

Date Issued: 4 June 2024

Item: Elizabeth Line Upgrade Plan: Opportunities To Support HS2 And Provide Capacity Enhancements

This paper will be published with the next agenda

1 Summary

- 1.1 In December 2023, the Programmes and Investment Committee approved authorities for five additional Elizabeth line trains to support High Speed 2 (HS2) customers who want to continue their journey into central London for the period that Old Oak Common is London's temporary HS2 terminus. This approval was subject to Government agreeing to provide the required capital funding.
- 1.2 Since that approval, we have identified additional service enhancements to respond to the pressures and opportunities on the network. An order of 10 trains will give us the flexibility to deploy a service in the best way. The purpose of this paper is to provide an update on the additional service enhancements and request unbudgeted Financial Authority and increases to Programme and Project Authority and Procurement Authority, to reflect the pricing agreed with Alstom and the revised funding request to Government.
- 1.3 On 12 April 2024, the Secretary of State for Transport outlined the support in principle for the Government to provide funding for TfL to order 10 Elizabeth line trains. This was conditional on TfL submitting a Full Business Case and Alstom agreeing a competitive price.
- 1.4 TfL has submitted a Full Business Case to the Department of Transport (DfT) for the 10-train order and we have concluded discussions with Alstom on the option pricing, payment schedule and contract variation for the additional trains. We are in the process of finalising the funding arrangements with Government and the approvals sought in this request are subject to Government providing written confirmation of funding.
- 1.5 We are requesting that this matter be determined by the Chair of the Finance Committee, in accordance with Standing Orders, as the Chair of the Programmes and Investment Committee, Dr Nelson Ogunshakin OBE, has a declared interest as a non-executive director of High Speed 2 Limited. He therefore cannot receive the exempt appendix to this paper nor take part in any discussion or decision relating to it (as was the case when this matter was considered by the Programmes and Investment Committee in December 2023). Members on the Programmes and Investment Committee, with the exception of its Chair, are included as part of the consultation on this Chair's Action.
- 1.6 The use of Chair's Action is considered appropriate as a decision to enter into the agreement is required before the date of the next meeting of the Programmes and Investment Committee on 26 June 2024. This decision is critical to agreeing the

contract variation with Alstom and issuing the notice to proceed with the order for 10 additional class 345 trains for the Elizabeth line in line with the funding conditions set by Government.

- 1.7 Appendix 1 to this paper contains exempt supplementary information that is not for publication to the public or press by virtue of paragraphs 3 and 5 of Schedule 12A of the Local Government Act 1972, as it contains information relating to the business affairs of TfL and other parties and in respect of which a claim to legal professional privilege could be maintained in legal proceedings.
- 1.8 The Members of the Finance Committee and the Programmes and Investment Committee (with the exception of Dr Nelson Ogunshakin OBE) are asked to consider the proposal and provide Anne McMeel, as Chair of the Finance Committee, with their views on or before noon on Thursday 6 June 2024. The contents of this paper and the exercise of Chair's Action will be reported to the next meetings of the Finance Committee and the Programmes and Investment Committee.

2 Recommendation

- 2.1 **The Chair of the Finance Committee, in consultation with available Members and Members of the Programmes and Investment Committee (excluding its Chair), is asked to note the paper and the exempt supplementary information in Appendix 1 and, subject to receipt of a final signed funding letter from Government:**
 - (a) **approve unbudgeted Financial Authority, for the amount set out in Appendix 1;**
 - (b) **approve Programme and Project Authority, for the amount set out in Appendix 1;**
 - (c) **approve Procurement Authority, for the amount set out in Appendix 1; and**
 - (d) **note that matters for which Authorities are sought above include commitments beyond the period of the 2024 TfL Business Plan and provision will, therefore, need to be made for those commitments in future Business Plans.**

3 Background

- 3.1 In September 2023, we requested funding for the additional trains and enabling works as part of our overall request to Government for capital funding in 2024/25.
- 3.2 In December 2023, we secured £250m in capital funding from Government for 2024/25. This agreement did not cover the additional Elizabeth line trains and enabling works, although discussion continued with Government on this topic. These discussions were in parallel to our commercial discussions with Alstom to finalise their pricing and delivery schedule.
- 3.3 Since the Programmes and Investment Committee's approval in December 2023 relating to an order of five trains, we have identified additional service

enhancements to accelerate opportunities in the central operating section and the branches that require a further five trains – making a total order of 10 additional Elizabeth line trains.

