

# **Consultation – Crossrail Central Operating Section (CCOS)**

Request for views on the designation of the CCOS as  
Specialised Infrastructure

Table of Contents

- 1 Purpose of this consultation ..... 3
- 2 TfL and its role in relation to the CCOS..... 3
- 3 Background to Crossrail..... 4
- 4 The Crossrail Central Operating Section..... 5
- 5 Background to Designation as Specialised Infrastructure ..... 6
- 6 Rationale for the Designation ..... 7
- 7 Points upon which consultees’ views are sought ..... 11
- 8 Timetable..... 12
- Appendix 1 - Crossrail Route..... 13
- Appendix 2 – Crossrail Central Operating Section..... 14

# 1 Purpose of this consultation

- 1.1 Regulation 25(1) of The Railways (Access, Management and Licensing of Railway Undertakings) Regulations 2016<sup>1</sup> (the 2016 Regulations) requires that all infrastructure capacity must be available for use of all types of rail transport services which conform to the characteristics necessary for use of that infrastructure, as defined in the infrastructure manager's network statement.
- 1.2 An infrastructure manager may pursuant to regulation 25(2) of the 2016 Regulations designate particular railway infrastructure for use by specified types of rail service and, once the infrastructure is so designated, may give priority to that specified type of rail service in the allocation of infrastructure capacity.
- 1.3 Transport for London (TfL) considers it necessary to designate the Crossrail Central Operating System (CCOS) as specialised infrastructure for use by high capacity metro passenger rail services. This designation is required to ensure that the Crossrail project realises the benefits that it was conceived, designed and is being constructed to deliver.
- 1.4 The purpose of this consultation, therefore, is to set out further information in relation to the CCOS, explain why such a designation of specialised infrastructure is necessary and seek feedback from those required to be consulted on their views regarding the proposed designation.

## 2 TfL and its role in relation to the CCOS

- 2.1 In addition to being a joint Sponsor of the Crossrail project, TfL is currently the ultimate owner of the majority of the land comprising the CCOS and the infrastructure affixed to it.
- 2.2 TfL has established a new wholly owned subsidiary, Rail for London (Infrastructure) Limited (RfL(I)), which it intends to be the infrastructure manager for the CCOS (for the purpose of the 2016 Regulations).
- 2.3 Before granting access to run services on the CCOS, TfL intends granting to RfL(I) a proprietary interest in the Crossrail land and the infrastructure so that RfL(I) can grant such access.

---

<sup>1</sup> The 2016 Regulations came into force on 29 July 2016 and replace The Railways Infrastructure (Access and Management) Regulations 2005 (the 2005 Regulations). The provisions in the 2016 Regulations in relation to the designation of specialised infrastructure are slightly – but not substantially – different from the 2005 Regulations, although the process for an infrastructure making the declaration of specialised infrastructure remains unaltered.

- 2.4 TfL notes that Network Rail Infrastructure Limited (NRIL) is the owner of
- the South East Spur comprising that part of the CCOS from Plumstead portal to Abbey Wood (excluding Plumstead sidings)<sup>2</sup>; and
  - the land upon which the Train Reversal Facility at Westbourne Park (which is part of the CCOS) is being built.
- 2.5 TfL has agreed in principle with NRIL that RfL(I) will be the infrastructure manager for the South East Spur and the Westbourne Park Train Reversal Facility and TfL is in discussions with NRIL regarding the transfer of ownership of both to RfL(I), which will then form part of the CCOS.
- 2.6 This consultation assumes that RfL(I) will have long term ownership or a proprietary interest across the whole of the CCOS.
- 2.7 TfL is undertaking this consultation for and on behalf of its subsidiary (and future infrastructure manager for the CCOS) RfL(I).

### **3 Background to Crossrail**

- 3.1 Crossrail is among the most significant infrastructure projects ever undertaken in the United Kingdom. From improving journey times across London, to easing congestion and offering better connections, Crossrail will change the way people travel around the capital. Crossrail will connect Reading and Heathrow to the west of London with Shenfield and Abbey Wood to the east, running through a new 13 mile (21 km) twin-bore tunnel under central and east London. As well as linking commuter and suburban services, it will provide a high-frequency, high-capacity and accessible link between Heathrow Airport, the West End, the City of London and Canary Wharf. 10 new stations are being built including Paddington, Bond Street, Tottenham Court Road, Farringdon and Liverpool Street in Central London with Whitechapel, Canary Wharf, Custom House, Woolwich and Abbey Wood serving the wider London area.

