HOUSE OF COMMONS TRANSPORT SELECT COMMITTEE

INTEGRATED RAIL PLAN INQUIRY

RESPONSE OF THE INLAND WATERWAYS ASSOCIATION

Inland Waterways Association

The Inland Waterways Association (IWA) was founded in 1946 and is a membership charity that works to protect and restore the country's canals and river navigations. IWA is a national organisation with a network of local branches and volunteers who work with navigation authorities, national and local government, and a wide range of voluntary, private and public sector organisations for the benefit of the waterways and their users. The Association also provides practical and technical support to waterway restoration projects, and acts as a national co-ordinating body for numerous local waterway societies and trusts that promote and protect waterways in their areas.

IWA is responding to the Transport Committee's request for views on the implications of the Integrated Rail Plan (IRP), the challenges in delivering the IRP, and how the rail schemes in the IRP integrate and interact with HS2.

Our prime interest is in the likely effects of construction and operation on the inland waterways that the intended new or improved railways cross or interface with. These include impacts on the waterways heritage, landscape setting, natural environment, recreational amenity and tranquillity; resulting from route selection, engineering design and noise mitigation decisions. There are also particular concerns about the blighting effect of plans on several waterways restoration projects. In this context we consider the rationale of various aspects of the IRP and make recommendations that will minimise its impact on inland waterway infrastructure and users.

Engagement

IWA has engaged with HS2 since 2010 on behalf of its individual and corporate members and the wider public interest in waterways. We have commented in detail on many stages of Phase 1 and Phase 2a, and on previous Phase 2b consultations in 2014, 2017 and 2018 and gave evidence to HS2 Select Committees in 2016 and 2018.

IWA responded in detail to the HS2 Phase 2b Working Draft Environmental Statement consultation in December 2018, the Design Refinement consultation in September 2019, and the Western Leg Design Refinement consultation in 2020. These plans for HS2 Phase 2b affected inland waterways, both canals and river navigations, in at least 16 locations, including three canal restoration schemes.

The future of Phase 2b was then included in reviews by the Infrastructure Projects Authority and the National Infrastructure Commission (NIC). In May 2020 IWA responded to the NIC's call for evidence for their Rail Needs Assessment for the Midlands and the North, which contributed to the evidence base for the IRP.

Integrated Rail Plan

The IRP considers the HS2 Phase 2b, Northern Powerhouse Rail (NPR) and some Midlands Rail Hub proposals together in an integrated way and sets out the Government's decisions, intentions and timescale for major developments of the rail network in the North and Midlands over the next 30 years. Whilst the decision to abandon the HS2 Eastern Leg route between East Midlands and Leeds in favour of upgrading existing routes is logical and welcomed, other parts of the IRP proposals are less convincing and should be reconsidered.

HS2 Phase 2b East (East Midlands to Leeds)

IWA's response to the NIC criticised HS2 Phase 2b East for, inter alia: its lack of integration with the existing network; its poor route selection requiring numerous motorway and major road diversions; the lack of advance ground investigation work in coalfield areas subject to mining subsidence; the decision to bypass Sheffield and the inconvenient location of Toton station for both Derby and Nottingham.

The northern section would have had major structural, visual and noise impact on the Erewash Canal, threatened the current restoration of the Chesterfield Canal, and had engineering impacts on the commercial Aire & Calder Navigation, along with other adverse impacts on the Trent Navigation, Nottingham Canal, and Sheffield & South Yorkshire Navigation.

The Eastern Leg from south of Toton to Leeds is now cancelled, with the IRP recognising that "The engineering challenges on the Eastern Leg of HS2, particularly its northern sections, have always been high with a north-south line running through east-west contours with multiple motorway interfaces" and "under the previous plans would have crossed the M1, A1(M), M42 or M62 13 times". Also "Updated analysis suggests that requiring passengers from Birmingham and London to change at Toton to reach Nottingham and Derby may in fact offer limited or no

improvement for journey times" as well as requiring "significant investment in local transport links" that are unfunded; all of which one might have thought would have been obvious from the start.

IWA recommended scrapping the Eastern leg in favour of electrifying and upgrading the Midland Main Line (MML), and upgrading the East Coast Main Line (ECML) to Leeds to 140 mph standard, and we commend the IRP for realising the logic and advantages of those alternatives.

Waterway Impacts

This welcome decision will avoid the impacts IWA had identified on several waterways including the Cranfleet Cut, Erewash Canal, Nottingham Canal, Chesterfield Canal, Sheffield & South Yorkshire Navigation, and Aire & Calder Navigation. However, "the Government does not intend to lift safeguarding on the previously proposed HS2 route at this time", pending conclusion of work on options for HS2 services to Leeds, which means the threats may remain for some years.

