



Department
for Transport

COVERING NOTE

Feasibility study - National Cycleway associated with HS2

Context

A study into the potential for new and improved cycle routes within a corridor of the HS2 route was commissioned in 2013 in response to an announcement made by the then Prime Minister, David Cameron, of his ambition to increase levels of cycling in England.

The feasibility report, and the associated design notes, were carried out by Royal Haskoning DHV in partnership with John Grimshaw & Associates and Phil Jones Associates.

The project brief was to set out broad options for possible new and improved routes, how much they might cost, and to assess the feasibility and demand for such a scheme. The study also set out a long term vision for a national cycleway, comprised of local routes and linking local communities with urban centres, major airports and tourist attractions.

The feasibility report was commissioned prior to the publication of the Cycling and Walking Investment Strategy in April 2017, which set out the government's long term ambition for cycling and walking. This included a strong focus on supporting local authorities to develop Local Cycling and Walking Infrastructure Plans (LCWIPs), and to implement interventions that align to local priorities.

Funding

Neither the Department for Transport nor HS2 Ltd. have any current plans to fund the national cycleway outlined in the study. This study was carried out independently of HS2 Ltd. and this report has no financial impact on the ongoing HS2 rail project.

If local authorities are interested in progressing the local routes within the study, they are encouraged to incorporate them into their LCWIPs and explore funding opportunities with their Local Enterprise Partnership, and other potential funders.

Local authorities may also wish to explore funding options arising from the Community and Environment Fund and the Business and Local Economy Fund which have been set aside for local communities who will be affected by HS2 works along the Phase

One route. Applications for these funds can now be made online by visiting www.groundwork.org.uk/hs2funds.

The Department would encourage those local authorities who have been allocated funding through the HS2 Road Safety Fund to consider whether they might wish to use that fund to support any of the projects identified in this study. HS2 Ltd. has undertakings and assurances on cycling provision, and some of the options set out in this report may be deliverable through collaboration between HS2 Ltd. and local authorities.

Disclaimer

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**Royal
HaskoningDHV**
Enhancing Society Together

FEASIBILITY STUDY

National Cycleway associated with HS2

Feasibility of a legacy cycle network linking
communities within the HS2 corridor



National Cycleway associated with HS2

Feasibility of a legacy cycle network linking
communities within the HS2 corridor

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National Cycleway

Feasibility of a legacy cycle network linking communities within the HS2 corridor

EXECUTIVE SUMMARY

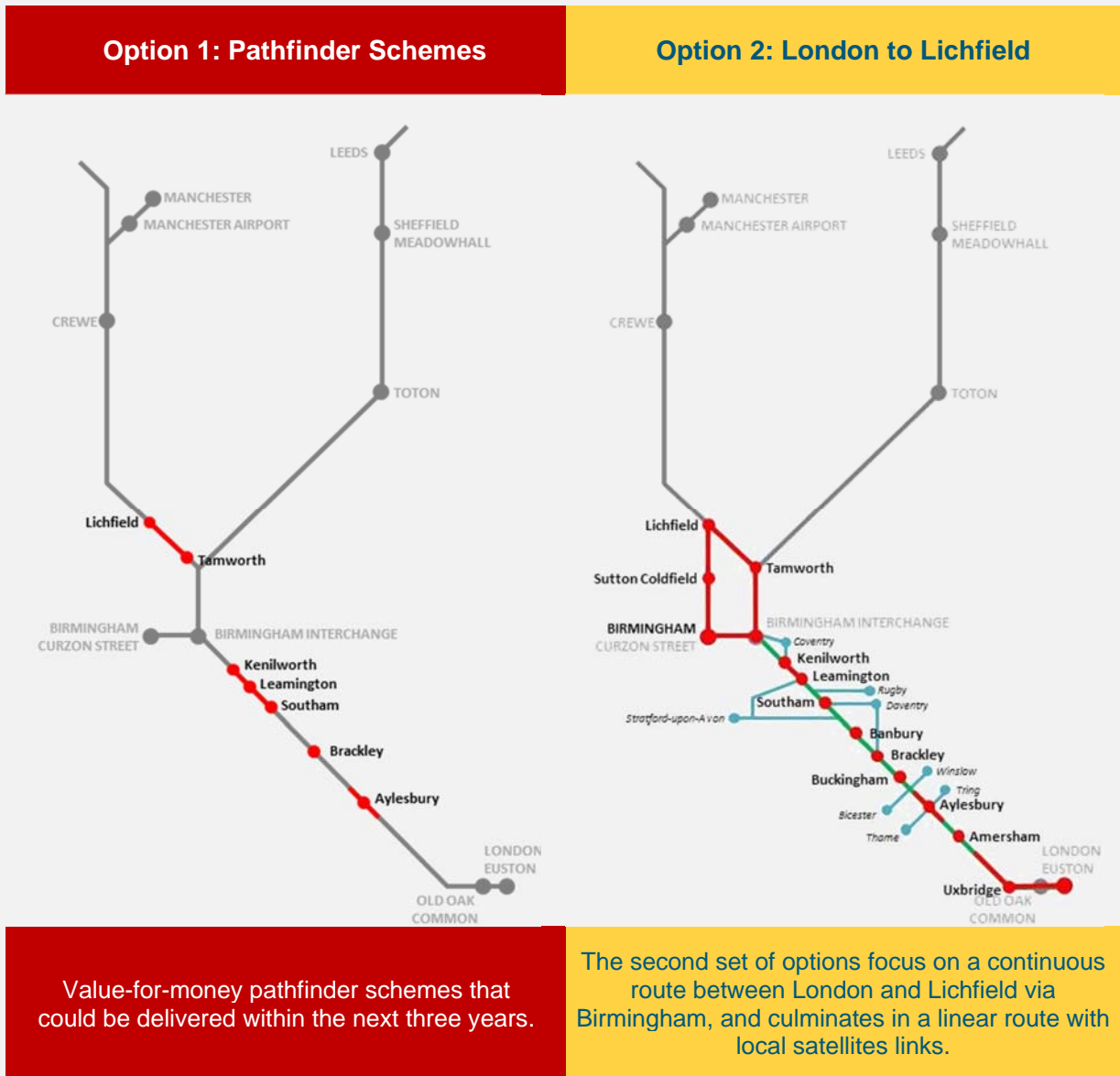


EXECUTIVE SUMMARY

In July 2013 the Prime Minister's first ever cycling vision announced a study looking at the feasibility of transforming local cycle networks and creating a linear cycleway along the HS2 corridor.

This report sets out the main findings following two years of dialogue with local highway authorities (LHAs) and other interested parties along the route. At the outset a route directly alongside the whole of the HS2 railway was considered but quickly ruled out because HS2 avoids settlements between major cities. A study area was therefore identified that consisted broadly of a three-mile corridor either side of the new railway. Such a corridor would be relatively flat and includes many settlements close together that would maximise cycling demand.

To build a 10 year vision to create the National Cycleway, four broad options have been identified:

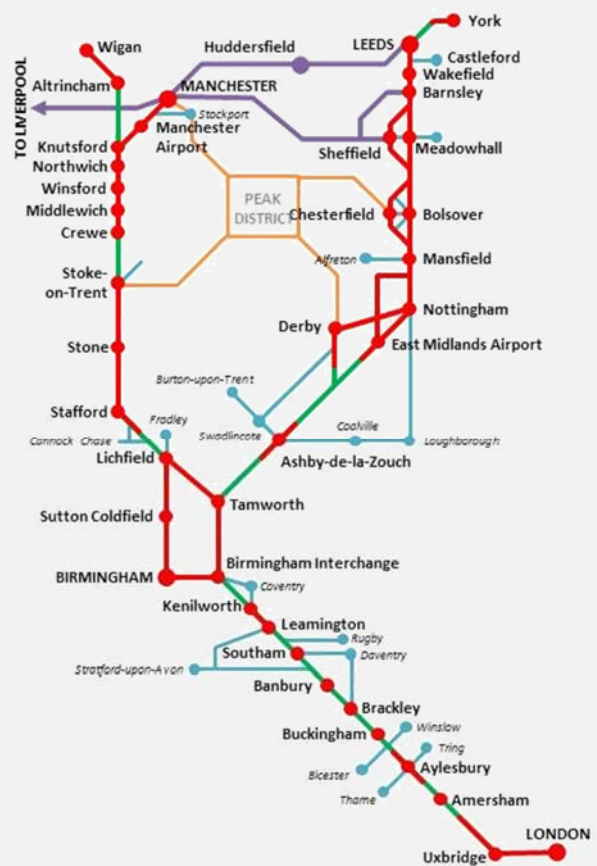


The extensive dialogue with stakeholders has led to the identification of a series of cycle routes that in isolation would serve as a beneficial facility for its local community, but would also form part of a national cycleway when fully joined together. Such a network would create a project of national significance and would serve as both a valuable benefit to local communities as well as encouraging a wide range of leisure and tourism activities.

A key objective of the project is to deliver a real step-change in the quality of cycling infrastructure throughout the study area so that travelling by bike becomes a realistic and attractive choice for short journeys. Such a facility could then serve as a catalyst for greatly improved cycling infrastructure nationwide to a level that is seen in the likes of the Netherlands; and would bring the associated health and economic benefits to the communities that it serves. Links between settlements would use quiet lanes, canal tow paths, improvements to footpaths and bridleways and old railway alignments, building on the concept of the Sustrans National Cycle Network.

Option 3: Complete Y Network

Option 4: Complete Network



The third set of options expands the network in Option 2 to extend up to Manchester and Leeds

Building on Option 3, the fourth option also includes a package of Trans-Pennine (HS3) and Peak District links.

Central Government is not the only source of funding for this vision. Local funding would be more likely to be forthcoming if this is presented as an opportunity of national significance that would benefit many people living, working and on holiday in England.

The study has developed a demand model based on the potential for people to switch from car to bike for short journeys, including potential leisure and cycle-rail journeys. The demand model suggests a high value-for-money business case for a programme to deliver the vision.

Approximately 7 million people would live within a ten minute bike ride of the national cycleway within the HS2 corridor and 10 million of the full HS2, HS3 and Peak District vision.

Key stakeholders, including each local highway authority, would support a national cycleway ambition as a way of supporting local strategies to design and deliver more attractive, continuous and safer cycle routes. Key emerging themes were the need to ensure that:

The vision contributes to the wider HS2 benefits realisation strategy by delivering new connections from city centres to three major airports, reducing severance within settlements and offering new sustainable travel options in communities close to the new railway.

The vision of the national cycleway and early information about its alignment will help local authorities to be more ambitious in developing their existing networks. Without such a wider vision local details are often fragmentary.

Local routes have numerous interfaces with national bodies such as Network Rail, HS2 Ltd and Canal & River Trust. Each would need clarity that there was a preferred route so they could seek opportunities to incorporate it into their plans. It is essential that their plans are designed to ensure that at a future date their assets incorporate the cycleway. It is recommended that the route workbooks of all possible inter-faces with major national bodies are continually developed and updated.

HS2 provides a design opportunity for Planning Authorities to future-proof new rail and road infrastructure for cycling. The National Trust and Canal & River Trust have stated that the national route would help them future-proof their schemes. In addition it is considered likely that developers will see sites with close proximity to the national cycleway as an added benefit making the development more feasible. This uplift in value would not be the case were it just a new local cycleway.

Most of the Local Enterprise Partnerships (LEPs) along the route are seeking to boost their visitor economies by putting local places on the national map. The national cycleway would provide the potential for day (or longer) tourism trips bringing the economic benefit to the many town centres and other attractions on the national route.

