

Transport for London

Rail and Underground Panel

Subject: Major Rail Projects Update (HS2, Crossrail 2, Northern Line Extension)

Date: 5 July 2012

1 Purpose and Decision Required

- 1.1 This paper is intended to provide an update to the Panel on the Northern Line Extension (NLE), High Speed 2 (HS2), and Crossrail 2 projects.
- 1.2 The Panel is asked to note this paper. These projects will be separately reported to the Projects and Planning Panel, Finance and Policy Committee and TfL Board as appropriate.

2 Background

- 2.1 London is growing quickly, with 1.2 million more people living in the Capital by 2031, plus 800,000 new jobs forecast. This growth is equivalent to a city the size of Birmingham being added into London over the next 20 years. Even with currently committed transport investment, this level of growth will lead to serious increases in crowding on the National Rail and Underground networks.
- 2.2 To help support this growth, the Mayor's Transport Strategy (MTS) identifies the need for a number of rail projects in the longer-term to provide additional rail capacity, including Crossrail 2 and the NLE. The case for Crossrail 2 is further strengthened by a significant increase predicted in National Rail use on lines into the major London terminals. This includes the proposed HS2 line into Euston, a scheme being developed by HS2 Limited, but for which TfL must develop various proposals to address the Mayor's concerns and the implications for London's transport network.

3 Major Rail Project Updates

Northern Line extension

- 3.1 The NLE is a proposed extension of the Charing Cross branch of the Northern line from Kennington to Battersea via an intermediate station in the Nine Elms area. The route is outlined in Figure 1. As identified in the Vauxhall Nine Elms Battersea (VNEB) Opportunity Area Planning Framework (OAPF) transport study, the NLE is fundamental to enable the Opportunity Area to develop in line with the Mayor's aspiration to provide an additional 16,000 homes and 25,000 jobs.
- 3.2 The cost for delivering the NLE including risk and optimism bias is estimated at up to £900m and the BCR is approximately 1.5:1. However, once wider economic benefits are included the ratio ranges between 2.8:1 and 9.1:1

(dependent on assumptions as to whether workers are 'new' or relocated from other parts of the London / UK).

- 3.3 The Chancellor's 2011 Autumn Statement confirmed Government's support for the NLE, and stated that the Government would consider creating a new Enterprise Zone at Battersea and allowing local borrowing against the Community Infrastructure Levy (CIL) to support this. This is subject to a commitment by April 2013 from a developer to develop the Power Station site and make agreed Section 106 contributions. The existing section 106 agreement for the Power Station site includes a commitment to contribute in excess of £200m towards the capital cost of the NLE project.
- 3.4 The administrators for the Battersea Power Station site have announced that the Malaysian company, SP Setia, is their preferred bidder for development of the site. Preliminary discussions suggest that SP Setia intend to proceed with developing the scheme that has received planning consent, which is dependent on the NLE being in place.
- 3.5 TfL, with the GLA, and the London Boroughs of Wandsworth and Lambeth, is currently in the process of working up a funding and financing solution. This would use incremental business rates generated within an Enterprise Zone for the area and developer contributions (Section 106 / and future contributions) as funding streams against which to repay the borrowing required to pay for the upfront capital construction costs. Assessments to date show that there is sufficient income from existing Section 106 contributions and future business rates and CIL contributions across the Opportunity Area to fund the NLE.
- 3.6 TfL is now progressing work on preparing a Transport and Works Act Order (TWAO) application, up to a point where an application could be made, subject to an agreed financing and funding position. Working closely with both local authorities and local landowners, it is intended that TfL should be ready to submit the TWAO by April 2013 subject to approval from the Board. The actual submission would also require consent from the Mayor.
- 3.7 Extensive public and stakeholder consultation and engagement are imperative to submitting a successful TWAO application. Two consultations were held in 2011, with a public consultation on the preferred route alignment held in summer 2011 and a detailed consultation on temporary ventilation shafts held in late Autumn 2011. TfL will be undertaking further engagement on the proposals with the local communities along the route and local stakeholders later in the year. As stated above, it is currently anticipated that a TWAO application could be submitted by April 2013, although this will depend on the timescales for securing an agreement with the new landowner of the site.
- 3.8 Powers decisions and timescales are subject to external parties but key milestones for the NLE are:
 - (a) Further Public engagement – local events June 2012
 - (b) Finalisation of Business Case and consultation November 2012
 - (c) Agree funding principles December 2012
 - (d) Potential submission of TWAO April 2013
 - (e) Construction starts Spring 2016

