TRANSPORT AND WORKS ACT 1992
TRANSPORT AND WORKS (INQUIRIES PROCEDURE) RULES 2004
TOWN AND COUNTRY PLANNING ACT 1990
LONDON OVERGROUND (BARKING RIVERSIDE EXTENSION) ORDER

TRANSPORT FOR LONDON'S REBUTTAL
OF
THE EVIDENCE OF MR. PHILIP RIDLEY

October 2016
TfL Rebuttal to Mr. Ridley’s proof of Evidence [TfL7]

Appendix 1: Proof of Evidence of Mr. Philip Ridley [OBJ/1] received by TfL on 20 September 2016

Appendix 2: Press release of Mayoral Announcement on River Crossings dated 4 October 2016

Appendix 3: c2c’s full response to the BRE spring 2015 public consultation

Appendix 4: Material extracted from the London Infrastructure 2050: Transport Supporting Paper relevant to the BRE Proposal
1. Introduction

1.1.1. This Rebuttal [Tfl7] has been prepared on behalf of Transport for London (TfL) to address the points raised in Mr. Philip Ridley’s Proof of Evidence [OBJ/1] which TfL received on 20 September 2016. Mr. Philip Ridley’s Proof of Evidence [OBJ/1] forms Appendix 2 of this Rebuttal [Tfl7].

1.1.2. This Rebuttal [Tfl7] is organised into themes that have been drawn from Mr. Ridley’s Proof of Evidence (numbered and shown in bold font) related to scheme development, due process and public consultation, planning policy, future extensions and alternatives to the proposed BRE. In each section, Mr. Ridley’s point is summarised in plain font, with any quotations shown in italics. This is followed by TfL’s response in bold font, preceded by the name of the witness making that part of the Rebuttal [Tfl7]. The name of the TfL witness who is responsible for each aspect of this Rebuttal [Tfl7] proof is given at the beginning of each section and throughout each section in instances where more than one of the TfL witness responds.

1.1.3. TfL has already responded to the issues raised by Mr. Ridley in his initial Proof of Evidence which TfL received on 20 July 2016 in Appendix 5 of the evidence of Christopher Porter [Tfl1/B]. Therefore throughout this Rebuttal [Tfl7] cross-reference to this appendix is made. Cross-reference to other witnesses’ Proofs of Evidence is also made where relevant.

1.1.4. Mr. Ridley’s Proof of Evidence as submitted does not contain paragraph or page numbers; therefore, TfL has inserted paragraph and page numbers, and reference to the paragraph numbers is made to these in this Rebuttal [Tfl7]. Mr Ridley’s Proof of Evidence is presented in Appendix 1 of this Rebuttal [Tfl7].
2. Scheme Development

2.1. Proposal to serve Barking Riverside as part of a cross-river London Overground route from Barking to Abbey Wood

2.1.1. Mr. Ridley states in paragraph 5 of his Proof of Evidence [OBJ/1] that following the cancellation of the DLR Dagenham Dock Extension, TfL proposed that Barking Riverside would be served by a cross-river rail link operating between Barking and Abbey Wood.

2.1.2. Mr. Ridley also states in sub-paragraph 2 of paragraph 6 of his Proof of Evidence [OBJ/1], that the “previous Barking Riverside to Abbey Wood alignment is no longer being sought by TfL.”

2.1.3. Paragraph 11 of Mr. Ridley’s Proof of Evidence states that such a proposal is set out in the London Infrastructure Plan 2050 [BRE/D13].

Expert witness: Christopher Porter

2.1.4. As outlined in Figure 1 of the Transport Options Summary Report [BRE/C10], the BRE was selected as the preferred transport mode to serve Barking Riverside in 2013. A conceptual London Overground link between Barking Riverside and Abbey Wood was then identified as a possible future extension of the BRE in the London Infrastructure Plan 2050 [BRE/D13] which was published in July 2014.

2.1.5. Therefore, the assertion of Mr. Ridley that a proposal for a cross-river rail link between Barking and Abbey Wood replaced the previously proposed DLR Dagenham Dock extension is incorrect, given that the concept of a possible southern extension of the BRE was developed after the BRE had been selected as the best performing, affordable and deliverable solution to serve Barking Riverside.

2.1.6. On this basis, the assertion of Mr. Ridley that the London Infrastructure Plan 2050 sets out a proposal for Barking Riverside to be served by a cross-river rail link operating between Barking and Abbey Wood is also incorrect, as the document references a future potential onward London Overground extension from Barking Riverside, south of the river Thames.

2.1.7. Sections 4.2 and 4.3 of my Proof of Evidence [TfL1/A] identify all the transport and route alignment alternatives considered in response
to the withdrawal of the TWAO for the previously proposed DLR Dagenham Dock Extension due to that scheme being considered unaffordable. The option identified by Mr. Ridley did not form part of this work, given it would not be required in its entirety and would incur a significant capital and operational cost. Such additional costs would not deliver any additional homes at Barking Riverside over and above those enabled by the BRE as proposed.

2.1.8. For reference, paragraph 5.8.6 of my Proof of Evidence [TfL1/A] identifies that separately to the BRE, a number of London Overground extension options across the river Thames from Barking Riverside were considered as part of TfL’s work associated with potential river crossings at Gallions Reach and Belvedere [BRE/E3].

2.1.9. This work [BRE/E4 and BRE/E5] identified that a London Overground Extension from Barking / Barking Riverside to Abbey Wood would:

- have a very high capital cost;
- due to capacity constraints elsewhere on the network, only achieve 4 trains per hour;
- have no significant effect on PTAL levels in Thamesmead; and
- be unlikely to support significant additional development in Thamesmead.

2.1.10. The assessment concluded that the extension of the London Overground across the river Thames did not fulfil the objectives of the Gallions Reach and Belvedere river crossings project, and that other public transport river crossing options provided greater benefits. It did however identify that this would not necessarily preclude it from being considered in the longer term, for example as part of a longer orbital corridor.

2.1.11. Pursuant to the Mayor of London’s announcement on 4 October 2016 regarding future river crossings, TfL is to undertake further study of the case for any long term extension of the BRE from Barking Riverside across the river Thames but this is clearly not an affordable or readily deliverable option to serve and unlock the growth of Barking Riverside that is required now. The Mayor of London’s announcement is presented in full in Appendix 2 of this Rebuttal [TFL7].
3. Impact at Barking Station

3.1. *The effect of the BRE on interchange movements at Barking station*

3.1.1. Mr. Ridley states in paragraphs 7 and 36 of his Proof of Evidence [OBJ/1] that the BRE will result in station congestion at Barking station.

*Expert witness: Richard Bland*

3.1.2. As set out in paragraph 9.2.23 of my Proof of Evidence [TfL5/A], there will be an increase in the total number of passengers using Barking station, particularly interchanging passengers as a result of the additional development within the Barking Riverside development area.

3.1.3. However, the effect of the increased interchange passenger flows at Barking station due to the BRE will only have a minor adverse effect over the peak periods which I consider to be acceptable. This is without taking into account the obligation within the Essex Thameside Franchise for c2c to deliver station improvements.
4. Process and Public Consultation

4.1. Position of previous Secretary of State for Transport regarding the BRE

4.1.1. In paragraph 11 of Mr. Ridley’s Proof of Evidence [OBJ/1], an assertion is made that the Rt. Hon. Patrick McLoughlin MP, in his capacity as the then Secretary of State for Transport, “objected to the proposal” for the Barking Riverside Extension (the BRE).

*Expert witness: Christopher Porter*

4.1.2. Paragraph 2.2 of Appendix 5 of my Proof of Evidence [TfL1/B] confirms that the then Secretary of State did not object to the BRE proposals.

4.2. Clarity of public consultation

4.2.1. In paragraph 27 of Mr. Ridley’s Proof of Evidence [OBJ/1], it is implied by Mr. Ridley that TfL has been unclear regarding its position for safeguarding a future rail river crossing.

*Expert witness: Christopher Porter*

4.2.2. Three public consultations were held on the proposed BRE in autumn 2014 [BRE/C1, BRE/C2 and BRE/C3], spring 2015 [BRE/C4, BRE/C5 and BRE/C6] and Winter 2015/16 [BRE/C7, BRE/C8 and BRE/C9] to help inform the development of the scheme. Each of these consultations made clear that the BRE would serve Barking Riverside as well as not precluding a further extension south in the future. This is explained, for instance, in the BRE Statement of Consultation paragraph 5.59 [BRE/A7]. This position is mirrored by that set out in paragraph 5.8.10 of my Proof of Evidence [TfL1/A] which outlines that the design of the proposed BRE alignment does not preclude the provision of a future extension across the river Thames. Therefore I consider that TfL has been clear on its position regarding a possible future extension south of the river Thames throughout the development of the project.
5. Planning Policy

5.1. The development of the proposed BRE alignment does not conform to policies 6.1 or 6.2 of the London Plan

5.1.1. Mr. Ridley states in paragraphs 13, 14 and 15 of his Proof of Evidence [OBJ/1] that the BRE fails to demonstrate conformity with policies 6.1 and 6.2 of the London Plan “on all counts” - although the scope of this comment in relation to his preceding text is not entirely clear.