---

<sup>2</sup> The South East Spur is shown in the bottom right of the diagram in Appendix 1

- 3.2 Crossrail is being built under powers granted by Parliament in the Crossrail Act 2008. Initial construction started in May 2009 with the start of work at Canary Wharf station followed by enabling works at sites within Central London. Crossrail tunnelling began in the summer of 2012 and ended at Farringdon in 2015 with the breakthrough of the final tunnel boring machine. The focus of the project is now on the fit out of tunnels and stations, as well as ongoing preparation for the introduction of new Crossrail trains from Spring 2017 between Liverpool Street and Shenfield. Crossrail services will start running through the central London tunnel to Paddington from 2018, with a full service across London expected to be from 2019.
- 3.3 The project is being jointly sponsored by the Department for Transport (DfT) and TfL (together, the Sponsors). Project delivery is being managed by Crossrail Limited (CRL), a wholly owned subsidiary of TfL.
- 3.4 When fully delivered, Crossrail will play a vital role in meeting London's current and future transport needs and in turn help to secure the future economic growth of the UK. Crossrail will facilitate easier, faster, and direct journeys by public transport from Heathrow to Canary Wharf, as well as better links to London's other central business areas, helping to improve London's international links. Crossrail will deliver the capacity needed to support increased employment across London including in growth areas such as the Thames Gateway.
- 3.5 London is expected to continue to grow rapidly with an additional 3.1million people and 1.4million jobs by 2050 adding further strain to a transport network that is already under pressure. Much of this growth will be located in areas that will be served by Crossrail. Crossrail will add 10 per cent to the overall capacity of London's rail network through the provision of twenty four high capacity trains per hour in each direction in the central section during peak periods. Crowding relief will result on the Underground and DLR networks as well as at congested stations. Through the provision of step free access across the Crossrail network accessibility to and from Central London will be transformed for passengers with mobility impairments.

## **4 The Crossrail Central Operating Section**

- 4.1 The CCOS largely comprises that part of the Crossrail route that is not part of the existing Network Rail network. It runs from Portobello Junction (exclusive) in the West to Abbey Wood Sidings (including Plumstead Sidings) in the South East and Pudding Mill Lane Junction (exclusive) in the East.
- 4.2 Please refer to Appendix 1 for a route map of Crossrail, where the CCOS is highlighted in red and Appendix 2 for a more detailed representation of the CCOS.

## 5 Background to Designation as Specialised Infrastructure

5.1 Regulation 25(2) of the 2016 Regulations states that:

*"Subject to the provisions set out in paragraph (3), and without prejudice to articles 101, 102 and 106 of the Treaty, an infrastructure manager may designate particular railway infrastructure for use by specified types of rail service and, once the infrastructure is so designated, may give priority to that specified type of rail service in the allocation of infrastructure capacity."*

5.2 The provisions set out in regulation 25(3) are that:

- "(a) suitable alternative routes for other types of rail transport service must exist and be available;*
- (b) before making such a designation the infrastructure manager must consult:*
  - (i) the Secretary of State;*
  - (ii) where an element of the railway infrastructure which it is proposed to designate is in Scotland, Scottish Ministers;*
  - (iii) the Office of Rail and Road; and*
  - (iv) all other interested parties; and*
- (c) such designation must not prevent the use of that designated railway infrastructure by other types of rail transport service when capacity is available."*

5.3 In relation to regulation 25(3)(a), TfL considers that the North London Line and the West London Line/South London Line provide alternative cross London routes for both passenger and freight services.

