



Phase 2b Western Leg Information Paper

E23: Approach to sustainability

This paper outlines HS2 Ltd's approach to sustainability.

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 (Crewe - Manchester) Bill. Content will be maintained and updated as considered appropriate during the passage of the Bill.

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.

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1 Introduction

- 1.1 High Speed Two (HS2) is the Government's scheme for a new, high speed north-south railway, which is being taken forward in a number of phases. Phase One will connect London with Birmingham and the West Midlands. Phase 2a will extend the route from the West Midlands to Crewe. The Phase 2b Western Leg will connect Crewe to Manchester. As set out in the Integrated Rail Plan, published in November 2021, HS2 East is proposed to deliver a new high speed line from the West Midlands to East Midlands Parkway.
- 1.2 HS2 Ltd is the non-departmental public body responsible for developing and promoting these proposals. The company works under the terms of a Development Agreement entered into with the Secretary of State for Transport.
- 1.3 The construction and operation of Phase One of HS2 is authorised by the High Speed Rail (London – West Midlands) Act 2017 and Phase 2a by the High Speed Rail (West Midlands – Crewe) Act 2021.
- 1.4 In January 2022, the Government introduced a hybrid Bill to Parliament (hereafter referred to as 'the Bill'), to seek powers for the construction and operation of the Phase 2b Western Leg (the Proposed Scheme), which is called the High Speed Rail (Crewe – Manchester) Bill. The Proposed Scheme comprises the Phase 2b Western Leg from Crewe to Manchester and several off-route works. It also facilitates the delivery of Northern Powerhouse Rail by providing the Crewe Northern Connection and junctions and other infrastructure to be used in future schemes.
- 1.5 The work to produce the Bill includes an Equalities Impact Assessment and 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), which set out the environmental and sustainability commitments that will be observed in the construction of the Proposed

Scheme. For more information on the EMRs please see Information Paper E1: Control of environmental impacts.

- 1.6 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'. There may be more than one nominated undertaker. However, any and all nominated undertakers will be bound by the obligations contained in the Bill, the policies established in the EMRs and any commitments provided in the information papers.
- 1.7 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.

2 Overview

- 2.1 This information paper explains HS2 Ltd's approach to sustainability.

3 Sustainability Policy

- 3.1 HS2's Sustainability Policy (which is included in Appendix A), sets out the five sustainability themes for the HS2 programme. These five themes are:
- Spreading the benefits: economic growth and community regeneration
 - Opportunities for all: employment and education
 - Safe at heart: health, safety and wellbeing
 - Respecting our surroundings: environmental protection and management
 - Standing the test of time: design that is future-proof

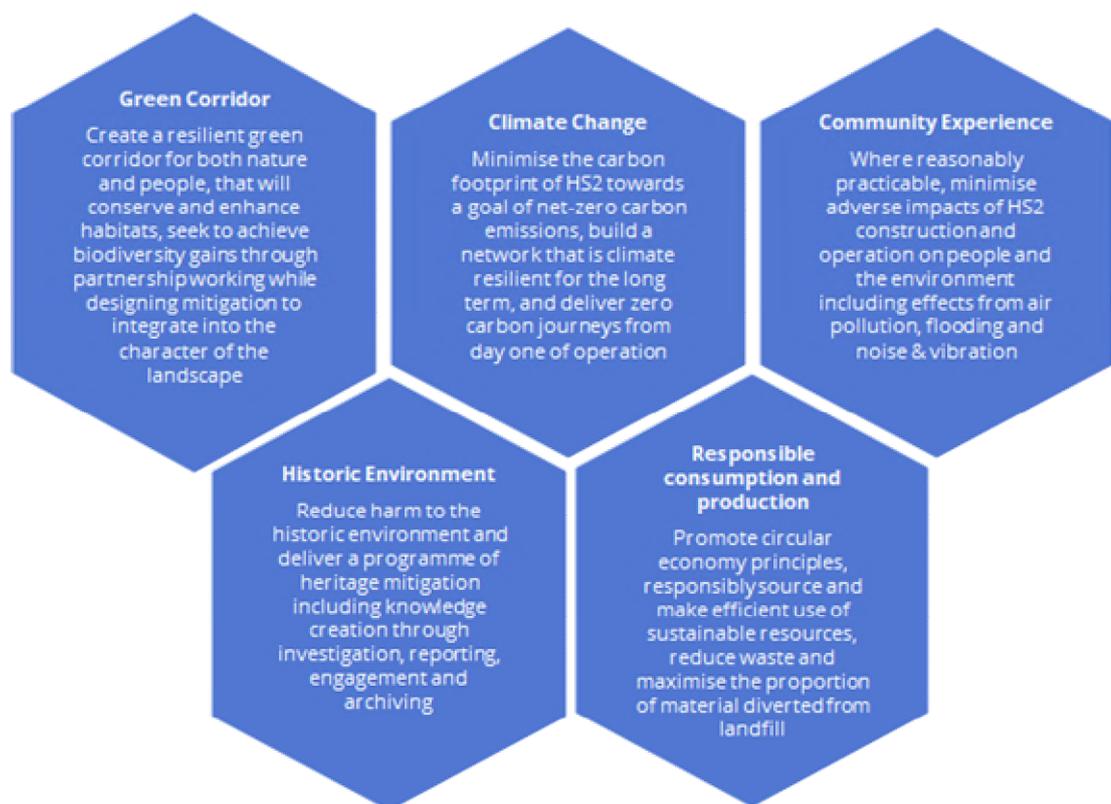
3.2 These Sustainability Policy themes are further described in our Sustainability Approach Document, a link to which can be found in the References section at the end of this paper.