5.1.2. Mr. Ridley also states in paragraph 16 of his Proof of Evidence [OBJ/1] that the BRE TWAO application should be refused as it contravenes Policy 6.2 of the London Plan [BRE/D11] by “not providing adequate safeguarding for the schemes outlined in table 6.1”, with specific reference to cross-river rail connections.

5.1.3. In paragraph 22 of his Proof of Evidence [OBJ/1], Mr. Ridley contends that the BRE is not in conformity with planning policy, as it would cause material harm to the National Planning Policy Framework, London Plan and National Infrastructure Commission’s aim for an integrated transport system.

Expert witness: John Rhodes

5.1.4. The principle of the BRE is supported by all levels of national, regional and local policy as set out in Sections 5 and 6 of my Proof of Evidence [TfL2/A].

5.1.5. At paragraph 5.4.16 of my evidence, I explain that the BRE is explicitly set out in Table 6.1 of the London Plan as a scheme which Policies 6.1 and 6.2 are committed to safeguard and deliver. The policy contains no qualification and no reference to a future extension of the BRE. Neither does the policy or the Table refer to or seek to safeguard future rail crossings of the Thames. There is, therefore, no policy conflict. Other policies of the London Plan rely on the BRE to deliver growth at Barking Riverside. It would be contrary to the London Plan to refuse the BRE.

5.2. The development of the proposed BRE is premature

5.2.1. Mr. Ridley contends in paragraphs 20 to 22 of his Proof of Evidence [OBJ/1] that the BRE should not be approved on prematurity grounds based on the Government’s Planning Practice Guidance (Reference ID: 21b-014-20140306).
**Expert witness:** John Rhodes

5.2.2. As set out in paragraph 9.2.10 of my Proof of Evidence [TfL2/A], the BRE is consistent with both current and emerging planning policy. No plan-making process is either sufficiently advanced, or contains proposals and policies so contrary to the BRE that it could be undermined by approving the proposed scheme. The circumstances referred to in the guidance cited by Mr. Ridley do not apply in the case of the BRE and I would therefore suggest that Mr. Ridley’s evidence misrepresents Government policy on prematurity and its relevance to the BRE.

5.2.3. Where other documents make reference to a possible extension of the London Overground from Barking/ Barking Riverside across the Thames to Thamesmead/ Abbey Wood, they do not have the status of development plan policy documents. Just as importantly, those references are to possible / potential long term options. For example, in “Connecting the Capital” [BRE/D31], the potential for an extension across the river is identified with a timeline of “2030s and beyond” (page 39). By contrast, Barking Riverside is a priority, to be delivered now. Infrastructure is being constructed and laid out on site now, in anticipation of the approval of the BRE. The project is the very opposite of premature.
6. Future Extensions

6.1. **The proposed BRE alignment could not enable a future extension south of the river Thames**

6.1.1. In paragraphs 27 to 29 of his Proof of Evidence [OBJ/1], Mr. Ridley states that the proposed BRE alignment would not allow a future extension south of the river Thames.

*Expert witness: Christopher Porter*

6.1.2. As outlined in section 5.8 of my Proof of Evidence [TfL1/A], the design of the BRE would not preclude the delivery of such an extension in the future, subject to further financial, planning, engineering and operational feasibility work, as well as powers being sought and granted for such an extension.

6.1.3. Should proposals for a future extension come forward, a cross-river connection would be likely to diverge from the proposed BRE alignment to the south of Choats Road, and descend into a tunnel, continuing south towards the river. This potential alignment is presented in Figure 18 of my Proof of Evidence [TfL1/B].

6.2. **Should a future extension come forward (via a tunnel), the proposed BRE alignment would require demolition**

6.2.1. At paragraph 30 of his Proof of Evidence [OBJ/1], Mr. Ridley states that in order to extend the BRE south of the river Thames via a tunnel, the proposed viaduct alignment south of the c2c line would need to be demolished. Furthermore he states the Barking Riverside station would need to be demolished and built underground if replaced on an underground alignment.

6.2.2. Also at paragraph 30 of his Proof of Evidence [OBJ/1], Mr. Ridley acknowledges the very substantial costs associated with an underground station at Barking Riverside, in the context of a future replacement of the BRE station.

*Expert witness: Christopher Porter*

6.2.3. As set out in at paragraph 6.4 in Appendix 5 of my Proof of Evidence [TfL1/B], an extension south of the river Thames does not form part of the Order application [BRE/A1], and as such, no detailed work has been undertaken to understand what would happen to the
proposed BRE alignment in the event a spur was constructed in the future.

6.2.4. It has not been determined that the proposed station at Barking Riverside and viaduct would be demolished, as a number of different options for the future operation of the BRE exist should a southern extension come forward in future.

6.2.5. The proposed alignment and station at Barking Riverside could remain operational alongside a branch that would continue south of the river Thames, with the destination of services spilt between Barking Riverside and south of the river. This would mirror operations elsewhere on the London Overground network, where short branches spur to New Cross and Crystal Palace from the route that runs towards West Croydon. The precise service patterns associated with this option would be determined by the extent of wider changes to the rail network within the east / south east sub-region [BRE/D30] and beyond, which could be required should an extension south of the river Thames come forward in future.

6.2.6. Another option could be to retain the proposed viaduct and station platforms at Barking Riverside to aid the recovery of services during periods of disruption across the London Overground network. Such an arrangement is mirrored at Charing Cross station on the Jubilee Line which is no longer served by trains in passenger service, but is used as a turnback and stabling facility.

6.2.7. A further option would be to retain a section of the proposed viaduct between Choats Road and Barking Riverside to enable service recovery and stabling activities to be undertaken with the remainder of the proposed viaduct and station demolished. In this scenario, Barking Riverside would be served by an underground station located on the route which would run south of the river Thames.

6.2.8. In respect of the cost attributed by Mr. Ridley to a tunneled BRE alignment between Choats Road and Barking Riverside, paragraph 5.8.14 of my Proof of Evidence [TfL1/A] states that such a proposal would have a net additional cost of between £160 million - £210 million in comparison to the proposed BRE alignment.

6.2.9. These additional costs would not deliver any additional homes at Barking Riverside over and above those enabled by the BRE as proposed. On the basis of this and the available funding for the
project, such a proposal is considered unaffordable, and therefore Mr. Ridley's comments about affordability in the context of replacement are similarly applicable to the provision of an underground station for the BRE scheme in the first place. Indeed at paragraph 7 of his Proof of Evidence, Mr. Ridley states that if the Barking Riverside extension is built as a tunnel to Abbey Wood via Thamesmead, this will “render a Barking Riverside station unviable due to the depth of the alignment”.

6.3. **The BRE ties up vital onward rail capacity that could prejudice future rail crossings of the Thames at Belvedere**

6.3.1. In paragraphs 6, 19, 32 and 33 of his Proof of Evidence [OBJ/1], Mr. Ridley states that the BRE could make the potential planned rail connection at Belvedere unviable. Mr. Ridley also makes reference to use of a crossing at Belvedere in discussing alternative transport projects to the BRE in paragraphs 7, 20, 49 and 51.

*Expert witness: Christopher Porter*

6.3.2. Mr. Ridley’s assertion that there is a planned rail connection at Belvedere is incorrect. Between December 2015 and February 2016, TfL consulted on proposals for multi-modal river crossings at Gallions Reach and Belvedere [BRE/E3]. As set out at paragraphs 5.2 and 5.3 in Section 5 of Appendix 5 of my Proof of Evidence [TfL1/B], the consultation did not include any rail proposals for the Belvedere crossing, as the Gallions Reach and Belvedere River Crossings, Option Assessment Report (Long List) [BRE/E4] identified that it would not be feasible for heavy rail to use a crossing at Belvedere.

6.3.3. It is also important to note that a rail or light rail crossing at Belvedere is not currently included in the London Plan [BRE/D11] or any other policy documents.

6.3.4. The Mayor of London’s announcement on 4 October 2016 attached as Appendix 2 of this Rebuttal [TfL7] set out a commitment to develop a package of new river crossings in east and south east London, and to study others. This announcement did not include any plans for a river crossing at Belvedere.
7. Alternatives

7.1. Provision of an eastern chord to provide a connection between the proposed BRE alignment and the Essex Thameside (Tilbury Loop) Line

7.1.1. At paragraph 31 of his Proof of Evidence [OBJ/1], Mr. Ridley makes reference to a potential eastern chord of the proposed BRE alignment and notes that such provision is not feasible.

