the line, it's for all Londoners travelling around London. Suggest amending to something like 'The map below summarises the routes that are open from December 9<sup>th</sup>, and the remaining stages before completion in December 2019'

**Comment [a6]:** TfL Rail will no longer exist from Dec 9<sup>th</sup> (it will all become EL)

Comment [a7]: Think we need to make this clearer about the three distinct routes that are open. E.g. 'The Elizabeth line opens. Three separate services will operate:

- •Paddington to Abbey Wood
- Paddington to Heathrow
- •Liverpool Street to Shenfield'

#### Copy

VCCP me Greencoat House Francis Street London SW1P 1DH T 020 7592 7500 F 020 7592 7465 www.VCCPme.com



CTA: Sign up for travel information

Tfl.gov.uk/emailupdates or on

Twitter @TfLRail

Comment [a8]: @Elizabethline

#### [PAGE 4]: INSIDE COVER - MESSAGE FROM THE MAYOR

**HEADLINE**: Message from the Mayor

**COPY:** The opening of the Elizabeth line though central London in

December is a landmark moment for London. The new railway, jointly sponsored by TfL and the Department for Transport, will provide new direct journey options for millions of people across London and the South East. In this leaflet you can see what services are available and how the line will look once it is fully

complete.

Customers travelling on the Elizabeth line will be able to use pay as you go with Oyster and contactless across the route, and benefit from daily fare capping. All TfL concessions, offering free or discounted travel, will also be valid, which means savings for lots of customers. Our fares freeze will also apply until 2020.

For customers with accessibility needs, there will be step-free access from street to train at all new Elizabeth line stations. As well as available staff while trains are running to help everyone turn up and go.

Plus, we have invested in brand new public spaces along the Elizabeth line to encourage people to walk and cycle as part of their journey, making the city greener, healthier and safe for all Londoners.

The Elizabeth line is central to my transport strategy to deliver a truly world-class transport system that is accessible and affordable for all Londoners.

The Mayor, Sadiq Khan #LondonlsOpen

Comment [a10]: If we need to make more space for copy, consider removing the image of the train

Comment [a9]: Fine to include

Comment [a11]: Do we have space for an intro to get across the scale of the benefits? There's a nice summary on the Crossrail website: From improving journey times across London, to easing congestion and offering better connections, the Elizabeth line will provide easier, quicker and more direct travel opportunities across the capital

Comment [a12]: Need to check this will be true for December

Comment [a13]: Once it's fully open

Think this could go under a subheading 'New stations'

#### [PAGE 5]: INSIDE PREVIEW - INDEPTH INFO

**HEADLINE**: Transforming trains across the City

COPY: We've built 10 new stations and upgraded 30 more across

<XX> miles to accommodate an expected 200 million people

each year.

#### Copy

VCCP me Greencoat House Francis Street London SW1P 1DH T 020 7592 7500 F 020 7592 7465 www.VCCPme.com



New bus routes that include Elizabeth line stations and improved road infrastructure have been introduced to make walking and cycling to your nearest stations easier and safer. Plus, each new station is step-free from street to train.

#### A new generation of trains

The new Elizabeth line trains have spacious walk through carriages, increased allocation for wheelchairs and pushchairs, and have been fitted with air conditioning.

The new trains will run between Abbey Wood and Paddington every 4 minutes, and cost the same as the tube. <u>Iravel from Heathrow\*\*</u> to Paddington, with unlimited travel around London, for no more than £12.50.

\*\* Heathrow Terminals 2,3 & 4

#### [PAGE 6]: BACK PAGE – ELIZABETH LINE LOGO

**CONTACT:** Sign up for travel information

Tfl.gov.uk

24 hour travel information 0343 222 1234\*

Sign up for email updates Tfl.gov.uk/emailupdates

@TfLRail

\*Service and network charges may apply. See tfl.gov.uk/terms for details. All information is correct at time of print – August

**Comment [a14]:** Separate the point about buses from walking/cycling.

We might need to add a CTA about

I also think we could put this section under a sub-heading e.g. 'Getting to the Elizabeth line / Connecting you to the Elizabeth line'

**Comment [a15]:** Pull this up into the section about stations

Comment [a16]: might be worth highlighting the real-time information and the capacity for 1,500 passengers (these are key selling points) Look at Crossrail website for more detail: <a href="http://www.crossrail.co.uk/route/new-twise/">http://www.crossrail.co.uk/route/new-twise/</a>

Comment [a17]: We can't say this

Comment [a18]: Remove this point – we can't say it until next year when we'll know what the daily cap will be

Comment [a19]: Elizabethline





## Press Office campaign strategy

With the launch of the Elizabeth line approaching, the time has come to **shift the focus of** the lead narrative from construction to the introduction of services.

The objectives of the press campaign are:

- To build awareness amongst Londoners and visitors that the Elizabeth line is coming in December 2018, supporting the biggest transport improvement in a generation
- To highlight the benefits the Elizabeth line will bring, building the excitement necessary to ensure the line is well-used from the outset
- To deliver a high-profile, VVIP-led media event to celebrate the historic launch of the Elizabeth line, working jointly with the Department for Transport and City Hall
- To adopt a creative approach in order to reach a diverse range of audiences, looking beyond traditional news media to promote the Elizabeth line brand
- To identify and mitigate all communications risks, ensuring the reputation of Transport for London is upheld



# Elizabeth line Media strands: overview

Dec '18: Elizabeth line launch

**Staff and Case Studies** 

Delivery: stations, trains + testing

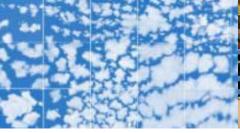


Art, architecture + design

History + heritage

Fares + technology

Social media, video + photography









**Documentaries & features** 

Local engagement

Commercial development

**Business & economy** 











## Target audiences

- All Londoners given the scale of the Elizabeth line network
- National and international news audiences
- Existing customers customers who already use services that convert to Elizabeth line services during the staged opening i.e. Heathrow Connect
- **New customers** customers who will start using the new Elizabeth line services and move from other lines i.e. Central and Jubilee lines and TOCs
- Visitors to London
- Stakeholders including government, business groups, local businesses, local authorities and politicians
- Businesses particularly those who have financially contributed



## **Media targets**

- National broadcast and print eg Today Programme, BBC, ITV, Channel 4, The Times,
   The Sun, The Daily Mail, The Telegraph, The Guardian etc
- London-wide media eg Evening Standard, Time Out, Londonist, BBC Radio London, local drivetime programmes
- Local media covering the entire Elizabeth line route, as well as local areas for our key suppliers
- News agencies PA, AP, AFP, Reuters etc
- Long-lead magazines
- International news media
- **Social media** Twitter, Facebook, Instagram
- Trade magazines and blogs eg Rail Magazine, lanVisits
- Politics programmes watched by Government eg Daily Politics, Question Time
- Documentaries Crossrail: The £15bn Railway



## Trial ops – public testing



- Exercise-style comms event, with various focus groups involved.
- Press release with photography, with a strong accessibility focus
- Select group of journalists invited to follow the testers
- Geoff Marshall to be invited to produce a video
- Photos shared on social media







# Mid-November 20 l8: International media event at an Elizabeth line station

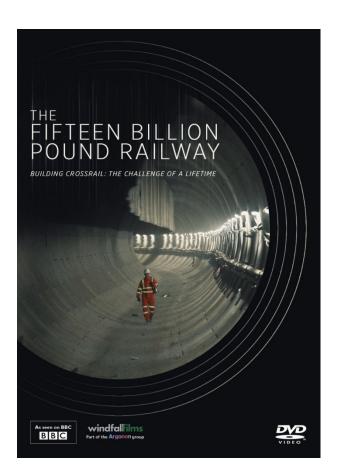


- Event to be held at an Elizabeth line station, in partnership with the Foreign & Commonwealth Office (FCO) and Foreign Press Association (FPA)
- FCO to issue invites to around 30 key international journalists (print + broadcast)
- Interviews offered with a DfT minister and hihg-level TfL spokesperson



## December 20 18: BBC Fifteen Billion Pound Railway





- Working with Crossrail Ltd on Series 3, which will air in December 2018
- 2 x one hour episodes will cover the completion of infrastructure and operations
- Treatment for Episodes 1 and 2 being finalised by Windfall
- Series 2 is BBC Two's most watched programme of 2017. Series 2 broadcast in Australia in September 2017
- Repeats of series 1 and 2 will continue



## December 20 18: Elizabeth line launch – ideas overview

- Large-scale media and stakeholder event and press release
- Event to be fronted by the Mayor, Mike Brown, PM, Transport Secretary
- Train of 'Elizabeths': Staff and Londoners named Elizabeth
- Interactive exhibition with Museum of London
- Other invitees to include representatives from key business groups, sponsors, charity representatives, celebrities etc
- Live radio broadcasts from stations throughout the day
- Launch day Google doodle
- "Turning London purple": TfL Head Offices, iconic buildings Tower Bridge, London Eye, City Hall, Emirates Air Line towers
- Work with London Transport Museum to refresh latest exhibition
- Lego roundels at stations
- Stakeholder event hosted by London First and Canary Wharf Group week of launch





# December 20 18: Launch day – draft media outline



VIP opening with PM, SoS, Mayor, TfL and CRL.