There was support for further work to develop an incremental delivery programme which would need to be subject to any local priorities and available funding.

National Cycleway

Feasibility of a legacy cycle network linking communities within the HS2 corridor

MAIN REPORT



National Cycleway associated with HS2

Feasibility of a legacy cycle network linking communities within the HS2 corridor

1 INTRODUCTION

1.1 Background

The Government is committed to making cycling a realistic travel choice, so that anyone, of any age, gender, fitness level and income can make the choice to get on a bike¹.

The need for high quality cycling infrastructure, that is *safe, convenient, comfortable, coherent* and *direct* is widely recognised and supported by recent academic studies which demonstrate the connection between cycling uptake and environments with complete or substantial separation from motor traffic².

On 12 August 2013 the Prime Minister announced an ambition to "kickstart a cycling revolution which would remove the barriers for a new generation of cyclists". This would involve an increase in levels of cycling in England towards those achieved in neighbouring countries in Europe where 10%-15% of all trips are commonly made by the bicycle compared with 2-3% in England.

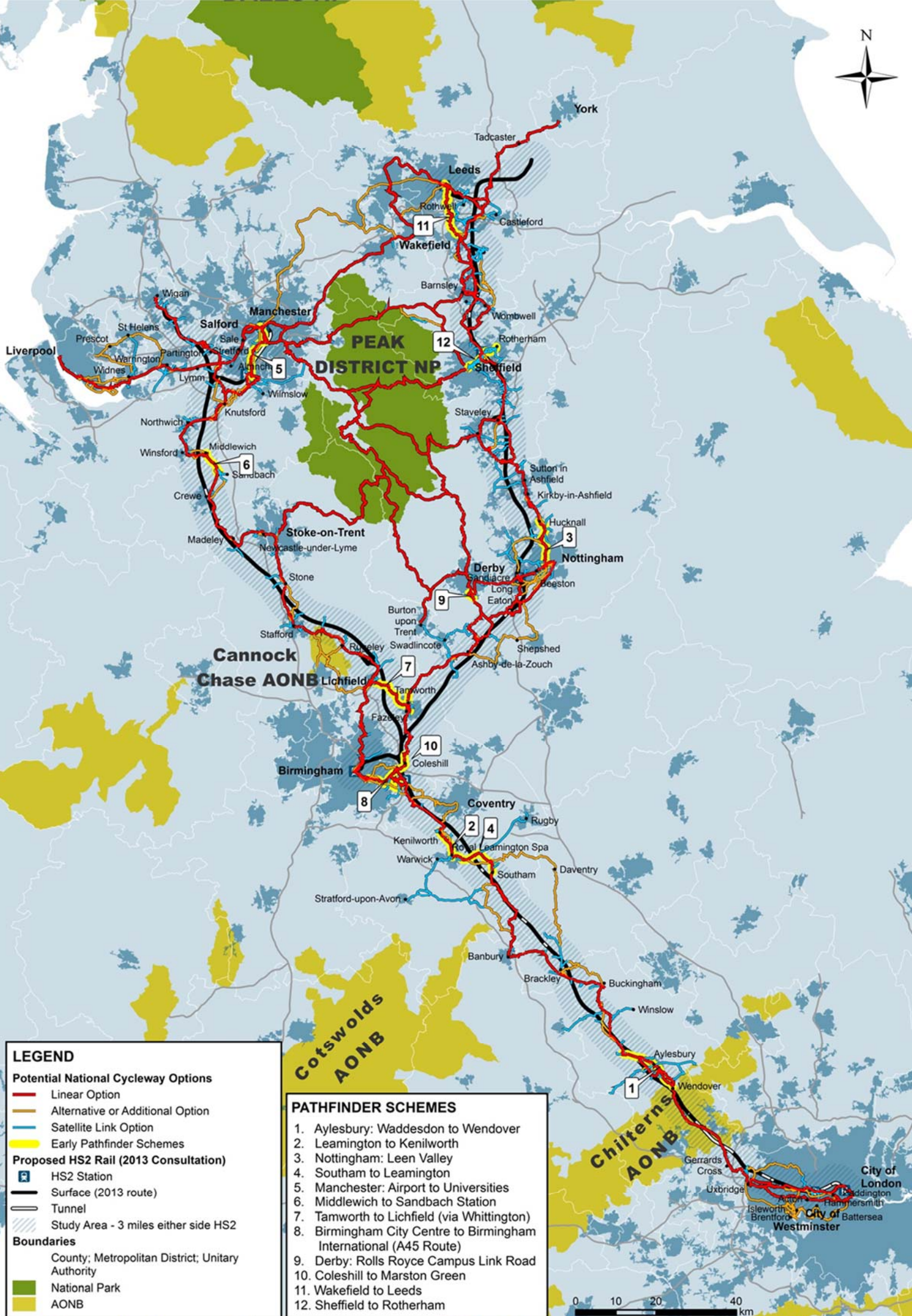
The announcement included a commitment to undertake a Feasibility Study to explore (a) the potential benefits developing enhanced local cycle networks within the corridor of the proposed HS2 rail alignment and (b) how a new national cycleway could be created that would broadly follow the route of the HS2 railway line, extending between London, Birmingham, Leeds and Manchester.

Royal HaskoningDHV, in consortium with Phil Jones Associates and John Grimshaw and Associates were commissioned by the Department for Transport (DfT) in January 2014 to undertake the Feasibility Study for a National Cycleway.

***“kickstart a
cycling revolution
which would
remove the
barriers for a new
generation of
cyclists”***

¹ 'Cycle Delivery Plan: draft', Department for Transport (2014)

² 'National Propensity to Cycle Tool – Appendix 4 Cycle route infrastructure and cycling uptake: a review'



LEGEND

Potential National Cycleway Options

- Linear Option
- Alternative or Additional Option
- Satellite Link Option
- Early Pathfinder Schemes

Proposed HS2 Rail (2013 Consultation)

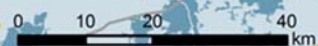
- HS2 Station
- Surface (2013 route)
- Tunnel
- Study Area - 3 miles either side HS2

Boundaries

- County; Metropolitan District; Unitary Authority
- National Park
- AONB

PATHFINDER SCHEMES

1. Aylesbury: Waddesdon to Wendover
2. Leamington to Kenilworth
3. Nottingham: Leen Valley
4. Southam to Leamington
5. Manchester: Airport to Universities
6. Middlewich to Sandbach Station
7. Tamworth to Lichfield (via Whittington)
8. Birmingham City Centre to Birmingham International (A45 Route)
9. Derby: Rolls Royce Campus Link Road
10. Coleshill to Marston Green
11. Wakefield to Leeds
12. Sheffield to Rotherham



1.2 Project Vision

The following 'Vision Statement' has been prepared in conjunction with the project sponsor³. The Statement sets out the guiding principles for the project to inform the development and appraisal of scheme options.

Vision for a Cycle Legacy Network

The project provides the opportunity to deliver new and upgraded local cycle facilities of 'world class standard' for communities along the length of the proposed HS2 railway alignment.

The project would seek to transform local cycle networks within the study area, creating links to railway stations, urban centres, existing and planned employment centres, tourist attractions and new housing developments.

Each section of new or upgrade cycle network would serve as an important facility at a local level, connecting where people live to where they want to go to. The improvements would represent a step change in the quality of cycle infrastructure design and would mainly be traffic-free; attractive to confident and non-confident cyclists.

The project also provides an opportunity to act as a catalyst to the regeneration and revitalisation of town centres and high streets, through the enhancement of the public realm, providing benefits to all users, including pedestrians, shoppers, businesses and cyclists.

Beyond the 'local' level, it is envisaged that these individual sections could be linked together to create a continuous long distance route that would provide an attractive leisure and tourism facility as well. The project would provide a national exemplar of modern and international cycling infrastructure.

The project would, as far as feasibly possible, also seek to enhance routes for non-cyclists and disabled users (using a range of cycles), all within the context of creating continuous, safe and attractive routes which would encourage the public to cycle for local trips, for work, leisure and as tourists.

³ Department for Transport

1.3 Study Terms of Reference

The following Terms of Reference were defined at conception of the project and have informed how the study has been undertaken.

The Feasibility Study was commissioned in two stages; the purpose of Stage 1 was to establish the preliminary route options; whilst the second stage aimed to refine the route options in greater detail and to engage further with local highway authorities, key stakeholders and larger land owners. This report serves as the combined output of both stages of the study.

Study Objectives

The principal objectives of the Feasibility Study are to consider:

- options for the enhancement of local cycle networks in communities within the study corridor, including connections to key origins and destinations, such as railway stations, urban centres, existing and planned employment centres, tourist attractions and new housing developments;
- the creation of a new national cycleway extending between London, Birmingham, Leeds and Manchester;
- design requirements of new/upgrade cycle infrastructure;
- potential demand for cycling in communities along a linear route; and
- engage in dialogue with local highway authorities and key stakeholders to assess how the benefits of the project can be maximised.

Additional objectives were incorporated following the commission of the Stage 2 study, which include:

- consideration of route options along the HS3 corridor connecting Liverpool with Sheffield and Leeds and within the Peak District National Park
- develop a pipeline of projects for the short, medium and long term
- further dialogue with local highway authorities and major landowners to achieve an agreement in principle in relation to the route alignment

Study Area

The study area is defined as a six mile wide corridor, three miles either side of the proposed HS2 railway alignment. The corridor considered by the study incorporates six of the largest cities in England, and more than 200 towns and villages.

The corridor was selected to create a 'legacy cycle network' that would provide benefits to communities impacted by the construction and operation of HS2. It also comprises six of the largest cities in England, provides a relatively flat corridor between the major settlements and takes in numerous tourist attractions.

Study Area Facts

- Six cities, 40 towns* and 200 smaller settlements**
- Population: 6.8m (approx.)

Administrative

- 54 County & Unitary Authorities
- 79 Districts
- 19 Local Enterprise Partnerships

Economic

- 67 Enterprise Zone sites

Transport

- 276 existing mainline rail stations
- 36 rapid transit stops

Environmental

- Two Areas of Outstanding Natural Beauty (Chilterns & Cannock Chase)
- 76 Air Quality Management Areas

* Census 'Built Up Areas' with populations of <10,000

** Census 'Built Up Areas' with populations of >10,000 (smaller settlements e.g. villages & hamlets).

Relationship with HS2 Rail

The study and its conclusions are entirely separate from the ongoing work on the HS2 rail project. The cycleway will not be part of the HS2 Bill processes with no land-take or cost impacts on the HS2 project itself. Any scheme that Ministers may decide to take forward would be implemented through other mechanisms.

1.4 Defining World Class

In order to define what is meant by 'world class' and to ensure consistency in the development and appraisal of route options, a set of 'Design Principles' have been established.

Design Principles

The Design Principles are consistent with the project's overall aim of the National Cycleway being an exemplar of what high-quality integrated modern cycling infrastructure looks like: *safe, direct, coherent, comfortable and attractive*. The design standards also emphasise that *adaptability* will be important as the UK grows its cycling mode-share.

The study places significantly focus on technical examples from the Netherlands and Denmark, where planning and designing for cycling is integral to all transport planning decisions, resulting in some of the highest proportions of travel by bicycle for everyday journeys. The Feasibility Study also takes into consideration recent reviews of international best practice⁴, academic reviews of 'stated' and 'revealed' preferences towards factors that influence cycle uptake⁵ and the experience of the project team in delivering cycle infrastructure within the UK and internationally.

