National Cycleway in association with HS2: Preliminary Feasibility Study

Leamington and Banbury together with link to Stratford-upon-Avon: Fieldwork Note Annex B15

Route maps and notes  December 2015

Recommended possible main National Cycleway associated with HS2
Additional or alternative routes
Local links and connections
**Introduction**

This document is one of 22 Annexes to the main HS2 Cycleway Project Report. It sets out the preferred routes which were identified in workshops, refined in subsequent field surveys and then discussed further with local authorities.

The detailed mapping shows the different traffic free and on road sections, and includes brief notes and photographs describing points of particular interest along the route.

**Background to the First Stage**

In January 2014, the Department for Transport (DfT) commissioned consultants, Royal HaskoningDHV, to carry out a Feasibility Study into creating a series of world class cycling routes from London to Birmingham, Manchester and Leeds. The project considers a study area that is generally three miles either side of the planned HS2 Rail alignment, and was conceived as an opportunity to deliver excellent local facilities for communities along the whole length of the proposed railway.

It is envisaged that each section of cycle route would serve as an important facility at a local level, connecting where people live to where they want to go to: and by linking the individual sections together, a continuous long distance could be created that would provide an attractive leisure and tourism facility as well.

As far as possible the project was also to enhance pedestrian routes, and in some cases bridleways too, all within the context of creating continuous, safe and attractive routes which would encourage the public to cycle for local trips, for leisure and as tourists.

The report of this first phase of work was completed in December 2014. It included a total of 18 detailed annexes, of which this is one, each of which described a section of the preliminary route options in some detail. The routes themselves were derived from discussions with local authorities and other interested bodies, backed up by cycling the routes as far as this was possible.

In order to avoid too much repetition in the text and explanation of details, a selection of photographs of appropriate arrangements and details from both the UK and the Netherlands is included here to indicate the sort of quality of route the HS2 Cycleway aspires to realise.
Second Stage

The second stage of the study was carried out during 2015. It comprised meeting with the local Highway Authorities and with the principal institutional landowners, such as Network Rail and the Canal & River Trust. Following on from these meetings, and any necessary further fieldwork, the route proposals were revised, and a series of “workbooks” prepared covering the details of how the proposed cycleway would interact with Network Rail, HS2 and others. In addition 4 further Annexes were prepared covering links to the Peak District, and HS3 cycle routes from Manchester to Liverpool, Sheffield and Leeds.

From Leamington to Banbury the land is more sparsely populated and we have anchored the proposed route on Southam and Banbury. Although the latter is well outside the 3 mile corridor either side of HS2 Rail, used as a guide for this study, we consider that it is a significant town to connect to, not least because of its mainline railway.

Despite the relatively few settlements, we have had difficulty finding linking quiet roads in this area, so are proposing a 6km long length of new path close to the boundary of HS2 Rail, south from Ladbrooke through to Stoneton. This is by far the longest such interaction with HS2 Rail on the whole of the London to Manchester and Leeds route.

Frequently Asked Questions

How will it be funded?
As the project is still in the feasibility stage, no specific funding commitments have been made; part of this study has been to determine the likely costs. However, should the project be commissioned, it is envisaged that it would be funded by DfT separately to current funding packages.

How will it be delivered, practically and politically?
Part of this feasibility study has been to identify potential delivery models. We have recommended that the local Highway Authority takes the lead, backed up by a central support team to handle commonly difficult matters such as land assembly.

How will it affect current funding streams?
It is not expected that this project would affect current funding streams, so that this project would be in addition to existing cycle infrastructure investment. It would, though, be advantageous to badge current schemes as part of the National Cycle Route.

When will it be delivered?
This feasibility study has identified a potential delivery programme based on the dialogue with local authorities. Should the project be commissioned, we expect certain sections will be able to be delivered relatively quickly whilst others may take longer. Alternatively, funding arrangements could dictate that certain sections are delivered in a particular order. The findings of the feasibility study will help inform these decisions.
Design Standards - Summary

A set of design standards was developed as part of the first stage of the feasibility study. These are available as a separate document. The design standards strongly emphasise the need for continuity and integration of cycle infrastructure, and that facilities should be appealing to the end user and also consider the needs of non-users. The design standards are a working document, and will be reviewed throughout this stage of the feasibility study in order to best take into account differing local contexts.