### Question 1:

**Is there any reason why the North London Line and the West London Line/South London Line cannot be available to provide alternative cross London routes for both passenger and freight services?**

### Question 2:

**Are there any rail services that can only be operated on the CCOS (other than the proposed Crossrail services) that the designation of specialised infrastructure would prevent?**

- 5.4 This consultation is being conducted to satisfy regulation 25(3)(b). The remainder of this document sets out:
- The proposed designation;
  - The rationale for the designation;
  - The specific points on which consultees' responses are sought; and
  - The timetable and process for consultees to respond, consideration of responses by TfL, publication of the consultation conclusion and the designation of the CCOS as specialised infrastructure.
- 5.5 In relation to regulation 25(3)(c), TfL confirms that the designation will not prevent the use of the designated infrastructure by other types of rail transport service when capacity is available.
- 5.6 How to apply for such access and the technical characteristics of the CCOS infrastructure will be set out in the Network Statement for the CCOS upon which TfL (or RfL(I)) intends to consult in 2016.

## **6 Rationale for the Designation**

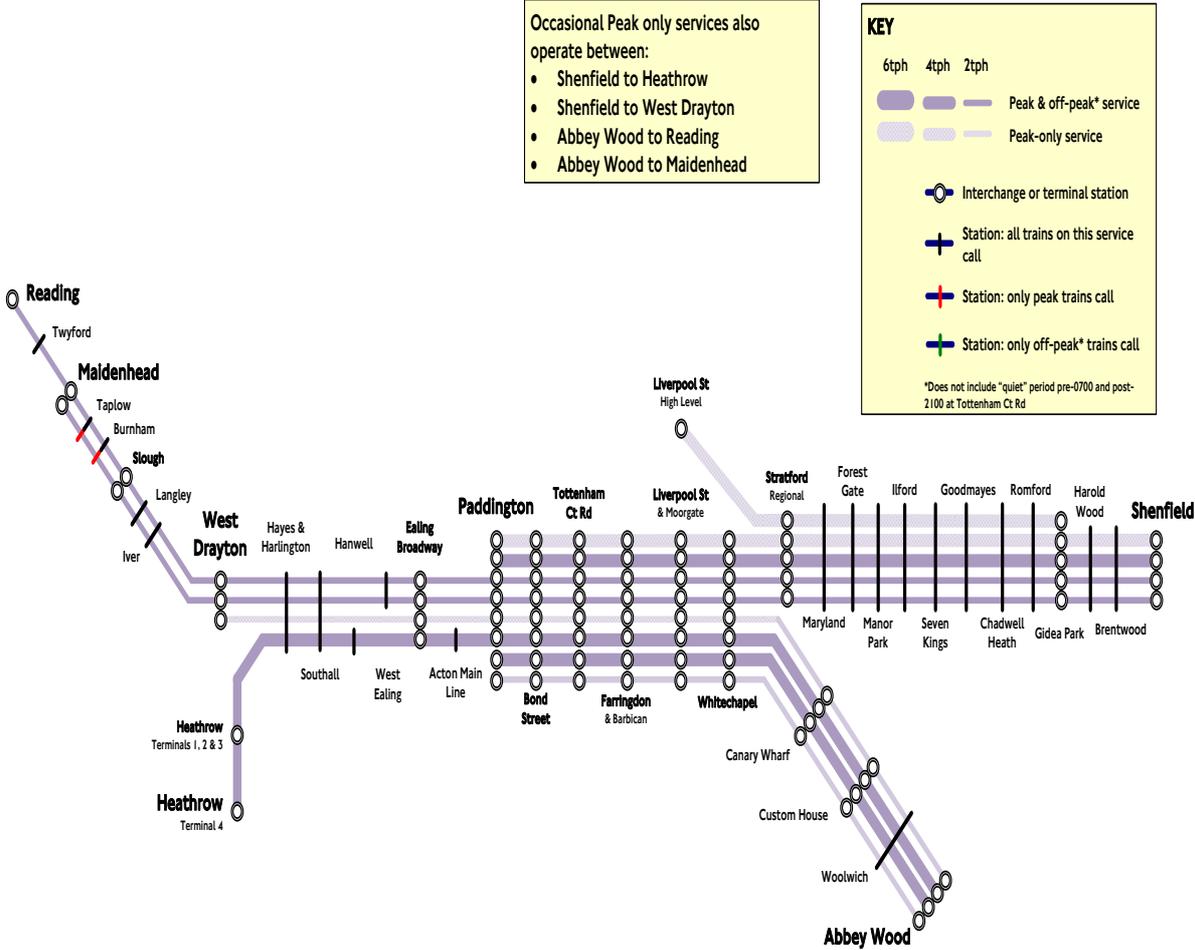
- 6.1 The CCOS will be designated as specialised infrastructure under regulation 25 of the 2016 Regulations for use by high capacity metro passenger rail services.