4 Environmental policy

4.1 The HS2 Ltd Environmental Policy contributes to our strategic goal of creating an environmentally sustainable solution and being a good neighbour to local communities.

4.2 The policy sets out five objectives that seek to guide and manage our potential environmental impacts.

Figure 1: Five objectives in environmental policy



4.3 These Environmental Policy objectives are further described in Appendix B.

5 Environmental Sustainability Vision

5.1 Our Environmental Sustainability Vision is for HS2 to provide zero carbon rail travel for a cleaner, greener future. The document sets out our commitments around nature recovery and carbon emissions To contribute to nature recovery, HS2 Ltd aims for a net gain in biodiversity during construction and operation of the Proposed Scheme. With regards to our carbon aspirations to realise net zero during the construction phase of the Proposed Scheme and procure net zero electricity from day one of operation, further information can be found in the Net Zero Carbon Plan. A link to both the Environmental Sustainability Vision and the Net Zero Carbon Plan can be found in the References section at the end of this paper.

6 Emerging policies and action plans

6.1 HS2 Ltd's commitments in relation to sustainability and environmental performance will continue to evolve, as they do for any organisation managing these issues, in order to ensure continuous improvement. As a result, policies and objectives may be amended over time. Up to date information on developments in this area will be provided via updates to the information paper.

7 The circular economy

7.1 The circular economy is where resources are kept in use and at their highest value for as long as possible. It can therefore thrive in the long term. It does this by decoupling economic growth and development from the consumption of finite resources. The circular economy is an alternative to the traditional linear economy – a world of make, use, dispose.

7.2 The circular economy is more than simply recycling, it involves looking at the entire life cycle of any process, creating and optimising value by reconsidering what might be seen as waste or system losses and identifying opportunities to reduce these to achieve the best whole-life outcome.

7.3 HS2 Ltd has adopted a holistic strategy to realising the benefits of adopting circular economy principles which consists of:

- establishing principles
- embedding and communicating the principles
- coordinating an approach to realising opportunities
- recording and reporting outcomes

7.4 HS2 Ltd's circular economy principles, to be observed throughout the programme are:

- Keep resources in use for as long as possible;
- Recover and regenerate resources at the end of use;
- Keep resources at their highest quality and value at all times.

7.5 These principles are complemented by an over-arching ambition to "promote circular economy principles, responsibly source and make efficient use of sustainable resources, reduce waste and maximise the proportion of material diverted from landfill" in the HS2 Environmental Policy.

7.6 The circular economy principles are set out in Appendix C of this information paper.

8 External assessment

8.1 To monitor the commitments made within the Sustainability and Environmental Policies HS2 Ltd will be using recognised environmental rating systems.

8.2 HS2 Ltd has set a target that all its Stations, Depots and other railway buildings to be designed and constructed for the HS2 project will achieve a minimum of an Excellent rating under BREEAM New Construction Non-Domestic 2018 version.

- 8.3 HS2 Ltd has set a target that the infrastructure works (Enabling Works, Main Work Civils and Rail Systems) to be designed and constructed for the HS2 project will achieve a minimum of an Excellent rating under the BREEAM Infrastructure version 6.

9 Embedding sustainability principles into the Proposed Scheme

- 9.1 Following the “Phase Two Sustainability Statement”, published in 2013, the “Phase 2b Sustainability Statement including post-consultation Sustainability Report” described the extent to which the 2016 design for the Proposed Scheme would satisfy sustainable development objectives and identified some potential significant effects. During the EIA process, the potential significant effects identified in the Sustainability Statement and the post-consultation Sustainability Report have been reviewed and assessed in the context of the Proposed Scheme. Sustainability has been a fundamental consideration in the way the Proposed Scheme has been selected and designed. The Proposed Scheme has emerged from several hundred options as the one considered overall on balance to best meet objectives for sustainability, alongside those of passenger demand, build cost, engineering complexity and journey time. A public consultation on the Working Draft Environmental Statement was carried out from October to December 2018. A link to the “Phase Two Sustainability Statement” and the “Phase 2b Sustainability Statement including post-consultation Sustainability Report” can be found in the References section at the end of this paper.