**Expert witness:** Christopher Porter

7.1.2. Mr. Ridley's initial letter of objection dated 1 April 2016, requested inclusion of passive provision and safeguarding for a future eastern chord between the proposed BRE alignment and the Essex Thameside (Tilbury Loop) line. The context of such a proposal was that this would allow the future extension of Southeastern and Crossrail services to Tilbury, should the BRE alignment be extended south of the river Thames in future.

7.1.3. In proposing such an eastern chord, Mr. Ridley did not make reference to a specific alignment that this would follow, and thus TfL addressed the proposal in broad terms in responding to Mr. Ridley's correspondence.

7.1.4. From an operational perspective, it was concluded that the delivery of an eastern chord would likely conflict with the operation of the DB Cargo Freight Terminal and other rail freight facilities to the east of Renwick Road.

7.1.5. Given that such a proposal would not deliver any additional homes at Barking Riverside beyond the 10,800 homes which are enabled by the provision of a rail connection to Barking Riverside, would materially conflict with a strategic rail freight facility, and would increase the cost of the project, the proposal would not fulfil the aims of the BRE project, and was discounted on this basis.

7.2. Consideration of the provision of a station at Renwick Road to be served by c2c and London Overground services

7.2.1. At paragraph 38 of his Proof of Evidence [OBJ/1], Mr. Ridley states that a station at Renwick Road would allow 8 trains per hour to call at the station during peak hours, assuming that both c2c and London Overground services could serve the station.
7.2.2. Later in the Proof of Evidence of Mr. Ridley [OBJ/1] at paragraph 41, an extension of the London Overground Gospel Oak-Barking route along the Essex Thameside (Tilbury Loop) line to Tilbury Town, calling at all intermediate stations (including Renwick Road) is also proposed as an alternative to the proposed BRE alignment.

7.2.3. At paragraph 35 of his Proof of Evidence [OBJ/1], Mr. Ridley states that such a station would be served by one train every 7.5 minutes and there is no reason to believe such frequencies could not co-exist with existing freight paths.

**Expert witness: John Rhodes**

7.2.4. Before examining more detailed issues, it is appropriate to recognise that the evidence to this inquiry is and should be directed to the submitted BRE proposals. No application has been made for an alternative station. The BRE proposals are to be considered on their own merits and this is not an inquiry into an alternative scheme, which Mr. Ridley may wish had been proposed instead.

7.2.5. The relevance of proposals may arise if there were clear cut planning or compulsory purchase objections to the submitted proposals but Mr. Ridley's evidence contains no such objections. There is no planning policy to which the BRE proposals are contrary. Mr. Ridley’s assertions that the application is premature are dealt with at Section 5.2 of this Rebuttal [TfL7]. A future rail crossing in the vicinity of Barking is not a proposal of any emerging development plan document.

7.2.6. It may be implicit in Mr. Ridley’s evidence that a future rail crossing is necessary to deliver homes or jobs which would not otherwise be provided (for example at Abbey Wood and Thamesmead) but no evidence at all is advanced to support such an assertion. As set out at paragraph 2.1 above, the work done to date suggests the contrary, whilst the London Riverside Opportunity Area Planning Framework [BRE/ D21] suggests that it is the potential extension of Crossrail rather than the London Overground which may be necessary to stimulate growth in Bexley and Thamesmead (paragraph 4.4.1). In any event the scale of growth at the Thamesmead/ Abbey Wood Opportunity Area proposed in the London Plan is a minimum of 5,000 homes, compared with a minimum of 26,500 homes at London Riverside. That growth is also important but it would make no sense to threaten the delivery of
growth at London Riverside by rejecting the BRE in the name of protecting smaller scale growth elsewhere (particularly when there is no evidence to suggest that such growth would be affected by decisions made in relation to the BRE).

7.2.7. Importantly, the evidence of Matthew Carpen on behalf of Barking Riverside Limited [SUPP/4] is clear that a refusal of the BRE proposals would stop the delivery now of large scale housing at Barking Riverside and seriously threaten even its longer term delivery. My Proof of Evidence (TfL2/A section 6.4) shows that BRE is necessary to deliver the homes that are planned and consented at Barking Riverside.

7.2.8. Against this background, little weight should be attached to assertions that a different scheme for which no application has been made should be preferred.

**Expert witness: Christopher Porter**

7.2.9. As explained in paragraph 4.2.3 of my Proof of Evidence [TfL1/A], an option similar to that proposed by Mr. Ridley\(^1\) was considered as one of a number of transport options to serve Barking Riverside. This option described as option 4 in the Transport Options Summary Report [BRE/C10] comprised of new platforms on the Essex Thameside (Tilbury Loop) Line that would be served by c2c services.

7.2.10. Option 4 was discounted during the consideration of transport alternatives following the cancellation of the previously proposed DLR extension to Dagenham Dock. Paragraph 7.3 of the Transport Options Summary Report [BRE/C10] outlines that such a proposal was discounted as it would not serve the heart of the new Barking Riverside site or provide sufficient capacity to serve the full development of 10,800 homes. It was also concluded that this option would not provide any additional train capacity, and would therefore contribute to overcrowding on existing c2c passenger services during peak periods. Paragraph 4.11.16 of the Transport Options Back-check Report [BRE/C11] also discounted such an option on the same basis. These conclusions are reinforced in the BRE Intermediate Station Feasibility Report [BRE/ C1].

\(^1\) This option assumed that a station at Renwick Road would be served by existing c2c services to / from Tilbury / Southend and not London Overground services, at a frequency of four trains per hour.
7.2.11. An option to extend the London Overground from Barking to terminate at Renwick Road was not identified as part of the work to develop transport alternatives to the previously proposed DLR extension to Dagenham Dock given that such an option would not serve the heart of the Barking Riverside site.

7.2.12. Although neither of these options would serve the Barking Riverside site, the operational implications of these possible extension options of the London Overground Gospel Oak to Barking routes are considered by Chris Abrehart.

**Expert witness:** Chris Abrehart

7.2.13. On the basis of the information set out in paragraphs 38 and 41 of Mr. Ridley's Proof of Evidence [OBJ/1], the operational impacts of two alternative London Overground extensions are also considered below.

**London Overground extension from Barking to Tilbury Town**

7.2.14. Mr. Ridley's proposal to extend London Overground services from Barking to Tilbury Town would require rail infrastructure modifications and would be challenging to accommodate operationally.

7.2.15. The presence of existing c2c Tilbury Loop passenger services and freight traffic at Tilbury station means that there would be insufficient capacity to reverse a fifteen minute interval London Overground service in the existing platforms at Tilbury Town.

7.2.16. Such an extension of London Overground services would therefore require additional platforms and tracks at Tilbury Town station or a new reversing facility east of the station, along with track remodelling to provide the required track crossovers, turnouts and associated re-signalling. It is likely that these new reversing facilities would need to be located between the Up and Down Tilbury Lines in order to minimise conflicts with other passenger and freight trains, and to avoid unnecessary timetabling constraints. This could result in significant remodelling / rebuilding of Tilbury Town station or the tracks to its east.

7.2.17. As set out in paragraph 5.6.8 of Christopher Porter's Proof of Evidence [TfL1/A], the Essex Thameside (Tilbury Loop) line is an important rail corridor providing access to a number of passenger and freight destinations, and Mr. Ridley's alternative proposal would
increase the number of trains operating along the route. This section of route is not a simple “plain line” railway and the introduction of an extended London Overground service would need to be timetabled in a way which avoided a number of operational challenges, including:

- Potential conflicts with c2c trains to / from Upminster on the flat junction at Grays.
- Potential conflicts with c2c services using the route out of the bay platform at Grays.
- Potential conflicts with long and low speed freight trains entering / leaving the various freight terminals alongside the route.
- Problems with reduced highway capacity across the road / rail level crossings on the route due to the significant increase in rail movements.
- Accommodation of two new intermediate stations on the route (Beam Park and Renwick Road) and their impact on c2c passenger train diagramming and freight train speeds.

7.2.18. Mr. Ridley’s assertion that such a proposal could co-exist with existing paths for other rail services is not based on any evidence such as timetable modelling.

7.2.19. Even if the extended London Overground service could be accommodated on the route to Tilbury, it is highly unlikely that it could operate in a combined clock face timetable with c2c services at 7.5minute intervals.

7.2.20. As set out in section 5.6 of Christopher Porter’s Proof of Evidence [TfL1/A], timetabling work for future BRE services identified that changes to the timing of some c2c services will be required. Further to this, many London Overground trains will need to be timetabled at minimum headways in front of or behind c2c services through Barking station in order to satisfy constraints further away on the rail network and to accommodate freight paths.

7.2.21. Given Mr. Ridley’s alternative proposal to extend London Overground services much further eastwards along existing rail infrastructure, there would be a larger number of timetabling
constraints than BRE, and compromises would inevitably need to be made with respect to his desired clock face intervals in the effort to achieve a workable, conflict free timetable.

