

Technical Standard - Public rights of way

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List of acronyms

BOAT	Byway Open to All Traffic
CILT	Chartered Institute of Logistics and Transport
CPTED	Crime Prevention Through Environmental Design
EMR	Environmental Minimum Requirements
DAS	Deliverable approach statement
GLA	Greater London Authority
RUPP	Road Used as a Public Path
TfL	Transport for London
TRO	Traffic Regulation Order
TTRO	Temporary Traffic Regulation Order

References

Title	Reference
<i>HS2 Technical Standards</i>	
Technical Standard – Highway and access drainage	HS2-HS2-DR-STD-000-000002
Technical Standard – Roads	HS2-HS2-HW-STD-000-0000001
Technical Standard – Earthworks	HS2-HS2-GT-STD-000-000001
Technical Standard – Fencing	HS2-HS2-CV-STD-000-000002
Technical Standard – Overbridges (post-hybrid Bill only)	HS2-HS2-BR-STD-000-000003
Technical Standard – Viaducts (post-hybrid Bill only)	HS2-HS2-BR-STD-000-000001
Technical Standard – Underbridges (post-hybrid Bill only)	HS2-HS2-BR-STD-000-000002
Technical Standard – Culverts and underpasses (post-hybrid Bill only)	HS2-HS2-BR-STD-000-000005
<i>HS2 Deliverable Approach Statements (applicable to hybrid Bill design only)</i>	
Deliverable approach statement – Overbridges	HS2-HS2-BR-DAS-000-000001
Deliverable approach statement – Viaducts and underbridges	HS2-HS2-BR-DAS-000-000002
<i>HS2 Phase One Information Papers</i>	
D11 – Maintaining access to residential and commercial property during construction	gov.uk
E5 – Roads and Public Rights of Way	gov.uk
E13 – Management of traffic during construction	gov.uk
E14 – Highways and traffic during construction – legislative provisions	gov.uk
E28 – Future highway maintenance responsibilities	gov.uk

Title	Reference
Standard detail drawings	
Highway standard detail drawings	HS2-CSI-HW-STD-000-XXXXXX-FD, where XXXXXX represents all drawing numbers
Other HS2 documents	
Guidance Document – Landscape Design Approach	C224-ARP-CV-REP-040-000090
Project dictionary	HS2-HS2-PM-GDE-000-000002
Legislation	
Highway Act 1835	legislation.gov.uk
Inclosure Act 1857	legislation.gov.uk
Commons Act 1876	legislation.gov.uk
National Parks and Access to the Countryside Act 1949	legislation.gov.uk
Commons Registration Act 1965	legislation.gov.uk
Countryside Act 1968	legislation.gov.uk
Highways Act 1980	legislation.gov.uk
Acquisition of Land Act 1981	legislation.gov.uk
Wildlife and Countryside Act 1981	legislation.gov.uk
Cycle Tracks Act 1984	legislation.gov.uk
Road Traffic Regulation Act 1984	legislation.gov.uk
Rights of Way Act 1990	legislation.gov.uk
Town and Country Planning Act 1990	legislation.gov.uk
Transport and Works Act 1992	legislation.gov.uk
Countryside and Rights of Way Act 2000	legislation.gov.uk
Commons Act 2006	legislation.gov.uk
DMRB	
DMRB standard TD 19 'Requirement for Road Restraint Systems'	gov.uk/standards-for-highways-online-resources
DMRB standard BD 29 'Design Criteria for Footbridges'	gov.uk/standards-for-highways-online-resources
DMRB standard TD 36 'Subways for Pedestrians and Pedal Cyclists. Layout and Dimensions'	gov.uk/standards-for-highways-online-resources
DMRB standard HD 42 'Non-motorised User Audits'	gov.uk/standards-for-highways-online-resources
DMRB advice note TA 90 'The Geometric Design of Pedestrian, Cycle and Equestrian Routes'	gov.uk/standards-for-highways-online-resources

Title	Reference
DMRB advice note TA g1 'Provision for Non-Motorised Users'	gov.uk/standards-for-highways-online-resources
Further sources of information	
Countryside, Access and Environmental Casework	http://www.planningportal.gov.uk/planning/countryside/
'Practice Guidance Note 1 – Consultation on changes to public rights of way and definitive maps', by the Rights of Way Review Committee	iprow.co.uk
Rights of way and accessing land	gov.uk/right-of-way-open-access-land
'Rights Of Way: a guide to law and practice' (also known as the 'Blue Book'), by John Riddall and John Trevelyan	Published by Ramblers and Open Spaces Society
'Advice on Specifications and Standards recommended for equestrian routes in England and Wales', by the British Horse Society	bhs.org.uk

Project terminology

The project terminology used within this document can be found in the HS2 project dictionary (HS2-HS2-PM-GDE-000-000002).

Conventions

Mandatory clauses

The following convention is used to indicate mandatory clauses.

Mandatory clauses are differentiated from the main text of this document by use of a 'black box'. They contain the word 'shall' to indicate their status as a requirement.

Departures

Any intention to not comply with a mandatory clause is considered to be a departure from this Technical Standard.

It is recommended that the designer discusses any proposed departures with HS2's Technical Directorate at an early stage.

Guidance

The following convention is used to indicate guidance.

NOTE – Guidance is differentiated from the paragraph to which it relates by use of italic type and use of the words 'should' or 'may'.

1 Executive summary

- 1.1.1 This technical standard provides the technical requirements and associated guidance for the design of any works to public rights of way potentially affected by the HS2 project. It also covers similar issues regarding other routes with public access by non-motorised users and is a companion document to Technical Standard – Roads (HS2-HS2-HW-STD-000-000001).
- 1.1.2 Adoption of this technical standard will help ensure a consistent approach to public rights of way issues across the whole project.
- 1.1.3 This technical standard is intended for use during all phases of design, from hybrid Bill design to detailed design.

2 Introduction

2.1 Background

- 2.1.1 Public rights of way are a type of highway, and in many respects the smallest country footpath has the same legal status as the busiest dual carriageway.

2.2 Legislation

HS2 hybrid Bills

- 2.2.1 The HS2 hybrid Bills give powers to a 'Nominated Undertaker' to stop-up, realign, divert and create new public rights of way. Refer to Information Paper 'E14 – highways and traffic during construction – legislative provision' for further details.

Other legislation

- 2.2.2 The main statutes covering the creation (dedication), use, maintenance, diversion and stopping up (extinguishment) of public rights of way are:
- Highways Act 1980
 - Wildlife and Countryside Act 1981
 - Town and Country Planning Act 1990
 - Countryside and Rights of Way Act 2000
- 2.2.3 However, there is also a considerable body of case law dating back over several centuries that also needs to be taken into account when developing proposals which may affect public rights of way.

NOTE – Refer to References section for other legislation referenced in this document.

2.3 Definition














2.3.1 A public right of way is a type of highway that is not a road. A highway can either be a road or a public right of way, never both.

2.4 Types of public rights of way

2.4.1 There are four types of public rights of way, as follows and shown pictorially in Table 1:

- **Footpath** – A public right of way for pedestrians only, accounting for 78% of England’s network
- **Bridleway** – Historically a public right of way for pedestrians and equestrians only, but which may also be used by cyclists under the provisions of the Countryside Act 1968
- **Restricted Byway** – A new type public right of way introduced by the Countryside and Rights of Way Act 2000 allowing use by non-motorised (usually horse-drawn) vehicles in addition to those classes of traffic entitled to use bridleways
- **Byway Open to All Traffic (BOAT)** – A public right of way which may be used all classes of traffic (including motorised vehicles)

Table 1 - Permitted users of public rights of way

Public right of way Type	Pedestrians	Equestrians	Cyclists	Non-motorised vehicles	Motorised vehicles
Footpath					
Bridleway					
Restricted byway					
Byway Open to All Traffic (BOAT)					

- 2.4.2 Reference may also be seen to a former type of public right of way, Road Used as a Public Path (RUPP), established by the National Parks and Access to the Countryside Act 1949. However, there was widespread confusion about the exact status of RUPPs and the Wildlife and Countryside Act required these to be reclassified; generally as bridleways, but also as BOATs where established use by motorised vehicles could be proved. As this process had not been fully completed in some areas, all remaining RUPPs were reclassified as restricted byways in 2006 under the Countryside and Rights of Way Act 2000.

2.4.3 If a public right of way described as a RUPP is encountered, the actual status of the route shall be established with the highway authority.

2.5 Records

General

- 2.5.1 The National Parks and Access to the Countryside Act 1949 required surveying authorities (local highway authorities) to prepare a Definitive Map of public rights of way in all non-metropolitan areas. This requirement was later extended to all local authority areas apart from the 12 Inner London boroughs.

NOTE – Refer to Section 2.8 for details on local highway authorities.

NOTE – In the Inner London Boroughs, public rights of way may be recorded in the 'List of Streets' that the local highway authority is required to maintain or otherwise shown on highway boundary maps or maintenance plans.

- 2.5.2 In each case, the Definitive Map is accompanied by a statement giving additional details such as connections to other highways and (in some cases) widths. In rare cases, limitations or conditions attached to the public's rights will also be recorded in the statement.

- 2.5.3 Definitive Maps and statements have to be made available for inspection in person at the council's offices, but are not usually published online. However, some local authorities do publish material derived from the Definitive Map in various forms, and the public right of way network (at the time of publication) is shown on 1:25000 and 1:50000 scale Ordnance Survey mapping in green and red respectively.

