

HS2

Phase 2a - Control of Environmental Impacts Briefing to House of Lords Select Committee

Peter Miller – Environment Director, HS2 Ltd.

What today's presentation will cover

1. The legal framework
 - Scope of Works and standard plans
 - Controls within the Bill
 - Controls outside the Bill
 - Existing Legislation
2. Principles of HS2's environmental design
3. HS2's Environmental policy

The legal framework

Controls within the Bill

- Scope of works (Sch 1 &2)
- Planning Conditions (Sch 17)
- Bringing into use scheduled works (Sch 17)
- Restoration of construction sites (Sch 17)
- Restoration of land following temporary possession and use (Sch 15)
- Construction of replacement buildings (Clause 55)
- Protective provisions (Sch 32)
- Highways approvals (Sch 4)

Controls outside the Bill Environmental Minimum Requirements

- General Principles
- Code of Construction Practice (Information paper D3)
- Planning Memorandum
- Heritage Memorandum
- Environmental Memorandum
- Undertakings and Assurances (Information Paper B5)

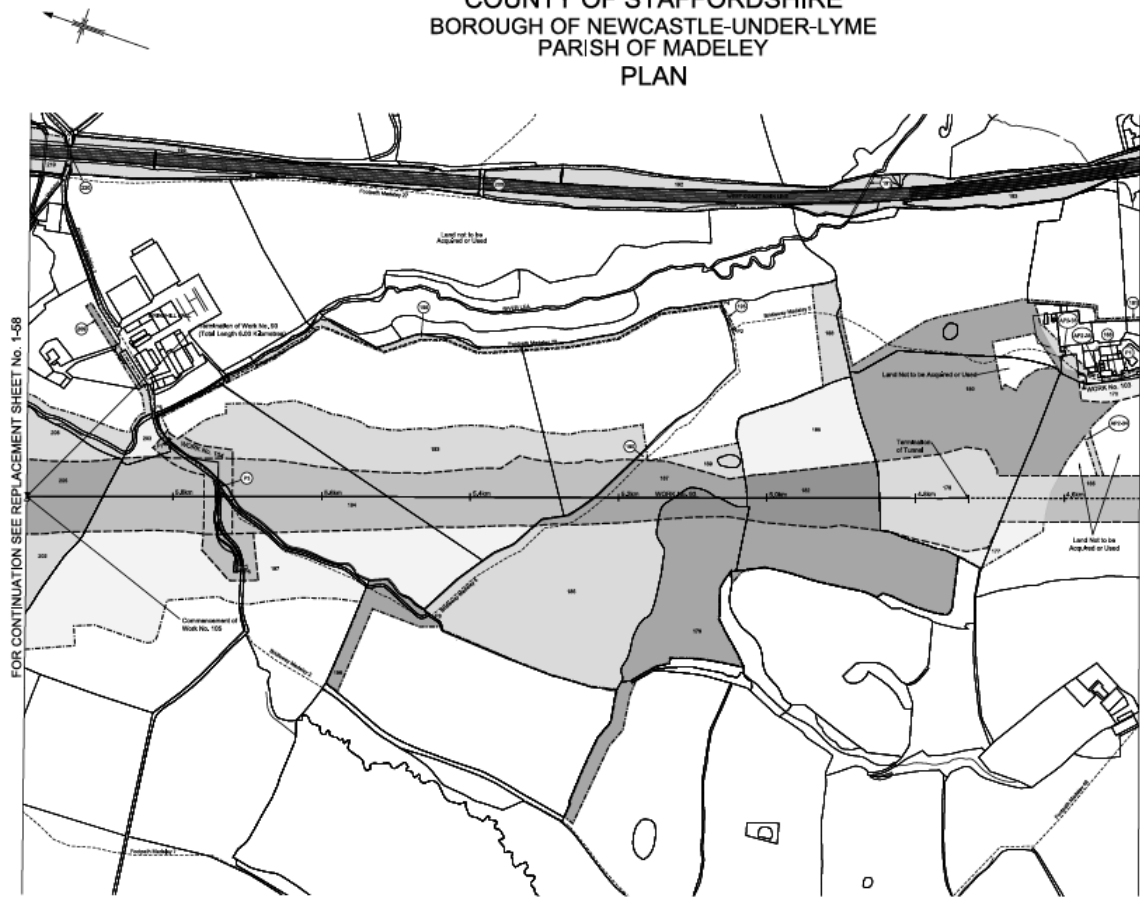
Existing Legislation

Unless expressly or impliedly disapplied or modified by the Bill, existing legislation will apply

- e.g. Section 61 of the Control of Pollution Act (noise)
- e.g. Licences for affected species
- e.g. Environmental permitting for waste

Scope of Works: Bill Plans

COUNTY OF STAFFORDSHIRE BOROUGH OF NEWCASTLE-UNDER-LYME PARISH OF MADELEY PLAN



REPLACEMENT SHEET No. 1-57
IN PARLIAMENT - SESSION 2017-19
HIGH SPEED RAIL
(WEST MIDLANDS - CREWE)
ADDITIONAL PROVISION
(FEBRUARY 2019)

Work No. 85 (Railway)
Work No. 104 (Access Road)

For Section of Work No. 85 see Sheet No. 2-56
For Section of Work No. 104 see Sheet No. 2-58
For Section of Work No. 104 see Sheet No. 2-59

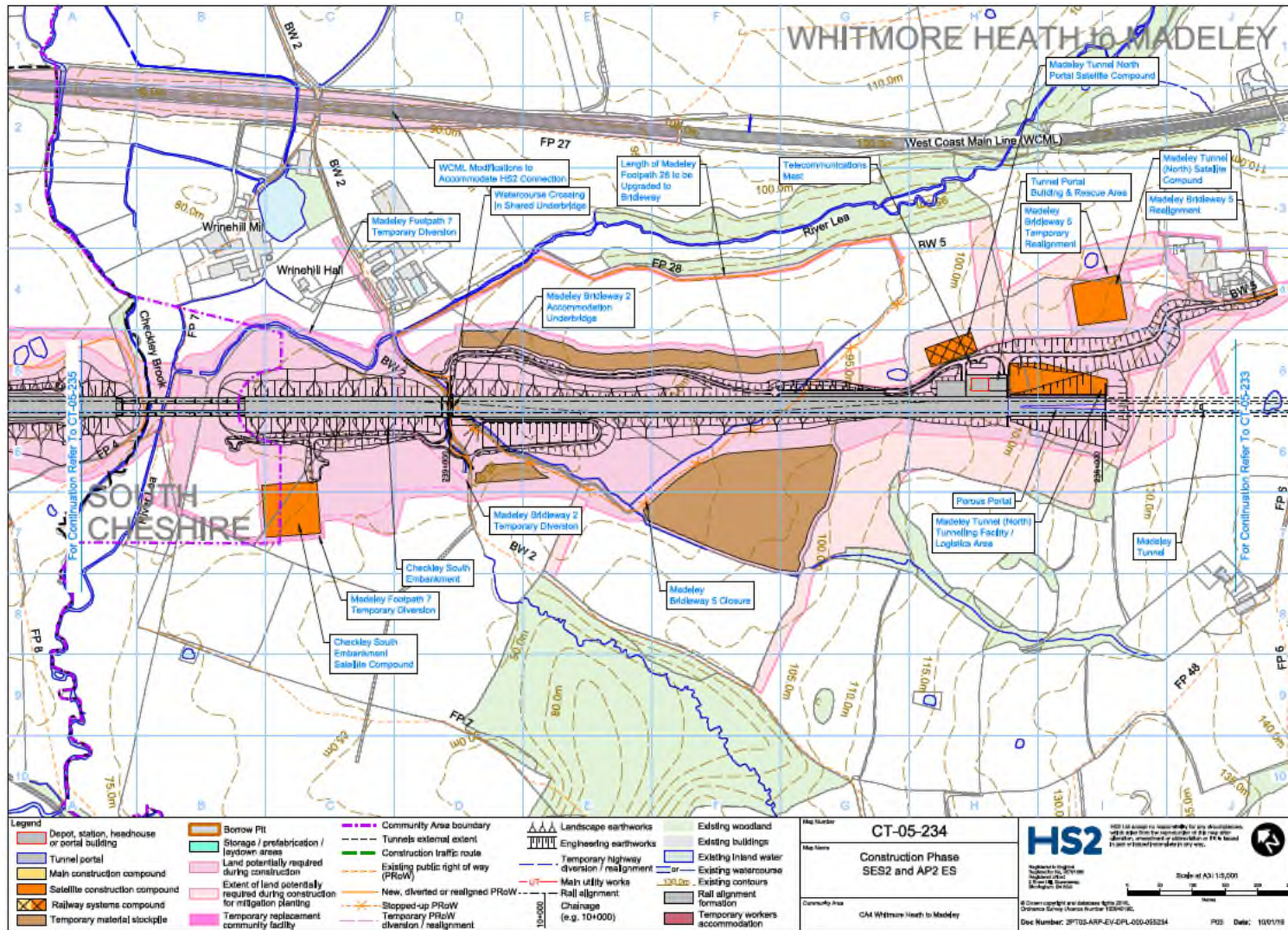
This map is intended to provide information only and does not constitute a contract. It is subject to the provisions of the High Speed Rail (Chilterns) Act 2015. The map is intended to provide information only and does not constitute a contract. It is subject to the provisions of the High Speed Rail (Chilterns) Act 2015.