7.2.22. Introducing an additional station at Renwick Road as proposed by Mr. Ridley as part of this option, would adversely impact the timetabling of existing passenger and freight services increasing journey times along the route, as well as requiring significant timetable changes. In response to the spring 2015 public consultation, c2c raised concern that a proposal to locate an intermediate station on the Essex Thameside (Tilbury Loop) line between Barking and Dagenham Dock would result in negative impacts for c2c passengers and freight services. c2c’s full response to the spring 2015 consultation is set out in Appendix 3 of this Rebuttal [TFL7].

London Overground extension from Barking to Renwick Road

7.2.23. The extension of London Overground services from Barking to Renwick Road could also form an alternative means of providing an eight train / hour service at Renwick Road as suggested by Mr. Ridley, avoiding operational constraints further east.

7.2.24. As with the case of Tilbury station in paragraph 7.2.14 of this Rebuttal [TFL7], the presence of existing c2c passenger services and freight traffic on the Up and Down Tilbury Lines at Renwick Road means there would be insufficient capacity to reverse a fifteen minute interval London Overground service on these tracks.

7.2.25. Station infrastructure required for this option would therefore need to include a separate reversing platform and tracks for terminating London Overground trains located between the outer Up and Down Tilbury Lines. One means of achieving this would be to construct a terminus platform at the location where passive provision for a future platform is currently allowed for the BRE proposals. Separate new twelve car platforms on the Up and Down Tilbury Lines would be required for the c2c services.

7.2.26. The presence of the goods lines and freight infrastructure between the Up and Down Tilbury Lines in this area prevents a crossover connection for up Overground trains departing from the terminus platform to directly access the Up Tilbury Line. A similar track remodelling solution to that for BRE would therefore be required, with a new up track for London Overground services being provided.
between Renwick Road and Barking East Junction, along with associated remodelling of Ripple Lane Yard to accommodate it.

7.2.27. In effect the proposal would entail construction of the westerly 2.3km of the proposed BRE scheme, together with a four platform Renwick Road station and additional crossovers for the terminating trains.

7.2.28. This would allow the 15 minute interval Overground service to be extended from Barking to Renwick Road and avoid issues associated with extending them further east towards Tilbury. However it would not address the problems associated with introducing an additional station stop for c2c services described in paragraph 7.2.21 above, and thus would not address the concerns expressed by c2c in the 2015 public consultation.

7.3. Proximity of a station at Renwick Road to Barking Riverside

7.3.1. At paragraph 7 of Mr. Ridley’s Proof of Evidence [OBJ/1], it is stated that a station at Renwick Road would lie a 10 minute walk and 3 minute bus journey from Barking Riverside. This is further discussed at paragraph 37 of Mr. Ridley’s Proof of Evidence, which states that a station at Renwick Road would lie a 12 minute walk, a 3 minute cycle and 2 minute car journey from the proposed Barking Riverside station.

Expert witness: Christopher Porter

7.3.2. It is noted that the estimated journey times between Barking Riverside and Renwick Road are taken from a single point within the Barking Riverside area, which is an approximate location for the proposed Barking Riverside station. As noted within paragraph 3.1.5 of John Rhodes’ Proof of Evidence [TfL2/A], Barking Riverside is a 179 hectare development site. Therefore I consider it is not appropriate to calculate journey times between Barking Riverside and a possible alternative station at Renwick Road in such a way, given the size of the Barking Riverside site.

7.3.3. Section 6.7 of my Proof of Evidence [TfL1/A] identifies that the placement of the proposed station at the heart of Barking Riverside is an integral part of the Barking Riverside Limited (BRL) masterplan providing a focus for local streets and the wider public realm while providing an attractive gateway to Barking Riverside. The BRE is the key transport intervention in a multimodal package of transport
improvements to serve the site and will be integrated with local bus, cycle and walking routes.

7.3.4. As implied by the journey time information outlined by Mr. Ridley, a station at Renwick Road would be isolated from the Barking Riverside site and therefore such a proposal does not fulfil the aims of the BRE project [BRE/A5].

7.4. **Public Transport Accessibility Levels (PTAL) associated with a station in the vicinity of Renwick Road, with Barking Riverside served by a high frequency bus link**

7.4.1. At paragraph 38 of his Proof of Evidence [OBJ/1], Mr. Ridley states that TfL has not compared the PTAL scores of an alternative option comprising of an intermediate station at Renwick Road, with Barking Riverside served by a high frequency bus link and the resultant PTALs from the BRE as proposed.

7.4.2. In paragraph 43 of his Proof of Evidence [OBJ/1], Mr. Ridley asserts that such an alternative would enhance the development prospects at stations along the Essex Thameside (Tilbury Loop) line without compromising the viability of Barking Riverside.

**Expert witness: Christopher Porter**

7.4.3. As set out in paragraph 7.2.9 of this Rebuttal [TfL7] to the Proof of Evidence of Mr. Ridley [OBJ/1], the Transport Options Summary Report [BRE/C10] and Transport Options Back-check Report [BRE/C11] TfL considered and discounted a variant of the option proposed by Mr. Ridley. As with the previously considered alternative, the option proposed by Mr. Ridley would not provide a direct connection to the Barking Riverside site, deliver sufficient capacity to serve the full development quantum of Barking Riverside, or provide any additional train capacity.

7.4.4. It is acknowledged that such a proposal would generate a similar calculation of Public Transport Accessibility Levels at Barking Riverside as the proposed BRE alignment. However, as noted in paragraphs 7.2.11 and 7.3.4 of this Rebuttal [TfL7] a station at Renwick Road would be physically isolated from the Barking Riverside and would not provide a direct connection to the site. Therefore such a proposal does not fulfil the aims of the BRE project [BRE/A5].
**Expert witness:** John Rhodes

7.4.5. The option proposed by Mr. Ridley would therefore not satisfy the occupancy triggers of the BRL Section 106 Agreement.

7.4.6. As explained at paragraph 6.4.11 of my Proof of Evidence [TfL2/A], the authorisation of the BRE would address the 1,500 occupancy trigger (as currently proposed) and enable the development of Barking Riverside to proceed beyond the first stage.

7.4.7. The new rail link is a critical step in delivering a sustainable transport package that will support the development of 10,800 homes at Barking Riverside. Without the BRE, the development cannot proceed beyond 1,500 homes and the site will remain as it has for too long: a missed opportunity.

7.4.8. The viability work undertaken for BRL has demonstrated that the BRE plays an essential part in generating an increase in land values. A central, fixed rail connection creates a sense of place and puts that place ‘on the map’ in a way that a bus service to a rail station removed from that place cannot achieve. Without the BRE and the extra dimension it brings to accessibility, the scale of affordable and market housing proposed would not be achievable.

7.5. **Serving Barking Riverside via a station in the vicinity of Renwick Road and a high frequency bus link would not impact the delivery of 10,800 homes at Barking Riverside**

7.5.1. At paragraph 40 of his Proof of Evidence [OBJ/1], Mr. Ridley asserts that an alternative option comprising of a station at Renwick Road and a high frequency bus link would not have any impact on the delivery of 10,800 homes Barking Riverside.

**Expert witness:** John Rhodes

7.5.2. As set out in section 6.4 of my Proof of Evidence [TfL2/A], not authorising the BRE would mean that the 1,500 occupancy trigger (as currently proposed) would not be satisfied and the development of Barking Riverside beyond the first stage could not take place. As the LBBD Statement of Case makes clear:

“A substantial amount of investment has been spent on this development to date, but if the rail link is not secured the future of the development will be put in jeopardy”.

7.5.3. New bus routes, cycle and pedestrian connections already form part of the wider public transport improvements and – together with the BRE – increase accessibility across Barking Riverside sufficiently in order to sustainably support the level of development proposed at BRL.

7.5.4. Insofar as the BRE would unlock Barking Riverside, it will also help deliver a range of other benefits associated with the revised scheme, over and above the development of 10,800 homes. In particular, the 2016 application proposed a revised approach to affordable housing which would – subject to the availability of grant – provide for up to 50% affordable housing at Barking Riverside. This would represent an increase in the proportion of affordable housing required by the current Section 106 agreement which requires 41% of habitable rooms to be affordable (this equates to approximately 33% units across the development).

7.5.5. As set out in Section 3.6 of Matthew Carpen’s Proof of Evidence [SUPP/4], the viability work undertaken for BRL has demonstrated that the BRE plays an essential part in generating an increase in land values. Without the BRE and the extra dimension it brings to accessibility, the scale of affordable housing proposed would not be achievable.

**Expert witness: Christopher Porter**

7.5.6. Notwithstanding the existence of the occupancy triggers associated with the planning consent for the Barking Riverside development, relating to the delivery of the BRE, its provision offers a further benefit over bus based alternatives given the comparative “permanence” of fixed rail links.

7.5.7. The permanence of the BRE and the station at Barking Riverside illustrates a long term commitment from BRL and TfL to the creation of a new community at Barking Riverside.