### **Business Case**

- 6.2 The business case supported the decision to proceed with the Crossrail project was predicated on its use of the CCOS for high capacity metro passenger rail services with a peak frequency of 24 trains per hour between Paddington and Whitechapel.
- 6.3 The CCOS has been designed, funded, and is being constructed, to deliver this.
- 6.4 The designation of the CCOS as specialised infrastructure will ensure that the high passenger carrying capacity that justified the construction is maintained and that the project funders (including, in addition to the Sponsors, London businesses via a Business Rates Supplement and other public and private contributors) continue to benefit fully from their investment.
- 6.5 Indeed TfL is dependent on the revenues from such high capacity services into, through and within the CCOS to service the debt that has been raised to finance the construction of the CCOS and to fund Network Rail for the enhancements to its network to facilitate Crossrail services.

6.6 Prior to construction commencing, the Sponsors raised with the Office of Rail and Road (ORR) their intention to make a declaration of specialised infrastructure (under the equivalent provisions of the 2005 Regulations) with priority given to high capacity metro passenger rail services. In its Regulatory Statement of November 2008 the ORR stated that at that time it could see no reason in principle why it would object to such a designation<sup>3</sup>.

6.7 The service specification underpinning the current Crossrail business case is set out below. This is based on twenty four 205 metre long trains (with 3 sets of doors (each side) per vehicle aligning with the platform screen doors in the subterranean CCOS stations) per hour through the CCOS between Paddington and Whitechapel, each with a capacity of just under 1,500 passengers.



**Question 3:**

**Are there any ways that consultees can see that the Crossrail project could deliver securely to the Sponsors and funders the benefits that they have paid for without the designation of the CCOS as specialised infrastructure?**

<sup>3</sup> ORR Crossrail Regulatory Statement - [http://orr.gov.uk/\\_data/assets/pdf\\_file/0017/10745/crossrail-reg-statement-131108.pdf](http://orr.gov.uk/_data/assets/pdf_file/0017/10745/crossrail-reg-statement-131108.pdf)

## The Mayor of London's Transport Strategy

6.8 Crossrail with its high capacity central operating section is a key component of the Mayor's Transport Strategy (MTS). The Mayor has a transport vision for London's transport system which requires it to "excel among those of world cities, providing access to opportunities for all its people and enterprises, achieving the highest environmental standards and leading the world in its approach to tackling urban transport challenges of the 21st century".<sup>4</sup>

6.9 The MTS says that achieving this vision "*will mean making sure the transport system offers enhanced capacity and connectivity, is more efficient, integrated, safe and secure, supports London's growth and economic development and is fair to all users...Moreover, it should contribute to improving Londoners' quality of life, opportunities and the environment in all parts of London*".<sup>5</sup>

6.10 The MTS vision is supported by six goals that set out it will be achieved. These goals and how Crossrail with its high capacity central operating section will help achieve them are as follows:

Goals		How Crossrail helps to achieve this?	
1	<i>Support economic development and population growth</i>	Increased transport capacity, reduced congestion and providing new direct journey opportunities through improved accessibility.	Crossrail is forecast to carry 210million passengers per annum in 2020. This will increase to 245 million passengers by 2031. Increased transport capacity, reduced congestion and providing new direct journey opportunities through improved accessibility.
2	<i>Increase transport capacity, reduce congestion and provide new direct journey opportunities</i>	Reduced travel times and less on train crowding on the public transport network.	A 10% increase in public transport capacity to London. A reduction in on train crowding on the Central and Jubilee lines as well as DLR, South Eastern services via Lewisham/Greenwich and services to Paddington and Liverpool Street.
3	<i>Improve the safety and security of all Londoners</i>	Improved transport safety through reduced numbers of road accidents resulting from mode shift and the use of a safer	Mode shift will also lead to a reduction in road accidents. 100 fewer "Injury" accidents are expected per annum and with one fewer fatality every

<sup>4</sup> Paragraph 29, Page 32, Chapter 2, Mayor's Transport Strategy, May 2010