AMENDMENTS TO THIS SHEET
ARE AS FOLLOWS:-
Plans AP12-04, AP12-26 and AP12-36 added in the
Parish of Madeley

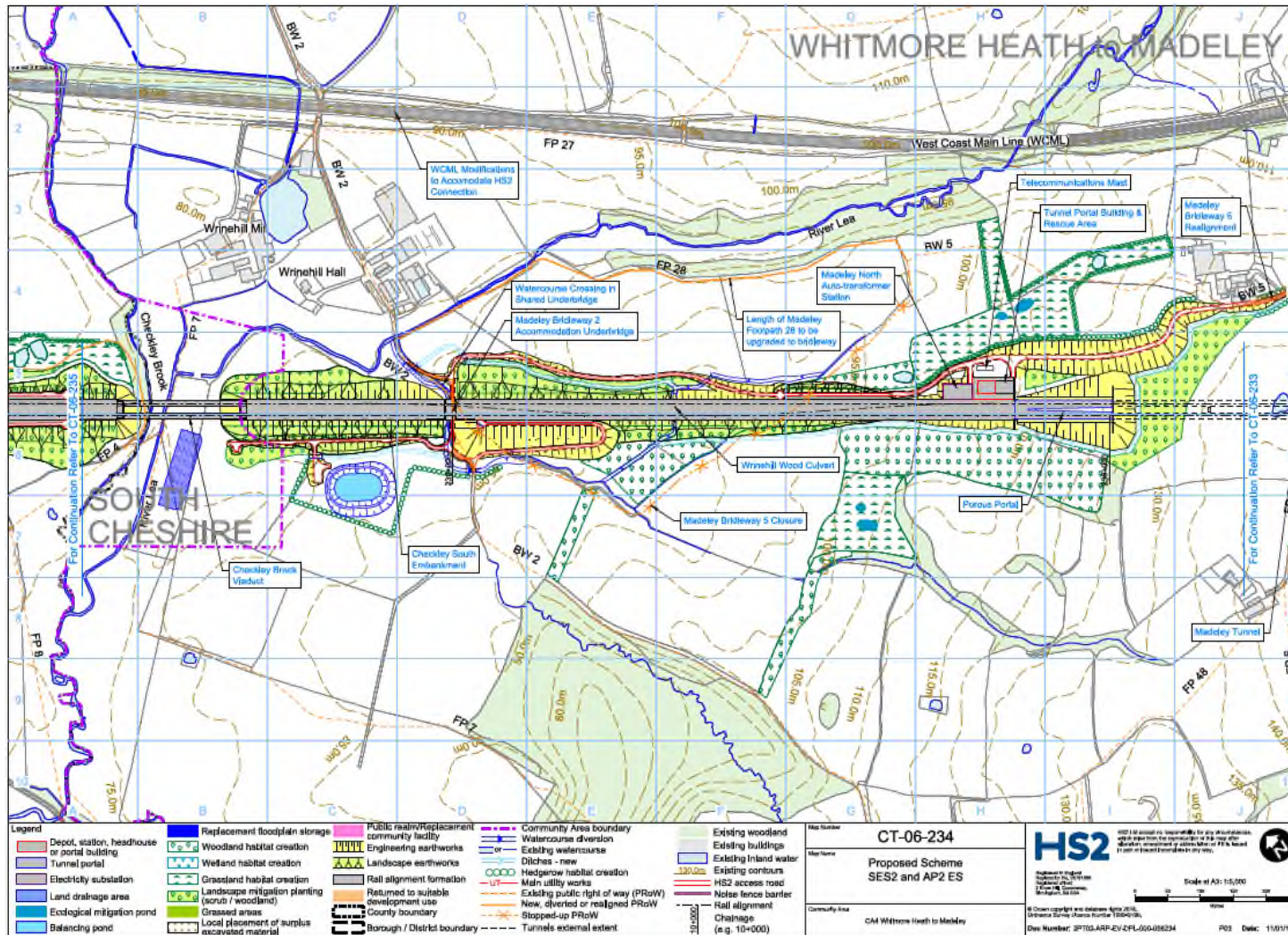
Proprietary Software: AutoCAD 2017, MicroStation V8i(32), Bentley ProjectWise 2017, Revit 2017, SolidWorks 2017

Drawing No.
CB81-ARF-HY-DPL-000-120034 Rev CB

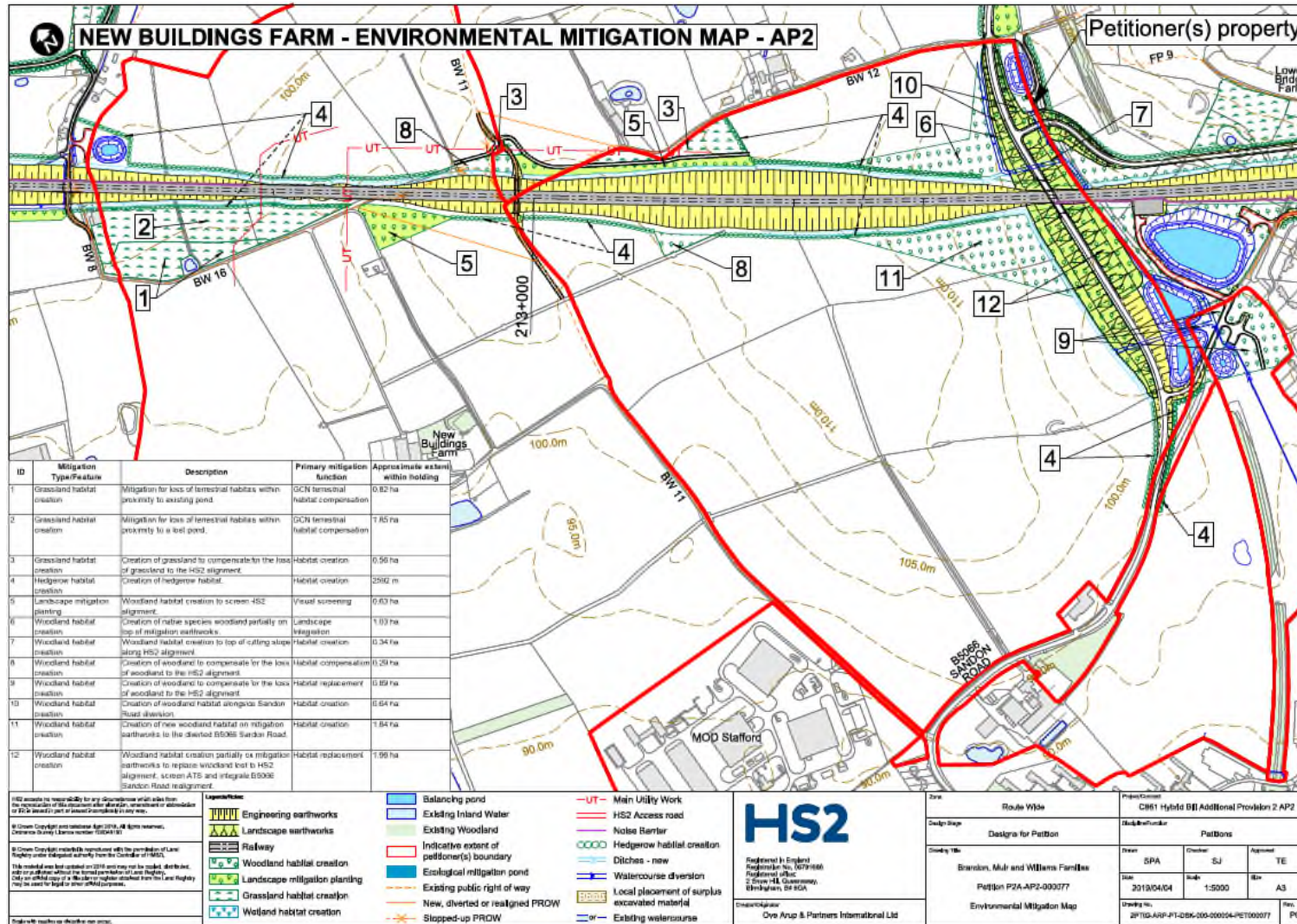
Scope of Works: Construction (CT05) Maps



Scope of Works: Operation (CT06) maps



Environmental Mitigation Map



Planning Conditions (Schedule 17)

IP E1

IP B2

- Bill provides deemed planning permission subject to conditions set out in Schedule 17.
- Schedule 17 includes conditions requiring various matters to be subject to approval by local planning authority.
- Extent and scope of approvals depends on whether local planning authority becomes a “qualifying authority” (through signing the Planning Memorandum).

Controls within the Bill

Controls outside of the Bill

Existing legislation

Planning Conditions (Schedule 17)

- In order to facilitate requests for approval under Schedule 17:
 - The Planning Memorandum sets out what is expected of the nominated undertaker and planning authorities that choose to become 'qualifying authorities'.
 - Upon signing the Memorandum, qualifying authorities have a wider range of planning controls and are bound by obligations of the Memorandum. Equally, the nominated undertaker must comply with its obligations.
 - The Memorandum states that the nominated undertaker will work with qualifying authorities to support the determination of requests for approval, which will include early and constructive engagement.
 - The Memorandum also states that nominated undertaker and qualifying authorities will have regard to the conclusions of the Planning Forum and Planning Forum Notes in preparing and determining the requests for approval.
 - Planning Forum Notes set out processes to be followed by those implementing the HS2 planning regime, for example they define the content of written statements and the scale of drawings etc.

Controls within the Bill

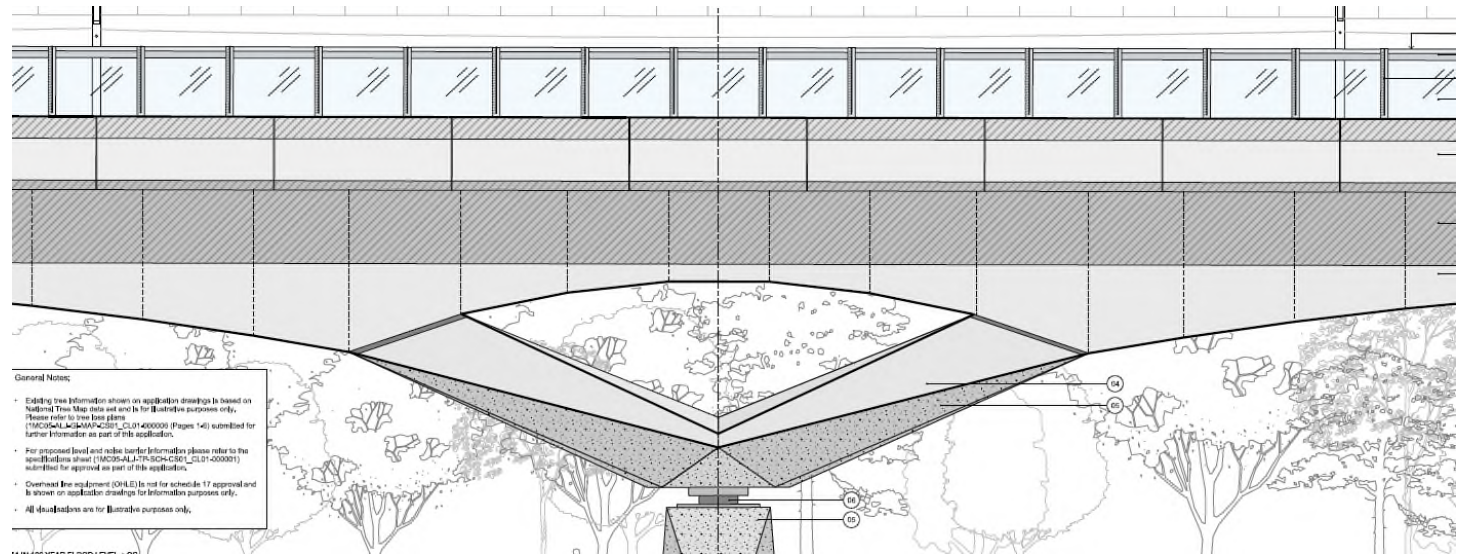
Controls outside of the Bill

Existing legislation

Example of a Phase One Schedule 17 Plans and Specification Drawings

Colne Valley Viaduct

General Details Drawings
Extended Spans



For information only
Not to scale

General Notes

- Existing tree information shown on application drawings is based on National Tree Map data set and is for illustrative purposes only. Please refer to tree base plans (MACS-ALL-7FSCH-C501_01-400000) (pages 1-4) submitted for further information as part of this application.
- For proposed level and other further information please refer to the specifications sheet (MACS-ALL-7FSCH-C501_01-000001) submitted for approval as part of this application.
- Overhead line equipment (OLE) is not for schedule 17 approval and is shown on application drawings for information purposes only.
- All dimensions are for illustrative purposes only.

