

HS2 Employment and Training Opportunities

September 2016



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Albion Economics



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Task

Albion Economics Ltd was asked to undertake independent research to establish the short and medium term employment and training impacts of the HS2 high speed rail project.

This has required an update to research work previously undertaken for Greengauge 21¹, to develop:

- (i) an estimate of the number of HS2 jobs that are already a subject of issued tenders—that is to say jobs that would be lost if the project was now to be cancelled;
- (ii) the number of jobs that would be created over the period between now and 2020 (the term of this parliament);
- (iii) the quantification of apprenticeship/training opportunities over the period to 2020.

The outputs from the work are headline numbers of job and training opportunities, representing a 'snapshot' of the status of the project in this regard.

The HS2 project has been developed as a long-term solution to the capacity constraints that exist for rail travel between the major cities of Great Britain. This is in response to unprecedented growth in the demand for intercity rail travel. For example, travel on the West Coast Inter City Mainline franchise—which links London, Birmingham, Manchester, Liverpool and Glasgow—has grown from 13m to 35m

¹ <http://www.greengauge21.net/publications/hs2-jobs-analysis/>

Background

passenger journeys per annum since 1997². HS2 services will provide faster links and more seats between cities, and allow more trains to run on existing lines to cater for commuter travel growth.

Phase 1 of the project between London and Birmingham is very well advanced in the planning and design process. The Phase 1 Bill is scheduled to receive Royal Assent later this or early next year. Construction would start next year with services due to commence in 2026. In advance of securing legal powers, tender contracts have been issued for enabling works and for seven packages of substantial civil engineering works. This is to ensure that the construction programme can hit the ground running once planning powers are in place and detailed design finalised.

Route options are still being finalised for Phase 2 of the project, initially to Crewe by 2027 and to Leeds and Manchester by 2033. A confirmed route is expected to be announced before the end of 2016. Planning for Phase 2 is well advanced and contracts are out to tender for professional and technical services in support of this process.

The scope of this exercise focuses on the planning, design and construction phases of the project in the short and medium term to 2020.

² https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/480647/annex-demand-and-capacity-pressures.pdf p.5

Method

A number of steps were undertaken to establish the required forecasts; each is briefly set out below.

Update of HS2 jobs forecast model

This was developed by Albion Economics in 2013 to identify the very wide range of jobs and opportunities associated with the project.

The scope of the model is:

- all direct employment for the planning, design, construction and long-term renewals of the infrastructure and trains;
- indirect jobs from the supply chain;
- permanent jobs for the operation and maintenance of the system;
- all expected employment within the station footprints, including retail and catering units;

measured in person-job years across the planned economic life of the project.

The work does not attempt to measure the induced jobs impact in the general economy of multiplier spending from HS2 direct and indirect jobs and incomes. It also excludes any regeneration impact to local economies in cities served by HS2, outwith station boundaries.

The model draws upon a wide range of data sources and evidence. The approach has been to estimate job calculations from 'bottom up' principles wherever possible. Detailed relationships have been developed between cost budgets, physical outputs, wage rates and employment, by type of job and skill level, drawing on a number of

evidence sources and 'coalface' industry expertise. This includes NSAR's published work on jobs and skills in the railway industry, as well as benchmark evidence from other High Speed Rail projects, including HS1 and TGV. The calculations utilise disaggregate published budget data from HS2 Ltd based on a cost and design freeze, together with other cost information provided from the same source.

The model has been updated to reflect more recent detailed data on relationships between budgets, outputs and demand for labour, by type of job, which is now modelled at a more disaggregate level. It also reflects the current delivery programme for the HS2 project. These updates focus specifically on those outputs required for this research commission. This gives an overall forecast for the scale timing of jobs across the period to 2020 (and beyond).

Review of procurement approach and tender schedule to date

Research was done to identify the range of contracts out to tender, their timing and budgets.

Enabling Works contracts to the value of around £900m were identified. These are in three lots and cover a broad range of tasks, disciplines and jobs, ranging from environmental mitigation work and archaeological investigations through to utilities diversions and preparatory groundwork. Seven joint venture entities were shortlisted for these three packages of enabling works. Decisions on contract awards are expected at the end of October this year.

Main Civil Engineering contracts out to tender were identified as follows:

Lot S1

'Euston Tunnels and Approaches' (£600m – £900m);

Lot S2

'Northolt Tunnels' (£850m – £1.4bn);

Lot C1

'Chiltern Tunnels and Colne Valley Viaduct' (£800m – £1.3bn);

Lot C2

'North Portal Chiltern Tunnels to Brackley' (£800m – £1.3bn);

Lot C3

'Brackley to Long Itchington Wood Green Tunnel South Portal' (£600m – £900m);

Lot N1

'Long Itchington Wood Green Tunnel to Delta Junction / Birmingham Spur' (£900m – £1.5bn);

Lot N2

'Delta Junction to West Coast Main Line Tie-in' (£800m – £1.3bn).