<sup>5</sup> Paragraph 30, Page 32, Chapter 2, Mayor's Transport Strategy, May 2010

		mode.	two years. The increase in train passenger kilometres will result in an expected 20 extra “injury” accidents and no additional fatalities per annum as a result of a switch to a safer mode.
4	<i>Improve transport opportunities for all Londoners</i>	Enhancing accessibility (including for those with restricted mobility) thereby improving people’s access to jobs, schools and other facilities.	Enhancing accessibility (including for those with restricted mobility) thereby improving people’s access to jobs, schools and other facilities.
5	<i>Reduce transport’s contribution to climate change and improve its resilience</i>	Reduce CO <sub>2</sub> emissions through mode shift to public transport and the use of a less polluting mode.	14million fewer car journeys in 2031. A reduction in CO <sub>2</sub> emissions with 40,000 fewer tonnes emitted in 2031 due to shift from highway to public transport
6	<i>Support delivery of the London 2012 Olympic and Paralympic Games and its legacy</i>	Improved accessibility to the Olympic Park area with reduced journey times and more direct journey opportunities.	Improved accessibility to the Olympic Park area with reduced journey times and more direct journey opportunities.

**Question 4:**

**Are there any ways that consultees can see that the Crossrail contribution to the Mayor's Transport Strategy could be securely delivered without the designation of the CCOS as specialised infrastructure?**

**Rolling Stock Technical Characteristics**

6.11 The CCOS has been designed for passenger trains (with electric traction). Conventional freight traffic is not compatible with the planned step-free platform access. The gradients, ventilation and power supply have also been planned around passenger trains. Since conventional freight traffic can cross or avoid London using the existing rail network, use of the Crossrail tunnels would be an expensive alternative for freight operators given that it would require investment in specialised rolling stock to take a limited range of freight<sup>6</sup>.

<sup>6</sup> Crossrail Information Paper E6 – Freight Operations - <http://74f85f59f39b887b696f-ab656259048fb93837ecc0ecbcf0c557.r23.cf3.rackcdn.com/assets/library/document/e/original/e06freightoperations.pdf>

- 6.12 The CCOS signalling system will be configured for 205m trains and for such trains to call at subterranean CCOS stations they will need to have door configurations compatible with the platform screen doors.
- 6.13 To be compatible with the service specification in 6.7 any applicant seeking to operate a service for which capacity is available will need to have rolling stock with a minimum acceleration and braking capability. This is to ensure the CCOS delivers the capacity upon which the business case is based and the funders made their investment.
- 6.14 The rolling stock requirements will be set out in the Network Statement for the CCOS upon which TfL (or RfL(I)) intends to consult later this year.

## **7 Points upon which consultees' views are sought**

- 7.1 TfL welcomes comments from the Secretary of State, the Office of Rail and Road and any other interested party on this consultation. In particular, TfL would like views on the following questions, which are contained in this document:

### **Question 1**

**Is there any reason why the North London Line and West London Line/South London Line cannot be available to provide alternative cross London routes for both passenger and freight services?**

### **Question 2**

**Are there any rail services that can only be operated on the CCOS (other than the proposed Crossrail services) that the designation of specialised infrastructure would prevent?**

### **Question 3**

**Are there any ways that consultees can see that the Crossrail project could deliver securely to the Sponsors and funders the benefits that they have paid for without the designation of the CCOS as specialised infrastructure?**

### **Question 4**

**Are there any ways that consultees can see that the Crossrail contribution to the Mayor's Transport Strategy could be securely delivered without the designation of the CCOS as specialised infrastructure?**

7.2 TfL would prefer to receive responses to this consultation in an electronic format as this will assist us in processing any response that you may wish to make quickly and efficiently. Please complete the online consultation survey no later than Friday 9 September 2016.