Planning Conditions (Schedule 17)

IP E1

IP B2

Operations and Works - Paragraph 2 & 3

- Qualifying authorities can refuse to approve or condition the approval of plans and specifications for most permanent, above ground works, on certain specified grounds.
- Provisions do not apply to temporary works, underground works (except part of stations), tunnel or railway track bed.

Controls within the Bill

Controls outside of the Bill

Existing legislation

Planning Conditions (Schedule 17)

IP E1

IP B2

Construction arrangements – Paragraph 4

Conditions apply to construction arrangements relating to:

- Handling of reusable spoil or topsoils;
- Storage sites for construction materials, spoil or topsoils;
- Works screening;
- Artificial lighting;
- Dust suppression; and
- Road mud control measures.

Construction arrangements will be subject to class approval by the Secretary of State

Controls within the Bill

Controls outside of the Bill

Existing legislation

Planning Conditions (Schedule 17)

IP E1

IP B2

Construction camps – Paragraph 8

Approval of residential accommodation on site

- Will always require site specific approval

Road transport – Paragraph 6

- Approval of large goods vehicle routes to and from worksites with more than 24 lorry movements per day

Controls within the Bill

Controls outside of the Bill

Existing legislation

Planning Conditions (Schedule 17)

IP D12

IP E1

Borrow pits – Paragraph 7

Qualifying authorities to approve plans and specifications for the excavation of bulk material from borrow pits and methods of working, including arrangements for noise, dust, vibration and screening

Restoration of borrow pits - Paragraph 12

Approval of scheme of restoration by qualifying authority before borrow pit excavation commences

Aim to restore land to a condition suitable for its original use, post excavation

Restoration of construction sites – Paragraph 12

Qualifying authorities also approve schemes to restore construction sites

Controls within the Bill

Controls outside of the Bill

Existing legislation

Planning Conditions (Schedule 17)

IP E1

IP B2

Bringing into use – Paragraph 9

Bringing into use scheduled works:

- To ensure appropriate mitigation for the permanent works and their operation, approval must be sought from the relevant local authority before a Scheduled Work can be brought into use, unless that work is underground.

Progressive engagement on mitigation:

- Bringing into use approvals are sought towards the end of the construction programme; and
- The Promoter will engage with local authorities and statutory consultees during the design approvals to get early feedback.

Controls within the Bill

Controls outside of the Bill

Existing legislation

Planning Conditions (Schedule 17)

Schedule 17 – Paragraph 16

Each planning authority must be provided with a document setting out the proposed scheme and programme for Schedule 17 consents

Note: example opposite is a Phase One example for illustration only



Request for Approval	2017 quarters				2018 quarters				2019 quarters				2020 quarters				2021 quarters				2022 quarters				2023 quarters				2024 quarters				2025 quarters				2026 quarters			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Ecological mitigation																																								
South Heath cutting																																								
Wendover Dean viaduct																																								
Small Dean viaduct																																								
Wendover green tunnel																																								
Wendover north cutting																																								
Stoke Mand. bypass																																								
Stoke Mand. south embankment																																								
Aylesbury south embankment																																								
Thame Valley viaduct																																								
Bicester Road embankment																																								
Bicester Road realignment																																								
Waddesdon south cutting																																								
Quinton south & Dad embankments																																								
Grendon Underwood embankment																																								
Calvert Cutting																																								
Aylesbury Link railway line realign.																																								
Calvert IMD																																								
Twyford viaduct																																								
Godington east and west viaducts																																								
Chetwode Cutting																																								
Westbury viaduct																																								
Turweston cutting																																								
Bringing into Use																																								
Lony route submissions																																								
Class Approval																																								
Small Dean viaduct construction camp																																								

Controls within the Bill

Controls outside of the Bill

Existing legislation

Temporary Possession and Use of Land (Schedule 15)

Restoration of land following temporary possession and use – Paragraph 5

Schedule 15 provides for the temporary possession of land. Before giving up such land the nominated undertaker must return the land to its former condition or to a condition agreed by the owners of the land and the relevant planning authority.

Controls within the Bill

Controls outside of the Bill

Existing legislation

Protective Provisions (Schedule 32)

- Part 1 of Schedule 32 of the Bill requires the nominated undertaker to seek to minimise disruption to traffic where reasonably practicable. Highway authorities will have rights of approval over various matters concerning works affecting highways
- Part 4 of Schedule 32 of the Bill requires the nominated undertaker to submit plans for any specified works which may affect drainage, flood storage or defence, the flow or purity of water and conservation of water resources, to the Environment Agency or Local Drainage Authorities for approval
- These bodies may impose conditions to require the nominated undertaker to construct protective works as are reasonably necessary

Controls within the Bill

Controls outside of the Bill

Existing legislation

Highways approvals (Schedule 4)

Part 1 - Highway access

- Allows the nominated undertaker to form and lay out new means of access to highways, and to improve existing means of access to highways within Bill limits.

Part 2 - Interference with highways

- Allows the nominated undertaker to stop up those highways (or parts of highways) where they are listed in the Bill.

Part 3 - Construction and maintenance of highways

- Requires highway authority approval for new or realigned carriageway.

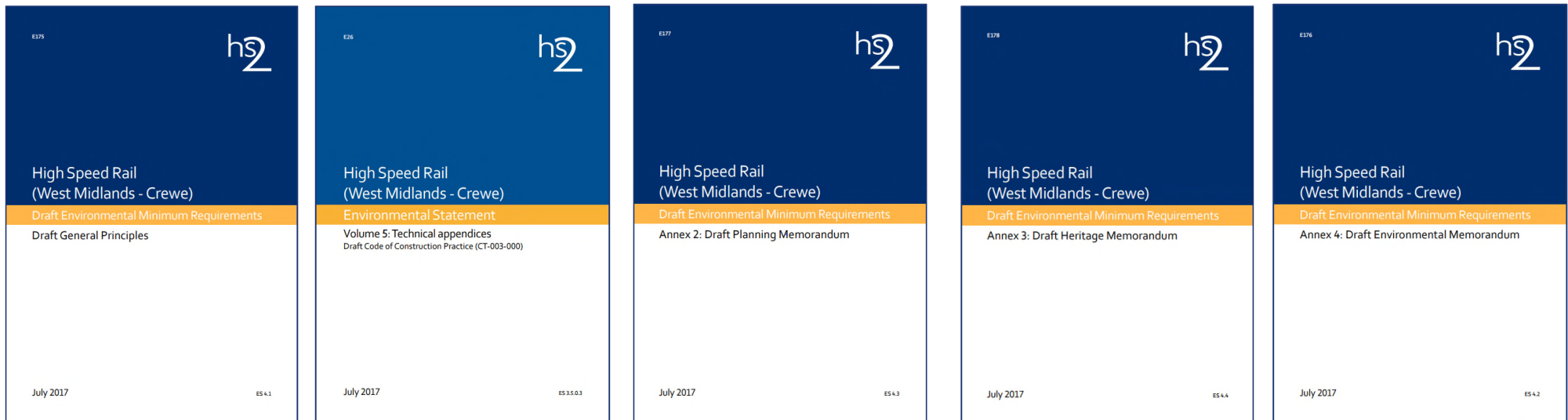
Controls within the Bill

Controls outside of the Bill

Existing legislation

Environmental Minimum Requirements

General Principles plus four annexes



- Register of Undertakings and Assurances

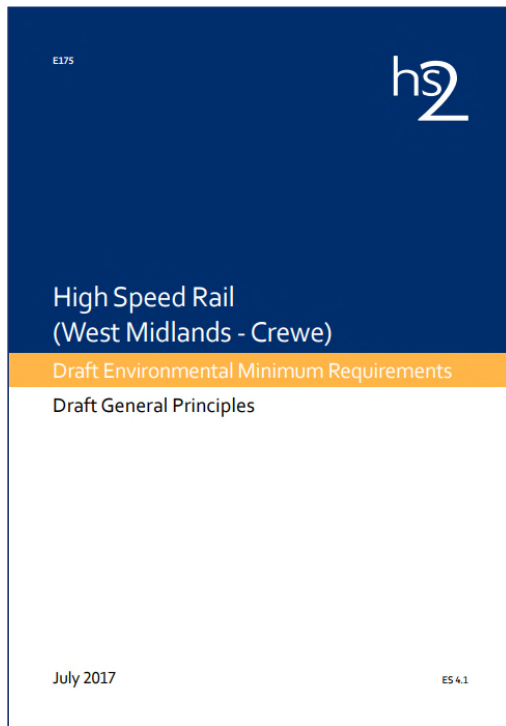
Controls within the Bill

Controls outside of the Bill

Existing legislation

Environmental Minimum Requirements

General Principles



- Nominated Undertaker and contractors contractually bound to comply with Environmental Minimum Requirements
- Impacts which have been assessed in the Environmental Statement will not be exceeded (subject to provisos in para 1.1.3 and 3.1.8)
- Requirement to use reasonable endeavours to adopt mitigation measures that will further reduce any adverse environmental impacts