NOTE – The Definitive Map can only be modified by an order made under the Wildlife and Countryside Act, although the change may be initiated by a 'legal event' arising from an order made under another piece of legislation (which will occur when the HS2 hybrid Bills are enacted).

2.5.4 As the public right of way network is subject to change, there is no guarantee that information shown on Ordnance Survey mapping or other published sources is still current so reference must be made to the Definitive Map for up-to-date details.

NOTE – Data has been added to the HS2 Geographic Information System (GIS) as provided by each surveying authority. However, a check against the Definitive Map still should be undertaken to validate this information.

Unrecorded public rights of way

- 2.5.5 Whilst there is no doubt about the status of a public right of way shown on the Definitive Map, the fact that a route is not shown does not mean that a public right of way does not exist. Any person who has evidence that public rights exist (e.g. through unchallenged use of a way for a minimum period of 20 years or documentary proof) can ask the surveying authority (i.e. local highway authority) to modify the Definitive Map at any time.

NOTE – Each surveying authority is required to maintain a register of claimed public rights of way and these should be available online.

NOTE – Major development schemes sometimes prompt claims for unrecorded public rights of way to be added to the Definitive Map (although these may, of course, ultimately prove unsuccessful).

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| 2.5.6 | Where a suspected unrecorded public right of way is encountered, the exact status of the claimed rights and whether it is expected to be included in the Definitive Map shall be established with the surveying authority. |
| 2.5.7 | Where an unrecorded public right of way is confirmed by the surveying authority, it shall be assessed on a case by case basis to determine an appropriate level of mitigation. |

'Dead end' public rights of way

- 2.5.8 As for roads, public rights of way exist for persons to travel without let or hindrance from one place to another. As such, they comprise a network with connections to other highways at each end (and often at intermediate points as well). It is therefore unusual for a 'dead end' route to exist, with exceptions for cases such as public rights of way leading to the coast or a river crossing (even though the bridge, ford or ferry may have long since disappeared).
- 2.5.9 However, the Definitive Maps are full of anomalies where 'dead end' public rights of way stop for no apparent reason. This frequently occurs at parish boundaries, where adjacent parish councils took a different approach to what they considered to be a public right of way when the Definitive Maps were being first drafted. It may also occur where a public right of way joins a green lane or what appears to be a private access which is actually public road but is not shown as such on the Ordnance Survey mapping.

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| 2.5.10 | The possibility always needs to be considered that an apparently 'dead end' route may continue as an unrecorded public right of way and where encountered the situation shall be clarified with the surveying authority. |
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2.6 Other routes with public access by non-motorised users

2.6.1 There are also many other types of route with public access by non-motorised users. These include:

Green lanes

2.6.2 This is a term with a variety of meanings, but for the purposes of this document it is taken to mean an unclassified road maintained by the local highway authority. Whilst usually unsurfaced – and often narrow and possibly wholly or partially overgrown – green lanes can legally be used by all classes of traffic (including motorised vehicles). In practice, there is little significant difference between a BOAT and a green lane and design considerations and mitigation measures are likely to be similar.

2.6.3 Where potential green lanes are identified, the exact status of the route shall be confirmed with the local highway authority.

NOTE – Also refer to Technical Standard – Roads (HS2-HS2-HW-STD-000-000001) regarding any potentially affected green lanes.

Permissive routes

2.6.4 Landowners may agree to public access on a basis usually equivalent to a footpath or bridleway but this permission may be withdrawn at any time. Landowners may also allow use of a public right of way by more classes of traffic than the type would normally permit (e.g. cyclist and pedestrian use of a public footpath). Permissive paths may also be closed temporarily (e.g. one day per year in order to prevent public rights from becoming established, or for periods to allow for agricultural or forestry operations, wildlife breeding seasons, etc.). A number of established permissive routes are shown in orange on 1:25000 scale Ordnance Survey maps. An example of permissive route is the Forest Trail network to be found in most Forestry Commission woodlands.

NOTE – There are various sources of information about permissive routes, some of which will be known to the local highway authority, but in most cases it will be necessary to obtain full details directly from the landowners concerned.

Canal towpaths

2.6.5 Many canal towpaths are recorded on the Definitive Maps as public rights of way, but nearly all others provide *de facto* public access to pedestrians. Access may also be available to cyclists and/or equestrians, but this tends to be more tightly controlled through the use of barriers and gates.

2.6.6 The exact status of canal towpaths not recorded as public rights of way shall be established with the owner (usually Canal and River Trust).

NOTE – In some cases, public rights may have become established over time (and thus the towpath ought to be considered as an unrecorded public right of way – see Section 2.5 for details) whilst others are only permissive routes.

Roads where use by certain classes of traffic is restricted by a Traffic Regulation Order (TRO)

2.6.7 Traffic management measures sometimes result in Traffic Regulation Orders (TROs) being made under the Road Traffic Regulation Act 1984, which restrict usage by certain classes of traffic (e.g. motorised vehicles) on either a temporary or permanent basis. Physical restrictions are usually supported by traffic signs and/or road markings, but these may fall into disrepair or disappear completely over time. In many cases, there will be exceptions to the general restrictions imposed by a TRO (permitting access by the emergency services and adjacent landowners, for example).

2.6.8 The exact nature of the restrictions imposed by a TRO shall be established with the local highway authority.

NOTE – Restrictions imposed by temporary orders can usually be disregarded after the stated expiry date (although it has to be borne in mind that this may be extended).

Footways

2.6.9 A path for pedestrian use only, located within the boundaries of a public road (i.e. 'pavements' in common usage). These are not highways in their own right, and are simply another component of the road together with the carriageway(s), verge(s), etc. Where used by pedestrians, traffic islands and paved areas on bridges also have the same status.

NOTE – Under the Highway Act 1835, it is a criminal offence to cycle or drive a vehicle on a footway (except at an official crossover to a private access).

NOTE – Refer to Technical Standard – Roads (HS2-HS2-HW-STD-000-000001) for requirements and guidance relating to footways.

Combined footway / cycleways

2.6.10 Similar to a footway, but provided as a path for use by both pedestrians and cyclists. They exist in two forms:

- Segregated – where the route is divided into two separate parts, one for pedestrians and the other for cyclists, divided by a white line
- Unsegregated – where pedestrians and cyclists share the full width of the route

NOTE – Combined footway / cycleways have to be specifically signed as such in order to allow use by cyclists without an offence being committed under the Highway Act 1835.

NOTE – Refer to Technical Standard – Roads (HS2-HS2-HW-STD-000-000001) for requirements and guidance relating to combined footway/cycleways.

Cycle lanes

2.6.11 Cycle lanes form part of the road carriageway, adjacent to (and usually on the nearside of) main traffic lanes. They exist in two forms:

- With-flow – where cyclists are travelling in the same direction as the other traffic
- Contra-flow – where cyclists are travelling in the opposite direction to the other traffic

NOTE – Cyclists have the right to use all traffic lanes on all roads (excluding motorways) except where a Traffic Regulation Order prohibits their use (accompanied with the relevant regulatory signs). Most bus lanes allow for usage by cyclists as indicated on signs.

NOTE – Refer to Technical Standard – Roads (HS2-HS2-HW-STD-000-000001) for requirements and guidance relating to cycle lanes.

Cycle tracks created under the Cycle Tracks Act 1984

2.6.12 A special type of off-road route either provided for cyclists alone or also permitting use by pedestrians. Cycle tracks should not be confused with on-road cycle lanes, roadside segregated cycleways or roadside unsegregated cycleway/footways.

2.6.13 Where potential off-road cycle tracks are identified, the status of the route shall be confirmed with the highway authority.

Greenways

2.6.14 The term 'greenway' is often used to describe a former railway line that has been converted to allow public access by non-motorised users. Greenways have traditionally been established primarily for pedestrians and/or cyclists however some also allow equestrian access. Greenways may be either a type of public right of way (such as a bridleway or restricted byway) or a linear country park with permissive access rights for defined user types.

2.6.15 The status of greenways shall be confirmed with the local highway authority, or landowner where not a public right of way.

Housing estate paths

2.6.16 A path for pedestrian use only, located within a housing estate but remote from roads. These are not usually highways in their own right, but may either be maintained by the local highway authority (in which case public use is generally permitted) or by the housing estate owner (in which case the intention may be that it is not, although public rights may have become established over time).

2.6.17 The status of housing estate paths shall be confirmed with both the local highway authority and the housing estate owner

NOTE – The possibility of a housing estate path being an unrecorded public right of way also needs to be considered (refer to Section 2.5 for further information).

Open access land ('right to roam')

- 2.6.18 Under the Countryside and Rights of Way Act 2000, pedestrians have a 'right to roam' on mapped areas of mountain, moor, heath, downland and registered common land without having to stick to a public right of way. However, landowners and tenants have the discretion to suspend or restrict public access for up to 28 days each year for any reason. They may also apply for additional restrictions or closures for purposes such as land management, safety or fire prevention reasons.

NOTE – Where areas of open access land are crossed, careful consideration will have to be given to the location of any proposed overbridges, underbridges or underpasses as it will not necessarily be obvious where the pedestrian desire lines are. For larger areas, it will be necessary to consider more than one crossing point.

NOTE – Open access land data is available on the HS2 Geographic Information System and online mapping is also accessible from the Natural England website.

- 2.6.19 Registered common land is protected from development by statutory controls. These are principally contained in the Commons Act 2006 and the Acquisition of Land Act 1981, but other controls are contained in various public and local Acts and Orders. Furthermore, any application to deregister an area of common land exceeding 200 square metres will require an equivalent area of suitable 'replacement land' to be provided.

