Appendix E
Impact of HS2 proposals in Leicestershire

Impact of the Route through Leicestershire

E 1. The implications of the proposed route through Leicestershire have been examined in relation to its impact on:

a) Highways and Public Rights of Way

b) Planning, Development and Regeneration

c) Noise and Visual Intrusion

d) Directly Affected Properties

e) Agriculture and Land Management

f) Heritage and Conservation

E 2. These impacts are detailed in **Appendix F**, referenced to distance 'chainage' along the line of the proposed route as shown on published HS2 detailed route plans (HSL06/1 to 5 and HSL09/1 to 3). For each identified potential impact, a mitigation proposal has been identified.

Summary of Impact and Mitigation Measures Sought

Highways and Public Rights of Way

E 3. A significant number of highways and public rights of way will be affected by the route, requiring bridges, diversions and possibly closures. All such features should be designed in consultation with and to the satisfaction of the County Council (and Highways Agency as appropriate) including details of temporary measures to maintain accessibility during their construction.

E 4. With regard to highway infrastructure the County Council requests that HS2 Ltd. ensures:

a) That there is appropriate investment in local transport so Leicestershire can take advantage of the economic benefits that HS2 can bring

b) That Toton station is readily accessible to residents and business of Leicestershire.

Planning, Development and Regeneration

E 5. The proposed route encroaches on sites scheduled for major residential and canal regeneration development at Measham, the Lounge Disposal Point site near Ashby de la Zouch and to some extent the Strategic Rail Freight Interchange adjacent to East Midlands Airport. The County Council wishes to see the proposals modified by realignment or other means to retain the development potential of these sites. This modification should include (but not be limited to) maintaining clearance for the free passage of boats at the crossing of the line of the proposed canal at Measham, and ensuring the same clearance is provided under the realigned A42. The County Council welcome

early discussions on the design for J13 of the A42 to ensure that future development at the Lounge Disposal Point site near Ashby de la Zouch is not frustrated by the HS2 proposals. The decision to modify earlier proposals to avoid jeopardising development of the proposed inter-modal freight terminal by extending the tunnel under East Midlands Airport is strongly supported.

Noise and visual intrusion

E 6. Much of the proposed route in Leicestershire is elevated on a series of embankments and viaducts. These will become prominent features in the landscape and noise from passing trains will be more pronounced with the effects of height. The County Council would wish to agree, in partnership with North West Leicestershire District Council, details of soft landscaping and screening to attenuate noise and visual intrusion arising from features of the line and passing trains.

Properties directly affected

E 7. The proposed route entails the demolition of a number of industrial, commercial, agricultural and residential properties. The County Council seeks to ensure that in addition to owners and occupiers receiving compensation in accordance with statutory provision, procedures are agreed with them to ensure minimum disruption to their activities during any consequential relocation of their premises.

Agriculture and land management

E 8. The proposed route will inevitably form a barrier to movement between parcels of land on either side, with implications for efficient agricultural and forestry activities. The county Council would wish to agree details of access and rail crossing points to be agreed in conjunction with North West Leicestershire District Council and land owners concerned.

Heritage and conservation

E 9. The proposed route affects the setting of a number of listed buildings, designated conservation areas and sensitive wildlife habitats. Measures to mitigate the impact of the railway on these sites should be developed and agreed with English Heritage, Natural England, the Environment Agency and property owners, in consultation with the County Council and NWLDC.

Construction impact

E 10. The construction of HS2 will be a significant civil engineering project, requiring extensive earthworks, many new structures, and a 3km tunnel under East Midlands Airport. In addition to land required for the railway itself, this project will inevitably require large areas of land for temporary construction sites / rail heads, particularly in the vicinity of the East Midlands Airport tunnel, and the viaduct over the Soar / Trent flood plain.

E 11. Furthermore, the works will require a considerable labour force, construction plant and materials, all of which will need to be transported to HS2 construction sites. It is reasonable to expect that there will be considerable volumes of construction related traffic likely to be generated by the works, which has a potential impact on local communities and the Strategic Road Network (SRN), i.e. A42/M42, M1, A50 and A453, and County road network infrastructure. The SRN already experiences significant congestion and safety problems, which should not be exacerbated by the impacts of construction traffic.