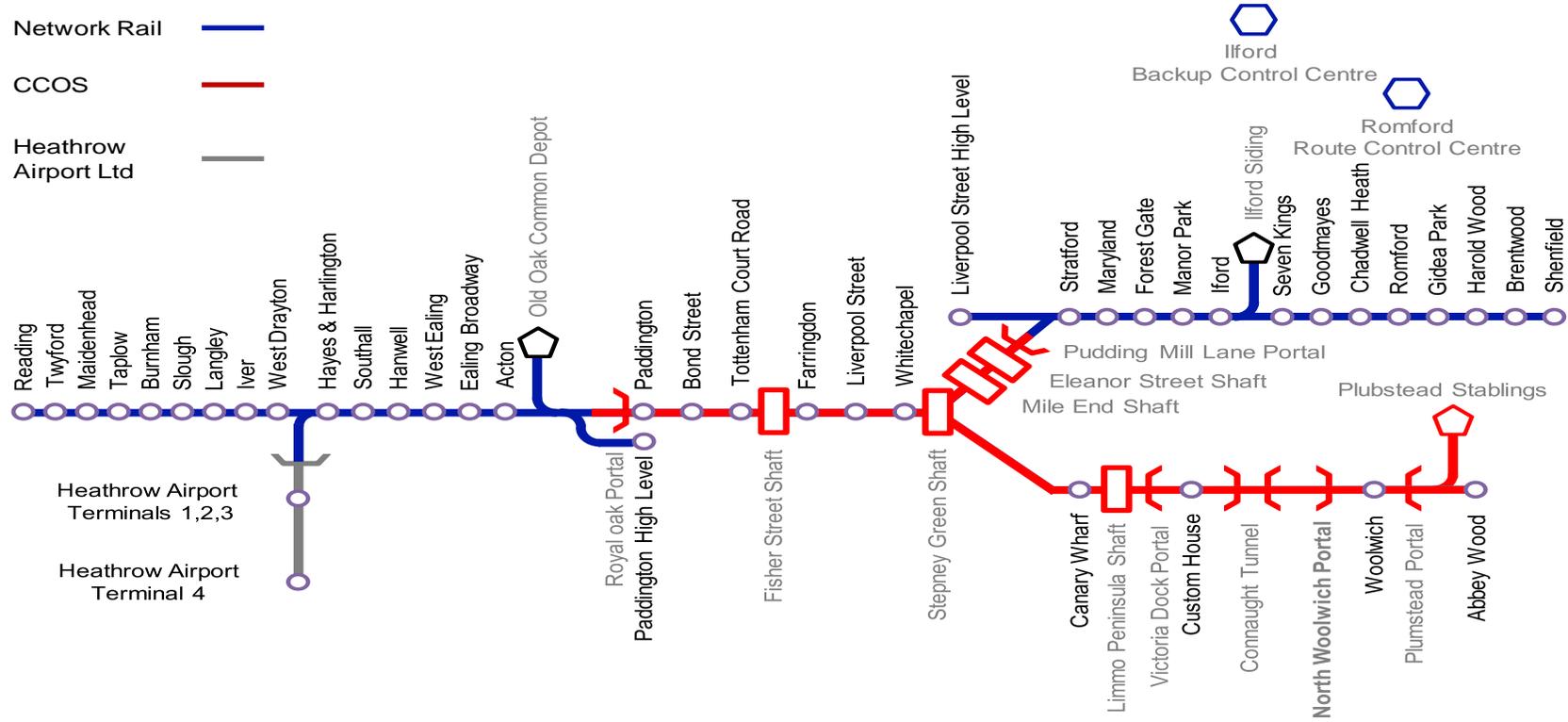
7.3 All responses may be published or quoted on TfL's website unless marked as confidential. Information provided in response to this consultation may be subject to publication or disclosure in accordance with the Freedom of Information Act 2000. TfL will process your personal data in accordance with the Data Protection Act 1998.