⁴ *International Cycling Infrastructure Best Practice Study, Urban Movement and Phil Jones Associates, on behalf of Transport for London (2014)*

⁵ *"Appendix 4 Cycle route infrastructure and cycling uptake: a review", part of the "National Propensity to Cycle Tool" project undertaken on behalf of the Department for Transport.*

Separation

The default position of the Design Principles is that cyclists should be afforded their own dedicated space with physical separation from other road users where volumes are high. In urban areas, this may require removal of carriageway space to provide segregated cycle tracks. The design standards allow for sharing with motor traffic and pedestrians to be accommodated in certain circumstances – normally where volumes are low. Steps may be required to engineer these conditions, for example by putting in place a “mode filter” which prevents a particular route being used by anything other than local access traffic or non-motorised traffic. However, shared facilities – either with motor vehicles or pedestrians – is not regarded as a default solution.

The design standards acknowledge the varied contexts of the area through which the route is likely to pass. Quality of infrastructure should be highest where potential for the route to be used is greatest, which is in urban areas or between sizeable settlements in rural areas. However, designs should not be put forward that prevent further expansion as usage grows or new journey possibilities are created that stimulate demand for movement.

Inclusivity

Attention is also paid to inclusivity, which not only covers all potential types of cyclists – including those with mobility impairment – but accessibility for all types of other users who will interact with the infrastructure. Benefits to the wider community are also encouraged: even if individuals do not directly use the route for transport or leisure purposes, the design should take the opportunity for place-making along the route to improve the attractiveness of town centres or other urban areas.

Visibility

A key requirement of the project is that the cycleway should be visible; particularly in urban areas. The cycleway should also become an integral part of the local transport network, providing connections through town centres and along high streets.

1.5 Summary

The Feasibility Study seeks to consider how new or upgraded local cycle facilities of ‘world class standard’ could be delivered within communities along the whole length of the proposed HS2 railway alignment.

Each section of new or upgraded cycle network would serve as an important facility at a local level, however it is envisaged that these individual sections could be linked together to create a continuous long-distance route that would provide an attractive leisure and tourism facility as well.

The objects of the project are to:	The objectives of the study are to consider:
<ul style="list-style-type: none"> ■ Provide a national exemplar of modern and international cycling infrastructure. ■ To serve both leisure and utility cyclists and walkers by providing safe, convenient, attractive and continuous links to local stations, urban centres, existing and planned employment centres, tourist attractions and new housing developments. ■ Consider the option of a mainly traffic-free route that would be attractive to non-confident cyclists and encourage domestic and international tourism. 	<ul style="list-style-type: none"> ■ options for the enhancement of local cycle networks in communities within the study corridor, including connections to key origins and destinations, such as railway stations, urban centres, existing and planned employment centres, tourist attractions and new housing developments; ■ the creation of a new national cycleway extending between London, Birmingham, Leeds and Manchester; ■ design requirements of new/upgrade cycle infrastructure; ■ potential demand for cycling in communities along a linear route;

2 METHODOLOGY

2.1 Overview

The Feasibility Study was approached with a focus on delivering the objectives of the study by harnessing the knowledge and experience of local representatives throughout the study corridor. The Feasibility Study was undertaken in two stages.

Stage 1 focussed on the development of a 'strawman proposal'⁶ of route options, underpinned by a detailed evidence base comprising:

- the identification of key communities, trip attractors/generators and strategic development sites;
- the assessment of the potential demand for cycling along sections of the identified route; AND
- The development of route design standards/principles.

Stage 2 focussed on the refinement of these processes, through further engagement with key stakeholders and the development of strategic options for the delivery of the project. The process is summarised in Figure 2.1 below.



Figure 2.1 Study Process

⁶ The term 'strawman' refers to a draft proposal intended to generate discussion of its disadvantages and to provoke the generation of new and better proposals.

2.2 Feasibility Study – Stage 1 (Steps 1-4)

Information Gathering

The first step of the study comprised a comprehensive desktop study of existing data sources, to understand the existing situation with respect to existing cycle networks transport strategies/local transport plans and local development plans, including Strategic Economic Plans (SEPs) produced by the Local Enterprise Partnerships. Key local facilities, points of interest and tourist attractions were also identified.

A Geographical Information System (GIS) was developed to capture, manage, analyse and visualise the data collected.

Data sources	Information
Strategic Economic Plans (SEPs)	Cycle Infrastructure Existing, currently proposed and aspirational cycle routes
Local Development Plans / Local Plans	Major development areas Residential, commercial & employment
Local Transport Plans	Key Points of Interest / Local Facilities Tourist attractions, school,
Local Authorities Officers (cycling, planning & transport)	Public Transport Interchanges Existing/proposed mainline rail stations
Third Sector Organisations (e.g. Sustrans, National Trust, Canal & River Trust)	HS2 Railway Proposals Key opportunities and constraints

Stakeholder Engagement

In order to identify potential route options a series of eight regional workshops were held, involving key stakeholders, such as Local Cycling Officers, Local Planning Authority Officers, third sector representatives and other invited parties. The engagement events aimed to harness the knowledge of local representatives, identify potential opportunities and existing constraints and identify planned and aspirational cycle schemes within the study corridor. The workshops also provided an opportunity for stakeholders to feed in to the route identification process, and were tasked with identifying options that aligned with the following objectives:

- provide the most benefit for local communities;
- maximise the potential use by pedestrians as well as cyclists;
- traffic-free as far as possible;
- generally fall within a 3 mile corridor either side of HS2 Rail;
- have the potential to capture popular imagination;
- have the potential to form part of a continuous linear route;
- opportunities for greenways;

- opportunities to connect to/through town centres and key retail destinations; and
- provide a shortcut, or real advantage over comparable motorised journeys, such that the balance of advantage and benefit swings greatly towards the individual choosing to walk and cycle.

Site Visits

Comprehensive site visits were undertaken to ascertain the suitability of each route, identify issues/concerns with route choices and potential solutions (including alternative route alignments), together with an initial appraisal of potential infrastructure interventions.

Development of Design Principles

In order to inform the appraisal of route options a set of initial design principles were developed against which the feasibility of each option could be assessed. These principles were set out from an early stage in order to demonstrate the required standard of cycle route which would help to inform the route option selection process. The principles are intended as a framework to inform this feasibility study; however it is expected that a more comprehensive set of standards will be prepared/adopted at a later stage as part of the development and detailed design phases.

The Design Principles are focussed on the following key elements:

- Location types
- Geometry
- Practicality and Construction

The key elements of the Design Principles are formed around the five main requirements for a bicycle-friendly infrastructure (see inset).

The Design Principles aim to provide attractive facilities that:

- positively encourage the public to cycle by the quality of the route
- address people's fear of motor traffic interaction
- the 8 to 80 age bracket should feel invited to cycle
- is part of the intrinsic fabric of the street

The Design Principles document is provided in full at **Appendix A**.

Five main requirements for cycling infrastructure:

- Safety
- Cohesion
- Directness
- Comfort
- Attractiveness

2.3 Feasibility Study – Stage 2 (Steps 5-6)

Further Stakeholder Engagement and Option Refinement

The second stage of the Feasibility Study focussed on the refinement of existing route options and appraisal. Detailed field notes, providing information on how a practical route might be created were issued to Local Highway Authorities and key national organisations, providing them with the opportunity to review and comment on the preliminary route alignments.

Mini-studies and Place-Making Examples

Three ‘mini-studies’ have been undertaken to assess the feasibility of achieving the design principles in real-world examples and to provide visual representations of potential project schemes; the three studies comprise the towns of Aylesbury, Brackley and Lichfield.

The studies seek to serve as a ‘blue-print’ for similar situations (i.e. market towns) across England, providing a safe, continuous and legible route, whilst considering the needs of all users including buses, freight, cars, pedestrians, motorcyclists etc.

Consideration has also been given to the potential for wider interventions beyond the cycleway and the opportunity for schemes with an added objective of ‘place making’ i.e. schemes where there is significant opportunity to enhance the public realm, resulting in wider community benefits for pedestrians, businesses and cyclists.

Delivery Strategy

The study considers the potential delivery strategy of the project, including the acquisition of land, organisation and coordination, initial programme/ funding. An indicative programme plan has been developed, including consideration of the resource implications of a central team.

3 ROUTE OPTION DEVELOPMENT

3.1 Overview

This section considers the conceptual development of the project; ranging from the enhancement of local cycle networks to the creation of a new linear 'National Cycleway'.

The Feasibility Study presents a typology of routes, which relate to the local environment and function i.e. urban, semi-urban, rural and satellite links. A number of assumed characteristics can be applied to these categories, relating to potential cycle usage, level of intervention required to provide high quality facilities for cycling, level of investment and so forth. The following section provides further details of each route type.

3.2 Enhancement of Local Cycle Networks

Urban Links

In urban areas, local networks could be enhanced through the creation of 'cross-settlement' cycleways, connecting the peripheries of the urban areas with the economic, retail and civic core(s). Such 'cross-settlement' routes would comprise highly visible infrastructure, along key alignments such as high streets, arterial transport corridors and through district / town centres.

The routes would also provide multiple options into and out of urban centres and form the spine of future enhanced cycle networks. Urban links do not only address radial trips oriented on the centre, but also shorter trips throughout the corridor.

The study identifies more than 200 opportunities to create continuous and inclusive 'cross settlement' routes within communities (ranging from cities to villages) close to the proposed HS2 rail alignment.

Semi-Urban Links

Semi-urban links are classified as those that extend beyond the urban boundary and serve as connections for longer distance journeys, for example commuters living and working in neighbouring towns.

Through the course of the study many instances were found of settlements located within 'cycleable' distance of each other, for example towns separated by green belt or communities located on the periphery of other larger urban areas.



Figure 3.1 Urban and Semi Urban Links

3.3 Connectors

Rural Links

Rural links could be developed to connect the towns and cities benefiting from local network improvements. In general, these links would utilise existing transport networks, such as canal towpaths, disused railways, converted footpaths, upgraded bridleways or quiet rural roads.

Where necessary, new infrastructure would seek to address existing physical problems of severance, caused by rivers, roads, railways etc. through the provision of new crossings (e.g. bridges, underpasses etc.) to reconnect communities. The nature of these links would require less intrusive interventions, when compared to their urban counterparts; a reflection of the rural sensitivities (i.e. visual impact) and the potential demand for cycling in these areas relative to the cost of interventions. Infrastructure would need to be designed to blend in to the rural surroundings; whilst retaining an adequate level of service for cyclists and providing ‘accessibility for all’.