E 12. Also, construction working practices themselves may have an impact to a greater or lesser degree on occupiers of buildings and premises adjacent to the HS2 construction sites. Matters such as working hours, construction methods (particularly with tunnelling, piling or other deep excavation methods), dust control, traffic management and other civil engineering operations must all be considered in relation to the surrounding area.

E 13. To date, no details of these aspects within Leicestershire have been published. Therefore it is not possible at this stage to evaluate the impact of HS2 construction operation on Leicestershire.

E 14. The County Council will require detailed consultation on these issues at the earliest possible time with a view to agreeing details of construction sites and developing an agreed construction traffic management regime to encompass haul routes, highway improvements and upgrades, and hours of operation.

E 15. The development of the detailed proposals and construction programme will require a very significant input from County Council officers in order to minimise the impact on Leicestershire Communities. The County Council expects HS2 Ltd to compensate the County Council on a full cost recovery basis for the staff time involved in this project.

E 16. The Government has published for consultation a draft National Policy Statement for National Networks (NPS for National Networks), which sets out the Government's vision for the future development of Nationally Significant Infrastructure Projects (NSIP) including road and rail. It specifically excludes the development of HS2, for the reason that the powers to deliver this project are being sought through Parliamentary Bills (and not the NSIP process). However, the draft does state that the Government's policy for the development of road and rail networks takes into account the capacity and connectivity that will be delivered by HS2.

E 17. The draft National Policy Statement for National Networks requires that Transport Assessments be submitted for the development of Strategic Rail Freight Interchanges and for road and rail construction sites; it talks about the need for this to included assessment of construction traffic impacts on the existing transport network. Whilst the draft NPS excludes HS2, nevertheless it is argued that the principle of assessing (and mitigating) the transport impacts of its construction prior to commencement should apply.

Economic Impact of HS2 on the East Midlands

E 18. Analysis carried for HS2 Ltd by KPMG suggests that investment in HS2 could generate £15 billion of additional output a year for the British economy in 2037 (2013 prices). The productivity benefits accrue to all regions with strong gains in the Midlands and North. However the potential distribution of economic impacts depends on the ability of businesses and people to respond to changes in connectivity.

E 19. The following table indicates the potential impact of investment in HS2 on the East Midlands region resulting from KPMG analysis. It reflects a "high" and "low" business location scenario where business location is driven by buyers' sensitivity to purchase and transport costs. Thus a high business location scenario implies that buyers are more sensitive to purchase and transport costs than in a low business location scenario.

HS2 investment impact on the East Midlands Region (KPMG analysis)

Location	GDP Impact per Year (£million)	
	Low Business Case Scenario	High Business Case Scenario
Derby – Nottingham (Derby, Nottingham, 8 Derbyshire districts, 7 Nottinghamshire districts	1,100.00	2,200.00
Leicester	89.94	134.04
Blaby	34.11	42.50
Charnwood	105.03	173.76
Harborough	11.43	8.54
Hinckley & Bosworth	29.20	43.38
Melton	13.74	24.37
North West Leicestershire	77.54	156.43
Oadby & Wigston (Leicestershire South)	6.79	1.00
Total Leicestershire (excl City)	277.84	449.98
Total Impact for GB Economy	15,000	15,000

East Midlands Hub Location

E 20. As part of the analysis of options for HS2, MVA Consultancy (http://mvaconsultancy.com/) has carried out a demand and appraisal study of existing and future demand for rail services in the East Midlands to inform the choice of station location. This study was commissioned by the East Midlands Councils (http://www.emcouncils.gov.uk/). The report identified that a city

centre connection to Leicester, either as a through station or via a spur line, involves higher costs or generates lower overall benefits than either Derby or Nottingham. As a result Leicester options were not progressed.

E 21. Whilst Nottingham has a larger market than Derby, options for a city centre connection are more expensive. As it was difficult to serve both Nottingham and Derby directly, consideration was given to locations at Derby, at the existing East Midlands Parkway and at a new interchange at Toton rail depot. Toton emerged as providing the highest overall benefits in terms of demand, cost and development opportunities.

E 22. Having concluded that it is not feasible to serve the East Midlands city centres directly on the line of HS2, it is important that the East Midland Hub station at Toton is built to an excellent standard of design and fully integrated into existing transport networks if the passenger and economic benefits of HS2 for the East Midlands are to be fully realised.

E 23. Toton is likely to become a car based commuter rail hub, from Ashby and other settlements in North-west Leicestershire, particularly bearing in mind there are no rail connections to Toton. Improvements to the road network must be included in the high speed rail proposal to provide capacity for this commuter traffic accessing Toton.