- 2.6.20 In the event that an area identified as common land is potentially affected, the commons registration authority (normally the county council, unitary authority, metropolitan district council or London Borough council) shall be consulted to confirm the status and extent of the site.

Town and village greens

- 2.6.21 Town and village greens developed under customary law as areas of land where local people indulged in lawful sports and pastimes. Most greens were registered in the late 1960s under the Commons Registration Act 1965 but anyone can apply under the Commons Act 2006 to register land as a town or village green if it has been used by local people for lawful sports and pastimes 'as of right' (i.e. without permission, force or secrecy) for at least 20 years.

NOTE – A town or village green does not have to be an area of neatly-mown grass; woodlands, ponds and even golf courses have previously been registered where they have met the statutory test.

NOTE – Strictly speaking, only inhabitants of the 'locality' (rather than the public at large) have the right to indulge in lawful sports and pastimes on a town or village green. However, in practice, they can be considered to be public open spaces for most purposes.

NOTE – Town and village green data is available on the HS2 Geographic Information System, but online maps are not generally available so it may be necessary to contact the registration authority (normally the county council, unitary authority, metropolitan district council or London Borough council) for up-to-date information.

2.6.22 Town and village greens have a high degree of statutory protection under the Inclosure Act 1857 and the Commons Act 1876, and permission is usually required from the local authority or the Secretary of State to carry out any potentially disruptive works to them. As for common land, any application to deregister an area of green exceeding 200 square metres will require an equivalent area of suitable 'replacement land' to be provided.

2.6.23 In the event that an area identified as a town or village green is potentially affected, the registration authority shall be consulted to confirm the status and extent of the site.

NOTE – Major development schemes sometimes prompt applications to register new town or village greens by those opposed to the scheme (although these may, of course, ultimately prove unsuccessful).

2.7 Maintenance and obstructions

2.7.1 Local highway authorities are legally responsible for public rights of way, including most aspects of maintenance and dealing with obstructions. The same applies to certain other routes with public access by non-motorised users (such as green lanes, roads with TROs, cycle tracks and footways). However, certain legal obligations are placed on owners with public rights of way crossing their land regarding matters such as the reinstatement of ploughed surfaces and the installation of gates.

NOTE – The fact that a public right of way (or similar route) may be rendered impassable by obstruction or neglect has no bearing on its status, no matter how long that situation has persisted.

2.7.2 When planning mitigation measures, it must be assumed that the local highway authority will fulfil its statutory duty to secure removal of any obstructions and restore the route to a usable condition consistent with its status.

2.7.3 Landowners are legally responsible for permissive routes, but may sometimes receive public funding for activities such as maintenance and improvements in return for allowing public access.

NOTE – For further details on highway maintenance responsibilities, refer to Information Paper E28 'Future highway maintenance responsibilities'.

2.8 Stakeholders

Highway Authorities

2.8.1 Under English law, there are three main types of highway authority, as follows:

- **Highways England**, a government owned company (formally known as the Highways Agency until March 2015)
- **Transport for London (TfL)**, part of the Greater London Authority (GLA)
- **Local highway authorities** – being the county council, unitary authority, London Borough or metropolitan borough for the area

2.8.2 Local highway authorities are the only highway authorities that are responsible for public rights of way.

2.8.3 While Highways England and Transport for London (TfL) are not responsible for public rights of way, they may be responsible for other routes with public access by non-motorised users (such as footways and cycleways).

NOTE – Local highway authorities often have a team dedicated to the management of public rights of way. They can be a useful source of information when designing new, realigned or diverted public rights of way.

Prescribed organisations

2.8.4 The bodies listed below are 'prescribed organisations' for notices about public rights of way orders being made under the Highways Act, the Town and Country Planning Act and Wildlife and Countryside Act. Although the HS2 project obtains powers for the project by means of the hybrid Bill process rather than one of the three above-mentioned acts, the prescribed organisations are likely to take a very detailed interest in the proposals.

- All notices
 - Auto Cycle Union
 - British Horse Society
 - Byways and Bridleways Trust
 - Cyclists' Touring Club
 - Open Spaces Society
 - Ramblers (see Clause 2.8.7 for more details)
- Notices about orders affecting land in districts including Chiltern, Wycombe, South Bucks, Aylesbury Vale and Three Rivers
 - Chiltern Society
- Notices about orders affecting land in Cheshire, Derbyshire, Greater Manchester, Lancashire, Merseyside, South Yorkshire, Staffordshire and West Yorkshire
 - Peak and Northern Footpaths Society
- Notices about Wildlife and Countryside Act orders
 - British Driving Society

- Notices about orders creating footpaths, bridleways or restricted byways on land adjacent to operational railway lines
 - Network Rail

Other consultees

2.8.5 The document 'Practice Guidance Note 1 – Consultation on changes to public rights of way and definitive maps', published by the national Rights of Way Review Committee, identifies the following additional consultees about public rights of way orders:

- Local Access Forums – statutory bodies created by the Countryside and Rights of Way Act 2000
- Local authorities, including parish or community councils and chairmen of parish meetings
- Statutory undertakers (as some may have apparatus under or over the public right of way concerned)
- Local organisations with an interest in public rights of way in the district concerned
- Natural England
- The owner and occupier of any land affected by a proposal

Canal and Rivers Trust

2.8.6 Canal and Rivers Trust is a registered charity that is responsible for canals and inland waterways in England, and any associated tow-paths. Refer to Clause 2.6.5 for details on the status of canal tow-paths.

Ramblers

2.8.7 Ramblers is a registered charity that represents the rights of walkers. The stated aims of the Ramblers are to promote walking, to safeguard paths, to increase access for walkers, to protect the countryside and to educate the public. Rambler groups are associated with a particular locality and are often a good source of information about public rights of way in their local area.

Sustrans

2.8.8 Sustrans is a registered charity that manages the National Cycle Network, which comprises a mixture of 'greenways' and quiet roads. As a result, they are likely to be interested in any changes to the National Cycle Network including impacts during construction. Refer to Clause 2.6.14 for details on greenways.

Other interested parties

2.8.9 Other user groups may have an interest in the design of public rights of way, such as:

- The National Farmers Union – which represents farmers and may have an interest where public rights of way cross agricultural land

- Fishing user groups – which may have an interest where changes to canal tow-paths and public rights of way adjacent to watercourses may impact on fishing
- Mountain biking groups – which may have an interest in changes to bridleway, restricted byways and Byways Open to All Traffic (BOATs)
- Four-wheel drive and off-road motorcycling groups – which may have an interest in changes to Byways Open to All Traffic (BOATs)

3 Environmental considerations

3.1 Environmental Statement

3.1.1 Environmental impacts, including the impacts on public rights of way, are assessed prior to and during the hybrid Bill stage and are reported by means of an Environmental Statement. Examples of temporary and permanent effects include:

- Impacts on journey times to public right of way users;
- Severance to communities; and
- Visual impact of the works.

3.1.2 Following Royal Assent, the project is obliged to comply with the Environmental Minimum Requirements (EMR), which amongst other things state that the project cannot introduce any significant effects beyond those already addressed in the Environmental Statement. Design development for all aspects, including for public rights of way, need to ensure that no new significant effects are introduced. Refer to the Scope and Methodology Report in the Phase One Environmental Statement for the definition of a significant effect.

3.2 Transport Assessment

3.2.1 Potential impacts on public rights of way are reported on in detail in the Transport Assessment supporting the Environmental Statement.

NOTE – The assessment is not just restricted to pedestrians – all non-motorised users are considered.

4 Design considerations

4.1 Function of public rights of way

4.1.1 Public rights of way may serve one of more functions, depending on the user, geography, links to other public rights of way and roads and other factors such as its condition. Below are some common functions that public rights of way serve, however this is not an exhaustive list.

NOTE – Consultation with the community, as well as interest groups such as Ramblers can help determine how public rights of way are currently being used.

Link to local destinations

- 4.1.2 Some public rights of way provide important connections between residential areas and local destinations such as health and social services, retail facilities, schools and educational facilities, community and leisure centres and faith centres. People who use public rights of way to access local destinations may be more sensitive to any increased distances associated with realigned or diverted public rights of way. Users of these public rights way could form a broad cross-section of the community and may include people with reduced mobility or people with push-chairs or trolleys.

Local recreation routes

- 4.1.3 Many public rights of way are used to access the countryside for recreational purposes. Informal circular routes (which may include sections on quiet roads) near villages and towns are often highly regarded with local residents including dog-walkers, people with reduced mobility and people with buggies, and specific accommodation for these may be required (such as in the design of gates).

Regional or national recreational routes

- 4.1.4 Recreational use of public rights of way may not just be for local journeys – public rights of way can also be used for longer journeys that may take several hours (or even days or weeks). These may also form part of promoted routes or other national networks (such as the National Cycle Network and the National Bridleroute Network).