The significant potential of the ‘Rural Links’ lies within the opportunity to connect settlements which would not normally benefit from significant cycling investment. The links would also serve an important leisure function, providing safe and attractive access from urban areas to rural landscapes and tourist attractions



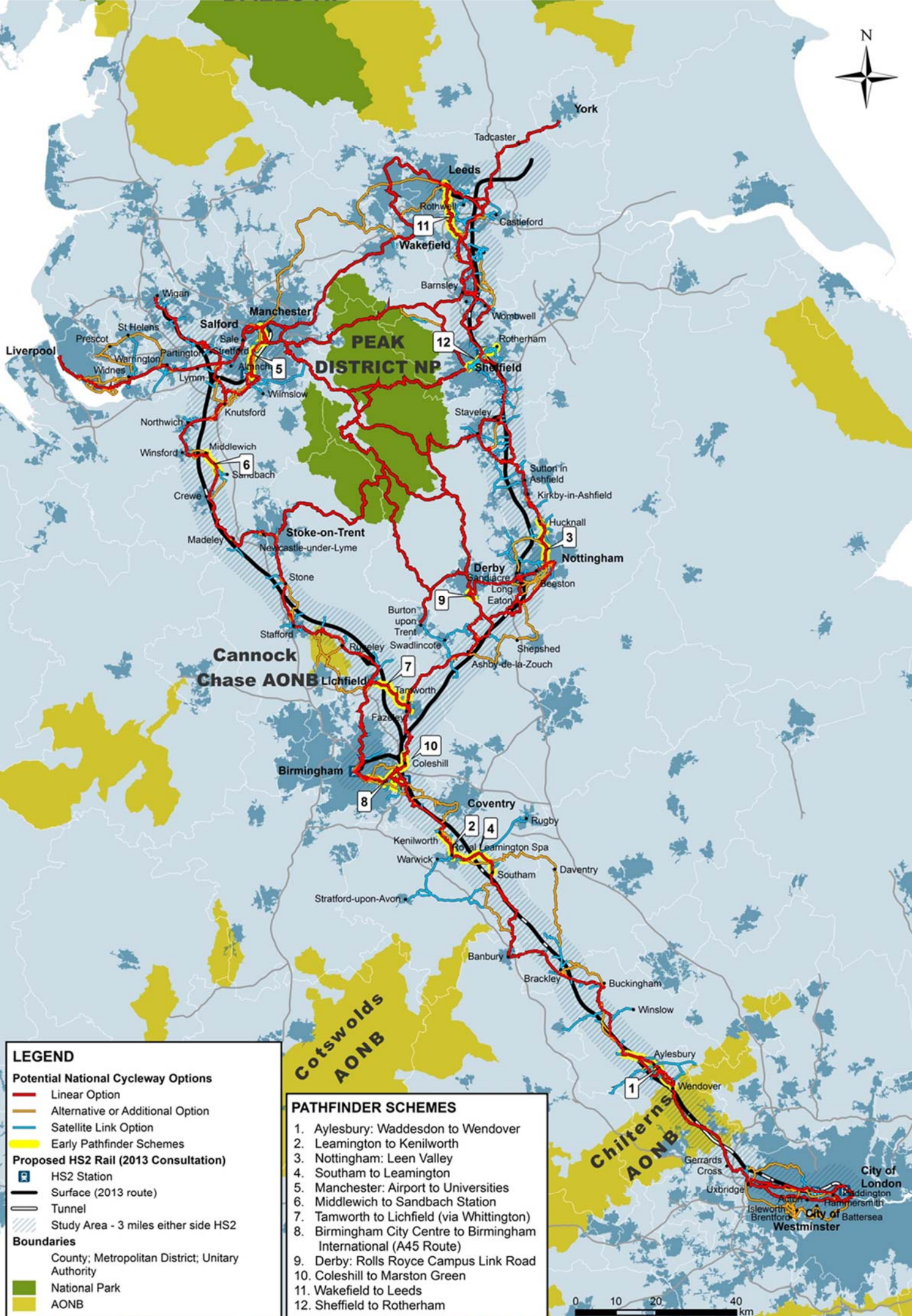
Figure 3.2 Rural Links

Satellite Links

A number of key destinations have been identified, which have the potential to attract and generate significant numbers of cycling trips, but are located beyond the boundaries of the study area. For this reason, an additional type of route has been identified, referred to as 'Satellite Links', which would provide connections between the Linear Route and satellite destinations. These include cities within cycleable distance of the linear route, such as Coventry, as well as tourist attractions of national and international significance (e.g. Stratford-upon-Avon).

A series of satellite links have therefore been identified that do not directly form part of the linear route but serve as a spur between the linear route itself and the place it connects to, and would be subject to the same high standard as the core route.

Approximately seven million people would live within a ten minute bike ride of the national cycleway within the HS2 corridor and 10 million of the full HS2, HS3 and Peak District vision.



LEGEND

Potential National Cycleway Options

- Linear Option
- Alternative or Additional Option
- Satellite Link Option
- Early Pathfinder Schemes

Proposed HS2 Rail (2013 Consultation)

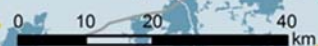
- HS2 Station
- Surface (2013 route)
- Tunnel
- Study Area - 3 miles either side HS2

Boundaries

- County; Metropolitan District; Unitary Authority
- National Park
- AONB

PATHFINDER SCHEMES

1. Aylesbury: Waddesdon to Wendover
2. Leamington to Kenilworth
3. Nottingham: Leen Valley
4. Southam to Leamington
5. Manchester: Airport to Universities
6. Middlewich to Sandbach Station
7. Tamworth to Lichfield (via Whittington)
8. Birmingham City Centre to Birmingham International (A45 Route)
9. Derby: Rolls Royce Campus Link Road
10. Coleshill to Marston Green
11. Wakefield to Leeds
12. Sheffield to Rotherham



3.4 Place Making

The project offers the opportunity to significantly contribute to the sense of 'place' within many communities along the route, through the reallocation of road space and reconfiguration of the streetscape.

The project has considered the contexts of three locations; Aylesbury, Brackley and Lichfield. The following case study presents a vision of how the National Cycleway could significantly enhance opportunities for walking and cycling within Brackley, which is considered to be representative of many market towns, suburbs and communities along the route. The remaining 'place making' locations are attached at **Appendix B**.

Case Study: Brackley

Current Situation	Place Making
<ul style="list-style-type: none">■ No cycling provision■ Wide carriageways■ Vehicular dominated	<ul style="list-style-type: none">■ Cycle-friendly routes■ Better Pedestrian Facilities■ Improved Public Realm Environment
	
	

4 STAKEHOLDER ENGAGEMENT

4.1 Initial Engagement

Initial engagement was undertaken with local representatives throughout the study area as part of the data collection exercise, comprising a series of seven regional workshops. In addition to the local workshops, an Advisory Group workshop was held to discuss the concept of a linear cycle route and to steer the direction of the project with various stakeholders including Sustrans, CTC, National Trust, HS2 Ltd, Living Streets, Design Council and a number of local authorities.

Together with identifying potential route options, the regional workshops also served as an opportunity to understand the difficulties that are faced with delivering cycling infrastructure at a local level as well as thoughts and ideas on the benefits and disbenefits of various delivery models for the potential National Cycleway project.

A summary of the key messages from stakeholders that came out of the workshops is set out in Table 4.1.

Need for national leadership	To set out the vision and narrative, assemble land, to overcome parochial local interests and to ensure consistency of design quality. This is particularly important for smaller car dependent communities along the route.
Design for all	Ensure design works for walkers, access to people with disabilities, and where possible in rural areas, horse riders. All share the aspiration for traffic free, or mostly traffic free routes to make the offer compelling. This will then enable the transformational change in the amount of cycling and walking to secure a boost to local business, health and well-being.
Association with HS2	Association with HS2 is a threat and an opportunity: Particularly in Buckinghamshire, association to HS2 might trigger the view that this was cynical 'green wash'. However, particularly as you go north up the route, people see opportunities to create some new links directly alongside the alignment of the new rail corridor for HS2 Phase 2. Desire for HS2 Ltd to think strategically about these opportunities. HS2 3 mile corridor provides a useful focus; however, it is important to consider places outside the corridor including Buckingham, Stratford Upon Avon, Warwick, Sheffield, Derby, Nottingham and major new housing developments around Banbury and Aylesbury, to leverage wider business and health benefits.

	<p>Additionally HS2 could consider opportunities to cycle proof replaced links such as bridges, greenways, rights of way, and provide traffic free cycle access to the new HS2 stations.</p>
<p>Linear or local route(s)?</p>	<p>It does not have to be one or the other. Preference to build a linear route from prioritising local level enhancements to networks first and where possible work closely with smaller car dependent local towns and villages to agree detailed route design.</p> <p>A Linear route provides the shared aspiration of a national cycling project comprised of linked local ‘people friendly’ schemes which could join up over time to form a continuous north-south spine of linear parks and paths bringing a host of secondary benefits.</p> <p>A linear route has potential to encourage a wide range of tourism trips including more sustainable trips to nearby attractions, family rides to nearby towns and weekend rides between destinations along the route.</p>
<p>Creating space for cycling</p>	<p>Many who attended, irrespective of where on the route they were from, saw this as opportunity for reconnecting people and communities and reviving lost links between places and landscapes. All felt that better, safer and more attractive routes would be welcomed locally and this project offered the opportunity to consider more ambitious possibilities.</p> <p>A nationally led route, rather than incremental schemes, which was convenient, continuous and inviting at all times in all seasons for all, is what participants understood by world class.</p>

Table 4.1: Summary of Key Messages from Stakeholders

A range of the comments received from the workshops are presented below; the comments represent the general themes expressed by the attendees:

“If done well, the cycleway will be as transformational to cycling as the HS2 itself is to the rail network”

“What do we want our country to look like in 50 years?”

“This project could make a huge difference to the north of England and help links to smaller communities that would normally miss out on adequate cycling provision”

“Gaps in the network ruin most cycle routes”



“A one off opportunity to achieve a national cycleway inviting the average person to cycle”

“The cycleway could bring something positive out of HS2 which most local people see as a decade of nuisance”

“It needs to be more than lots of local upgrades if it is to inspire and galvanise the nation”

“A kick start to creating a meaningful national infrastructure fit for health and happiness”

“It could become an emerald necklace of linear parks and paths joining communities along the HS2 corridor.”

Table 4.2: Summary of Themes

4.2 Alignment with Local Cycling Strategies

Following a process of re-engagement; i.e. the presentation of identified strawman options, the local authorities were provided with the opportunity to review and comment on the preliminary options.

Subsequently, the local authorities were invited to demonstrate their support, in principle to the project and the preliminary alignment options. Letters of support have since been received from the majority of authorities.

4.3 Key Stakeholder Discussions

Due to the scale and nature of the project, large sections of the strawman route options were identified to be located on or interacting with land in the ownership of various public and third sectors bodies, such as Network Rail and the Canal & River Trust. Whilst representatives from the majority of the major stakeholders attended the workshops, a series of additional discussions were carried out in order to provide an update on the project and to explore strategic opportunities for the next stages of the project, should it progress. These included discussions with:

- Network Rail
- National Trust
- High Speed 2 Ltd.
- Canal & River Trust
- Tourism Bodies
- Cycle Rail Working Group

The outcomes of the discussions are presented at **Appendix C**.

5 VISION FOR A CYCLE LEGACY NETWORK

New and Upgraded Local Cycle Facilities

A vision provides the opportunity to deliver new and upgraded local cycle facilities of 'world class standard' for communities along the length of the proposed HS2 railway alignment. The strategic focus will provide greater impetus to local and regional routes that may otherwise be difficult to deliver.



New Connections

The project would seek to transform local cycle networks within the study area, creating links to railway stations, urban centres, existing and planned employment centres, tourist attractions and new housing developments.

Step Change

Each section of new or upgrade cycle network would serve as an important facility at a local level, connecting where people live to where they want to go to. The improvements would represent a step change in the quality of cycle infrastructure design and would mainly be traffic-free; attractive to confident and non-confident cyclists.



Public Realm

The project also provides an opportunity to act as a catalyst to the regeneration and revitalisation of town centres and high streets, through the enhancement of the public realm, providing benefits to all users, including pedestrians, shoppers, businesses and cyclists.

National Cycleway

Beyond the 'local' level, it is envisaged that these individual sections could be linked together to create a continuous long distance route that would provide an attractive leisure and tourism facility as well. The project would provide a national exemplar of modern and international cycling infrastructure.



Accessible for All

The project would, as far as feasibly possible, also seek to enhance routes for non-cyclists and disabled users (using a range of cycles), all within the context of creating continuous, safe and attractive routes which would encourage the public to cycle for local trips, for work, leisure and as tourists.