E 24. HS2 will bring implications for planning authority Core Strategies as the demand for a new commuter belt around Toton emerges. Any planned infrastructure improvements around Toton should consider this wider future demand.

E 25. The East Midlands Councils have commissioned a study to assess the potential to provide direct rail access to the HS2 network from Derby, Leicester and Nottingham. The study identifies that quality connectivity to the three cities is crucial to realising the potential economic benefits of HS2 in the region.

E 26. A transport modelling exercise was carried out as part of the study. This compared existing passenger demand between the East Midlands' cities and various destinations to demand after HS2 with and without direct city centre connections. The results suggest that direct connections showed increases in passenger demand to most destinations modelled, particularly from Leicester and Nottingham. Strongest demand flows resulting from direct connections emerged from Leicester and Nottingham to Birmingham, Manchester and Sheffield, and from all three cities to Leeds.

E 27. To enable classic compatible[1] rail services to operate between the existing city centre stations and various destinations via the HS2 network, the study suggests a number of possible track configurations for direct rail connections to the HS2.These include

[1] Two basic types of train will operate on HS2 lines, high speed only trains (which run only on high speed track) and classic compatible trains (which run on high speed track and the existing 'classic' network). The trains will be up to 400m long (200m single unit; 400m when two units operate as a pair). There will be up to 1,100 seats per train.

a) Full interconnections between HS2 and classic rail tracks at Toton to enable classic compatible trains to serve Derby, Leicester, and Nottingham

b) A new chord into an existing track north of Toton to allow classic compatible trains between Nottingham and destinations to the south to operate via Toton.

c) Full interconnections between HS2 and classic rail tracks at Killamarsh (near Sheffield) to enable classic compatible trains to serve Sheffield, Chesterfield and Rotherham

(Source: East Midlands Councils, HS2 Direct Connections Study, Outline Business Case, Ove Arup & Partners, December 2013)

of these, option a0 appears to offer most benefit to Leicestershire.

Regional infrastructure implications of an East Midlands high-speed rail hub

E 28. HS2 is designed for trains to operate at up to 250 mph. From Toton, it will be possible to reach London in 51 minutes, Sheffield in 27, Leeds in 30 and Birmingham in 19. The area surrounding Toton can therefore be expected to become attractive for development, both as a centre for employment (attracting employees from a wide area) and for residential development to house long distance commuters. Arising from this will be increased demand for schools, health services, retail and leisure facilities etc. Within Leicestershire, these pressures are likely to have the greatest impact on North West Leicestershire and Charnwood areas.

E 29. Whilst good access to Toton by classic rail connecting services will be essential, inevitably many connecting journeys can only be made by road. The need for road capacity improvements to the A52 in the vicinity of Toton is recognised by HS2 Ltd, but demand is likely to extend some way beyond that. The M1 and A42 for example, already frequently experience severe congestion. Traffic generated in the region associated with Toton can only exacerbate this, particularly during the peak commuting periods. Further studies need to be undertaken to assess the wider impact of HS2 on the regional highway network

Released Capacity

E 30. In conjunction with HS2 Ltd, Network Rail is exploring options for the future use of the existing rail network to take full advantage of the capacity released by the new lines. Their report, “Better Connections” describes the three broad approaches which they conclude could be taken to determine how services should be run on the existing network and HS2:

a) **Do Minimum Approach:** Under this approach, the train services that exist in 2032 before HS2 Phase 2 would be broadly maintained. Capacity released by Phase 1 would already have been used to increase London suburban peak services. Whilst crowding on some long distance services would be reduced, commuter and regional services would gain little benefit, and the opportunities to increase commuter, regional and freight services would be constrained

b) **Incremental Approach:** An assessment is made of the transfer of passengers from the existing network to the high speed lines on the basis that services replicated on the existing network by HS2 are transferred to the latter. This has the potential to provide a number of new journey opportunities and additional freight paths. Examples quoted include the reintroduction of a direct service between Leicester and Coventry. Others might include new services from the East Midlands via Oxford to the south coast and south west, or direct services via Birmingham to South Wales.

c) **Integrated Connectivity Approach**: This offers a more holistic approach to planning services on the existing network in conjunction with HS2. Long distance services would be provided where appropriate by HS2 with services on the existing network set up to provide a feeder pattern from the surrounding area to the HS2 hub. Whilst offering a fully integrated and potentially seamless operation between existing and high speed networks, the cost of travel on HS2 needs to be comparable with that of the existing network and interchange must be made simple, quick and effortless for this approach to work.