7.5.8. The provision of the BRE requires an initial investment for capital works such as the proposed viaduct, track and supporting rail infrastructure, with the subsequent payback period being longer in comparison than for a system that does not require bespoke infrastructure such as a shuttle bus. Therefore to obtain value for money, projects such as the BRE are delivered with a view of the long term, meaning they are unlikely to be constructed one year and removed the next.
7.5.9. Furthermore, due to the nature of the rail infrastructure required for the BRE, the proposed alignment cannot be physically moved to another location, and as a result an infrastructure dependent system such as the BRE can be described as having permanence.

7.5.10. In contrast, the proposal to serve Barking Riverside by means of a shuttle bus does not exhibit characteristics of permanence, as buses utilise the public road network and features of their operation such as bus stops can be easily relocated.

7.5.11. Linked to point of viability noted in paragraph 7.4.8 of this Rebuttal [TFL7], the permanence of rail investment represents a commitment to an area, attracting developers and home-buyers, signaling that a high quality transport link will be available in future.

7.5.12. The benefits of permanence are illustrated in the instance of the Vauxhall Nine Elms Battersea (VNEB) Opportunity Area and the Northern Line Extension (NLE). Several development proposals were prepared over many years based on bus-based public transport, with these failing to be subsequently implemented. The NLE proposal (a fixed scheme with “permanence”) was developed by the new developer of Battersea Power Station in 2005 and was subsequently granted consent in 2014.

7.5.13. Similar to the benefits of the BRE in unlocking 10,800 new homes at Barking Riverside, the implementation of the NLE helped unlock the delivery of 14,000 jobs and 5,600 homes within the VNEB Opportunity Area.

7.6. Development potential associated with an extension of the London Overground to Tilbury Town

7.6.1. In paragraph 43 of his Proof of Evidence [OBJ/1], Mr. Ridley asserts that a proposal to extend London Overground services to Tilbury Town as an alternative to the BRE would enhance the development prospects at stations along the Essex Thameside (Tilbury Loop) line without compromising the viability of Barking Riverside.

Expert witness: Christopher Porter

7.6.2. As noted in sections 7.4 and 7.5 of this Rebuttal [TFL7], the alternative proposed by Mr. Ridley would not unlock the delivery of 10,800 homes at Barking Riverside, and therefore would compromise the viability of Barking Riverside.
7.6.3. Alongside the delivery of the BRE and the new homes this will unlock at Barking Riverside, future housing growth is anticipated at Beam Park supporting wider growth within the London Riverside Opportunity Area at South Hornchurch and south Dagenham. Furthermore, the City in the East document [BRE/D12] identifies further anticipated growth and the delivery of new homes at both Purfleet and the Lakeside Regional Town Centre, with both of these locations in proximity to the Essex Thameside (Tilbury Loop) rail corridor.

7.6.4. Therefore I consider that such proposals illustrate how existing public transport capacity and connectivity alongside the provision of the BRE will be maximised to support housing delivery through the London Riverside Opportunity Area and the wider East of England.

7.7. Crossrail 2

7.7.1. Throughout paragraphs 44 to 53 of Mr. Ridley’s Proof of Evidence [OBJ/1], reference is made to Crossrail 2, with specific reference made to an eastern extension. Mr. Ridley’s Proof of Evidence [OBJ/1] also asserts that an eastern branch of Crossrail 2 would deliver over 200,000 new homes.

Expert witness: John Rhodes

7.7.2. Paragraph 9.1 of Appendix 5 of Christopher Porter’s Proof of Evidence [TfL1/B] confirms that an eastern extension of Crossrail 2 is still being investigated and that TfL has safeguarded a short route from Angel to Hackney Central, so a branch could be added at a later stage.

7.7.3. TfL, the Mayor of London and Network Rail note in their joint submission to the National Infrastructure Commission (February 2016) that up to 200,000 additional homes could be 'unlocked' by Crossrail 2 in London and the South East. This is the objective of Crossrail 2 as a whole, however, not an eastern extension.
7.8.  **London Overground Orbital Service**

7.8.1. Paragraph 51 of Mr. Ridley’s Proof of Evidence [OBJ/1] refers to an alternative proposal to extend the Gospel Oak to Barking London Overground services utilising a river crossing at Belvedere as part of a wider orbital rail route.

*Expert witness:* Christopher Porter

7.8.2. The London Infrastructure Plan 2050: Transport Supporting Paper (p90) identifies that there may be a case for providing some new orbital rail based capacity for key links in outer London, with a possible option for doing this cited as an extension of Overground services.

7.8.3. In comparison to the BRE, which is described as ‘planned’, the document makes clear that idea for an orbital link is a very long term idea, with the indicative network and supporting text confirming this position set out within the London Infrastructure Plan 2050: Transport Supporting Paper, presented in Appendix 4 of this Rebuttal [TFL7].

7.8.4. In response to the proposal of Mr. Ridley, paragraphs 6.3.2, 6.3.3 and 6.3.4 of this Rebuttal [TFL7] confirm that a rail crossing at Belvedere would not be feasible, nor is a proposal included in the London Plan [BRE/D11], and nor was it included as part of the Mayor of London’s announcement on 4 October 2016 to develop a package of new river crossings in East and South East London.

7.8.5. If a future orbital rail route is to be developed it would require very major investment as part of a long term strategy involving substantial change in the capacity and organisation of a wide spread of east London’s rail network. Critically important projects such as BRE cannot be held up in anticipation.
Appendix 1: Proof of Evidence of Mr. Philip Ridley [OBJ/1] received by TfL on 20 September 2016

Please note that for ease of cross referencing, page and paragraph numbers have been inserted into the Proof as these were not originally present.
TRANSPORT AND WORKS ACT 1992: APPLICATION FOR THE PROPOSED LONDON OVERGROUND (BARKING RIVERSIDE EXTENSION) ORDER

PROOF OF EVIDENCE

OF

Philip Ridley, MSc (Spatial Planning), PGDip (Historic Conservation)
(Member of the general public)

July 2016
Introduction

1. My name is Philip Ridley. I have worked in the field of Town Planning, within Development Management since 2004.

2. I have a Masters Degree in Spatial Planning and am a Licentiate Member of the Royal Town Planning Institute. I also have a Post Graduate Diploma in Historic Buildings Conservation and am an Affiliate Member of the Institute of Historic Buildings Conservation.

3. I am a member of the Eastern Division of Rail Future and a member of the Enfield Transport Users Group but this Statement of Proof is independent of those voluntary memberships and do not necessarily reflect their positions.

4. The Barking Riverside Extension could deliver 10,800 homes. It would however cause material harm to the delivery of a substantially greater number of homes and volume of regeneration and also sustainable transport provision elsewhere, throughout London. This is because it fails and potentially makes impossible the future delivery of rail river crossing and the previously proposed R25 outer circular rail route, contrary to Policy 6.2 of the London Plan, which states that any proposal that fails to safeguard river crossings should be refused.

5. The Barking Riverside redevelopment was initially to be delivered by a now cancelled DLR extension from Becton to Barking Riverside. That proposal was then replaced by the London Overground extension from Barking that was initially planned as a cross-river link to Abbey Wood to connect with Crossrail and to create an R25 outer circular rail route that would connect most of the outer London Boroughs, also relieving the M25 and south circular road.

6. The proposals fails to safeguard link fails to safeguard a rail crossing to the south of the river for three reasons:
   1. The proposed viaduct is too tall for a tunnel, which was the previous preferred option for a crossing from Barking Riverside to Abbey Wood via Thamesmead.
   2. The previous Barking Riverside to Abbey Wood alignment is no longer being sought by TFL, who recently consulted on a potential rail crossing from Beam Park to Belvedere.
   3. If four trains per hour are sequestered to an isolated rail head at Barking Riverside, this rare capacity will not be available for a future rail crossing at Belvedere, potentially making it unviable, causing undue reliance on less sustainable road transport.

7. The Barking Riverside extension is also less attractive to the development of the north bank of the Thames than the simple provision of the second proposed station on the existing C2C line for the following reasons:
   1. Station 2 is just 10mins walk or 3mins bus from the proposed development site.
2. Station 2 would provide eight trains per hour vs the proposed four trains per hour provided by Barking Riverside.
3. Station 2 would provide at least four trains per hour to central London, whereas Barking Riverside would provide none. TFL admit that most journeys from the new development will be for central London, with this failure to provide a direct connection likely resulting in interchange chaos at Barking.
4. Utilising Station 2 plus a simple turnback facility further down the line could double rail frequencies from four to eight along the line, potentially all the way to Tilbury, with each station suffering both capacity issues and providing significant development potential.
5. A turnback facility for four to six trains per hour could be provided within minimal cost at Grays or Tilbury Town with a single platform terminus that could turn around circa six trains per hour, as has been achieved already at Clapham Junction with London Overground.
6. Utilising Station 2 and sending London Overground services towards Tilbury Town would safeguard a potential rail crossing at Belvedere, because London Overground services could then be diverted on the R25 route via Belvedere, whilst a number of Crossrail trains could be extended to Tilbury via the rail crossing.

