

## HIGH SPEED TWO PHASE 2a INFORMATION PAPER

### H3: EDUCATION PROGRAMME

This paper outlines HS2 Ltd's Education Programme.

It will be of particular interest to those potentially affected by the Government's proposals for high speed rail.

This paper was prepared in relation to the promotion of the High Speed Rail (West Midlands-Crewe) Bill which is now enacted. It was finalised at Royal Assent and no further changes will be made.

If you have any queries about this paper or about how it might apply to you, please contact the HS2 Helpdesk in the first instance.

**The Helpdesk can be contacted:**

**by email:** [HS2enquiries@hs2.org.uk](mailto:HS2enquiries@hs2.org.uk)

**by phone (24hrs):** 08081 434 434  
08081 456 472 (minicom)

**or by post:** High Speed Two (HS2) Limited  
2 Snowhill, Queensway  
Birmingham  
B4 6GA

Version 1.2

Last updated: 11 February 2021

# H3: EDUCATION PROGRAMME

## 1. Introduction

- 1.1. High Speed Two (HS2) is the Government's proposal for a new, high speed north-south railway. The proposal is being taken forward in phases: Phase One will connect London with Birmingham and the West Midlands. Phase 2a will extend the route to Crewe. Phase 2b will extend the route to Manchester, Leeds and beyond. The construction and operation of Phase One of HS2 is authorised by the High Speed Rail (London – West Midlands) Act 2017.
- 1.2. HS2 Ltd is the non-departmental public body responsible for developing and promoting these proposals. The company works to a Development Agreement made with the Secretary of State for Transport.
- 1.3. In July 2017, the Government introduced a hybrid Bill<sup>1</sup> to Parliament to seek powers for the construction and operation of Phase 2a of HS2 (the Proposed Scheme). The Proposed Scheme is a railway starting at Fradley at its southern end. At the northern end it connects with the West Coast Main Line (WCML) south of Crewe to allow HS2 services to join the WCML and call at Crewe Station. North of this junction with the WCML, the Proposed Scheme continues to a tunnel portal south of Crewe.
- 1.4. The work to produce the Bill includes an Environmental Impact Assessment (EIA), the results of which are reported in an Environmental Statement (ES) submitted alongside the Bill. The Secretary of State has also published draft Environmental Minimum Requirements (EMRs)<sup>2</sup>, which set out the environmental and sustainability commitments that will be observed in the construction of the Proposed Scheme.
- 1.5. The Secretary of State for Transport is the Promoter of the Bill through Parliament. The Promoter will also appoint a body responsible for delivering the Proposed Scheme under the powers granted by the Bill. This body is known as the 'nominated undertaker'. The nominated undertaker will be bound by the obligations contained in the Bill and the policies established in the EMRs. There may be more than one nominated undertaker.
- 1.6. These information papers have been produced to explain the commitments made in the Bill and the EMRs and how they will be applied to the design and construction of the Proposed Scheme. They also provide information about the Proposed Scheme itself, the powers contained in the Bill and how particular decisions about the Proposed Scheme have been reached.

---

<sup>1</sup> The High Speed Rail (West Midlands – Crewe) Bill, hereafter 'the Bill'.

<sup>2</sup> For more information on the EMRs, please see Information Paper E1: Control of Environmental Impacts.

## 2. Overview

- 2.1. This information paper outlines the approach and work of the Education Programme during the construction of HS2.
- 2.2. This Programme is already operational and has so far engaged with more than 80,000 students at over 300 educational events.

## 3. Education Programme: objectives and delivery approach

- 3.1. The design, planning, construction, operation and maintenance of HS2 will create a significant number of employment opportunities. At the peak of construction it is forecast that we will need some 30,000 men and women to design and build the railway, with at least 2,000 apprentices taking their first career steps or re-training on the project. The sector faces a number of employment challenges: an ageing workforce; a need to upskill the current workforce; and a shortfall in the number of people entering the highly skilled jobs need to deliver the planned infrastructure projects.
- 3.2. To support the forecast employment growth and the challenges outlined above, HS2 Ltd is working to attract the individuals it needs to fill the new jobs and roles which will be created. HS2 Ltd and its supply chain will seek out new ways to bring new people into the sector.
- 3.3. The Education Programme is an integral element of HS2 Ltd's broader Skills and Employment Programme. It aims to raise interest in the sector among young people, their teachers and their parents through access to learning materials and direct engagement opportunities with HS2 and its supply chain. These activities showcase the types of skills required to create a high speed railway, the range of jobs and professions that will work on it and the STEM (Science, Technology, Engineering and Maths) subjects that are needed to get into these careers.
- 3.4. The Education Programme is a national programme which nevertheless has due consideration of specific local issues and needs along the route. It prioritises schools in regions that will benefit most from the skills opportunities HS2 will create with a focus on schools that are in more deprived areas and score below average for educational attainment.
- 3.5. The Programme uses 'Education Ambassadors': HS2 Ltd representatives who are passionate about their profession and have volunteered to help attract the next generation into their industries. They support a range of events with schools to help tell the story about the diversity of jobs and skills that will be required to plan, build and operate HS2. HS2's Education Ambassadors are registered as part of the national STEM Ambassador programme.