A total of nine consortia are preparing bids for these packages of work.

A number of other design, planning and professional services contracts were identified, including:

- engineering delivery partner role awarded to a CH2M-led team in March 2016 (£350m);
- development partner role for Phase 2 (£170m);
- civils design and environmental services contract for Phase 2 (£350m).

Interviews with key players

A number of High Speed Rail Industry Leader members made themselves available for consultation on key issues. Representatives of each of the civil engineering, construction and rolling stock sectors were interviewed. Issues covered included bid and resource planning; emerging additional contract opportunities; and, apprenticeship training and the role of the National High Speed Rail College.

All interviews were undertaken on a non-attributable basis and on the understanding that quantitative information shared would remain confidential. The outputs from the discussions have provided evidence and inputs to the overall forecasting exercise.

Findings

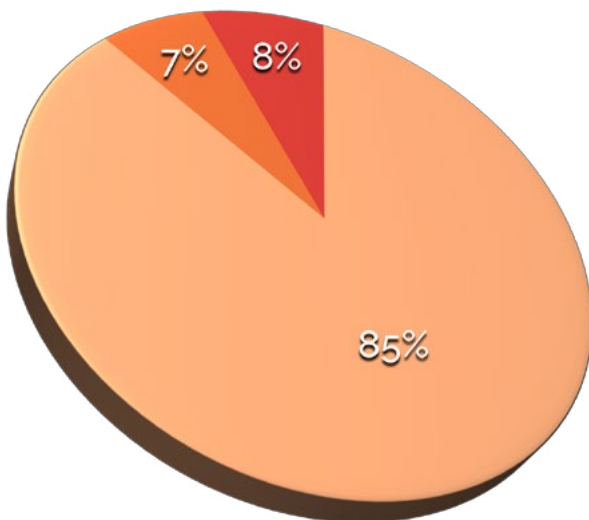
The estimates presented here have been informed by each of the tasks set out above. They are, however, independent estimates of Albion Economics Ltd, using the best information available and professional judgement.

The shorthand of "jobs" here is defined as expected labour demand for fulltime posts.

Committed jobs

These are the jobs associated with contracts already let or in the process of being tendered by HS2 Ltd. They represent a 'central case' which does not reflect the uncertainty around the range in estimated contract values. The majority (85%) are associated with the large civil engineering contracts currently out to tender.

Committed jobs
14,440



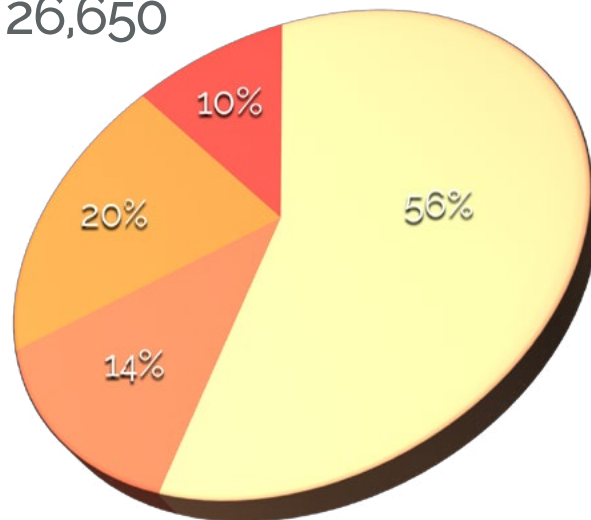
- Civil contracts
- Enabling works
- Design and professional services

Peak job requirement 2017–2020

These represent the forecasts for all peak labour demand by different category of job. Note that the peak for different categories occurs at different times between now and mid-2020.

The majority of jobs are construction operatives across a range of trades and skills. This incorporates the station design and construction contracts for Phase 1 that are expected to come forward by 2020, in accordance with the current programme. It also includes planning and design works for Phase 2 of HS2.

Peak job requirement 2017–2020
26,650



- Construction operatives
- Designers
- Senior managers and non-construction staff
- Construction management



Apprentices

Apprentice opportunities will play a vital role in ensuring that skilled labour supply is available to meet the expected demand for jobs on the project. The National High Speed Rail College at Birmingham and Doncaster has a key role to play, particularly in the training of skilled railway systems staff.

It is expected that **2,000** new apprenticeships will be created at the NHSRC to meet demand for jobs. In addition, major employers in the railway systems, rolling stock and civil engineering sectors have their own apprentice programmes, from which staff will be drawn to fill jobs on HS2.

Overall in Phase 1, if apprenticeship levels are achieved at the levels suggested by the Transport Infrastructure Skills Strategy³, then we would expect HS2 Phase 1 to support between 5,000 and 9,000 apprenticeships, reflecting the scale of works involved.

³ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/495900/transport-infrastructure-strategy-building-sustainable-skills.pdf

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