## 8 Timetable

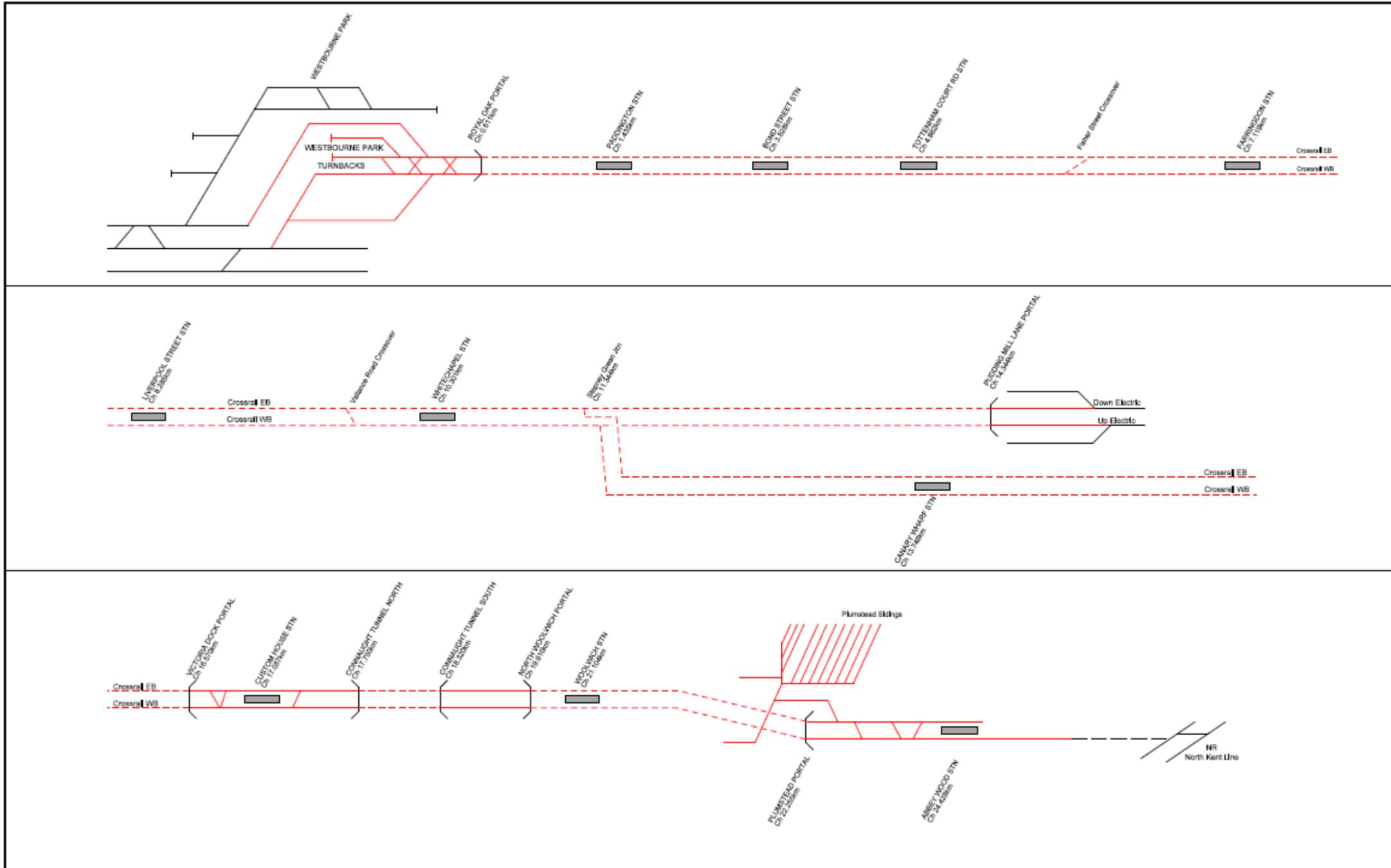
8.1 The timetable for the consultation is set out below:

Consultation launched	15 August 2016
Deadline for Consultation responses	9 September 2016

# Appendix 1 - Crossrail Route



# Appendix 2 – Crossrail Central Operating Section



Rev.	Date	Description	By	Chkd	App	Auth
P01,1	09/11/2015	First Issue	EN	-	-	-

Notes:

- Crossrail Central Operating Section (CCOS)
- - - Crossrail Central Operating Section (CCOS) (in tunnel)
- - - Non-electrified connection
- Other lines

 **Crossrail Limited**  
 25 Canada Square  
 Canary Wharf  
 London  
 E14 5LQ  
 © Crossrail  
 www.crossrail.co.uk

Contract : Crossrail Line 1 Programme		Originator : Crossrail Ltd	
Location : Crossrail General		Title : CROSSRAIL SINGLE LINE DIAGRAM CENTRAL OPERATING SECTION	
Scale : NTS @ A3	Drwg No : CRL1-XRL-R4-DDA-CR001-00022	Rev : P01,1	Sub : S0
By : E.NAVARRO		Auth : —	

RESTRICTED  
PDF Check Plot