New Developments

Create cycle friendly access to new housing, new businesses, new HS2 stations and developments close to the new railway.



© Ursula Bach & Cycling Embassy of Denmark



5.1 Potential Benefits

The benefits of a National Cycleway would be realised through the upgrading and enhancement of local networks, linking key origins and destinations, including rail stations, high streets, employment centres, tourist destinations and new housing developments with a comprehensive network for bikes and e-bikes.

The National Cycleway has the potential to respond to a range of departmental objectives and strategic benefits across a range of contexts:



Supporting LEP Strategic Economic Plans

- Support the rising importance of the visitor economy in Local Economic Plans
- Clusters of towns along the route with high growth potential that can be joined together by identifying the cycleway in the Strategic Economic Plans.
- Commercial property developers in high value sectors demanding traffic free cycle access for journeys to work.
- Reducing congestion through promoting alternatives to the car.
- Streets with high quality paving and inviting to cycling and walking have high repeat visits and increased footfall.
- Three new cycleways from regional airports to City Centres



Health Context

- Build on the successes of schemes around the country such as the Cambridge Guided Busway cycleway in promoting active community
- Reversing the decline in levels of physical activity across most demographics, helping to stem rising levels of diseases of inactivity across the population.
- Physical activity designed out of much new infrastructure. Towns such as Bolsover with lowest rates of physical activity in UK.
- Reduce stress of commuting and improve mental well-being.
- A more active, healthier population will ease the burden on the NHS.



Social Context

- Provide infrastructure of sufficient quality that attracts a wider demographic including more women and older people to cycle more often.
- Provide opportunities to communities that will be affected by the construction and operation of the HS2 railway.
- Academic studies identifying connections between commute times and well-being. Daily commute is often the most stressful part of the day for many motorists and public transit users, but a way of securing daily exercise needs for those cycling.

Cycleways to Support Economic Growth





Cultural & Historic Context

- Opportunity to revitalise and enhance historic transport infrastructure such as old railway paths, canals and parts of the ancient rights of way network with innovations to allow more use throughout the year.
- Proximity to UK's most visited national park, the Peak District, with new links from High Peak trail to neighbouring cities.
- Improved access the countryside from urban areas and highly valued landscapes such as the Chiltern AONB and National Forest and access to National Trust estates.



Urban Planning & Housing Growth

- Provide sustainable access to new developments; including major housing developments already under construction in areas such as Aylesbury and Banbury.
- Address Twentieth Century planning with zoning, suburban sprawl and busy ring roads which have led to car dependency and weakened town centres.

5.2 Realising the Vision









The project seeks to enhance existing cycle networks to 'world class' standard and an exemplar of high-quality integrated modern cycling infrastructure. The project will require infrastructure that appeals to a broad range of users, including new and existing cyclists, from a broad demographic spectrum.

The study makes reference to UK and international best practice examples (particularly the Netherlands and Denmark) to define and inform what 'world class' might look like. The principles from these examples serve as a guide to the development and assessment of route options.

Many people who might cycle don't want to cycle on busy roads. Feeling safe is a prerequisite for most people when choosing whether to cycle or not. Too many cycle routes in England are unattractive, discontinuous or indirect. People are discouraged by poorly maintained stop-start cycle paths which often use footways or indirect and hidden cycle paths.

The Netherlands and Denmark, despite a wet and windy climate have high levels of cycling for every day journeys. This is largely down to high quality infrastructure that separates cyclists from busy traffic: conditions that are generally absent in the UK, where indirect or discontinuous provision prevails.

Designs to transform existing cycle routes...

from	to
 <p data-bbox="343 714 549 745">Discontinuous</p>	 <p data-bbox="927 714 1091 745">Continuous</p>
 <p data-bbox="392 1104 502 1135">Indirect</p>	 <p data-bbox="967 1104 1051 1135">Direct</p>
 <p data-bbox="360 1507 533 1538">Unattractive</p>	 <p data-bbox="940 1507 1078 1538">Attractive</p>
 <p data-bbox="352 1910 552 1942">Unsegregated</p>	 <p data-bbox="940 1910 1102 1942">Segregated</p>



5.3 Potential Solutions

A toolbox of solutions will be required to achieve the design principles set out by the study, including bespoke solutions to address local situations. Three key infrastructure types will be prominent; including Cycle Tracks, Quietways and Greenways - the types of infrastructure that people who don't cycle say they would entice them to cycle⁷.



Cycle Tracks

Physical segregation from motor traffic and pedestrians

A preference towards segregation from vehicles and pedestrians will be adopted where volumes and speeds dictate, thereby reducing conflicts between modes.



Quietways

Very lightly trafficked streets and country lanes

Quiet streets could be utilised as strategic routes, supported by measures to reduce traffic speeds and volumes, such as filtered permeability and traffic calming.



Greenways

Routes away from motor traffic

Routes would also utilise natural features (e.g. rivers paths), green spaces (e.g. parks) and historical transport networks (e.g. canals and disused railway corridors) where acceptable solutions can be achieved.

⁷ 'National Propensity to Cycle Tool – Appendix 4 Cycle route infrastructure and cycling uptake: a review'

6 OPTIONS

6.1 Overview

This section considers how the straw-man route options could be realised to provide local network improvements.

The study considers a spectrum of options relating to varying levels of investment and geographic scope. The presented options range from focussed interventions a limited number of urban areas within the study corridor, to the creation of a new 'National Cycleway'; a linear cycle route, extending in excess of 1,000km, connecting cities, towns, villages, historic buildings, tourist attractions and landscapes.



Option 1A: Pathfinder Schemes

Value-for-money local improvements. These begin with a set of schemes to transform local networks.

A preliminary schedule of pathfinder schemes worth has been identified that could be delivered within the next 3 years.



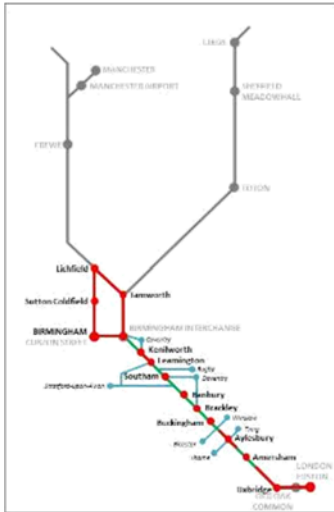
Option 1B: Priority New Links

Enhancing cycling networks in settlements within the HS2 railway (Phase 1) section of the study corridor. Local links would be joined up to create a continuous linear route between London and Litchfield.



Option 1C: Priority New Links + Satellites

Building on Option 1B, the addition of Satellite links would provide significant benefits to communities located beyond the study corridor, as well as creating important links to tourist attractions such as Stratford-upon-Avon.



Option 2: London to Lichfield

The second set of options focus on a continuous route between London and Lichfield via Birmingham, and culminates in a linear route with local satellites links.



Option 3A: Cross Settlement Links

Development of 'cross settlement links; in to and out of the main towns and cities within the full study corridor



Option 3B: Linear Route

Joining up all 'cross settlement' links; to provide a continuous linear route between the northern cities of Manchester, Leeds, Sheffield, Nottingham with Birmingham and London.



Option 3C: Whole Corridor without Rural Links

Delivering the urban links and key satellite links throughout the entire study area.



Option 3D: Complete Y Network

The linear route plus satellite links for the whole of the Y network.



Option 4A: Complete Y Network plus HS3

The addition of a cycleway within the corridor of HS3 would provide connections across the Pennines between the major northern cities of Manchester, Sheffield and Leeds. The route would also connect with Liverpool, which would provide an international link to Ireland.



Option 4B: Complete Y Network plus Peak District Links

Connections between the major cities surrounding the Peak District National Park and the High Peaks trail would create a significantly important tourism and leisure attraction.



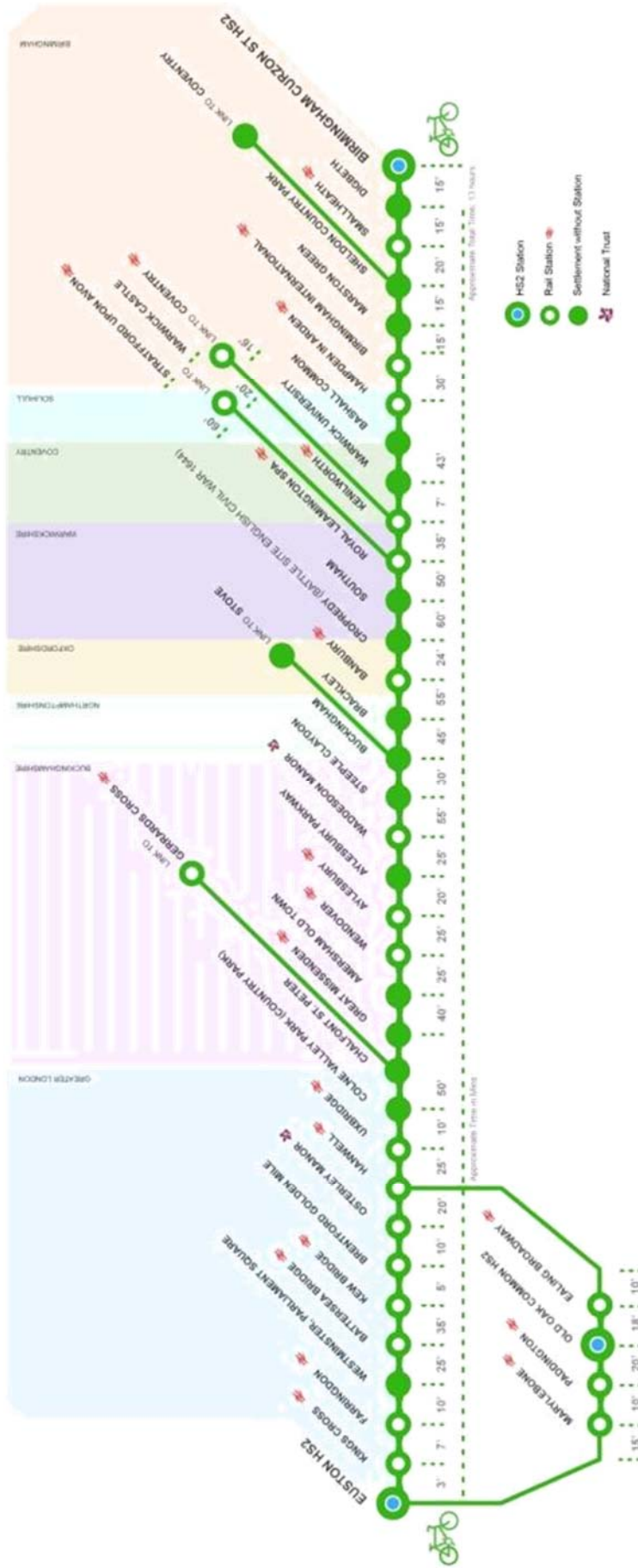
Option 4C: Complete Y Network and Trans-Pennine Links

The combination of a linear cycleway in conjunction with the HS3 and Peak District National Park would provide a comprehensive National Cycleway, serving many communities, townscapes and landscapes across.