Crossrail 2

- 3.9 In 2009, the DfT asked the Mayor to review the safeguarding for the Chelsea Hackney Line (also known as Crossrail 2) (see figure 2), allowing a five year timeframe for the review. This provided TfL with the opportunity to review the need for the scheme and safeguarding in the context of the 2010 MTS and the 2011 London Plan.
- 3.10 The first stage of this review was to confirm the need for new rail / underground capacity in a broad south west to north east corridor. Future growth in London as per the London Plan is such that additional rail / underground capacity will be necessary over and above that already currently committed to address key issues: congestion on the Underground network; the increase in demand at London's main national rail termini; lack of accessibility and connectivity in parts of London; congestion on major radial rail routes and the need to support development, regeneration and air quality strategies.
- 3.11 Furthermore, the Government's plan, to develop a national high speed rail network centred on Euston station as the London terminus, creates an additional pressure on London's transport network, particularly dispersal at Euston. The current safeguarded route does not serve this station.
- 3.12 An extensive optioneering exercise has been undertaken to determine the best alignment for Crossrail 2. The number of options have been reduced from over 100 in late 2010, to 11 in the spring of 2011, to a shortlist of three broad options. These options include the original safeguarded (Chelsea – Hackney) alignment and two new options, which are being considered in more detail as follows:

Option A

A London focused metro scheme between Seven Sisters and Clapham Junction via Euston and Victoria, providing key interchange with national rail services at each end. The approximate cost of this is between £9bn and £11bn at today's prices and including risk and optimism bias. The indicative route is shown in Figure 3.

Option B

A broader regional scheme more akin to Crossrail 1, which follows a similar alignment as Option A in the core section but connects with national rail services to the north and south west. This would connect some of the services on the South West Trains network directly into central London via a similar tunnel alignment as Option A, with services on the Lea Valley Lines to the north. The approximate cost of this is between £13bn and £16bn at today's prices and including risk and optimism bias.

Option C

Safeguarded alignment linking Wimbledon to Epping. The approximate cost of this is between £12bn and £15bn at today's prices and including risk and optimism bias.

- 3.13 Option B is preferable to Option C as it provides greater and wider benefits. As Option A and B follow the same core alignment through the centre, there is potentially an opportunity to phase delivery of Option B with Option A being the initial phase, created through the construction of the new tunnel with the regional connections delivered in later phases. The regional scheme, while higher cost and more complex in terms of interfaces, has the potential to generate significantly more benefits by addressing crowding/congestion on both the Underground network and critical parts of the national rail network such as South West trains. In the absence of this scheme, there are limited options available for providing additional capacity on South West Trains. Network Rail is supportive of a regional scheme and has included the proposal in its London and South East Route Utilisation Strategy (L&SE RUS).
- 3.14 In late 2011, the Mayor asked TfL to continue investigation of both Options A and B and report back by the end of 2012, with a view to refreshing the Crossrail 2 safeguarding in 2013/14 (a task to be undertaken in partnership with the DfT). Further modelling, engineering and wider impacts assessment is under way that will reassess the costs, benefits and impacts of each of the alignment options. The most recent initial BCR for Option A ranges from 1.4:1 – 1.6:1 and for Option B ranges from 2.2:1 – 2.5:1. These estimates include an initial estimate of wider benefits but critically do not include the additional demand at Euston from HS2 as these confirmed figures are still awaited from HS2 Limited. Option C has a BCR range of 1.3:1 – 1.5:1.
- 3.15 A critical issue is the need to update the current DfT safeguarding for this route to reflect the revisions to the tunnel alignment in central London in the vicinity of Euston and King's Cross. The full phase of HS2 is dependent on additional rail capacity being in place at Euston and the design of the new HS2 terminus at Euston has to allow for a Crossrail 2 station. This design work is currently under way but provision of this in the HS2 scheme requires a change in the remit for HS2 and TfL is lobbying the DfT for this. This needs to be accepted by September 2012 to influence the 'red line' boundary for HS2 (see HS2 update below).
- 3.16 Stakeholder engagement with bodies such as London First (who are producing their own report on the scheme) and Local Authorities will inform a preferred option report to the Mayor in late 2012.
- 3.17 If the project were to progress beyond the safeguarding refresh, then a broad programme could be as follows:
- | | | |
|-----|--|------|
| (a) | Safeguarding refresh | 2014 |
| (b) | Submit Powers application | 2019 |
| (c) | Powers decision | 2021 |
| (d) | Construction (Euston box earlier as part of HS2) | 2023 |
| (e) | Opens | 2033 |