7. The only viable alternative that safeguards a river crossing is if the Barking Riverside extension is built as a tunnel to Abbey Wood via Thamesmead. This will however render a Barking Riverside station unviable due to the required depth of the alignment. That should not be a significant issue however in light of the fact that Station 2 is sufficient to facilitate the development of Barking Riverside.

8. Finally, faced with all these issues, TFL stated to me that notwithstanding concerns, the existing platform at Barking is constrained and that Barking Riverside would be a convenient turnback facility for them. Indeed, but at considerable cost, both in terms of money and material harm to the London Plan’s aim to achieve regeneration throughout east London plus achieve Thames rail crossings.

9. Barking Riverside Extension should therefore be refused by virtue of failing to meet the test of Policy 6.2 of the London Plan, which seeks to refuse any proposal that fails to safeguard river crossings. As a result, notwithstanding the cited delivery of 10,800 homes, the proposal would also fail London Plan policies requiring housing, regeneration and sustainable transport delivery in light of the wider impact of a failure to safeguard a viable rail river crossing.
**Planning Context**

10. Unfortunately the NPPF does not anticipate or provide strategic policy direction for national infrastructure projects and Local Plans are generally inadequate in terms of setting out long-term direction for the rail network. As a result there is need to rely upon the London Plan for the strategic planning policy context, which should form a greater material consideration even than the Local Plan when a major infrastructure project such as this could cause material harm to the achievement of more significant housing, regeneration and sustainable transport delivery elsewhere.

![Figure 1: Excerpt from London 2050: A Tube Map for the future](http://www.londonreconnections.com/2014/london-2050-cartographical-interlude/)

11. For this reason, the previous Mayor developed his 2050 vision for the metro rail network, which included a cross-river rail connection, called R25 that was to serve Barking Riverside. It is important to remember that the Barking Riverside Station was an artifact of this overall plan rather than the primary objective. As a result of this strategic plan and no information to the contrary, many respondents to the BRE consultation were under the opinion that Barking Riverside extension safeguarded a link to Abbey Wood via Thamesmead. Those voicing the opinion that the scheme safeguarded a river crossing that should be
delivered as soon as possible including the then Secretary of State for Transport. He in fact objected to the proposal due to it not delivering the cross-river link. It is also likely that Treasury funding for the electrification of the Barking to Gospel Oak line was in part on the expectation that the R25 route would be delivered. However, it is noted that the only section of the R25 easily delivered is that utilising existing infrastructure west of Abbey Wood towards Woolwich or looping to the east via Slade Green and Bexleyheath or simply heading to Dartford.

12. Unfortunately nothing could be further from the truth. The proposed alignment is too tall for a tunnel, which was the preferred option and too low for a bridge. I asked TFL’s engineers how much of the new alignment would have to be demolished if at a later stage a river crossing were constructed. The answer was that the link would be via a tunnel and that the descent would need to start soon after the mainline junction. As a result, the entire viaduct would require demolition.

13. Policy 6.1 of the London Plan seeks a strategic approach to transportation within London, working “with all relevant partners to encourage the closer integration of transport”. Whereas the Barking Riverside extension does form part of the London Plan, the London Plan also emphasises the crucial need for Thames crossings, particularly in the east of London, calling for a “programme of works under development to improve cross Thames links in east London”.

14. Policy 6.2 states that land should be safeguarded for transport, stating that development proposals that do not provide adequate safeguarding for the schemes outlined in table 6.1, including cross river connections “should be refused”. It states that there must be coordinated measures to ensure that the transport network, now and in the future increases the capacity of public transport in London over the Plan period, identifying and safeguarding route alignments to implement transport proposals that have a reasonable prospect of achievement.

15. It is my assertion that this BRE proposal fails on all counts.
16. The Mayor’s recent consultation on potential River Thames crossings\(^2\) should be deemed a material consideration to the determination of this proposal in light of the London Plan’s requirement that proposals, which do not safeguard schemes in table 6.1, that include cross-river connections, “should be refused”. The Belvedere crossing should be afforded considerable weight due to it recently being consulted upon.

17. Given that the nearest crossing to the west is an unreliable ferry at Woolwich and to the east is the congested, hard to reach M25, this could not be a more serious matter in terms of business activity and housing delivery. This is precisely why the London Plan could not be clearer in its intention that proposals harming such strategic plans should be refused.

18. The cross-river proposals, in particular between Belvedere and the new station at Beam Park, are interesting because it refers to potential rail crossings. In order

\(^2\) Have your say on options for new river crossings in east London (December 2015) 
https://consultations.tfl.gov.uk/roads/river-crossings
to make a cross-river rail link viable, it must have a critical mass of train capacity to achieve a positive business case and indeed to satisfy projected demand.

19. It is quite possible that the Barking Riverside Extension, by sequestering four trains per hour to an isolated railhead that cannot be extended across the Thames, could materially harm the operational and financial viability of a potential Belvedere rail crossing, because if London Overground trains do not terminate at Barking Riverside, they could potentially continue to Dagenham Dock and then Belvedere and beyond, in an alternative R25 outer orbital route, delivering tens of thousands of new homes and jobs throughout London and easing congestion on existing cross river routes and also the South Circular road and M25.

20. A Belvedere crossing could carry a Crossrail extension, but it is important to note that there will be conflicting demands to extend to Ebbsfleet International via Dartford, noting that this option is cited within Table 6.1 of the London Plan. A London Overground connection via the route could therefore be crucial and it would be premature to approve the rail link to Barking Riverside prior to a rail river-crossing plan being finalised and funded in light of the interdependence of the schemes and very limited options for rail capacity for the new link which should not be entirely road based to be truly sustainable.

21. Essentially therefore, it is considered premature to approve the link to Barking Riverside prior to a cross Thames strategy being approved by the new Mayor, because, should the new rail head at Barking Riverside render a new rail link across the Thames unviable, it would cause material harm to the London Plan, NPPF and National Infrastructure Commission’s aim for an integrated transport system.

22. Paragraph 014 of The National Planning Policy Framework\(^3\) sets out the approach that should be taken regarding prematurity, where significant proposals are put forward for decision prior to a relevant emerging plan being developed. It states that proposals can be refused where prematurity would have clear adverse affects that would demonstrably outweigh the benefits, which can be demonstrated to be the case.

23. Situations where this is relevant include where the development proposed is so substantial or its cumulative effect would be so significant, that to grant permission would undermine the plan-making process by predetermining decisions. In this instance, the cross-river proposals by the Mayor that form a key part of the London Plan and that have recently undergone public consultation are considered to be material considerations materially impacted by this proposal and one that should be given substantial weight to the belvedere rail

\(^3\) NPPF “Determining a Planning Application”
http://planningguidance.communities.gov.uk/blog/guidance/determining-a-planning-application/how-must-decisions-on-applications-for-planning-permission-be-made/
river crossing having been recently been through a rigorous public consultation. It will be up to the new Mayor to decide which proposals should be taken forward and safeguarded, but it is my opinion that the Maybe should be instructed to not pursue the Barking Riverside extension until a river crossing strategy is granted and funded.
Cross-river limitations of the Barking Riverside Extension

24. The Barking Riverside Public Consultation Report included at the end a letter from the then Secretary of State for Transport, Rt Hon Patrick McLoughline, MP that should have formed the introduction to the report. The letter states that TFL was:

"missing out on a big opportunity by not considering a longer extension"

25. The Minister literally pleaded with the Mayor to invest in the future of Abbey Wood, Thamesmead and Barking Riverside by linking them by rail. He noted that whilst 10,800 homes are proposed at Barking Riverside, that 7,000 are proposed at Thamesmead and that neither will reach their full potential without appropriate cross-river public transport. The Minister also cited subsequent potential sustainable transport links to Bluewater, Lakeside, Southend Airport and the Olympic Park.

26. The Minister was not the only one concerned about a potential missed opportunity. Greenwich Council stated:

"The extension will also provide the opportunity for a further extension across the River Thames to Thamesmead and/or Abbey Wood"

27. Unfortunately the Minister and Royal London Borough of Greenwich were poorly informed in their belief that this proposal safeguarded a future rail river crossing when nothing could be further from the truth. It appears that TFL, in single mindedly pursuing its aim for these 10,800 homes and a convenient turnback facility, that they failed to correct this assumption and make it clear that the Barking Riverside Extension is planned to be an isolated rail head.

28. Firstly, and most importantly, it was confirmed to me by TFL’s engineers during a recent meeting that the proposed Barking Riverside Station is sited too low for a Thames Bridge, yet too high for a tunnel. It was confirmed to me that a tunnel would be the most likely alignment in this location.