Cycleway Southeast

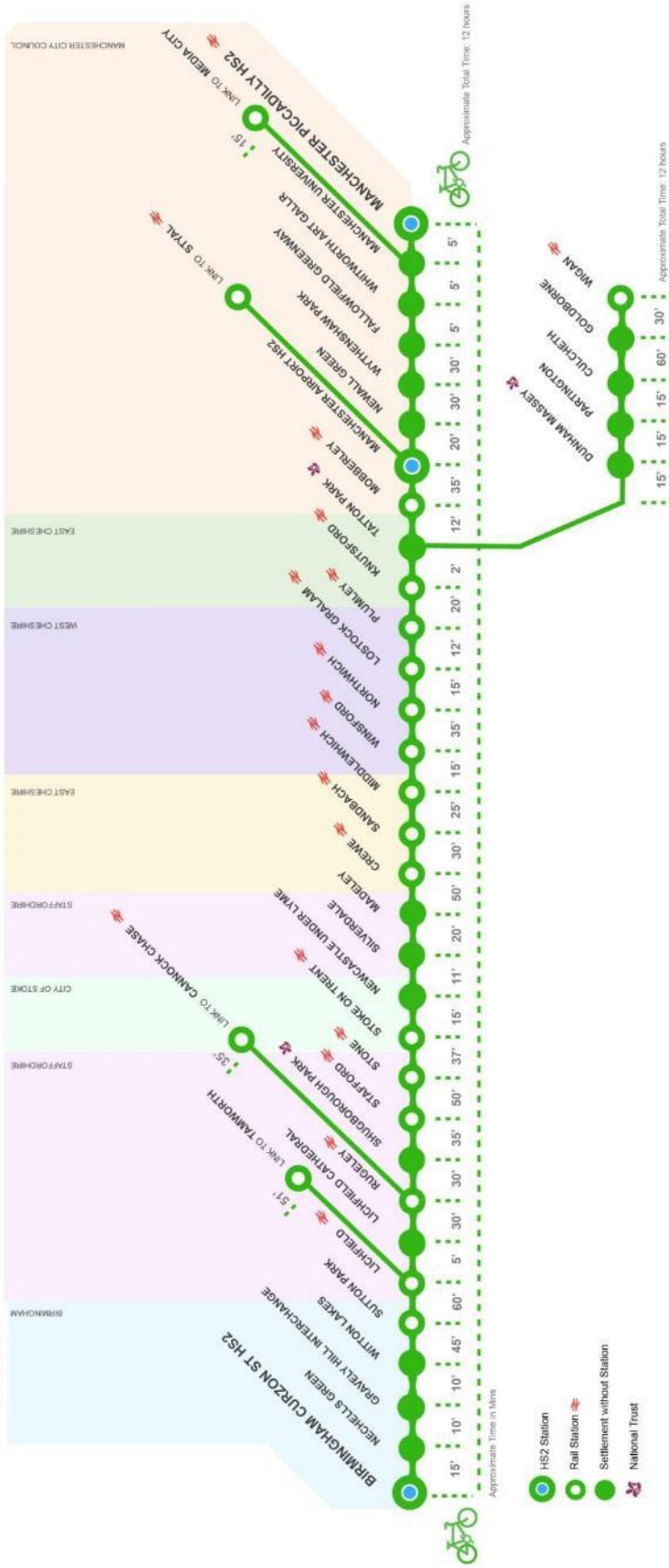
London - Birmingham (Strawman route feasibility study)





Cycleway West Pennines

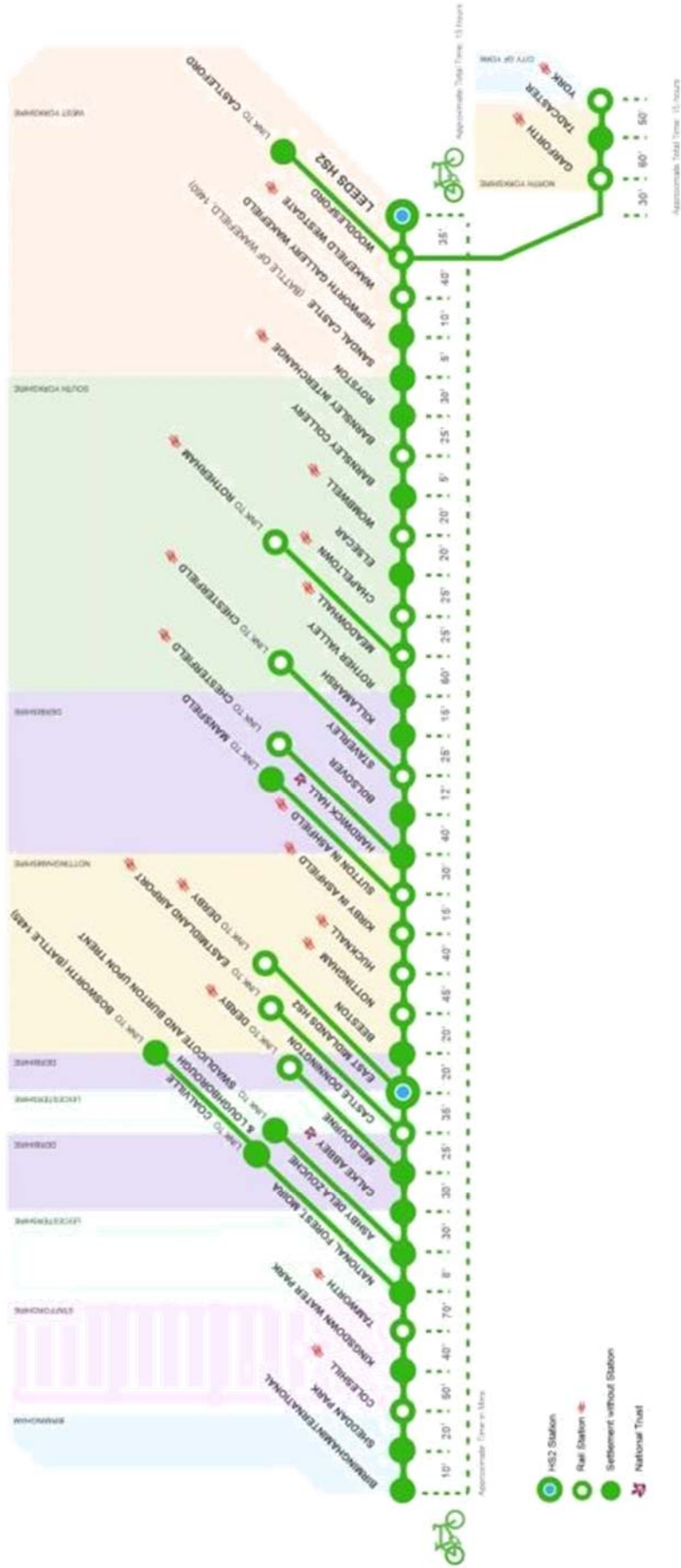
Birmingham - Manchester (Strawman route feasibility study)





Cycleway East Pennines

Birmingham - Leeds - York (Strawman route feasibility study)



Many of these using existing cycling infrastructure but upgraded to ‘Dutch’ standards to be attractive to new demographics. In addition, we have reviewed existing rural links and National and Local cycle networks to create a linear route that has variety of landscape and city scape, and to avoid the boredom of having to ride continually on one type of facility whether an old railway line, canal, or quiet lane. To further enhance its interest to leisure cyclists, the route avoids as far as possible hills, and takes in tourist hotspots and links to as many rail stations as possible to promote car free access. For international tourists it could aim to showcase a wide diversity of English places and landscapes.

It was striking in the workshops how attendees felt that a national project for cycling based on the straw-man route option that emerge and built to world class standards – could be as transformational for cycling demand as HS2 is for Rail capacity – it could, with satellite links, run for at least 1,050 miles linking 218 settlements between London, Birmingham, Leeds and Manchester.

Urban Links

In designing the straw-man route option, we aimed first and foremost for it to be made up of over 590 miles of local schemes providing new or upgraded safe, direct, and attractive routes, segregated or semi segregated from heavy traffic into and out of the centre of each settlement. These routes would be underpinned by the highest design standards to ensure they offer safe, convenient and attractive journey options as only then will they be desirable for all to use.

7 ROUTE DESCRIPTION

7.1 Overview

These 590 miles of local schemes would need to offer safe, direct and attractive new links between homes, employment centres, schools, suburbs and town centres. They would offer new and improved links to 70 conventional rail stations and provide high quality cycle access to ALL of the new HS2 stations.

The scheme could put in place new routes from car dependent suburbs through and to the heart of our biggest cities: London, Manchester, Birmingham, Sheffield, Leeds, and Nottingham as well as major towns such as Derby, Wakefield, Barnsley, Stoke, Stafford, Coventry, Banbury and Aylesbury. The route could provide new cycling access for all to the many and varied attractions in these cities and towns: shops and businesses, entertainment venues, museums and public spaces.

7.2 Supporting Economic Growth

The cycleway could travel through or close to 9 Local Enterprise Partnership (LEP) zones, including:

- Buckinghamshire Thames Valley
- Greater Birmingham and Solihull
- Coventry and Warwickshire
- Derby, Derbyshire, Nottingham and Nottinghamshire
- Leeds City Region
- Stoke and Staffordshire
- Sheffield City Region
- Cheshire and Warrington
- Greater Manchester

The Strategic Economic Plans (SEPs) prepared by each LEP set-out their long term vision for the area to support economic growth. The SEPs present the plans for major development and regeneration areas and the transport projects to support the area. The creation of sustainable transport corridors including walking and cycling are commonplace in the SEPs in order to provide sustainable access to key employment and residential areas as well as support leisure and tourism demand. The cycleway project could therefore support and complement the visions of the above LEPs.

Our review of the SEPs has identified the growing importance of the leisure and tourism sector and cited cycling tourism as a particular target to get people staying overnight and spending more. Strong themes around planning transport to be 'HS2 ready' with links to new HS2 stations.

Some of the specific schemes within the corridor include:

- Manchester, Leeds and Birmingham City Regions ambitions to double cycling over next decade and double again over 20 years.

- London Mayor's vision for cycling with a new 16 mile East West traffic free route.
- Cluster of small towns targeted for growth between Crewe and Knutsford.
- Buckinghamshire LEP's aspiration to promote sustainable tourism and links from East-West Rail to Buckingham.
- Major housing developments near Aylesbury.
- Oxfordshire LEP: employment opportunities near Banbury.
- Coventry and Warwickshire's aspiration for sustainable travel to work in the north-south corridor between Warwick – Leamington Spar – Kenilworth – Coventry.
- Nottingham and Derby LEP (D2N2) focus on access to the new HS2 station, Derwent Valley World Heritage Site, new developments within Hucknall, new links between Ashfield and Mansfield and sustainable transport links to East Midlands Airport.
- Stoke and Staffordshire focus on sustainable access from the centres of Tamworth – Lichfield – Stafford – Stone – Stoke to development sites.
- Sheffield sustainable transport ambition around developments at Markham Vale and Meadowhall with links to Rotherham.

7.3 Leisure, Tourism and Landscapes

By using existing public space, operational and disused rail and canal routes, local highway corridors and public rights of way as well as on occasion beside and over HS2, these local links can be joined together to form a national north - south long distance connected route with valuable links to leisure and tourism destinations. It will join and celebrate the distinct English landscapes of the South, Midlands and North including the Chilterns AONB, the Peak District National Park, the Pennines, Stratford Upon Avon, Warwick Castle, Ashby de la Zouch Castle, Lichfield Cathedral, Hardwick Hall, Waddesdon Manor, Calke Abbey, Hardwick Hall and Tatton Park; and we consider a link to Leicester via the site of the Battle of Bosworth may also be warranted.

It has the potential to provide new and iconic links across motorway blighted cities. For example, in Birmingham, under the ultimate symbol of a motorway system, the Gravelly Hill Interchange ('Spaghetti Junction'), 40 years of severance within the city could be addressed with a new strategic cycling and walking link connecting the north of the conurbation with the wider green network and the city centre.