4.2 Users of public rights of way

- 4.2.1 Section 2.4 discusses the types of users (such as pedestrian, equestrian, etc.) that are permitted to use public rights of way; however a good public right of way design requires a greater understanding as to *who* and *why* a particular public right of way is being used.
- 4.2.2 It is essential to ensure that adequate provision for disabled people and people with reduced mobility is made in design.
- 4.2.3 Examples of people who may use a particular public right of way, include:

Footpath

- Disabled people
- People with reduced mobility
- People pushing buggies
- People walking dogs
- Recreational fishermen accessing waterways or canals
- People walking with small children
- Able-bodied people
- Hikers / ramblers

Bridleway

4.2.4 As for footpath plus the following:

- People cycling with children
- People cycling on tandem bikes
- Mountain bikers
- Disabled cyclists
- Able-bodied cyclists
- Children learning to ride horses (such as members of a Pony Club)
- Disabled equestrian riders
- Able-bodied equestrian riders

Restricted byway

4.2.5 As for bridleway plus the following:

- Horse-drawn vehicles

Byway Open to All Traffic (BOAT)

4.2.6 As for restricted byway plus the following:

- Trail (dirt) bikes
- Four-wheel drive vehicles
- Two-wheel drive vehicles

4.3 Public rights of way coincident with an access

4.3.1 Many public rights of way are coincident with existing private means of access or new accommodation accesses such as driveways or farm tracks. Whilst such accesses may be used by other classes of traffic (e.g. motorised vehicles) with permission of the landowner, public use is governed by the public right of way type. Refer to Technical Standard – Accommodation accesses (HS2-HS2-HW-STD-000-000004) for further details.

NOTE – When designing mitigation works for affected public rights of way – such as overbridges, underbridges, underpasses and diversions – it is also necessary to take account of any permitted private usage (unless this will cease through compulsory purchase or by accommodation works providing an alternative private means of access).

NOTE – There is no definitive source of private use arrangements, so it is important that as much information as possible is gleaned from sources such as community engagement and direct contact with landowners.

4.3.2 Besides accommodation accesses, HS2 accesses may also be coincident with public rights of way. Refer to Technical Standard – HS2 accesses (HS2-HS2-HW-STD-000-000003) for further details.

4.3.3 A public right of way is considered 'coincident' with an access where the public right of way and access share the same alignment. In these instances users of the public right of way (pedestrians, cyclists and or equestrians, as permitted) walk/ride along the access in an informal shared-use basis with vehicles using the access. This arrangement is often appropriate given the infrequent and low-speeds of vehicles typically using accesses.

4.3.4 There may be instances at very busy accesses where a separate unbound surface for non-motorised users is preferred, as opposed to having an informal shared-use arrangement. Where this occurs, the public right of way is no longer considered coincident with the access. Refer to Appendix C of Technical Standard – Roads (HS2-HS2-HW-STD-000-000001) for details of the similar case of paths being provided in the verge adjacent to busier roads.

4.4 Crime Prevention Through Environmental Design (CPTED)

4.4.1 Crime Prevention Through Environmental Design (CPTED, also known as Designing Out Crime) is a multi-disciplinary approach to deterring criminal activities through environmental design. This is based on research into criminal behaviour which shows that the decision to offend or not to offend is often related to the risk of being caught. Many aspects of CPTED relate to perceived risks and perceived safety, which are difficult to quantify.

4.4.2 The following list is a selection of CPTED issues that should be considered for non-motorised users in urban areas or on the urban fringe, however the designer should consider all relevant CPTED issues based on industry good-practice and guidance:

- Will the route feel 'safe'?
- Does the route encourage 'legitimate' use or 'illegitimate' use, such as anti-social behaviour?
- Will users of the route feel 'threatened'?
- How well can users see what is ahead or behind, so that threatening behaviour can be identified? Are there places where an attacker could hide (for example, behind a wall, in bushes or in a dark place)?
- If a person felt threatened, are there likely to be people nearby who could see or hear that person in distress? This is known as 'passive surveillance' and could be provided by adjacent residences or businesses, nearby roads or public rights of way, or from other non-motorised users.
- Should usage of a route be encouraged at night (such as by providing street lighting), or would this lead to encourage use in areas that may be 'unsafe'?

4.5 Integration with the landscape

4.5.1 Public rights of way, as with all aspects of the project, should be sensitive to the unique patterns, subtleties and diverse character of the surrounding landscape. Refer to the Guidance Document – Landscape Design Approach (HS2-HS2-EV-GDE-000-000002) for requirements and guidance relating to landscape integration.

4.6 Land ownership

- 4.6.1 Almost all public rights of way are located on private land, but this has no bearing on the public's right to use the route without let or hindrance.

NOTE – No landowner or member of the public can obstruct or otherwise cause an unlawful interference to a public right of way, and to do so is a criminal offence under the Highways Act 1980.

Private access rights

- 4.6.2 In the event that a public right of way along a track or lane is stopped up (extinguished), any existing private rights of access will remain. However, great care needs to be taken to ensure that no other party relies on the public right of way to access land or other property further along the route. If they do, new private rights – either along this route or by means of another – will have to be secured for them.

NOTE – The same would apply to any new private accesses required (e.g. for a nearby landowner or an HS2 vehicular access for the future operation / maintenance of HS2) where it is intended that this would follow the alignment of a public right of way to be stopped up.

Construction sites

- 4.6.3 Consideration should be given at an early stage to the need for construction sites required for any overbridges, underbridges, underpasses or other structures associated with public rights of way works.

4.7 Provision for future development

- 4.7.1 New, realigned or diverted public rights of way should only be designed where required to mitigate the impacts of the scheme. It is not within the scope of HS2 to provide 'betterment' to the existing highway network.
- 4.7.2 When designing public right of way mitigation, the highway network should be considered as the existing network plus any committed schemes.
- 4.7.3 Where highway authorities or third parties have planned future developments or aspirations that will impact on public rights of way and are not yet committed, consideration should be given to ensuring – where reasonably practicable - that the design does not preclude these plans from occurring. However any provision over and above what is required to mitigate the scheme should be considered only where the cost and programme impact to HS2 is minimal.

NOTE – Where in doubt as to whether a development is 'committed' or not, please consult with HS2 Technical Directorate.

4.8 Promoted routes

- 4.8.1 A large number of different types of promoted routes exist. Whilst many of the historically popular long-distance routes have become promoted routes, other routes have become popular largely as a result of becoming a promoted route.

NOTE – Being a promoted route confers no extra status to a public right of way, but because of their greater public awareness they can become more sensitive issues if any changes are proposed.

European Long Distance Paths (E-paths)

- 4.8.2 A network of 12 international European Long Distance Paths (E-paths) has been established by walkers' and ramblers' groups who are members of the European Ramblers Association. Three of these routes (E-2, E-8 and E-9) have lengths within the UK which run along a chain of public rights of way.

National Trails

- 4.8.3 National Trails are a network of 15 long distance routes in England and Wales (with the Scottish equivalent being called Long Distance Routes). Starting with the Pennine Way, this network now includes the Ridgeway and the Thames Path and is mainly funded by Natural England and the Countryside Council for Wales. In addition to linking public footpaths, increasing provision for cyclists and equestrians is being made in the network.

Recreational routes

- 4.8.4 In addition to the National Trails, there is a much larger network of recreational routes (often developed by local authorities in association with user groups). Most recreational routes are intended for walkers, but routes for cyclists and equestrians have also been developed. Recreational routes are usually waymarked with a special logo or the route name, and many of them (such as the Icknield Way and the Aylesbury Ring) are shown on Ordnance Survey maps.

Unwaymarked routes

- 4.8.5 There are also a number of widely known, but unofficial, unwaymarked routes using the public rights of way network with the most famous perhaps being Wainwright's Coast to Coast route. Other examples of off-road routes developed (controversially in some cases) by four-wheeled-drive clubs. Despite not being shown on Ordnance Survey maps, such routes are often featured in other publications and can be very popular.

Community routes

- 4.8.6 At a more local level, many parish councils and local user or amenity groups have developed their own circular routes – often with a nature or history theme – using footpaths or bridleways (usually public, but sometimes with permissive sections as well). Although not

widely promoted outside the locality, guides can often be found in Tourist Information Offices or public libraries and community routes can be well used by visitors and residents alike.

National Cycle Network

- 4.8.7 Since 1995, a national network of some 13,400 miles of cycle-friendly routes has been developed by Sustrans. In addition to bridleways and other public rights of way and permissive off-road routes where cycling is allowed, the network also includes many lengths of quieter urban roads and country lanes.

National Bridleroute Network

- 4.8.8 The British Horse Society is promoting a National Bridleroute Network which aims to offer similar benefits for horse riders to those enjoyed by cyclists using the National Cycle Route.

4.9 Temporary impacts during construction

General

- 4.9.1 Refer to the following information papers for the management of temporary impacts on public rights of way during construction:

- D11 – Maintaining access to residential and commercial property during construction
- E13 – Management of traffic during construction
- E14 – Highways and traffic during construction – legislative provisions

- 4.9.2 Information Paper E14 explains that the hybrid Bill allows the Nominated Undertaker to temporarily interfere with highways, including public rights of way. This power means that the need for a Temporary Traffic Regulation Order (TTRO) made under the Road Traffic Regulation Act 1984 is unlikely for works affecting public rights of way.