#### From 06.00 - before media event commences with VIPs

• Opportunity for BBC Breakfast and select media to join the 'final prep' moments behind the scenes. Live outside broadcast opportunities, potentially including from Old Oak Common depot where the first trains will travel from to Paddington. Interviews with staff, train drivers, station staff, line controller etc.

## 08.00 Visit the new Elizabeth line station at Paddington

- See the new station: concourse, platforms, cloud art
- Meet the people responsible: operational station staff and train drivers, construction representatives including apprentices and young engineers, VIPs
- Large group of Elizabeths all at station ready to board train



# December 20 18: Launch day – draft media outline



## 08.30 Travel on the Elizabeth line to the new Elizabeth line station at Canary Wharf

Board a new Elizabeth line train

Select group of 'Elizabeths' representing Londoners to travel on first train with VIPs — main photo op (potential to break a record — most number of Elizabeths in one place...or similar) Alight at Canary Wharf (train travels non-stop Paddington to Canary Wharf)

## 10.00 railway to open to the public

Media facility offered at key stations including TCR, Paddington and Farringdon for public opening, chance to film stations in use and vox pop passengers.

Key TfL spokespeople and potential supportive stakeholders i.e. Canary Wharf Group, London First etc to be available for interviews

### Throughout the day

Celebratory feel across stations with potential for 'busking' acts / choirs etc to be singing in ticket hall areas (note: Elizabeth busking programme won't officially start until late 2019)



# December 20 l8 / January 20 l9: Elizabeth line launch – station by station





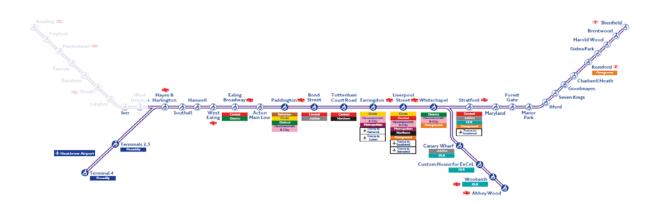


- Following the large-scale media and stakeholder event, we will mark the launch in a more local way with a focus on individual stations
- Potential for events at stations along the route, with the aim of inviting trade and local press and stakeholders
- Local press releases and images to be issued
- Involvement with local schools, businesses, residents, accessibility and charity groups



# May 20 19: Elizabeth line begins between Paddington – Shenfield via Whitechapel

- Press release detailing the service changes, with photography and maps
- Time-lapse social media video to illustrate how you can go straight from Paddington to Shenfield
- Work with vloggers to explain 'how it all works'

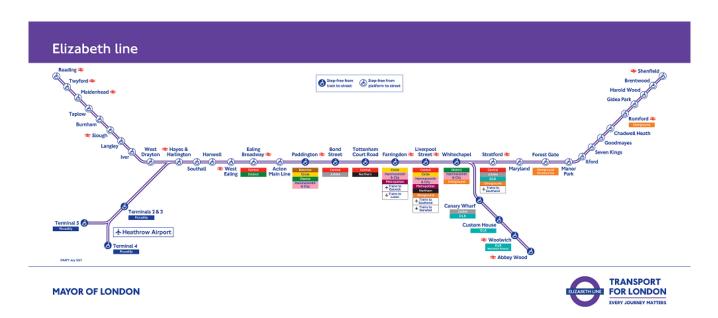




# December 20 19: Elizabeth line fully open



- Press release with photography, strong focus on accessibility transformation
- London and home-counties focussed media event at Reading station, with VIPs travelling on the first Elizabeth line train to London
- Social media videos produced to highlight new journeys that can be made







	Day	Milestone / event	Planned media activity
	7 July	*CRL open day: Whitechapel	Public viewing only, no media. Images will be
			available after the event.
	9 July	*CRL open day: Tottenham Court Road	Images and press release highlighting supply chain.
	w/c 9 July	OSD announcement re Farringdon West	Press release
	24 July (TBC)	Written Ministerial Statement	Reactive lines and Q&A
July	July TBC	First end-to-end 345 journey	Video release TBC (footage captured for £15bn Railway)
	July TBC	Incline lifts at Farringdon and Liverpool Street installed	Potential for social media
	Late July TBC	Bloomberg News to photograph the production of roundels at AJ Wells	Being arranged with AJ Wells
	Late July TBC	Commercial Development update	Press release TBC
	Late July	Liverpool street east oversite developer agreement	Press release
	6 – 10 August	Potential closure of Goodmayes station for Network Rail work	Network Rail press release
	August	Two Elizabeth line engineering trains arrive at Plumstead Depot	Trade press release with photography
August	Summer TBC	Potential event at TUCA	Media event and press release
	Summer TBC	Gidea Park and Forest Gate ticket halls open	Joint NR / TfL release for locals in the east, with social media activity to follow
	August (Summer TBC)	New Tube map unveiled with the Elizabeth line 'coming soon' message	Press release with photography, potential event
	September/October	Production Guild event at an Elizabeth line station	Event for location scouts, line producers and producers to visit an Elizabeth line station.  Potential to also loop in Film London and FCO.
	September	LTM Elizabeth line merchandise goes on sale	Work with LTM on joint press release, images and social media
September	September	'Calling all Elizabeths' press release to be issued jointly with Museum of London	Press release and media activity
	September	State of the art rail-milling machine arrives at Plumstead Depot	Trade press release with photography
	September TBC	Training operations staff at Romford Control Centre	Trade media briefing, feature pitch to Rail Magazine/ RailStaff
	September	Borough Press "Underground: Tales for London" published	Collaborative press activity with the author James Smythe
	September TBC	Whitechapel green roof planted	Press release and photography
October	October TBC	Three months to go: first train with VIP passengers through tunnels	Potential for event with SoS and Mayor ahead of public testing
	October TBC	NR contract awards for stations in the west	Reactive lines. Network Rail to lead on comms
	l October onwards	Trial ops and trial running commence (Every Saturday 27 October- 24 November)	Exercise-style comms — various focus groups involved. Pre-briefed to news media Media event, press release with photography Social media
	October	*Art installations across the line TBC	Press release + picture story for art press

November			
	November	Placement of travel features for London shopping	Work with NWEC to do 'Holiday shopping along the Elizabeth line' features with regional and
	November	Elizabeth line pocket Tube map	international media, partnering with hotels  Announcement of artist, unveiling of artwork via social media
	w/c 13 November	Elizabeth line commemorative Oyster card released	Social media
	Mid-November	"One month to go" international media event at an Elizabeth line station, hosted by the FCO and Foreign Press Association.	Media event at a station. Working with FCO, around 30 journalists expected.
December	December	*Museum of London press release issued* - Museum of Elizabeths	Including a line from TfL
	December TBC	Mayor to meet staff with one week to go until the launch	'Behind the scenes' event for media, to mark one week to go
	December	Elizabeth line launch	Large-scale media and stakeholder event
		Launch of new Elizabeth line posters, designed by art students	Press release and social media

2019

	Day	Milestone / event	Planned media activity
2019	Early 2019	Crossrail Art Foundation installations are complete	Event and press release
	Early 2019 (Jan – March)	Elizabeth line busking pitches selected (reviewing passenger flows, acoustics)	Might work well for a documentary crew or similar. Ann Gavaghan and Angela Green leading on this.
	Mid-2019	Oversite developments begin to reach completion	TBC
	May	Services between Paddington – Shenfield via Whitechapel	Press release and social media
	Summer	LU & Elizabeth line busking call-out held at an Elizabeth line station	Usual press release and media activity, with an Elizabeth line focus
	December	Elizabeth line fully open	London and home counties-focussed media event with the Mayor and other VIPs travelling on the first train leaving from Reading.