The cycleway could showcase how user-focussed route and street design, consistent with international best practice and accessible to all - cyclists, walkers and mobility scooters included - can attract a range of people to travel actively day to day.

It could directly benefit 324 communities through better connections, more attractive residential streets and revitalised high streets. It would have wider benefits in driving up cycling ambitions, being an exemplar to all parts of the UK on how cycle infrastructure designed and built to a high standard, set by central Government, can promote tourism, local growth, more physical activity and better health.

The national vision might be for an easy-to-access cycleway linking local destinations as well as great places people want to go across the nation. It could become to be seen as a major attraction for the UK and the world's best long-distance cycleway designed to be accessible to all.

7.4 Detailed Route Options

The length of the route has been separated into a number of sections for which a series of workbooks are provided that set out the route options for each section. These are provided as standalone annexes and provided in **Appendix G**. Each annex sets out the route alignments on detailed plans with annotated comments along the route. In addition, an annex for a number of the key stakeholders where interactions with their land or infrastructure is likely has been prepared.

The series of Annexes are listed in Table 7.1 and shown indicatively on Figure 7.1.

Ref.	Study Area Section	Ref.	Study Area Section
B01	Manchester Piccadilly to Manchester International Airport	B12	Kirkby to Long Eaton
B02	Manchester International Airport to Knutsford	B13a	Long Eaton to Tamworth
B03	Wigan to Knutsford	B14a	Birmingham to Leamington
B04	Knutsford to Crewe	B14b	Solihull
B05	Crewe to Stoke	B15	Leamington to Banbury
B06	Stoke to Birmingham International Airport	B16	Banbury to Waddesdon
B07	Birmingham (Lichfield to City Centre and onto Airport)	B17	Waddesdon to Uxbridge
B08	Leeds to Wakefield	B18	Uxbridge to Euston
B09a	Wakefield to Meadowhall	B19	Peak District National Park
B09b	Wakefield to Meadowhall	B20	Liverpool to Manchester
B10	Meadowhall to Staveley	B21	Manchester to Sheffield
B11	Staveley to Kirkby	B22	Manchester to Leeds
		B23	Various detailed place making work
Stakeholder Workbooks			
Canal & River Trust			
HS2 Rail			
Network Rail			
Sustrans			
Highways England			
National Trust			
Environment Agency			

Table 7.1 – Summary of Fieldwork Annexes

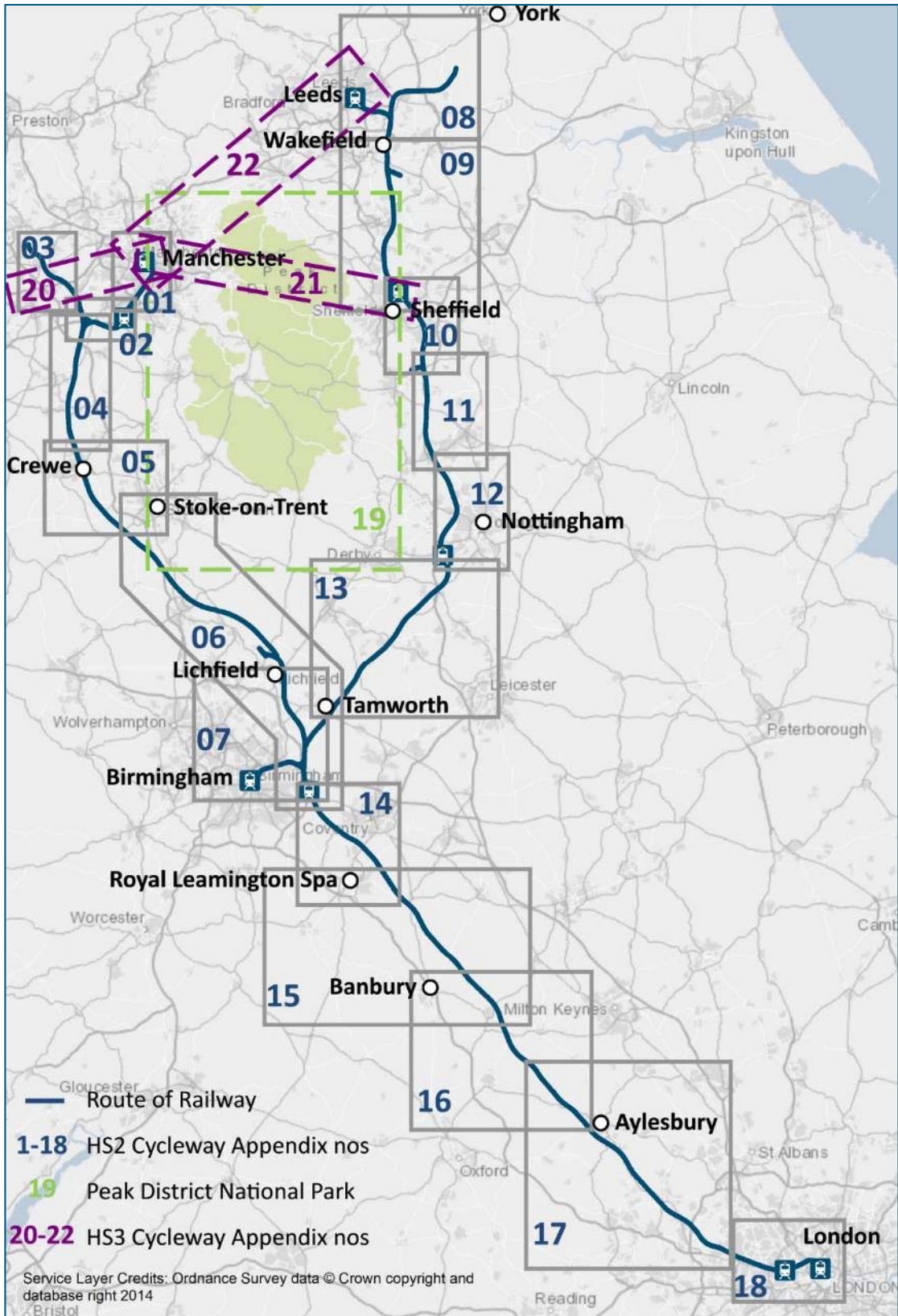


Figure 7.1 – Overview of Fieldwork Annexes

8 DELIVERY

8.1 Introduction

Consideration has been given to how the project could be funded, planned (including land assembly), designed, constructed and maintained. It has been based on discussions with a number of interested parties including Sustrans, the European Cyclists' Federation (as managers of the EuroVelo network) the Department for Transport (including legal advice) and local highway authorities.

Some 30% of the route would be within existing highways, and would therefore be within the control of the local highway authority (or Highways England for Trunk Roads). In legal terms these sections would either be cycle track; or on-carriageway along quiet routes or on busier roads where there is adequate protection from motor traffic.

Considerable sections of route pass through land in other ownerships, including the HS2 Railway, Canal and River Trust, National Rail, the National Trust, private developers and non-highway departments of local authorities, e.g. leisure services. In these places the route could become highway maintained at the public expense, and with traffic limited to cyclists and pedestrians; or would be designated as a public right of way/permissive path for cycling and walking but with maintenance responsibilities remaining with the original landowner.

8.2 Project Governance & Administration

Four broad options for the governance of the project have been identified:

- **Option 1** – Grant funding is given directly to local highway authorities by the Department for Transport against agreed standards, but with no control over the quality of the schemes. Any underspend is returned to DfT
- **Option 2** – As with Option 1, but with central control over the quality of scheme design and implementation
- **Option 3** – As with Option 2, but with local authorities being supported by a central body to manage the project, provide expert advice including land negotiations and to take over scheme design and implementation where a local authority is not able or willing to do so.
- **Option 4** – the project is delivered centrally with no involvement by local authorities.

The merits and disbenefits of each option are considered in detail at **Appendix E**. The Technical Note concludes that Option 3 is likely to provide the most suitable, which was considered by many Local Authority representatives to provide stronger political and technical support mechanisms than others, whilst utilising local skills, knowledge and decision making capabilities at a local level.

It was felt that this approach would help to overcome any local political difficulties over the possible use of compulsory purchase powers to acquire land and the reallocation of road space, particularly car parking.

In terms of the design and delivery of individual sections of route, local authorities clearly have a significant contribution to make in achieving local political support and making sure that the route is well integrated with existing and future cycling networks. The project would also enable technical capacity in designing for cycling to be built within local authorities.

8.3 Establishment of a National Team

The following options have been considered for establishing the new National Team to lead and manage the delivery of the scheme.

- A new section within the Department for Transport
- A new arm's length body
- A department within Highways England
- A third sector organisation (e.g. Sustrans)
- A new subsidiary charity of Sustrans - working name, 'National Cycleway Limited'
- A subsidiary of a potential Cycling and Walking Investment Strategy (CWIS) delivery company

Each option is considered in detail within the Technical Note at **Appendix E**. It is concluded that the most appropriate option would be to align the delivery of the National Cycleway with the delivery of the CWIS. It is likely that a new delivery body would be established to deliver the CWIS and so the preferred option would therefore be to manage the National Cycleway as part of that.

However, the wider objectives of the CWIS would have a different focus to that of the National Cycleway, particularly in terms of ensuring the standards of design that would be required. As such it will be important to have a distinct separation between the National Body and the CWIS delivery body. In addition, a key part of the success of the National Cycleway will be to manage the acquisition of the required land, and it is considered that a mechanism is established to utilise the existing experience of expertise within Sustrans.

8.4 Leadership & Promotion

The preferred governance model comprises the establishment of a 'National Body', to lead, coordinate, manage, promote, ensure standards and consistency across the project, as well as providing a range of technical and financial support services.

The key functions and structure of the National Body are illustrated in Figure 8.1.

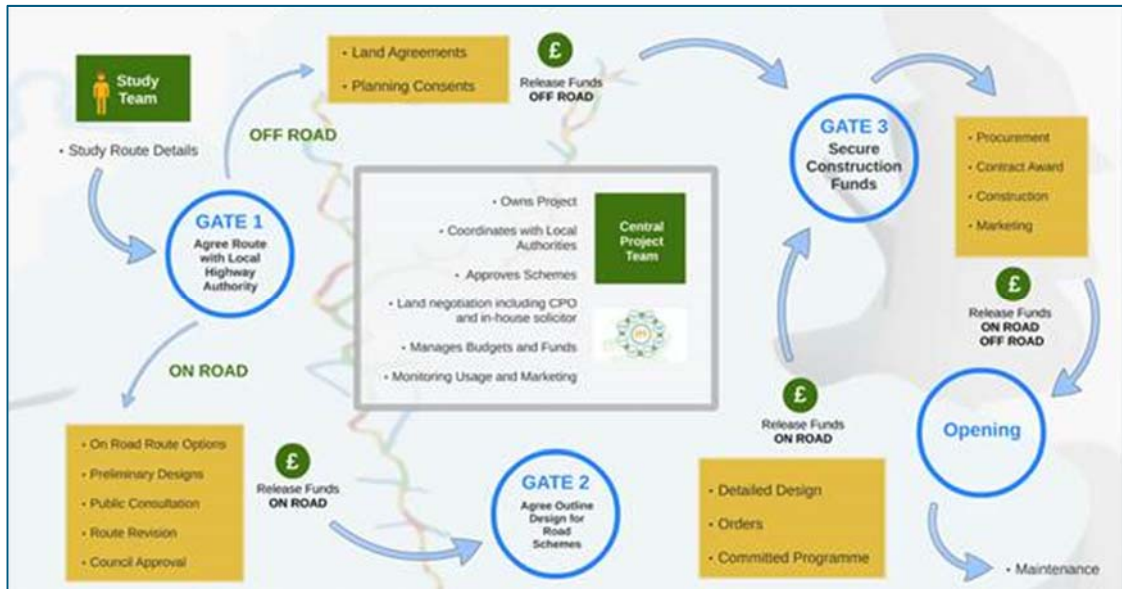


Figure 8.1 - Project Delivery showing role of National Central Project Team

8.5 Coordination and Programme Management

A key function of the National Body will be to coordinate between the various stakeholders, delivery agents, land owners and consenting authorities. The key stakeholders are illustrated in Figure 8.2.