The design standards are consistent with the project’s overall aim of the National Cycleway being a domestic 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.

A strong focus is on the best practice seen in places with high levels of utility cycling like the Netherlands and Denmark. 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 should also be 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 areas through which the route passes.

The default position of the design standards is that cyclists should be afforded their own dedicated space with physical separation from other users. This is an effort to move away from infrastructure strategies that default to a shared use path, or on-carriageway facilities with limited protection from motor vehicles on busy roads. The design standards, however, do allow for sharing with motor traffic, pedestrians or equestrians in certain circumstances – normally where volumes are low. Steps may nevertheless be required to engineer these conditions where they are not currently present. It is likely that many extant greenways through open space or in the countryside which are shared with pedestrians and equestrians would already be suitable for use by the National Cycleway with few changes necessary. In more built-up environments, however, the design standards promote the implementation of dedicated infrastructure for cyclists, consistent with the best practice found elsewhere in the world where cycling for everyday journeys is commonplace.

The design standards acknowledge the varied contexts of the areas 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.
HS2 Cycleway: A visual checklist of proposed standards

Throughout the section of HS2 Cycleway route described in these notes, it is intended that the overall route is created to the highest standards of design, of surface, of continuity and attractiveness all based on current best practice guidelines, including the Dutch CROW manual. The following examples drawn from England and Holland indicate what is intended, even though the brief descriptive notes attached to the route section maps may not explicitly say so. The photographs are loosely arranged to run from the town to the countryside ending up with the all-important junction and crossings details. These are required at each and every intersection with trafficked roads.

0  The HS2 Cycle route will start in the traffic calmed core of the town where cyclists share the road space on equal terms with motor vehicles. (Massluis)

1  Almost without exception cyclists will be permitted 2 way down one way streets in order to maximise their direct networks. (Gouda)

2  Sympathetic treatment of main street in typical small town

3  Closure of main street to traffic. (Rotterdam)

4  Typical English town with “pedestrianised” town centre already paved to delineate cyclists. (Stafford)

5  The Embankment, London, showing the space created for the Cycle Superhighway

6  Where space is limited the removal of the central white line and introduction of advisory cycle provision emphasises the presence of cyclists. (Gouda)

7  One lane of the road made into a two way cycling track (Redcliffe Bridge, Bristol)

8  Reallocation of road space through residential development to create 2 way cycle route. (Breda)
9 Cycle track set well back from main road and separated by avenue trees. (Rotterdam)

10 Wide promenade in urban park. (Tamworth)

11 New cycle track in Warwick University grounds with lighting

12 Typical railway path, 2.5m wide rural areas, 3.0m minimum urban areas. (Derby, Melbourne)

13 Wide towpath on Calder navigation

14 Narrow 2m wide towpath on Erewash Canal; note sealed surface with appropriate coloured gravel

15 Typical National Route in rural areas on lightly trafficked road. (Boxtel to Eindhoven)

16 Typical measures to show traffic on lightly trafficked rural roads on routes advertised for cyclists

17 Quiet lane approaching Lichfield – 20mph

18 Typical minor cul-de-sac in Holland, links to ongoing path for cyclists. No motor vehicles permitted except farm vehicles
19 Similar farm access on the way to Waddesdon

20 National Cycleroute (LF) parallel to main road in rural Holland. (LF13 Alphen)

21 Stone based cycle route through National Forest near Ashby-de-la-Zouch

22 Field boundary path with cattle grid and wicket gate approaching Kenilworth

23 Single stage toucan crossing of dual carriageway in Aylesbury

24 Dual use crossing of side road in Gouda

25 Cycling zebra at Aylesbury

26 Priority crossing of side road at Gouda

27 Path continuing parallel to main road (Gouda). Note the crossing is arranged on the desire line
28 Priority crossing in Rotterdam
29 Continuity of route on London Cycle Superhighway to Canary Wharf
30 Direct priority crossing in Lancaster
31 Direct crossing in York on the desire line
32 Treatment of approaches to splitter island at roundabout in Aylesbury
33 New shared use bridge over railway at Aylesbury Station
34 Tank Top bridleway bridge over M1
35 Major new cycle route attached to railway bridge approaching Nijmegen
36 Wide, on the level, underbridge at Tamworth
Leamington Spa to Stratford-upon-Avon

Although Stratford is well outside the HS2 three mile corridor, it is a popular destination, so the study team were asked to comment on the works needed to make a good quality cycling route from the main HS2 Cycleway route in Leamington across to Warwick and Stratford.

The existing NCN41 route has some excellent sections, notably the Myton Green Lane and idyllic country lane to Hampton Lucy. However, it has an unsatisfactory exit from Leamington in that it bypasses the historic centre of Warwick and has a long diversion via Loxley at the end, adding an extra two miles to the overall route. The notes here suggest modifications to tackle these points.

1. Section of existing route on busy main roads.
2. Railway station subway and forecourt are confusing.
3. Cycle lanes on rather dreary main road, although a link to the canal towpath would improve this.
4. Much better route would be to go past the Bowling Club on Archery Road and through the Park on one of its wide carriageways which are already popular routes for cyclists. Pelican lights cover the main road crossing at the exit.
5. The path is ridiculously narrow through the railway arch, where there is another open one adjacent, through which the route should be directed (Network Rail).
6. Rather good path separated from road with separate bridge under Warwick line. This route could be enhanced by future redevelopment of adjacent demolished site. The new wildlife fence is rather brutally on the boundary of the path when setting it back a few metres would have provided a much more spacious feel.
7. Existing toucan crosses this road for formal cycle route over canal.
8. Excellent Green Lane with split path. The south side hedge is a bit claustrophobic and would be much better replaced with an avenue of trees giving views over the fields.
9. Shared footway section. Continuity needs improving as it serves schools.
10. Existing toucan leads to a lovely, and unexpected, section of the route.
11. Existing path past the lake and over the river.
12. End of signed route on main road.
14. Main road section needs footway widened by 1m onto the carriageway for shared use. Is there any chance of using the Castle gateway and approach?
15. Castle Street is one way to the west. Travelling towards Leamington, cyclists must use the High Street.
16. Take time out in the babble of town streets around the centre.
17. Below Gate the main road is wide and attractive. Slow speeds would be advantageous and perhaps cycle logos on the road.
18. Start the shared use path as soon as possible with new surface and continuity at all junctions. This path is hard against the road and although there is space it is probably not a worthwhile effort to shift it.
19. There is adjacent rough land – Severn Trent – if one did want to enhance the quality of the journey experience.
20. This excellent bridge over the motorway and slip roads deals with an otherwise impossible set of conflicts. There are unnecessary chicanes, four dismount warnings for the public to ignore and far too much unnecessary steel railings on the approaches. (These could all usefully be recycled elsewhere). The parapets are 1.25m high, for which the current DfT guidelines permit the engineer to decide if they are appropriate or not. As this is much too long a bridge to expect cyclists to walk, the signs should be removed.
21. Short section of path beside the Barford Road.
22. Some markings are required for this currently unmarked crossing.
23. The whole of this lane offers a perfect view of an idyllic English countryside with a good vista over the Avon Valley at one point.
Leamington Spa to Stratford-upon-Avon

24 A slightly busier road leads down to the village.

25 The current route hits problems here. The road get busier, the Charlecote Road is a bit of a rat run (could it be closed to through traffic at the Hotel car park?) and the B4086 carries far more traffic than we can cope with. The ideal solution would be for the National Trust to allow a new path built around the perimeter of Charlecote Park to provide for a memorable experience of a visit there.

26 This public footpath runs to the side of the avenue and former drive, rather than along it. Deer graze throughout the Park but this should be no problem. In Richmond Park there are a number of cycling routes crossing where the herds roam and it is a feature of the trip. Ideally, agreement would be reached to rebuild the drive itself.

27 Again, ideally, one would use the existing bridge, which is currently locked off from October to May each year. Alternatively, a new bridge would be required near the boundary.

28 Ornamental park gates.

29 To by-pass this section of road, which has no footway, a new path needs to be built on the lower field edge. Such a route would be a real boon to Alveston residents who would then be able to walk to Charlecote Park.

30 There is a short section where the river cuts in close and careful work will be needed to build a path up the verge, narrowing the carriageway if necessary.

31 Again past the house, the existing path is narrow.

32 Move with the field edge as soon as possible.

33 Go through the village for pleasure and the Ferry Inn. This is the old road. There is a reasonable path along the north side of the “bypass” but we do not recommend improving this. Ideally one would bridge across near the historic ferry site or maybe at the ford upstream but this would then bypass Charlecote Park so on balance we considered it better to not go that way.

34 There is no choice but to use the footway. This generally has adequate width. Over quite long lengths it could be widened. It also has open views of a number of interesting houses.

35 At this end we need to gain some width which could be by negotiation with owners of small riverside plots and council strips.

36 A crossing of the main road is needed.

37 There is some doubt about whether cyclists should use this excellent tramway viaduct. This should be resolved and the route signed through to the theatre.

38 Use the town streets for a route to the station.
Leamington Spa to Stratford-upon-Avon

Map showing traffic-free and access roads on the main route.
Royal Leamington Spa to Southam – 10 miles

This section of the HS2 Cycleway is particularly interesting as the proposed railway offers the chance of resolving a long standing discontinuity at Offchurch where the busy and fast Fosse Way serves the former railway route.

The Welsh Road option was found to be much too busy and hilly. The canal towpath option, whilst shorter, does not offer the same potential of a traffic free link to Rugby Station, as does the old railway which is the route recommended here. To reach Southam itself, a new path up the edge of the former cement works land is required to avoid the A423. This route follows NCN41 but makes some radical improvements to it.

1. An excellent path through open space to the leisure centre.

2. Follow the stone track to the Local Wildlife Site Haymeadow and forge a new link to the canal towpath on roughly the line shown, including a new 15m span bridge over the river. This by-passes the current route with its crossing of the main road, shared use footway, narrow towpath and constricted way under the main road, and would make for a very much better route.

3. This section of the Grand Union Canal is reasonably wide with a good path. It could achieve 2.0 or 2.5m width, without difficulty.

4. The ramp up to the railway could be re-built to give an easier gradient and wider path.

5. Good railway path with views. Needs new surface.

6. This bridge is infilled at a difficult junction with lots of turning traffic. A subway here would be appropriate. Note this could be set square to the road for shortest length and its invert needs to be only about 4m below the road level, so shallow ramps would be needed.

7. HS2 crosses this particularly attractive railway path. It would be appropriate to make a bit of an effort with a bridge over HS2 Rail, which will be in a deep cutting. There is no doubt that the whole character of this beautiful path will changed and, by way of compensation, it would be proper for HS2 Rail to put in the subway under Welsh Road and a bridge over the Fosse Way.

8. This missing bridge has massively affected the use of this railway path. Its replacement can be a simple span on new earthwork approaches with adequate clearance.

9. There is a well-used track through this deep cutting, created by bikes and motorbikes.

10. Under this high lattice steel (listed) bridge, the area is used for motor bike scrambling – something which will stop when a popular tarmac path is put in place.

11. Potential railway path to Rugby.

12. Continue railway path. This whole alignment avoids the long hill up to Snowford Lodge on an otherwise charming quiet road.

13. Existing NCN route 41 including an Armco subway under road.

14. Bridge over canal and 5 arch brick viaduct. This section is currently only used informally.

15. Desirable link to model village.

16. Armco culvert under main road. Careful attention to drainage is needed here to sort out current flooding.

17. Link up on cement works land by agreement with Cemex.

18. Mark out crossing of works road with zebra.

19. Make new route up through former quarry area, all set back as far from main road as possible. Plant up as a tree lined avenue to create an attractive walk for Southam.

20. Formalise crossing of main road and make cycle track around roundabout.

21. Old main road is very wide and cycle lanes are appropriate or narrow carriageway for 4m wide shared use pavement on west side to serve school.

22. (These notes describe link to Long Itchington). Start with constructing 1:20 ramp to canal towpath.

23. Good towpath.

24. Use existing access road to loop around to cross canal on adequately wide main road pavement.

25. Construct new path on wide verge and across works forecourt.

26. Construct link through wooded workings.

27. A ramp down at this point would give good access to the village, or there is a narrow slot before the lock, or the path by the main road could continue for village access.

Alternatives considered and dismissed

A. Although this long length of canal towpath offers a more direct route, the works required, and land to be negotiated, are disproportionate to the benefits, AND the opportunity of making a valuable link to Rugby is lost.

B. Welsh Road carries an unexpectedly high volume of fast moving traffic and has a poor reputation with cyclists. Its hills are also quite challenging.
Southam and Banbury Section

South of Southam the countryside is relatively empty and it has been difficult to decide on how best to meet the HS2 Cycleway objectives of creating a popular and attractive route as well as meeting local needs. Eventually this study concluded that it would be the most valuable to route via Banbury before rejoining the HS2 corridor at Brackley.

Although there is a network of relatively minor roads in this area, a surprisingly large number of them carry rather large volumes of traffic travelling at speed. So for example, the Welsh Road striking away to the south-east from Southam has 3000 v.p.d., well above our target of 1000 v.p.d. or less.

This is an area where the actual corridor of the HS2 Rail does provide much the most satisfactory route and we recommend that by linking up a series of access roads and field access tracks, the Cycleway follows the HS2 alignment as far as Stoneton, for Lower Boddington from where a combination of minor roads and greenways lead on to Banbury.

The existing NCN 48 does travel in the general direction required but its departure from Southam via the B4451 is unsatisfactory and it drifts off to the west without approaching Banbury. Nonetheless we show a possible route using part of this as a rather inferior options – inferior because the HS2 alignment is direct, traffic-free and would be a positive resource for the Southam area.

We also considered the possibility of a route further east via Daventry to Helmdon and Brackley which might make up a part of a “family” of HS2 routes in this area designed to encourage visitors to holiday here as well to bring forward local links such as from Branton to Daventry. This option is shown as a line on a map only because we have yet to discuss it closely with Northamptonshire.

The following notes describe the preferred route, and then the reserve route via Ladbroke and Bishop’s Itchington using the prefix “A”.

1 Coventry Street would hugely benefit from a ‘place making’ programme to give the area a more focussed and popular centre. The study has prepared details for such a scheme at Brackley which might be of interest to Southam.

2a Continue southwards on Abbey Lane and cross the Leamington Road via the existing, shortly to be uprated lights for a single stage crossing of this main road.

2b The Banbury Road development has provision for a shared use route running southwards. Care should be taken to make this to the best HS2 Cycleway standards and link this through to the Banbury Road itself.

2c HS2 has agreed to provide a new shared use route along the A423 as far as Ladbroke. Again this should be to the Cycleway standards and carefully set back from the carriageway by a wide verge.

3a Cycle into Ladbroke on the Southam Road. This is the way for a route continuing southwards to Banbury largely on existing rural roads.

3b The main route should follow Windmill Lane and the cross the Banbury Road with a dedicated provision to Ladbroke Hill.

3c The main way south would now best be incorporated into the boundaries and access roads associated with HS2.

A1 It is most important that Ladbroke is connected to Southam so as to give this village a positive benefit. This will require a link beside the main road, and a crossing of it, all as part of HS2 road re-alignment works.

A2 Construct a new path separated from the main road by a wide verge with trees to create a promenade and provide a safe crossing of the A423 to Ladbroke so as to make a local route and link for that village to Southam. Note, ideally this road crossing would be incorporated in the HS2 bridge works.

A3 Traffic calm through Ladbroke.

A The existing bridge under the bypass gives a valuable local access to the Southam Fields area. It would be very useful to work out and develop a good route along the network of streets to reach the Town Centre.

B Welsh Road looks on attractive route at off peak times but is in fact used by numerous vehicles driving at high speeds and as a consequence is not comfortable to cycle on.
A4 This option now joins the minor roads followed by NCN 48 as far as Fenny Compton.

A5 This road from Bishop's Itchington to Knightcote is quite delightful and is gated at Holmes House, which serves to make it almost traffic free.

A6 The road south from Knightcote is rather busier but still attractive to use and almost completely level.

A7 This last section to Fenny Compton is a bit bleak and would benefit from hedgerow trees, or even perhaps it may warrant a separate field edge path as traffic is heavier.

4 The HS2 route has extensive earthworks and plantings over this whole length so it should be possible to include a good route all the way, adjusting the earthworks to provide a reasonably level launch for the path through to Stoneton. In addition, the path could use the planned agricultural accommodation roads, which could all be linked up.

5 Join the rerouted road from Stoneton.

6 Provide a safe crossing of the “main” road to reach Lower Boddington, and make a shared use traffic free path beside the road through to the village.
Southam and Banbury Section

A8 Appropriate measures to calm traffic in Fenny Compton.
A9 Another long quiet road gated at its southern end just before Farnborough. Traffic calm through the village.
A10 There is a bit of a hill here and advantage should be taken to position some convenient benches for stopping off and viewing.
A11 For 300m a new path is required along the field edge to connect the two minor roads without having to come into contact with the main road.
A12 There may be a useful back street route through Mollington, but use the HS2 Cycleway project to calm the existing roads anyway.
A13 The main road crossing at Mollington requires a central island placed across the extensive central area white lining. This will allow cyclists to cross the road in two stages.
A14 Drop down to the core route at Cropredy.

7 Depending upon traffic volumes calm or provide a segregated path on the approach to the village.
8 This road is to be closed to through traffic but a small bridge will give access for cyclist and pedestrians to a quiet rural ride.
9 This road will become a cul-de-sac.
10 Traffic calm through Claydon.
11 Quiet attractive roads continue.
Southam and Banbury Section

12 Traffic calm through Cropredy.

13 At Cropredy we need to join the canal corridor and design a route which can be considered a resource for Banbury. The Oxford Canal was an early contour canal and its bank is narrow with no reasonable way of widening it. For this reason we are aiming to avoid the towpath itself for as much of the way as possible. The first section is a stone access road.

14 This first field seems to be a bit of a public space with moored boats and people sitting around.

15 The bridleway goes over the first bridge and then follows the field edge for 600m to Peewit Farm bridge. Make this whole bridleway up to a good standard with a firm surface.

16 From Peewit to Little Bourton, continue the path along the field edge so as to avoid the towpath. There may be a case for planting a new hedge and then removing the existing one so that the public can see the water. This would result in the towpath area being mostly the preserve of fishermen, uninterrupted by passers-by.

17 For the next 1200m the canal is backed by a new flood bank which has the advantage of giving a good view and a good width for a sound path.

18 Join the canal towpath to pass under the M40.

19 Move into the abandoned field so as to bypass the narrow and steep passage at the lock. There is ample space in the field edge to create a spacious and easily graded path.

20 Rejoin the towpath to pass under the main line railway.

21 Make a link along the edge of the wood, a local nature reserve, to reach the reservoir.

22 Widen the path along the east side of the reservoir, where there is much more space than on the narrow canal towpath.

23 Join the excellent local cycle path through the Country Park passing under all the roads along the route.

24 Complete the riverside way to near the station by defining a route through the small car park and by creating a new promenade as part of any developments in the area.

25 The canal towpath itself could be used as a local link and it would be most desirable to designate appropriate cycling routes to the Town Centre itself.

26 Existing local links via the long spillway of the flood water banks and path under the motorway.

27 Valuable link from Banbury to Chacombe needs a crossing of the main road.
Map showing possible arrangement of an eastern option via Daventry and Helmdon

1. Existing signed NCN route to Rugby starting on this section of canal towpath.
2. There are aspirations to complete this railway path through from Daventry to Braunston.
3. Existing signed “Great Central Way” cycle route.
4. Suggested Helmdon and Brackley Railway Path link as part of the HS2 Rail Project.