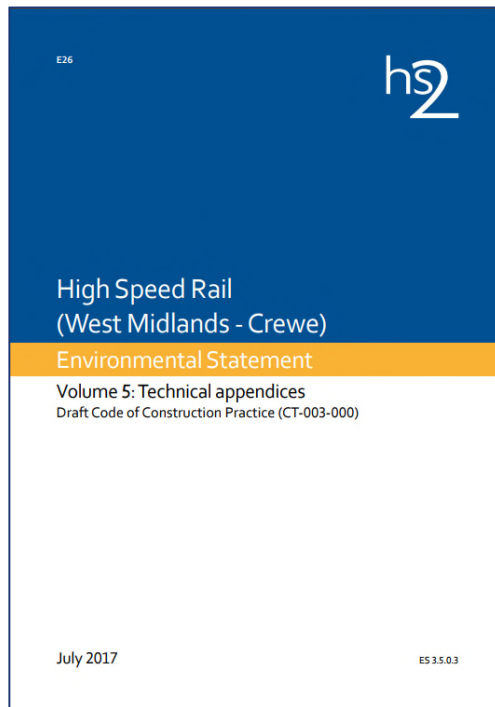
Controls within the Bill

Controls outside of the Bill

Existing legislation

Environmental Minimum Requirements

Annex 1: Code of Construction Practice



- Lead contractors and sub contractors will be contractually obliged to comply with the Code of Construction Practice
- Nominated undertaker and contractors will be contractually obliged to have an Environmental Management System (certified to ISO14001)

Controls within the Bill

Controls outside of the Bill

Existing legislation

Environmental Minimum Requirements

Annex 1: Code of Construction Practice – Local Environmental Management Plans



- Code of Construction Practice has a requirement for Local Environmental Management Plans
- Local Environmental Management Plans build on general environmental requirements of the Code of Construction Practice and set out specific measures within each local authority area

Controls within the Bill

Controls outside of the Bill

Existing legislation

Environmental Minimum Requirements

Annex 1: Code of Construction Practice - requirements

General requirements

Examples:

- Lead contractors to sign up to considerate constructors scheme
- Core working hours
- Community engagement framework
- Pollution incident control measures
- Carbon Management Plan requirement



Site-specific requirements

Examples:

- Dust and air quality management – covering stockpiles
- Control of invasive and non-native species
- Protection of trees
- Noise and vibration – best practicable means
- Workforce travel plans

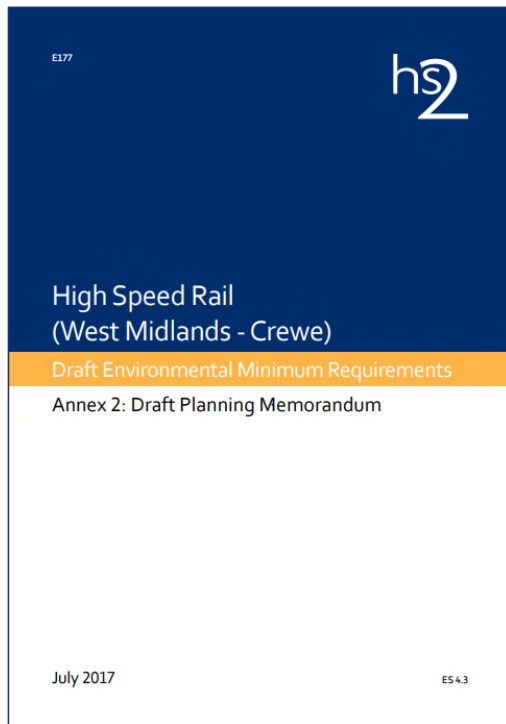
Controls within the Bill

Controls outside of the Bill

Existing legislation

Environmental Minimum Requirements

Annex 2: Planning Memorandum



- Sets out undertakings and responsibilities of “qualifying authorities”
- The qualifying authorities and nominated undertaker sit on a Planning Forum (established in 2017), which assists effective implementation of the planning regime

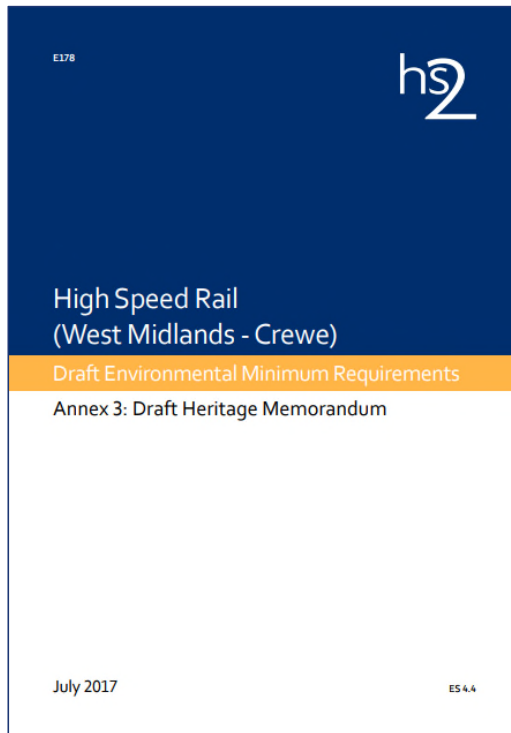
Controls within the Bill

Controls outside of the Bill

Existing legislation

Environmental Minimum Requirements

Annex 3: Heritage Memorandum



- Sets out how the historic environment (including heritage assets and their setting) will be addressed during the design and construction (including role of Heritage Agreements)
- A specialist heritage sub-group to the planning forum has been set up to provide the framework for effective engagement and information sharing on high-level technical matters

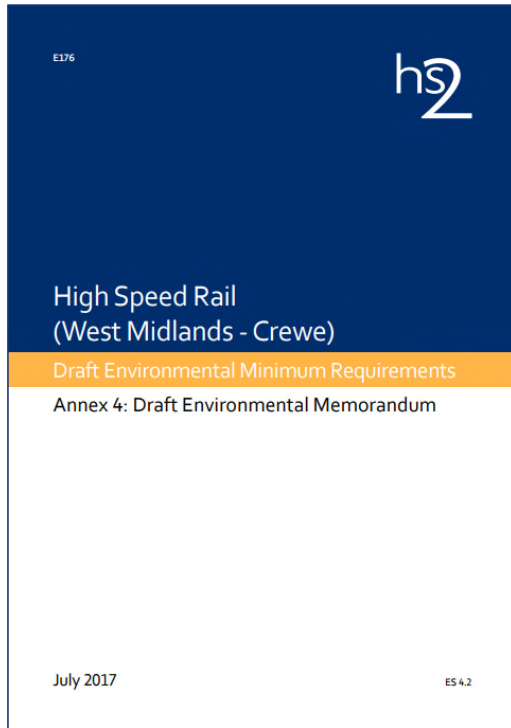
Controls within the Bill

Controls outside of the Bill

Existing legislation

Environmental Minimum Requirements

Annex 4: Environmental Memorandum



- Relates to the environmental aspects of the design and construction
- National Environmental Forum comprising the Agencies (Historic England, Environment Agency and Natural England) and representatives from relevant Government departments, including the Forestry Commission.

Controls within the Bill

Controls outside of the Bill

Existing legislation

Environmental Minimum Requirements

Undertakings and Assurances (U&As)

- Undertakings & Assurances - commitments by the Promoter to Parliament or beneficiary of commitment
- The Register of Undertakings & Assurances is published on Royal Assent, however drafts are published periodically during the Hybrid Bill Process
- Process for reporting a non compliance is published on the HS2 website
- The latest draft of the register can be found at: <https://www.gov.uk/government/publications/hs2-phase-2a-register-of-undertakings-and-assurances>

Phase 2a Register of Undertakings and Assurances

Beneficiary (to whom)	U&A Text (where relevant)	Subject	Reference
Section A: undertakings and assurances that have general application			
General	6.1 Water resources and flood risk monitoring will be undertaken in consultation with the Environment Agency prior to and during construction, and if required post construction, to establish baseline conditions for surface water and groundwater and to confirm the effectiveness of temporary and permanent mitigation measures together with any remedial works deemed necessary.	Water resources and flood risk monitoring	Paragraph 6.1, Information Paper E15: Water Resources Flood Risk and Authorisation of Related Works. Version 1.0.
Section C: undertakings and assurances given to specific third parties			
Madeley White Star FC	The Secretary of State shall require the Nominated Undertaker to use reasonable endeavours not to prevent access to Madeley White Star Football Club ("the Club") at the times when the Club is used for training and / or when football matches are being held during the works to install the tunnel boring machine power supply along Manor Road as specified in AP2 or otherwise by prior agreement with the Club.	Access	Letter from Oliver Bayne (HS2) to Mark Healings (Madeley White Star FC)

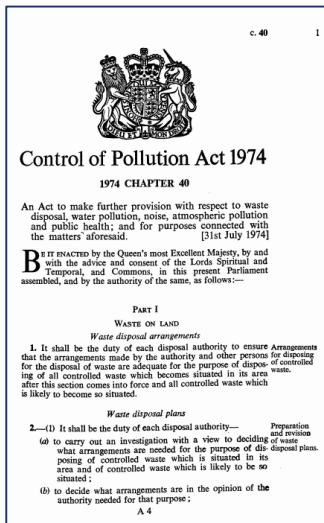
Controls within the Bill

Controls outside of the Bill

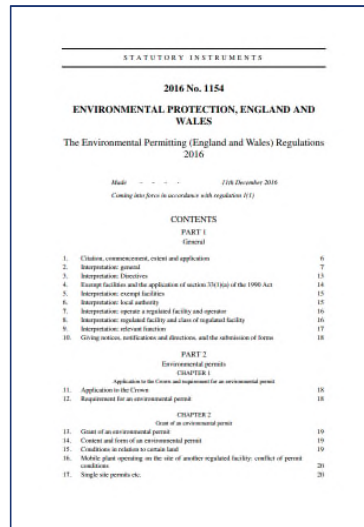
Existing legislation

Existing legislation

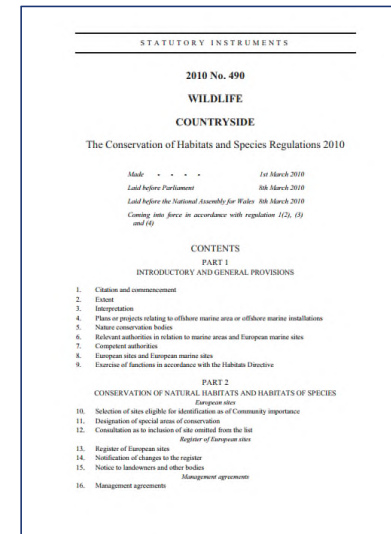
Unless legislation is expressly or impliedly disapplied, or modified by the Bill it will continue to apply as normal to the design and construction of the Proposed Scheme