#### PRESS RELEASE

### Elizabeth line services through central London to start in 2019

- Central section between Paddington and Abbey Wood will open in autumn 2019
- Further time required to ensure a safe and reliable railway for customers from day one of passenger service

The Elizabeth line, which will redefine transport in London with quicker, easier and more accessible journeys, will open through central London in autumn 2019, Crossrail Limited announced today. The revised schedule is needed to complete the final infrastructure and extensive testing required to ensure the Elizabeth line opens as a safe and reliable railway.

The hugely complex ten-year project, delivered by Crossrail Limited, brings together multiple infrastructure contracts, new trains and three different signalling systems. The Elizabeth line will add 10 per cent to central London's rail capacity, and the project will boost the economy by an estimated £42bn.

Crossrail Limited has been working hard to maintain the programme and sufficient testing time is required to introduce the next phase of the railway – the central section between Paddington and Abbey Wood – in a way that can be guaranteed to be safe and reliable.

The original programme for testing has been compressed by more time being needed by contractors to complete fit-out activity in the central tunnels and the development of railway systems software. Testing has started but further time is required to complete the full range of integrated tests.

The focus remains on opening the full Elizabeth line, from Reading and Heathrow in the west to Shenfield and Abbey Wood in the east, as soon after the central tunnels open as possible.

**Simon Wright, Crossrail Chief Executive said:** "The Elizabeth line is one of the most complex and challenging infrastructure projects ever undertaken in the UK and is now in its final stages. We have made huge progress with the delivery of this incredible project but we need further time to complete the testing of the new railway. We are working around the clock with our supply chain and Transport for London to complete and commission the Elizabeth line."

The new Elizabeth line trains are already operating between Shenfield and Liverpool Street (mainline station) and between Paddington (mainline station) and Hayes & Harlington, in readiness for the full opening. The trains are also being tested in the Heathrow tunnels. Construction activity is drawing to a close including the completion of the remaining architectural fit-out in the new central section stations.

When the central section of the Elizabeth line opens in autumn 2019, the railway will initially operate as three separate services as planned:

- Paddington (Elizabeth line station) to Abbey Wood via central London
- Paddington (mainline station) to Heathrow (Terminals 2, 3 and 4)
- Liverpool Street (mainline station) to Shenfield

The new railway, jointly sponsored by the Department for Transport and Transport for London with support from London's business community, will connect stations such as Paddington to Canary Wharf in only 17 minutes, transforming how Londoners and visitors move across the capital.

The Elizabeth line will bring an extra 1.5 million people to within 45 minutes of central London and more than 200 million passengers are expected to use it every year.

#### **Ends**

For media enquiries - Tel. 0343 222 4141

#### CROSSRAIL PRESS OFFICE MEDIA Q&A - SCHEDULE

#### Headlines:

The Elizabeth line's central section between Paddington and Abbey Wood will open in autumn 2019 instead of December 2018.

The revised schedule is needed to complete the final rail infrastructure and extensive testing required to ensure the Elizabeth line opens as a safe and reliable railway.

The Elizabeth line is one of the most complex and challenging infrastructure projects ever undertaken in the UK and brings together multiple contracts, new rolling stock and three different signalling systems.

We have been working hard to maintain the programme and testing time is required to introduce the next phase of the railway – the central section between Paddington and Abbey Wood – in a way that can be guaranteed to be safe and reliable.

The original programme for testing has been compressed by a delayed start and more time being needed by contractors to complete fit-out activity in the tunnels and the development of railway systems software.

Testing has started but further time is required to complete the full range of integrated tests required to ensure a safe and reliable railway.

The railway will open through the central section once full testing has been successfully completed and a sufficient level of system operational reliability has been achieved.

The new Elizabeth line trains are already operating between Shenfield and Liverpool Street (mainline station) and between Paddington (mainline station) and Hayes & Harlington, in readiness for the full opening. The trains are also being tested in the Heathrow tunnels.

Construction activity is drawing to a close with the completion of the remaining mechanical, electrical and communications systems along with the architectural fit-out in the new central section stations and will complete this year.

When the central section of the Elizabeth line opens in autumn 2019, the railway will operate as three services as planed:

- Paddington (Elizabeth line station) to Abbey Wood via central London
- Paddington (mainline station) to Heathrow (Terminals 2, 3 and 4)
- Liverpool Street (mainline station) to Shenfield

The focus remains on opening the full Elizabeth line, from Reading and Heathrow in the west to Shenfield and Abbey Wood in the east, as soon after the central tunnels open as possible.

Crossrail will now work closely with Transport for London and Department for Transport to establish whether the revised schedule has any potential additional impact on funding.

## 1. How did the Crossrail programme get this bad so quickly? Who is to blame for this situation?

The Elizabeth line is one of the most complex and challenging infrastructure projects ever undertaken in the UK.

Crossrail has been managing a number of schedule and cost pressures as this enormously complex project comes to an end.

The revised schedule is required to complete the final rail infrastructure and extensive testing required to ensure the Elizabeth line opens as a safe and reliable railway.

We have been working hard to maintain the programme but sufficient time is required to introduce the next phase of the railway – the central section between Paddington and Abbey Wood – in a way that can be guaranteed to be safe and reliable.

The original programme for testing has been compressed by more time being needed by contractors to complete fit-out activity in the central tunnels and the development of railway systems software.

Testing has started but further time is required to complete the full range of integrated tests required to ensure a safe and reliable railway.

The railway will open through the central section once full testing has been successfully completed and a sufficient level of operational reliability has been achieved.

## 2. Was it known that the Elizabeth line would not open in December 2018 at the time the WMS was published in July?

No. The extent of the situation became apparent as we progressed further through the testing phase. A final view was formed in August following a comprehensive review of the remaining programme.

Testing has started but more time is needed by contractors to complete fit-out activity in the central tunnels and in the development of railway systems software.

The revised schedule is required to complete the final rail infrastructure and extensive testing required to ensure the Elizabeth line opens as a safe and reliable railway.

## 3. How long has it been known that the Elizabeth line would not be ready to open in December 2018?

A final view was formed in August following a comprehensive review of the remaining programme.

## 4. When did CRL inform Sponsors that it was no longer possible to meet the central section opening date for December 2018?

Crossrail formally notified the Department for Transport and Transport for London 30 August following a formal decision by the Crossrail Board on 29 August.

#### 5. When was the final decision taken and by whom?

The final decision was taken by the Crossrail Limited Board on 29 August.

6. What was the trigger that made a December 2018 opening no longer possible? Only a few weeks ago you said the railway would open this year, why is there now a 9 month or more delay?

Following a comprehensive review of the remaining programme we have concluded that the central section will no longer be ready to open in December 2018.

There is no one single element. The Elizabeth line is one of the most complex and challenging infrastructure projects ever undertaken in the UK and brings together multiple contracts, new rolling stock and three different signalling systems.

The revised schedule is required to complete the final rail infrastructure and extensive testing required to ensure the Elizabeth line opens as a safe and reliable railway.

Testing has started but further time is required to complete the full range of integrated tests required to ensure a safe and reliable railway.

#### 7. Why will it take until autumn 2019 before the central section can open?

This will give the programme the remaining time needed to complete the rail infrastructure and the extensive testing required to introduce the next phase of the railway.