4.10 HS2 nomenclature

- 4.10.1 The following terms should be used when referring to highway alterations (including for public rights of way):

- **Realignment** – where a new alignment is to be provided between points 'A' and 'B' on the same route (refer to Figure 1)
- **Diversion** – where the existing route between points 'A' and 'B' is to be replaced by a new route from point 'A' to a different point 'C', no longer passing through point 'B' (refer to Figure 1)
- **Reinstatement** – where a route is to be re-provided more-or-less on the same alignment, e.g. over a green tunnel
- **Closure** – where all or part of a route is to be stopped up without replacement

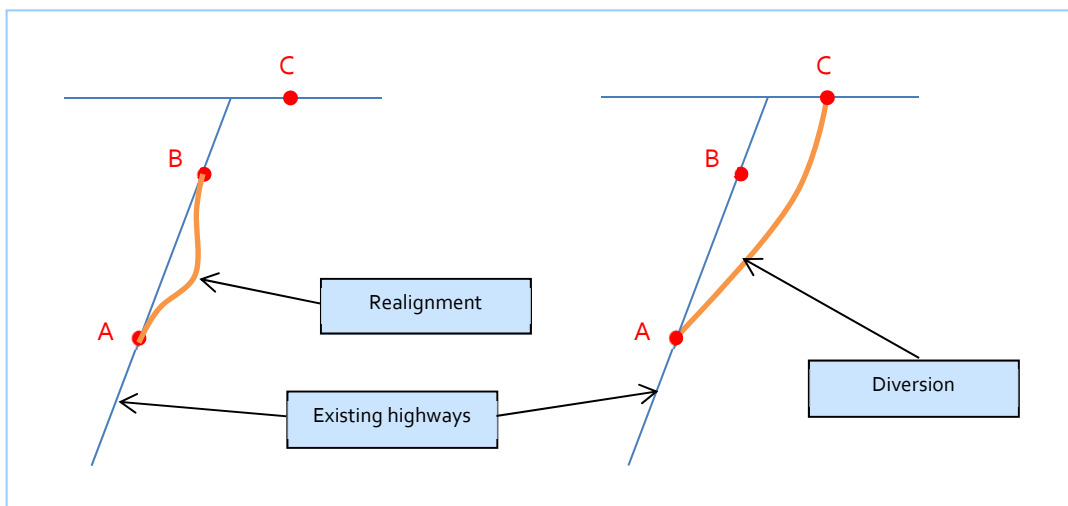


Figure 1: Realignment versus diversion

5 Alignment and crossings

5.1 Guiding principles for alignment design

- (i) All works – both temporary and permanent – affecting public rights of way should provide reasonably convenient route continuity for the class(es) of users legally entitled to use them.
- (ii) Potential adverse impacts of HS2 on public rights of way should be 'designed out' where reasonable practicable to do so.
- (iii) Where adverse impacts on public rights of way are unavoidable, appropriate and proportionate mitigation measures must be incorporated into the design.

5.1 Realignments and diversions

General

5.1.1 Refer to Information Paper 'E5 – Roads and public rights of way' for the general approach to be taken for the design of public rights of way. Other useful guidance when developing and assessing alignment and crossing options is contained in DMRB advice note TA 91.

5.1.2 There are several aspects to consider when selecting an alignment for a public right of way. These are listed below in no particular order of importance.

Desire line

5.1.3 Non-motorised users (and in particular pedestrians) have a tendency to take the shortest route possible. If a non-motorised user is starting at Point 'A', and wants to get to Point 'B', then the quickest route between the two points is known as the 'desire line'.

NOTE – Refer to Figure 2 for a visual example of desire lines within Hyde Park, London.

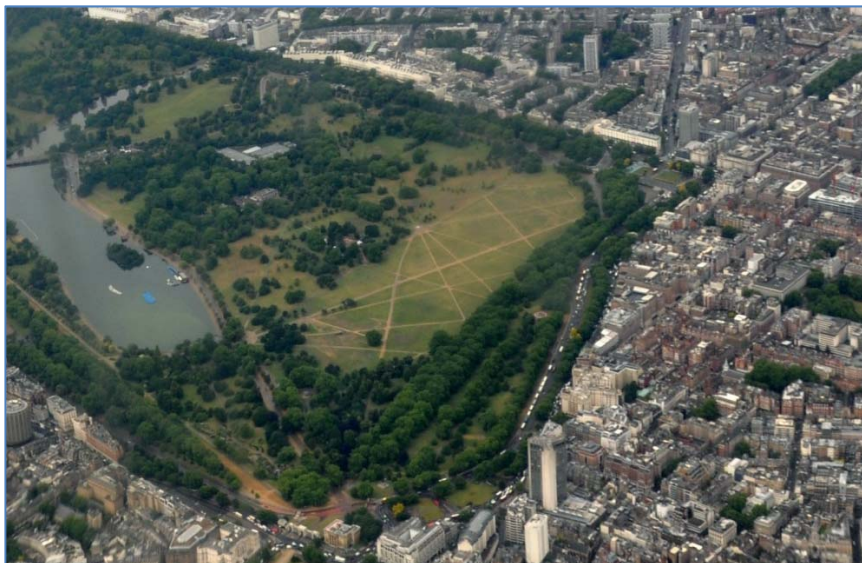


Figure 2: Aerial image of Hyde Park

5.1.4 Realigned or diverted public rights of way should follow the desire line of users where possible.

Sharp bends

5.1.5 Sharp bends (with an internal angle more acute than 90 degrees) should be avoided where possible (in both temporary and permanent realignments and diversions) to discourage users 'cutting off' corners. Cyclists and equestrians can also struggle to negotiate sharp bends, depending on the speed that they are travelling.

5.1.6 The risk of 'cutting off' corners can be reduced by the use of hedging / fencing, but this may increase visual impact in areas where public rights of way are not usually confined by boundary features on both sides (e.g. cross-field and field-edge routes).

Routes parallel to HS2

5.1.7 Realignments or diversions adjacent to HS2 will likely have reduced amenity compared to the existing alignment, due to the noise and/or visual effect of HS2.

5.1.8 Public rights of way that allow use by equestrians shall not run closely parallel to HS2 unless a risk assessment has been conducted demonstrating that it is unlikely that horses will become startled.

Minimising impacts on farms

5.1.9 Whilst there are many existing public rights of way that pass across fields, it is preferred that any realigned or diverted public right of way should follow existing field boundaries. This is particularly the case for cultivated fields, as the need to create a walkable cross-field path through the field can cause difficulties for farmers and users.

NOTE – Where public rights of way are proposed to be realigned or diverted adjacent to or through fields, the local farmer should be consulted at an early stage to determine the land usage.

Minimising impacts on residents

- 5.1.10 Consideration should also be given to potential impacts of realigning or diverting public rights of way close to existing residents, as public rights of way that pass by the back fence of properties can pose privacy issues.

5.2 Crossing types

General

- 5.2.1 Public rights of way can cross the alignment of HS2 via an overbridge, underbridge, underpass, or by following the existing ground level where HS2 is on a viaduct or in a tunnel.
- 5.2.2 Overbridges, underbridges and underpasses can either be provided solely for the public right of way, or can be designed to cater for other purposes as well, such as:
- Being coincident with accommodation accesses (overbridges, underbridges and underpasses)
 - Being coincident with HS2 accesses (overbridges, underbridges and underpasses)
 - Combining with watercourse crossings (underbridges and underpasses)
- 5.2.3 The type and location of public right of way crossings is often influenced by factors such as the:
- Need to provide accommodation access across HS2 in a similar location (e.g. to link up two fields of a farm)
 - Need to provide HS2 access across HS2 in a similar location (so that HS2 assets can be maintained)
 - Proximity to other public rights of way that cross HS2
 - Proximity to roads that cross HS2
 - Proximity to watercourses that cross HS2
 - Proximity to utilities that cross HS2
 - Environmental constraints
 - Land and property constraints

NOTE – Refer to Technical Standard – HS2 Accesses (HS2-HS2-HW-STD-000-000004) and Technical Standard – Accommodation Accesses (HS2-HS2-HW-STD-000-000005) for further details on requirements and guidance for accesses.

Skew

- 5.2.4 Overbridges, underbridges and underpasses can be either skewed or perpendicular to HS2. Skewed crossings are generally not preferred due to their increased cost, however there may

be cases where skewed crossings are appropriate (such as to avoid tight bends on busier bridleways and byways, or for public rights of way that following an ancient route alignment).

On-line versus off-line crossings

5.2.5 Overbridges, underbridges and underpasses can either be designed as on-line or off-line crossings. The potential advantages and disadvantages of each are described in Table 2.

Table 2: On-line crossing – HS2 in deep cutting

	On-line crossing	Off-line crossing
Advantages	Less permanent additional length for public right of way users	No temporary realignment or closure required
Disadvantages	Temporary realignment or closure required	Additional permanent length for public right of way users

NOTE – As most temporary public right of way realignments can be provided at minimal cost, on-line overbridges are often preferred in the absence of other constraints.

5.1 Public right of way crossings remote from other highways

5.1.1 There are three typical situations for consideration when designing a public right of way crossing remote from other highways. Refer to Table 3 for a comparison of each scenario.

Table 3: Comparison of typical scenarios and associated crossing types, where cells shaded green indicate low potential negative impact, amber indicate some potential negative impact and red indicate greater potential negative impact.

HS2 route earthworks	HS2 in deep cutting		HS2 on high embankment		HS2 close to existing ground level	
	Overbridge	Underbridge / underpass	Overbridge	Underbridge / underpass	Overbridge	Underbridge / underpass
Severance	None - minimal	None - minimal	Steeper gradients on approach embankments may introduce severance to some users	Steeper gradients on approach cuttings may introduce severance to some users		
Visual impact*	Limited impact associated with structure	Minimal impact	Impact associated with approach embankments and structure	Limited impact associated with approach cuttings		
Maintenance considerations	None – minimal	May require street lighting	None - minimal	May require street lighting and/or pumped drainage		

** NOTE – Consideration should be given to the visual impact of HS2 as a whole (including railway earthworks) rather than just the crossing.*

5.2 Combined public right of way crossings

5.2.1 Combined crossings allow multiple public rights of way that are in close proximity to cross HS2 using the one structure. In many cases the alternative of providing dedicated crossings for each public right of way cannot be justified. Combined crossings can be either centred or offset, as described below.

5.2.2 Where two public rights of way of a different status (e.g. one a footpath, the other a bridleway) are to be joined locally at a combined crossing, the section where they are combined shall be given the higher status.