High Speed 2

3.18 The Government announced in January 2012 its intention to proceed with plans for a high speed network to be delivered in two phases:

Phase 1: London to Birmingham by 2026; and

Phase 2: Birmingham to Leeds and Manchester by 2033

3.19 The current remit for HS2 as set by the DfT is narrowly defined and does not include certain conditions that the Mayor has insisted are essential in order to support the scheme fully. In order to meet the Mayor's stated conditions for HS2, the following changes are required to the scope of the HS2 project:

- (a) to ensure there is a high quality design for the station at Euston that includes provision for Crossrail 2 as well as sufficient capacity and the necessary facilities for other transport services;
- (b) to ensure the new station at Old Oak Common is planned to facilitate development of the surrounding area and to include in the scope of the new station, additional road and rail links to connect better the area to the rest of London. This specifically includes a new station on the West / North London lines, to be served by Overground trains;
- (c) to seek assurances that construction of HS2 at Old Oak Common will not prejudice the operation of the Crossrail depot and Crossrail service;
- (d) to secure a suitable link between HS2 and HS1 that does not impact on the future operation/capacity of the North London Line; and
- (e) to minimise the environmental impacts of HS2 on west London residents.

3.20 These changes need to be agreed by the Secretary of State in the next two months in order to be incorporated in the current design process. TfL has started working with HS2 Limited on the next phase of their work including developing a set of functional requirements, consistent with Mayoral requirements, setting out all of the issues to be addressed by the HS2 project. TfL is also preparing the necessary supporting material to make the case for these amendments.

3.21 HS2 Limited is working to a very tight timescale as set out below:

Stage 1: April 2012 - November 2012

Progress the current plans to fix an initial design and define the "red line" for the purpose of safeguarding and consultation.

Stage 2: December 2012 – March 2013

Progress the initial design and develop further details regarding HS2 infrastructure and undertake the environmental assessment.

Stage 3: April 2013 – October 2013

Continue to develop the design and reporting of the Environmental Statement and complete documents for the Hybrid Bill submission for submission in October 2013.

3.22 A summary of the current status of the key issues for London is given below.

Euston

- 3.23 The proposals for HS2 at Euston will lead to a major increase in the number of passengers using Euston mainline station with the largest increase associated with Phase 2 of HS2. Indicative analysis provided to HS2 as part of the Mayor's 2011 consultation response, estimates that demand will more than double from 23,500 Euston National Rail passengers (2010 AM Peak) to more than 50,000 once HS2 Phase opens in 2033, even with 30 per cent of London-bound passengers interchanging at Old Oak Common. This will require significant enhancements to onward transport links which, with growth, will be capacity constrained by 2031 and unable to cope with the significant increase in demand resulting from HS2. This is despite the tube upgrade, Thameslink and Crossrail schemes. In particular, the Victoria and Northern (City Branch) lines will suffer from serious congestion with passengers experiencing serious delays in getting onboard already crowded trains.
- 3.24 TfL has provided HS2 Limited with an indicative list of requirements to address these impacts adequately and meet TfL best practice standards on a variety of matters such as LU station sizing, bus station design and cycling provision. TfL is also pressing the DfT to amend the HS2 remit to include provision for Crossrail 2 to provide sufficient capacity to cater for London's background growth as well as the impact of HS2.
- 3.25 TfL is also working with the London Borough of Camden through the OAPF process to ensure that HS2 can act as a catalyst for the development of the surrounding area, by incorporating significant improvements to the public realm, including high quality walking and cycling routes through the station site linking east, west, north and south (in particular to reduce the severance of Euston Road).