Figure 8.2 – Key Stakeholders

8.6 Planning, Design and Construction Processes

The table below shows the key steps and responsibilities that would typically be required to deliver schemes on highway land, private land and as part of new developments based on the preferred governance model.

	Context		
	Existing Adopted Highway	Private Land	New Development
Commitment to support and deliver	LHA	LHA (and landowner if possible)	LHA and LPA
Gateway 1			
Preliminary Design	LHA	LHA	Developer/LHA
Gateway 2			
Public Consultation	LHA	LHA	Developer/LHA/LPA
Land – acquire freehold or rights	-	LHA with support of NB by negotiation or CPO	-
Obtain consents (including planning permission, TROs etc)	LHA	LHA	Developer/LHA/LPA
Detailed Design	LHA	LHA	Developer/LHA
Gateway 3			
Construction	LHA	LHA	Developer
Final Status of Route	Adopted Highway	Permissive Path, Unadopted Highway or Adopted Highway	Adopted Highway
Maintenance Funding	NB Grant to LHA	NB Grant to LHA or Landowner	NB Grant to LHA; Possible Commuted Sum from developer

LHA – local highway authority

LPA – local planning authority

NB – National Body

TRO – traffic regulation order

CPO – compulsory purchase order

8.7 Control Mechanisms

A key function of the National Body would be to ensure that the route achieves a consistently high quality throughout its length. To do this, we envisage a series of 'gateways', as summarised below.



8.8 Capital Funding

Principal Funding Sources

In order to ensure that local authorities give high priority to this scheme of national importance, we recommend that the Department for Transport is generally responsible for all of the capital funding, which would be in addition to existing grant regimes (LSTF, CCAG etc).

It is suggested that the National Body would act as the agent of the Department for Transport in administering the capital funding allocated to the project, controlling and accounting for all expenditure.

Alternative Sources

The following options have been considered for establishing the new National Body to lead and manage the delivery of the scheme.

- A new section within the Department for Transport
- A new Quango
- A department within Highways England
- Sustrans
- A new subsidiary charity of Sustrans - working name, 'National Cycleway Limited'
- A subsidiary of a potential Cycling and Walking Investment Strategy (CWIS) delivery company

Each option is considered in detail within the Technical Note at **Appendix E**. It is concluded that the most appropriate option would be to align the delivery of the National Cycleway with the delivery of the CWIS. It is likely that a new delivery body would be established to deliver the CWIS and so the preferred option would therefore be to manage the National Cycleway as part of that. However, the wider objectives of the CWIS would have a different focus to that of the National Cycleway, particularly in terms of ensuring the standards of design that would be required. As such it will be

important to have a distinct separation between the National Body and the CWIS delivery body. In addition, a key part of the success of the National Cycleway will be to manage the acquisition of the required land, and it is considered that a mechanism is established to utilise the existing experience and expertise within Sustrans as well as other measures.

8.9 Land Assembly & Acquisition

Many of the shortcomings of the existing National Cycle Network (NCN) are due to the difficulties in obtaining sufficient private land. Sustrans, the delivery agent of the NCN was only able to acquire land through negotiation, and local authorities were generally unwilling to use Compulsory Purchase Orders (CPOs) for cycle schemes.

There are 200 or so privately owned sections of land required to form the route and although they will mostly be acquired through amicable negotiation and mutual agreement. When voluntary agreements are not forthcoming then alternative statutory processes should be available. Provided these processes are established from the beginning then only in a few instances will it be necessary to resort to these powers.

Compulsory Purchase Orders (CPO)

Where land is adjacent to an existing highway, and/or would become public highway maintainable at public expense (adopted) the local highway authority would be able to exercise its functions under Section 239 of the Highways Act 1980.

As with any CPO, it would be necessary to be able to demonstrate to an Inspector at public inquiry that the scheme was of importance; and that the land in question was essential for it to be delivered.

Highways Act 1980

It may be that the local authority is unwilling to use CPO powers, and in this situation the National Body may need to exercise the Secretary of State's land assembly powers, again under Section 239 of the Highways Act 1980. The Secretary of State is only able to do this in order to construct a Trunk Road, and so in order for this to happen this part of the route would need to be designated as such.

Although this would be an unusual use of these sections of the Highways Act 1980, we were advised by DfT lawyers (see **Appendix E**) that it would be possible to do this as a fall-back option. The expectation would be that on its completion the section of National Cycleway would be detrunked and handed to the local highway authority. As their agreement will be needed to this step, we would expect that the local highway authority would need to agree to this procedure at the outset.

8.10 Maintenance

It is vital that the National Cycleway is maintained to a high standard if it is to be successful in attracting users for both regular short utility journeys and longer leisure trips. Many of the sections of poor quality on the existing National Cycle Network have occurred due to a lack of maintenance. Local authority highway maintenance budgets are constrained and tend to be directed towards more strategic roads, while Sustrans finds it difficult to obtain revenue funding for off-road paths and has to make use of volunteers.

Throughout our engagement, concerns were expressed by local authority staff over the additional maintenance burden that the National Cycleway could bring.

Local authority highways maintenance is funded by the Department for Transport through block funding, which from 2018/19 will include an allowance for the total length of cycleways and footways within an authority's area. The National Cycleway would add to this and therefore in theory local authorities would be funded to maintain the route through the normal process.

However, local authorities would be free to use the block funds as they see fit and it is therefore possible that they would not maintain it the route to the desired standard. It is therefore recommended that, at least for an initial period following construction, separate ring-fenced grants for maintenance of the National Cycleway are made to local authorities, administered by the National Body. Similar arrangements would need to apply where the route passes through non-highway land, unless these sections of the cycleway became highway maintainable at public expense.

8.11 Risks

A preliminary high level risk assessment has been undertaken to identify the key threats to the successful delivery of the project and its associated benefits.

A detailed risk log and proposed mitigation measures can be found at **Appendix F**.

Theme	Risk
Political	Delivery of interventions blocked or 'watered down' at due to local 'hot topics' (e.g. parking).
	Differing/competing objectives and priorities of various organisations
	HS2 opposition a barrier to National Cycleway
Economic	Accuracy of budget costs, given the unique and extensive scale of the project.
	Extent of unknown costs e.g. utility diversions
	Variation in costs relating to extent of public realm works demanded by local authorities.
	Availability of funding

Theme	Risk
Social	Social safety
	Competing demands by users i.e. equestrians
	Compromised designs to accommodate all users
	Coordination needed across multiple organisations
Technological	Quality of route designs: suitability of routes for all users, of all ages
	Definition of 'World Class' may be a moving goal post.
	Adaptability of schemes to accommodate growth
	Availability of design and delivery skills with organisations (planning, design, legal etc.)
Legal	Land assembly and CPO powers
	Planning permission
	Cycle Track Orders etc.
	Ensuring project is built in to planning policy / local plans etc. in order to benefit from S106/CIL funding
Environmental	Impact of statutory designations e.g. SSSI's etc.
	Requirement for an EIA in some locations
	Need for sensitive designs in sensitive areas including lighting.
	Construction impacts

9 NEXT STEPS

9.1 Immediate Focus

The next steps of the project will depend on how the project aligns with the CWIS. This study has identified various options.

9.2 Establish Delivery Team

It would be necessary to establish a team that considers and sets-out how the project would be delivered in detail.

9.3 Develop Projects Programme

One of the first requirements of the Working Group would be to establish an Action Plan that sets-out how the next stage of the project would be delivered. The Plan would include specific aims and milestones for what the project would seek to deliver for the pathfinder schemes. The group would need to set out a process for programme assurance and work with the DfT to develop overall programme business case.

9.4 Identify Pathfinder Demonstration Projects

During the process of the stakeholder engagement, routes have been identified that could potentially be delivered relatively quickly. The list of schemes in Table 9.1 has been identified as examples of those that are considered to be potential options for the following reasons:

- The principle or aspiration for the route already exists within the local authority's strategy and therefore has some degree of support and planning history;
- The route would serve as an example of the type of infrastructure that would be delivered elsewhere and thus would serve as an exemplar;
- The route is likely to be relatively straightforward to implement within a three year timeframe.


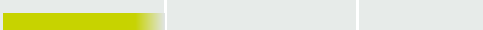





































Scheme Section	Expected Completion		
	Year 1	Year 2	Year 3
Wendover to Waddesdon <ul style="list-style-type: none"> Wendover to Aylesbury Aylesbury Parkway to Waddesdon Aylesbury Centre 			
Southam to Leamington <ul style="list-style-type: none"> Through Southam Through Leamington 			
Leamington to Kenilworth			
Birmingham International to Solihull			
Coleshill to Marston Green			
Coleshill Parkway to Coleshill Town Centre			
Birmingham A45 Corridor			
Tamworth (upgrade existing routes)			
Tamworth to Lichfield			
Brownhills Railway Line			
Leen Valley to Nottingham			
Staveley to Bolsover			
Middlewich to Sandbach Station			

Table 9.1: List of Potential Demonstration Projects

9.5 Continued Stakeholder Dialogue

It would be important for the national team to continue the initial dialogue with priority stakeholders in order to align their plans with the project. Whilst this should be ongoing throughout each stage of the project, it would be useful to develop partnerships with the key stakeholders such as HS2 Ltd, Network Rail and the Canal & River Trust. HS2 Phase 2 might pose further opportunities for some integration of works into cities.

It would also be appropriate to create a **high level steering group** with representatives from TfL, Public Health England, Visit Britain, Transport for the North, Cycle Rail Working Group and each major highway authority, road safety groups and DCMS and DoH that may have an active interest in such a project.

The national team will need to work with local planning authorities to synchronise the cycleway with local and district plans for new housing and developments. In addition, new relationships will need to be developed with LEPs to ensure that the benefits of the cycleway for their growth strategies can be maximised.

The need for continued stakeholder dialogue is demonstrated in a letter from Birmingham City Council's Cabinet Member for Development, transport and the Economy in which he states:

“With our imminent programmes, I would welcome an opportunity for early collaborations in these areas, to ensure that we can maximise investment to meet Birmingham's and HS2's objectives around sustainable transport and connectivity. I am sure you will agree that this is necessary to avoid causing any conflict or retrofitting within other programmes around regeneration for HS2 and the wider connectivity package Birmingham which are currently being discussed with other government departments, Greater Birmingham & Solihull LEP and the emerging WM Combined Authority.”

Based on similar responses received, it is considered that Birmingham City Council's position represents that of the other local authorities in that ongoing dialogue would be beneficial to all parties.

9.6 Continued Identification of risk

It will be important to continue the monitoring and management of risk throughout the next stage of the project; and this will need to be applied at a strategic level for the wider project, such as the potential need for an Environmental Impact Assessment, and to each individual route option in terms of its deliverability.

9.7 Public consultation

Whilst a high degree of key stakeholder engagement has been carried out as part of the Feasibility Study, part of each individual route option may need to be subject to more formal and public consultation exercises. This is considered to be the first key step to delivering each route option once the more strategic actions set out above have been undertaken.

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