Centred

5.2.3 A centred off-line crossing may be provided at a suitable location between the points where the original routes of the public rights of way intersect the HS2 route (as illustrated in Figure 3). This means that temporary diversions are not required during construction and that the additional length to public right of way users is shared between the two public rights of way.

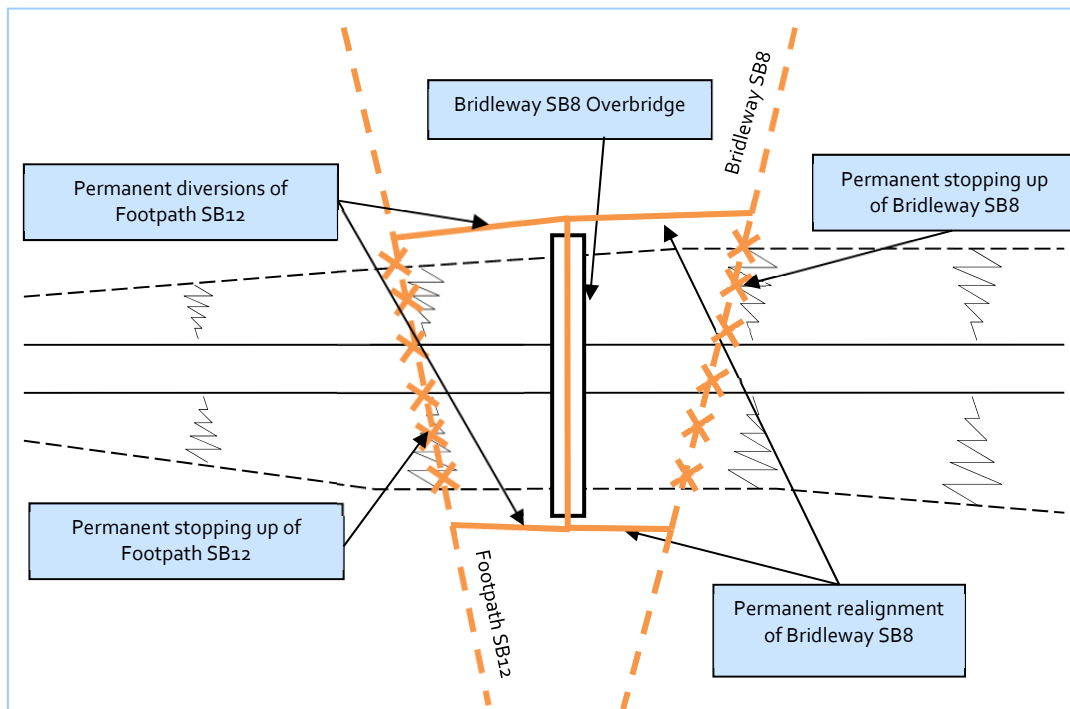


Figure 3: Combined crossing – centred

Offset

5.2.4 An on-line crossing may be provided for one of the public rights of way with diversions being required on each side of HS2 for the other (as illustrated in Figure 4). This is generally provided when one of the two public rights of way has a higher status or significantly heavier usage than the other, resulting in a permanent diversion for the less-used public right of way only.

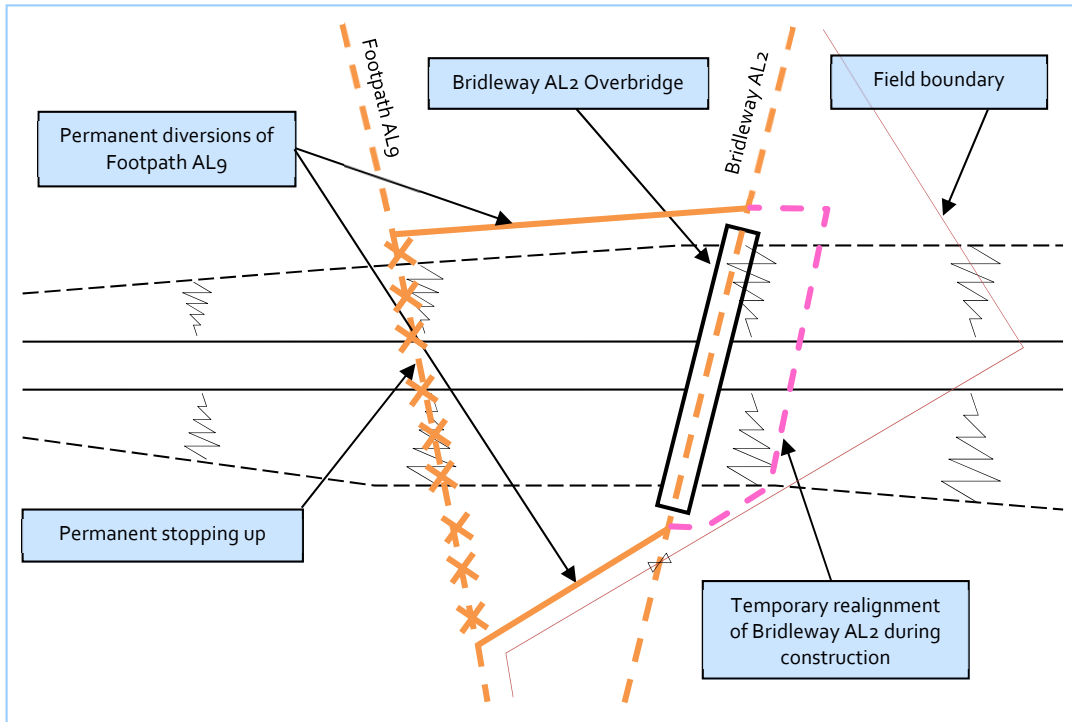


Figure 4: Combined crossing – offset

5.3 Diversion to a road crossing

5.3.1 In some situations it may be appropriate to divert a public right of way to a nearby road that crosses HS2 (as shown in Figure 5). This is often proposed where the cost associated with a dedicated public right of way overbridge, underbridge or underpass cannot be justified. The potential advantages and disadvantages of this solution are summarised in Table 4.

5.3.2 It is not possible to have a public right of way coincident with a road, as both are types of highway. Public rights of way that are diverted to a road shall stop at the road boundary.

NOTE – Refer to Technical Standard – Roads (HS2-HS2-HW-STD-000-000001) for details on provision for non-motorised users along roads.

Table 4: Use of other crossings – simple diversions

Potential advantages	Potential disadvantages
<ul style="list-style-type: none"> No structure cost No visual impact Can be constructed without a temporary diversion or closure of the public right of way 	<ul style="list-style-type: none"> Requires a permanent diversion Lengthening of journeys for users, depending on separation between routes Part of the route may not be user friendly (e.g. busy road)

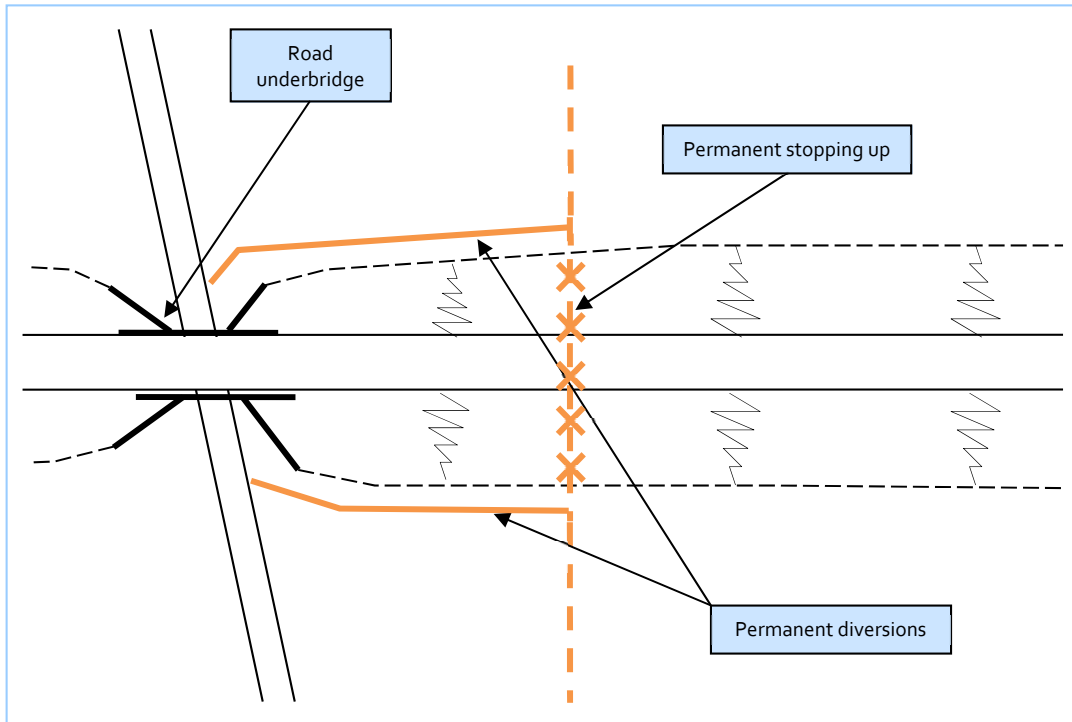


Figure 5: Diversion to a road crossing

5.4 Permanent closures

5.4.1 In certain circumstances, it may be appropriate to stop up (extinguish) an existing public right of way altogether. One example might be where a 'dead end' route has no connections on one side of the HS2 route, as illustrated in Figure 6 (but see Clauses 2.5.8 to 2.5.10 for further discussion of this topic). The potential advantages and disadvantages of this solution are summarised in Table 5.

