HS2 2016 Government Consultation on Route Refinement and Property

Response from Derbyshire County Council

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This response has been prepared by Derbyshire County Council and its position on HS2 remains clear. The Council welcomes the economic benefits of the scheme but has consistently pressed HS2 to minimise the adverse effects on people's homes and local communities – both during construction and after the line has opened – with any harmful effects reduced, mitigated or removed completely.

In preparing this response, every effort has been made to reflect the views, where known, of the borough and district councils.

The County Council would like to thank these councils and many other interest groups for contributing to this consultation response in addition to any separate individual responses they may wish to make.

Acknowledgement

Derbyshire County Council acknowledges the support and professional advice on this consultation response provided by AECOM as part of the Midlands Highway Alliance (MHA) partnership. The County Council is grateful for the advice and input from all those who have contributed to this document.

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1 INTRODUCTION

1.1 County Council's consultation response

1.1.1 This report is Derbyshire County Council's response to the Government's latest proposals for HS2. The Council has been consistent in its approach to HS2. While welcoming the economic benefits of the scheme, the Council has pressed HS2 to minimise the adverse effects on people's homes and local communities, both during construction and after the line has opened. Any harmful effects should be reduced, mitigated or removed completely.

1.1.2 HS2 will affect communities in Derbyshire in many different ways and in preparing this response the County Council has been greatly assisted by District and Borough Councils and other interested parties who have shared their local knowledge and understanding. Derbyshire County Council would like to thank specialist advisers AECOM who have assisted in compiling this report and all those who have contributed to this report as well as making their own responses direct to HS2. The Council asks that the Government and HS2 Ltd take full account of all the representations that they receive.

1.1.3 This report should be read in conjunction with the County Council's response to the original consultation on the HS2 proposals submitted in January 2014 and a report on the proposed response to the Route Refinement proposals considered by the Council's Cabinet on 21 February 2017.

1.2 Background

1.2.1 In January 2014 Derbyshire County Council published a response to the 2013/14 Government consultation on High Speed Two Phase 2b Crewe to Manchester and West Midlands to Leeds scheme. Since then there have been some substantial changes to the route through Derbyshire.

1.2.2 On 7 July 2016, HS2 Ltd published revised proposals to serve Sheffield and a new alignment for the route through north Derbyshire and South Yorkshire. Revised layouts for the Infrastructure Maintenance Depot (IMD) at Staveley and its access route were published at the same time. The revised proposals include a new spur to provide a classic compatible link to Chesterfield and Sheffield.

1.2.3 On 15 November 2016 the Secretary of State for Transport announced the preferred route for Phase 2b and published the safeguarded zone, (from Crewe to Manchester in the west, and from West Midlands to Leeds in the east). Two public consultations were started on the same date: "Route Refinement Consultation 2016 and "Property Consultation 2016".

1.2.4 Three of the seven refinements apply directly to the route through Derbyshire:

- East Midlands Hub approach around Long Eaton;
- Derbyshire to West Yorkshire (M18 / Eastern route) - a new alignment north of junction 29 of the M1; and
- a new HS2 spur to join the Erewash Valley Line near Hilcote.

1.2.5 The County Council has welcomed the economic benefits that will result from the proposed East Midlands hub station at Toton, the proposed Infrastructure Maintenance Depot at Staveley and the potential opportunities for the construction and rail supply industries. The most recent proposals to serve Chesterfield by high speed rail services could also provide an economic boost both locally and in wider areas of north and central Derbyshire.

1.2.6 The scheme, however, will have a significant impact on large areas of Derbyshire and the County Council is concerned to ensure that the adverse impacts of the scheme are effectively mitigated, especially where the route passes close to or through residential and other sensitive areas.

1.3 Response

1.3.1 The comments on the route refinement proposals are in addition to the County Council's previous submissions and in responding to the latest consultation HS2 Ltd is reminded of the need to take into account earlier representations.

1.3.2 Whilst this report is primarily concerned with areas affected by the eastern arm of HS2, in the west and north-west of Derbyshire the western arm (Crewe – Manchester) is generally of greater interest. This does not run through Derbyshire, but the County Council is concerned to ensure that there is good connectivity with parts of Derbyshire Dales and High Peak if these areas are to benefit from the national investment in high speed rail. HS2 stations are proposed at Manchester Piccadilly and close to Manchester Airport. Existing rail services provide links with Manchester Piccadilly, but it will be important to ensure continued progress on improving road links to the airport for car and bus users.

1.3.3 The main areas concerns highlighted in this report include the impacts on:

- business sites and development, including major development sites at Staveley and the former Coalite site;
- residential and other sensitive land uses;
- the local environment and heritage; and
- the Chesterfield Canal and plans for its restoration.

1.3.4 Initial concerns regarding the accuracy and details of the planned route north of M1 junction 29 were raised in 2016 by Derbyshire County Council and other interested parties. HS2 Ltd has explained that the proposals are at a preliminary level of

design and issues will be considered as the scheme is designed in more detail. These concerns have not been addressed in the consultation drawings and therefore remain outstanding.

1.3.5 This response does not seek to represent the detailed views of individuals or organisations as they are often better placed to make their own representations direct to HS2, but concentrates on issues of a more 'strategic' nature. These are generally matters affecting a large number of people or which have far-reaching implications for the County.

1.3.6 Where the route is unchanged, the original response is still relevant. This report has been prepared to highlight potential issues associated with the revised proposals and does not purport to provide a comprehensive response to the scheme as a whole. Whilst there are some cross-cutting issues, the response has been split into four areas:

- the main line M18 / Eastern route;
- Trent Valley and Long Eaton;
- Hilcote – Clay Cross link, (the new spur); and
- Staveley IMD Link.

1.3.7 Each of these three areas is considered under five headings: Engineering, Environmental, Economic Planning, Strategic Planning; Highways and Classic Rail. Health, safety and welfare is addressed in a separate section.

1.3.8 An initial assessment of the key environmental impacts has been carried out on the revised route north of M1 junction 29. The impacts along the corridor past Sutton Scarsdale Hall and Bolsover Castle have increased with the new alignment but overall there is potentially less ecological impact associated with the realigned route. New landscape areas have been created where the alignment has changed and are referenced Section 1 to 7, see map in Appendix A . Section 4 applies to the Staveley IMD and link and Section 7 relates to the Chesterfield spur along the former Erewash Valley Line. A summary table of the environmental impacts is also included in the appendix.

1.3.9 Comments about the impact on the landscape areas A to F identified in the "Response from Derbyshire Local Authorities" 31 January 2014 remain valid, and a plan is provided in Appendix A for reference. Some of the concerns raised for areas A to F of the original response have been addressed but others remain. A considerable amount of further work is needed to mitigate the impact of the scheme on the natural environment including, for example, an assessment of the opportunities to restore habitats as part of the works.

1.3.10 The County Council remains broadly supportive for the economic benefits but there are serious concerns about the impact on existing activities and future development sites. The responses to the consultation from District and Borough Councils will outline specific examples in more detail.

1.3.11 Impacts on highways have been established from consultation with Derbyshire County Council officers and have taken account of major development proposals. Consultation has also been carried out with East Midland HS2 Growth Strategy Officer Group (EMHGSOG) and Highways England.

1.3.12 Impacts on the existing rail networks have been established from consultation with experts, feedback from various workgroups and specific studies by Network rail.

1.3.13 The Health Impact Assessment carried out as part of the January 2014 response has been updated, see Appendix B .

2 RESPONSE TO CONSULTATION QUESTIONS

2.1 Route Refinement consultation

Question 5 – Route along A42 around East Midlands Airport
(Section 2.5 of the 'HS2 Phase 2b: Crewe to Manchester, West Midlands to Leeds Route Refinement Consultation 2016' document).
The Secretary of State is minded to move the route on the approach to East Midlands Airport so that it follows the eastern side of the A42 more closely before passing east of the runway and to the east of the M1.
Do you support the proposal to realign the route in the area around East Midlands Airport?
Please indicate whether or not you support the proposal together with your reasons.

Answer:

2.1.1 Derbyshire County Council supports in principle the proposed route of HS2 but has concerns regarding the impact on Trent Valley. The County Council remains concerned that HS2 Ltd appears to have low aspirations for this area. Proposals in this area should aim to contribute to, rather than detract from, high quality landscapes, and the viaducts need to be carefully designed.

2.1.2 The further development of HS2 in this area should respond to the objectives of Trent Valley Vision being developed and promoted by the Lowland Derbyshire and Nottinghamshire Local Nature Partnership (LDN LNP).

Question 6 – Changes to East Midlands Hub approach through Long Eaton
(Section 2.6 of the 'HS2 Phase 2b: Crewe to Manchester, West Midlands to Leeds Route Refinement Consultation 2016' document).
The Secretary of State is considering two options for the route as it passes through Long Eaton. Both options follow the same route but pass through Long Eaton at different heights. The two options are to:

- *Either lengthen the viaduct over the River Trent floodplain so that the line passes through Long Eaton at a high level, directly to the east of the existing rail lines.*
- *Or, an alternative option where, after crossing the River Trent floodplain on a shorter viaduct the route passes through Long Eaton on a lower viaduct and embankment again directly to the east of the existing rail lines.*

Do you support one of the two options being considered by the Secretary of State for the alignment through Long Eaton? Please indicate which option together with your reasons.

Answer:

2.1.3 Derbyshire County Council has a number of concerns regarding the major impact on the town of Long Eaton.

2.1.4 In responding to the original consultation the County Council expressed serious concern about the impact of HS2 in this area. The Authority was especially concerned about the potential severance at Station Street and Main Street as these provide the principal link between the town centre and the residential area to the east of the freight railway. There is now less concern about the potential severance of roads in Long Eaton as the 'high level' option would enable the existing street pattern to be maintained and the 'low level' option provides an alternative route to mitigate closure of the level crossing at Station Road. The route may nevertheless act as a significant barrier in the community and the underpass proposed for the low level option would disadvantage pedestrians and cyclists.

2.1.5 The revised proposals mean that the route will continue to have a major impact on the town for either the high or low level options presented by HS2. Based on the evidence available at the time of writing it would appear that, on balance, and with careful design the high level option may be the preferable option. The significance of the impact of HS2 on Long Eaton should not be under-estimated and it is recommended that in consultation with HS2 Ltd and Erewash BC a comprehensive and creative approach should be adopted that seeks to effectively integrate the new line into the urban fabric.

2.1.6 The design through Long Eaton will need to respond to the identified impacts on townscape character. As well as the direct impacts of HS2 there may be additional impacts associated with the support infrastructure required to connect the proposed station at Toton to the wider area. The impact of this and associated development will also need to be carefully considered.

2.1.7 The local authorities look forward to working closely with HS2 Ltd and other partners on the further development of proposals for the Long Eaton and Toton area.

2.1.8 The concerns are discussed in more detail within this report which should be treated as the full response to this question.

<u>Question 7 – Derbyshire to West Yorkshire (M18 / Eastern route)</u>
(Section 2.7 of the 'HS2 Phase 2b: Crewe to Manchester, West Midlands to Leeds Route Refinement Consultation 2016' document).
The Secretary of State is minded to move the alignment of the route between Derbyshire and West Yorkshire to reflect a change in the proposals for serving Sheffield.
Do you support the proposal to amend the route to serve South and West Yorkshire?

Please indicate whether or not you support the proposal together with your reasons.

Answer:

2.1.9 The route refinement proposals fundamentally change the way in which South Yorkshire would be served by HS2 with consequential changes for the alignment of the route through north Derbyshire.

2.1.10 The M18/Eastern route offers some advantages over the previous consultation route and goes some way to addressing the concerns expressed by the County Council, including the impact on development at Markham Vale, plans for the restoration of the Chesterfield Canal and concerns about the impact on residential areas of Renishaw and Eckington.

2.1.11 The revised proposals will have a significant impact on people who live or work close to the line of the route. Particular attention is drawn to:

- An increase in the vertical alignment near Stainsby which could have implications for the setting of Sutton Scarsdale and Hardwick Hall and possibly for traffic using the local road network.
- The impact on Carr Vale and Peter Fidler nature reserves. Sensitive design will be needed to ensure these valuable nature conservation sites are protected.
- The revised alignment is closer to New Bolsover and may be detrimental to residential amenity in the area. It may also intrude into the view from Bolsover Castle.
- The new route passes through the eastern (residential) part of the proposed redevelopment of the former Coalite site. This may undermine a finely balanced financial package of development designed to meet local housing needs whilst helping to fund the restoration of contaminated land on the west side of the site.
- The revised route runs close to Shuttlewood and the small community at Bentinck Road; Barlborough as well as a number of individual properties that will be affected.

2.1.12 The revised link to the proposed depot at Staveley follows the former Clowne branch line. Although this will be used by slower maintenance trains and not on a continuous basis, there could be some disturbance at night.

2.1.13 The revised plans indicate a footprint for the depot that will facilitate the provision of the A619 Regeneration Route that is critical to the redevelopment of this brownfield site. The M18/Eastern Route that is now proposed significantly reduces the impact on plans for the restoration of the Chesterfield Canal, although the plans still show severance of the route at Staveley and Norwood in South Yorkshire. HS2 Ltd is

aware of these problems and it is understood that these matters will be addressed as further design work is undertaken.

2.1.14 Plans for the original consultation route have not yet been rescinded. In order to remove the remaining blight and uncertainty it is requested that this route should be formally abandoned at the earliest opportunity.

2.1.15 The Health Impact Assessment (HIA) of the Derbyshire section of the route undertaken for the 2013 consultation noted that the proposed alignment of HS2 runs through or close to some of the most deprived communities in Derbyshire. The revised proposals continue to affect the less prosperous areas of Derbyshire. This underlines the importance of maximising the economic benefits of the scheme and ensuring that these communities are not further disadvantaged.

2.1.16 A very high standard of design will be needed to avoid or reduce these adverse effects and to develop appropriate mitigation measures. Consideration should be given to investigating any opportunities to enhance the local environment and to compensate local communities for the loss of local amenities on a 'like for better' basis. These matters are likely to be most effectively addressed by a continuing dialogue with local communities, business interests and local authorities.

2.1.17 The local authorities look forward to working closely with HS2 Ltd and other partners on the further development of proposals.

2.1.18 The concerns are discussed in more detail within this report which should be treated as the full response to this question. Derbyshire County Council's continued support for the proposed route through Derbyshire is dependent on satisfactory progress being made in resolving these issues.

<u>Questions 8 and 9 – Creating a northern junction</u>
(Section 2.7 of the 'HS2 Phase 2b: Crewe to Manchester, West Midlands to Leeds Route Refinement Consultation 2016' document).
Changing the way Sheffield is served opens up the possibility of running high speed trains from Sheffield to Leeds via a dedicated link. The Secretary of State is also seeking views on the railway junction needed to create this northern 'loop'.
Do you support the potential development of a northern junction to enable high speed services stopping at Sheffield to continue further north? Please indicate whether or not you support the proposal and your reasons.
Do you support the proposed location of the northern junction in the vicinity of Clayton?
Please indicate whether or not you support the proposal and your reasons.

Answer:

2.1.19 Derbyshire County Council welcomes the economic opportunities that the new link would bring to the County. A high speed rail service to Chesterfield could have transformational benefits with improvements in the journey time to London and, with provision of the northern 'loop', to Leeds, Newcastle and Birmingham. Chesterfield already benefits from good inter-regional rail links and the addition of high speed rail services would reinforce its position as an important node on the national rail network.

2.1.20 The Council welcomes the proposal to serve Chesterfield with 'classic compatible' services and would also welcome improved connections north of Sheffield provided that there is no adverse impact on existing rail services to Chesterfield. This connection could be in the vicinity of Clayton but Derbyshire County Council does not have a preference for an exact location.

2.1.21 'Classic compatible' trains can only operate on electrified lines and electrification of the Midland Main Line is therefore a pre-requisite of this strategy. The County Council is aware of current uncertainty about the Government's electrification plans and requests clarification of the position oat the earliest opportunity.

2.1.22 The County Council would wish to see more high speed train services stopping in Chesterfield. A growth strategy being developed jointly with Chesterfield Borough Council will further improve connectivity to Chesterfield station and development both locally and in wider areas of north and central Derbyshire will increase the demand for high speed rail services. There are, however, significant adverse impacts to both communities and landscape from the new HS2 spur to the Erewash Valley Line, particularly in the area around Hilcote, Newton and Blackwell.

2.1.23 The Government and HS2 Ltd are asked to consider alternative means of meeting their strategic aim of serving Sheffield Midland by diverting trains on to the Erewash Valley and Midland Main Lines. One option, for example, may be to provide a link between the main HS2 line and the Erewash Valley Line at Toton where the two lines are adjacent to each other. This would bring with it the additional benefit of electrifying the Erewash Valley Line with potentially significant operational benefits for local rail services. To help understand these wider issues HS2 Ltd is asked to prepare a report comparing these and any other appropriate options in terms of their engineering feasibility, capital and operating costs, disruption during construction, effect on journey time, environmental impact, effect on existing rail services and the wider benefits for the local rail network of electrifying the Erewash Valley Line.

2.1.24 There are also concerns regarding the capacity of the existing line and disruption to existing services. The County Council would not wish to see the provision of high speed rail services disadvantaging in any way passengers using the existing ('classic') rail network.

2.1.25 These concerns are discussed in more detail within this report which should be treated as the full response to this question.

2.2 Property consultation

Question 2
(Part A of the 'HS2 Phase 2b: Crewe to Manchester, West Midlands to Leeds Property Consultation 2016' document).
The following questions relate to the proposed rural and urban boundaries along the preferred Phase 2b section of HS2. See map on page 7 of the Property Consultation document for an outline of the five proposed rural/urban boundaries along the preferred Phase 2b route.

Eastern Leg:
a. What are your views on the proposed boundary of the RSZ in south Long Eaton, on the Eastern Leg?

Answer:

2.2.1 Some provision should be made for people in Long Eaton affected either by HS2 or its construction. This would need to be a 'special case', but the Council believes this to be justified because of the severity of the impact on the town. Indeed the Authority is not aware of any other town on the entire HS2 network that is similarly affected.

2.2.2 Derbyshire County Council asks for properties in the Newbery Avenue/Owen Avenue (off Trent Lane) to be included in the rural support zone. This site has open fields on two sides and is somewhat detached from the rest of the town so there is a strong case for rural designation. It is understood that urban residents are deemed to benefit from house price increases due to the proximity of the East Midlands Hub Station. This assumption, however, depends on effective local connectivity plans being put in place and effective mitigation of the impact of the route as it passes through the town. Whilst some residents may be eligible for compensation under the "Need to Sell*"provisions Express Purchase and Need to Sell), it is unclear how residents would be compensated for the disruption during the construction of the route. The scale of the engineering works and the proximity of housing suggest that local residents could be severely affected. HS2 Ltd is therefore requested to give the highest priority to the design and method of construction for this very sensitive section of the route.

2.2.3 The County Council will need to be consulted regarding property they own that will be affected by HS2. A listing of land that is going to be taken and the land that will be the subject of subsequent Part 1 claims is included in Appendix C . A second list includes assets close to the HS2 path that could be indirectly affected.

3 M18 EASTERN ROUTE

3.1 Overview

3.1.1 The route refinement proposals fundamentally change the way in which South Yorkshire would be served by HS2 with consequential changes for the alignment of the route through north Derbyshire. The current proposals adopt a more easterly alignment than the original 2013 proposals, running closer to Bolsover and continuing northward, immediately to the west of the M1. Under these proposals there will not be a station on the main line of HS2 within Sheffield City, although it is understood that options for a 'parkway' station near the M18 are currently being investigated.

3.2 Engineering

3.2.1 It is unclear what the implications are for overhead powerlines that cross the proposed route. The plan in Appendix D shows locations where HS2 crosses overhead power lines. In two locations the track is raised in order to cross the M1 on viaduct but also crosses the path of overhead power lines. If there is not sufficient headroom under the cables significant secondary works may be required for new or relocated pylons. In two other locations HS2 cutting slopes could undermine pylons which may need relocating. Other services are expected to be diverted as necessary.

3.2.2 The current consultation does not include discussion on a new Parkway Station although it is understood that options for a 'parkway' station near the M18 are currently being investigated. Derbyshire County Council would support a well located station with good connectivity that would improve access for the north east of the county.

3.2.3 The following table lists the published HS2 drawings for this section with a summary of observations.

C321-MMD-RT-DPP-120-581304	• Alignment significantly closer to Langton Hall Farm (chainage 20,000), elsewhere minor changes to horizontal alignment • 13m high viaduct over Maghole Brook • Structure over Brookhill Lane not shown. • Farmwell Lane. Structure needed over and looks like HS2 goes through balancing ponds here. Will need reinstating. • 15m cutting & tunnel under A38. • 12m increase in height where mainline crosses over southbound Clay Cross Link, (now 21m above Normanton Brook) embankment and viaduct. • Only 1.4m clearance shown under B6026. • 12.5m embankment past Huthwaite. • Impact on Silverhill Trail (chainage 24,600) is unclear. • Potential impact on Tibshelf Services.

C321-MMD-RT-DPP-120-581305	• Minor changes to vertical and horizontal alignment. • 23.6m cutting past Tibshelf and under M1. • Overhead powerlines (chainage 26,550)- clearance retained but pylon to west of M1 will be undermined so may need relocating • Increased impact on Saw Pit Industrial Estate. • Mansfield Road (B6014) needs a bridge over HS2. • New access track to Hurst Farm. • Spring Lane will be affected by the earthworks for the cutting. • Bridge needed for Deep Lane over HS2. • Astwith Lane/Stanley Lane diversion details required. • Bridge needed for Mill Lane over HS2 or re-alignment. Access to Hardwick Hall to be confirmed.
C321-MMD-RT-DPP-120-581306	• Horizontal alignment significantly different from 2013. • Overhead powerlines (chainage 31,100) - clearance retained, pylon undermined by cutting slope • Increase impact on M1 Junction 29, 20m cutting and tunnel • Viaduct over M1 with 20.6 and 9.1m embankments either side. • Overhead powerlines (chainage 32,800) - clearance reduced significantly on approach to viaduct • HS2 bridge over Palterton Lane/Carr Lane • Long viaduct over Goyt and Doe Lea floodplain. • HS2 bridge over Chesterfield Road (A632). • HS2 bridge needed over Woodhouse Lane and Chesterfield Road (B6418). • Potential problem with hazardous waste on former Coalite Site on Buttermilk Lane. • Significant impact on Coalite development proposals. • Bridges needed over Woodhouse Lane and B6418 Buttermilk Lane
C321-MMD-RT-DPP-120-581307	• Horizontal alignment significantly different from 2013. • HS2 passes west of Shuttlewood in 20m deep cutting. • A 490m long viaduct over the Doe Lea floodplain and the M1 at Junction 30 (max 28.4m above the river). The embankments on either side are 12m to 14m high. •A long 15m deep cutting on approach to A619 and again under A6135. •There is a 200m length of embankment just south of J30, max 7.4m high. • Bridges or extended tunnel under A6135 needed under Westfield Lane and Sheffield Road. • Overhead powerlines (chainage 38,800) - clearance reduced significantly on approach to viaduct • HS2 crosses Doe Lea floodplain on 28.4m high viaduct. • Other road crossings shown on plans.
C321-MMD-RT-DPP-120-581308	• Horizontal alignment significantly different from 2013. • 3.9m cutting near Barlborough Hall.

3.3 Environmental

3.3.1 Much of the route is less disruptive than the 2013 alignment but there are significant issues with the details published on 7 July 2016 and 15 November 2016.

3.3.2 The concerns raised for landscape areas A to F identified in the "Response from Derbyshire Local Authorities" on 31 January 2014 remain largely valid, a copy of the associated plan is provided in Appendix A for reference. Please also refer to this response for more detailed comments of the route south of M1 Junction 29. A new plan in Appendix A identifies new landscape Areas 1 to 6 where the horizontal alignment has changed under this consultation. (Sections 1, 2, 3, 5 and 6 are on the HS2 mainline).

3.3.3 At the Information Event at South Normanton on 2 February 2017 residents questioned the need for the spur through Newton and Hilcote. The vertical alignment of the mainline at the junction with the Clay Cross link has increased by 12m. The proposals now show a 140m viaduct over Normanton Brook at a maximum 21m high. This will have a huge impact on the local residential areas, especially Huthwaite in Nottingham and Newton and Hilcote in Derbyshire.

3.3.4 The Council is concerned about the impacts of HS2 on the residential areas of Shuttlewood & Stanfree in landscape section 2 and on properties west of the M1 at Barlborough, (landscape section 7). The new route is significantly closer to these communities.

3.3.5 There is also concern about the impact on Carr Vale nature reserve. This was raised by local residents at the Information Event at Bolsover on 4 February 2017.

3.3.6 There is an increase in the vertical alignment of the route near Stainsby. This could have implications for the setting of Sutton Scarsdale and Hardwick Hall and possibly for traffic using the local road network. The County Council will work with the National Trust, HS2 Ltd and other interested parties to seek agreement on a design that protects heritage interests and addresses the concerns of local residents. The National Trust are developing potential mitigation measures and the County Council will continue to liaise with them. Concerns have already been raised regarding the need for high quality design and mitigation through this historic landscape.

3.3.7 The revised alignment brings the high speed line closer to New Bolsover and may be detrimental to residential amenity in the area. It may also intrude into the view from Bolsover Castle.

3.3.8 North of the B6418 Buttermilk Lane the revised route runs close to Shuttlewood and the small community at Bentinck Road. The route continues in a northerly direction crossing to the west side of the motorway running close to and broadly parallel to the M1 as it passes to the west of Barlborough and Junction 30. Along this length of

the route there will be a number of individual properties that will be affected as well as larger population areas that could be affected.

Landscape and Visual Assessment (Areas labelled Section1 to 6)

3.3.9 The northern realignment, as with the original proposed route, runs through a number of Landscape Character Types as defined in the National Characterisation work and the 'Landscape Character of Derbyshire' publication (www.derbyshire.gov.uk/landscape); each with their own individual abilities to accept and mitigate development of this type. Sections labelled 1 to 5 run predominantly through the South Yorkshire, Nottinghamshire and Derbyshire Coalfield: Estate Farmlands Landscape Character Type, which is typically a large scale and open landscape. Further north the route passes through the Wooded Farmlands Landscape Character Type; a small scale and well-wooded landscape. Section 6 extends through the Southern Magnesian Limestone: Limestone Farmlands Landscape Character Type described as a large scale, open landscape with large and medium estate woodlands.

3.3.10 Section 1 has the greatest potential to impact on landscape character as the proposed route passes through a very open agricultural landscape associated with the wider Doe Lea Valley, which has less capacity for mitigation. These adverse impacts are amplified where that landscape forms part of the setting to the important heritage assets of Sutton Scarsdale Hall and Bolsover Castle (and the historic town of Bolsover) where there is a heightened degree of landscape sensitivity.

3.3.11 As with the landscape sensitivity, visual sensitivity will be more evident in the open and unwooded landscape primarily associated with the Estate Farmlands landscape character type. Again it is likely that Section 1 of the revised route will have the greatest visual intrusion as it crosses the motorway on a high embankment (21m) and viaduct (11m) and then extends through a very open landscape adjacent to the River Doe Lea on further embankments and structures. There are a number of significant sensitive visual receptors that will be able to view this section of the route including residents at Palterton and Bolsover as well as visitors to Sutton Scarsdale Hall and Bolsover Castle. It is difficult to appreciate how this section of the route can be satisfactorily mitigated and integrated within the context of the established landscape character so we would strongly urge HS2 to consider lowering the vertical alignment through this section and employ the skills of a specialist bridge architect/designer to deliver a world class structure to avoid the need for embankments.

3.3.12 Section 2 runs very close to the community of Shuttlewood and Bolsover Woodhouse directly affecting a number of properties on the B6418, Buttermilk Lane/Chesterfield Road. In this section the route will cross the recently restored Bolsover Colliery Tip and the lower slopes of the Markham North Tip. These crossing points will need to be carefully detailed to avoid unacceptable visual impacts on these restored features and ensure that any exposed, contaminated

land is appropriately treated (physically and visually). In Sections 3, 5 and 6 the new route starts to parallel the M1 Motorway and although it would be closer to Barlborough, HS2 will be constructed to the west of the motorway and will be viewed in this context. The character of the landscape becomes more wooded in these sections providing greater scope for satisfactory landscape mitigation and integration. Sufficient land should be acquired to deliver new woodland planting and avoid narrow linear strips adjacent to HS2 corridor, which may simply contribute to heightening its impact.

3.3.13 There is concern around Barlborough due to the height and length of embankments in the area.

3.3.14 Section 6 of the revised route is located within the North East Derbyshire Green Belt. The policies of the National Planning Policy Framework seek to protect the Green Belt from inappropriate and harmful development and to preserve its openness. These policies seek to ensure that where development does occur it should help preserve and not adversely harm the openness of the Green Belt. This is a key environmental constraint that will need very careful consideration in the design of HS2 and associated infrastructure in the vicinity of Barlborough and Killamarsh to ensure that impact on the Green Belt is minimised as far as possible.

Ecological Assessment (Areas labelled Section 1 to 6)

3.3.15 The ecological assessment has taken account of the potential impacts of the revised proposal north of M1 junction 28 as well as the impacts of the original alignment which will not now occur. A table is attached that separates out these ecological effects section by section, see Appendix A .

3.3.16 HS2: 2013 alignment (impacts which will not now occur) –

- Key areas of impact were identified immediately east of Staveley, where the route ran for approximately 4km through the Doe Lea Valley between Long Duckmanton and Renishaw. Through this area, the route would have impacted upon numerous flashes and other designated sites. Approximately 2.6kms of the route ran through Local Wildlife Sites or potential Local Wildlife Sites, directly affecting them. Potential for impacts and habitat severance were high within the river valley.
- Connections to the proposed Staveley depot had the potential to cause additional impacts, direct habitat loss and habitat severance in and around Pinnock North/Norbriggs flash.
- Impacts were also anticipated north of Renishaw along the River Rother valley. These affected individual designated sites along the disused railway rather than as a result of the route traversing significant tracts of floodplain and wetland.

2016 revised alignment (Areas labelled Section 1 to 6)

3.3.17 Conversely, the new alignment appears likely to have the most significant impacts west of Bolsover, where the route passes through the edge of the wetland complex around Carr Vale, Peter Fidler and Snipe Bog Local Wildlife Site– again in the River Doe Lea valley but further south than the area affected by the 2013 alignment. This time however, the route seems to affect the edge of designated sites rather than passing through the heart of them. About 1km- 1.5kms of the route pass within or close to potentially valuable sites – with about 600m of the route directly affecting a Local Wildlife Site/planned Local Wildlife Site in this area.

3.3.18 Along the remainder of the main HS2 line, whilst the route would impact directly on several more Local Wildlife Sites, the impacts seem to be more limited. The proposed route crosses over comparatively narrow designated sites, with 50-100m of route passing through each affected Local Wildlife Site (of which there are two or three), thereby leaving them substantially intact. Again impacts might be lessened further through careful design of the route in these areas.

3.3.19 Whilst this is only a rapid desk-based assessment, it would appear that the revised route will result in lesser ecological impacts than the previous alignment, directly affecting less land within designated sites and causing less severance of habitat connectivity. This must however be borne out by surveys and ecological impact assessment in due course.

Heritage Assessment (Areas labelled Section 1 to 6)

3.3.20 The revised route has been assessed and there isn't any additional major issue with known heritage features. The issues remain those which have already been clearly identified regarding the corridor between Sutton Scarsdale and Hardwick Hall and Bolsover Castle. There is also the impact on the scheduled monument at Stainsby in the same area that shouldn't be overlooked. Already identified is the demolition of the grade II listed Woodhouse Farmhouse. There may be other as yet unidentified archaeological sites which should be identified and assessed during the normal evaluation process.

Greenways and Public Rights of Way

3.3.21 Derbyshire County Council have carried out a review of the impact of the revised route of HS2 on existing and proposed Greenways, Public Rights of Way and Countryside Sites and assessed potential opportunities. See details in Appendix E . HS2 Route section references have impacts on public rights of way as follows:

- HSL 09B in Long Eaton;
- HSL 12 in Sandiacre;
- HSL 13A and 13B in Barlborough, Staveley, Old Bolsover, Sutton cum Duckmanton, Heath & Holmewood, Ault Hucknall, Tibshelf, Blackwell, South Normanton, and Pinxton.

3.3.22 HS2 is asked to liaise with the Local Authorities to ensure that existing and proposed Greenways and Public Rights of Way are retained, enhanced and access is retained both during and after construction.

3.3.23 The Council supports the development of new routes including:

- cycling routes considered in the feasibility reports by Royal Haskoning DHV;
- development of sustainable transport links to new strategic locations by the Trans Pennine Trail partnership; and
- potential path finder projects for Clowne Branch Line.

Noise

3.3.24 There is concern regarding increased noise levels, especially around residential areas. The Noise Regulations will provide mitigation where levels exceed established thresholds but residents may find it a nuisance below this level.

Landscape Areas A to F.

3.3.25 Much of January 2014 response remains valid. Extracts from this response for areas D to F are updated below.

Huthwaite/Hilcote/McArthur Glen (Area D)

3.3.26 The new alignment has minor changes to the horizontal but significant increase in the vertical alignment, especially over Normanton Brook which now features a 140m viaduct 21m above. The visual impacts of this will be considerable.

3.3.27 The landscape character is typical of South Yorkshire, Nottinghamshire and Derbyshire coalfield: coalfield estate lands. This comprises an urbanised and well-wooded landscape with coalfield village farmlands, (a relatively small-scale and well-settled landscape). The area includes:

- Scheduled monuments of Pinxton Castle Motte and fortified manor with moated site and five fishponds;
- Listed buildings Brookhill Hall and the stable block at Brookhill Hall;
- Ecological receptors directly affected by the route: The route crosses directly through ‘Cambro Tip and Lane’ planned Local Wildlife Site. This site is known to support a number of great crested newts. Crucially, this site lies on a strong east/west habitat connectivity corridor, along and adjacent to Normanton brook, with a number of locally designated sites in that area;
- Other ecological considerations: east-west habitat connectivity and protected species; and
- Areas of Multiple Environmental Sensitivity (AMES), part of the route in this section passes through an area of ‘secondary sensitivity’ and therefore will be moderately sensitive to change.

Design considerations.

3.3.28 It is recommended that HS2 Ltd should:

- note the east-west habitat connectivity provided by Normanton Brook and the presence of protected species, particularly Great Crested Newts where the route crosses Cambro Tip;
- ensure that a sensitive approach is taken in relation to the parkland landscape around Brookhill Hall; and
- ensure that when crossing open agricultural areas opportunities are taken to minimise visual impacts and integrate the route with the surrounding landscape character, and consider long-term agricultural viability.

Land east of Newton and Tibshelf (Area E)

3.3.29 The new proposals include a new spur to through Newton, Hilcote and Stonebroom, just north of M1 Junction 28. The implications of this new spur are discussed in more detail 5.3 in a new landscape area Section 7.

3.3.30 This spur requires a new grade separated (flyover) junction immediately north of the A38 to the east of Hilcote significantly increasing the impact of the route in this area. Although there are only minor changes to the horizontal alignments of the mainline in this area, the height has increased significantly in order to accommodate the junction, (a maximum of 21m over Normanton Brook). The County Council have serious concern about the impact of HS2 in this area, particularly in Huthwaite and Hilcote and Newton.

3.3.31 The landscape character is typical of South Yorkshire, Nottinghamshire and Derbyshire coalfield: coalfield village farmlands (a relatively small-scale and well-settled landscape). The area includes:

- ecological receptors directly affected by the route of a potential Local Wildlife Site at Red Barn Meadows; and
- other ecological considerations include possible habitat connectivity concerns where HS2 crosses former Silverhill Colliery branch line, (an undesignated site which joins a number of other ecological assets to the west). The area also includes a potential Local Wildlife Site at Saw Pit Lane Grassland.

Design considerations

3.3.32 It is recommended that HS2 Ltd should:

- ensure that when crossing open agricultural areas opportunities are taken to minimise visual impacts, integrate the route with the surrounding landscape character and consider long-term agricultural viability.

- consider an alternative solution to the Spur, for example by providing a link between HS2 and the Erewash Valley Line where the lines are adjacent to each other near Toton.

Hardwick and Stainsby (Area F)

3.3.33 The new alignment has minor changes to the horizontal but some changes to the vertical alignment. This is most significant over Mill lane where the vertical alignment has increased by 5m. This increases the impact on the setting of Sutton Scarsdale and Hardwick Hall.

3.3.34 The landscape character is typical of South Yorkshire, Nottinghamshire and Derbyshire Coalfield: estate farmlands. large-scale and open landscape; coalfield village farmlands, (relatively small-scale and well-settled landscape); and wooded farmlands, (small-scale and well wooded landscape). The area includes:

- Hardwick Hall Grade 1 listed building and registered park and garden of special historic;
- Old Hardwick Hall Grade 1 listed building;
- Scheduled monuments at Hardwick Old Hall and Stainsby defended manorial complex including site of chapel;
- Listed buildings Conduit House south of Hardwick Old Hall, gazebo and garden walls at Hardwick Hall, group of six statues in the gardens of Hardwick Hall, range of cottages to the south-west of Hardwick Hall, range of outbuildings and stables, and walls enclosing a courtyard to south of Hardwick Hall, shed to north of engine house and saw mill, joiner's shop to north of saw mill, engine house, saw mill and attached chimney at Hardwick Saw Mill, The Hardwick Inn, stables to the north-west of the Hardwick Inn, Stainsby Mill and The Grange;
- Conservation Areas of Hardstoft, Hardwick and Rowthorne, Astwith and Stainsby;
- Other ecological considerations are Local Wildlife Sites at Ridlocks Wood, Hardwick Hall Park, Great Pond, Row Ponds, Astwith Dumbles, Cross Wood and Oxclose Plantation, Hollingworth Woodland and Stainsby Park; and
- RIGS at Quarry north of The Hurst.

Design considerations

3.3.35 It is recommended that HS2 Ltd should:

- give the very highest level of consideration to the heritage assets around Hardwick;
- recognise that the existing impacts on Hardwick Hall and Park are already considered to be unacceptable;
- seek to address the existing impacts caused by the M1 as well as new impacts caused by HS2;

- give special consideration to issues of setting, noise, visual impact, sequential appreciation and historic approaches;
- recognise that land trapped between the M1 and HS2 could become unmanageable creating an incongruous feature in the landscape and further visual impact; and
- take the opportunity to address habitat connectivity issues in the wider area, particularly where this is complimentary to other aspirations.

3.3.36 It is understood that both Historic England and the National Trust have a strong desire to reduce the impact of HS2 as it passes Hardwick Hall and Bolsover Castle and have major concerns regarding the impact of HS2 on these heritage sites.

3.4 Economic Planning

3.4.1 Plans for the original consultation route have not yet been rescinded. In order to remove the remaining blight and uncertainty it is requested that this route should be formally abandoned at the earliest opportunity.

3.4.2 The January 2014 "Government Consultation on HS2 Response from Derbyshire Local Authorities" discussed the economic impact of the proposals in detail, outlining some of the opportunities and concerns. More recently the East Midlands HS2 Strategic Board has recognised the economic potential of the proposed Infrastructure Maintenance Depot (IMD) at Staveley and the significant additional benefits of serving Chesterfield with classic compatible services (see *East Midlands HS2 Growth Strategy - Emerging Strategy: Fast Track to Growth 30 September 2016*).

3.4.3 The report recognises that:

- HS2 is a once in a generation opportunity for the communities and businesses in the East Midlands;
- HS2 will transform connectivity between East Midlands' local economies and those of the West Midlands, the North of England and Scotland, as well as with London and the South East. The HS2 Hub Station at Toton near Nottingham will be the most connected station on the high speed network outside of London;
- the Maintenance Depot at Staveley and the recent proposals for serve Chesterfield with high speed trains will have a transformational impact on the Derbyshire economy.
- the Maintenance Depot at Staveley and the recent proposals for serve Chesterfield with high speed trains will have a transformational impact on the Derbyshire economy.

<u>Chesterfield Canal</u>

3.4.4 The impact on the Chesterfield Canal is much reduced but the current plans still show severance at Staveley and in Norwood South Yorkshire where a bridge will be

required. We understand that HS2 intend to resolve these issues at detailed design in order to safeguard the opportunities the canal will bring when linked in water. The canal is discussed in detail in section 6.4.

Coalite Development site.

3.4.5 The route crosses areas identified for housing development at the Coalite site. These proposals may affect the viability of the development as it sterilises some of the greenfield area (see Coalite planning application dated 21 February 2014 drawing in Appendix F Coalite is a key growth ambition and integral to SCR and D2N2 LEP plans for improving the regional economy and closing the Gross Value Added (GVA) gap. It is understood that the developer has had direct discussions with HS2 Ltd.

3.4.6 The potential impact of the refined route on the Coalite development site is a key concern. Derbyshire County Council has been working for some time now with Bolsover District Council and North East Derbyshire District Council (NEDDC) to deliver a key strategic housing and employment development on the site. Bolsover District Council has recently published its Bolsover Consultation Draft Local Plan (October 2016) which identifies the Coalite site as a Strategic Allocation Site (Policy SS7), which will accommodate approximately 660 dwellings; 70,000 sq m of employment land; a transport hub; energy centre; visitor centre; local centre; and land for the provision of a new primary school. In February 2015, North East Derbyshire District Council published its North East Derbyshire Local Plan (Part 1): Initial Draft, which identified the Coalite Regeneration Area to be safeguarded for future strategic development needs. The NEDDC Draft Local Plan is likely to confirm the strategic allocation at Coalite. Outline planning permission has been granted for the Bolsover District part of the site in December 2015 (Application Ref: 14/00089/OUTEA) and a decision to approve the outline application was taken by NEDDC for their part of the site in April 2016 (Application Ref: 14/00145/OL) subject to conditions and the completion of a Section 106 Agreement.

3.4.7 The Refined Route would now pass through the eastern part of the Coalite site, which has been identified through the planning application process as accommodating the first phase of new housing development. This is because this part of the site is the only greenfield part of the site and would be the most viable to develop early in the development of the whole site. Its early delivery is seen as crucial to kick starting the wider regeneration of the whole mixed-use housing and employment site. The site is heavily contaminated and Derbyshire County Council has recently committed £3 million of funding towards the remediation of the site. It is of significant concern, therefore, that the new route could potentially sterilise part of the site earmarked for the first phase of housing and impact adversely on the delivery and viability of the whole regeneration of the site.

Mc Arthur Glen Designer Outlet

3.4.8 The route runs close to the Mc Arthur Glen Designer Outlet and crosses adjacent land held for possible expansion. The revised plans make a minor adjustment to the route in this area; the implications of this are currently being investigated.

3.5 Strategic Planning

3.5.1 The local authorities have co-operated to work together through the East Midland HS2 Growth Strategy Officer Group to investigate the opportunities and requirements needed in order to maximise the benefits of HS2. The group reports to the East Midlands Strategic Board and a number of studies have been commissioned to support the development of a growth strategy.

3.5.2 The HS2 Growth Strategy Report, September 2016, for example, identified four key economic impacts to focus on to deliver job and GVA growth across the study area at a rate above, rather than below, the UK trend:

- Productivity & Direct employment
- Catalytic job growth.
- Indirect capacity improvements.
- Procurement and supply chain.

3.5.3 A Delivery Board was set up to promote development associated with the IMD. It comprises elected members from the local authorities and representatives of business and colleges that have an interest in the site. Its brief has been expanded to consider more broadly at the context of how the depot and HS2 trains stopping at Chesterfield would affect the town and the wider region.

3.5.4 Officers, in conjunction with Chesterfield BC, are currently developing an outline growth strategy for Chesterfield and wider areas of central and north Derbyshire and north Nottinghamshire using funding secured by the D2N2 LEP.

3.5.5 To maximise the benefits to the wider community, there needs to be good transport links to HS2 stations, including links from Chesterfield to Bolsover and other communities in north and central Derbyshire.

Nottingham Express Transit (NET).

3.5.6 The Strategic Board has commissioned reports to inform the strategic planning for the East Midlands Hub Station, including an assessment of the potential for extending the Nottingham tram service into Derbyshire. The report Final Net Extensions Report May 2016 (NET) confirms the engineering feasibility of a number of route options.

Skills and Training

3.5.7 The Growth Strategy Report includes a section on Skills that identified five key priorities:

- Inspiring our young people;
- Building Further Education (FE) capacity;
- Harnessing the power of our Universities;
- Support for individuals; and
- Ensuring our businesses are 'HS2 Ready'

3.5.8 In order for the local population to take advantage of the new job opportunities the local workforce will need training in advance of construction, currently planned around 2025. There will also be a need for professionals in the pre-build phase, CPO and land purchase.

3.5.9 The East Midlands sits at the heart of the UK rail industry and is uniquely placed to provide the skilled workforce to both develop the rail infrastructure and to provide the trains that will run on it. Further work will be undertaken as part of the full Growth Strategy for submission in 2017.

3.5.10 There is a significant opportunity for the East Midlands to capitalise on the investment in HS2 during construction. HS2 Ltd is asked to support this growth strategy when progressing through design and construction.

3.6 Highways and Transport

3.6.1 The new alignment has been reviewed and the current proposals present similar concerns to those raised in response to the 2013 consultation.

3.6.2 The County Council assumes that all highway crossings will be kept open. Nevertheless concerns remain regarding the impact on highway network and how roads will be re-instated or replaced. The disruption to the local highway network has the potential not just car traffic, but also public transport, school transport, delivery vehicles, cyclists and buses. There are potential cost implications associated with temporary or permanent road closures and the County Council, other organisations and individuals should not be financially disadvantaged by the scheme

3.6.3 There is potential for significant disruption during construction and this is of concern to the Authority and the residents of Derbyshire. The County Council would wish to work closely with HS2 Ltd to mitigate the adverse effects of construction and construction traffic. The position will need to be reviewed when further details are available of:

- Potential routes for construction traffic. There will need to be significant investment in signing and infrastructure for construction traffic routes;
- Traffic generation in relation to the construction of HS2.

3.6.4 The officer group is concerned to improve connectivity to the proposed Hub Station. A priority is to resolve current uncertainty over trunk road access to the station. Further details are required from HS2 to facilitate more detailed work on local connectivity.

3.7 Classic rail

3.7.1 There are no significant issues in principle with the new route as it gives a much better HS2 availability southbound for North Derbyshire residents. A detailed discussion on the impact on classic rail is included in Appendix G and also discussed in 5.7 and 6.8.

3.7.2 Derbyshire County Council supports in principle the proposed HS2 to Sheffield via Chesterfield. The Council is keen to see more trains stopping in Chesterfield but there are significant adverse impacts to both communities and landscape from the new HS2 spur to join the Erewash Valley Line near Hilcote and Newton. The Council would also welcome improved connection to the north from Sheffield provided that there is no loss of service on other routes.

3.7.3 The East Midlands Strategic Board commissioned a *Classic Compatible Study Draft Report (Network Rail)* in relation to Toton Hub Station. This draft report considers the economic benefits of a 'classic compatible' link to the Hub Station. The report suggests that:

- There are clear economic benefits for classic compatible services serving Derby, Leicester and Nottingham that could justify the capital costs of the necessary infrastructure;
- The best economic results are for services linking the Midland Main Line with Manchester via the proposed 'Northern Powerhouse Rail', and for linking the Thames Valley and Leeds via the Midland Main Line and the proposed 'East-West Rail'.

3.7.4 The report identifies a major benefit will be capacity released by HS2 from the classic rail network that can be used to deliver improved and additional services. This will not apply to those sections required for classic compatible trains on the Midland Main Line and Erewash Valley Line.

3.7.5 There is concern about the timescales for electrification of the Midland Main Line. Network Rail is not currently committed to this provision This is a fundamental element of the current strategy and clarification of the position is requested at the earliest opportunity.

4 LONG EATON AND TRENT VALLEY

4.1 Overview

4.1.1 In responding to the original consultation the County Council expressed serious concern about the impact of HS2 in Long Eaton, in particular the potential severance at Station Street and Main Street. The consultation presents two different engineering solutions and both present significant impacts on the town.

4.1.2 There was a very high turnout at the Information Event at Long Eaton 28 January 2017 with local concerns about both the high and low level options under consultation, discussed under landscape Area B (from 4.3.6).

4.2 Engineering

4.2.1 HS2 are consulting on two different engineering solutions to address severance at Long Eaton, both on the same footprint but at different elevations.

4.2.2 The 'High Level' option is based on a continuation of the viaduct that takes the high speed line across the River Trent floodplain and the existing railways links at Trent Junction. The elevated route would pass over the existing local roads and the main A6005 Nottingham Road. As such it would address the severance issues although it would be a very prominent feature in the townscape fundamentally altering the whole character of the Bonsall Street area.

4.2.3 The alternative lower route would also have a very significant impact. The retained structure would be a major physical barrier through the town and would result in the closure of Station Street. If this option is used, an alternative route would be provided under the existing track. A solution for this was presented at the information event 28 January 2017. There is therefore less concern about the potential severance but additional engineering issues for this option include:

- Extent of demolition;
- Extent of highway realignment;
- Construction of underpasses in a flood risk area; and
- Disruption during construction.

4.2.4 Based on the evidence available at the time of writing it would appear that, on balance, and with careful design the high level option may be the preferable option. The significance of the impact of HS2 on Long Eaton should not be under-estimated and it is recommended that in consultation with HS2 Ltd and Erewash BC a comprehensive and creative approach should be adopted that seeks to effectively integrate the new line into the urban fabric.

4.2.5 The following table lists the published HS2 drawings for this section with a summary of observations.

C321-MMD-RT-DPP-110-580903	High and low level options have the same horizontal alignment. Increased elevation throughout max of 17.2m, bridge over A6005, no severance to Main street, extensive realignment to existing railway at Trent Junction. Proposed track runs adjacent to existing lines and safeguarded area includes Trent Cottages and properties on Bonsall Street and New Tythe Street Lengths of track realignment required at Trent Junction are expected to be within existing rail corridor.
C321-MMD-RT-DEL-110-580903	<u>High level</u>: 4700m viaduct continues from Trent floodplain and crosses all roads/track-maximum 17m at Station Street (plus electrification poles). <u>Low Level</u> 2470m viaduct continues from Trent floodplain and crosses Main Road at 8.8m. Station Street is stopped up but option presented at the information event on 28 January 2017 showed alternative layout replacing the link with underpass at least 6.8m under the existing line. The model indicated an extensive realignment of the local highway and associated demolition. 6.8m underpass possible for realigned A6005.
C321-MMD-RT-DPL-170-5821201	High and low level options have same alignment with the platforms located approximately 150m further south. Extensive track realignment throughout and within the existing rail corridor. Implied access from A52 unchanged from 2013. Changes in the level of the HS2 platforms, similar alignment, railway alignment throughout platforms 5m higher and 100m further south
C321-MMD-RT-DEL-170-581201	High and Low level options <u>High level</u>: 4700m viaduct ends north of the platforms. (between 12.3 and 1.5m high) <u>Low Level</u> HS2 platforms 3.6m lower
C321-MMD-RT-DPP-170-5821202	Alignment further west, extensive track realignment, some increased elevation from chainage 3,800. Viaduct now 2660m over River Erewash floodplain, Erewash Canal and railway, (was 760m).
C321-MMD-RT-DPP-120-581301	Viaduct over River Erewash floodplain extends back into Nottinghamshire. Same horizontal alignment, changes in vertical alignment max 1m difference
C321-MMD-RT-DPP-120-581302 (NCC)	*(Nottinghamshire)* *Same horizontal alignment, changes in vertical alignment max 4m difference*

C321-MMD-RT-DPP-120-581303 (NCC)	*Nottinghamshire) Same horizontal alignment, changes in vertical alignment max 9m, 132kv overhead power cable crossing vertically at chainage 16,450*

4.3 Environmental

4.3.1 Trent Valley, Long Eaton and Sandiacre were identified as landscape areas A to C in the previous response. The response has been updated and a copy of the original plan is provided in Appendix A for reference.

4.3.2 The route will inevitably have a major impact on the town of Long Eaton with either the high or low level options presented by HS2. The original landscape area B, updated below. The significance of the impact of HS2 on Long Eaton should not be under-estimated.

Trent Valley (Area A)

4.3.3 The approach to Long Eaton across this valley is on two long viaducts now takes a significantly different path. The further development of HS2 in this area should respond to the objectives of Trent Valley Vision being developed and promoted by the Lowland Derbyshire and Nottinghamshire Local Nature Partnership (LDN LNP).

4.3.4 The County Council remains concerned that HS2 Ltd may have low aspirations for this area. Proposals in this area should aim to contribute to, rather than detract from, high quality landscapes, and the viaducts therefore need to be carefully designed. The landscape character mainly comprises Trent Valley Washlands: riverside meadows – landscape associated with the river with a lack of built development and infrastructure other than the occasional river crossing. The area includes:

- listed buildings at Cranfleet lock and canal bridge;
- ecological receptors directly affected by the route: Meadow Lane Carr Local Wildlife Site, Cranfleet Farm flood banks planned Local Wildlife Site;
- other ecological considerations: The River Trent, along with established wetlands (including many old mineral workings) along the Trent Valley hold significant ecological value; HS2 will cross over post extractive wetlands. Forbes Hole Local Nature Reserve and Local Wildlife Site are in close proximity to route;
- conflicts with Trent and Mersey Canal and Trent Valley Way; and
- Trent Valley Vision and Strategy1.

[1] The Trent Valley Vision (TVV) is a priority project for the Lowland Derbyshire and Nottinghamshire Local Nature Partnership (LDN LNP) aimed at delivering high quality GI across the entire Trent Valley within Derbyshire and Nottinghamshire. Any development within the area defined by the TVV will be expected to contribute towards and assist in delivering the vision in accordance with the emerging Strategy.

Design considerations

4.3.5 It is considered that HS2 Ltd should:

- respond to the identified landscape and visual effects of crossing the Trent Valley; and
- ensure that the delivery of HS2 in this area respects the existing and future value of this area and seeks to deliver the objectives of the Trent Valley Vision being promoted by the Lowland Derbyshire and Nottinghamshire Local Nature Partnership (LDN LNP).

Long Eaton (Area B)

4.3.6 In a change from the original 2013 proposals, the 'low level' freight line will be retained and high speed lines will run adjacent to it immediately to the east. This will require substantial demolition in the Bonsall Street/New Tythe Street area. The route refinement proposals envisage the route being taken through Long Eaton on a long viaduct at least 16m above ground level. The alternative option for a lower level route will also be some 3m-8m above ground level, in this case on a retained embankment (ie with solid vertical walls).

4.3.7 The design through Long Eaton will need to respond to the identified impacts on townscape character, adjacent land uses and any proposals that may emerge for redevelopment in the area. As well as the direct impacts of HS2 there may be additional impacts associated with the support infrastructure required to connect the proposed station at Toton to the wider area. The impact of this and associated development will also need to be carefully considered.

4.3.8 The landscape character is a predominantly urban area including:

- a Conservation Area in Long Eaton Town Centre;
- listed buildings at 38 and 40 Market Place, War memorial, Church of St Laurence and St James, the Hall, Halifax Building Society, Midland Bank and J and H Lacey Warehouse;
- ecological receptors directly affected by the route at Nottingham Road Carr Local Wildlife Site; and
- other ecological considerations include Local Wildlife Sites at Toton Sidings Pond and River Erewash Floodplain, and Toton Fields Local Nature Reserve, (all in close proximity to route).

Design considerations

4.3.9 It is recommended that HS2 Ltd should:

- ensure that design, including embankments and retaining structures, responds to the identified impacts on townscape character and adjacent land uses;

- recognise the indirect impacts of the support infrastructure required to connect the Toton Station into the wider area and ensure that appropriate design solutions are implemented;
- consult with Borough and County Council officers in seeking design solutions for the embankment/viaduct and highway; and
- give careful consideration to the impact on the Erewash Valley north of Long Eaton to ensure the area retains its character and negative impacts are reduced or mitigated.
- based on the evidence available at the time of writing it would appear that, on balance, and with careful design the high level option may be the preferable option.

Sandiacre and Stanton Gate (Area C)

4.3.10 The latest proposals include a much longer length of the viaduct over the River Erewash floodplain existing railway and Erewash Canal. This has increased from 780m and is now 2660m and does address some of the previous concerns with embankments in the floodplain. Concern remains for the visual and ecological impact on the local area.

4.3.11 The landscape character is typical of South Yorkshire, Nottinghamshire and Derbyshire coalfield: coalfield village farmlands. This comprises relatively small-scale and well-settled landscape; riverside meadows; landscape associated with the river with a lack of built development and infrastructure other than the occasional river crossing. The area includes:

- a conservation area at Sandiacre Cloudside;
- listed buildings at Church of St Giles and canal bridge on Erewash Canal;
- ecological receptors directly affected by the route are Erewash Canal Local Wildlife Site crossed twice by HS2, whilst Sandiacre Marsh Local Wildlife Site is crossed once by the route. Furthermore, a significant amount of embankment seems to be located within Ilkeston Road Pastures planned Local Wildlife Site, and the route lies in very close proximity to Stanton Gate Local Nature Reserve. West Hallam Towpath Scrub Local Wildlife Site, Erewash Canal Local Wildlife Site and Stanton Regeneration Site planned Local Wildlife Site are all affected by the proposed realignment of the M1;
- other ecological considerations include sites along this stretch of the route (along the Erewash Valley) are known to support species such as water vole and grass snake; and
- amenities of Erewash Canal and the Nutbrook Trail, the towpath is a Public Right of Way and the waterway is integral to the quality of the path.

Design considerations

4.3.12 It is recommended that HS2 Ltd should:

- ensure that the viaduct design responds to the identified impacts on the landscape, ecology and visual amenity of the Erewash Valley; and
- In developing detailed proposals consult Borough and Council design and conservation officers.

4.4 Economic Planning

4.4.1 Refer to section 3.4 for details.

4.5 Strategic Planning

4.5.1 Refer to section 3.5 for details.

4.6 Highways and Transport

4.6.1 The new alignment has been reviewed and the current proposals present some different concerns to those raised in 2014.

4.6.2 Some of the concerns about the potential severance in Long Eaton have been addressed as the high level option would leave the existing street pattern unchanged and an alternative route will be provided on the low level option to mitigate the severance of Station Road. Severance is also discussed in section 4.2.1. The indicative solution shown at the Information Event involved extensive realignment of the local highway network and two deep underpasses crossing the existing track. This could adversely affect pedestrians who would have a longer and less attractive route to and from the town centre. There is concern regarding the extensive demolition and disruption during construction of this option and also the suitability of underpasses within the flood plain. The high level route does not cause any severance but will be a huge and imposing structure across the Town.

4.6.3 Concern for disruption during construction is discussed in section 3.6.3.

4.6.4 The Strategic Board is seeking to develop local access to the proposed station at Toton. In particular, there is concern to ensure that communities in the Long Eaton area, who may suffer from the adverse effects of the schemes as it passes through the town, should be afforded convenient access to the new station. This will need to be done in such a way that it does not add to the already severe parking and congestion problems in Long Eaton. It is considered, for example, that any access to the station should be limited to, say, buses, taxis, cyclists and pedestrians and that there should be no access to the main car park through the town. Further progress on this work is limited by uncertainty over the main A52 access to the site and the County Council would wish to see this resolved as a matter of urgency.

4.7 Classic rail

4.7.1 Refer to section 3.7 for details.

5 HILCOTE – CLAY CROSS LINK

5.1 Overview

5.1.1 This spur did not form any part of the 2013 consultation proposals and the concept of providing a link to the classic rail network in this area has only emerged in recent months. Whilst the spur will be used by fewer trains than the main route and much of the route would be in a cutting there is understandable concern in the local area about the noise and visual effects of the scheme, the disturbance during construction and the general loss of amenity in this residential area.

5.1.2 Some of the areas of concern in this area include:

- the impact of the scheme on the Mc Arthur Glen Designer Outlet and plans for its future expansion;
- a grade separated (flyover) junction immediately north of the A38 to the east of Hilcote significantly increasing the impact of the route in this area;
- The proximity of the spur to residential properties, notably in Newton, Hilcote and Blackwell;
- the implications of 'classic compatible' trains joining the existing rail network in the Clay Cross area, particularly in terms of capacity and any additional engineering works that may be required.

5.1.3 Under these proposals there will not be a station on the main line of HS2 within Sheffield City and instead the existing Sheffield Midland station would be served by 'classic compatible' trains. To allow this a new spur is proposed from the main high speed line to the Erewash Valley Line. The County Council's understanding is that 400m trains to/from London would split into two 200m trains at the Hub Station at Toton with one 'half' continuing on to the Erewash Valley Line and the Midland Main Line to Chesterfield and Sheffield. The current assumption is that two London trains per hour in each direction would use this route of which one would call at Chesterfield. There is also the potential for trains to/from Birmingham to use this route if the 'loop' was provided north of Sheffield to improve links to Leeds. Classic compatible' trains can only operate on electrified lines and electrification of the Midland Main Line is therefore a pre-requisite of this strategy. There is currently some uncertainty about the electrification programme and the County Council requests early clarification of the position.

5.1.4 Despite the concerns, it is recognised that a high speed rail service to Chesterfield could have transformational benefits. The journey time to London could be significantly reduced to around 71 minutes with the prospect, in the longer term, of significant reductions in the journey time to places such as Birmingham, Leeds and Newcastle. Chesterfield already benefits from good inter-regional rail links and the addition of high speed rail services would reinforce its position as an important node on the national rail network.

5.2 Engineering

5.2.1 There is no expected impact on overhead powerlines on the new link and all other services are expected to be diverted as necessary.

5.2.2 The following table lists the published HS2 drawings for this section with a summary of observations.

C321-MMD-RT-DPP-165-581501	• Completely new classic compatible link. • Crosses Normanton Brook on 15m high viaduct. • New Lane (B6406) hasn't got enough clearance for a bridge over HS2. Alignment of road/rail to be changed. • Under M1 in 12.6m deep tunnel with 6.3 and 7.7m cuttings either side. • Two new bridges needed on (B6026); one on Huthwaite Lane and the other on Cragg Lane over HS2 • HS2 crosses two watercourses between Alfreton Road and Alfreton Road (B6025), that need culverting. • 18.5m embankment past Banks Farm. • Possible impacts on Silverhill Trail. • Alfreton Road (B6025) to have a bridge over HS2 • 8.4m cutting on approach to existing line.
C321-MMD-RT-DPP-165-581502	• New bridges over HS2 at Doe Hill Lane (B6014) and Pilsley Road. • Extent of widening/replacement bridges needed for 'realignments' and electrification clearances is unclear. • No details of proposals beyond tie in with existing track.

5.3 Environmental

5.3.1 This section of the route was not included in the original proposals and therefore has new impacts to the local environment. It is identified in the new landscape Section 7; see Appendix A for the plan.

5.3.2 The County Council has serious concerns about the impact of the spur in the Hilcote, Newton and Blackwell area and there is significant local opposition. Could an alternative connection to the Erewash Valley Line be made at Toton? The Government and HS2 Ltd are asked to consider alternative means of meeting their strategic aim of serving Sheffield Midland by diverting trains on to the Erewash Valley Line and Midland Main Lines, including consideration of the potential for providing a link between HS2 and the Erewash Valley line at Toton.

5.3.3 The County Council does not have access to the information, nor the resources, to understand the full implications of linking to the Erewash Valley Line at Toton instead of via the proposed Hilcote - Clay Cross link. It would appear to have some significant benefits including removing the adverse impact on the

Hilcote/Newton/Blackwell area, reducing the capital cost of constructing the spur and. by electrification of the Erewash Valley line, offering some wider benefits for the local rail network. HS2 Ltd is therefore requested to produce and make available a report comparing the relative costs and benefits of the 'Hilcote', 'Toton' , and any other potential options, in terms of:

- Capital and operating costs
- Environmental impact
- Engineering feasibility
- Journey times
- Impact on existing rail services
- Opportunities and impact of electrifying the Erewash Valley line
- Disruption during construction

Landscape and Visual Assessment

5.3.4 The Chesterfield spur, runs through the Coalfield Village Farmlands landscape character type; a well settled small scale landscape of scattered villages, mixed pastoral farming and small woodlands. In this context it is clear that the more wooded landscapes provide greater scope for landscape mitigation and integration.

5.3.5 This spur aims to take advantage of the former Clowne branch line. However, in this section, the previous branch line is much less well defined with parts having been restored and incorporated into the surrounding agricultural landscape. The suggestion is that the majority of this section will be in cutting as it crosses the B6406 near Hilcote (1.0m), the M1 Motorway (9.0m), Cragg Lane near Newton (7.0m), and the B6025 near Tibshelf (10.0m), which will assist to some extent in screening views of the route. It will, however, pass very close to these communities and some properties will be directly affected by the proposal. There will be some direct impact on Doe Hill Country Park, a restored former open cast coal site. Careful landscaping will be needed to incorporate the HS2 route and retain some of the local interest in the site.

Ecological Assessment

5.3.6 The Chesterfield spur might pose ecological sensitivities, passing through three potential Local Wildlife Sites and one designated Local Wildlife Site, for a distance of approximately 1.2km before it reaches the existing railway line. By far the largest section of site affected in this stretch is within Doe Hill Community Park (potential Local Wildlife Site), where the site will be bisected by the route which runs through it for nearly 900m. The only designated site in this section - Newton Disused Railway Local Wildlife Site – is a long, linear site only around 35m wide at the point it will be crossed by the Chesterfield spur line.

Heritage Assessment

5.3.7 There are no major issues with known heritage features on the spur. There may be other as yet unidentified archaeological sites which should be identified and assessed during the normal evaluation process.

Greenways and Public Rights of Way

5.3.8 HS2 is asked to liaise with the Local Authorities in order to ensure public access is retained both during and after construction:

- Route section reference HSL 15A has impacts on public footpaths and Bridleways affecting South Normanton, Blackwell, Tibshelf , Morton Pinxton and Pilsley. See details in Appendix E

5.3.9 Where the route follows existing railway track it is expected that crossings will be upgraded where necessary.

5.4 Economic Planning

5.4.1 The current proposals to run classic compatible trains to Chesterfield present a huge potential for business and tourism. The County Council is working closely with District and Borough Councils to develop a growth strategy that will seek to maximise the economic benefit of HS2 locally, for North Derbyshire and Nottinghamshire. The proposals for an infrastructure maintenance depot at Staveley also offers the prospect of new job opportunities and a boost to the local economy. This work is being overseen by the Chesterfield and Staveley Delivery Board which reports to the East Midlands HS2 Strategic Board.

5.4.2 To cater for the increased demand access to Chesterfield station will need to be improved for both public and private transport. Expansion of the station may be required to increase capacity and improve the user experience.

5.4.3 There is currently a bus stop, taxi rank and parking facilities at the station, but the provision is inadequate to meet the potential future demand. The Waterside development to the north of the station has the potential to improve the experience but although it is close to the station there is no direct or convenient link between the two. Chesterfield masterplan is being developed and includes ambitious proposals for development in the area. This will need to be updated and revised in the light of the emerging proposals for HS2.

5.4.4 For Chesterfield to become a hub for tourists, (to the Peak District, Chatsworth Estate, Peak Resort etc), dedicated bus and coach services may be needed which will require appropriate provision.

Chesterfield Development Plans

5.4.5 On 12h January 2017, Chesterfield Borough Council published its Chesterfield Local Plan Consultation Draft, which identifies the Chesterfield Waterside site as a key regeneration priority site to accommodate up to 1550 houses, 30,000 sq m of new office space and a new canal basin. The proposals for the Sheffield Spur, with trains stopping at Chesterfield Station are likely to have a significant positive impact in boosting the local economy of Chesterfield and increasing the likelihood of the deliverability and marketability of these two key regeneration sites. The Sheffield Spur will it make quicker for residents of Chesterfield to travel to London and other major cities. This is likely to open up employment options further afield for residents in the Chesterfield area and also provide a boost for business start-ups/re-location in the area.

5.4.6 Peak Resort in Chesterfield & NE Derbyshire is under construction will potentially become a destination for cyclists and will be in a position to benefit from increased traffic to Chesterfield station. Improved public transport and cycle links will help to promote these opportunities.

Clay Cross regeneration

5.4.7 Extensive regeneration is currently under way in Clay Cross. Although not directly affected, the area will benefit from improved connectivity and access to HS2.

5.4.8 Planning permission exists for a major strategic mixed-use housing and employment development on the former Biwaters site in Clay Cross with the developer currently preparing a revised planning application for over 900 dwellings and a large area of employment land on the site. Proposals for an “energy from waste” recycling plant have also recently been granted permission by the County Council at Bridge Street in Clay Cross. Again, wider regeneration proposals for Clay Cross could be significantly boosted by improved connectivity and access to HS2.

Other regeneration

5.4.9 There are planning proposals at the Avenue site at Wingerworth where over 1000 new homes are planned together with a new primary school, employment land and a district centre. Again, the regeneration proposals at the Avenue site are likely to benefit positively from improved connectivity to HS2 via Chesterfield railway station.

5.4.10 Chatsworth House is continuing development as a key international tourist destination.

5.5 Strategic Planning

5.5.1 Strategic planning is covered in section 3.5. There are, however, some uncertainties that will need to be addressed as the growth strategy is developed. These include consideration of potential demand for high speed services from Chesterfield, the inter-relationship between demand and the level of service

provided, and the type and scale of development that could be attracted both in the immediate vicinity of the station and in the wider area.

Clay Cross

5.5.2 HS2 Ltd is asked to take into account outline proposals for a new station on the Erewash Valley Line to serve Clay Cross. Further work is needed to assess its viability and to identify a suitable site.

Electrification.

5.5.3 Electrification of the railway lines south of Chesterfield could help support the development of local rail services. A short section of the Erewash Valley Line will be electrified with the new link but if the whole length to Trent Junction at Long Eaton could be electrified there could be considerable benefits for local rail services. It would, for example, help to facilitate electric train services in the Leicester-Toton-Chesterfield-Sheffield and the Nottingham-Toton-Chesterfield-Sheffield corridors as well as providing a diversionary route for the Midland Main Line.

5.5.4 If the electrification is not complete when HS2 Ltd starts operations, the service to Sheffield could not start. There could also be significant opportunities for classic services if electrified services could operate on the whole of the Erewash Valley Line. The County Council propose that the whole length is electrified from Nottingham-Sheffield.

5.5.5 In the longer term access to Chesterfield station could be improved with electrification of the Barrow Hill line north east of the town. This would open up the potential for running trams or stopping trains on this line and possibly creating a park and ride site near the Staveley Depot.

5.6 Highways and Transport

5.6.1 In addition to the general concerns noted in 3.6 the proposals for the Hilcote - Clay Cross link and the associated 'classic compatible' services to Chesterfield raise issues and opportunities for the local highway network. Derbyshire County Council and Chesterfield Borough Council are developing a connectivity plan for Chesterfield that will consider options for improving access to the station by all modes, better links to the town centre and funding opportunities. There are however, some significant uncertainties particularly forecasting potential demand and the impact of generated traffic on the local road network. Support and advice from HS2 Ltd will be needed if meaningful plans are to be developed.

5.7 Classic rail

5.7.1 A detailed discussion on the impact on classic rail is included in Appendix G

5.7.2 The impact of the new Hilcote-Clay Cross link and the potential 'loop' north of Sheffield on the existing rail network needs to be considered. The County Council

would not want to see the introduction of classic compatible train services at the expense of existing train services. It would be particularly concerned if some 'classic compatible' train services ran through, but did not stop at Chesterfield.

5.7.3 At present it is not clear whether HS2 services using the line would result in changes to existing local and long distance services. In particular, the extent to which they could replace or supplement existing London, Birmingham and Sheffield (and potentially Leeds) bound services (currently at least two an hour to most destinations). Further work on the capacity of the line may be required to ensure both good HS2 and local services are maintained.

5.7.4 Capacity of Chesterfield Station needs to be reviewed to ensure that it offers the capacity and facilities commensurate with its role as a high speed rail station. It is a modern station with reasonable concourse space but limited facilities for passengers and visitors. The existing subway between platforms is narrow, particularly for services at peak times. A third platform is already in place, and is currently under-used.

5.7.5 Plans for electrification are discussed in section 5.5.3.

5.7.6 A concern is that the improvements to the existing line including electrification will be needed to make sure the connection is available from the start. There will also be significant disruption during construction.

5.7.7 The Erewash Valley Line was originally 4 tracks between Toton and Pye Bridge and this could be reinstated if additional capacity is needed as the formation is still intact.

5.7.8 Further consideration needs to be given to the capacity on the Midland Main Line through Chesterfield if the 'loop' north of Sheffield is completed and Birmingham-Leeds HS2 services are diverted via Sheffield.

6 STAVELEY IMD AND LINK

6.1 Overview

6.1.1 The new route means that the link to the proposed depot at Staveley now follows a longer and less direct route along the former Clowne branch line. This will be used by maintenance trains so, unlike the main route, it will not be used on a continuous basis, trains will be running at a slow speed and the line will not need to be electrified. There could be some disturbance at night, however as maintenance will generally take place when the high speed line is not in use.

6.1.2 The revised plans indicate a footprint for the depot that will facilitate the provision of the A619 Regeneration Route that is critical to the redevelopment of this brownfield site. The M18/Eastern Route that is now proposed significantly reduces the impact on plans for the restoration of the Chesterfield Canal, although the plans still show severance of the route at Staveley and Norwood in South Yorkshire. HS2 Ltd is aware of these problems and it is understood that these matters will be addressed as further design work is undertaken.

6.1.3 Initial concerns regarding the accuracy and details of the planned route north of M1 junction 29, and in particular around Staveley were raised in 2016 by Derbyshire County Council.

6.2 Engineering;

6.2.1 There is no expected impact on overhead powerlines and all other services are expected to be diverted as necessary.

6.2.2 The following table lists the published HS2 drawings for this section with a summary of observations.

C321-MMD-RT-DPP-190-581301	• Completely new alignment for link to IMD. • Increased width of HS2 on merge length both sides of Junction 30 • Mostly in cutting between 11.3 and 20.4m deep • 11.4m embankment past Valley View (Robinsons Lumb) • 15.2m embankment north of Sheffield Road
C321-MMD-RT-DPP-190-581302	• Alignment follows old Clowne branch line. • Unclear extent of widening/replacement bridges needed or any realignment. • Seymour link road - opened to public use on 8 November 2016, but not identified on plan. • Impact on Markham Vale development plots • Proposed greenways along the line will be lost. • HS2 crosses Doe Lea flood plain on 5.8m embankment, much higher than the existing track level • Impact on residential properties in Staveley needs to be confirmed.

C321-MMD-RT-DPP-190-581303	• Alignment follows old Clowne branch line. • Realignment of A619 - presume to increase bridge clearance • HS2 does not use existing ground levels • B6053 Incorrect bridge level • Levels clash with water level of Chesterfield canal - currently under construction. • Unclear levels and access into IMD site. • Impact on listed building and Barrow Hill line.

6.2.3 HS2 Ltd was advised of engineering concerns following the initial publication of this route published in July 2016. The link does not use the same levels as the existing line resulting in the need for a viaduct over River Rother and Hall Lane.

6.2.4 The flood level for the River Doe Lea during the 100 year rainfall event is 51.4m, (as advised by the Environment Agency), 150 years estimated at approx. 51.5m. The IMD link rail track level is shown at 56.5m across the Doe Lea floodplain with 5m embankment slopes. This height appears excessive and may require substantial engineering if the current rail bed is to be widened as the whole of the wash land has been heavily silted up in the river corridor due to the impacts of deep mining subsidence or original ground levels.

6.2.5 The proposal to lower the track level into deeper cutting as the route passes through Staveley may not be required as realignment of the A619 is also proposed. Lowgates bridge was re-decked some years ago by Network Rail and headroom is now recorded at 4.528 metres.

6.2.6 The track could be raised to better clear the Chesterfield Canal as the actual road level at Eckington Road bridge is 64.8m with bridge soffit level at 63.42 at its lowest, see the plan in Appendix H . The alternative need to change the canal water level would be very difficult.

6.2.7 In respect of Hall Lane, the existing rail track currently passes beneath Hall Lane which may have insufficient headroom. It is not clear why there is reference to a raised viaduct at this location. Raising the line will put it in conflict with Hall lane which is likely to require re-alignment too. The rail overbridge bridge at Works Road needs lifting to increase vehicular headroom beneath its span.

6.3 Environmental

6.3.1 The revised alignment for the Staveley IMD connection is less disruptive than the 2013 consultation but there are significant issues with the details published 7 July 2016. It is identified in the new landscape Section 4; see Appendix A for the plan. Clashes with the Chesterfield Canal are discussed in section 6.4.

Landscape and Visual Assessment

6.3.2 The Staveley spur runs through booth urban areas and Derbyshire Coalfield: Estate Farmlands landscape character type. It will make use of an existing former branch line. Although there may be some opening up of views as a result of requisite vegetation clearance, it is not anticipated that there will be any other direct landscape impacts associated with this section.

Ecology

6.3.3 Whilst the Staveley IMD connection passes in close proximity to/ in between four planned Local Wildlife Site and two Local Wildlife Site, it is assumed that as the route follows an existing rail corridor (which lies outside of the designated sites), impacts on those sites will be limited.

Heritage Assessment

6.3.4 There is no major issue with known heritage features on the spur.

6.3.5 There may be other as yet unidentified archaeological sites which should be identified and assessed during the normal evaluation process.

Greenways and Public Rights of Way

6.3.6 HS2 is asked to liaise with the Local Authorities in order to ensure public access is retained both during and after construction. The new link identified as Staveley Depot Link has impacts on public rights of way in Barlborough, Staveley and Old Bolsover. See details in Appendix E

6.3.7 Proposed greenways along the track will be well established in 3 to 5 years' time and will require diversion when HS2 is constructed. An alternate alignment could be either from a location immediately to the east of the M1 crossing at the location of the IMD connection to the main HS2 rail route or perhaps via diverted route located immediately alongside the IMD route from its junction with the main line through to existing bridges at SE corner of the MEGZ site (link line chainage 4+000 on drg C321-MMD-RT-DPP-190-581302/PO1). The trail is unlikely be used at night when the IMD line is in use.

6.3.8 The Trans Pennine Trail route through Poolsbrook Country Park will be dissected by the new route alignment of HS2.

6.3.9 A new greenway crossing (ideally by bridge) of the IMD line to the north of Poolsbrook, is required to facilitate extension of greenways (both existing and being installed) at Markham Vale and from Bridle Lane Woodthorpe, with the wider Trans Pennine Trail and canal network west and north of Staveley.

6.3.10 The map produced in 2013 shows the location of the required rail crossing, this is Transport and Roads – Sustainable Transport.

http://www.derbyshire.gov.uk/transport_roads/transport_plans/transport_studies/chesterfield_cycle_network/default.asp

and published as Map 4 as
http://www.derbyshire.gov.uk/images/Map%204_tcm44-153480.pdf

6.3.11 The route can utilise tracks within the Poolsbrook country park constructed across what was Ireland Colliery Tip 11/039, the crossing Erin Road in the centre of the park before extending toward the Trans Pennine Trail spur which comes south from the town itself. Routes link back to the canal at Staveley basin near to the IMD site.

6.3.12 The walking and cycling route for the Trans Pennine Trail along Chesterfield Canal will be impacted during the major development site of the newly intended Staveley Infrastructure Maintenance Depot.

6.4 Chesterfield Canal

6.4.1 The HS2 plans currently show a clash at both Eckington Road in Derbyshire, (see 6.2 above), and just outside the county boundary at Norwood in South Yorkshire where the canal can no longer route through the Norwood Tunnel. It will need to follow an alternative alignment up the hillside and beneath the M1 motorway. An additional rail viaduct may be needed to span the required flight of locks between the existing tunnel portal and the crossing of the M1. HS2 Ltd has indicated that it intends to resolve these issues during detailed design.

6.4.2 Derbyshire County Council owns and manages a 5 mile navigable stretch of the Chesterfield Canal in Derbyshire which runs north and east from Chesterfield to Staveley. This waterway forms part of an on-going canal restoration programme which has been active since the early 1990's, largely driven by the County Council in co-ordination with other member organisations of the Chesterfield Canal Partnership.

6.4.3 The partnership's objective is to restore the remaining 9 miles of derelict canal between Staveley and Kiveton thereby re-connecting to the Canal & Rivers Trust network. This will be the final link in restoring the canal to navigation between Chesterfield and West Stockwith, a total length of 46 miles. Once achieved, this will provide a long term and significant regeneration opportunity for the north of the County. It forms the basis of a long term project to uplift the environmental quality of the area, provide recreational opportunities on the water and towpath and economic development opportunities from water-based and water-side business.

6.4.4 To date 5 miles of continuous waterway have been restored to navigation, with the most recent addition being the construction of a small marina at the Staveley Town

Basin site in 2012 (adjacent to the proposed IMD). Work is presently being undertaken to construct a new lock structure at the basin site using work party volunteers of the Chesterfield Canal Trust.

6.4.5 The Derbyshire Waterways Strategy provides the strategic overview and detail of the restoration is provided in Next Navigation West (Chesterfield Canal Partnership, 2013). The indicative line of the route is recorded in the Local Plan.

6.4.6 Specific interaction between the proposed HS2 infrastructure need is currently identified at Staveley where the maintenance depot's spur overlies the line of the canal.

6.4.7 Severing the line of the canal restoration route at any point will negate the benefits highlighted above, preventing the development of an economically viable length of navigable waterway.

6.4.8 It is vital that the proposed route of the Chesterfield Canal, as indicated in Next Navigation West, is protected and that consideration is given to its on-going restoration. It is essential that the HS2 line does not create a physical or financial barrier to this on-going programme.

Proposals

6.4.9 An engineering solution needs to be sought whereby construction of the railway and the canal can be accommodated without any significant detriment to their operation. Any option that involves additional canal structures, water pumping facilities or other related infrastructure resulting from HS2 will need to be included as part of the project in addition to providing long term funding for running and maintenance costs.

6.4.10 Maintaining continuity of the canal is essential, but equally, associated watercourses and rainwater run-off that would normally supply the canal along its length with water must also be considered and protected.

6.4.11 It is requested that HS2 engineers engage on an on-going basis with County Council officers throughout the duration of the project, to develop suitable mitigation measures to ensure a mutually beneficial outcomes can be effectively achieved.

6.4.12 Where there are specific interactions and mitigation is sought, then early construction of canal and structures prior to the completion of the HS2 line will be sought, in order to prevent delay. It is important that engineering and design discussions are maintained to enable both projects to proceed in parallel.

6.4.13 A continuous means of alternative access and navigation must be maintained during construction.

6.4.14 There should be a presumption of betterment within the planning process as part of compensation of impacts to amenity, to environmental quality and to heritage

features. Considering the HS2 project timescales, steps to secure advance mitigation should be sought, with designs appropriate to the local context.

6.4.15 In terms of seeking either support or finance (grants), there should be must be no blight on future project development and waterway project delivery costs should need to increase as a result of HS2 proposals or development.

6.5 Economic Planning

6.5.1 General economic planning issues are discussed in section 3.4. EMHGSOG provided financial support to support masterplanning in the area around the IMD at Staveley and this is ongoing.

6.5.2 The *East Midlands HS2 Growth Strategy* published 30 September 2016 recognizes the potential benefits of the IMD as it will offer major opportunities to the local communities, both in terms of job creation and training opportunities linked to the High Speed College facilities at Birmingham and Doncaster.

Staveley Work Area & Staveley Regeneration Route.

6.5.3 The IMD is located on land within the Staveley Works Area and has a key impact on the Staveley Regeneration route which is an essential requirement for regeneration plans at the site. This Regeneration Corridor has the potential for up to 1,500 new homes and 10 ha of employment land. The revised layout is better for the regeneration route and the Chesterfield Canal.

6.5.4 Chesterfield Local Plan Consultation Draft published by Chesterfield Borough Council on 12 January 2017 identifies the site as a Regeneration Priority Area and includes a masterplan for the site.

6.5.5 The revised layout shortens the overall length of the depot at the cost of increased width and appears to respond to a number of the key concerns that were raised in the Chesterfield Borough Council and Derbyshire County Council responses to the initial line of route consultation.

6.5.6 The County Council supports the use of the Staveley Depot as a construction site for the route which could significantly increase local employment opportunities.

6.5.7 Initial concerns regarding proposed track levels have been submitted to HS2, (Eckington Road and Hall Lane). HS2 Ltd indicated that these will be reviewed at detail design.

6.5.8 There is concern that the published protection zones impact on land that was in process of inclusion in the draft local plan for residential housing land use, in part to mitigate the land lost within the Staveley works corridor due to siting of the IMD therein.

6.5.9 Further extension of the Chesterfield Canal to Renishaw is dependent upon how the IMD link is to be crossed; the puddle bank is restored; HS2 is to cross the river Doe Lea; and the need for 8 to 10 million pounds of investment.

Markham Vale

6.5.10 HS2 Ltd has indicated a clear preference for the new route but has yet to remove blight on the previous alignment. This should be addressed at the earliest opportunity to remove ongoing blight.

6.5.11 The revised route no longer crosses the tip, but the development has already incurred significant losses due to the impact of HS2 on various sites, reducing the size of the plots and buildings. Almost 200 potential jobs have been lost on a single site. Generally the development has cost twice the land value, yet only the reduction in land value can be compensated.

6.5.12 UK Coal and Derbyshire County Council are purchasing sections of the line from Network Rail, to be used for greenways/cycle to work. These negotiations are well underway with Network Rail 'permissions to close' the line in place.

6.5.13 The plan in Appendix I shows how the route now crosses the site. The key impacts of HS2 include:

- the route crosses the Seymour Link Road in Markham Vale;
- potential impact on the development plots at Markham Vale; and
- impact on proposed greenways and cycleways (discussed in section 6.3).

6.5.14 HS2 has confirmed a much reduced protection zone width to the south and east of the proposed IMD link where it passes through Markham Vale North (Seymour) site. The protected corridor has been reduced to 15m from the centreline on the south and east side of the route so there is now no physical impact on the development plots.

6.6 Strategic Planning

6.6.1 Overall strategic planning is covered in section 3.5 but there are some specific opportunities in relation to the IMD and link.

6.6.2 A local training facility, possibly as a satellite of the high speed rail college could be provided within the depot footprint or in the adjacent business area. It could be base for learning construction and operation skills.

6.7 Highways and Transport

6.7.1 In addition to the general concerns noted in section 3.6 there are specific concerns regarding Staveley.

6.7.2 Questions have already been raised with HS2 Ltd regarding existing bridge heights and whether it is actually necessary to provide new bridges or raise the height of some of the routes, see section 6.2.

6.7.3 HS2 plans show realignment of the A619 and the assumption is that this is required to replace the existing bridge to provide sufficient headroom and width.

6.7.4 The impact of traffic generation from the depot is difficult to determine without demand forecasts, but the County Council in its capacity as the local highway authority will wish to explore this further HS2 when more details become available.

6.7.5 The IMD link to HS2 is on the line of a former rail route. This could be used as the haul route for HGVs if the former Staveley works is to be used as construction depot.

6.7.6 It is not possible to comment on impact at Lowgates without detailed plans from HS2 Ltd.

6.8 Classic rail

6.8.1 A detailed discussion on the impact on classic rail is included in Appendix G

Staveley and Link

6.8.2 The current proposals show a connection to the existing freight railway and the use of redundant lines. Some of the line to be used for the Staveley IMD & Link was built as single track; the assumption is that it would be opened as double track railway throughout. Recent clarification of the width of the corridor is discussed in section 6.5 above.

6.8.3 Impacts on the line currently in operation include:

- disruption to freight services whilst constructing link;
- additional rail freight during construction and operation of IMD; and
- disruption of passenger services when diverted on freight line.

6.8.4 The revised plans show a realignment of the A619 crossing. Track maintenance vehicles are built to continental gauge, and appropriate adjustments to the bridge or track will be needed.

6.8.5 Suggested electrification of the Barrow Hill line is discussed in section 5.5 above to improve access to Chesterfield station. (This will provide the potential for running trams or stopping trains on this line and possibly park and ride near the Depot).

7 HEALTH SAFETY AND WELFARE

7.1 HIA assessment

7.1.1 The 2013 Rapid Health Impact Assessment of HS2 initial preferred route in Eastern Derbyshire (HS2 HIA 2013) was very comprehensive and remains relevant. The proposed route refinements have been summarised and both positive and negative impacts have been identified. The recommendations for enhancing positive impacts and mitigating negative impacts of the realigned route can be found in the full report in Appendix B .

7.1.2 The new health impacts relating realignment of the East Midland Hub Approach through Long Eaton vary with the option:

- Issues with the high level viaduct Option One are associated with the quality of viaduct design and the possibility of a “suicide hotspot” and suicide prevention measures should be considered;
- a positive health impact of the Option One viaduct is that it avoids transecting existing communities which can lead to community severance;
- Issues with the lower level Option Two are associated with the loss of property and land; the reduction in green space in people's living environment; a higher density of roads and traffic which can cause community severance.

7.1.3 Revised health issues relating to Derbyshire to West Yorkshire (M18/Eastern route) are associated with improved access to capital cities, tourism, social mobility and employment.

7.1.4 Revised health issues relating to route refinement between Derbyshire and West Yorkshire are associated with the route being closer to the heritage site of Bolsover Castle; and improved access to HS2 in Chesterfield and Bolsover that will mitigate against some of the negative health impacts identified in HS2 HIA 2013.

7.1.5 Revised health issues relating to route refinement for Staveley IMD recognise better alignment with local development plans and use of the disused mineral railway and notes that the spur now impacts upon a larger geographical area.

7.1.6 The updated Health Impact Assessment assesses if the proposed changes to routes and stations have health impacts beyond those identified in HS2 HIA 2013. The report acknowledges that the health impacts and recommendations from HS2 HIA 2013 remain relevant but provides new health impacts and refreshed recommendations which can be found in the full report in Appendix B .

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Appendix A Environment Summary

Conservation and Design Plan areas 2016 Sections 1 to 6
HS2 – Revised alignment 2016: Potential ecological impacts (Sections 1 to 6)
Conservation and Design Plan areas A-F from January 2014 response

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1

SOUTH YORKSHIRE

DERBYSHIRE

NOTTINGHAMSHIRE

DERBY

M1 to be realigned to the west of HS2

AREA C

HS2 viaduct over River Erewash flood plain, Erewash Canal, Stanton Gate and existing railway

HS2 viaduct over River Erewash flood plain, existing railway and Erewash Canal

NOTTINGHAMSHIRE

New B5010 Derby Road overbridge over HS2

Diversion of River Erewash

Indicative location of new roundabout on A52 to facilitate access to HS2 station

New A52 bridge over HS2

NET Phase 2 Toton Lane P&R

HS2 Toton Station & Interchange

New national rail platforms for interchange

HS2 Platforms

HS2 bridge over River Erewash flood plain

New flyover structure over HS2 for freight lines

New A6005 bridge over HS2

Existing rail corridor to be widened to four tracks

HS2 in existing low level rail corridor

LONG EATON

AREA B

Level crossings at Station Road and Main Street to be closed. Alternative routes to be developed

Low level tracks to be diverted onto adjacent rail corridor

Existing low level rail lines to be removed

AREA A

DERBYSHIRE County Council Improving life for local people

Figure 1 - HS2 Environmental Assessment, Map of Areas

HS2 viaduct over River Trent flood plain, Cranfleet Canal, Trent Lane and existing railways

LEICESTERSHIRE

HS2 cut & cover tunnel

2

Astwith Lane diverted on new alignment to the west

AREA F

Deep Lane bridge over HS2

HS2 retained box under M1. Motorway temporarily realigned to allow construction of box

AREA E

NOTTINGHAMSHIRE

Newtonwood Lane bridge over HS2 - retaining structure on western side. Embankment to east.

B6026 bridge over HS2

HS2 bridge over River Amber flood plain

AREA D

HS2 box under A38

Realignment and bridge over HS2 at Brookhill Lane

HS2 bridge over Maghole Brook

3

AREA J

HS2 viaduct over River Doe Lea flood plain and M1

AREA I

HS2 bridge over B6418

HS2 bridge over A632

AREA H

HS2 bridge over Palterton Lane

M1 box under HS2

AREA G

HS2 retained cut under M1 junction 29

Mill Lane diverted on new alignment to the west

HS2 bridge over River Doe Lea flood plain

AREA F

Astwith Lane diverted on new alignment to the west

4

Existing rail line to be realigned

SOUTH YORKSHIRE

HS2 viaduct over River Rother flood plain and B6058

HS2 retained structure

AREA M

New HS2 viaduct over River Rother flood plain and Spinkhill Lane

HS2 bridge over A6135

AREA L

HS2 viaduct over River Doe Lea flood plain

AREA J

HS2 viaduct over River Doe Lea flood plain

Connection to HS2 Staveley Infrastructure Maintenance Depot

A619 bridge over HS2

AREA K

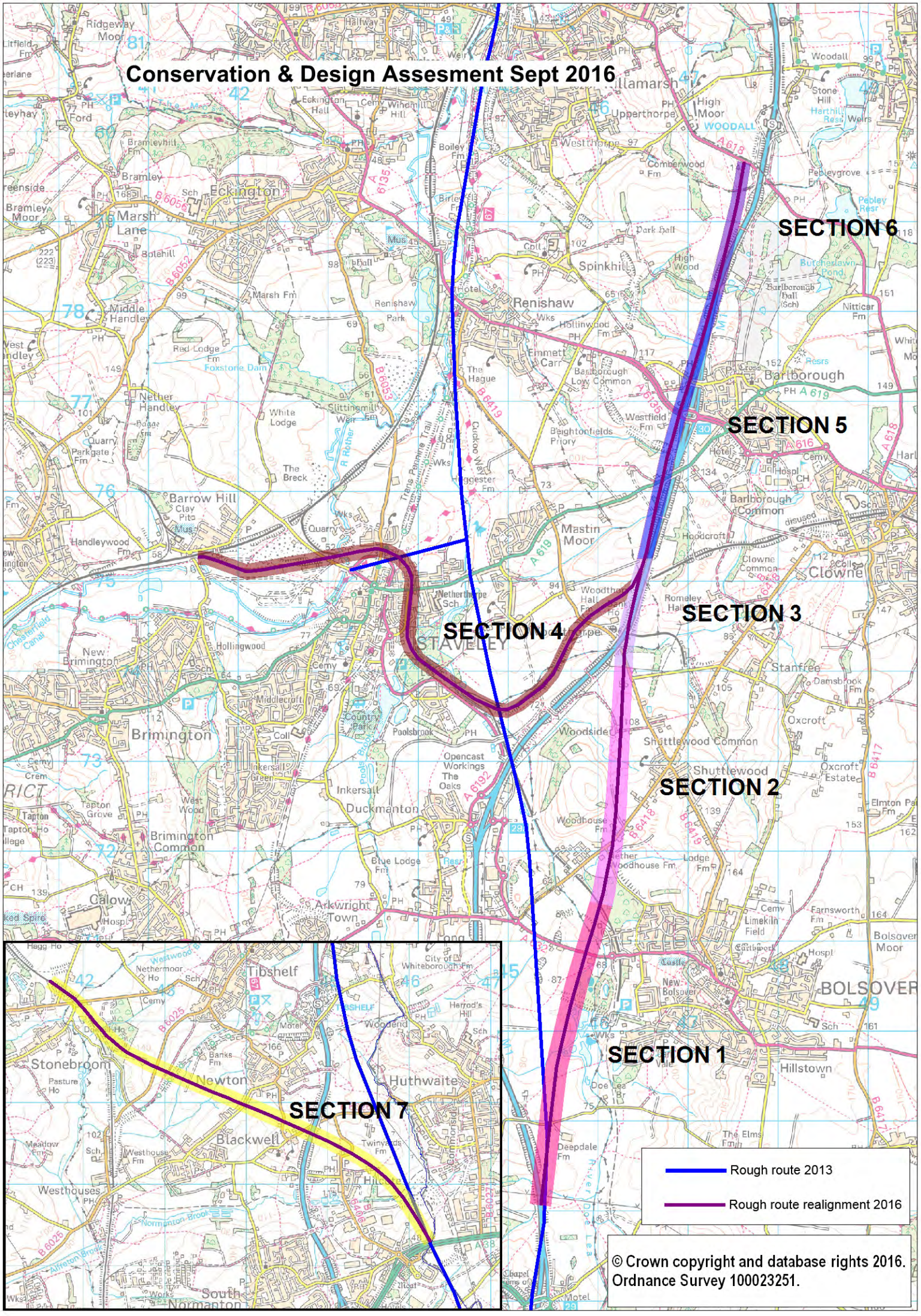
Bridle Road bridge over HS2

HS2 viaduct over River Doe Lea flood plain, Existing rail lines and M1

N

SCALE 0 125 250 500 metres

for more information please refer to the DfT website


Conservation & Design Assesment Sept 2016
SECTION 1
SECTION 2
SECTION 3
SECTION 4
SECTION 5
SECTION 6
SECTION 7
Rough route 2013
Rough route realignment 2016
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Ordnance Survey 100023251.

High Speed Rail 2 – Revised alignment 2016: Potential ecological impacts

Feature	2013 Alignment	2016 new alignment
Local Wildlife Sites	CH052 Netherthorpe Flashes CH051 Pinnock North Flash NE172 Birley Wood NE173 Park Brook Marsh NE267 Forge Lane Railway Trail	NE186 Carr Vale Flash NE373 peter Fidler Reserve and the Goit Railway (west) BO174 Bolsover Colliery Marsh BO009 Woodside Field Slope and Stream BO061 Robinson's Lumb BO066 Westfield Railway BO074 High Wood and Thompson's Holt BO104 Newton Disused Railway Local Wildlife Site
Potential Local Wildlife Sites	CH902 Poolsbrook Marsh (Chesterfield) BO902 Poolsbrook Marsh (Bolsover) pLWS Seymour Coal Stacking Yard CH R6709 Staveley Sewage Works Flash NE R6302 Renishaw Old Goods Yard	pLWS Snipe Bog pLWS Cambro Tip pLWS New Lane Grassland pLWS Doe Hill Community Park
Ancient Woodland	None	High Wood Ancient Woodland
Ancient Woodland under 2Ha	None	Ancient Woodland <2Ha Nr Romeley House
Local Nature Reserves	Norbriggs Flash	

By sections:		Section 1: NE186 Carr Vale Flash NE373 peter Fidler Reserve and the Goit Railway (west) pLWS Snipe Bog BO174 Bolsover Colliery Marsh Section 2: BO009 Woodside Field Slope and Stream Section 3: NONE Section 4: Probably none – cuts between multiple LWS/pLWS but on existing railway route Section 5: Ancient Woodland <2Ha Nr Romeley House BO061 Robinson's Lumb BO066 Westfield Railway (BO074 High Wood and Thompson's Holt LWS and AW) Section 6: NONE Section 7 - Chesterfield spur (to existing line): pLWS Cambro Tip pLWS New Lane Grassland Bo104 Newton Disused Railway Local Wildlife Site pLWS Doe Hill Community Park

Narrative	Key areas of impact were identified immediately east of Staveley, where the route ran for c4km through the Doe Lea Valley between Long Duckmanton and Renishaw. Through this area, the route would have impacted upon numerous flashes and other designated sites at Poolsbrook Marsh, (Seymour Colliery), Netherthorpe Flashes, Pinnock North Flash/Norbriggs Flash LNR, Staveley Sewage Works Flash. Approximately 2.6km of the route ran through Local Wildlife Sites or potential LWSs, directly affecting them. Potential for impacts and habitat severance were high. Connections to the proposed Staveley depot had the potential to cause additional impacts, direct habitat loss and habitat severance in and around Pinnock North/Norbriggs flash. Impacts were also anticipated north of Renishaw along the River Rother valley, although impacts appeared likely to be focussed upon individual designated sites along the disused railway, as well as Birley Wood and Park Brook Marsh, rather than as a result of the route traversing significant tracts of floodplain and wetland	Conversely, the new alignment appears likely to have the most significant impacts west of Bolsover, where the route passes through the edge of the wetland complex around Carr Vale, Peter Fidler and Snipe Bog LWSs – again in the River Doe Lea valley but further south than affected by the 2013 alignment. This time however, the route seems to affect the edge of designated sites rather than plough through the heart of them. Only around 1 – 1.5km of the route passes within or close to potentially valuable sites – with possibly only c600m of the route directly affecting an LWS/pLWS in this area. The Chesterfield spur might also pose ecological sensitivities, passing through three potential LWS and one designated LWS, for a distance of approximately 1.2km before it reaches the existing railway line. By far the largest section of site affected in this stretch is within Doe Hill Community Park (potential LWS), where the site will be bisected by the route which runs through it for nearly 900m. The only designated site in this section - Newton Disused Railway Local Wildlife Site – is a long, linear site just c35m wide at the point it will be crossed by the Chesterfield spur line. Whilst the Staveley Depot connection passes in close proximity to/ in between four pLWS and two LWS, it is assumed that as the route follows an existing rail corridor (which lies outside of the designated sites), impacts on those sites will be limited. Along the remainder of the main HS2 line, whilst the route would impact directly on several more Local Wildlife Sites, the impacts seem to be more limited. The proposed route generally crosses over comparatively narrow designated sites, with only 50-100m of route passing through each affected LWS (of which there are two or three), thereby generally leaving them substantially intact. Whilst this is only a rapid desk-based assessment, it would appear that the revised route will result in lesser ecological impacts than the previous alignment, directly affecting less land within designated sites and causing less severance of habitat connectivity. This must however be borne out by surveys and ecological impact assessment in due course

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Appendix B HIA

Update of the 2013 Rapid Health Impact Assessment of HS2 initial preferred route in Eastern Derbyshire

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Update of the 2013 Rapid Health Impact Assessment of HS2 initial preferred route in Eastern Derbyshire

An update of community profiling, review of proposals and recommendations in response to the HS2 Realignment Phase 2b Eastern Leg

FEBRUARY 2017

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Contents

1. Introduction

1.1 Background

The Department of Public Health, Derbyshire County Council produced a rapid health impact assessment of High Speed Two (HS2) initial preferred route in Eastern Derbyshire in December 2013 (HS2 HIA 2013): see appendix 1 for the link to this document. On 7th July 2016, HS2 Ltd published a proposed, revised route and station location in the eastern leg to serve Sheffield and the Toton-Leeds section of HS2 – Phase 2b (figure 1). This report aims to:

- Summarise the changes
- Assess if the proposed changes to routes and stations have any health impacts beyond those identified in the HS2 HIA 2013 and
- Summarise the details of the property compensation scheme which was not previously available.

1.2 Summary of the proposed HS2 Phase 2b route refinements affecting the eastern leg and Derbyshire

A more detailed description on the proposed route refinement can be found in sections 3, 4, 6 and 6.

I. Route refinement 1: East Midland Hub Approach through Long Eaton

Amends the alignment of the route as it passes through Long Eaton. The Secretary of State is considering two options for the alignment in this area. Both pass through Long Eaton directly to the east of the existing low level rail lines, either by lengthening the viaduct over the River Trent floodplain through Long Eaton at high level or via a lower viaduct and embankment through Long Eaton.

II. Route refinement 2: Derbyshire to West Yorkshire (M18/Eastern Route)

Moves the alignment of the route from Derbyshire to West Yorkshire over 70km to reflect a change in the proposals for serving Sheffield, as proposed by Sir David Higgins in the Sheffield and South Yorkshire Report, published on 7 July 2016, which can be found in appendix 2.

III. Route refinement 3: Derbyshire to West Yorkshire

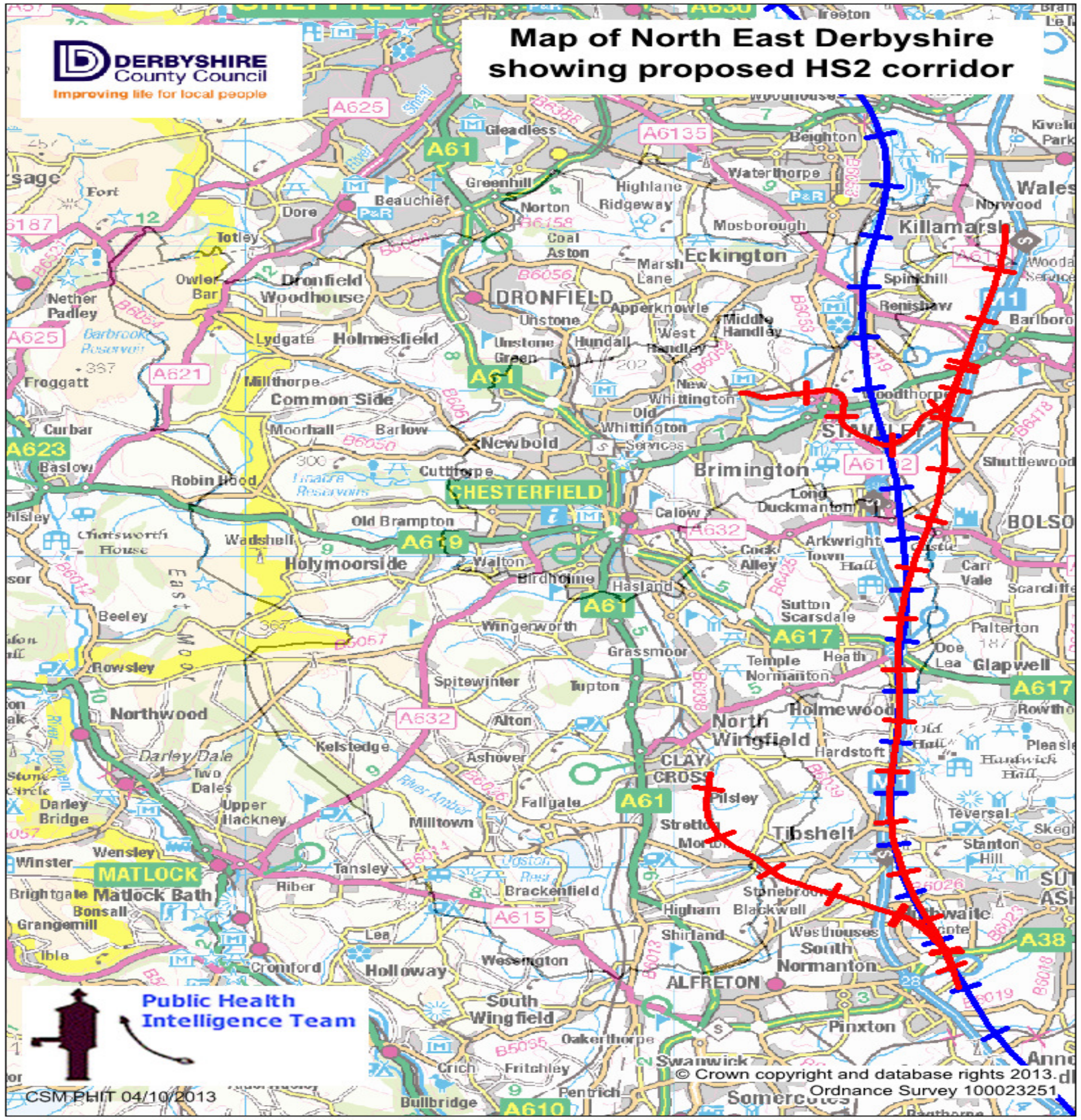
HS2 Ltd has developed a new proposal to serve Sheffield and Chesterfield via a connection to the Midland Main Line that would allow HS2 Ltd services to run on the existing network to Sheffield Midland Station. A spur would leave the HS2 network between Huthwaite and South Normanton, passing under the A38, then under the M1 and between the villages of Newton and Blackwell. As a result of this proposal, HS2 Ltd have re-examined the line of route through South Yorkshire to consider whether there is the opportunity to deliver an alternative line of route.

IV. Route refinement 4: Staveley Infrastructure Maintenance Depot

In order to align with local development plans HS2 Ltd have refined the layout of the infrastructure maintenance depot (IMD) at Staveley. The realigned route is now further away from the IMD so they have proposed an alternative connection from the mainline, which follows the line of a currently disused mineral railway and connects to the mainline to the east of Mastin Moor with a grade separated connection that passes under the mainline.

On 13th September 2016, HS2 Ltd stated that they expected the proposed route to be fully confirmed by mid-2017. The current proposal is that the Eastern Leg of HS2 will not be operational until 2033.

Figure 1. Map to show sections of the proposed realignment of the eastern leg



Key:

2013: Initial Preferred route (blue)

2016: Realigned Route (red)

2. Methodology

2.1 This report comprises of a summary of the proposed realignment of the HS2 Ltd, Eastern Leg, Phase 2B, in Derbyshire. Using information from HS2 Ltd we have summarised the proposed realignment affecting Derbyshire in the Eastern Leg. We considered if the changes have a positive or negative impact upon health. Health Impacts were measured according to: scale, likelihood, equality, locality and stage of development. Where impacts have previously been reported in the HS2 HIA 2013 (see appendix 1) we have not revisited this information in this report. Where additional, health related themes have emerged in Erewash and Chesterfield, the Public Health Intelligence team have undertaken a literature review of evidence to support recommendations on health impacts. These themes include 2 proposed routes through Long Eaton and the spur linking HS2 to Chesterfield's mainline station. Where new information from routinely collected statistics and health related surveys of 2016 (appendix 3) were available we updated and compared changes with the existing data in each of the localities. For the purposes of this report we did not pursue further public consultation. Public consultation took place for the HIA in 2013 and the evidence gained at that stage is still valid. We have searched the literature for key emerging themes and have made recommendations to HS2 Ltd where we consider there is further opportunity to enhance positive health impacts and mitigate negative health impacts.

3. Proposed Route Refinements 2016

3.1 Route refinement 1: East Midland Hub Approach through Long Eaton

The route consulted on in 2013 crossed the River Soar and River Trent on viaducts before running at ground level through Long Eaton along the existing low-level rail corridor on the approach to the East Midlands Hub station at Toton. The originally proposed route would have directly impacted Main Street and Station Road, and the existing high level rail line through Long Eaton would have needed to be widened for use by rail services on existing networks. Following the 2013 consultation, HS2 Ltd undertook extensive work to consider alternative options for station locations in the East Midlands, which would have required a change to this line of route. As well as designing and appraising alternative station options, HS2 Ltd also engaged with key local stakeholders to understand how well these options fit with local

aspirations. As a result of this work, HS2 Ltd continue to recommend that Toton is the best location for an East Midlands Hub Station.

There are a number of significant constraints and challenges in this area, including interfaces with the existing network, interactions with highways, and the River Erewash flood plain. The HS2 route needs to reflect these constraints while considering the impacts on local communities, particularly the need to avoid creating a physical barrier across the communities of Long Eaton and Toton.

The 2013 consultation highlighted concerns over local connectivity in this area, particularly owing to the possible impact on local highways of the construction and operation of the railway. In addition, following consultation, HS2 Ltd undertook further work to understand the wider rail network through this area. This highlighted that the consultation proposition would involve work on two rail corridors through Long Eaton, which could involve construction impacts being spread more widely in this area than the HS2 corridor alone.

HS2 Ltd therefore considered options that would focus construction on a single corridor:

3.1.1 Route refinement 1: Option One Upper Alignment

One option is to lengthen the viaduct over the River Trent flood plain to approximately 4,700m, so that the route would pass through Long Eaton on a viaduct, with HS2 directly to the east of the existing low-level corridor. The viaduct would cross Main Street at a height of approximately 17m, Station Road at approximately 16m, and the A6005 Nottingham Road at approximately 8m high. The current level crossings on the existing network would continue to operate as normal.

3.1.2 Route refinement 1: Option Two Lower Alignment

An alternative option was for a lower alignment through Long Eaton, with HS2 crossing Station Road at a height of 4m and then travelling through Long Eaton at ground level, on the same general horizontal alignment as the route described above. HS2 Ltd expect that this would introduce a number of conflicts with the existing highways network that would need to be resolved, including Station Road, and the A6005 Nottingham Road.

Although the East Midlands Hub Station is still proposed to remain at Toton, HS2 Ltd have made some small changes to accommodate changes to the route design as a result of lessons learned from Phase One. The configuration of the station, including new platforms on the existing network, has not changed. However, to allow for the route to pass between the gap between Sandiacre and Stapleford, the station has moved approximately 150m southwards to accommodate the updated alignment.

3.2 Health Issues relating to route refinement 1

The health issues related to the East Midland Hub Approach through Long Eaton are mostly covered on the HS2 HIA 2013 (appendix 1). HS2 HIA 2013 recommended working closely with local planning in Long Eaton with aims to: Enhance road safety and reduce fear of crime particularly on public transport; protect parking for residents especially around the station at Toton; reducing the impacts of community severance and mitigating against potential job losses through potential closure of manufacturing businesses. Also covered are: Noise, air and light pollution.

The regeneration of the station at Toton may create about 1,600 additional jobs. Increased income via employment improves self-worth and communities benefit from the increased spending in the community.

Additional Health Issues associated with the route refinement options through Long Eaton are considered in more detail below.

3.3 Health Issues Relating to the Upper Alignment Option one

3.3.1 What did the literature tell us?

We searched the literature regarding health impacts of viaducts. This section summarises the literature and considers the potential impacts on health and whether such implications widen or close gaps in health status. Where health impacts highlighted in the literature have been identified previously, such as noise and vibration, they have not been repeated in this report and can be found in the HS2 HIA 2013 at appendix 1.

- Viaduct design is sometimes used to improve transportation efficiency but possibly affects urban airflow and the resultant risk of increased exposure to environmental pollutants (1)
- High structures like a viaduct may become a “suicide hotspot” and suicide prevention measures should be considered (2)(3).

3.3.2 References:

(1) Jian. Hanga *et al*. Environmental Pollution. The influence of street layouts and viaduct settings on daily carbon monoxide exposure and intake fraction in idealized urban canyons. Volume 220, Part A, January 2017, Pages 72-86.
(2) Pirkis J, Spittal MJ, Cox G, Robinson J, Cheung YT, Studdert D. The effectiveness of structural interventions at suicide hotspots: a meta-analysis. University of York. 26/11/2013.
(3) Sinyour, M. Levitt, A.J. Effect of a barrier at Bloor Street Viaduct on suicide rates in Toronto: natural experiment. BMJ; July 2010: vol.341; p. c2884.

3.3.3 Our Assessment of the Overall Impact

This section characterises potential impacts in terms of:

- Scale (major, moderate, minor)
- Likelihood (definite, probable, speculative)
- Effect on social equality (enhancing, worsening, neutral)
- Locality affected and development stage of impact (all, planning, construction, operational).

3.3.4 Summary of the health issues with a positive impact of the upper alignment proposal

Table 1 summarises the health issues with a positive impact of the upper alignment proposal, including the scale, likelihood, equality, locality and stage of developments issues are likely to have impact.

Table 1. Route refinement 1 (Option 1 Upper alignment): Health Issues with a Positive Health Impact

Health issues with a positive impact using the upper alignment proposal	Scale	Likelihood	Equality	Locality	Stage
HS2 Ltd may consider erecting aesthetically pleasing, structural barriers on high level viaducts to prevent attempts of suicide	Moderate	Probable	Enhancing	Erewash	Construction
HS2 Ltd may support suicide prevention strategies such as exploring the introduction of telephone help lines at potential "hot spots" for suicide	Moderate	Speculative	Enhancing	Erewash	Construction Operational
Avoids transecting existing communities which can lead to community severance	Major	Definite	Enhancing	Erewash	Construction Operational

3.3.5 Summary of the health issues with a negative impact of the upper alignment proposal

Table 2 summarises the health issues with a negative impact of the upper alignment proposal, including the scale, likelihood, equality, locality and stage of developments issues are likely to have impact.

Table 2. Route refinement 1 (Option 1 Upper alignment): Health Issues with a Negative Health Impact

Health issues with a negative impact using the upper alignment proposal	Scale	Likelihood	Equality	Locality	Stage
High level viaducts may become suicide "hot spots"	Moderate	Speculative	Worsening	Erewash	Operational
High level viaducts have potential to affect urban airflow and increase exposure to carbon monoxide pollutants at pedestrian level in traffic crowded streets	Moderate	Speculative	Worsening	Erewash	Operational

3.4 Health Issues Relating to the Lower Alignment Option 2

3.4.1 What did the literature tell us?

Whilst most of the health impacts of a lower level alignment through Long Eaton are covered in the 2013 HIA/HS2, we searched for evidence from the literature to identify how any other major infrastructure developments might or have an impact on community, as a cause of ill health. We sought evidence on the effectiveness of any proposed interventions to enhance positive health benefits or mitigate health impacts. This section summarises what we found and considers whether such impacts help to close or further widen gaps in health status (if reported).

- The loss of property and land caused by compulsory purchase / eminent domain takings could lead to adverse psychological effects associated with the community that provided a sense of safety, comfort and identity (4).
- Less green space in people's living environment can coincide with feelings of loneliness and with perceived shortage of social support (5).
- Some studies show moderate associations between perceived safety and physical activity (5).
- More disadvantaged areas tend to have a higher density of roads and traffic, which can cause community severance (6).
- Crime and the perception of crime-related safety are both individual and social-level factors affecting physical activity (6) (7). In an examination of the relationship between walkable, safe environments and indicators of health in urban areas, researchers found that participants in areas with higher crime rates walked less often, with crime-related safety more adversely affecting walking rates among women than men (7).
- Visual characteristics influence the perception of noise on railways (8).
- Green walls along with other greening strategies can mitigate against air pollution, improve social wellbeing, aesthetically and visually enhance urban space, add nature to man-made, high visibility structures and utilise rainwater for irrigation, reducing flood risks (9)(10)(11).

3.4.2 References

(4) The psychological cost of eminent domain takings and just compensation. Citation: Law & Psychology Review, Mar 2006, vol. 30, p. 215-228, 0098-5961 (Spr 2006) Author(s): Powell, Jeffrey T.

(5) Social contacts as a possible mechanism behind the relation between green space and health. Citation: Health & Place, 01 June 2009, vol./is. 15/2(586-595), 13538292. Author(s): Maas J, van Dillen SM, Verheij RA, Groenewegen PP.

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(6) Wilson D.K., Kirtland, K.A., Ainsworth, B.E., Addy, C.E. "Socioeconomic Status and Perceptions of Access and Safety for Physical Activity." Annals of Behavioural Medicine, 28(1), 20–28.

(7) Wolch, J.R., Tatalovich, Z., Spruijt-Metz, D., Byrne, J., Jerrett, M., Chou, C., Weaver, S., Wang, L., Fulton, W., Reynolds, K. 2010. "Proximity and perceived safety as determinants of urban trail use: findings from a three-city study." Environment and Planning, 42, 57–79.

(8) Maffei, L. et al. The influence of visual characteristics of barriers on railway noise perception. Science of The Total Environment. 15th February 2013, Pages 42 -47

(9) Virtudes, A. Manso, M. Green Walls Benefits in Contemporary City. EPOKA, University. Proceedings 19-21 April 2012.

(10) Rakhshandehroo, M. et al. Living wall (vertical greening): Benefits and Threats. University Putra Malaysia. May 2015.

(11) Dalgard, O. Tambs, K. Urban environment and mental health. A longitudinal study, The British Journal Of Psychiatry. Dec 1997, 121 (6) 530-536.

3.4.3 Our Assessment of the Overall Impact:

This section characterises potential impacts in terms of:

- Scale (major, moderate, minor)
- Likelihood (definite, probable, speculative)
- Effect on social equality (enhancing, worsening, neutral)
- Locality affected and development stage of impact (all, planning, construction, operational).

3.4.4 Summary of the health issues with a positive impact of the lower alignment proposal

Table 3 summarises the health issues with a positive impact of the lower alignment proposal, including the scale, likelihood, equality, locality and stage of development

Table 3. Route refinement 1 (Option 2 Lower alignment): Health Issues with a Positive Health Impact

Health issues with a positive impact using the lower alignment proposal	Scale	Likelihood	Equality	Locality	Stage
HS2 Ltd may create a case for extension of Nottingham's NET tram line into Long Eaton to ease traffic congestion and journey times during peak travel times.	Moderate	Probable	Enhancing	Erewash	Construction Operational
Provides opportunities during planning to ensure design optimises provision of open green space	Moderate	Probable	Enhancing	Erewash	Planning Construction
Provides the opportunity to strengthen provision of cycle lanes in local highway network reform for Long Eaton	Moderate	Probable	Enhancing	Erewash	All

3.4.5 Summary of the health issues with a negative impact of the lower alignment proposal

Table 4 summarises the health issues with a negative impact of the lower alignment proposal, including the scale, likelihood, equality, locality and stage of development

Table 4. Route refinement 1 (Option 2 Lower alignment): Health Issues with a Negative Health Impact

Health issues with a negative impact using the Lower alignment proposal	Scale	Likelihood	Equality	Locality	Stage
Closure or reconfiguration of highways in Long Eaton may cause community severance and reduced physical activity due to perceived safety	Moderate	Probable	Worsening	Erewash	Construction Operational
For transparent noise barriers, the perceived noise annoyance is likely to be judged lower than for opaque barriers.	Moderate	Probable	Worsening	Erewash	Operational

3.5 Updated Health Profiles for Erewash

Available, comparative data for 2016 demonstrates health improvements since the HIA /HS2, 2013 and further information can be found in appendix 4. A number of indicators within the health profile for Erewash remain similar to the 2013 profile presented in the HS2 HIA 2013.

4 Derbyshire to West Yorkshire (M18/Eastern Route)

4.1 Route refinement 2: Derbyshire to West Yorkshire (M18/Eastern Route)

HS2 Ltd propose to move the alignment of the route from Derbyshire to West Yorkshire over 70km to reflect a change in the proposals for serving Sheffield, as proposed by Sir David Higgins in the Sheffield and South Yorkshire Report, published on 7 July 2016.

HS2 Ltd is now proposing to serve South Yorkshire via a spur to the existing network north of Pinxton. This spur would leave the HS2 network on a grade separated junction as the route passes between Huthwaite and South Normanton.

The route would leave the HS2 mainline, with the northbound spur passing under the A38 in a cutting approximately 16m deep. The southbound spur would also pass under the A38, at a depth of 20m, before passing under the main line. The route would run in cutting, passing under the M1 and between the villages of Newton and Blackwell.

The route would continue in cuttings up to 7m deep, moving to embankment as the ground level starts to fall. The spur would join the corridor of the existing Erewash Valley Railway immediately to the east of Stonebroom, before joining the existing railway with a flat junction at Clay Cross to enable HS2 trains to serve Chesterfield and Sheffield.

4.2 Health Issues Relating to Derbyshire to West Yorkshire (M18/Eastern route)

4.3 What did the literature tell us?

New proposals of 2 trains per hour from Chesterfield station to London with a 70 minute commute were not covered in the HS2 HIA 2013 and whilst aspects such as increased time pressures of high speed rail (HSR) have already been identified we looked at the literature in relation to access to capital cities, tourism, social mobility and employment.

Key themes arising from the literature:

- High speed rail (HSR) is mostly used for business travel followed by tourism and visiting family or friends. Notably in one study the employment-residence split was 19% demonstrating the ability for families to live and work in different cities/regions as a result of HSR (12)(13)(14).
- The introduction of HSR may contribute to the development of tourism, and the speed, safety and comfort of travel may also impact upon the expansion of tourism (15)(16).
- HSR introduces the possibility for household mobility and potential for “double city*” households (12).
  *Double city describes the separation of the place of residence and place of work.

- The Capital city has strong links to industry, capital and talents and this may have negative impact on surrounding areas (12).

4.4 References

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4.5 Summary of the health issues with a positive impact of the lower alignment proposal

Table 5 summarises the health issues with a positive health impact of the new connection to Chesterfield, including the scale, likelihood, equality, locality and stage of development.

Table 5. Route refinement 2: Issues with a positive health impact

Health issues with a positive impact	Scale	Likelihood	Equality	Locality	Stage
Improved commuting times to the Capital city may increase opportunities of travel for leisure	Moderate	Probable	Enhancing	Chesterfield	Operational
A 70 minute commute to the Capital could increase employment and education opportunities for Chesterfield residents in particular	Moderate	Definite	Enhancing	Chesterfield	Operational
Increased access to travel for leisure may increase tourism to Derbyshire's places of interest.	Moderate	Speculative	Enhancing	Chesterfield	Operational
More affordable housing than the Capital and a 70 minute commute in Derbyshire could encourage London dwellers to migrate to Derbyshire for rural living.	Moderate	Speculative	Worsening	Chesterfield	Operational

4.6 Summary of the health issues with a negative impact of the lower alignment proposal

Table 6 summarises the health issues with a negative health impact of the new connection to Chesterfield, including the scale, likelihood, equality, locality and stage of development.

Table 6. Route refinement 2: Health Issues with a negative health impact

Health issues with a negative impact	Scale	Likelihood	Equality	Locality	Stage
Affordability of travel could have a negative impact for those who are financially excluded from accessing the HS2 link to the capital	Moderate	Probable	Worsening	Chesterfield	Operational
Commuter times to the capital may have a negative effect on the labour market, taking young, highly educated and middle income earning adults out of Derbyshire.	Minor	Speculative	Worsening	Chesterfield	Operational
Train timetables would need to be compatible with work activity and travel, especially for non-flexible hour's employment such as retail.	Moderate	Probable	Worsening	Chesterfield	Planning Operational
Increased numbers of commuters at Chesterfield Station could have a negative impact on surrounding infrastructure.	Major	Definite	Worsening	Chesterfield	Operational

4.7 Update of the Health Profile of Chesterfield

The headlines of changes to the health profile of Chesterfield since the HS2 HIA 2013:

- Emergency hospital visits for self-harm remain high and are double that of England rates.
- Suicide rates in Chesterfield have doubled since in 2013.
- Smoking related deaths have increased and are the highest in Derbyshire.
- Whilst cancer rates in England in under 75 yrs have reduced, in Chesterfield they remain higher than England averages.
- Hip fractures in 65+ years in Chesterfield are the highest in Derbyshire.
- Fuel poverty has reduced in England and in Chesterfield it has halved.

- Long term unemployment rates have reduced in Chesterfield and are now similar to England as a whole.

Further information can be found in appendix 4.

5 Derbyshire to West Yorkshire

5.1 Route refinement 3: Derbyshire to West Yorkshire

HS2 Ltd has developed a new proposal to serve Sheffield via a connection to the Midland Main Line that would allow HS2 Ltd services to run on the existing network to Sheffield Midland Station. As a result of this proposal, HS2 Ltd have revisited the line of route through South Yorkshire to consider whether there is the opportunity to deliver an alternative line of route.

The route presented in the 2013 consultation travelled to a station at Meadowhall along the line of the Rother Valley, before heading north into West Yorkshire. On the 2016 proposed alignment the route would run closer to Bolsover, to the west of the town on a mixture of viaduct and embankment, passing into longer sections of cutting to the north of the town. The alignment would then cross the M1 on a 490m-long viaduct, crossing the M1, the B6419 and an existing mineral railway at a height of up to 29m. It would then continue to run to the west of the M1 in the existing transport corridor, largely cutting of up to 15m deep, heading north of Balborough.

5.2 Health Issues Relating to Derbyshire to West Yorkshire

The original 2013 proposed route of this section of the Eastern Leg already passed through the District of Bolsover and into North East Derbyshire. The health impacts of HS2 for the Bolsover District were covered in the HS2 HIA 2013 (Appendix 1) this included potential impacts associated with construction and operation of HS2 including noise and air pollution. The health impacts on the introduction of viaducts are also considered earlier in sections 3.3. The newly proposed route runs closer to the heritage site of Bolsover Castle and potential health impacts to this area are covered in

the HS2 HIA 2013 (Appendix 1). The connection to HS2 in Chesterfield will mitigate against some of the negative health impacts identified in the HS2 HIA 2013 through increased access to HSR for Bolsover residents.

5.3 Updated Health Profiles for Bolsover

- Since reporting in 2013 the number of children living in poverty in Bolsover remains higher than county and national averages.
- Smoking rates in Bolsover have increased and remain the highest in Derbyshire and significantly worse than the England average.
- There have been significant reductions in under 75 mortality rates for cancer and rates in Bolsover are now comparable to those of England as a whole.
- Alcohol specific hospital stays have reduced and are also now comparable with the England average.
- Fuel poverty in Bolsover has halved.

Further information can be found in appendix 4.

6 The Eastern leg Infrastructure Maintenance Depot Located at Staveley

6.1 Route refinement 4: Staveley Infrastructure Maintenance Depot

The 2013 proposed route to serve Sheffield entered Chesterfield east of Duckmanton and exited to the southwest of Renishaw. The closest station for Chesterfield residents would have been at Meadowhall (the South Yorkshire hub), to the north east of Sheffield. There was a proposed Infrastructure Maintenance Depot (IMD) at Staveley within the borough. In their 2016 proposals, HS2 Ltd have reviewed and refined the layout of the IMD at Staveley so it better aligns with local development plans. This depot now occupies 26 hectares of land to the north-west of Staveley. As the route is now further away from the depot, HS2 Ltd have proposed an alternative connection from the mainline, which follows the

line of a currently disused mineral railway and connect to the mainline to the east of Mastin Moor with a grade separated connection that passes under the mainline.

6.2 Health Issues Relating to IMD and Staveley Spur

The health impacts of Staveley and the IMD are covered in the HS2 HIA 2013 (appendix 1). Considerations of light and noise pollution and loss of homes are some of the issues covered. The construction and operation of an infrastructure maintenance depot at Staveley is expected to create local jobs, some of which may be permanent. Increased income via employment improves self-worth and communities benefit from the increased spending in the community. Whilst the spur now impacts upon a larger geographical area the health impacts are documented and transfer to the newly proposed route.

7 Property and Compensation

7.1 The Property Compensation Scheme

The HS2 HIA 2013 covers the health impacts of property loss and compensation. However details of the property compensation scheme were not available at that stage. Information on the scheme and consultation is now available and is summarised below:

The Government is running a consultation on the property compensation and assistance schemes it is proposing to introduce along the Phase 2b line of route. The consultation closes on Thursday 9th March 2017.

The proposed property compensation and assistance schemes for Phase 2b that are being consulted on are:

- Express Purchase (available now)
- Extended Homeowner Protection Zone
- Need to Sell

- Rent Back Rural Support Zone – Voluntary Purchase and Cash Offer
- Home Owner Payment Scheme

To make sure the people most directly affected by the proposed Phase 2b route can begin to plan their future, the Secretary of State for Transport has launched the Express Purchase and Need to sell schemes for this phase of the route at the same time as the consultation for these schemes. Further detailed information can be found at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/571256/D8_Property_Factsheet_FINAL.pdf

8 What are the recommendations to HS2 Ltd?

The steering group acknowledge that the HS2 phase 2b realignment through the eastern leg will have both positive and negative impacts upon health and that the recommendations from HS2 HIA 2013 remain relevant. These recommendations can be found in the Executive Summary of the HS2 HIA 2013 (appendix 3). The recommendations for enhancing positive impacts and mitigating negative impacts of the realigned route can be found in table 7 and 8 below.

8.1 Enhancing the Positive Health Impacts

We offer the following recommendation to HS2 Ltd with a view to enhancing the positive impacts (Table 7)

Table 7 Recommendations for enhancing positive health impacts

Recommendation for enhancing positive health impacts
HS2 Ltd to enhance the ability to access employment through faster train time journeys by ensuring that travel journey times from Chesterfield are compatible with work activity.
HS2 Ltd to work with local planners in minimising the loss of green space when considering the lower alignment in Long Eaton.
HS2 Ltd to work with local planners at Long Eaton with the reform of the local highway network (the lower alignment option), to support active travel like walking and cycling, via safe, well-lit paths that potentially link to other public transport access points.
A 70 minute commute from the capital to Chesterfield could increase tourism and migration to Derbyshire and its places of interest. HS2 Ltd may support Derbyshire in the promotion of its places of interest.

8.2 Mitigating the negative health impacts

We offer the following recommendations to HS2 Ltd, with a view to mitigating the negative health impacts.

Table 8 Recommendations for mitigating negative health impacts

Recommendations for mitigating negative health Impacts
Where the introduction of viaducts is in significantly populated areas like Long Eaton (higher alignment route) HS2 Ltd to consider the provision of aesthetically pleasing barriers as a prevention measure to mitigate against potential suicide.
HS2 Ltd may support suicide prevention strategies in areas like Long Eaton (higher alignment route) e.g. Telephone Helplines in potential suicide "hot spots"
HS2 Ltd to improve the accessibility of high-speed access with travel concessions for those experiencing low income and financial exclusion
HS2 Ltd and local planning agencies to consider traffic flow under viaducts in the infrastructure reform at Long Eaton (upper alignment) avoiding static traffic and an increase in air pollutants at pedestrian level.
HS2 Ltd to consider how Chesterfield Station's footfall and congestion could increase. HS2 Ltd to work with local authorities, emergency services and the Highways Agency to develop a traffic management strategy aimed at minimising disruption to road users and limiting the risk of road traffic accidents or injuries to pedestrians and minimising the effects on disruption to work-travel compatibility.
Closure of roads in Long Eaton (lower alignment) could create community severance, increasing the perceptions of isolation and higher crime. HS2 Ltd to consider preventing reduced physical activity levels by improving access through bridges and improving street lighting.
HS2 Ltd to support the extension of Nottingham's NET tramline into Long Eaton (upper and lower alignment) to reduce congestion and increase traffic flow at peak times.
HS2 Ltd to consider the use of transparent noise barriers to mitigate against visual characteristics that affect perceived noise annoyance.
HS2 Ltd may consider contemporary technologies like living walls or other greening strategies to improve aesthetics, wellbeing, air quality and use of rainwater on both the upper and lower alignment options in Long Eaton.

9 Appendices

9.1 Appendix 1.

Rapid Health Impact Assessment of HS2 Initial Preferred Route in Eastern Leg Derbyshire 2013:

Available at: http://www.apho.org.uk/resource/item.aspx?RID=131972

9.2 Appendix 2

Sheffield and South Yorkshire Report 2016

Available at:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/535307/CS550A_South_Yorkshire_Report_WEB.pdf

9.3 Appendix 3

Rapid Health Impact Assessment of HS2 Initial Preferred Route in Eastern Derbyshire: Executive Summary

https://observatory.derbyshire.gov.uk/IAS/Custom/resources/HealthandWellbeing/Health_Needs_Assessments/Derbyshire%20HS2%20HIA%20Exec%20Summary.pdf

9.4 Appendix 4

HS2 Health Impact Assessment Locality Profile 2016 update

HS2 Health Impact Assessment Locality Profile 2016 update

Health indicator	Period	England	Derbyshire County	Bolsover	Chesterfield	Erewash	North East Derbyshire
Mental health							
Emergency Hospital Admissions for Intentional Self-Harm	2014/15	191.4	245.1 ▲	257.3 △	466.2 ▲	199.3 △	238.9 △
Mortality from suicide and undetermined injury, directly age-standardised rate per 100,000 people	2012-14	10.1	10.3 ▲	- -	14 -	10.5 △	8.6 -
Deaths from drug misuse	2013-15	3.4	3.7 △	- -	- -	- -	- -
Prevalence of psychoses, % diagnosed in primary care (QOF register)	2015/16	0.9	0.78 △	0.78 ▽	0.99 △	0.71 ▽	0.88 △
Prevalence of depression, % diagnosed in primary care (QOF register)	2015/17	8.28	9.3 ▽	7.63 ▽	9.79 ▽	9.74 △	9.61 ▽
Prevalence of dementia, % diagnosed in primary care (QOF register)	2015/18	0.76	0.92 △	0.95 △	0.89 △	1.03 △	1.03 △
Physical health and injury							
Incidence of malignant melanoma, aged < 75 yrs, directly age-standardised rate per 100,000 people							
People diagnosed with diabetes, % on GP registers	2014/15	6.4	6.9 ▲	8.3 ▲	7.6 △	6.7 △	7.2 △
New cases of tuberculosis, crude rate per 100,000 people	2012-14	13.5	3.5 ▽	35 △	5.8 ▽	3.2 ▽	1.3 ↔
Infant deaths, rate per 1,000 live births	2013-15	3.9	3.5 △	4.2 △	3.9 ⇔	2.3 ⇔	3.1 ▽
Under 75 mortality rate: cardiovascular	2013-15	74.6	73.7 ▼	81.5 △	89.2 ▽	76.4 ▽	64.3 ▽
Under 75 mortality rate: cancer	2013-15	74.6	73.7 ▼	81.5 △	89.2 ▽	76.4 ▽	64.3 ▽
Under 75 mortality rate from liver disease	2013-15	18	18.4 ▲	15.6 △	21.1 △	21.5 △	16.1 △
Road injuries & deaths, rate per 100,000 people	2012-14	39.3	45.1 △	40.4 △	31.7 △	34.8 △	41 ▽
All age, all cause mortality, directly age-standardised rate per 100,000 people*	2014	946.72	987.03 ▽	1186.37 ▽	1032.38 ▽	978.6 ▽	955.84 ▽
Limited day-to-day activities, % people*	2011	17.6	20.4	24.7	23.1	19.3	22
People with 'bad' general health, % people	2011	5.5	6.2	8.6	7.6	5.6	6.9
Dental health (tooth decay in children aged < 5 yrs), mean decayed/ missing/ filled teeth per child	2011/12 (ac	0.94	0.67 ▽	0.65 ▽	0.80 ▽	0.75 ▽	0.54 ▽
Proportion of five year old children free from dental decay	2011/12 (ac	7.5	77.8 ▲	66.4 ▽	76.2 △	81.1 △	87.6 △
Mortality rate from communicable diseases per 100,000 population	2012-14	10.5	10.2 ▽	- -	12.9 ▽	- -	10.9 ▽
Estimated GP recorded prevalence: CHD, %	2015/16		3.8	4.1	3.3	3.6	4.5
Estimated GP recorded prevalence: Stroke & TIA, %	2015/16		2.1	2.1	1.9	2.1	2.5
Estimated GP recorded prevalence: Hypertension, %	2015/16		15.4	16.3	14.0	15.9	17.6
Estimated GP recorded prevalence: COPD, %	2015/16		2.2	2.7	1.8	2.1	2.5
Lifestyle							
Smoking in pregnancy, % of mothers where status known	2015/16	10.6	14.2 ▽	15.8 △	12.4 ▽	16 △	14.3 ▽
Alcohol-specific hospital stays (under 18 yrs), crude rate per 100,000 people	2012/13 - 1	36.6	45.4 △	53.2 △	58.7 △	37.6 △	76.9 △
Admission episodes for alcohol-related conditions - narrow definition (Persons)	2014/15	641	705 ▽	683 △	964 △	717 ▽	705 ▽
New sexually transmitted infectiions (STI)	2015	815	478 △	527 ▽	619 △	517 ▽	437 ▽
Teenage pregnancy, crude rate of < 18 yrs conceptions per 1,000 females aged 15–17 yrs	2014	22.8	16.2 ▽	19.7 ▽	18.7 ▽	16.2 ▽	16.7 △
Adults smoking, % aged 18+ yrs	2015	16.9	17.9 ▽	19.3 ▽	18.3 ▽	20.4 ▽	20.9 △
Smoking-related deaths, directly age-standardised rate per 100,000 people aged 35+ yrs	2012-14	274.8	272.7 ▽	355.9 △	300.1 ▽	282.4 △	235.9 ▽
Physically active adults, % achieving 150+ mins activity per week	2015	57	55.6 ▽	52.9 △	54.8 △	58.3 △	52.8 ▽

Key:

Significantly better than England	Similar to England	Significantly worse than England	▲▼ – significant change	△▽ – non-significant change	Not updated

Health indicator	Period	England	Derbyshire County	Bolsover	Chesterfield	Erewash	North East Derbyshire
Community							
Violent crime, crude rate per 1,000 persons		13.5	8.1 ▲	9.3 △	10.9 △	11.3 ▲	4.8 △
Antisocial behaviour (call for service), per 1,000 people*	2012	41	44.1	47.2	62.3	47.2	39.7
Total crime, per 1,000 people*	2012	67	44.4	50.8	57.3	56.3	28.9
Youth offending (first time entrants), per 100,000 people aged 10-17 yrs*	08/11-09/1	595	540	231.2	396.4	687.6	407.2
Dependency ratio (non-working/ working population)	2011	57.4	57.4	57.1	56.5	56.1	60.8
Lone parent households, %	2011	7.1	6.2	6.8	7	7.1	5.3
Children in care, per 10,000 people aged < 18 yrs*	2012	59	42.5	56.9	56.8	60.7	32.5
Lone pensioner households, %	2011	12.4	13	13.4	13.5	12.5	14
Environment							
Resident satisfaction with local area, % 16+ yrs*	2011		85.8	76.6	88.3	83.8	86.6
Greenspace, % of total land m2	2005			86	61	74	63.7
CO2 emissions, total per capita	2012		10.8	14.1	6.4	6.4	6.9
CO2 emissions from transport, total per capita	2012		2.5	4.5	1.4	2.3	2.4
Fluvial (river) flood risk, % of properties at risk	2011			1	3.5	28.7	1.5
Pluvial (rain) food risk, % of properties at risk	2011			4.7	5.2	4.2	2.5
Housing							
Excess winter deaths, ratio	Aug 12 - Jul	19.6	23.2 △	18.9 △	17.7 ▽	25.5 △	20.3 △
Owner occupied, %	2011	64.1	71.4	67.2	63.5	73	71.3
Rented (council or housing association), %	2011	17.7	15.3	18.2	23.1	13	20.4
Private or other rented, %	2011	16.8	12	13	12.4	12.9	7.4
Living rent free, %	2011	1.3	1.3	1.5	1	1.2	0.9
Average of monthly average house prices	2015	211175	151263	105488	134293	137318	158831
Council tax band D & above, % of dwellings*	2011	33.8	22.7	10.5	12.6	16.6	22
Overcrowded households, % of households	2011	8.7	3.7	3.3	4.7	3.7	3
Households without central heating, % of households	2011	2.7	2	1	1.3	3.2	1.1
Detached housing, % of households	2011	22.3	31.8	28.1	23.9	28.3	36.4
Transport and access							
Hip fracture in 65+ yrs, directly age & sex standardised rate of acute admissions per 100,000 people aged 65+	2014/15	571	576 ▽	592 ▽	703 △	542 ▽	638 △
Travel time to nearest GP, minutes	2011	10	10.2	9.6	9.2	9.3	10
No car or van, % of households	2011	25.8	20.1	23.4	27.1	22.4	18.7
Nutrition							
Obese children, % aged 10-11 yrs (Year 6)	2014/15	19.1	17 △	20.5 △	19.8 △	16.7 ▽	17.6 △
Excess weight in adults	2012-14	64.6	68.8	73.1	73.4	69.3	68.7
Starting breast feeding, % mothers initiating where status known	2014/15	74.3	73.4 △	69.1 ▽	78.7 △	69 ▽	-
Eligible & claiming free school meals, % compulsory school age*	2011-12	17.9	14.3	22.2	17.5	16.8	12
Proportion of the population meeting the recommended '5-a-day' on a 'usual day' (adults)	2015	52.3	53.3 ▼	44.5 ▽	57.2 △	48.6 ▽	50.6 ▽
Land use for cereals, % of farmed land	2010	28.1	12.6	49	33.6 —		23.4
Land use for arable crops excluding cereals, % of farmed land	2010	14.4	5.1	18.2	20.9 —		7
Land use as grassland, % of farmed land	2010	49.2	77.7	29.1	35.6	54.7	63.7

Health Impact Assessment Locality Profile 2016 update

Health indicator	Period	England	Derbyshire County	Bolsover	Chesterfield	Erewash	North East Derbyshire
Education							
GCSE achieved (5A*-C inc. Eng & Maths), % at Key Stage 4	2014/15	57.3	55.7	47.2	58.5	56.3	59
Pupils with statements of special educational needs, % compulsory school age*	2011-12	1.6	2	2.2	2.2	1.5	1.6
Adults with a degree, % aged 16+ yrs*	2011	27.4	23.7	15.8	21	20.7	22.2
Adults with no qualifications, % aged 16+ yrs*	2011	22.5	25.7	32.9	27.6	25.9	26.9
Foundation stage pupils achieving 78+, % 4-5 yrs*	2011-12	64	68.8	65.3	63	69.1	67.2
School absenteeism (primary), % missed sessions at compulsory school age*	2011-12	4.4	4.2	4.6	4.5	4.3	4.1
School absenteeism (secondary), % missed sessions at compulsory school age*	2011-12	5.9	6	6.1	5.7	6.3	6.1
Employment							
Children living in poverty (< 16 yrs in families receiving means-tested benefits & low income), %	2013	17.8	15.9 ▼	20.9 ▽	20.5 ▽	18 ▽	15 ▽
Unemployment rate (overall), % aged 16-64 yrs*	2015/16	73.9	77.7 △	73.5 △	74.3 △	84.2 △	77.3 △
Youth unemployment, % aged 16-24 yrs*		Sep-16	2.1 ▽	2.7 ▽	2.9 ▽	2.7 ▽	2.2 ▽
Long term unemployment, crude rate per 1,000 persons aged 16-24 yrs	2015	4.6	3.2 ▼	3.7 ▼	5 ▼	4.6 ▼	3.2 ▼
Fuel poverty, % households*	2014	10.6	9.8 ▼	9.9 ▼	9.6 ▼	9.4 ▼	8.7 ▼
Unpaid care provision, % people*	2011	10.2	12.1	12.7	12.6	11.2	13.3
Full time work (30+ hours), % people aged 16-74 in employment	2011	71	70.3	71.5	68.4	71.6	68.8
Part time work (< 30 hours), % people aged 16-74 in employment	2011	29	29.7	28.5	31.6	28.4	31.2
Employment in managers, directors & senior officials role, % people aged 16-74 in employment	2011	10.9	10.9	9.6	9.1	10	11.1
Employment in professional role, % people aged 16- 74 in employment	2011	17.5	15.1	10.9	14.5	13.6	14.3
Employment in associate professional or technical role, % people aged 16-74 in employment	2011	12.8	11	9.6	10.7	11.3	10.9
Employment in administrative or secretarial role, % people aged 16-74 in employment	2011	11.5	10.9	10.3	11.4	11.5	12.3
Employment in skilled trade (manual), % people aged 16-74 in employment	2011	11.4	13.3	13.4	12	13.7	13.6
Employment in caring, leisure or other services role, % people aged 16-74 in employment	2011	9.3	9.6	11	11.1	8.9	9.7
Employment in sales or customer service role, % people aged 16-74 in employment	2011	8.4	7.9	8.2	9.5	9	8.4
Employment in process, plant or machine operative (manual) role, % people aged 16-74 in employment	2011	7.2	9.6	11.4	9.1	9.8	8.9
Employment in elementary (manual) occupation, % people aged 16-74 in employment	2011	11.1	11.7	15.7	12.5	12	10.8
Economy							
Economically active (available to work), % people aged 17-74 yrs*	2011	69.9	69.9	66.9	67.9	71.5	68
Not in education, employment or training (NEET), % 16-18 yrs*	2015	4.2	3.6 ▽				
Position in agriculture, forestry or fishing industry, % people aged 16-74 in employment	2011	0.8	1	0.6	0.2	0.3	0.9
Position in mining, quarrying or utilities industry, % people aged 16-74 in employment	2011	1.4	1.9	2.4	1.6	1.8	1.6
Position in manufacturing industry, % people aged 16-74 in employment	2011	8.8	14.9	15.2	11.4	16.3	13.4
Position in construction industry, % people aged 16- 74 in employment	2011	7.7	8.5	8.8	7.7	8.7	9.6
Position in wholesale or retail industry, % people aged 16-74 in employment	2011	15.9	16.6	19.4	18.1	17.8	17.3
Position in business services industry, % people aged 16-74 in employment	2011	32.1	25.1	22.6	25.4	25.6	24.5
Position in public services industry, % people aged 16-74 in employment	2011	28.2	27.5	26.7	31.1	25.5	28.2

Key:-

Significantly better than England	Similar to England	Significantly worse than England	▲▼ – significant change	△▽ – non-significant change	Not updated

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Appendix C DCC Property

List of Derbyshire County Council Property affected by HS2.

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Derbyshire County Council Land affected by HS2 proposals published November 2016.

Properties within the affected area

Land within protected safeguarded area and land subject to subsequent Part 1 claims for noise, vibration, pollution etc.

NAME	ADDRESS	POSTCODE	AREA (m2)	PRIMARY USE
Former Clowne Branch Line	Woodthorpe to Creswell	-	170,874.48	Reclaimed Land
Markham Vale Project - Development Land North	Erin Road, Poolsbrook, Chesterfield	-	332,734.46	Reclaimed Land
Markham Vale Project - Ancillary Land	Markham Lane, Markham Vale, Chesterfield	S44 5HY	2,616,026.87	Reclaimed Land
Hartington Industrial Estate	Deepdale Close, Staveley, Chesterfield	S43 3YF	5,727.59	Industrial Estate
Trans Pennine Trail	Staveley to Killamarsh	-	227,957.28	Trail
Land at Mill Lane, Shuttlewood	Mill Lane, Shuttlewood, Chesterfield	S44 6AW	2,354.27	Highways
Peter Fidler Nature Reserve, Bolsover	Chesterfield Road, Bolsover, Chesterfield	S44 6BS	245,008.16	Nature Reserve
Former Silverhill Colliery Branch Line	Newton to Woodend, Tibshelf	-	118,330.61	Reclaimed Land
Former 'B' Winning Colliery, Blackwell	Berristow Lane, Blackwell, Alfreton	DE55 2FH	115,079.24	Land
Five Pits Trail and Associated Land	Holmewood & Grassmoor to Blackwell	-	409,734.90	Trail
Former Morton Colliery Reclamation Land	Main Road, Morton, Alfreton	DE55 6HL	198,042.07	Reclaimed Land
Former Arkwright-Staveley Branch Line	Arkwright to Staveley	-	180,505.25	Reclaimed Land

Properties outside the affected area, but may still be affected

Derbyshire County Council assets close to the HS2 path that could be indirectly affected.

NAME	ADDRESS	POSTCODE	AREA (m2)	PRIMARY USE
Barlborough Primary School	High Street, Barlborough, Chesterfield	S43 4ET	7,214.76	Primary School
Barlborough Resource Centre	School House, Ward Lane, Barlborough, Chesterfield	S43 4JD	433.5858	Dwelling
Poolsbrook Primary Academy	Cottage Close, Poolsbrook, Chesterfield	S43 3LF	5,014.30	Primary School
Former Ireland Colliery Industrial Land	Adelphi Way, Staveley, Chesterfield	S43 3GW	3,252.91	Reclaimed Land
Speedwell Industrial Estate	Telford Crescent, Staveley, Chesterfield	S43 3PF	2,552.08	Industrial Estate
Leyfield Family Support Centre, Staveley (Closed)	Leyfield House, Lowgates, Staveley, Chesterfield	S43 3TR	1,665.88	Family Support Centre
Staveley Library	Hall Lane, Staveley, Chesterfield, Chesterfield	S43 3TP	1,570.19	Library
Brockley Primary School	Clowne Road, Shuttlewood, Chesterfield	S44 6AF	18,665.10	Primary School
Stockley Trail	Carr Vale to Glapwell	-	98,715.23	Trail
Newton Primary School	Hall Lane, Newton, Alfreton	DE55 5TL	6,115.69	Primary School
Morton Primary School	Main Road, Morton, Alfreton	DE55 6HH	11,433.92	Primary School
Stonebroom Industrial Estate	Stonebroom, Alfreton	DE55 6LQ	9,572.59	Industrial Estate
Land to the rear of Former Heath School, Heath	Mansfield Road, Heath, Chesterfield	S445SB	34,109.52	Land
Woodthorpe CE (C) Primary School	Seymour Lane, Mastin Moor, Chesterfield	S43 3DA	5,987.62	Primary School
Bolsover Storage Depot	Bolsover Business Park, Intake Road, Bolsover, Chesterfield	S44 6BB	1,458.49	Depot

Appendix D Overhead Power lines

HS2-AEC-XX-DR-SK-00001 Sketch Overhead Power

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CH32850
HS2 APPROXIMATELY 13M ABOVE M1
AT THIS LOCATION
ADD 5M ELECTRIFICATION EQUALS 18M.
VISIBLE FROM SUTTON SCARSDALE AND
BOLSOVER.

CH 31100
HS2 IN 9.2M CUTTING,
NO IMPACT ON CABLES
BUT PYLON COULD BE
UNDERMINED BY HS2 CUTTING
SLOPE.

CH 26700
HS2 CUT + COVER
TUNNEL UNDER M1
NO IMPACT ON
O/HCABLES
BUT PYLONS MAY BE
UNDERMINED BY HS2
CUTTING SLOPE.

Drawing no: C321-MMD-RT

Drawing no: C321-MMD-RT-DPP-120-581307

Drawing no: C321-MMD-RT-DPP-120-581306

Drawing no: C321-MMD-RT-DPP-120-581305

Drawing no: C321-MMD-RT-DPP-120-581304

CH38800
HS2 5.8M ABOVE GROUND LEVEL,
ADD 5M FOR ELECTRIFICATION EQUALS
10.8M
PYLONS IN FIELDS NEAR MOTORWAY.

SKETCH HS2-AEC-SK-001
OCT 2016

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Appendix E Greenways & PRoW

HS2 Existing and Proposed Greenways, Public Rights of Way and Countryside Sites and potential opportunities

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HS2 Preferred Route – Leg 2b Crewe to Leeds - Derbyshire

HS2 - Existing and Proposed Greenways, Public Rights of Way and Countryside Sites and potential opportunities

The following notes identify the vulnerable user crossing points and Derbyshire County Council (DCC) countryside sites affected by the proposed alignment of the HS2 preferred route 2b through Derbyshire. The existing or proposed multi-user routes and cycle routes (Greenways) are highlighted in green; Public Rights of Way are listed in white; countryside sites affected that are not Greenways are highlighted in red. This is not a definitive list and other proposed routes may be found. Additional public rights of way crossings may also exist. The grid references show the exact location at the time of writing. The proposed Greenways may alter position due to changing opportunities but where identified the purpose and connection will be described in the comments box.

In Derbyshire we are developing a well connected network of traffic free routes for disabled access, walking, cycling, people with pushchairs, and where appropriate for horse riders. These routes aim to link communities together and to provide access opportunities between settlements and to places of employment, education, commerce, leisure and countryside.

We welcome the environmental design aims set out in the HS2 Information Paper E5: Roads and Public Rights of Way with regard to minimising the effect of severance on local communities and maintaining access during construction and operation. Although there is reference to rural lanes and public rights of way being used by horse riders, we would like to see paragraphs 1.2.1 and 1.2.3 expanded to make specific reference to equestrian access and links.

It is essential that those multi user Greenways which have already been established are protected and that consideration is also given to those which are proposed in order to enhance this network as a means of achieving the aim "*to promote sustainable transport choices for all society*". There is a huge opportunity to improve and create new links within the corridor of the HS2 line and overcome both natural and physical barriers. It is essential that the HS2 line does not create another physical barrier, but accommodates those routes listed below, as well as maximising the potential for further route provision or improvement to cater for as many different users as possible.

We note the intention to work with highway authorities as part of the detailed design process and look forward to early discussions about safeguarding the multi user Greenway network and the opportunities to improve its connectivity - the initial point of contact is our Countryside Access Improvement Officer, Gill Millward gill.millward@derbyshire.gov.uk . With regard to any Public Rights of Way which are affected by the Proposed Scheme, please contact the County Council's Rights of Way Officer, Peter White PeterJ.White@derbyshire.gov.uk as soon as the necessary detail is available. This will allow the proposed design for crossing points,

the need for any temporary or permanent route realignments or scope to upgrade individual paths etc to be considered at an early stage in order to maximise the accessibility of the network.

There appear to be 27 Greenways, 45 Public Footpaths, 6 Public Bridleways and 2 of our Countryside Sites (Peter Fidler Nature Reserve and Blackwell Plantation) affected by the proposed alignment of the HS2 preferred route 2b through Derbyshire. We also own land in connection with the Trans Pennine Trail, Blackwell Trail, Silverhill Trail, Clowne Branch Line, Bolsover Branch Line and Oxcroft Branch Line. Details of the individual routes and sites affected are listed in the table below.

Existing and Proposed Greenway Routes + PROW

Grid Reference	HS2 Section Reference	Name of Site / Path	Existing / Proposed	Location	Ownership/Status	Comments
SK 4758 7935	HSL 13B Cutting	Killamarsh to Rotherham	Proposed Greenway + PROW	Barlborough Parish Park Brook	Barlborough FP25	Proposed wider project to create cycling and bridleway links between Sheffield, Rotherham and Derbyshire
SK 4750 7900	HSL 13B Embankment	Public Footpath	PROW	Barlborough Parish	Barlborough FP28	Existing public footpath – no greenway proposed
SK 4712 7767	HSL 13B Embankment	Public Footpath	PROW	Barlborough Parish	Barlborough FP6	Existing public footpath Spinkhill to Barlborough at M1 Motorway underpass
SK 4711 7767	Staveley Northbound Embankment	Public Footpath	PROW	Barlborough Parish	Barlborough FP6	Existing public footpath Spinkhill to Barlborough at M1 underpass
SK 4697 7714	HSL 13B Cutting	Public Footpath	PROW	Barlborough Parish	Barlborough FP36 on Westfield Lane	Existing public footpath leading to Sheffield Road and bridge across M1 to connect severed community to Barlborough
SK 4696 7713	Staveley Northbound Cutting	Public Footpath	PROW	Barlborough Parish	Barlborough FP36 on Westfield Lane	Existing public footpath leading to Sheffield Road and bridge across Motorway to connect severed community to Barlborough

Grid Reference	HS2 Section Reference	Name of Site / Path	Existing / Proposed	Location	Ownership/Status	Comments
SK 4667 7609	HSL 13B Cutting	Staveley to Barlborough Greenway	Proposed Greenway + PROW	Barlborough Parish Wood Lane Bridleway	Barlborough BW12 A619 Worksop Road	Greenway requires off road connection at this point from Junction of bridleway to junction of Slayley Lane. Will provide access to employment area
SK 4666 7609	Staveley Northbound Cutting	Staveley to Barlborough Greenway	Proposed Greenway + PROW	Barlborough Parish Wood Lane Bridleway	Barlborough BW12 A619 Worksop Road	Greenway requires off road connection at this point from Junction of bridleway to junction of Slayley Lane. Will provide access to employment area
SK 4638 7490	HSL 13B Embankment	Clowne Branch Line	Proposed Greenway	Staveley Parish	Derbyshire County Council	Proposed strategic Key Cycle Network
SK 4619 7481	Staveley Northbound At grade	Clowne Branch Line	Proposed Greenway	Staveley Parish	Derbyshire County Council	Proposed strategic Key Cycle Network along HS2 Staveley route alignment
SK 4588 7460	Staveley Northbound At grade	Public Footpath	PROW	Staveley Parish	Staveley FP28	Connecting footpath between Woodthorpe and Clowne crossing the motorway
SK 4579 7450	Staveley Northbound At grade	Public Footpath	PROW	Staveley Parish	Staveley FP29	Connecting footpath between Woodthorpe and Woodside, crossing the motorway
SK 4564 7428	Staveley Northbound At grade	Clowne Branch Line Seymour Link	Built link & Proposed Greenway	Staveley Parish	Derbyshire County Council owned land	HS2 alignment uses western section of proposed greenway and crosses junction of new ramp carrying built greenway to Woodthorpe

Grid Reference	HS2 Section Reference	Name of Site / Path	Existing / Proposed	Location	Ownership/Status	Comments
SK 4532 7380	Staveley Northbound Embankment	Seymour Link Road and Greenway	Built	Old Bolsover Parish	Derbyshire County Council land	HS2 alignment through MEGZ area where essential Key Cycle Network connectivity must be ensured to connect Clowne Branch Line to Trans Pennine Trail at Poolsbrook Country Park
SK 4496 7356	Staveley Northbound Embankment	Public Footpath	PROW	Old Bolsover Parish	Bolsover FP64	Footpath connecting 2 areas of MEGZ land
SK 4430 7391	Staveley Northbound Embankment	Public Footpath Proposed multi user upgrade	PROW	Staveley Parish	Staveley FP35	Multi user crossing required for Key Cycle Network and bridleway connectivity
SK 4416 7401	Staveley Northbound Embankment	Public Footpath Proposed multi user upgrade	PROW	Staveley Parish	Staveley FP30	Multi user crossing required for Key Cycle Network and bridleway connectivity
SK 4387 7448	Staveley Northbound At grade	Public Footpath	PROW	Staveley Parish	Staveley FP37	Connecting footpath between residential areas in Staveley
SK 4390 7469	Staveley Northbound Cutting	Public Footpath	PROW	Staveley Parish	Staveley FP66	Connecting footpath between residential areas in Staveley
SK 4376 7528	Staveley Northbound Cutting	Trans Pennine Trail	Built PROW	Staveley Parish	Licence holding	DCC constructed Lowgates ramps in 2003 to provide multi user access across mainline railway between Chesterfield Canal and Beighton-Staveley Trail, as the Trans Pennine Trail Chesterfield Spur. Forms part of Derbyshire's Key Cycle Network & should be retained

Grid Reference	HS2 Section Reference	Name of Site / Path	Existing / Proposed	Location	Ownership/Status	Comments
SK 4367 7535	Staveley Northbound Cutting	Trans Pennine Trail Beighton - Staveley Trail	Built	Staveley Parish	Derbyshire County Council Countryside Site	HS2 alignment borders DCC Countryside Service land that may be affected
SK 4635 7470	HSL 13B Embankment	Public Footpath	PROW	Staveley Parish	Staveley FP28	Existing footpath leads to M1 underpass
SK 4631 7440	HSL 13B Viaduct	Oxcroft Branch Line	Proposed Greenway	Staveley Parish	Derbyshire County Council – MEGZ??	Proposed greenway following former Oxcroft railway line
SK 4625 7332	HSL 13B Cutting	Public Footpath	PROW	Old Bolsover Parish	Bolsover FP35	Public Footpath through Woodside Farm to Shuttlewood Common
SK 4620 7241	HSL 13B Cutting	Public Footpath	PROW	Old Bolsover Parish	Old Bolsover FP34	Links communities at Bolsover Woodhouse
SK 4601 7138	HSL 13B Embankment	Bolsover Branch Line	Proposed Greenway	Old Bolsover Parish	Derbyshire County Council – MEGZ??	Proposed strategic Key Cycle Network greenway through development to Bolsover
SK 4586 7085	HSL 13B Embankment	Bolsover to Poolsbrook	Proposed Greenway	Sutton cum Duckmanton Parish	A632 – parallel to carriageway	Route to connect Stockley Trail through MEGZ to Poolsbrook
SK 4580 7065	HSL 13B Viaduct	Public Footpath	PROW	Sutton cum Duckmanton Parish	Sutton cum Duckmanton FP18	Footpath connects A632 to Doe Lea Nature Reserve via Mill Farm which further south becomes the proposed greenway route to Arkwright
SK 4576 7051	HSL 13B Viaduct	Peter Fidler Reserve	Existing	Sutton cum Duckmanton Parish	Derbyshire Countryside Site	HS2 on proposed viaduct inside western boundary of reserve and across the former railway embankment on southern boundary

Grid Reference	HS2 Section Reference	Name of Site / Path	Existing / Proposed	Location	Ownership/Status	Comments
SK 4571 7036	HSL 13B Viaduct	Chesterfield to Bolsover Greenway	Proposed Greenway	Sutton cum Duckmanton Parish	Derbyshire County Council Countryside Site	Route crosses the proposed Chesterfield to Bolsover Greenway at the Peter Fidler Reserve just west of the Stockley Trail. This is Key Cycle Network
SK 4546 6942	HSL 13B Embankment	Public Footpath	PROW	Sutton cum Duckmanton Parish	Sutton cum Duckmanton FP19	Community link between Sutton Scarsdale, Carr Vale and Bolsover
SK 4522 6765	HSL 13B Embankment	Public Footpath	PROW	Heath & Holmewood	Heath & Holmewood FP1	Community link Heath to M1 underpass
SK 45196692	HSL 13B Cut and cover tunnel	Holmewood to Doe Lea Greenway	Proposed	Heath & Holmewood Parish	Highway underpass	Connects public footpaths proposed for upgrading to Greenway between Five Pits Trail and Glapwell. DCC Countryside Site at Doe Lea / Bramley Vale
SK 4521 6535	HSL 13B Embankment	Public Footpath	PROW	Ault Hucknall Parish	Ault Hucknall FP37	Connecting footpath between Stainsby Village and Stainsby Mill (National Trust property) either side of motorway
SK 4515 6406	HSL 13B Embankment	Public Footpath	PROW	Ault Hucknall Parish	Ault Hucknall FP17	Connecting footpath between Astwith and Hardwick Hall (National Trust property)
SK 4512 6382	HSL 13B At Grade	Public Footpath	PROW	Ault Hucknall Parish	Ault Hucknall FP18	Connecting footpath between Hardstoft and Hardwick Hall (National Trust property)
SK 4502 6294	HSL 13B At Grade	Public Bridleway	PROW	Tibshelf Parish	Tibshelf BW31	Connecting public bridleway between Tibshelf and Hardwick Hall (National Trust property)

Grid Reference	HS2 Section Reference	Name of Site / Path	Existing / Proposed	Location	Ownership/Status	Comments
SK 4500 6243	HSL 13B Cutting	Public Footpath	PROW	Tibshelf Parish	Tibshelf FP32	Connecting footpath From BW31 above (Biggin Lane) to motorway underpass
SK 4499 6210	HSL 13B Cutting	Public Footpath	PROW	Tibshelf Parish	Tibshelf FP33	Connecting footpath to FP32 above to motorway underpass
SK 4504 6124	HSL 13B Cutting	Public Bridleway	PROW	Tibshelf Parish	Tibshelf BW21	Junction of Mansfield Road and Sawpit Lane – bridleway connects to Five Pits Trail
SK 4517 6041	HSL 13B Cutting	Public Footpath	PROW	Tibshelf Parish	Tibshelf FP46	Corner of Tibshelf Services
SK 4524 6008	HSL 13A Cutting	Public Footpath	PROW	Blackwell Parish	Blackwell FP13	Connecting footpath to Silverhill Greenway
SK 4527 5995	HSL 13A Cutting	Silverhill Greenway	Existing	Blackwell Parish (East of M1 Motorway)	Derbyshire County Council Countryside Site	HS2 crosses a major existing Greenway to be dedicated as public bridleway. This route is part of the Derbyshire Key Cycle Network and is a significant cross county boundary route with Nottinghamshire
SK 4532 5979	HSL 13A Embankment	Public Footpath	PROW	Blackwell Parish	Blackwell FP12	Connecting footpath in Blackwell Parish
SK 4539 5954	HSL 13A Embankment	Public Footpath	PROW	Blackwell Parish	Blackwell FP10	Connecting footpath between Newton and Silverhill Greenway
SK 4554 5910	HSL 13A Embankment	Public Footpath	PROW	Blackwell Parish	Blackwell FP36	Connecting footpath between Newton in Derbyshire and Huthwaite in Nottinghamshire
SK 4583 5839	HSL 13A Embankment	Public Footpath	PRW	Blackwell Parish	Blackwell FP6	Connecting footpath between Hilcote and Huthwaite

Grid Reference	HS2 Section Reference	Name of Site / Path	Existing / Proposed	Location	Ownership/Status	Comments
SK 4601 5800	HSL 13A Embankment	Blackwell Trail	Existing	Blackwell Parish	Derbyshire Countryside Site	HS2 crosses a major existing Greenway to be dedicated as public bridleway. This route is part of the Derbyshire Key Cycle Network and forms a significant cross county boundary link and connects to the Greenways of Nottinghamshire
SK 4612 5774	HSL 13A Embankment	Blackwell Trail Link	Proposed	South Normanton Parish	Private ?	Proposed connection from Blackwell Trail to Huthwaite industrial estates in Nottinghamshire
SK 4647 5664	HSL 13A Embankment	Public Footpath	PROW	Pinxton Parish	Pinxton FP1	Connecting footpath to East Midlands Designer Outlet (McArthur Glen)
SK 4647 5664	HSL 15A	Public Footpath	PROW	Pinxton Parish	Pinxton FP1	Connecting footpath to East Midlands Designer Outlet (McArthur Glen)
SK 4603 5773	HSL 15A Embankment	Blackwell Trail Link	Proposed	South Normanton Parish	Private ? Former	Proposed connection from Blackwell Trail to Huthwaite industrial estates in Notts.
SK 4591 5787	HSL 15A Viaduct	Blackwell Trail	Existing	Blackwell Parish	Derbyshire Countryside Site	HS2 crosses a major existing Greenway to be dedicated as public bridleway. This route is part of the Derbyshire Key Cycle Network and forms a significant cross county boundary link and connects to the Greenways of Nottinghamshire

Grid Reference	HS2 Section Reference	Name of Site / Path	Existing / Proposed	Location	Ownership/Status	Comments
SK 4561 5817	HSL 15A Embankment	Public Footpath at Blackwell Plantation	PROW	Blackwell Parish	Blackwell FP6 and Derbyshire County Council Countryside Site	The Chesterfield Spur route crosses DCC plantation at Hilcote and connecting footpath from Hilcote to Huthwaite Industrial Estate
SK 4514 5846	HSL 15A Cutting	Public Footpath	PROW	Blackwell Parish	Blackwell FP8	Connecting footpath at Hilcote
SK 4311 5935	HSL 15A Cutting	Silverhill Greenway	Existing	Blackwell Parish	Derbyshire County Council Countryside Site	HS2 crosses a major existing Greenway to be dedicated as public bridleway. This route is part of the Derbyshire Key Cycle Network and is a significant cross county boundary route with Nottinghamshire
SK 4304 5938	HSL 15A Cutting	Public Bridleway	PROW	Tibshelf Parish	Tibshelf BW5	Connecting Public Bridleway to Silverhill Greenway, Tibshelf and Five Pits Trail
SK 4087 6127	HSL 15A Embankment	Public Bridleway	PROW	Morton Parish	Morton BW8	Connecting Public Bridleway from Evershill Lane to Padley Wood Lane across mainline railway
SK 4072 6207	HSL 15A At Grade	Public Footpath	PROW	Pilsley (NE)	Pilsley (NE) FP7	Connecting Public Footpath between the communities of Stretton and Pilsley across the mainline railway

Grid Reference	HS2 Section Reference	Name of Site / Path	Existing / Proposed	Location	Ownership/Status	Comments
Erewash District						
SK4830 3829	HSL 13A Viaduct	Nutbrook Trail Erewash Valley Trail Erewash Canal NCN67	Existing	Stanton By Dale Parish Stanton Gate	Canal and River Trust Towpath & public footpath Stanton By Dale FP 21	HS2 crosses a significant existing Greenway, resurfaced by British Waterways (now the Canal and River Trust). This route will provide a vital connection to the major mixed use development site of the former Stanton Ironworks, which will provide both employment areas and a sizable new neighbourhood. An opportunity exists to create a connection from Stanton Gate along the former railway sidings directly into the development area. The route also forms part of the National Cycle Network and Erewash Valley Trail, a locally important loop route connecting many communities between Derbyshire and Nottinghamshire
SK 4822 3764	HSL 12 Viaduct	Public Footpath	PROW	Sandiacre Parish	Sandiacre FP6	Cross county boundary connecting footpaths between Sandiacre and Stapleford
SK 4822 3759	HSL 12 Viaduct	Public Footpath	PROW	Sandiacre Parish	Sandiacre FP24	Cross county boundary connecting footpaths between Sandiacre and Stapleford

Grid Reference	HS2 Section Reference	Name of Site / Path	Existing / Proposed	Location	Ownership/Status	Comments
SK 4822 3757	HSL 12 Viaduct	Public Footpath	PROW	Sandiacre Parish	Sandiacre FP5	Cross county boundary connecting footpaths between Sandiacre and Stapleford
SK 4821 3734	HSL 12 Viaduct	Public Footpath	PROW	Sandiacre Parish	Sandiacre FP7	Connecting footpath from Ilkeston road to canal crossing and connecting cross county boundary paths
SK 4821 3726	HSL 12 Viaduct	Nutbrook Trail Erewash Valley Trail Erewash Canal NCN67	Existing	Sandiacre Parish	Canal and River Trust Canal and towpath Sandiacre FP19	As above plus…It is a desire to upgrade a route between north Sandiacre and Stapleford. Both physical and natural barriers have made this difficult, as the preferred route Public Footpath Sandiacre 16 crosses the Erewash Canal, the live railway line and River Erewash to Mill Road, Stapleford in Notts. An improved community link here would be a valuable asset to reduce community severance
SK 4914 3432	HSL 09B Viaduct	Public Footpath	PROW	Long Eaton	Long Eaton FP4	Stepped footbridge across mainline railway could be improved to form multi user ramped access across live line to reduce community severance. FP runs between mainline and proposed HS2 alignment to rear of properties on Bonsall Street
SK 4946 3357	HSL 09B Viaduct	Public Footpath	PROW	Long Eaton	Long Eaton FP6	Connecting footpath between Station Street and Cross Street

Grid Reference	HS2 Section Reference	Name of Site / Path	Existing / Proposed	Location	Ownership/Status	Comments
SK 4952 3346	HSL 09B Viaduct	NCN 6 Derby to Nottingham	Existing	Long Eaton Station Road	Highway	Existing National Cycle Network route – Derby to Nottingham
SK 4952 3345	HSL 09B Viaduct	Public Footpath Proposed Long Eaton Cycle route	PROW	Long Eaton	Long Eaton FP72	Proposed upgrade of existing footpath to allow cycling to employment area between Station Road and Meadow Lane Industrial Estate
SK 4966 3313	HSL 09B Viaduct	Proposed Cycle route along Oakleys Road	Highway	Long Eaton	Highways	Proposed connection for walking and cycling to Erewash Canal / NCN67 and Long Eaton School
SK 4985 3142	HSL 09B Viaduct	Trent Valley Greenway / Cranfleet Canal and Towpath	PROW	Long Eaton Cranfleet Canal	Canal and River Trust Towpath & Long Eaton FP12	HS2 alignment crosses the western edge of the Attenborough Nature Reserve, Cranfleet Canal and the River Trent. It crosses the Greenway at a significant location between Trent Lock and Attenborough Nature Reserve. The Trent Valley Greenway is part of Derbyshire's Key Cycle Network delivering a traffic free route between Long Eaton and Nottingham.

Appendix F Coalite site

Coalite planning application (21-2-14)
Drawing 14_00145_OL- _4.1_-_MASTERPLAN-1579256

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General Notes

All site dimensions shall be verified by the Contractor on site prior to commencing any works.

Do not scale from this drawing.

Only work to written dimensions

INDICATIVE ONLY

PLOTS 1, 2 & 3 - Residential	sqm	sqft	No.
Residential Dwellings			795
Neighbourhood Retail	1,110	11,948	
Site Area (exc. SUDs & GCN habitat)	21.31ha	52.66 acres	

PLOT 4a - Industrial	sqm	sqft
B2 / B8 Industrial	38,935	419,096
Site Area	10.51ha	25.97 acres

PLOT 4b - Energy	sqm	sqft
AD Facility	5,265	56,672
Site Area	0.58ha	1.43 acres

PLOT 5 - Transport Hub	sqm	sqft	No.
Amenity Facilities	520	5,597	
Trailer Parking Spaces			141
Site Area	3.36ha	8.29 acres	

PLOT 6 &7 - Open Storage	sqm	sqft
B2 / B8 Industrial	16,457	177,143
Open Storage Area	19,465	209,519
Site Area	9.70ha	23.99 acres

PLOT 8 - Industrial	sqm	sqft
B2 / B8 Industrial	12,958	139,480
Museum / Visitor Centre	1,095	11,787
Site Area	3.82ha	9.44 acres

Revision

Scale	1:2500@A1
Status	PL
Drawn by	MQ
Date	Feb 2014

Client
Bolsover Land Limited

Project
Former Coalite Works, Bolsover

Drawing Description
Illustrative Masterplan

Drawing No. **11078_PL03** Rev.

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Architecture | Master Planning | Project Management

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Appendix G Rail Summary

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Classic Rail Impact

Staveley IMD and link to HS2

The assumption is that HS2 Ltd will construct the new link into the IMD as double track, but some of the redundant line was built as single track. From the diversionary route that goes from the Midland Main Line at Chesterfield via Barrow Hill and Beighton to Sheffield the line is double track throughout. However, the former link from Seymour Junction Sidings at Markham under the M1 to the former Oxcroft Coal Disposal Point was built as single track. Some further clarity on HS2 Ltd's plans for this section of the route would be helpful.

HS2 Ltd's plans show a length of realignment of the A619 where it crosses the new link. This will be needed to replace the existing bridge to current standards. The bridge over the railway will have tight headroom clearances. It is assumed that a bridge constructed to the latest standards would ensure headroom for maintenance vehicles built to continental gauge. This section is still officially part of Network Rail's infrastructure. To establish the necessary clearances either the bridge will need to be re-built or the track will need to be lowered.

The B6053 bridge at Staveley over this route was rebuilt in recent years and should have sufficient clearance from the existing track. HS2 Ltd's plans currently show incorrect levels for this bridge.

M18/Eastern route.

There are no significant issues in principle with the new route as it gives a much better HS2 offer southbound for north Derbyshire residents.

Toton Connection

The proposed new link at Clay Cross will have a significant impact on the area, not least by raising the mainline by 12m to enable a grade separated interchange. An alternative option may be to provide a connection between HS2 and the Erewash Valley Line at Toton. A link at Toton may have more operational benefits than a separate HS2 spur to the Erewash Valley Line at Stonebroom, and may offer cost savings. Further information with indicative costs would be helpful in understanding the viability of this option.

The County Council understands that HS2 will fund the electrification of classic lines where this is not currently programmed, but more clarity on the scale and programming of this work is needed. The funding for planned electrification of the affected sections of the classic rail network may need to be brought forward.

By 2023, the Midland Main Line should be electrified up to Sheffield via Derby. However the Erewash Valley Line from Nottingham via Wollaton to Clay Cross/Hasland is not currently included in any programme. The new spur and the northern section of the Erewash Valley Line from Stonebroom to Clay Cross will need to be electrified leaving a gap on the classic line between Stonebroom and Nottingham. There is a case for the whole of the Erewash Valley Line to be electrified from Nottingham-Sheffield.

Capacity Constraints

In general terms, the new route has less impact on the classic network, but this is not the case in Derbyshire. The Erewash Valley Line was originally mostly 4 track from Toton north to Pye Bridge and mostly double track from there to Clay Cross where the line was again 4 track to join the 4 track Midland Main Line. In 2008 the route from Toton to Pye Bridge was reduced to 3 track with sections of reversible working. North of Pye Bridge the route remained double track but the Clay Cross junction has been relocated north to Hasland where a 70 mph high speed junction is

located. If necessary it should be possible to reinstate the 4 tracks between Toton and Pye Bridge as the formation is still intact.

The current passenger service on the Erewash Valley Line consists of 2 trains per hour (tph) 30 minutes apart. This may increase to 3 tph in the next 5-10 years if passenger growth continues. Freight traffic has reduced, but the route has been cleared for intermodal traffic. Aggregate traffic from Peak District quarries to southern England remains buoyant. The line has a speed limit of 80 mph. This may need to be increased to reduce journey times although all passenger trains have at least one station stop along the route. Therefore, the Erewash Valley Line could take the extra two HS2 tph if at least one train replaces a current Midland Main Line London express. This would free capacity between Chesterfield and Derby for more services. Chesterfield is likely to get a net increase of at least one London train per hour overall assuming both HS2 trains stop there.

However, for this to work, the link at Stonebroom may need to be a grade separated junction. The junction at Hasland may also need to be part grade separated for capacity/route conflict reasons. A net increase in trains at Chesterfield by 1 tph each way could be accommodated. However there will be capacity issues north of Chesterfield at Dore where the Midland Main Line route is met by the Hope Valley route. The 1980s capacity reduction at Dore is planned to be reinstated. The former 4 tracks from Dore into Sheffield, now reduced to 2, may also need to be reinstated following recent growth.

The possibility of a new station at Clay Cross would need further study, but there is limited time in current train schedules to stop.

The proposed strategy needs to consider how these additional trains can be effectively fitted in if all these passenger service proposals materialise and rail freight grows in line with industry expectations.

Operation of Sheffield loop.

If the ‘loop’ north of Sheffield is completed and the Birmingham - Leeds services are diverted, there is a potentially significant capacity issue north of Chesterfield. Grade separation of the Hasland junction may need to be considered. Growth in freight traffic could add to the pressures.
k.

Appendix H Staveley

SK9213-09-01-17-1
Alignment of Crossing Beneath Bolsover Branch Mineral Railway Line, Staveley

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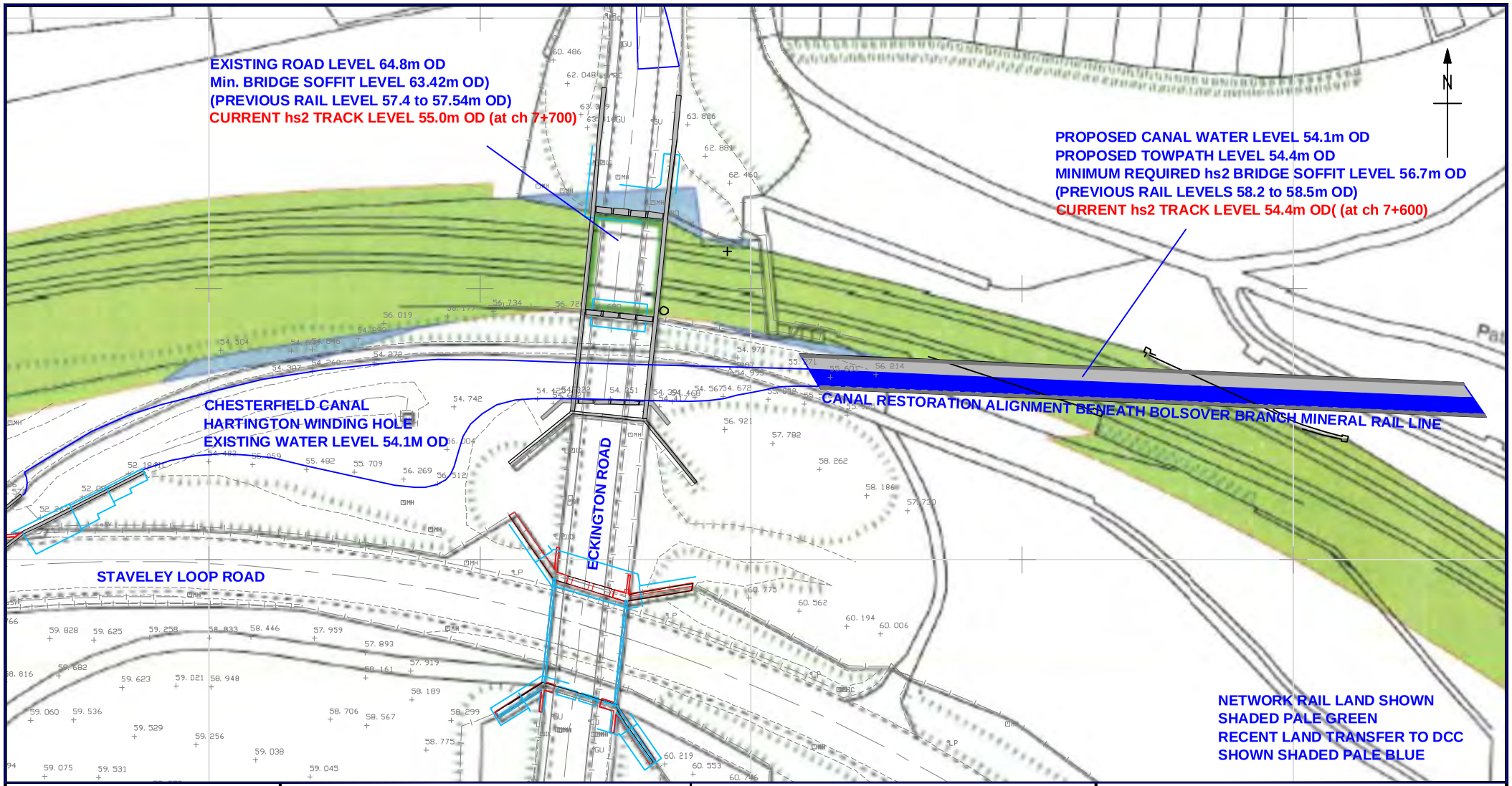

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Last Saved: Fri 15-Jul-2016 - 09:17AM

DERBYSHIRE County Council
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Mike Ashworth
Strategic Director - Economy, Transport and Communities.

AMENDMENT DETAILS	BY	CHKD	APVD	DATE	NO.

Land Reclamation Section
Highways Division

bsi ISO 9001 Quality Management FM641223 / FM641224

Print Date 15 Jul, 2016 - 9:17am

DRAWN	CHECKED	APPROVED
R S JONES	C J BEECH	C J BEECH
Date 14-07-16	Date 14-07-16	Date 14-07-16

PROJECT TITLE
RESTORATION OF CHESTERFIELD CANAL (NEXT NAVIGATION WEST)

DRAWING TITLE
ALIGNMENT OF CROSSING BENEATH BOLSOVER BRANCH MINERAL RAILWAY LINE, STAVELEY

DCE Project Reference No. 9213-20

Drawing Number 9213-20-14-07-2016-1

SCALE 1:1000

At A4 (210 x 297mm)

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Appendix I Markham Vale Plan

33A1255c (Impact of hs2 at Markham Vale)

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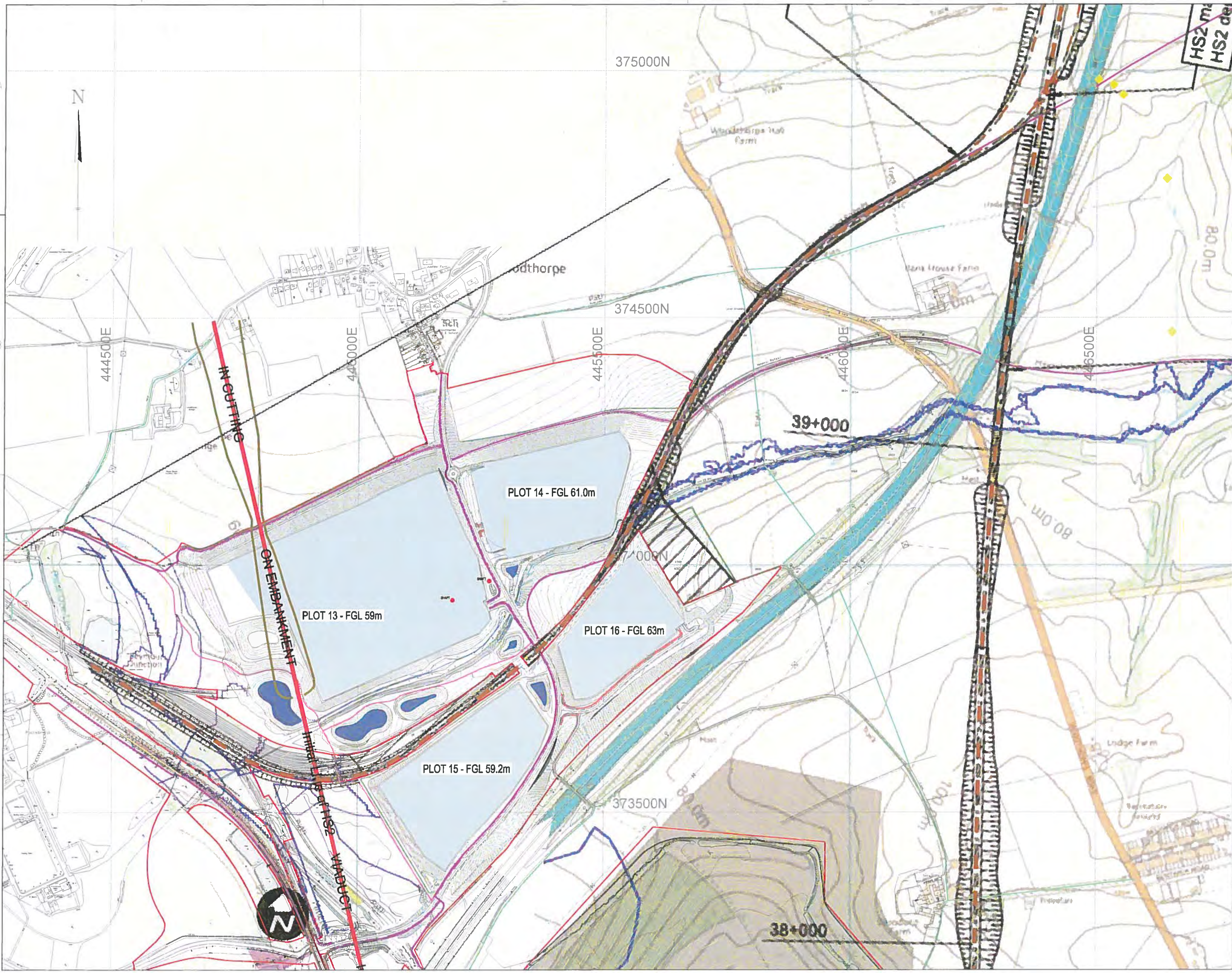

KEY

PROPOSED CONTOURS
Normal Contours
Prominent Contours
Contour Labels
EXISTING CONTOURS
Normal Contours
Prominent Contours
Contour Labels
Re-inforced Earth Retaining Wall

NEW MULTI-USER TRAILS (Planned or under construction)
NEW FOOTPATHS (Planned or under construction)
NEW CYCLEWAYS (Planned or under construction)
NEW FOOTWAYS (Planned or under construction)
EXISTING / UNAFFECTED RIGHTS OF WAY (Where not affected by MEGZ proposals)

INITIAL hs2 ROUTE ALIGNMENT
ALTERNATE hs2 ROUTE ALIGNMENT

AMENDMENT DETAILS			By	Chkd	Appd	Date	No.
DRAWN BY C.BEECH	CHECKED BY P.STOREY	APPROVED BY P.STOREY	SCALE 1:2500				
Date 16/09/16	Date 16/09/16	Date 16/09/16	At A0 (841 x 1189mm)				

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Mike Ashworth
Strategic Director - Economy, Transport and Environment

Land Reclamation Section
Highways Management Division

PROJECT TITLE
MARKHAM EMPLOYMENT GROWTH ZONE

DRAWING TITLE
REVISED LAYOUT PLAN SHOWING CONTOURS AND AMENDED HIGHWAY ALIGNMENT SHOWING hs2 IMPACT AT MEGZ (SEYMOUR)

Project Reference Number: 9033

Drawing Number: 9033/1388

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Government Consultation on HS2

Response from Derbyshire County Council

Visualisation of the HS2 Line

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