29. As such, in order to extend Barking Riverside to Thamesmead and potentially beyond, most of the proposed viaduct alignment south of the existing C2C line would need to be demolished to achieve the appropriate depth beneath the Thames with a circa 2% gradient. I asked the engineer what proportion of the overall cost this would be and was advised, due to the track and station being on a viaduct, this potentially redundant section would account for more than half of the overall cost, putting the potentially redundant investment at £150m, effectively writing off the entire developer contribution and some of the Treasury’s contribution.

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30. Furthermore, the existing Proposed Barking Riverside station would need to be demolished and built underground if replaced on an underground alignment. I note that new underground Crossrail stations cost circa £1bn. Whilst costs for a subterranean London Overground station are likely to be significantly lower, it would nonetheless make its replacement unviable along with a future rail link under the Thames. It is also very important to note that the existing Thames crossing consultations do not anticipate any future link in this location, preferring Belvedere due to a far less constrained site being available that would not conflict with the strategically important freight terminal.

31. In light of there being limited capacity for significant frequency enhancements to Fenchurch Street and Liverpool Street via Barking and to Gospel Oak, a new river crossing should likely deliver an extension to the Elizabeth Line or existing South Eastern services. Unfortunately that cannot be delivered with an extension of the Barking Riverside extension south of the river. This is because an eastern chord would conflict with obstructions that include overhead pylons. TFL’s engineer also advised me that an eastern chord here would also be a non-starter because it would disrupt the existing, strategically important goods yard here that serves HS1. I have been reliably advised cannot be compromised under any circumstance.

32. Furthermore, by routing 4 London Overground trains per hour to a rail head at Barking Riverside that cannot be extended, with little to no opportunity for frequency enhancements, this proposal ties up vital onwards rail capacity that could prejudice future rail crossings of the Thames at Belvedere, making that potential crossing dependent on road transport, causing more rather than less congestion because people would travel considerable distances to reach the crossing.

33. As a result, not only does the Barking Riverside Extension potentially make the potential planned rail connection at Belvedere unviable, it also delivers a spur that should but cannot viably cross the Thames itself. For this reason, due to the proposal failing to safeguard and likely causing material harm to planned river crossings, it should be refused for being contrary to London Plan Policy 6.2.
34. The Barking Riverside Extension has been altered in response to responses to make passive provision for a new railway station on the existing line, just 1.1km from the proposed Barking Riverside Extension, sited on the west side of Renwick Road.

35. This station, if served by C2C and London Overground services, would deliver 8 trains per hour during peak times on proposed timetables if the station were served by both operators. There is no reason to believe that a relatively clock face timetable could not be achieved with one train every 7.5mins. There is also no reason to believe that such frequencies cannot co-exist with existing and proposed freight paths.

36. In contrast, Barking Riverside will deliver just 4 trains per hour, providing 15 minute intervals with no services provided to central London resulting in
potentially chaotic interchange scenes at Barking Station and additional dwell times on an already congested line.

Figure 3: Journey times between the two proposed Barking Riverside stations

37. Above are the projected journey times from Barking Riverside Rail Station and the potential second station on the existing C2C Thameside line. Walking is 12 minutes, cycling is 3 and car is 2. No buses presently run the route, but journeys would likely take 2 to 3 minutes and bus frequencies could be substantial and wholly funded by the developer in light of the developer contributions that are on the table. Note, the existing EL1 and 387 bus services could also be routed to the new station, providing excellent accessibility for the area.

38. In assessing the BRE proposal, TFL has not compared PTAL scores of a proposal comprising the second station only plus a high frequency bus link. It is likely that this could provide a higher PTAL in light of the second station providing eight trains per hour, four of which serve central London directly, unlike the existing proposal, which requires a change of trains and delivers no trains to central London.

39. The implications of this are, not only potentially improved PTALS if the BRE extension is ditched, but also that many people will find 8 trains per hour from the existing line more convenient than waiting potentially for 15 minutes at Barking Riverside Station for a train that does not go to central London, particularly if it is linked with a high frequency bus route.
40. Furthermore, it is likely that this arrangement would not hinder the 10,800 proposed homes due to similar PTALS being achievable alongside the developer saving over £100m, and the Treasury could instead spend money supporting the Mayor to deliver new cross Thames links.

41. An implication of providing 4 additional London Overground trains per hour to a new station on the existing line without a £300m spur to Barking Riverside, is that these trains could continue towards Tilbury Town, serving Dagenham Dock, Rainham, Purfleet, Grays, Tilbury Town and the proposed new station at Beam Park, possibly utilising the freight branch to Tilbury Terminal as a convenient turn back facility with a potential new station there.

42. This proposal would double frequencies at five existing and one proposed Thameside stations from 4 to 8 trains per hour, plus delivering a new station 10mins walk from the new Barking Riverside redevelopment, also with 8 trains per hour. Train frequencies at Grays would be boosted from 8 to 12 trains per hour, with no other viable solution on the table to boost frequencies in this location due to Fenchurch Street Station and Liverpool Street Station being at capacity.

43. These areas would not only benefit from doubled frequencies, they would also gain a place on the Central London Tube Map, enhancing development prospects in all these locations without compromising the viability of the Barking Riverside redevelopment.
44. The London Borough’s of Hackney⁶, Barking and Dagenham and Newham are so keen to deliver housing, constrained principally by a lack of rail capacity and no spare capacity at Fenchurch Street that they called for an eastern branch of Crossrail 2 to solve a problem that could be largely resolved by a more strategic approach to the Barking Riverside Extension at significantly lower cost.

45. These Council’s propose a circa 14km tunnel from Angel to Barking that would deliver just 15 trains per hour. This is a very low frequency for such a long tunnel. As such it is questionable whether London could fund half of the scheme and even more questionable that a business case could be achieved.

46. 15 trains per hour can be justified on the two eastern branches of Crossrail 1 because those underground sections are far shorter and achieve a significant amount of their journey on conventional tracks with a significant number of above ground stations. The Abbey Wood branch is a partial exception due to significant funding provided by Canary Wharf, the likes of which simply does not exist in Dagenham.

47. The proposed eastern Crossrail 2 branch is proposed to deliver 7.5 trains per hour to Grays and also to Basildon to deliver over 200,000 homes.

48. In terms of the route to Grays, routing the four London Overground trains per hour to Grays that are presently proposed for Barking Riverside would deliver half of the proposed frequency of this eastern branch, which could be delivered soon after 2018 with relatively minimal capital investment comprising some rolling stock, potentially some work to level crossings and then a turnback facility at Greys or Tilbury Town. The route would utilise the same Aventra stock being used by Crossrail, albeit with shorter formations, but platforms can be extended in time.

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⁶ Hackney Citizen (March 2016) “Crossrail 2 needs ‘eastern phase’ through Hackney, claims Mayor” http://hackneycitizen.co.uk/2016/03/22/crossrail-2-hackney-eastern-phase-mayor/
49. Furthermore, a cross-river alignment, essential for the regeneration of this area, could form an extension to Crossrail 1 from Abbey Wood to Grays, potentially via the proposed Belvedere crossing, alongside a grade separated junction at Beam Park with an east and west chord. Such a Crossrail extension could deliver between six and 18 trains per hour.

50. I suggest six as a minimum, because Crossrail has been engineered for 30 trains per hour vs. the initial 24 trains per hour. There is therefore potential for an additional six trains per hour that could be routed via this alignment. They are unlikely to be routed via Stratford because that route is highly constrained between Stratford and Forest Gate, where it shares conventional tracks with six conventional trains per hour plus a number of freight paths. The future potential of 18 trains per hour is a fantasy level that combines these additional six trains per hour with the existing proposal of 12 trains per hour to Abbey Wood.

51. Meanwhile, at least 4 London Overground trains per hour can take an outer orbital, R25 route, with an eastern chord to Belvedere, heading to Erith and then looping back through south London, as per the 2050 transport plan published by the previous Mayor, substantially relieving pressure on the South Circular road, the M25, other Thames crossings and associated routes.

52. Off topic for this public enquiry, but the route to Basildon can be supplemented, again at far lower cost than the eastern Crossrail 2 branch, by dual tracking the alignment between Romford and Grays via Upminster with grade separations inserted at existing junctions. The 4 trains per hour residual Crossrail service from Liverpool Street to Gidea Park could then be routed along this alignment to double capacity on the line to Grays via Upminster from four to eight trains per hour, alongside additional peak shuttle services if necessary, utilising Platform 3 at Romford.

53. Such is the importance of new rail capacity to this area in terms of delivering over 200,000 homes, that the Barking Riverside extension must be refused if it prejudices delivery of vital rail capacity. I hope I have demonstrated here that the Crossrail 2 extension proposal cannot be relied upon to deliver the required capacity and that as a result, more efficient use of the London Overground extension should be sought.
Conclusion

54. In conclusion, I have attempted to demonstrate the proposal is contrary to Policies 6.1 and 6.2 of the London Plan due to it failing to safeguard a river crossing and potentially causing material harm to the potentially planned Belvedere rail crossing that was recently consulted upon. Furthermore, I hope I have demonstrated that the second proposed station plus a high frequency bus link, delivered without the Barking Riverside Extension save circa £300m without necessarily prejudicing development in the area, but providing opportunity to double rail provision for six railway stations, all of which have high development potential. As a result, I believe that the proposal will cause material harm to housing delivery for the entire Thames estuary region, contrary to all the policies that the Barking Riverside Extension claims to satisfy in terms of housing delivery and economic growth.