Table 5: Permanent closure

Potential advantages	Potential disadvantages
<ul style="list-style-type: none"> No structure cost No visual impact No temporary diversion or closure required 	<ul style="list-style-type: none"> Requires a permanent stopping-up Major severance impact (unless a 'dead end' route) Lengthening of journeys for users, depending on availability of alternative routes Alternate routes may not be user friendly (e.g. busy road)

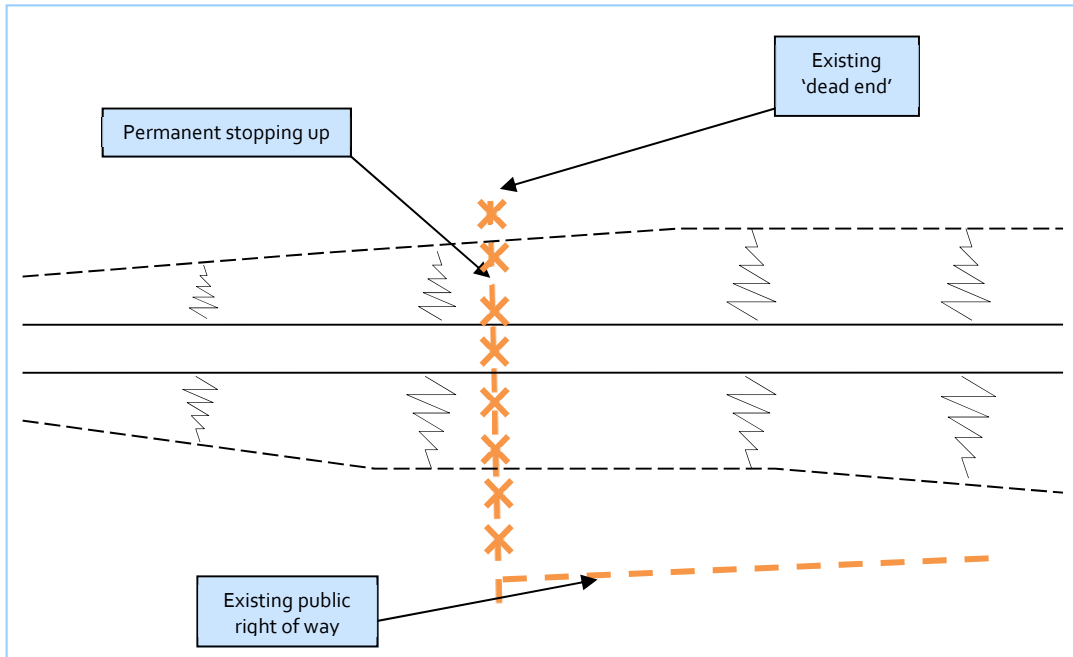


Figure 6: Permanent closure

6 Legal width

General

- 6.1.1 The Definitive Maps have statements associated with them which may quote a minimum or fixed legal width of public rights of way, as described in Section 2.5.
- 6.1.2 Legal width should be considered separately from the 'surfaced width', which relates to the width of any surfacing provided along the public right of way, though they may be the same width (refer to Clause 7.2.5 for details on surfaced width).

6.1.3 Any fixed or minimum width quoted in the statement accompanying the Definitive Map for a particular public right of way shall be used for realignments or diversions of that public right of way (except where a quoted width is smaller than given in Clause 6.1.4 to Clause 6.1.8 and an increase is agreed with the local highway authority).

Minimum width

- 6.1.4 Appropriate legal widths for each type of public right of way shall be discussed with the highway authority, with any variances to be considered on a case-by-case basis to take account of local constraints and landscape character. However, the absolute minimum requirements are given below.

6.1.5 Footpaths which are cross-field paths shall have a width not less than 1 metre.

6.1.6 Footpaths which are not cross-field paths shall have a width not less than 1.5 metres.

- | | |
|-------|--|
| 6.1.7 | Bridleways which are cross-field paths shall have a width not less than 2 metres. |
| 6.1.8 | Any other public right of way (e.g. a bridleway which is not a cross-field path, a restricted byway or a byway open to all traffic) shall have a width not less than 3 metres. |

NOTE – The minimum widths given above are the values given in the Rights of Way Act 1990 for the statutory minimum widths to be kept clear from interference by crops and for reinstatement after disturbance (e.g. ploughing).

Public rights of way coincident with an access

- 6.1.9 The minimum width of a public right of way coincident with a private access should be the greater of the width required for the public right of way and that required for the access.

NOTE – Refer to Technical Standard – HS2 Access (HS2-HS2-HW-STD-000-000003) and Technical Standard – Accommodation Access (HS2-HS2-HW-STD-000-000004) for details of width requirements for HS2 and accommodation accesses respectively.

Public rights of way between two boundary features

- 6.1.10 Where a public right of way passes between two boundary features (such as hedges, fences and/or walls), the legal width should be the full width between one boundary feature and the other (except where this width is less than the minimum widths given in Clauses 6.1.4 to 6.1.9).

Overbridges

- 6.1.11 The legal width of public rights of way on overbridges (including those coincident with accesses) should be the distance between parapets, except where the overbridge is divided by a boundary feature (such as to separate livestock from non-motorised users), in which case the legal width should be the distance between the parapet and the boundary feature.

NOTE – The legal width of public rights of way on green bridges should only be the portion of the bridge accessible to the public.

Underbridges and underpasses

- 6.1.12 The legal width of public rights of way passing through underbridges or underpasses (including those coincident with accesses) should normally be the distance between the adjacent abutments, piers or walls of the structure, except:
- where the span is separated by a boundary feature (such as to separate livestock from non-motorised users) in which case the legal width should be the distance between the boundary feature and the adjacent abutment, pier or wall
 - where the underbridge or underpass is shared with a watercourse in which case the legal width should be the distance between the bank of the watercourse and the adjacent abutment, pier or wall

7 Engineering aspects

7.1 Guiding principles for engineering design

- (i) All works – both temporary and permanent – affecting a public right of way should aim to retain the existing character and distinctiveness of the route wherever feasible.
- (ii) Therefore, as a general rule, the starting point for design should be the existing engineering parameters when a public right of way is diverted or reinstated.
- (iii) For new routes, the requirements should be based on other similar public rights of way of the same status in the area.
- (iv) All works should be designed to minimise, as far as is reasonably practicable, future maintenance requirements.

7.2 Surfacing

General

- 7.2.1 The majority of existing public rights of way are un surfaced and may comprise of a path that is visible due to the passage of other users. In some cases the public right of way may not be visible on the ground at all, except for signage or way-marker posts where provided. Other public rights of way do have some form of surfacing.

NOTE – Refer to Appendix A for photos of some typical public rights of way.

- 7.2.2 Apart from on overbridges or inside underpasses, application of guiding principle (ii) (see Section 7.1) means that any unbound or paved surfacing should only be provided on a 'like for like' basis.

Public rights of way coincident with an access

- 7.2.3 The surfacing of public right of way coincident with an access is normally determined by the requirements for the access.

NOTE – Refer to Technical Standard – HS2 Access (HS2-HS2-HW-STD-000-000003) and Technical Standard – Accommodation Access (HS2-HS2-HW-STD-000-000004) for details of surfacing requirements for Hs2 and accommodation accesses respectively.

Surfacing

- 7.2.4 Where surfacing is provided (either unbound or paved), the surfacing material shall respond to the local landscape character and be of a type suitable for the usage allowed by the status of the public right of way, including during periods of inclement weather.

- 7.2.5 The width of surfacing shall be the same as the legal width as detailed in Section 6, except where a lesser width is agreed with the highway authority (e.g. where a grass verge on one or both sides is deemed appropriate).

7.3 Gradient

General

- 7.3.1 The existing topography has a significant influence on the gradient of public rights of way, as they generally follow the natural ground level. However gradients steeper than the existing may be required where they pass over or under HS2.

Footpaths

- 7.3.2 Footpaths preferably should not exceed 1:20, unless steeper gradients are already a feature of the route. An increase in gradient to 1:15 may be appropriate in situations where the footpath alignment is constrained or to reduce environmental impacts.

- 7.3.3 Footpaths shall not be steeper than 1:12 unless gradients steeper than this are already a feature of the route, in which case the gradient shall not exceed the existing maximum prevailing gradient.

Bridleways, restricted byways and byways open to all traffic

- 7.3.4 Bridleways, restricted byways and byways open to all traffic preferably should not exceed 3%, unless steeper gradients are already a feature of the route.

- 7.3.5 Bridleways, restricted byways and byways open to all traffic shall not be steeper than 5% (100 metres maximum) or 7% (30 metres maximum) unless gradients steeper than this are already a feature of the route, in which case the gradient shall not exceed the existing maximum prevailing gradient.

NOTE – The gradients given above are governed by the needs of cyclists, as equestrians and vehicles can typically accommodate steeper gradients than cyclists. The British Horse Society advice on specifications and standards for equestrian routes states that "for general purposes, a gradient of 1 in 12 is the ideal maximum for ridden use."

NOTE – The former Cycling England, an independent body funded by the Department for Transport to promote cycling in England, provided detailed design guidance for maximum gradient. This, together with other useful guidance, is available from the Chartered Institute of Logistics and Transport (CILT) and Sustrans websites.

Approaches to overbridges

- 7.3.6 Approaches to overbridges should generally be designed as embankments as opposed to steel or concrete structures, as embankments are more in-keeping with a rural setting and

allow for space for landscaping. See Figure 7 for a typical example of an approach embankment to a public right of way overbridge.