## 8. What remaining rail infrastructure works are still to be completed? When will this complete?

The remaining rail infrastructure works will complete this year. This ranges from removal of temporary services to completing the remaining installation of the permanent lighting and drainage pumps in the tunnels.

#### 9. What is the current status of construction activity?

Construction activity is drawing to a close with the completion of the remaining mechanical, electrical and communications systems along with architectural fit-out in the new central section stations. By the end of the year, construction schedule will no longer impact testing, thereby allowing full testing to commence.

#### 10. What is railway systems software?

Railway systems cover the integrated systems and associated software that are required to operate the railway including rolling stock, signalling, tunnel ventilation, communications and power (traction and non-traction).

## 11. Why is more time needed by contractors for railway systems software? Is there an issue with the signalling system on the Elizabeth line?

Railway systems cover the integrated systems that are required to operate the railway including rolling stock, signalling, tunnel ventilation, communications and power (traction and non-traction).

We have been working hard to maintain the programme but further integrated testing is required.

The railway will open through the central section once full testing has been successfully completed and a sufficient level of operational reliability has been achieved.

## 12. What are the three signalling systems that will be used on the Elizabeth line?

CBTC or Communications Based Train Control was selected for the central section as it is technically and operationally proven and is successfully used by many metro systems around the world.

TPWS or Train Protection Warning System operates on the Great Western Mainline and Great Eastern Mainline.

ETCS or European Train Control System operates in the Heathrow tunnels.

## 13. What was the impact of the electrical explosion at Pudding Mill Lane on the opening of the Elizabeth line? Is this the reason why testing started late?

During the initial energisation of electrical equipment at Pudding Mill Lane substation on 11 November 2017, two voltage transformers failed.

The cause of the failure was quality assurance – aspects of the wiring at the substation had been completed incorrectly.

This delayed the start of energisation of the power equipment in the tunnels by several months while extensive checks were completed, and thus delayed the start of testing.

#### 14. Will this mean longer disruption for local communities around work sites?

Construction activity is drawing to a close with the completion of the remaining mechanical, electrical and communications systems along with architectural fit-out in the new central section stations.

While it is hugely disappointing that the central section of the new railway will not open to passengers in December, the remaining construction schedule remains the same as most recently communicated to local residents and businesses.

## 15. The funding envelope has just been increased from £14.8 billion to £15.4 billion, what are the cost implications of today announcement?

Crossrail will now work closely with Transport for London and Department for Transport to establish whether the revised schedule has any potential additional impact on funding.

#### 16. Will the Elizabeth line open in autumn 2019, could it be later?

Everyone involved in the Crossrail project remains focused on completing the remaining testing and commissioning works to enable the central section of the Elizabeth line to open in autumn 2019.

#### 17. Will all the new central section stations open in autumn 2019?

Yes. Paddington, Bond Street, Tottenham Court Road, Farringdon, Liverpool Street, Whitechapel, Canary Wharf, Custom House, Canary Wharf and Abbey Wood will all be served by the Elizabeth line when services through the central section commence in autumn 2019.

#### 18. Could a preview / partial service be operated this December?

No. It is not possible to operate a limited or partial service through the central section without it impacting testing. Crossrail looked at every possibility and could not offer London a safe and reliable railway by doing so.

#### 19. Could the Elizabeth line open in the central section before autumn 2019?

The intention is that the central section will open in autumn 2019.

## 20. When exactly will the central section open and will the Elizabeth line be fully open in December 2019?

Full details of the opening strategy will be announced in due course.

The focus remains on opening the full Elizabeth line, from Reading and Heathrow in the west to Shenfield and Abbey Wood in the east soon as possible after the central section opens.

#### 21. What is the revised opening strategy for the Elizabeth line?

When the central section of the Elizabeth line opens in autumn 2019, the railway will initially operate as three services as planned:

- Paddington (Elizabeth line station) to Abbey Wood via central London
- Paddington (mainline station) to Heathrow (Terminals 2, 3 and 4)
- Liverpool Street (mainline station) to Shenfield

### 22. When the Crossrail project complete?

The focus remains on opening the full Elizabeth line, from Reading and Heathrow in the west to Shenfield and Abbey Wood in the east soon as possible after the central section opens.

#### 23. What will be the final cost of the Elizabeth line?

The final cost will be confirmed when the programme completes.

#### FOR BACKGROUND - CRL MEDIA Q&A - ADDITIONAL FUNDING

#### **Crossrail statement (approved):**

"A number of factors have meant that additional investment is needed by both Crossrail Limited and Network Rail during this final stage of the programme covering both the new build central section and upgrades to the existing railway. These cost increases are disappointing but additional funding is critical to the delivery of this vital project. £300m will be made available to Crossrail Limited for its remaining programme of works in the central section. Both Crossrail Limited and Network Rail remain focused on managing costs through to project completion."

#### Information for journalist:

The Secretary of State has announced on 24 July 2018 that the overall funding envelop for the delivery of the project has increased from £14.8 billion to £15.4 billion.

The original budget for the project was £15.9 billion, including a large contribution from London businesses. Following the Comprehensive Spending Review in 2010, a revised funding envelope of £14.8 billion was agreed. Crossrail Limited is responsible for £12.5 billion of works with Network Rail responsible for £2.3 billion of upgrade works.

Cost pressures have increased on both the Crossrail Limited and Network Rail parts of the project. As we get closer to the opening of the railway, the challenge of delivering a major infrastructure project of this scale and complexity has increased, with fewer opportunities to mitigate these pressures.

Additional funding is being provided to both Crossrail Limited and Network Rail.

£300 million is being made available to Crossrail Limited for its remaining programme of works in the central section, specifically the complex systems installation and testing, prior to the opening of the railway for reliable passenger service.

Around £290 million additional investment is required by Network Rail to complete its upgrades to the existing railway.

#### Crossrail Limited

Cost pressures in the central section have resulted from a number of factors.

Increased time and resource has been required for the installation and testing of the multiple systems needed to operate the new railway including track, communications, power and signalling and worse than expected ground conditions during station construction. These have prolonged works and compressed the delivery schedule. Some construction costs are higher than was originally budgeted

#### **Network Rail**

The need for around £290 million additional funding for Network Rail to complete their programme of works for the Elizabeth line, including those enhanced ticket halls at surface stations, relates to a number of factors.

These include the complexity of integrating new systems onto the national rail network such as a new driver only operation camera system and the poor underlying condition of some of the Victorian infrastructure.

#### **TfL Reactive statement:**

Mark Wild, London Underground's Managing Director, said: "We will continue to work closely with Crossrail Limited as they complete the remaining railway infrastructure work and testing needed to deliver the new railway. The delayed opening is disappointing, but ensuring the Elizabeth line is safe and reliable for our customers from day one is of paramount importance."

#### **Top lines**

- The central section of the Elizabeth line (Paddington through to Abbey Wood) will now open in autumn 2019, instead of December 2018.
- Crossrail Limited have now advised us and DfT, as joint sponsors of the project, that they will not be able to make the original December opening date.
- They need more time to test the railway to make sure it is safe and reliable before it opens to customers.
- The revised schedule is needed to complete the final rail infrastructure and extensive testing required to ensure the Elizabeth line opens as a safe and reliable railway.
- The original programme for testing has been compressed by more time being needed by contractors to complete fit-out activity in the central tunnels and in the development of railway systems software.
- Testing has started, but further time is required to complete the full range of integrated tests.
- The central section will open once full testing has been successfully completed and a sufficient level of operational reliability has been achieved.
- There is no one single element causing the delay. The Elizabeth line is one of the most complex and challenging infrastructure projects ever undertaken in the UK and brings together multiple contracts, new rolling stock and three different signalling systems.
- The remaining rail infrastructure works will complete this year. This ranges
  from removal of temporary services to completing the remaining installation of
  the permanent lighting and drainage pumps in the tunnels.
- The focus remains on opening the full railway, from Reading and Heathrow to Shenfield and Abbey Wood, as soon after the central tunnels open as possible.
- This is one of Europe's largest infrastructure projects, it will transform travel in London and the South East and is already delivering benefits to across the UK through its vast supply chain. The project will boost the economy by an estimated £42bn.
- The delay is disappointing, but not uncommon in a project of this scale and complexity and delivering the railway safely is of paramount importance.
   There is always the potential for unexpected pressures to emerge that can challenge opening dates.
- IF PRESSED: Crossrail Limited is responsible for the construction and delivery of the end-to-end railway.