10 More information

- 10.1 More detail on the Bill and related documents can be found at www.gov.uk/hs2-phase2b-crewe-manchester.

Appendix A:

HS2 Ltd.'s Sustainability Policy



Sustainability policy

Purpose

This policy sets out HS2 Ltd's ambition to build the most sustainable high speed railway of its kind in the world. We want a high speed railway network which changes the mode of choice for inter-city journeys, reinvigorates the rail network, supports the economy, creates jobs, reduces carbon emissions and provides reliable travel in a changing climate throughout the 21st century and beyond.

Principles

Sustainability at HS2 is about delivering social, environmental and economic benefits. This includes delivering value to the UK taxpayer and passenger through taking decisions that seek to get the best value for money through the whole operating life of the railway.

Our sustainability approach at HS2 groups our work into five themes reflecting the economic, environmental and social aspects of sustainability. These themes support the HS2 vision of being a catalyst for growth across Britain and our mission, which includes being an exemplar project in our approach to engagement with communities, sustainability and respecting the environment.

Our five sustainability themes are:



**Spreading the benefits:
Economic growth and community regeneration**

Being a nationwide catalyst for regeneration and economic growth through development of an integrated transport system, maximising the benefits to communities and individuals and minimising negative impacts.



**Opportunities for all:
employment and education**

Providing rewarding jobs and careers that are open to all in society, setting new standards for equality, diversity and inclusion and providing a legacy of skills, learning, expertise, and experience.



**Safe at heart:
Health, safety and wellbeing**

Creating a world-class 'safe at heart' culture where no one gets hurt, and which prioritises the health and wellbeing of those who build, operate, use and host HS2 services and infrastructure.



**Respecting our surroundings:
Environmental protection and management**

Breaking new ground wherever possible on environmental standards including resource use, waste, carbon minimisation, the protection of the natural and historic environment and safeguarding communities.



**Standing the test of time:
Design that is future-proof**

Building a network that is resilient to climate change in the long term, adaptable to future trends and demands, and built around the needs of the people who will use it, in line with our Design vision.



We will only be successful in this huge undertaking if sustainability is embedded in our DNA. Sustainability is a way of working within the HS2 culture, alongside innovation and collaboration. We will promote innovation to find sustainable solutions focusing on ideas and technologies for improving sustainability. We cannot deliver our ambition alone; we will work with our contractors to engender a collaborative culture to ensure we get the innovation we need to deliver a sustainable railway.

Executive Owner:

The Infrastructure Director is the Executive Owner of this policy and is responsible for maintaining the accuracy and relevance of its contents and for periodic review and update to reflect changing circumstances.

A handwritten signature in blue ink, appearing to read 'Mark Thurston'.

Approved on: 22nd August 2019

Mark Thurston
Chief Executive Officer
HS2 Ltd

Appendix B:

HS2 Ltd.'s Environmental Policy



Environmental Policy

Purpose

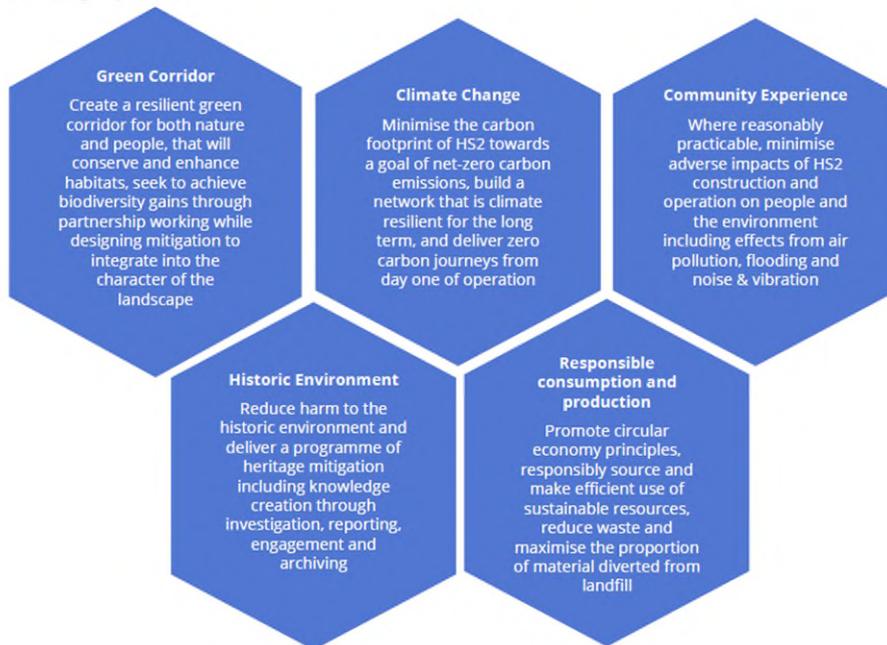
This policy provides a framework for environmental protection and management for HS2 and its operations. It acts to elaborate on the Sustainability Policy theme “respecting our surroundings: environmental protection and management” and our strategic goal of “creating an environmentally sustainable solution and being a good neighbour to local communities”. This framework is underpinned by a comprehensive set of detailed policies contained in Information Papers².