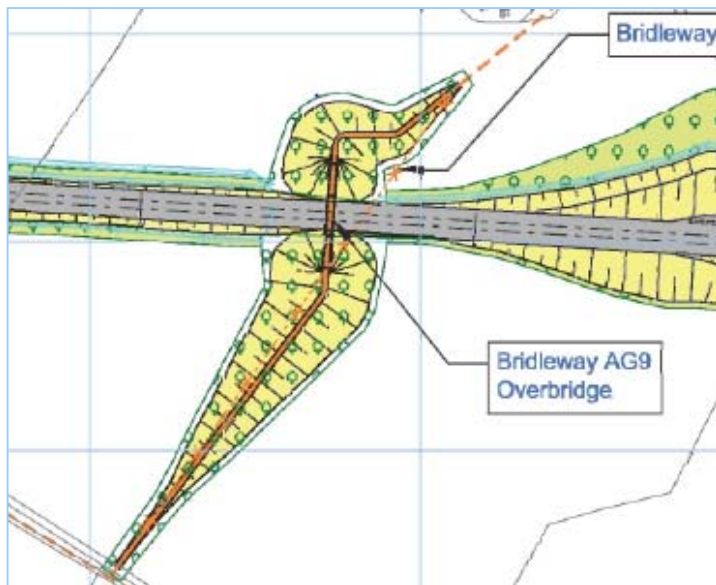


Figure 7: Approach embankment to a public right of way overbridge

Steps and ramps

7.3.7 Steps or ramps on public rights of way shall be in accordance with DMRB standards BD 29 (for overbridges) and TD 36 (for underbridges and underpasses).

NOTE – Any paved approaches to overbridges, underbridges or underpasses should be considered 'ramps' as described in DMRB standard BD 29 and DMRB standard TD 36.

7.4 Other geometric parameters

7.4.1 For reinstatement works and diversions not requiring earthworks, guiding principle (ii) (see Section 7.1) should apply.

7.4.2 In other situations, the guidance given in DMRB advice note TA 90 should apply, however within the context of the local landscape character – refer to Section 4.5 for further details.

7.5 Structures

Public rights of way coincident with an access

7.5.1 Refer to Technical Standard – HS2 accesses (HS2-HS2-HW-STD-000-000003) for details on overbridges, underbridges and underpasses that cater for both public rights of way and HS2 accesses.

- 7.5.2 Refer to Technical Standard – Accommodation accesses (HS2-HS2-HW-STD-000-000004) for details on widths of overbridges, underbridges and underpasses that cater for both public rights of way and accommodation accesses.

Width

7.5.3	The width of an overbridge carrying a footpath or bridleway shall be in accordance with DMRB standard BD 29.
7.5.4	The width of an underpass carrying a footpath or bridleway shall be in accordance with DMRB standard TD 36.
7.5.5	The width of an overbridge, underbridge or underpass carrying a restricted byway or byway open to all traffic shall be, as a minimum, that of the associated route on each approach (and in no case less than that for a bridleway).

Headroom

7.5.6	The headroom for a pedestrian or bridleway underpass shall be in accordance with DMRB standard TD 36.
7.5.7	The appropriate headroom for an underbridge or underpass carrying a restricted byway or byway shall be considered on a case-by-case basis, taking account of the size of any vehicles that may reasonably be expected to use the bridge (but in no case less than that for a bridleway, where an equestrian does not have to dismount to pass through the underbridge or underpass).
7.5.8	Where public rights of way are coincident with accesses, the headroom shall be the greater of that required for the public right of way and that required for the accommodation access or HS2 access.

Other aspects

- 7.5.9 Refer to the following documents for all other requirements relating to public right of way overbridges:
- Hybrid Bill design – Deliverable Approach Statement – Overbridges (HS2-HS2-BR-DAS-000-000001)
 - Post-hybrid Bill design - Technical Standard – Overbridges (HS2-HS2-BR-STD-000-000003)
- 7.5.10 Refer to the following documents for all other requirements relating to public right of way underbridges:
- Hybrid Bill design – Deliverable Approach Statement – Viaducts and underbridges (HS2-HS2-BR-DAS-000-000002)

- Post-hybrid Bill design - Technical Standard – Underbridges and viaducts (HS2-HS2-BR-STD-000-000002)

7.5.11 Refer to the following documents for all other requirements relating to public right of way underpasses:

- Hybrid Bill design – Deliverable Approach Statement – Viaducts and underbridges (HS2-HS2-BR-DAS-000-000002)
- Post-hybrid Bill design - Technical Standard – Culverts and underpasses (HS2-HS2-BR-STD-000-000005)

7.6 Earthworks

7.6.1 Refer to Technical Standard – Earthworks (HS2-HS2-GT-STD-000-000001) for details of engineering earthworks associated with public rights of way.

7.7 Boundary features

7.7.1 Public rights of way are not required to have boundary features, such as fences, walls or hedges. However many public rights of way have some form of boundary feature, which is the responsibility of the land owner. Typical functions that boundary features serve where adjacent to public rights of way include:

- To demarcate the extent of the public’s right of way (to discourage trespass by the public)
- To provide privacy (particularly to back-yards of residential properties)
- To restrict the movement of livestock

7.7.2 A public right of way can pass through boundary feature in one of the following ways – through a gap, through a gate or over a stile.

Gates

7.7.3 Gates on public rights of way shall only be installed where necessary to control livestock, and shall be of a type suitable for operation by disabled people.

7.7.4 The guidance ‘Advice on Gaps, Gates and Vehicles Barriers’ by the British Horse Society should be followed for all public right of way gates where equestrians are permitted.

Motorbike inhibitors

7.7.5 Motorbike inhibitors shall only be provided where there is a demonstrable history of illegal use of public rights of way by motorbikes.

Stiles

7.7.6 Pedestrian stiles shall not be used.

- 7.7.7 Equestrian stiles (also known as 'hop-over gates') are not preferred since they are inconvenient to cyclists and difficult to negotiate for some equestrians, and should only be installed where the use of a conventional gate is not appropriate. Refer to the guidance 'Advice on Gaps, Gates and Vehicles Barriers' for more details.

7.8 Signs

- 7.8.1 A 'finger post' sign indicating the presence of a public right of way shall be provided at each junction of a new, realigned or diverted public right of way with another highway (road or public right of way).

- 7.8.2 Refer to standard detail drawings HS2-CSI-HW-DDE-000-007001-FD to HS2-CSI-HW-DDE-000-007003-FD for details of signs and waymarkers for public right of way.

- 7.8.3 Other signs, such as signs identifying promoted routes, should be identified in collaboration with the local highway authority.

7.9 Street furniture

- 7.9.1 Whilst public rights of way are exactly that – rights of access for the public to pass on private land – the landowner may agree to street furniture being placed on their land to cater for public right of way users. This may include resting points, litter bins and information boards.

NOTE – Typically street furniture for public right of way users is only appropriate where the land owner is a local authority or highway authority, unless alternative arrangements are made with the landowner for the maintenance of the street furniture.

7.10 Errant vehicle protection

- 7.10.1 Public rights of way that pass near or over HS2 and permit the usage of non-motorised or motorised vehicles may require errant vehicle protection. Refer to Technical Standard – Errant vehicle protection (HS2-HS2-HW-STD-000-000005) for further details.

7.11 Drainage

- 7.11.1 Refer to Technical Standard – Highway and access drainage (HS2-HS2-DR-STD-000-000002) for requirements and guidance for highway drainage.

7.12 Lighting

General

- 7.12.1 Application of guiding principle (ii) (see Section 7.1) means that lighting should only be provided on a 'like for like' basis.

NOTE – In the countryside, usage of public rights of way during the hours of darkness is likely to be minimal (and where it occurs, users are likely to be using torches anyway)

NOTE – Particular difficulties can arise in the urban fringes where structures such as underpasses may be perceived (rightly or wrongly) as a source of anti-social behaviour.

Underpasses and underbridges

7.12.2 The only potential exception to the guiding principle (ii) (see Section 7.1) is at new underpasses and underbridges.

7.12.3 A risk assessment shall be carried out for each underpass and underbridge to determine whether the provision of lighting is justified.

7.13 Safety

7.13.1 Non-motorised user audits shall be undertaken in accordance with DMRB standard HD 42 for all public rights of way

NOTE – In the case of diversions requiring public rights of way users to walk / ride along a length of road (see example in Section 8.5.2), non-motorised user safety will also be considered during the road safety audits carried out in accordance with DMRB standard HD 19; refer to Technical Standard – Roads (HS2-HS2-HW-STD-000-0000001) for further details.

8 Further sources of information

8.1.1 Refer to the 'Rights of way and accessing land' pages on the gov.uk website for further information on public rights of way, 'right to roam' and access to private land.

8.1.2 The Planning Inspectorate's '*Countryside, Access and Environmental Casework*' pages on the Planning Portal website provide useful further information on public rights of way.

8.1.3 The 'Blue Book' – '*Rights Of Way: a guide to law and practice*' by John Riddall and John Trevelyan, published by the Ramblers' Association and the Open Spaces Society also provides useful guidance.

Appendix A – Typical public rights of way



Footpath – cross-field (not cultivated)



Footpath – cross-field (cultivated)



Footpath – edge-of-field



Footpath – through woodland



Bridleway (courtesy of Harrison 49, Wikicommons)



Restricted Byway (courtesy of Evelyn Simak, Wikicommons)



Byway open to all traffic (*courtesy of Martin, geography.co.uk*)



Public right of way coincident with an accommodation access