#### 1. Why didn't you announce this when you announced the additional funding?

DfT and TfL were made aware of the change to the schedule on 30th August, following a decision at the latest Crossrail Board which took place on the 29th August.

#### 2. How could you have been unaware of the potential for this delay?

As has been discussed on a number of occasions at the TfL Board, the Crossrail Limited team have been managing a number of schedule and cost pressures as this enormously complex project draws towards completion.

Crossrail Limited have now completed a review of the remaining schedule for the completion of the construction and integrated systems testing ahead of the line opening safely and reliably to passengers.

As a result of that, Crossrail Limited has now notified us that they can no longer meet the December 2018 date which means that the central section will now open in autumn 2019.

#### 3. Only if pressed:

#### We've heard TfL commissioned an independent review of the schedule?

As has been discussed on a number of occasions at the TfL Board, the Crossrail Limited team have been managing a number of schedule and cost pressures as this enormously complex project draws towards completion.

Crossrail Limited have been continually reviewing their schedule. As Sponsors, it was prudent for us to commission an independent review of Crossrail Limited's current programme to help assess the volume of work to go and risk involved.

#### 4. Will this have a further impact on the already extended funding envelope?

As announced in July, an additional £300m of funding has been made available to Crossrail Limited by the DfT and TfL.

Crossrail Limited have just informed TfL and DfT about the delay. Crossrail Limited are working to establish any additional impact on funding from the revised schedule.

## 5. Why did you agree the funding package with the DfT in July, potentially leaving TfL to foot the bill for any remaining costs?

When the revised funding agreement was made in July, Crossrail Limited had not advised the DfT and TfL, the joint sponsors of the project, that the December 2018 opening date could no longer be met and the potential cost implications of this. Crossrail Limited are working to establish any additional impact on funding from the revised schedule.

## 6. What are the revenue implications of not beginning a service from this December?

We are assessing the revenue implications. Details of how we will manage the change will be announced as part of our annual business planning process at the end of 2018.

The predicted revenue from the opening of the central section was mainly attracted from other TfL services, for example customers switching from the Central and Jubilee lines to the Elizabeth line, rather than being brand new revenue from new sources.

## 7. What are the revenue implications of not running a full service by December 2019?

We will work through any cost and revenue implications of a revised opening date and report this through our annual business planning process.

#### 8. How will you fund the December delay?

Crossrail Limited have just informed TfL and DfT about the delay and we will now work with them to establish any additional impact on funding from the revised schedule. Details of how we will manage the change will be announced as part of our annual business planning process at the end of 2018.

#### 9. Is the funding for other projects now at risk?

Full funding details will be announced as part of our annual business planning process in November.

### 10. What are the reasons for the delay?

The original programme for testing has been compressed by more time being needed by contractors to complete fit-out activity in the central tunnels and delays in the development of railway systems software. Testing has started, and further time is required to complete the full range of integrated tests required to ensure a safe and reliable railway.

## 11. Do you have confidence in Sir Terry Morgan / the management of Crossrail Limited?

Sir Terry Morgan has been the chair of Crossrail Ltd since 2009 and brings a wealth of experience from many years working in the industry. He has overseen this world class infrastructure project for almost ten years, and it is already delivering immense benefits to the whole of the UK through its vast supply chain. All major projects are subject to the highest level of scrutiny to ensure they can be successful but there is always the potential for unexpected pressures to emerge that can challenge opening dates. Although the delay is disappointing, it is not uncommon in a project of this scale and complexity and TfL and the DfT will continue to work closely with Terry and his team on delivering the Elizabeth line as quickly as possible.

#### 12. When will the full railway open?

The DfT and TfL will continue to work closely with Crossrail Limited on the revised schedule. The focus remains on opening the full Elizabeth line, from Reading and Heathrow in the west to Shenfield and Abbey Wood in the east as soon after the central tunnels open as possible.

#### 13. What is the regulatory sign off required to run the railway?

There are a series of safety reviews both TfL and MTR, the operator, need to complete ahead of the railway being ready for passenger service which is why full testing of all of the systems together is essential. The Office of Rail and Road then need to approve the railway as safe to operate before services can begin.

## 14. Doesn't this show an inability by Government and Transport for London to deliver major projects on time and on budget?

No. Crossrail is a world class infrastructure project that will transform travel in London and the South East and is delivering immense benefits to the whole of the UK through its vast supply chain, adding up to £42bn to the UK economy.

Major projects are integral to unlocking new housing, creating jobs, driving forward economic growth and provide communities across the country with the transport infrastructure we need for the future.

The delay is disappointing, but not uncommon in a project of this scale and complexity and delivering the Elizabeth line safely is of paramount importance. There is always the potential for unexpected pressures to emerge that can challenge opening dates.

#### 15. Why weren't these delays noticed earlier and mitigating action taken?

Following a full review of the remaining delivery schedule we have been advised the central section of the railway will not be able to open in December 2018.

Although the major construction work has been broadly delivered to schedule, finalising the communications systems and bringing together and testing the complicated interfaces such as track, power, signalling and trains is the most complex phase of the Crossrail project and it is during this late phase of the project that Crossrail Limited has come up against delays.

The DfT and TfL will continue to push Crossrail Limited to manage any schedule pressures and mitigate these as much as possible. The focus remains on opening the full Elizabeth line, from Reading and Heathrow in the west to Shenfield and Abbey Wood in the east as soon after the central tunnels open as possible.

## 16. What was the impact of the electrical explosion at Pudding Mill Lane on the completion date and cost for the Elizabeth line?

During the initial energisation of electrical equipment at Pudding Mill Lane substation on 11 November 2017, two voltage transformers failed.

The cause of the failure was quality assurance. This delayed the start of energisation of power equipment in the tunnels by several months while extensive checks were completed, and thus delayed the start of testing.

This was one a number of unexpected challenges that occurred during construction, and it highlights the complexity of delivering major projects.

### 17. What about the Network Rail works, are they also delayed?

The upgrade of existing stations in the west is the responsibility of Network Rail.

### 18. What is the revised timetable for opening?

Full details of opening dates will be announced in due course.

#### 19. What is the revised opening strategy for the Elizabeth line?

Full details of the opening strategy will be announced in due course.

When the central section does open the railway will initially operate as three separate services:

- Paddington (Elizabeth line station) to Abbey Wood via central London
- Paddington (mainline station) to Heathrow (Terminals 2,3 and 4)
- Liverpool Street (mainline station) to Shenfield

## 20. What are the three signalling systems that will be used on the Elizabeth line?

CBTC (Communications Based Train Control) was selected for the central section as it is technically and operationally proven and is successfully used by many metro systems around the world.

TPWS (Train Protection Warning System) operates on the Great Western Mainline and Great Eastern Mainline i.e. Liverpool Street to Shenfield and Paddington to Reading.

ETCS (European Train Control System) operates in the Heathrow tunnels.

# 21. Is it true that TfL delayed the train procurement for the Elizabeth line and that this has been the real cause of the delay?

The procurement of the trains has had no impact on the delayed opening of the central section. Informed by the lengthy delays to the train procurement for the Thameslink project, which was carried out through a PFI, a decision was taken by the DfT and TfL that TfL would procure the trains directly. The risk to train delivery under a PFI was much greater. The only change we made to the train procurement was done with the clear intent of de-risking the programme. The trains are now being

delivered, and are already serving parts of the Elizabeth line route in the east and the west.

## 22. What about the credit ratings agency putting TfL on negative watch?

We note the S&P analysis and are assessing the financial implications of Crossrail's announcement as part of our annual business planning process.

We have a tight grip on costs and have delivered more than £500m per annum in net operating savings and are on track to deliver £630m this financial year as we work towards an operating surplus by 2021.