(Source: Better Connections – Options for the Integration of High Speed 2; Network Rail, July 2013).

E 31. Network Rail is seeking feedback on the findings of their report and will be publishing the results of a separate and more detailed analysis in due course

E 32. Whilst the Integrated Connectivity Approach might be intuitively attractive, it is conditional on several elements as described above. It is suggested that deficiencies in any of these could seriously undermine the quality of service offered to Leicestershire. The need for most journeys to require at least one change of train, however simple is generally unappealing, and particularly to the elderly and infirm. The Incremental Approach would appear to offer passengers a wider choice and would enable a more gradual transition between existing and potential service patterns to emerge and is therefore supported by Leicestershire County Council.

<u>The Need for Improvements to the Existing Local Rail Network</u>

E 33. Whilst providing opportunities for new and additional services on the existing network, HS2 does not of itself offer any proposals for improvements to the quality of those services. Recent improvements to the Midland Main Line have led to a welcome reduction in journey times with the publication of the winter timetable, and planned line improvements, and electrification, will result in further improvements

E 34. In comparison, the east – west route through Leicestershire is poorly served. Despite substantial demand between Leicester and Birmingham (exceeded only by demand to London), trains are slow and overcrowded, usually being only two or three car length. Speed is restricted by poor alignment, particularly west of Nuneaton, and congestion on approaches to Birmingham. Network Rail is investing in the line east of Nuneaton to provide additional freight capacity. Further investment to accommodate trains of higher speed, capacity and quality is also warranted an d would be supported by Leicestershire County Council.

E 35. Under current proposals, HS2 services to Birmingham will operate out of a new station at Curzon Street. Whilst a reasonably central location, there will be no facility for interchange between classic and high speed services. A similar situation will prevail at Birmingham Interchange where connections will only be available between high speed services. There would be considerable benefits in providing an interchange opportunity between classic and high speed services at Birmingham Interchange, either into a joint station (which would be difficult) or by providing a station nearby connected to the classic rail network. Such a facility, in conjunction with improved east – west services would offer increased benefits from HS2 to Leicestershire and eastern counties. It would also provide the opportunity for direct services on this line to The National Exhibition Centre and Birmingham International Airport.

E 36. Network Rail are currently carrying out a long term planning exercise (to 2043) examining how classic rail services need to support UK economic growth. In respect of the East Midlands, it is understood that the final outcomes of this work will be published in Spring 2015. HS2 development should take the emerging results of this work into consideration.

Existing and Future Demand for Rail Services

E 37. The MVA report also gives comparisons between rail trips to and from the East Midlands in 2010 and projections for 2043 as indicated in the table below.

Rail trips to and from the East Midlands: 2010 & 2043

	Nottingham (2 way)		Leicester (2 way)		Derby (2 way)	
	2010	2043	2010	2043	2010	2043
London	2,600	5,900	3,200	6,500	1,700	4,100
Birmingham	1,000	1,600	2,000	3,400	1,900	3,200
Sheffield	800	1,300	400	600	800	1,400
Manchester	500	800	200	300	200	300
York	60	100	40	60	100	200
Newcastle	50	80	60	50	70	100

E 38. HS2 not only provides additional capacity to cater for the projected increase in demand, it offers most passengers shorter journey times. For example, in 2043, 76% of passengers from Derby to London would transfer travel via Toton and HS2, with 83% of passengers from Nottingham so transferring. By contrast, only 7% of Leicester – London passengers would choose to travel via Toton and HS2, the remaining 93% continuing to travel via Midland Main Line (MML) services.

E 39. So passengers accessing rail services at Leicester gain very little from HS2 in terms of journeys to London and Birmingham, the predominant demand. Greater benefits will accrue from the proposed electrification and improvement of MML. However with many of the London bound passengers from Sheffield, Derby and Nottingham transferring to HS2, it is questionable whether Leicester will continue to enjoy the current quality and frequency of service to the capital. Although service patterns around 2032, when HS2 will open for traffic, are presently a matter for speculation, it will be important for the prosperity of Leicester and Leicestershire to main fast, frequent main line-style services to London and the County Council will need to work to ensure that this is the case.

This page is intentionally left blank