Old Oak Common

- 3.26 The current DfT remit for Old Oak Common is primarily designed to allow for interchange between HS2 and other rail services including Crossrail, Heathrow Express and Great Western Main Line services without giving any consideration to broader access issues. However, the station is located in a major growth area and is seen by the GLA and the local Boroughs as a catalyst for growth and will be a key transport node that has to be connected to the existing transport network.
- 3.27 A new station served by London Overground services from Clapham Junction, Richmond and north London would ensure this station is properly connected to west London and beyond, creating a new interchange for north, west and south London, improving accessibility and further reducing demand at Euston station. This would also serve development of the surrounding area. These additional rail links were identified in the Network Rail 2011 L&SE RUS report. In addition to this, there is a need to ensure the new station at Old Oak Common is connected to the strategic road network.
- 3.28 The HS2 plans for Old Oak Common are dependent on Crossrail services being extended from Paddington to Old Oak Common. TfL is working with HS2 to ensure any Crossrail impacts are identified and mitigated and the longer term

potential for a western extension of these Crossrail services from Old Oak Common is protected.

HS2 – HS1 Connection

- 3.29 Following criticism from TfL and Network Rail about the original HS2 proposal, the DfT has now asked HS2 Limited to review further options for the HS2-HS1 connection, which seek to reduce the impact on the North London Line through Camden. TfL believes very strongly that if a link between HS2 and HS1 is necessary, then this should be delivered in a way that does not impact on current London Overground operations or prevent future enhancements on this line taking place. Following completion of its review, HS2 Limited will recommend an alternative solution before the initial scheme design freeze in October 2012.