Section 61
consent
under
Control of
Pollution
Act 1974



The
Environmental
Permitting
(England and
Wales)
Regulations
2016 for waste
permitting



Licences for
affected
species
(issued under
Conservation
of Habitats
and Species
Regulations
2017)

Controls within the Bill

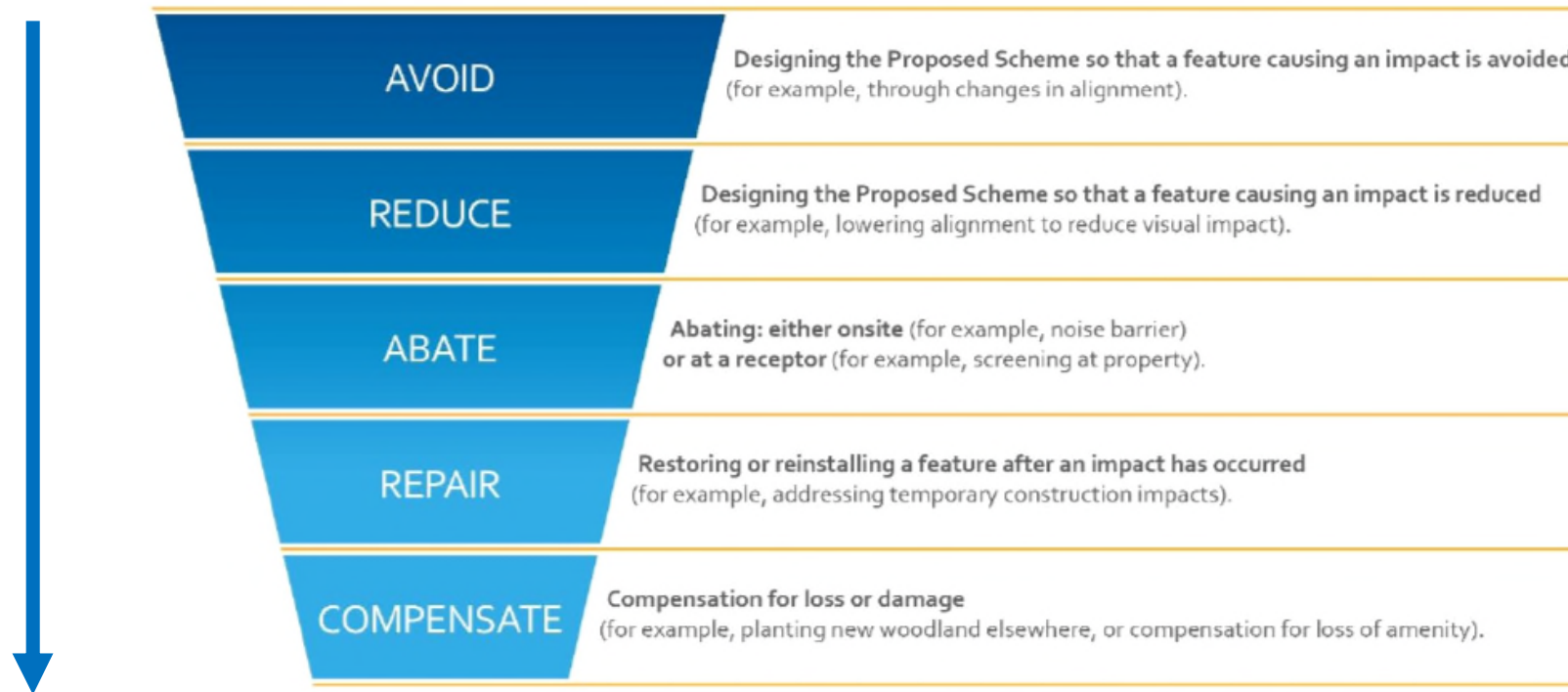
Controls outside of the Bill

Existing legislation

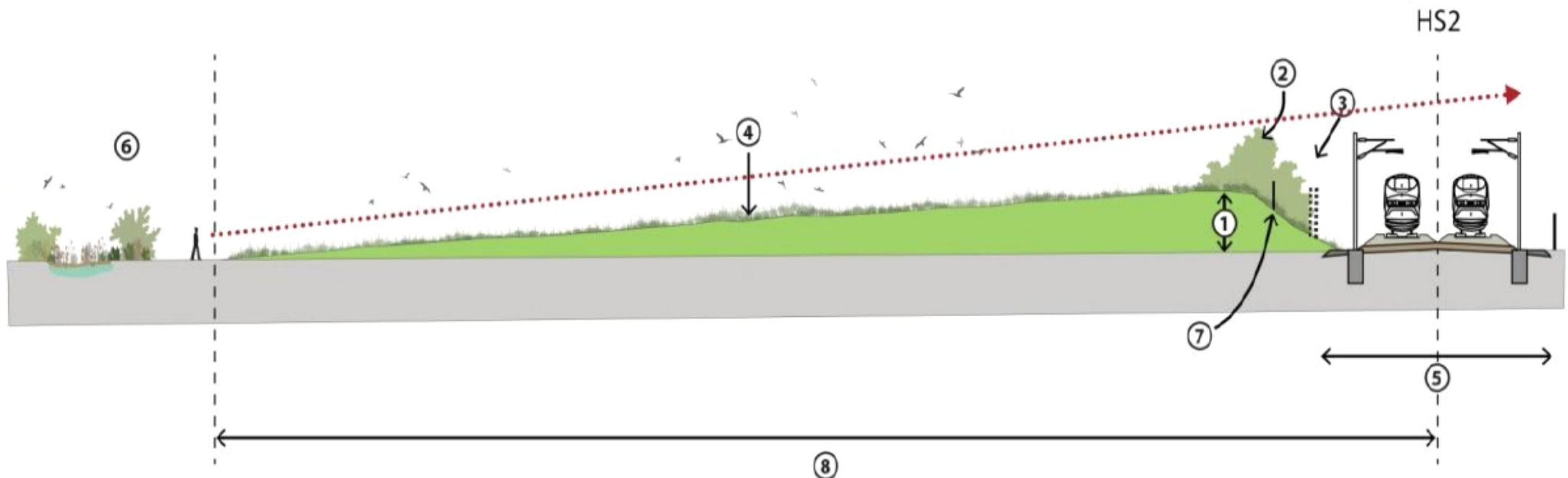
Principles of HS2's Environmental Design

The Mitigation Hierarchy

The mitigation hierarchy is applied at each stage of the design in order to reduce the effects of the scheme on the environment.



Design Principle: Holistic Approach



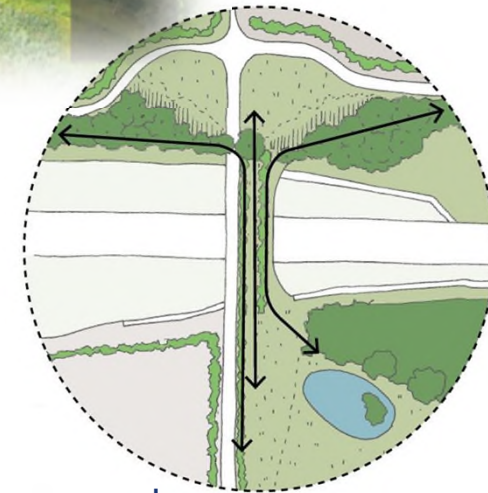
1. Landscape earthworks designed to screen the railway.
2. Screen planting to supplement earthworks and fit with local landscape.
3. Earthworks designed to mitigate operational noise.
4. Landscape earthworks designed to be returned to agriculture use.
5. Width of railway corridor designed to a minimum requirement.
6. Mitigation design with multiple functionality (ecology, heritage, landscape, hydrology).
7. Boundary fence visually concealed behind landscape earthworks.
8. Scheme designed to restore majority of land to previous use.

Design Principle: Permeability

The design of the railway track is expected to be permeable to a variety of smaller species including newts, reptiles and some terrestrial invertebrates.

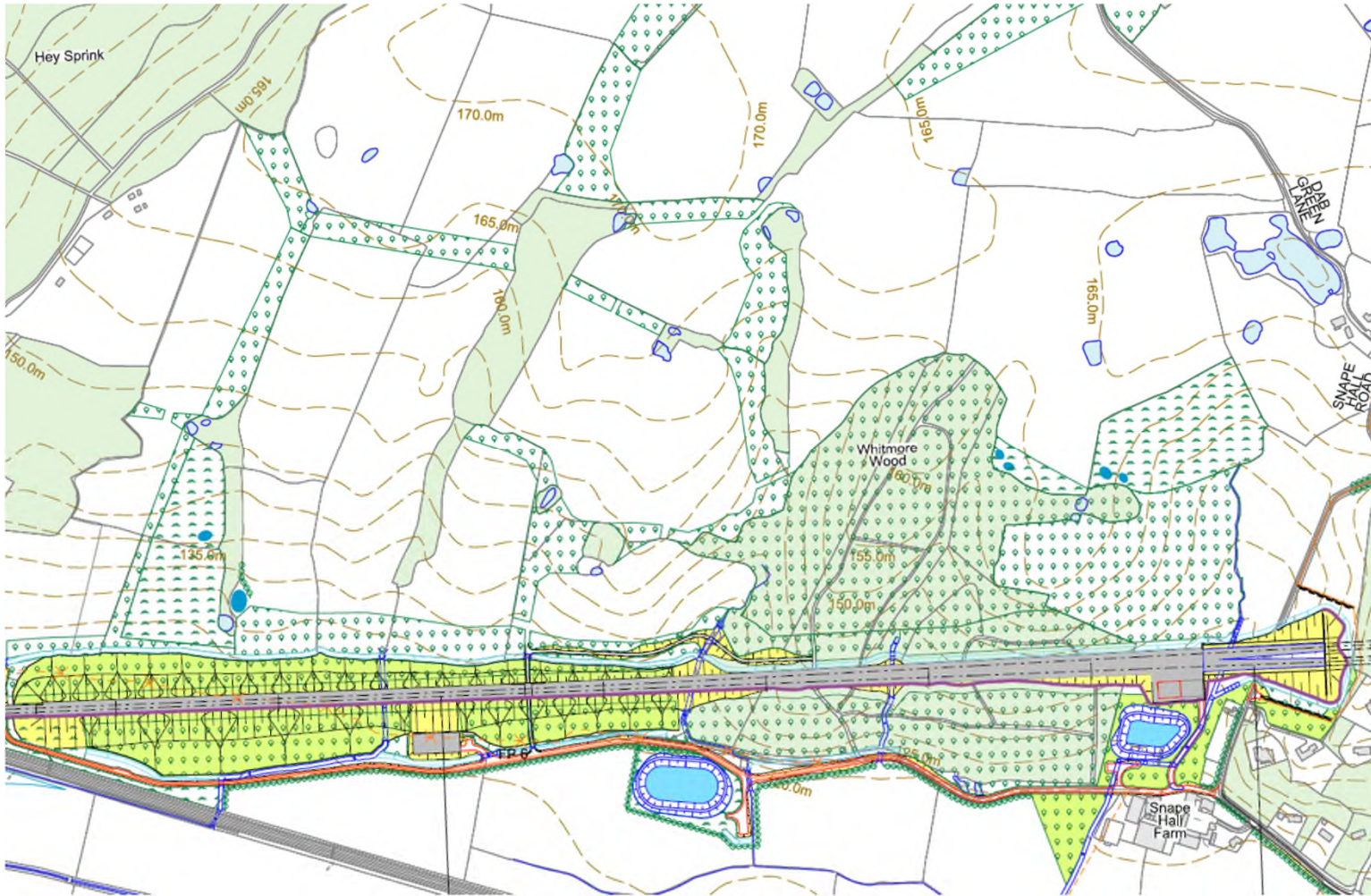
In addition, a number of design features will facilitate the safe movement of species across the railway:

- 5.9km of the route on viaduct;
- 2.2km of the route in tunnel;
- 5 green bridges over the railway;
- 3 underpasses;
- 39 culvert, with 19 enlarged to enable use by bats, otters and water voles;
- Overbridges will aim to include 'hop-overs' to facilitate safe passage of bats and some species of bird.



The Proposed
Colwich Bridleway 23
Accommodation
Green Overbridge

Design Principles: Connectivity



Example:
Ancient woodland
compensation at Whitmore
Wood and Hey Sprink (CA4)

Design Principle: Integrating with the Local Landscape

Baseline View -
Summer



Operation Year
15 (2042) –
Summer
Verifiable



Ancient Woodland

Ancient Woodland Strategy

The Bill design seeks to minimise the impact on Ancient Woodland. 9.8ha of Ancient Woodland is directly affected by the Bill.

The Promoter will seek to reduce effects as part of the detailed design. Compensation measures include:

- 78ha of new woodland planting (including the translocation of up to 9.6ha of ancient woodland soils)
- Enhancement of 13.4ha of ancient woodland
- £2 million Woodland Fund for additional tree planting.

The Forestry Commission has successfully managed the allocation of the first £1.2million of the Phase One Woodland Fund which will lead to approximately 103ha of new woodland and 63ha of restocking of Plantations on Ancient Woodland Sites (PAWS).



High Speed Two

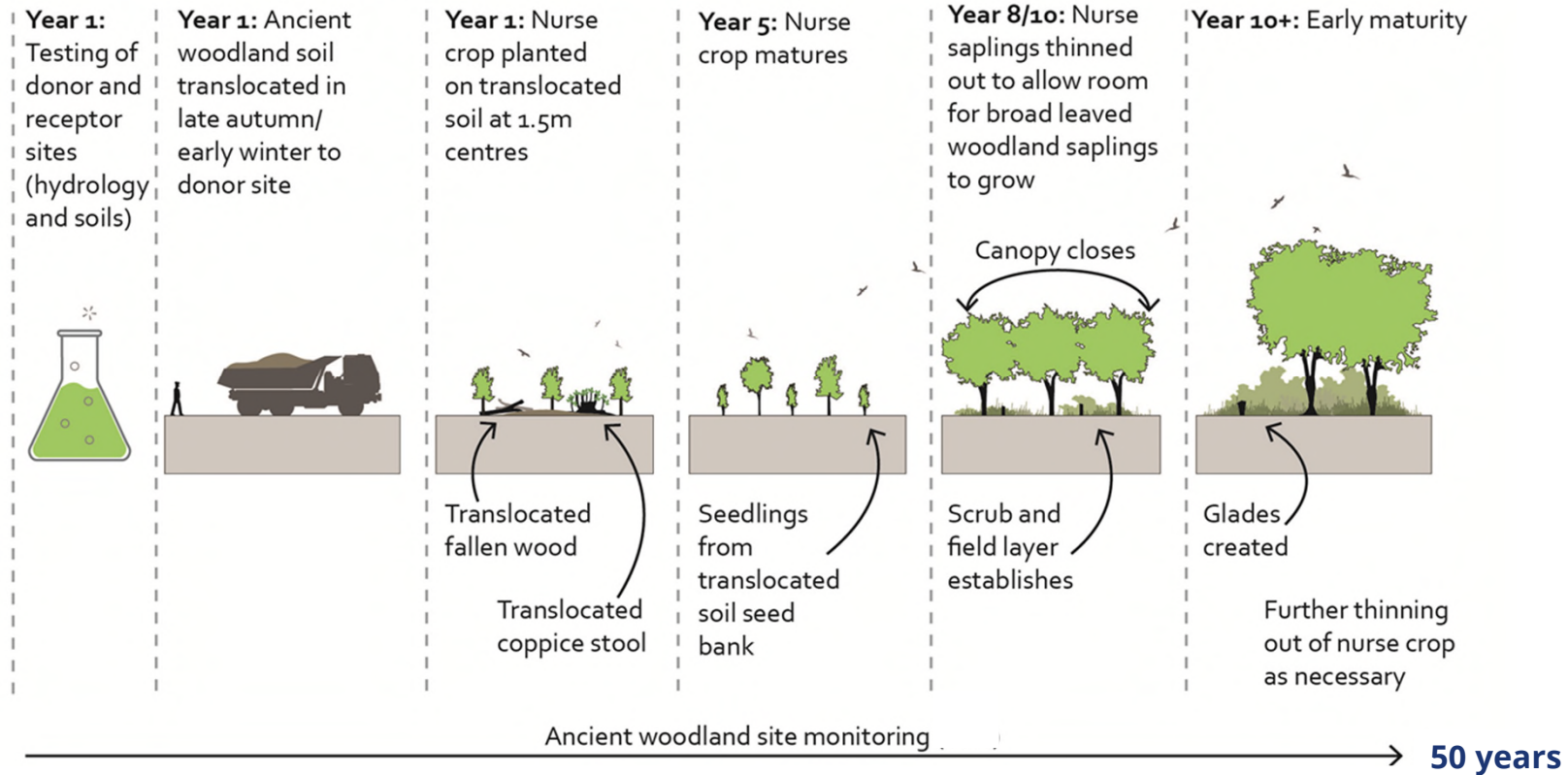
Phase 2a: West Midlands-Crewe
Ancient Woodland Strategy

February 2018

PH2-HS2-EV-STR-A000-000001

www.gov.uk/hs2

Ancient Woodland Compensation Planting



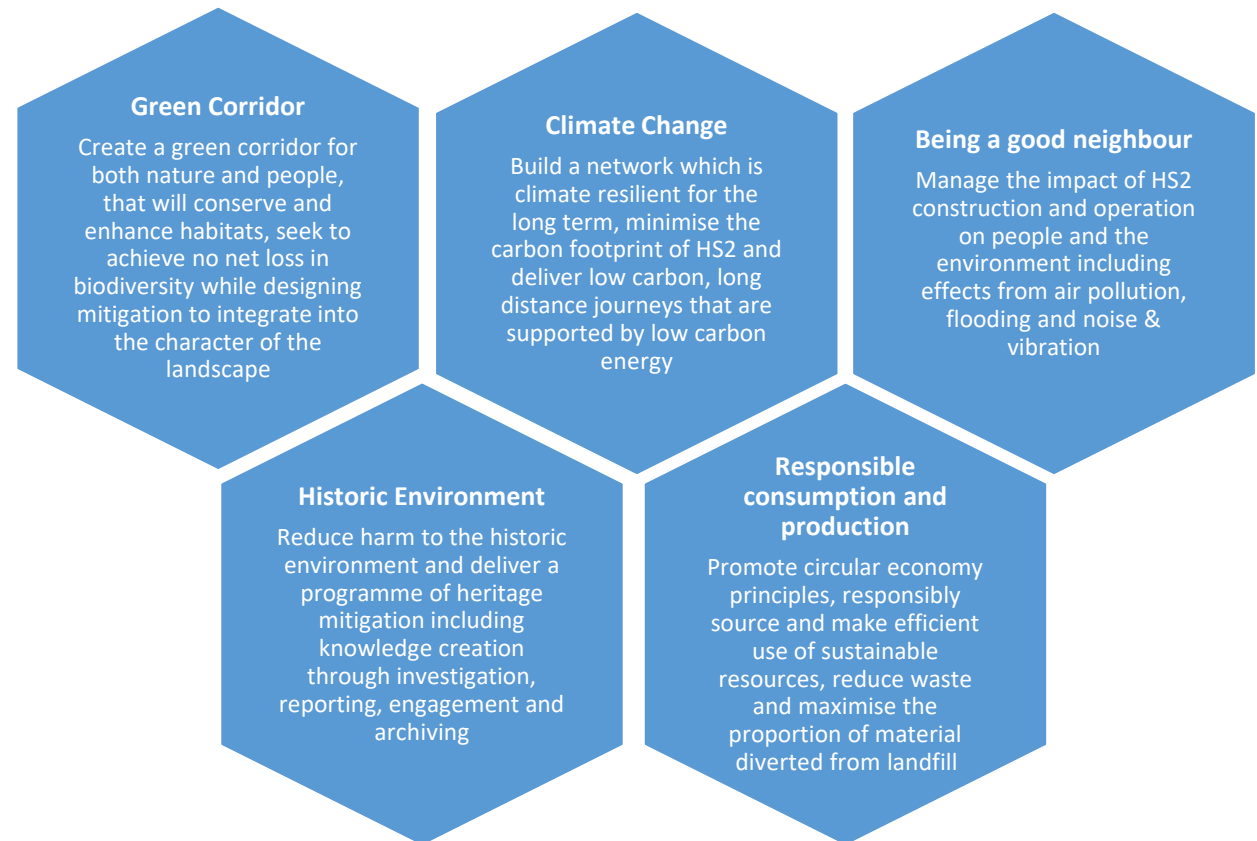
HS2's environmental policy

HS2 Environmental Policy & Objectives

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

HS2 Ltd. is committed to protecting the environment through the avoidance and prevention of pollution and meeting all compliance obligations, and seeks to continually improve environmental performance.