#### **Jacob Gemma**

From: Gasson Sarah

**Sent:** 30 August 2018 14:19

To: Brown Mike (Commissioner); Everitt Vernon; Wild Mark (CEO Crossrail); Kilonback

Simon; external howard Smith; Carter Howard; Powell Gareth; Dix Michèle

**Cc:** Brown Matt; Preteceille Lauren; Edwards Nicky; Prior Lois; Morley Vicky; Gillespie

Alice; Mannah Sylvia; Tucker John; Brown Andy (Corporate Affairs); Zavitz Richard; Preen Heather; Tagg Ella (ST); Branks Kirsten; Thomson Linda; Lee Stuart; Quinn

Amy; Leaker Jane; Fenimore laura; Williams Alex

**Subject:** For info: Elizabeth line revised opening date announcement - TfL restricted

Dear all,

As you will be aware, today we received notice from Crossrail that they will be unable to deliver the central section of the Elizabeth line by December, as originally planned.

Below is the final press release announcing this news, which will be issued by Crossrail at 10am tomorrow. Obviously, until then the news remains confidential.

A comprehensive plan for briefing key stakeholders has been agreed between Crossrail, DfT and ourselves. A message from Mike to TfL staff will also be issued tomorrow, following the press release.

If pushed hard for interview by broadcast media, Simon Wright from Crossrail will be conducting interviews on this.

Our response, if asked for general comment by media, will be as follows:

Mark Wild, London Underground and Elizabeth line Managing Director, said: "We will continue to work closely with Crossrail Limited as they complete the remaining railway infrastructure work and testing needed to deliver the new railway. The delayed opening is disappointing, but ensuring the Elizabeth line is safe and reliable for our customers from day one is of paramount importance."

If asked about funding, our response will be as follows:

A TfL spokesperson, said: "As announced in July, an additional £300m of funding has been made available by the DfT and TfL, the joint sponsors of the project, to Crossrail Limited. TfL and the DfT will now work with Crossrail Limited to establish whether the revised schedule has any additional impact on funding."

City Hall's response will be as follows:

Spokesperson for the Mayor - "It's obviously disappointing that Crossrail Ltd have advised that they need more time than anticipated to complete the final pieces of infrastructure, and to carry out the extensive testing required before the next phase of the Elizabeth Line can open.

"This has been a ten-year construction project and is one of the most complex engineering schemes ever undertaken. It is essential that a safe and reliable railway operates from day one, and this has to be the top priority.

"When complete, the Elizabeth Line will transform travel across London and the South East, with new state-of-the-art trains taking millions of people more quickly across London, providing a boost to the economy worth billions of pounds."

We'll keep you updated on how this news is landing tomorrow once the announcement is made.

Many thanks

### Elizabeth line services through central London to start in 2019

- Central section between Paddington and Abbey Wood will open in autumn 2019
- Further time required to ensure a safe and reliable railway for customers from day one of passenger service

The Elizabeth line, which will redefine transport in London with quicker, easier and more accessible journeys, is expected to open through central London in autumn 2019, Crossrail Limited announced today. The revised schedule is needed to complete the final infrastructure and extensive testing required to ensure the Elizabeth line opens as a safe and reliable railway.

The hugely complex ten-year project, delivered by Crossrail Limited, brings together multiple infrastructure contracts, new trains and three different signalling systems. The Elizabeth line will add 10 per cent to central London's rail capacity when fully opened, and the project will boost the economy by an estimated £42bn.

Crossrail Limited has been working hard to maintain the programme and sufficient testing time is required to introduce the next phase of the railway – the central section between Paddington and Abbey Wood – in a way that can be guaranteed to be safe and reliable.

The original programme for testing has been compressed by more time being needed by contractors to complete fit-out activity in the central tunnels and in the development of railway systems software. Testing has started, but further time is required to complete the full range of integrated tests.

The focus remains on opening the full Elizabeth line, from Reading and Heathrow in the west to Shenfield and Abbey Wood, in the east as soon after the central tunnels open as possible.

**Simon Wright, Crossrail Chief Executive said:** "The Elizabeth line is one of the most complex and challenging infrastructure projects ever undertaken in the UK and is now in its final stages. We have made huge progress with the delivery of this incredible project and we need further time to complete the testing of the new railway. We are working around the clock with our supply chain and Transport for London to complete and commission the Elizabeth line."

The new Elizabeth line trains are already operating between Shenfield and Liverpool Street (mainline station) and between Paddington (mainline station) and Hayes & Harlington, in readiness for the full opening. The trains are also being tested in the Heathrow tunnels. Construction activity is drawing to a close including the completion of the remaining architectural fit-out in the new central section stations.

When the central section of the Elizabeth line opens in 2019, the railway will initially operate as three separate services, as planned:

- Paddington (Elizabeth line station) to Abbey Wood via central London
- Paddington (mainline station) to Heathrow (Terminals 2, 3 and 4)
- Liverpool Street (mainline station) to Shenfield

The new railway, jointly sponsored by the Department for Transport and Transport for London, with support from London's business community, will connect stations such as Paddington to Canary Wharf in only 17 minutes, transforming how Londoners and visitors move across the capital.

The Elizabeth line will bring an extra 1.5 million people to within 45 minutes of central London and more than 200 million passengers are expected to use it every year.

#### **ENDS**

Sarah Gasson | Head of Media

Transport for London | TfL Press Office, Palestra, 11th Floor, 197 Blackfriars Road, London, SE1 8NJ Tel: | Mobile: | E-mail: | @tfl.gov.uk | Web: www.tfl.gov.uk

The main press office number is | ...

### Elizabeth line Communications Delivery Board Actions

Friday 20th July 2018

Attendees: Vernon Everitt, Matt Brown, Sarah Gasson, Vicky Morley, Jenna Henshaw, Shashi Verma, Anna Bown, Dan Gierhart, Peter MacLennan, Richard Storer, Leon Thorne, Sam Murat, Rob Symonds, Jane Leaker, Brian Woodhead, John Futcher, Iain Farnsworth

**Apologies:** Dave McNeill, Richard Zavitz, Julie Dixon, Chris MacLeod, Simon Adams, Laura Fenimore, Mark Evers, Sarah Cohen, Emma Shannon, James Gray, Harriet McDonald

ltem	Action	Owner	Due by
Reporting delays on TfL Rail	Dan Gierhart updated on communication plans for when there are delays on TfL Rail in the east and west.		
	Sub-group to be created to continue to look at most effective customer information for delays of this sort.	Mark Evers supported by Leon Thorne, Dan Gierhart and Brian Woodhead	21 September
2. Active Travel and the Elizabeth line	John Futcher and Iain Farnsworth presented on active travel and the Elizabeth line, particularly focusing around areas such as Abbey Wood and getting customers to walk/cycle their first or last mile. Presentation to be shared with wider comms group.	Sarah Gasson	Completed
	Active travel presentation to go to Mike's Ops Readiness Board	John Futcher	Suitable future meeting to be identified
	Opportunities will be explored to work jointly with the boroughs to encourage more cycling to Elizabeth line stations. Could have jointly branded comms i.e. posters and press releases.	Jenna Henshaw / John Futcher	Continuing

3. Customer information	Leon Thorne and Sam Murat updated on where any potential gaps with customer information may be and the project plan for providing information.		
	Confirmed the additional budget needed would be found within existing Marketing budgets.		
	Leon Thorne and Sam Murat to continue to share detailed plans as they develop.	Leon Thorne and Sam Murat	Continuing

## Suggested agenda 17th August:

- Recap of actions from 20<sup>th</sup> July board Sarah Gasson
- Update on Stage 3 Howard Smith
- Upcoming Communications Milestones Sarah Gasson / Vicky Morley
- Crossrail / TfL Transition plans Jenna Henshaw
- AOB

#### **Jacob Gemma**

From: James Ryan @london.gov.uk>

Sent:30 August 2018 13:19To:Gasson Sarah; Janine RasiahCc:Morley Vicky; Brown Matt

**Subject:** RE: Lizzie line

We've drafted a line if we have to comment, that we'll get through sign off.

#### Draft -

#### Spokesperson for the Mayor -

"It's obviously disappointing that Crossrail Ltd have advised that they need more time than anticipated to complete the final pieces of infrastructure, and to carry out the extensive testing required before the next phase of the Elizabeth Line can open.