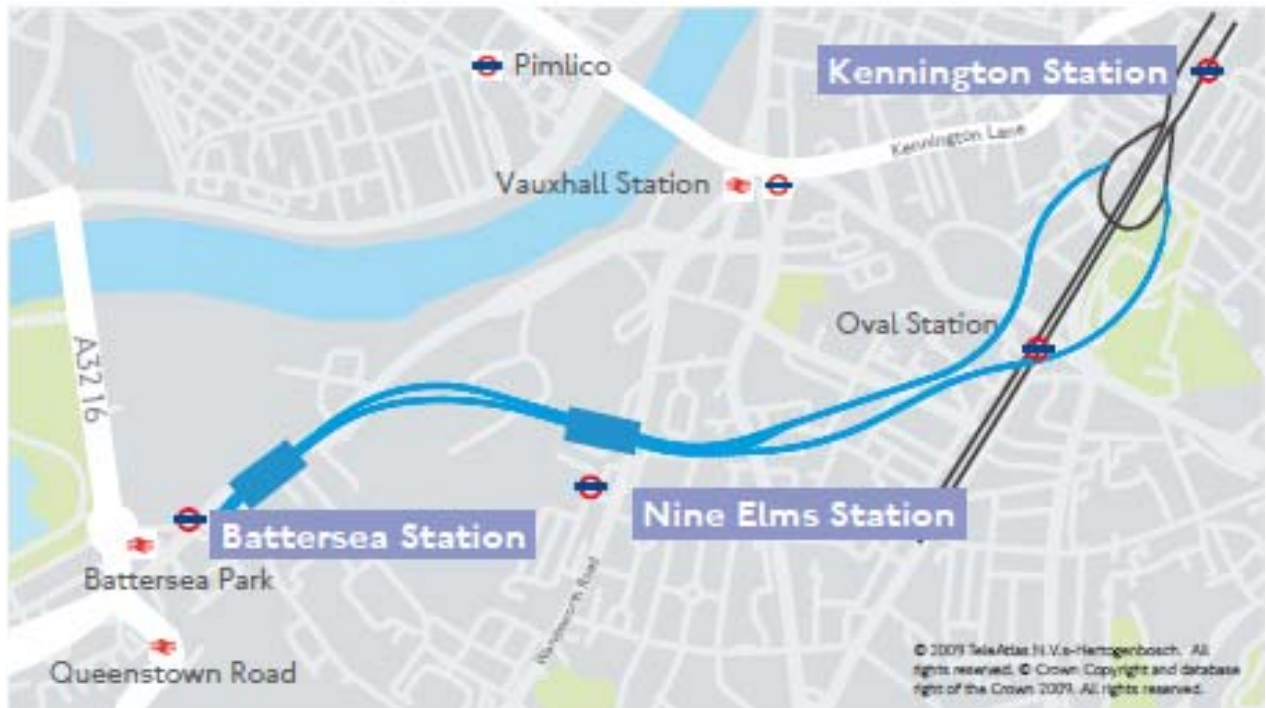
4 Recommendation

- 4.1 The Rail and Underground Panel is asked to NOTE this paper.

5 Contact

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Figure 1: The Northern Line Extension to Battersea – endorsed route