HS2 Environmental Policy Objectives:



Green Corridor

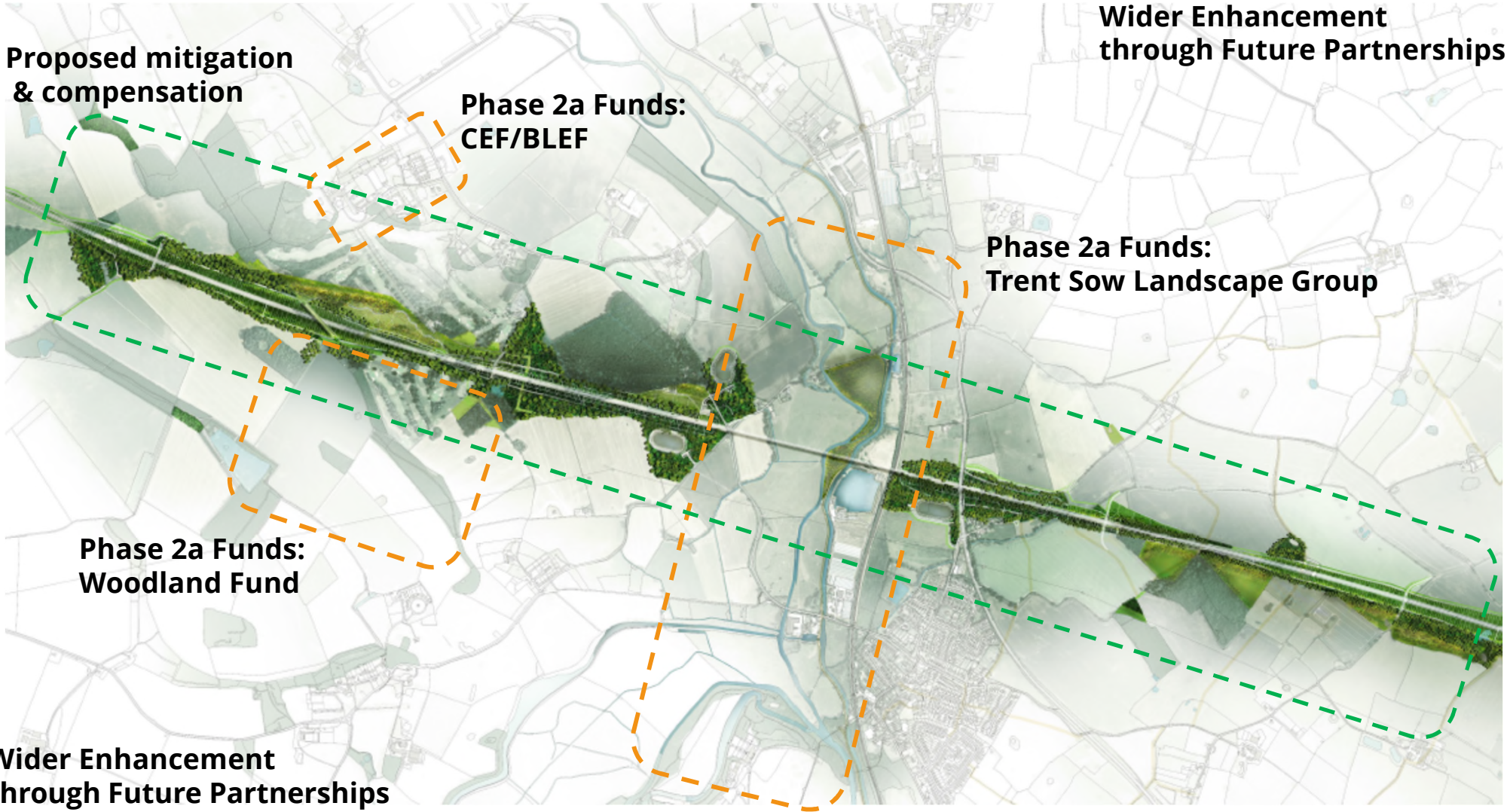
No Net Loss in Biodiversity



“The Proposed Scheme has the objective of seeking to achieve **No Net Loss in biodiversity** at a route-wide level”

- The scheme design is based on a professional assessment to determine the appropriate mitigation to address its likely ecological impacts.
- A metric has been used as an ‘accounting’ tool to check that the mitigation and compensation in the Bill is in line with the project objective; it has not been used to inform the level of compensation provision.
- The objective of No Net Loss is a long standing commitment, therefore there will be opportunities to improve the overall balance of biodiversity units generated by Phase 2a of HS2 during detailed design, construction, and operation.

The Green Corridor



Climate Change

IP E26

IP E27

- The Promoter has considered how climate change (including assessment of greenhouse gases, in-combination impacts and resilience), may affect communities, businesses and the natural, historic and built environment along the Phase 2a route, for the projects lifetime. This is reported within Volume 3 Route-wide Effects, of the Environmental Statement.
- Each environmental topic has considered changes to long-term, seasonal averages and extreme weather events as projected by the UK Climate Projections 2009. A number of mitigation measures have also been incorporated within the design of the Proposed Scheme, including:
 - designing mitigation measures to be adaptable to climate change embedding climate resilience into the design;
 - designing flood risks for up to a 1 in 100 year plus climate change allowance peak river flow events; and
 - designing railway infrastructure be protected from the 1 in 1000 year peak river flow events.

Engagement

Engagement: Consultation

Consultation and Engagement prior to Bill deposit

- EIA Scope and Methodology (over 90 organisations)
- 7 Property Consultation Events (1,442 visitors)
- 7 Working draft EIA Consultation Events (1,929 visitors)
- 6 Bill Deposit Consultation Events (1,902 visitors)

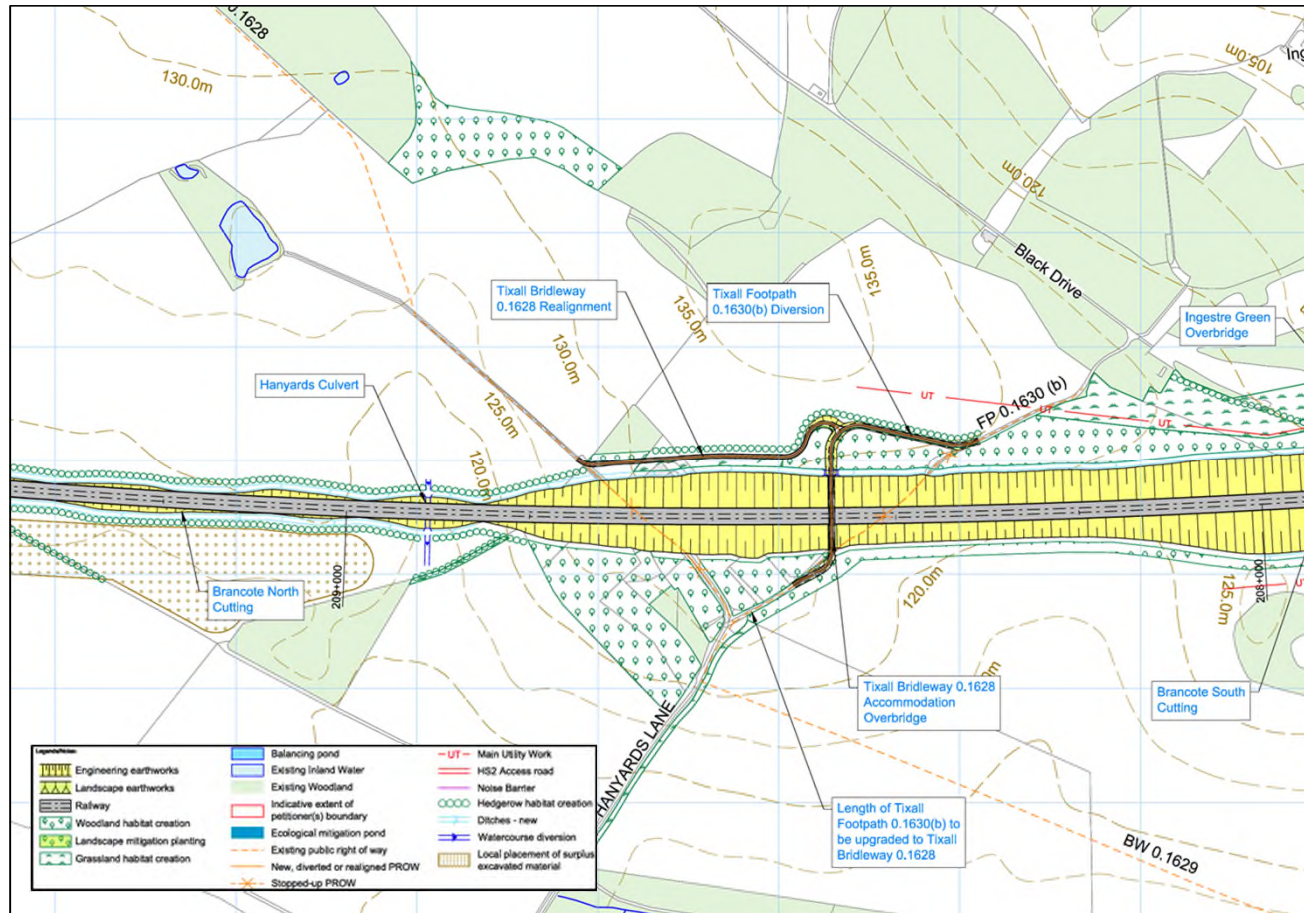
Consultation and Engagement post Bill deposit

- 12 Community Surgeries (101 meetings)
- 9 Information Events (1,170 visitors)
- Bilateral meetings with petitioners and stakeholders (approximately 550 meetings)