This is particularly troublesome for the Chesterfield Canal restoration which has already been blighted by uncertainty for many years. Whilst the immediate threat of an embankment across the main canal at Norwood is lifted, the unresolved headroom issue for the reinstatement of the mineral line at Staveley as access to the planned Infrastructure Maintenance Depot may continue to hamper progress there.

Although the intended study of ways to run HS2 into Leeds may justify retention in that area, the safeguarding should now be removed from the discontinued route through Derbyshire, Nottinghamshire and South Yorkshire

HS2 Phase 2b East (Birmingham to East Midlands)

HS2 Phase 2b East will now be only partly built, from the West Midlands to East Midlands Parkway station, with the route north through Toton to Leeds being dropped. Although the truncated and now renamed "HS2 East" will be "on the route and line speed as previously planned" and is also said to be "based largely on the existing safeguarded route", changes will obviously be needed for it to join the Midland Main Line south of East Midlands Parkway. This is 3 miles south of the previously intended parkway station at Toton and south of Trent Junction which will enable High Speed Trains to directly serve the city centre stations at Nottingham and Derby, and on to Chesterfield and Sheffield, via an upgraded and electrified Midland Main Line "and to be capable of future extension".

Waterway Impacts

One consequence is that the crossing of the River Soar will be further south, although it is not clear if the line will still run north of Kegworth which would require some tight curves, or take a new route to the south of the town. There are also plans for an East Midlands Delivery Vehicle to regenerate three large 'opportunity' sites, one of which is Ratcliffe-on-Soar power station, which could have some impact on the river.

There is no mention in the IRP of any other changes, but a further review of the route around Measham remains outstanding since 2018. There have so far been three different routes proposed at Measham, all of which were devised as limited desk studies without taking full account of vital local interests including employment, housing and canal restoration. Before active work on Phase 2b was suspended a fourth alternative route was put forward which would avoid a large housing site that was set to contribute significantly to the restoration of the Ashby Canal, until blighted by the HS2 plans. This review should now be speedily completed and the route around Measham amended to minimise disruption to the commercial and housing sites and to allow the developer funded restoration of the Ashby Canal to proceed.

Alternative Upgrade

An alternative to retaining the Birmingham to East Midlands section of HS2, which IWA advocated, is upgrading the Tamworth- Burton line to Derby and to "connect it to the HS2 Phase One around Wilnecote" which would give "broadly similar outputs for Derby, Chesterfield and Sheffield from London". However, HS2 East is justified as providing better connectivity to Nottingham, although the costs are not separately identified from the MML and ECML upgrades.

With improved London connections via an upgraded Midland Main Line, the remaining section of HS2 East will be primarily just an East Midlands to West Midlands connection. Without any of the claimed capacity problems of the West Coast Main Line, it is far from obvious that this high speed route is needed or will offer cost-effective benefits over upgrading the existing route. The DfT should therefore now produce a comparative cost/benefit analysis of retaining this section of HS2 against upgrading and electrifying the existing Birmingham to Derby and Nottingham lines. However, this should not be used as a further excuse to delay addressing the local route variation needed at Measham.

HS2 Phase 2b West

IWA's response to the NIC criticised HS2 Phase 2b West for, inter alia: its major impacts on waterways heritage, environment and amenity; its poor route selection through the Cheshire salt field with lack of advance ground investigation work of areas subject to subsidence; the design of a terminal station in Manchester with lack of planning for through connections to Yorkshire and Scotland; and the indirect and expensive tunnelled route into Manchester via the airport.

Waterway Impacts

The IRP confirms the intention to proceed with HS2 Phase 2b West from Crewe to Manchester "on the route and line speed as previously planned", and including the Crewe Northern Connection, through a Hybrid Bill in Parliament to be deposited in 2022. As detailed in IWA's responses to consultations on the Working Draft Environmental Statement in 2018 and the Western Leg Design Refinement in 2020, these plans will have major impacts on the environment and heritage of the Middlewich Branch of the Shropshire Union Canal and on the Trent & Mersey Canal north of Middlewich. These impacts are summarised below:

The Middlewich Branch of the Shropshire Union Canal will be affected by the Crewe North Rolling Stock Depot, by a complex of three viaduct crossings of the canal, and by road diversions. The historic environment of the canal within the rural landscape will be permanently degraded by the visual impact of these HS2 structures, and the users of the canal will be subject to construction and operational noise impacts.

The Trent & Mersey Canal will be affected by three crossings over a 2 mile section in the River Dane valley north of Middlewich. The impact of the 2016 Preferred Route on the canal is much greater than the original 2013 alignment which involved just one crossing of the canal. The Trent & Mersey Canal is a linear Conservation Area throughout its 93 miles, designated for its historic and architectural significance and now used extensively for recreation. All three crossings are in scenically attractive and currently tranquil rural settings. Construction of the proposed route will have a permanent visual and environmental impact on the Trent and Mersey Canal Conservation Area due to the height and mass of the viaduct structures and embankments and the operational noise. The proposed track level will be between 13m and 16m above the canal water level at the three crossing, and there will be a dominating view of the viaducts and embankments, rising up to 26m above adjacent land and the River Dane flood plain. It is essential to incorporate parapet or noise fence barriers at all three crossings to significantly reduce the operational noise effects of the railway.