55. The proposal is also premature in light of the Mayor’s Thames crossing strategy not yet being crystalised and due to the fact that this proposal, by sequestering four trains per hour to an isolated rail head could make any future rail crossings unviable, contrary to guidance contained within Paragraph 014 of The National Planning Policy Framework.

56. As a result, I recommend that Station 2 be recommended for approval but that the junction and subsequent viaduct to Barking Riverside and the new Barking Riverside station be refused. The inspector may wish to consider a split decision, whereby Station 2 is provided conditional or outline approval or safeguarding subject to detailed design and details of the turn-back facility that will be required.
Appendix 2: Press release of Mayoral Announcement on River Crossings dated 4 October 2016
Appendix 2: Press release of Mayoral Announcement on River Crossings dated 4 October 2016

Mayor commits to building greener, public transport-focused river crossings in East London

The Mayor of London, Sadiq Khan, has today outlined his commitment to providing greener and more public transport-focused river crossings in the East and South East of London.

The Mayor has set out a package of new river crossings to be built in the next five to 10 years that will vastly improve travel across the capital, while supporting new affordable homes and business opportunities in East London.

These include:

- Plans for a new pedestrian and cycle bridge linking Rotherhithe & Canary Wharf to be accelerated

- A series of enhancements to be made to the proposals for Silvertown Tunnel to make it greener and more public transport-focused, and exploring further benefits for local residents who use the tunnel

- A DLR crossing at Gallions Reach, helping support the development of around 17,000 new homes across Newham and the Royal Borough of Greenwich

- Further assessment work for a Barking Riverside-Abbey Wood London Overground crossing

- Further assessment of a North Greenwich-Isle of Dogs ferry, supporting new development on the Greenwich Peninsula and the Isle of Dogs

Mayor of London, Sadiq Khan, said: “It’s no secret that London has long needed more river crossings in the east. With new homes and economic growth across East London, it becomes even more important that we deliver new greener transport links that allow Londoners to cross the river quickly and more easily.”
"But we don’t want these to have a damaging impact on our environment, and that’s why I’ve reviewed and improved plans for Silvertown Tunnel and why I’m pushing forward with crossings that encourage public transport, walking and cycling.

"As we continue to unlock the massive economic potential of East London, we must secure the very best transport infrastructure that improves the quality of life for everyone living and working in the area."

With congestion and air quality around the Blackwall Tunnel predicted to get worse in the coming years as London’s population grows, the Silvertown Tunnel is vital to provide a more reliable crossing as well as ensure goods and services can continue to be transported around London. The tunnel, which would open in 2023 and be paid for via a user charge, will help significantly reduce traffic queues. It will also support freight and delivery businesses by providing a more reliable route.

The proposed tunnel was consulted on last year and following enhancements requested by the Mayor, a six-month Public Examination will begin next week (11 October).

Enhancements made to the plans inherited from the previous Mayor, including to help mitigate potential air quality impacts, are:

- A clear commitment within TfL’s Business Plan to support the new buses through the tunnel which are vital to improving travel and supporting growth, as well as a bus concession for local residents for a period, with the tunnel to be one of London’s low emission bus zones when it opens.

- TfL will also look at providing a bespoke cycle-bus which will carry cyclists and their bikes through the tunnel on a turn-up and go basis.

- Reduced road use by construction vehicles with 55 per cent of all material now set to be carried via the river. TfL will also look to review this throughout the project to see whether this could be increased further.

- All vehicles working on the construction of the Silvertown Tunnel will be Euro 6 and comply with the Mayor’s new Direct Vision Standard.
• Further pedestrian and cycling improvements to the local areas on both sides of the tunnel entrance.

• Exploring further benefits for local residents who use the tunnel

The Mayor has also asked for the acceleration of the new pedestrian and cycling bridge linking Rotherhithe and Canary Wharf – a key manifesto commitment. The new bridge will make it easier for people south of the river to link to Cycle Superhighway 3 – the East-West Cycle Superhighway – as well as provide people north of the river better access to the Thames Path and planned cycle routes throughout Southwark.

Due to the range of river traffic at this location, the bridge would need to open for shipping, and TfL has carried out analysis on whether a bascule or swing style bridge could be more suitable. A competitive procurement process will be held next year and subject to funding, availability of land and relevant approvals, the new bridge could be open by as soon as 2020.

The Mayor has instructed TfL to take forward a new extension of the Docklands Light Railway (DLR) from Gallions Reach towards Thamesmead. A DLR crossing will help to support new housing developments and air quality by improving conditions for walking and cycling, and encouraging Londoners to take public transport. The new crossings would be the 7th extension in the network’s 29 year history and would help support development of around 17,000 new homes across Newham and the Royal Borough of Greenwich in the next 10 years.

TfL will look to source the majority of funding for these crossings through third-party developer contributions and via existing Community Infrastructure Levies. On current estimates, these new crossings, along with the future Elizabeth line, could all be delivered within the next five to ten years, rebalancing the historic lack of river crossings in this part of London.

As well as these new committed crossings, the Mayor has asked TfL to look at developing a new ferry between Canary Wharf and North Greenwich, which will help support new developments on the Greenwich Peninsula and the Isle of Dogs, as well as reduce demand on the Jubilee line at key times. It is also looking at the case for
the extension of the London Overground from Barking Riverside across the Thames towards South East London.

Alex Williams, Acting Managing Director of Planning at TfL, said: “London’s population continues to grow and it’s vital that we do everything we can to support this to ensure that everyone can continue to move around freely and easily. The Mayor’s new vision for river crossings in East London is firmly rooted in supporting growth and providing better public transport links for all. We will now work hard to develop the designs for these new crossings, as well as identify potential funding opportunities, to allow them to be constructed more quickly.”

David Leam, Infrastructure Director at London First, said: “Better river crossings will help unlock the economic potential of East and South East London and connect thousands of new homes in Newham, Barking, Greenwich and elsewhere. We’re delighted the Mayor has sped up these plans, aiming to deliver new ways of getting across the river within the next five to ten years.”
Appendix 3: c2c’s full response to the BRE spring 2015 public consultation
Appendix 3: c2c’s full response to the BRE spring 2015 public consultation

In principle, do you support an extension of the London Overground line from Barking to Barking Riverside?
Yes

Do you have a preferred alignment?
I prefer option B

Do you have any comments to make about route option A?
c2c’s key concern with Option A is that it makes no provision for a future new station. If increasing passenger demand meant that such a station became necessary in the future, then the opportunity to incorporate it into the extended section of the route will have been missed. In all likelihood the only possible locations would be on the existing Tilbury line section of the route instead. This would result in the negative impact for c2c passengers and freight services that TfL has already identified.

Do you have any comments to make about route option B?
Of the two routes proposed by TfL in this consultation, at c2c we strongly regard Option B as the preferred route. This scheme makes passive provision for a future station, and many previous transport infrastructure schemes have demonstrated the importance of such foresight. Importantly, the location of this potential future station would be on the new extension, not the existing Tilbury line. TfL have rightly identified the negative impact a station on the Tilbury line would have on existing c2c passengers and freight users, especially considering the existing likelihood of an additional station on the Tilbury line at Beam Park and the other aspirations of some developers.

Do you have any other comments about the proposals?
The issues highlighted in c2c's last consultation response regarding loading levels on c2c services and the need for work at both Barking and West Ham stations are ongoing. TfL’s continuing strong engagement in the existing multi-party project addressing these issues is essential if the extension project is to be a success for London’s passengers.
Appendix 4: Material extracted from the London Infrastructure 2050: Transport Supporting Paper relevant to the BRE Proposal
Description of the Barking Riverside Extension and a further future extension across the river Thames as presented on Page 82 of the London Infrastructure 2050: Transport Supporting Paper

Meanwhile there are a number of possible extensions of the London Overground network that could unlock significant development sites. An extension of the Gospel Oak to Barking Line to Barking Riverside is currently being planned to open up development of a major new quarter with 11,500 new homes. A potential further extension could involve crossing the river to Thamesmead and Abbey Wood where there are major regeneration needs and major opportunities for new housing development.
Indicative outer orbital rail network and supporting text as presented on Page 90 of the London Infrastructure 2050: Transport Supporting Paper

In the longer term, there is potential for more significant expansion of the light rail/rail network to support higher densities. For example, there may be a case for providing some new orbital rail based capacity for key links in outer London. An option for doing this could involve an extension of Overground services in stages, creating some new links initially where most feasible and joining up existing routes over time. An indicative network is illustrated below. This is not included in the costings.