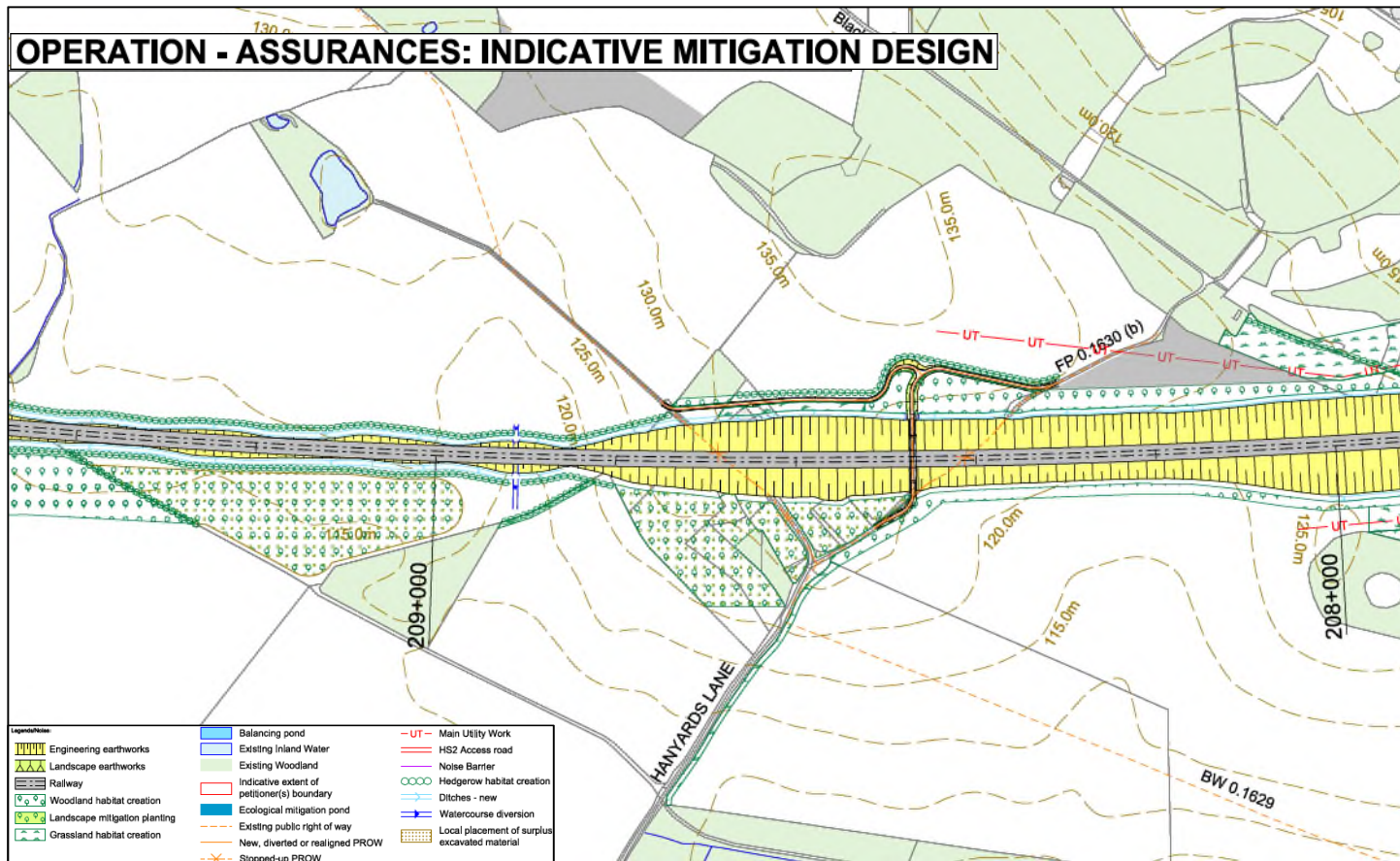


Environmental Mitigation: Development through Consultation

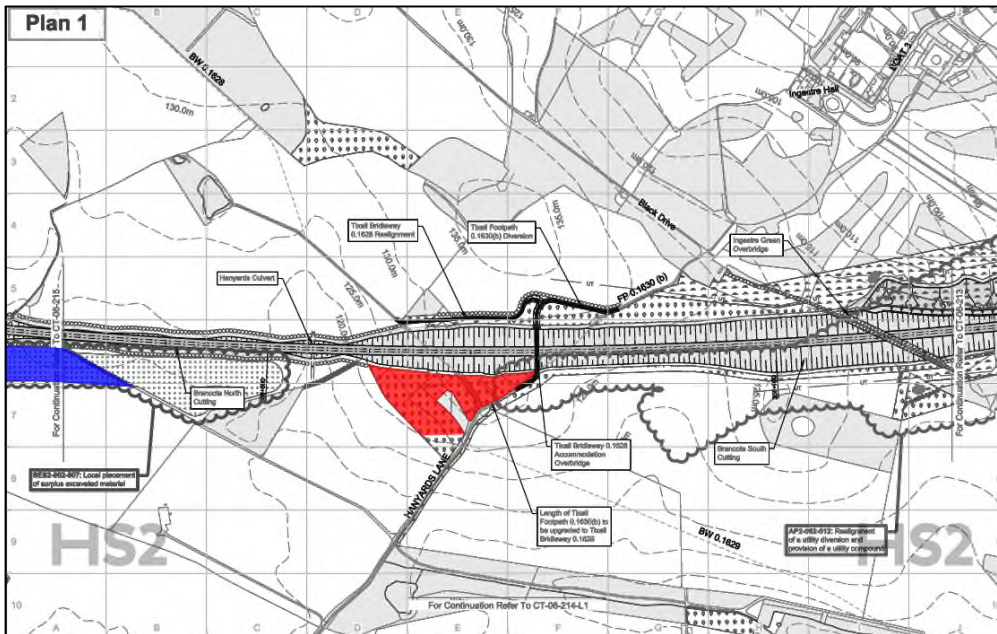
IP G1



Environmental Mitigation: Development through Consultation

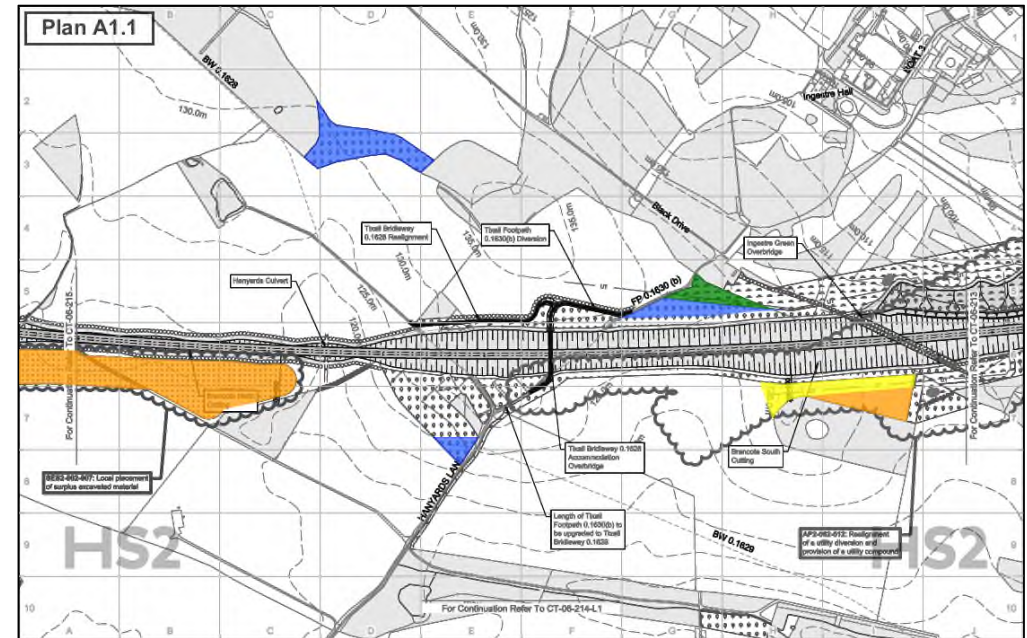


Environmental Mitigation: Development through Consultation



Use of alternative site for local placement

Where local placement of excavated materials is required in Area A but the Nominated Undertaker and Petitioner agree that an alternative site ("Area B") should be used for the same purpose, then the Nominated Undertaker will use Area B for the purposes of local placement of excavated materials, subject to the conditions in paragraph 3.2.



Assurance 1 – Environmental Mitigation

1.1 Subject to the conditions in paragraph 1.2, the Promoter will not use its powers of compulsory acquisition or temporary use in respect of:

- 1.1.1 the Blue Land designated in the Environment Statement for woodland habitat creation PROVIDED THAT the Orange Land may be used for that purpose; and
- 1.1.2 the Green Land designated in the Environment Statement for grassland habitat creation PROVIDED THAT the Yellow Land may be used for that purpose.

Engagement: Detailed Design

HS2 has committed to appropriate engagement with the public in the design development process.

- On key design elements, such as; Viaducts, Tunnel Portals and Maintenance Bases, engagement is likely to focus on those local to where the infrastructure is located.
- On common design elements, such as; road-bridges, foot-bridges and noise barriers, engagement will be more widely spread and will focus on developing standard or common designs.

Designers will consider comments and issues raised through public engagement and modify their designs appropriately, before these designs are submitted to the Planning Authority (under Sch 17 of the Bill).

Guide for Farmers and Growers

- Explains policies on agricultural matters, including:
 - Communication
 - Construction activity
 - Land restoration
 - Compensation

IP C2

HS2

High Speed Two Phase 2a

Guide for Farmers and Growers

July 2019

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Phase 2a Funds

Phase 2a Funds

The Promoter has provided funding for a number of schemes that have the potential to deliver significant environmental benefits in addition to those proposed within the Bill.

The following funds have been announced since the Phase 2a Bill was deposited;

- The Trent-Sow Parklands and Cannock Chase AONB HS2 Group – £1.5 million.
- The Cheshire East environment and landscape enhancement fund - £850,000.
- The Phase 2a Woodland Fund - £2 million.

HS2 Community and Environment Fund (CEF) and Business and Local Economy Fund (BLEF)

IP C11

Phase 2a

The Promoter announced the allocation of £5m of CEF and BLEF funding for Phase 2a in January 2018.

This funding aims to:

- enhance community facilities, improve access to the countryside and conserve the natural environment along the line of route; and
- support local economies in areas where businesses collectively may experience disruption from the construction of HS2.

The £5m for Phase 2a will be administered and made available for application after Royal Assent.

Phase One

- Since Feb 2017 for the Phase One scheme, 102 projects worth £5.3m have been approved, these include:
 - 5 BLEF projects; 3 CEF Strategic projects; and 94 CEF Local projects.