HS2 Ltd. is committed to developing an exemplar project through seeking environmental enhancements and benefits whilst limiting negative impacts through design, construction and operation of the railway.

HS2 Ltd. commits to protecting the environment through the avoidance and prevention of pollution and meeting all compliance obligations. We seek to continually improve environmental performance.

Objectives

In order to guide and manage our potential environmental impacts, we will seek to achieve the following objectives:



² Phase One Environmental Information Papers: <https://www.gov.uk/government/publications/hs2-information-papers-environment>
Phase 2a Environmental Information Papers: <https://www.gov.uk/government/publications/environment-hs2-phase-2a-information-papers>
Phase 2b Environmental Information Papers will be available on submission of the hybrid Bill. Factsheets can be found here: <https://www.hs2.org.uk/documents/collections/hs2-phase-2b-factsheets/>

Executive Owner

The Technical Services Delivery Director is the Executive Owner of this policy and is responsible for maintaining the accuracy and relevance of its contents and for periodic review and update to reflect changing circumstances.

Signed:

A handwritten signature in black ink, appearing to read 'Mark Thurston', written over a light blue horizontal line.

Mark Thurston
Chief Executive Officer
HS2 Ltd

Approved on: Tuesday, 09 November
2021

Appendix C:

HS2 Ltd.'s Circular Economy Principles

HS2 Circular Economy Principles
Document no.: HS2-HS2-SU-STR-000-000007
Revision: Po1

1 Introduction

- 1.1.1 HS2's vision is to be a catalyst for growth and we believe that adoption of circular economy principles can play a key role in delivering this through stimulating new approaches, products and services, and by creating employment opportunities.

2 Definition

- 2.1.1 The circular economy is an alternative to the traditional linear economy (make, use, dispose) whereby resources are kept in use and at their highest value for as long as possible. It can therefore thrive in the long term by decoupling economic growth and development from the consumption of finite resources.
- 2.1.2 The circular economy is more than simply recycling; it involves looking at the entire life cycle of any process, creating and optimising value by reconsidering what might be seen as waste or system losses and identifying opportunities to achieve the best whole-life outcome.

3 Benefits

- 3.1.1 Implementing circular economy principles within HS2 could deliver efficiencies, economic, environmental and social benefits including:
- lower capital and operational costs;
 - increased whole life value;
 - an avenue to resilient growth for the UK;
 - reduced virgin non-renewable material use;
 - reduced waste, carbon emissions, water use and environmental impact;
 - improved health (of supply chain workforce and general public);
 - greater opportunities for collaboration; and
 - new job opportunities throughout the supply chain.

4 Principles

- 4.1.1 To achieve the benefits we need to observe the following principles:
- keep resources in use for as long as possible;
 - recover and regenerate resources at the end of each use; and

HS2 Circular Economy Principles

Document no.: HS2-HS2-SU-STR-000-000007

Revision: P01

- keep resources at their highest quality and value at all times.

4.1.2 These are complemented by our over-arching principle to use resources efficiently, as stated in the HS2 Sustainability Approach Document (HS2-HS2-SU-STR-000-000006).

4.1.3 Resources are thought of in terms of materials, water, energy and carbon, as well as natural and social capital.

4.1.4 These principles are relevant to everything we and our supply chain do.

5 Implementation

5.1.1 These principles need to be proactively considered throughout specification, design, procurement, construction and operation.

5.1.2 We wish to collaborate with our supply chain to explore and develop solutions which implement these principles and realise the benefits.

References

HS2 Sustainability Approach

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/621219/hs2_sustainability_approach.pdf

Circular economy principles

<https://www.gov.uk/government/publications/hs2-circular-economy-principles>

Phase 2b Sustainability Statement including post-consultation Sustainability Report

<https://www.gov.uk/government/publications/hs2-phase-2b-sustainability-statement-2016>

Phase 2 Sustainability Statement

<https://www.gov.uk/government/publications/hs2-phase-two-consultation-sustainability-statement>

[HS2 Net Zero Carbon Plan](#)

https://assets.hs2.org.uk/wp-content/uploads/2022/01/25357_HS2_NetZeroCarbonPlan_CS1656_Final_InteractiveWeb_Accessible.pdf

[HS2 Environmental Sustainability Vision](#)

<https://www.hs2.org.uk/about-us/our-documents/environmental-sustainability-vision/>