The western leg also includes the Golborne Link to the West Coast Main Line near Wigan, which crosses the Bridgewater Canal and the Manchester Ship Canal and passes close to the Leigh Branch of the Leeds & Liverpool Canal, and the referenced "Union Connectivity Review" recommends more work on continuing this further north as part of improved connections from HS2 to Scotland.

Crewe to Manchester Route Issues

The Phase 2b West route was planned through the subsidence-affected Cheshire brine field before any site investigations had been done, so changes may yet need to be made for engineering reasons. The safety of high speed railways depends fundamentally on track stability with tolerance limits for ground subsidence being only a few millimetres. In Cheshire much of the subsidence is from historic 'wild brine' pumping, remote from the extraction points, unpredictable and still active.

The proposed surface level terminal station at Manchester Piccadilly remains controversial with rival proposals for a through station underground which would enable easier through services to Leeds without reversing, as well as improved connections to the northwest and more direct future connections via Preston to Scotland. This clearly needs to be integrated with the NPR route from Manchester to Leeds and with the connection to Scotland. The Government is defensive about the rationale of "turnback" stations and claims a redesign would delay opening by 7 years, but "has commissioned a more detailed analysis of the optimum form of station at Manchester Piccadilly".

Manchester Piccadilly station serves south Manchester but has only a tram connection to Victoria for other routes. The proposed south facing HS2 terminal station perpetuates this Victorian disconnect with no proper provision for onward connections to Scotland, or for efficient integration with a new east-west trans-Pennine line from Liverpool to Leeds and beyond.

The 8 miles long tunnel under south Manchester is an expensive extravagance needed only to go via the airport, but the airport station is not funded by HS2, and there is already a rail service to the airport. HS2 would not want its trains to be overcrowded between the city centre and the airport, so the market for an airport station will be limited to travellers to and from Birmingham or London, which already have good access to their own more convenient airports. The economic case for this station and tunnel is therefore very dubious.

The route from Manchester to Crewe via the airport also results in a circuitous route around Knutsford (popularly attributed to avoiding the then Chancellor's constituency) and a major deviation from the shortest route, adding distance, travel time and further construction expense. The need for an airport connection and this whole route alignment should be reconsidered.

An alternative surface route into the city from the west or southwest via the Mersey and Irwell valleys to a station in Salford was considered at the route planning stage. This would better connect with an improved east-west aligned NPR trans-Pennine route.

Given the serious engineering difficulties with the proposed route to Crewe, crossing the Cheshire salt field with its unpredictable subsidence problems, and the need to better integrate this route with the Northern Powerhouse Rail proposals for improved east-west connections, the whole Crewe to Manchester section of Phase 2b needs to be paused and go back to the drawing board to optimise its engineering, route, station design and connectivity with NPR and Scotland. Pausing the intention to submit an early Hybrid Bill for say 2 years will also give time to assess the long term effects of Covid-19 on rail passenger traffic and future capacity requirements.

IWA's response to the NIC included the following recommendations which remain valid:

- The new station in Manchester, whether at Piccadilly or Salford, should be a through station, essentially east west aligned, and provide connections via Preston to Scotland as well as being at the centre of the Liverpool to Leeds, Sheffield, Hull and Newcastle NPR system.

- The connection with HS2 Phases 1 & 2a from Crewe should avoid the worst of the Cheshire salt field, probably by taking a route further west than the current proposal and using more of the existing WCML corridor towards Warrington. It could then follow existing surface rail corridors into Manchester.

Northern Powerhouse Rail

A total of "40 miles of new build high speed line between Warrington, Manchester and Yorkshire (to the east of Standedge tunnels)" are promised as part of the NPR route, in two sections, from Manchester to Marsden and west from Warrington to join HS2 West. However, these proposed new high speed lines will apparently not be completed before the mid-2040s. From Marsden to Leeds and from Liverpool to Warrington existing routes will be upgraded and electrified.

Transpennine Main Line

The NPR case for a completely new cross-Pennine high speed line from Manchester to Leeds via Bradford has been rejected. A detailed route for this never seems to have been designed, and a line to current HS2 standards through such hilly terrain with winding valleys already full of transport infrastructure and buildings would be almost impossible to envisage without very extensive tunnelling. The IRP is very critical of the NPR options as offering poor integration with the network (ironic when HS2 was designed as a stand-alone system) and poor value for money, with two conflicting projects serving the same places, and that proposals "were being made which would cost many billions of pounds more than alternatives for – in some cases – little additional benefit". They instead propose upgrades of the existing Transpennine route via Huddersfield along with some new sections of line.

The Government has also rejected NPR proposals for new stations at Bradford, