

Appendix 1

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Rt Hon Mr Patrick McLoughlin
Secretary of State for Transport
House of Commons
London
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15th January 2014

Dear Patrick,

Cheshire East Council HS2 Phase 2 Consultation Response

As the Leader of Cheshire East Council, I would like to enthusiastically welcome the Government's intention to progress with the proposed HS2 project, including the section from the West Midlands to Manchester.

The Council has taken a supportive stance on HS2 subject to the inclusion of a new Hub Station at Crewe and the highest standards of mitigation and compensation being applied. It also recognises the need for HS2 for these key reasons:

- Meet the future demand for strategic connectivity in the UK for business, freight and personal travel.
- Offer Relief to the West Coast Main Line (WCML), which is the busiest rail corridor in Europe for both passengers and freight.
- Support sustainable development and travel patterns.
- Link Manchester to London and Manchester Airport.

Attached to this letter is my Council's response to your specific questions in the HS2 Phase Two consultation. As you will see I have identified ways in which I believe the case for HS2 can be significantly improved. These include:

- A new station and track layout for Crewe to be delivered by Network Rail by 2020 to accommodate an HS2 stop. This investment would deliver over £1.5bn of transport benefits and £1bn GVA uplift for the South Cheshire economy including 20,000 additional jobs.
- HS2 deliver the full HS2 Hub Interchange Station at Crewe by connecting into the new station. The Hub would offer access to dedicated and classic compatible

HS2 services, capturing the vast connectivity opportunity and boosting the Borough and the UK economy by up to £3bn GVA and 40,000 to 60,000 jobs.

- The section from Lichfield to Crewe be implemented to coincide with the delivery of Phase One delivering £2bn of additional transport benefits for the case for Phase One.
- Plans for future train services with HS2 need to maintain and enhance the connectivity to our other key stations at Wilmslow, Macclesfield and Congleton.
- The highest standard of compensation is offered to blighted homes through the Exceptional Hardship Scheme now and the eventual statutory provisions, including the consideration of a Property Bond Scheme. This should be supported by engineering solutions that maximise the mitigation against the impacts of HS2 on residents, businesses, farms and the local environment.

The Council supports the findings of the HS2 Growth Task Force which identifies the unique opportunity HS2 provides for the UK as a driver for economic growth. The Borough is exceptionally well placed to deliver a boost to economic connectivity, enable high value development and regeneration and provide employment, skills and business opportunities directly linked to HS2 investment.

The proposed Infrastructure Maintenance Depot is an example of this and the Borough will be seeking to both support and build upon this opportunity. Also, our plan for a University Technical College (UTC) will offer the opportunity to train the future workforce, and the design and construction of our Crewe proposition supports the case for major Network Rail and HS2 engineering staff to be located at Crewe.

I hope that you will agree with the improvements we are proposing.

I look forward to a continued dialogue with you, your Department and HS2 Limited at both political and officer level, as the HS2 proposals are developed.

Yours sincerely,

Councillor Michael Jones,
Cheshire East Council Leader.

cc. HS2 Phase 2 Consultation, Department for Transport.

Cheshire East Council's HS2 Phase 2 Consultation Response

- i. *Do you agree or disagree with the Government's proposed route between the West Midlands and Manchester as described in Chapter 7 [of the consultation document]? This includes the proposed route alignment, the location of tunnels, ventilation shafts, cuttings, viaducts and depots as well as how the high speed line will connect to the West Coast Main Line.*

As the HS2 route passes directly through the Borough it will inevitably impact on residents, businesses, farms and the local environment. At the August meeting, Cabinet reaffirmed its commitment to HS2 and to securing maximum economic benefit for Cheshire East whilst minimising harm to our residents, land and property.

Meetings have already taken place with HS2, and will continue to do so. Wherever possible and prudent to do so, our aim should be to negotiate an increase in the amount of tunnelling, cuttings and false cuttings, for example, and reduce the severance of communities and farms by providing bridges and under bridges along the route. If such changes can be secured the Borough would suffer reduced blight, maintain the maximum amount of productive farmland and reduce the loss of property and harm to residents.

In August Cheshire East Council's Cabinet reaffirmed its commitment to continue to work with the local community and HS2.

The Leader of the Council and officers have attended meetings in the affected Parish Council areas, which included Local Members, residents, farmers and businesses, to understand their concerns and views on HS2. These meetings have helped the Council to construct this consultation response and have previously been shared with HS2 Limited.

Six key issues have emerged through this process on where the Council should focus its efforts to change the existing line of route:

- Impacts on farms.
- The impact of the proposed "fly-over" junction south of Crewe.
- The long viaduct proposed from Lostock Gralam to Pickmere.
- The M6 crossing.
- The delta junction in the M6 / M56 / A556 triangle and the link Wigan.
- The crossing of the Mid-Cheshire Rail Line south of Ashley.

Line of Route Assessment

Compensation

Compensation to local businesses, residents and farms requires greater clarity as currently there is confusion over who would be eligible for compensation, what the extent of the compensation would be and when it becomes available. The Council believes the area covered by any compensation scheme needs to be extended to cover a wider corridor either side of the Phase Two proposals. The

Council hopes that the outcome of the consultation process on Phase One will deliver these improvements and that these are then adopted on Phase Two.

The Council also believes that the highest standard of compensation should be offered to blighted homes through the Exceptional Hardship Scheme now and the eventual statutory provisions, including the consideration of a Property Bond Scheme. This should be supported by engineering solutions that maximise the mitigation against the impacts of HS2 on residents, businesses, farms and the local environment.

Impact on Farms

The quality of our Borough both as a place to live and farm demands the highest standards of design, environmental protection and mitigation and compensation and this needs to be given greater recognition in the HS2 work going forward. To ensure that the severance impact on farmland is minimised and that as much land as possible remains viable localised crossing points would be required for livestock and farming equipment.

To ensure that the impact on farms is considered in detail, representatives of the local National Farmers Union and other local representative bodies, should be engaged in the next stage of any design process.

Fly-Over Junction

South of Crewe a large 'fly-over' junction is proposed to facilitate the link from the HS2 mainline to the existing West Coast Mainline for 'classic compatible' high speed trains through Crewe and also to maintain the existing freight services.

The scale of this infrastructure solution is considered to be unacceptable and the Council is working hard to identify an alternative solution through its proposition for Crewe. The structures will have a severe detrimental impact on the local communities of Chorlton, Basford and Weston with significant realignment and loss of existing roads and the proposed railway being up to 25m above the existing ground levels, creating very significant noise and visual impacts and community severance.

The proposed junction will also result in the rebuilding of the new A500 dual carriageway to the north with a significant loss of development land at both of the Basford strategic investment sites.

To mitigate these impacts very significant bunds would be required to both sides of the rail corridor, including the West Coast Main Line, and the level of the railway lines would need to be dropped. The removal of the need for the freight connection and connections between the existing line and the HS2 line would equally reduce the severity of the impact.

One of the knock-on benefits of our proposition for Crewe would be the removal of the need for the 'fly-over' junction south of Crewe and the realignment of the A500. It would also increase the developable land at the Basford sites.

Long Viaduct

Over the last few months the Council has worked extremely hard to assess ways to protect the north of the Borough. The emerging view is that the section close the Cheshire West and Chester border near Tabley and Pickmere will have a significant impact on Smoker Brook. It appears that straightening the alignment by moving the route slightly east could also result in a lower vertical alignment, and therefore reduce the impact here and potentially enable a less intrusive solution for the crossing of the A556. This should be complemented by further additional mitigation measures.

M6 and Mid-Cheshire Rail Line Crossings

Where the HS2 plan cross both the M6 and the Mid-Cheshire Line south of Ashley that these should be under rather than over the existing motorway and railway line. By lowering the alignment in these two locations it would have a significant benefit of increasing the lengths of cutting through this entire area, providing much better mitigation for the local communities and farms in this area.

Delta Junction and Wigan Link

In the north of the Borough, the height at which the route is proposed to cross over the Manchester Ship Canal on the Wigan Link means the line has to rise up quickly after it has passed under the M56. With the inclusion of the triangular delta junction to provide a spur into Manchester, this means the links on and off the HS2 north south route have a significant impact on the surrounding areas as well as affecting numerous farms.

To mitigate the impact of the delta junction the line should be lowered from north of the M6 crossing with the inclusion of cuttings and false cuttings and numerous farm crossings. This would be more easily achievable if the line passes under the M6. Cut and cover options should be considered wherever possible to completely hide the line, in particular around the Rostherne Mere section of the scheme near to the A556.

The Council has issues with crossing over the Manchester Ship Canal and its associated infrastructure. The impact of going under the Manchester Ship Canal should be considered by HS2 and further dialogue is planned with HS2 on this matter.

Wider Environmental Impacts

An initial desktop review on archaeology, heritage, nature conservation, landscape, noise and air quality identifying key issues along the line of route in Cheshire East has been undertaken and is attached in Annex A. This work should be referenced as part of any detailed design work.

Connection between Crewe and Lichfield

The Council is also developing a case for the early completion of the section of HS2 from Lichfield to Crewe as part of the second Hybrid Bill. This would bring

the benefits of HS2 further north sooner, reducing concerns over the macro economic impacts the North West, including Cheshire and Warrington, from not having the same connectivity gains as the Midlands and South East from Phase 1 investment.

Given Crewe's unique connectivity to the entire North West, North Wales and the North Midlands, delivering the connection to Crewe to coincide with the planned opening of Phase One would spread the benefits over a wider area. In addition, it would free up the West Coast Main Line south of Crewe where significant capacity constraints exist.

An initial estimate of the benefits suggests that the early delivery of the connection to Crewe would add around £2bn of transport benefits to Phase One, of which £0.8bn will be derived in the North West. This represents more than a 50% increase on the benefits to the North West based on Phase One alone. Also, in appraisal terms there would also be a benefit from these early benefits being discounted less over time, and cost expenditure in the early years results in avoiding real cost inflation.

The benefits of early delivery would be maximised across the Borough, if the Government were to adopt the Council's proposition for Crewe. This would also lead to cost savings through synergies between the Council's proposition for Crewe and the HS2 works (see the response to iii below).

This proposal is also considered in the supporting report.

- ii. *Do you agree or disagree with the Government's proposals for:*
- a. *A Manchester station at Manchester Piccadilly as described in Chapter 7 (sections 7.8.1 – 7.8.7) [of the consultation document]?*
 - b. *An additional station near Manchester Airport as described in Chapter 7 (sections 7.6.1 – 7.6.6) [of the consultation document]?*

The Council agree with the proposed stations at Manchester Airport and Manchester Piccadilly, however believe an additional station should be provided in Crewe which will provide wider macro-economic benefits across the North West of England and Wales (see the response to iii below).

- iii. *Do you think that there should be any additional stations on the western leg between the West Midlands and Manchester?*

The Council is working with the railway industry to develop a compelling case for a new station at Crewe. The proposition aims to address all the issues that arise at the existing station, from future rail passenger and freight growth and the delivery of HS2.

A separate detailed report has been prepared for the Secretary of State which supplements this consultation response. This report should be read in the context of our response to this question, a summary of which is set out below.

In the HS2 Command Paper the Secretary of State stated that Government is keen to explore how a connection at Crewe between the existing rail network and HS2 could effectively serve the wider Cheshire and Staffordshire areas. The proposition for Crewe is the Council's initial response to this opportunity and would form the basis for future dialogue:

- A new station and track layout for Crewe to be delivered by Network Rail by 2020, capable of accommodating an HS2 stop.
- A full HS2 Hub Interchange Station delivered by HS2 at Crewe, offering access to dedicated and classic compatible HS2 services, which would capture the vast connectivity opportunity.
- A station environment fit for the 21st Century which will provide a major gateway and improve the image of Crewe
- A station capable of handling significant passenger growth with high quality road and local public transport connections and improved parking facilities. An investment package is being developed in the detailed report.
- Additional rail capacity for stopping and through services at Crewe Station, maximising the economic benefits the Station creates both locally and regionally.
- Maximise the economic impact of Crewe Station and HS2 on the strategic sites at Basford East and West, whilst also delivering new opportunities for brownfield land development, and a new site for the proposed Infrastructure Maintenance Depot.
 - a. The new Network Rail station would deliver up to £1bn in additional GVA and up to 20,000 additional jobs for the South Cheshire economy.
 - b. The Full Integrated Hub Station with the HS2 connection would increase this opportunity to up to £3bn in GVA and up to 60,000 new jobs across the local and wider economic area and destroy the argument that HS2 will only benefit a few areas of the UK.
- Remove the need for the major viaduct south of Crewe, reducing the severe and unacceptable environmental and community impacts.
- Investment into freight operations to support growth and specific new markets, such as the port, Liverpool Two, through the provision of a new facility.

Our proposition for Crewe requires the Government to change its initial proposal for the HS2 Phase 2. It is our intention to present the case for the proposition directly to the Secretary of State ahead of the end of the HS2 Phase Two consultation period.

vii. Please let us know your comments on the Appraisal of Sustainability (as reported in the Sustainability Statement) of the Government's proposed Phase Two route, including the alternatives to the proposed route as described in Chapter 9 [of the consultation document].

To be addressed in supporting report.

viii. *Please let us know your comments on how the capacity that would be freed up on the existing rail network by the introduction of the proposed Phase Two route could be used as described in Chapter 10 [of the consultation document]?*

The opening of HS2 Phases One and Two will add new capacity from London to the Midlands and the North and consequently release capacity on existing lines and create room for improving the passenger and freight services on these. The development of complementary rail services will ensure that the benefits of HS2 are maximised and that existing connectivity between key locations not served by HS2 is maintained or enhanced.

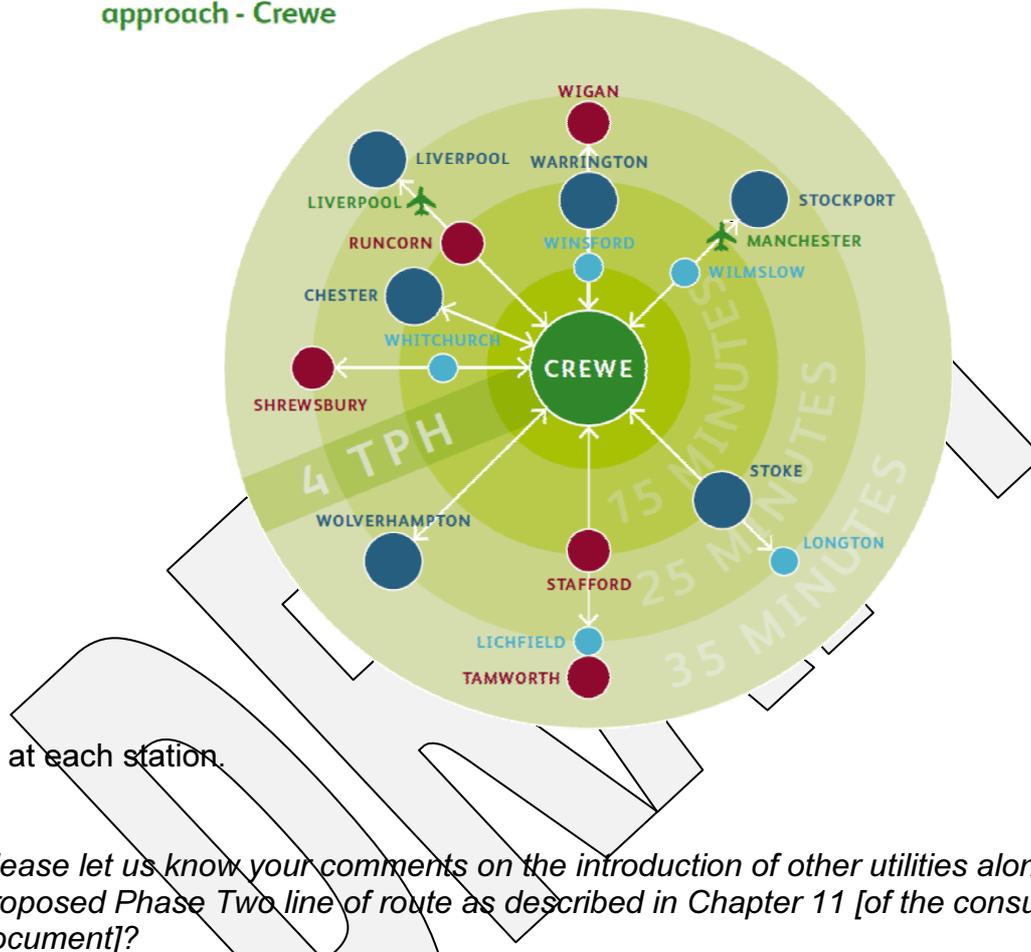
Crewe is located at a strategic point on the rail network, acting as a hub between regional and local services and the WC – 40% of trips at Crewe are interchange trips. With HS2, Crewe will become a key gateway to the high-speed network from a range of regional destinations. The enhancement of these services, including utilising spare capacity, will be fundamental to ensuring the overall benefits of HS2 are maximised, and that these benefits are spread geographically. This enhancement and integration of rail services will ensure the economic transformation that HS2 seeks to achieve is broad based, both sectorally and geographically.

In this context, Cheshire East is fully supportive of the Hub and Spoke concept, advanced by Network Rail in their report 'Better Connections: Options for the integration of High Speed 2'. The aspiration of the approach is that where appropriate, long distance services would be provided by HS2, with services on the existing network set up in a feeder pattern to provide frequent and reliable connectivity between surrounding areas and the HS2 station (hub). Crewe was the template for this concept, as depicted in the Figure below (from the Network Rail Report).

The current timetabling proposals show that Crewe will lose its West Coast Main Line service to Scotland and destinations north of Preston, whilst Wilmslow will lose all its current services to London on the West Coast Main Line. Macclesfield and Congleton are expected to gain additional services towards Manchester and Birmingham.

The Council will be seeking to ensure that future timetabling with HS2 maintains and enhances the connectivity to our key stations at Crewe, Wilmslow, Macclesfield and Congleton, with today's service levels maintained as a minimum

Example of 'Hub and Spoke' approach - Crewe



Where appropriate the Council would be supportive of the consideration of introducing other utilities along the proposed Phase Two route. The Council would be support the development of options for utilities where it will support economic growth and reduce the environmental impact.

Annex A

Initial Archaeology, Heritage, Nature Conservation and Landscape Assessment

These comments cover Archaeology, Built Heritage, Nature Conservation and Landscape and are an initial response to the consultation route. They are made from a desk based assessment of recorded assets and should be treated as an initial draft response. They do not cover the impact of ancillary works such as road realignments, compounds and service areas.

Archaeology

The route will affect a large number of **non-designated Heritage Assets**. These cannot be quantified at this time, but should be defined during a more detailed assessment process, at which time a mitigation strategy can be developed. Many of these features are quite minor but larger sites do appear to be present, for example at Blakenhall there is an extensive area of possible settlement earthworks (CHER 4358). Such a site may require open-area excavation as part of a mitigation strategy.

There does not appear to be any direct, physical effect on **designated Heritage Assets** such as Scheduled Monuments, Registered Parks and Gardens, Registered Battlefields (for listed buildings see Built Heritage). There may, however, be issues of 'setting' and three examples in this category have been identified: Tatton Park (Grade II* Park), Hough Hall moated site, Bucklow Hill (SM 13478), and Minshull Vernon moated site (SM 13440). The potential effect on the Minshull Vernon moat is acknowledged in Paragraph 6.83 of the Cultural Heritage section of the Sustainability Summary and, doubtless, English Heritage will offer an authoritative opinion on the effect on the setting of all of these sites.

Built Heritage

In order to consider the potential impact on built heritage the route has been divided into a number of sections and those properties close to the line considered for potential impact.

South Borough Boundary to Crewe:

- Basford Bridge Cottage Grade II (in poor condition with pp for restoration) – significant impact.

North of Crewe to Borough Boundary:

- Minshull Vernon Moated Site SAM – possible impact on setting
- Newfield Hall Grade II – limited impact
- Park House – possible impact

Borough Boundary at Lostock Gramam to M6:

- Holford Hall and bridge (moated site) Grade II* and II – limited impact

- The Smoker Inn, Plumley Grade II – limited impact
- The Smithy, Plumley – limited impact
- Cobb Lodge, Pickmere – limited impact
- Brooke Cottage – limited impact
- Hollow Wood Farmhouse II – significant impact

M6 to A50:

- Winterbottom Farmhouse Grade II – Significant impact on setting
- Mere College Grade II – limited impact
- Legh Cottage Grade II – limited impact

The Route Triangle to Borough Boundary and A556:

- Broad Oak Farm Grade II – limited impact
- Ovenback Cottage Grade II – possible impact
- Holly Bank Grade II – limited impact
- Stamford Farmhouse Grade II – no impact
- The Chapel house, Arthill – possible impact
- Boothbank Farmhouse Grade II – limited impact
- Millington Hall Grade II – possible impact
- Denfield Cottage Grade II – limited impact
- Montabello Castle LL – no impact

A556 to Thorns Green:

- Mere Covert Cottage Grade II – limited impact
- Outbuilding at Ryecroft farmhouse Grade II – limited impact
- Tatton Park Historic Park/Garden II* – potential to impact upon setting of NE tip of parkland
- Birkin Bridge & North Lodge II, Tatton Park – potential to impact upon setting of NE tip of parkland
- Sycamore Cottage Grade II – possible impact on setting
- Church of St Elizabeth Grade II – possible impact on setting
- South Lodge Grade II – limited impact
- Hough Green Farmhouse Grade II – impact on setting
- Lower House farm Grade II – possible impact on setting
- Primrose Hill Farm Grade II – no impact
- Ashley Hall Farm, Kitchen Garden Wall and Barns Grade II - no impact
- Tanyard Farm and barns Grade II – no impact

Nature Conservation

The route will potentially impact on the ecology of Cheshire East in a number of ways – impact on designated sites, impact on protected species and impact on important habitats. The route has been divided into sections to consider these impacts.

South Borough Boundary at Winehill to Borough Boundary at Walley's Green:

No designated sites exist within 500m of the route. Potential impact on particularly Great Crested Newts, Grass Snakes, Badger, Lesser Silver Diving Beetle, Bats. Impact on hedgerows, ponds and possibly grassland.

Borough Boundary at Plumley to M6:

- Winnington and Peas Wood ASNW and grade A SBI - Significant impact
- Leonards and Smoker Wood ASNW and grade A SBI - Significant impact
- Arley Brook and Bongs Wood ASNW and grade A SBI – within 200m. minor impact

Potential impact on particularly Great Crested Newts, Badger, Bats, possibly Otter. Impact on hedgerows, ponds and possibly grassland.

The impact on Ancient Semi Natural Woodland (ASNW) adjacent to the Peover Eye and Smoker Brooks is very significant, consideration should be given to move the route several hundred metres to the east in order to reduce the impact. Substantial mitigation will be required.

M6 to Agden Bridge/North Borough Boundary:

- Belt Wood grade C SBI – within 200m minor impact
- Dobb Lane grade C SBI – within 200m minor impact

Potential impact on particularly Great Crested Newts, Badger, Bats, possibly Otter. Impact on hedgerows, ponds and possibly grassland.

Hoo Green to Thorn Green (Rostherne Mere Corridor):

This is an area where there is potentially significant impact on nationally and locally designated sites. Rostherne Mere is a RAMSAR site, Site of Special Scientific Interest and a National Nature Reserve, the route is within 100m of the northern edge of this site. Within the corridor south of the M56 there are 12 locally designated sites (of which 3 are ASNW) which are either directly impacted or close to the route:

- Risley Pitts Covert grade C SBI
- Greys Gorse grade B SBI
- Yarwood Heath Covert grade C SBI
- Hancocks Bank North ASNW and grade A SBI
- Rycroft Covert grade C SBI
- Hancocks Bank South ASNW grade A SBI (direct impact)
- Birkenheath Covert grade C SBI
- Wood near Arden House ASNW grade A SBI
- Erlams Meadow grade B SBI
- Acclesfield Wood grade C SBI
- Brickhill Wood ASNW grade A SBI (direct impact)
- Millwood Castle Mill grade B SBI

Potential impact on particularly Great Crested Newts, Badger, Bats, possibly Otter. Impact on hedgerows, ponds and possibly grassland. The Bollin Valley is an important river and wildlife corridor.

(Please note saved policies within existing local plans refer to Sites of Biological Importance SBIs, the current draft local plan contains a policy which refers to these areas as Local Wildlife Sites).

Landscape

The route is shown without mitigation and a supporting landscape and visual impact assessment (LVIA), but in the relatively flat landscape of the Cheshire Plain it is likely to have a significant landscape and visual impact. A quick overview assessment is provided below, but more work is required at this stage to make a preliminary assessment of potential impact.

From Southern Borough Boundary to Crewe:

From just north of the boundary to Gonsley Farm the route is in cutting. North of Gonsley Farm to just north of the A500 bridge the route is on embankment and involves a double height viaduct crossover, rebuild of the A500 bridge and substantial mounding and reworking of minor road structure to provide a single road crossing over the line. In this flat agricultural landscape there is likely to be a severe impact on both landscape character and visual quality for surrounding receptors.

Crewe north to Borough Boundary:

As the line rises to grade northward from the tunnel there is the potential for impact on an adjacent housing area, this will require careful mitigation. Northwards to the boundary the route is mainly at grade running through an agricultural landscape and adjacent to the West Coast Main Line. Impact is likely to be minor and could be mitigated by reinforcing the existing landscape of hedgerows, trees and small copses.

Borough Boundary at Lostock Gralam to M6:

The route is on embankment to cross a railway line, A556, Peover Eye and Smoker Brook and associated woodlands. Impact on landscape character and local visual impact is likely to be very significant. Further north the route is on embankment to cross over the M6, it could be very visible in this agricultural landscape and have significant impact on landscape character.

Hoo Green and Wigan Spur:

The junction cross over at Hoo Green could have significant impact on landscape character and local visual impact. The Wigan spur passes under the M56 and will have low impact here, but further north where the line leaves the Borough it crosses over the A56 and Bridgewater Canal. There is the potential for significant impact on landscape character and local visual impact.

M6 to A556 Manchester Spur:

The route here runs through a corridor that includes pylons and the proposed new route for the A556 – there is the potential for significant cumulative impact. Much is in cutting which will help with mitigation.

A556 to Thorns Green:

The route is close to the M56 (north of route) and cuts through two locally designated landscapes – Rostherne/Tatton ASCV and Bollin Valley ASCV. For some of this route the line is in cutting, but adjacent to Ashley it is on embankment. There is the potential for significant impact on landscape character and significant visual impact. *(Please note saved policies within existing plans refer to Areas of Special County Value ASCVs, the current draft local plan contains a policy which refers to these areas as Locally Designated Landscapes)*

Potentially, substantial mitigation could be achieved by placing more of the route in cutting and substantially reducing the length on embankment and viaduct. A corridor approach to the reinforcement/extension of landscape features such as hedgerows trees and copses could also be very valuable. It is suggested that prior to making a formal response more work to assess the visual/landscape character impact and possible mitigation is undertaken at: Gonsley Green Farm to A500; Lostock Gramam area; either side of M6 crossing; north of M56 on Wigan Spur; Corridor from A556 to Thorns Green (particularly adjacent to Ashley).

HS2 Route Noise and Air Quality Comments

These comments relate to the environmental protection considerations of the proposed HS2 route through Cheshire East Borough Council. These are primarily concerned with noise impacts from the train movements and noise and air quality impacts relating to road traffic near stations.

Noise impacts

In general adverse noise impacts could be expected at most sensitive receptors near the route. Many of these are in rural areas with the worst affected receptors being those near sections of the route that are not in cutting. It is recommended that where it is not feasible to consider a cutting that other noise mitigation measures are put in place to reduce the impacts to acceptable levels. The following table considers the route from south to north through Cheshire East from a noise impacts perspective and recommends where alterations could address these impacts. The absence of the consideration of an area should not preclude that we consider that further mitigation would be required at sensitive receptors when we are consulted on detailed and objective noise assessments.

Section	Cheshire East Sensitive Receptors	Subjective Assessment	Recommendations
South of Crewe	Chorlton, Hough, Weston, Shavington, Basford, South Crewe	HS2 line at grade, embankment and viaduct would increase noise impacts to these areas and other sensitive receptors	Design route in cutting, redesign of junction re-assess need for viaduct.
Basford Depot / Station	Weston, Shavington, Basford, South Crewe	Cumulative noise impacts from service depot and related traffic	Further mitigation required
North Crewe	North Crewe, Coppenhall Moss	HS2 Line emerges from tunnel and cutting close to residential areas	Extend tunnel and sections in cutting to the north
Crewe to CWAC Boundary	Rural villages / properties	HS2 predominantly at grade	Cutting / mitigation required
East of Middlewich	East Middlewich	HS2 line at grade or embankment 1km to the west of Middlewich extents	Mitigation required
River Dane Viaduct	North Middlewich	Viaduct increases likelihood of noise propagation to north Middlewich properties	Mitigation required
Smoker Brook / Peover Eye Viaducts	Plumley, Pickmere and rural properties	Viaducts and embankments increase likelihood of noise propagation to sensitive receptors	Mitigation required
Jodrell Bank Viaduct	Pickmere and rural properties	Viaduct increases likelihood of noise propagation to sensitive receptors	Mitigation required
Area near M6 crossing	Mere and rural properties	HS2 route over M6 and embankments. Cumulative impacts from M6 and proposed A556 re-alignment	Re-route under M6, use of cutting.
South of M56	High Legh, Bucklow Hill, rural properties	HS2 line at grade and in embankment increases noise impacts, plus cumulative impacts from M56 and proposed A556 re-alignment	Cutting / Mitigation required
East section towards Manchester South of Ashley	Ashley, rural properties	Section adjacent to Ashley in embankment as passes over existing rail line	Cutting / re-route under railway
Wigan spur south junction	Rural properties	HS2 line in embankment at A56 / Bridgwater Canal increasing noise impacts.	Mitigation required

Air Quality

The Basford Depot / Station has the potential to have adverse air quality impacts in the area. There is currently an Air Quality Management Area (AQMA) on Nantwich Road in Crewe. Mitigation and design would need to consider these impacts and emissions. A holistic consideration of all Crewe rail requirements could have the potential to improve road traffic related emissions.

Similarly a Manchester Airport HS2 station proposal would need to consider mitigation of air quality impacts and emissions in the area.

Other considerations relating to the proposed route are vibration from construction and operation activities.