Crossrail 2 Route Option Maps

Figure 2: 1991 / 2008 Chelsea Hackney Line safeguarded alignment

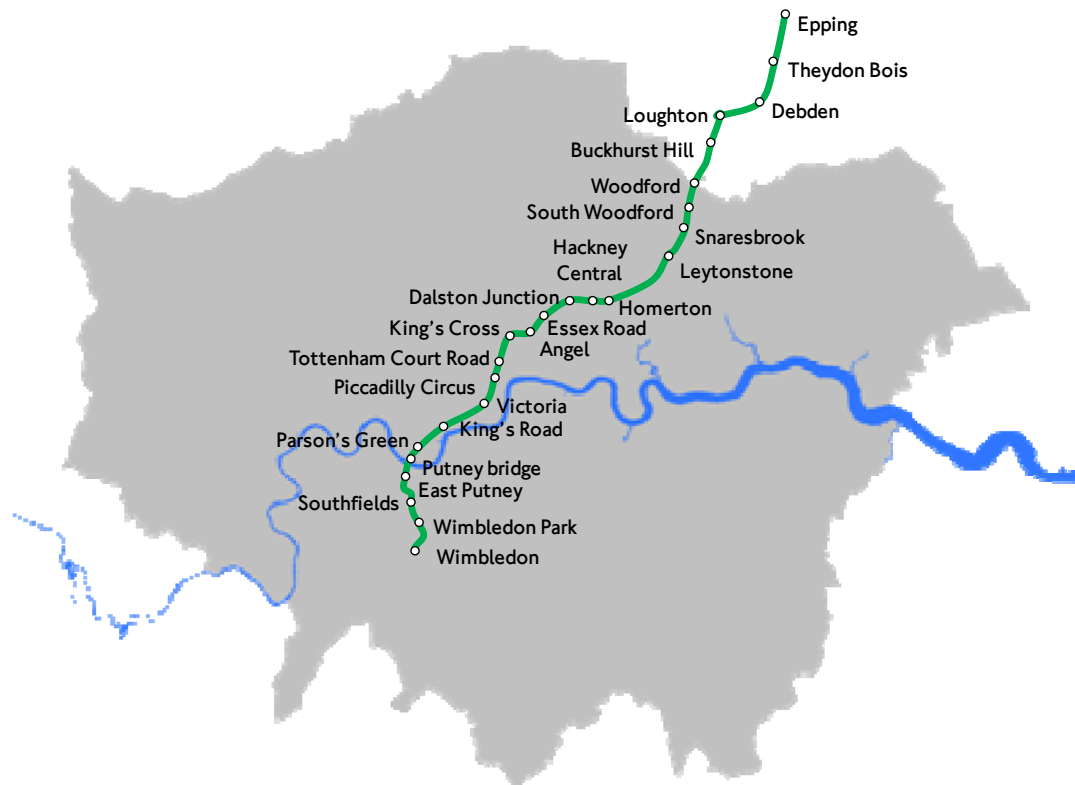


Figure 3: Option A –Metro Scheme

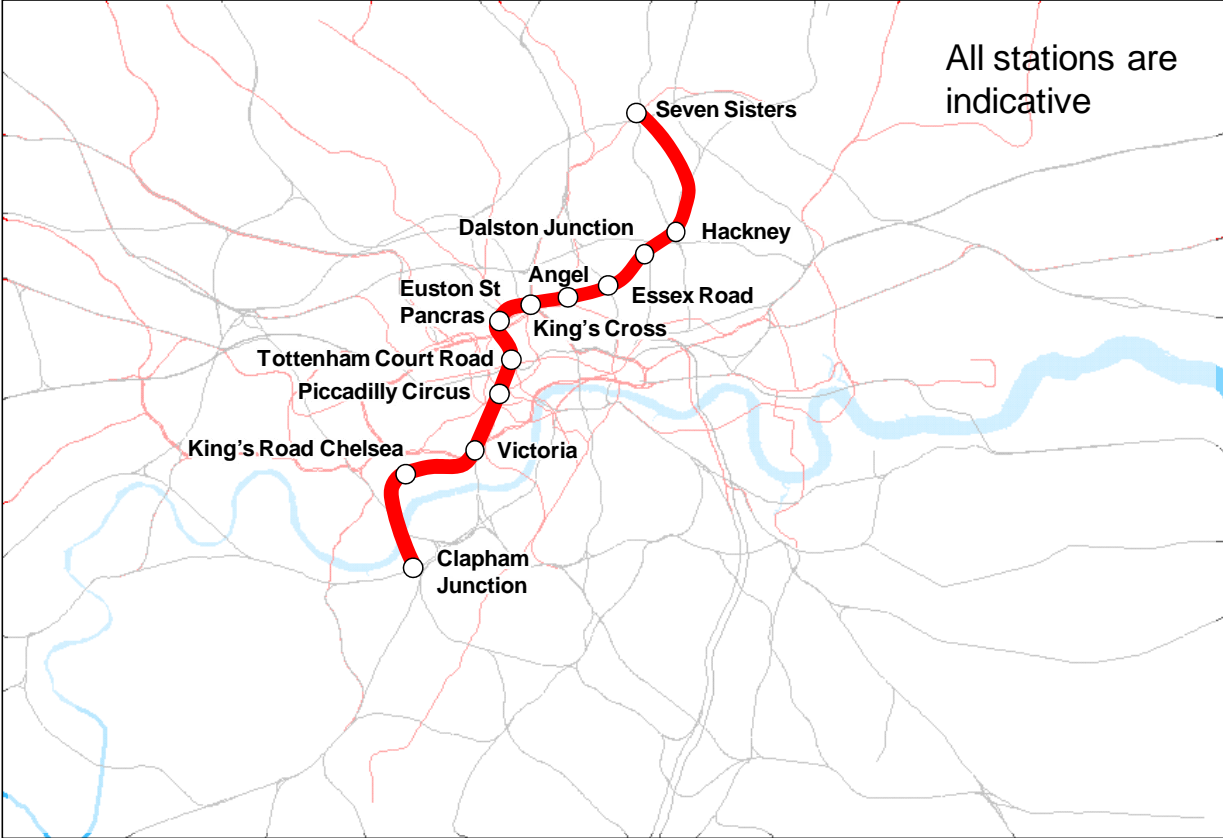


Figure 4: Option B – Regional Scheme