"This has been a ten-year construction project and is one of the most complex engineering schemes ever undertaken. It is essential that a safe and reliable railway operates from day one, and this has to be the top priority.

"When complete, the Elizabeth Line will transform travel across London and the South East, with new state-of-the-art trains taking millions of people more quickly across London, providing a boost to the economy worth billions of pounds."

From: James Ryan

**Sent:** 30 August 2018 13:14

To: 'Gasson Sarah' ; Janine Rasiah Cc: Vicky Morley ; Matt Brown

Subject: RE: Lizzie line

Thanks Sarah

From: Gasson Sarah < @tfl.gov.uk>

**Sent:** 30 August 2018 13:07

To: James Ryan < @london.gov.uk>; Janine Rasiah < @london.gov.uk>

Cc: Vicky Morley < @tfl.gov.uk>; Matt Brown < @tfl.gov.uk>

Subject: Lizzie line

Hi both,

As you will be aware, today we received notice from Crossrail that they will be unable to deliver the central section of the Elizabeth line by December, as originally planned.

Below is the final press release announcing this news, which will be issued by Crossrail at 10am tomorrow. If pushed hard for interview by broadcast media, Simon Wright from Crossrail will be conducting interviews on this.

Our line, if asked for general comment, will be as follows:

Mark Wild, London Underground and Elizabeth line Managing Director, said: "We will continue to work closely with Crossrail Limited as they complete the remaining railway infrastructure work and testing needed to deliver the new railway. The delayed opening is disappointing, but ensuring the Elizabeth line is safe and reliable for our customers from day one is of paramount importance."

If asked about funding, our line will be as follows:

A TfL spokesperson, said: "As announced in July, an additional £300m of funding has been made available by the DfT and TfL, the joint sponsors of the project, to Crossrail Limited. TfL and the DfT will now work with Crossrail Limited to establish whether the revised schedule has any additional impact on funding." If asked about Terry, our suggested response is as follows:

Sir Terry Morgan has been the chair of Crossrail Ltd since 2009 and brings a wealth of experience from many years working in the industry. He has overseen this world class infrastructure project for almost ten years, and it is already delivering immense benefits to the whole of the UK through its vast supply chain. All major projects are subject to the highest level of scrutiny to ensure they can be successful but there is always the potential for unexpected pressures to emerge that can challenge opening dates. Although the delay is disappointing, it is not uncommon in a project of this scale and complexity and TfL and the DfT will continue to work closely with Terry and his team on delivering the Elizabeth line as quickly as possible. We'll keep you updated on how this news is landing tomorrow once the announcement is made. Many thanks

#### Sarah

Elizabeth line services through central London to start in 2019

- Central section between Paddington and Abbey Wood will open in autumn 2019
- Further time required to ensure a safe and reliable railway for customers from day one of passenger service

The Elizabeth line, which will redefine transport in London with quicker, easier and more accessible journeys, is expected to open through central London in autumn 2019, Crossrail Limited announced today. The revised schedule is needed to complete the final infrastructure and extensive testing required to ensure the Elizabeth line opens as a safe and reliable railway.

The hugely complex ten-year project, delivered by Crossrail Limited, brings together multiple infrastructure contracts, new trains and three different signalling systems. The Elizabeth line will add 10 per cent to central London's rail capacity when fully opened, and the project will boost the economy by an estimated f42bn

Crossrail Limited has been working hard to maintain the programme and sufficient testing time is required to introduce the next phase of the railway – the central section between Paddington and Abbey Wood – in a way that can be guaranteed to be safe and reliable.

The original programme for testing has been compressed by more time being needed by contractors to complete fit-out activity in the central tunnels and in the development of railway systems software. Testing has started, but further time is required to complete the full range of integrated tests.

The focus remains on opening the full Elizabeth line, from Reading and Heathrow in the west to Shenfield and Abbey Wood, in the east as soon after the central tunnels open as possible.

**Simon Wright, Crossrail Chief Executive said:** "The Elizabeth line is one of the most complex and challenging infrastructure projects ever undertaken in the UK and is now in its final stages. We have made huge progress with the delivery of this incredible project and we need further time to complete the testing of the new railway. We are working around the clock with our supply chain and Transport for London to complete and commission the Elizabeth line."

The new Elizabeth line trains are already operating between Shenfield and Liverpool Street (mainline station) and between Paddington (mainline station) and Hayes & Harlington, in readiness for the full opening. The trains are also being tested in the Heathrow tunnels. Construction activity is drawing to a close including the completion of the remaining architectural fit-out in the new central section stations.

When the central section of the Elizabeth line opens in 2019, the railway will initially operate as three

When the central section of the Elizabeth line opens in 2019, the railway will initially operate as three separate services, as planned:

- Paddington (Elizabeth line station) to Abbey Wood via central London
- Paddington (mainline station) to Heathrow (Terminals 2, 3 and 4)
- · Liverpool Street (mainline station) to Shenfield

The new railway, jointly sponsored by the Department for Transport and Transport for London, with support from London's business community, will connect stations such as Paddington to Canary Wharf in only 17 minutes, transforming how Londoners and visitors move across the capital.

The Elizabeth line will bring an extra 1.5 million people to within 45 minutes of central London and more than 200 million passengers are expected to use it every year. ENDS

Sarah Gasson | Head of Media

Transport for Tel:	r <b>London</b>   TfL Press Of   <b>Mobile</b> :	fice, Palestra, 11th Flo   <b>E-mail</b> :	or, 197 Blackfriars Road @tfl.gov.uk   We	, London, SE1 8NJ • <b>b:</b> <u>www.tfl.gov.uk</u>
The main pre	ess office number is			
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# Elizabeth line central section to open in summer 2019 to guarantee a safe and reliable railway for customers

- Central section opening date revised to enable completion of construction and robust and integrated systems testing
- New railway remains on track to fully open in December 2019

Crossrail Ltd announced today a revised delivery schedule for the completion of the central section of the Elizabeth line. This will see it open through central London in summer 2019, with the completed railway on schedule to open in December 2019, as planned.

The hugely complex, ten year infrastructure project is now in its final construction phases. This has been a massive engineering challenge and the work remaining to complete the railway means that the central section between Paddington and Abbey Wood will now open in summer 2019 instead of December 2018.

The new schedule provides the necessary time for Crossrail Ltd to complete the railway's final infrastructure, including the completion of essential communication equipment which links to key functions at the stations, including the air conditioning, escalators, lifts, platform edge doors and emergency exits. Once this is complete, Crossrail Ltd will then conduct full testing of the signalling and other infrastructure together, before Transport for London conducts the very final live trials, ahead of opening the new railway to customers.

Building the railway has involved some of the most complex engineering ever undertaken. It is vital to integrate the full testing of the stations, signalling and trains running through the stations in order to guarantee a safe and reliable railway.

The Elizabeth line remains on track to fully open between Reading and Heathrow in the west through the central tunnels to Shenfield and Abbey Wood in the east by December 2019.

Crossrail Ltd, said: "We have made, and continue to make, huge progress with the construction of this complex project, but it is now clear we need more time to complete the final pieces of infrastructure that will enable integrated testing of this brand new railway. I know this delay to the opening of the central section is disappointing but our primary concern has to be opening a safe and reliable railway where everything has been fully tested before it opens to passengers."

Mark Wild, London Underground & Elizabeth line Managing Director, said: "We are on the cusp of opening the Elizabeth line which will redefine transport in London. Allowing more time for the completion of construction and integrated testing will enable us to run a safe and reliable railway from day one. We will continue to work closely with Crossrail Ltd on the delivery of the end-to-end railway which remains on schedule to fully open as planned in December 2019."

DfT, said: "XXX"

Brand new Elizabeth line trains are already operating between Shenfield and Liverpool Street and between Paddington and Hayes & Harlington, in readiness for the full opening. The trains are also being successfully tested in the Heathrow tunnels.