4 Case for additional service enhancements

- 4.1 We have experienced impressive demand on the Elizabeth line to date and have strong growth forecasts. We have recorded 137 million journeys in 2022/23 and over 210 million journeys in 2023/2024. We are continuing to see increased daily usage with 787,000 passengers recorded in April 2024, surpassing the previous record of 777,000 in December 2023. High demand leads to some instances of crowding on the trains, in particular on the eastern branches, the central section and between Paddington and West Drayton.
- 4.2 Demand will continue to grow with population and employment growth and is expected to contribute to further crowding if additional capacity is not provided. HS2 will also lead to a significant increase in passengers at the new Old Oak Common station.
- 4.3 On the east, with the current fleet, we expect on-train crowding levels to increase by about 10 per cent by 2031 with standing expected from Romford in the morning peak rather than from Chadwell Heath today towards Liverpool Street (an almost 30-minute journey). We expect on-train crowding levels from Abbey Wood to Whitechapel to increase by about 12 per cent by 2031 with standing expected from Abbey Wood (a 15-minute journey).
- 4.4 On the west, with the current fleet, we expect a 50 per cent increase in on-train crowding levels by 2031 on services into Paddington driven by the increase in demand from Old Oak Common. Further west, we expect passengers standing from West Drayton during the morning peak (a 25-minute journey).
- 4.5 A combined fleet of 80 trains (70 current plus 10 additional) will give us the flexibility to deploy a service in the best way to respond to the pressures and opportunities on the network, including because of HS2 services terminating at Old Oak Common. This addition also supports the forecast residential and commercial growth along the line, including the planned 25,000 new homes and 65,000 new jobs around Old Oak Common station.
- 4.6 Two indicative service enhancement packages have been developed for a combined fleet of 80 trains that include the following enhancements:

Package West	Package East
<ul style="list-style-type: none"> • 18 trains per hour (tph) to Old Oak Common from Paddington • 10tph to West Drayton from Old Oak Common • 26tph in the central operating section 	<ul style="list-style-type: none"> • 18tph to Old Oak Common from Paddington • 28tph in the central operating section and increasing services to Abbey Wood to 14tph

- 4.7 Further planning and development this year is required to determine the precise implementation plan for the proposed enhancement options and agree through our established governance on the specific interventions. Implementing both

packages would require a fleet larger than 80 trains and has not been modelled or appraised at this time.

- 4.8 The aim will be to maximise the benefits while taking advantage of the implementation opportunities. We have more direct control over the implementation opportunities for the eastern branches that involves increased services in the core and paths already available on the Great Eastern route. Additional services on the west will have more interfaces with Network Rail and freight and we will look to optimise the available capacity on the Great Western route and the use of existing reversing locations.
- 4.9 An initial appraisal shows that both packages have strong business cases with very high (greater than four to one) benefits-to-cost ratio (BCR). Further development of the integration costs would confirm the BCR and the overall value for money of the combined package of 10 trains, which is expected to remain very high.
- 4.10 The additional service enhancements included in the two packages will provide service level increases over a larger geographic extent than for the service level increase to Old Oak Common alone and will benefit a high volume of passengers. In addition, the increased services are expected to mobilise new passengers to the Elizabeth line. Increasing services to the east and in the central operating section are expected to add an additional 22 million passengers per year and increasing services to West Drayton is expected to add an additional 16 million passengers per year.
- 4.11 Although the areas along the Elizabeth line are already well connected and desirable, increases in frequency will enable further housing development or encourage development to happen more quickly. Particular opportunity areas include Old Oak Common, Stratford, Custom House, Woolwich and Abbey Wood.

5 Commercial arrangements

- 5.1 To procure additional trains that are compatible with the existing fleet and the Elizabeth line's unique infrastructure at a reasonable cost, we have agreed with Alstom a change to the existing contract to extend the backstop date allowing TfL to exercise further options up to 13 more class 345 trains.
- 5.2 Alstom's costs are split across the financial years 2024/25 to 2027/28. Milestone payments will be made on achievement of key programme milestones, as follows:
- (a) Notice to Proceed being issued;
 - (b) Alstom placing equipment orders with their sub-suppliers;
 - (c) carriage bodysHELLS delivered to the assembly line for fit out;
 - (d) individual trains with relevant approvals for operation, with evidence of compliant technical performance, and defect free pre-delivery testing; and
 - (e) trains achieving an in-service reliability threshold.

- 5.3 Costs to enable stabling of additional units at the Westbourne Park turnaround facility are under review along with other options on the network.
- 5.4 Alstom have indicated that an order for 10 trains would be manufactured as a priority and that trains would be available from Quarter 2 2026. Alstom have indicated that they could store trains after manufacturing if needed to help ease the transition into operations. However, our preference is to accept them into operational service as soon as available. We anticipate that short-term capacity is available at the depot for stabling while the permanent capacity is provided at Westbourne Park or other location on the network.

List of appendices to this report:

Appendix 1 that contains supplementary information that is exempt from publication.

List of Background Papers:

Paper submitted to the meeting of the Programmes and Investment Committee held on 6 December 2023: Elizabeth Line: Service Frequency Increase for High Speed 2

Contact Officer: David Rowe, Director of Investment Planning
Email: David.Rowe@tfl.gov.uk