## 4. STEM Workshops

- 4.1. HS2 visit primary and secondary to deliver STEM workshops that use hands-on activities to inspire young people to take an interest in STEM subjects and careers.

- 4.2. From 2014 – 2017, workshops were delivered in secondary schools by the Smallpiece Trust on behalf of HS2 Ltd and supported by Education Ambassadors. During this period, 176 STEM Inspiration Days were delivered to secondary schools along the Phase One and Phase Two routes. These were all-day events delivered to groups of approximately 60 children, aged 11-14. Students explored railway engineering through 'design and build' activities. These gave participants an insight into the range of exciting and rewarding career options that high speed rail can offer.
- 4.3. From 2018 – 2020, workshops were delivered in secondary schools by Zinc Communicate on behalf of HS2 Ltd and supported by Education Ambassadors. During this period, 80 'EPIC' workshops were delivered to secondary schools along the Phase One and Phase Two routes. These were all-day events delivered to groups of approximately 60 children, aged 11-14. Through collaborative STEM-linked activities students developed the transferrable skills needed in transport and infrastructure careers. Students will also use augmented reality apps, highlighting the forward facing, hi-tech nature of the transport infrastructure sector.
- 4.4. From 2018 – 2020 workshops have been delivered in primary schools by Hopscotch Consulting on behalf of HS2 Ltd and supported by Education Ambassadors. By the end of the 2019-20 academic year 50 'Zoom Rail' workshops were delivered to primary schools along the Phase One and Phase Two routes. 'Zoom Rail' is a half day workshop that gives students the challenge of planning, designing and building a fictitious railway. The programme aims to promote an awareness of the value of STEM subjects in connection with future careers such as engineering, architecture and ecology.
- 4.5. We are currently planning procurement to find contractors to help us deliver STEM workshops in primary and secondary schools from April 2021. A single provider will deliver both the 'Zoom Rail' workshops to primary schools and 'EPIC' workshops to secondary schools in each region. Separate regionals packages will be offered so that we can find suppliers who have good links with schools in each region.

## 5. Careers Education

- 5.1. HS2 Education Ambassadors can also support the delivery of careers education activities in schools. Working with a range of brokers, our employee volunteers have been present at careers fairs, enterprise days, mock interview workshops and networking events.

Support for careers education is being offered as part of the follow up to schools that have received an HS2 STEM Workshop, through liaison with our community engagement teams and to independent enquirers. We work with regional stakeholders, such as the Careers and Enterprise Company, to identify schools in most need of employer engagement. Careers support is targeted mainly at students aged 11-18.

- 5.2. During the 2019/20 academic year, 4 members of the Skills, Employment and Education team have become Enterprise Advisors for local schools. This role involves supporting a school with the strategic planning of their careers programme and helping to connect them to employer networks. We will be working with the Careers and Enterprise Company to promote the Enterprise Advisor role within HS2 Ltd and our supply chain.

## 6. Work Experience

- 6.1. HS2 Ltd supports the Social Mobility Foundation's Aspiring Professionals Programme by providing their talented A-level students with valuable work experience opportunities. Students on this programme are typically from low-income backgrounds and would not usually be able to secure vital work experience, because of barriers such as being the first generation in their family to go to university.

## 7. Information online

- 7.1. HS2 Ltd has a range of information available online which is showcased on a page for teachers, which is available here:  
<http://www.hs2.org.uk/in-your-area/education>
- 7.2. The page focuses in particular on the range of curriculum resources which can support the teaching of wide range of subjects, but also signposts careers information aimed at students which is presented through case studies and articles.
- 7.3. As a member of the Routes into Rail board, we are supporting the rail industry's collaborate efforts to promote jobs in the sector, and are contributing to a Routes into Rail website, which is due to launch during the 2020/21 academic year.

## 8. Curriculum Resources

- 8.1. A range of curriculum resources are available on our website, which teachers can use to deliver their own lessons using HS2 a context to explore curriculum areas.  
<http://www.hs2.org.uk/in-your-area/education>
- 8.2. Virtual STEM workshop. Aimed at 11-14 year olds. A collection of printable PDFs and PowerPoint presentations that enable teachers to deliver the activities developed for our 'EPIC' STEM workshop (see section 4.3)
- 8.3. Collaborate, Create, Communicate: Aimed at 14-16 year olds. HS2 Ltd and Transport for London have worked in partnership to develop a cross-curricular teaching resource based on the challenge of creating a river crossing. The project gives students the chance to take part in an engaging and challenging opportunity that will support subjects such as maths and science and develop key employability skills, such as communication.

- 8.4. Route Options: Aimed at 16-18 year olds. Students evaluate four possible routes for a new railway. With no perfect answer, they must weigh up pros and cons, balancing community, economic and environmental factors, and make a case for their choice. The project aims to develop students' analytical, reasoning and communication skills, set in the context of a realistic business scenario.
- 8.5. We are currently developing a range of curriculum activities, that will be made available on our website during the 2020/21 academic year. These will be short activities that a teacher could use in a single lesson or to set as a homework project. Students will be able to put the knowledge from STEM curriculum subjects into practice using work related contexts on the HS2 project, including design, archaeology and ecology.

## **9. More information**

More detail on the Bill and related documents can be found at:

[www.gov.uk/HS2](http://www.gov.uk/HS2).