When the central section of the Elizabeth line opens in summer 2019, the railway will initially operate as three separate services, as planned:

- Paddington (Elizabeth line station) to Abbey Wood via central London
- Paddington (mainline station) to Heathrow (Terminals 2 & 3 and 4)
- Liverpool Street (mainline station) to Shenfield

The Elizabeth line will be fully open by December 2019, with services running from Reading and Heathrow in the west (including Terminal 5) through the central tunnels to Shenfield and Abbey Wood in the east.

The new railway, jointly sponsored by TfL and the DfT with support from London's business community, will connect stations such as Paddington to Canary Wharf in only 17 minutes, transforming how Londoners and visitors move across the capital. The Elizabeth line will increase central London's rail capacity by 10%. It will bring an extra 1.5 million people to within 45 minutes of central London and more than 200 million passengers are expected to use it every year.

The Elizabeth line is expected to support 90,000 new homes along the route by 2021, doubling to 180,000 by 2026. Over 360,000 new jobs are predicted by 2021, boosting the UK economy by £42 billion. All 41 stations on the Elizabeth line will have step-free access. This includes the new stations in central London and existing stations in east and west London that will become part of the line.

#### **Notes to Editors**

Crossrail Limited issued Transport for London and the Department for Transport with an Adverse Event Notice, a requirement of the Crossrail Act on the X August. This outlines the need for a revised delivery schedule for the central section of the railway. This notice is available here: LINK

### 1. Why didn't you announce this when you announced the additional funding?

The change to the schedule hadn't been advised to us. Sponsors were only made aware on XXXX.

### 2. How could you have been unaware of the potential for this delay?

As has been discussed publicly on a number of occasions at the TfL Board, the Crossrail Limited team have been managing a number of schedule and finance pressures as this enormously complex project draws towards completion.

Crossrail Limited has now completed a formal and comprehensive review of the schedule for the completion of the construction and integrated systems testing ahead of the line opening safely and reliably to passengers. As a result of that, Crossrail has now notified us that they can't meet the December 2018 date which means that the central section is expected to open in autumn 2019.

Crossrail has confirmed that the full opening of the line remains on track for December 2019.

### 3. Will this have a further impact on the already extended funding envelope?

As announced in July, an additional £300m of funding has been made available by the DfT and TfL, the joint sponsors of the project, to Crossrail Limited.

Crossrail Limited will advise of any additional costs arising from the revised opening date. If required, a revised funding package will be prepared between the DfT and TfL.

## 4. Why did you agree the funding package with the DfT in July, potentially leaving TfL to foot the bill for any remaining costs?

When the revised funding agreement was made in July, Crossrail Limited had not advised the DfT and TfL, the joint sponsors of the project, of the need for a revised opening date and the potential cost implications of this. We continue to work closely with Crossrail Limited and the DfT on the potential financial implications of this change.

## 5. What are the revenue implications of not beginning a service from this December?

Although there will be some lost revenue through opening the central section of the Elizabeth line later than anticipated, the main revenue benefits will be made when the Elizabeth line fully opens in December 2019, which remains on schedule.

If pressed: What was the predicted revenue from December 2018?

Circa £80m, although this includes revenue from TfL Rail services between Liverpool Street and Shenfield and Paddington and Hayes & Harlington / Heathrow.

## 6. What are the revenue implications of not running a full service by December 2019?

The TfL business plan forecast £400m per annum in revenue following the opening of the full railway out to Reading from December 2019 and this remains on schedule.

#### 7. How will you fund the December delay?

Crossrail Limited will advise of any additional costs arising from the delay. If required, a revised funding package will be prepared between the DfT and TfL. We are experienced at managing our costs and are ahead of our savings target for the year. Full details will be announced as part of our annual business planning process in November.

### 8. Is the funding for other projects now at risk?

Full funding details will be announced as part of our annual business planning process in November.

#### 9. What are the reasons for the delay? Who is to blame?

The original programme for testing has been compressed by more time being needed by contractors to complete fit-out activity in the central tunnels. Testing has started, but further time is required to complete the full range of integrated tests required to ensure a safe and reliable railway.

#### 10. How can you be confident the full opening in 2019 will still be on schedule?

The DfT and TfL will continue to work closely with Crossrail Limited on the revised schedule which prioritises fully opening the railway between Abbey Wood and Reading, as planned, by the end of 2019.

### 11. What is the regulatory sign off required to run the railway?

There are a series of safety reviews both TfL and MTR, the operator, need to complete ahead of the railway being ready for passenger service which is why full testing of all of the systems together is essential. The Office of Rail and Road then need to approve the railway as safe to operate before services can begin.

## 12. Doesn't this show an inability by Government and Transport for London to deliver major projects on time and on budget?

No. Crossrail is a world class infrastructure project that will transform travel in London and the South East and is delivering immense benefits to the whole of the UK through its vast supply chain, adding up to £42bn to the UK economy.

Major projects are integral to unlocking new housing, creating jobs, driving forward economic growth and provide communities across the country with the transport infrastructure we need for the future.

All major projects are subject to the highest level of scrutiny to ensure they can be successful. However, there is always the potential for unexpected pressures to emerge that can challenge opening dates.

The delay is disappointing, but not uncommon in a project of this scale and complexity and delivering the Elizabeth line safely is of paramount importance.

#### 13. Why weren't these delays noticed earlier and mitigating action taken?

Following a full review of the project delivery schedule we have been advised the central section of the railway will not be able to open in December 2018.

Although the major construction work has been broadly delivered to schedule, finalising the communications systems and bringing together and testing the complicated interfaces such as track, power, signalling and trains is the most complex phase of the Crossrail project and it is during this late phase of the project that Crossrail Limited has come up against delays.

The DfT and TfL will continue to push Crossrail Limited to manage any schedule pressures and mitigate these as much as possible. The new schedule will prioritise fully opening the railway between Abbey Wood and Reading, as planned, by the end of 2019.

## 14. What was the impact of the electrical explosion at Pudding Mill Lane on the completion date and cost for the Elizabeth line?

During the initial energisation of electrical equipment at Pudding Mill Lane substation on 11 November 2017, two voltage transformers failed.

This caused a delay in the ability of several sub-contractors to complete works, which had an impact on the testing of key infrastructure.

The cause of the failure was quality assurance. This delayed the start of energisation of power equipment in the tunnels by several months while extensive checks were completed.

This was one of a number of unexpected challenges that occurred during construction, and it highlights the complexity of delivering major projects.

#### 15. What about the Network Rail works, are they also delayed?

The upgrade of existing stations in the west is the responsibility of Network Rail and the DfT and these are due to be complete by December 2019.

#### 16. What is the revised timetable for opening?

The Elizabeth line opens. Three separate services will operate:

- Paddington to Abbey Wood
- o Paddington (National Rail station) to Heathrow
- Liverpool Street (National Rail station) to Shenfield

#### Stage 4 – Autumn 2019

Direct services operate Paddington to Shenfield and Paddington to Abbey Wood (no need to change at Liverpool Street station). Services from Paddington to Heathrow will continue to start and terminate in the National Rail station.

#### Stage 5 – December 2019

The Elizabeth line is fully open, with services running from Reading and Heathrow in the west through the central tunnels to Shenfield and Abbey Wood in the east.

### 17. What is Crossrail Limited responsible for?

Crossrail Limited is responsible for the construction and delivery of the end-toend railway and has full accountability for systems integration; including integrating and testing the new trains with the new infrastructure, such as signalling and track. They are also responsible for managing the contracts for the main construction and the delivery of the railway, including signalling.

### 18. What is TfL responsible for?

TfL is one of the joint sponsors of the project.

The railway will become part of the TfL network when the railway is operational; TfL let the concession to run the railway to MTR Crossrail.

The contract for the build of the brand new Elizabeth line trains and depot was selected and awarded by TfL to Bombardier, however the integration of the new train with the new infrastructure, such as track and signalling, is the responsibility of Crossrail Limited.

#### 19. What is DfT responsible for?

The DfT is one of the joint sponsors of the project.

Network Rail report to the DfT on the sections they are responsible for.

#### 20. What is Network Rail responsible for?

Network Rail is delivering the upgrade work across the existing stations and railway. This includes station upgrades and installation of lifts to improve accessibility.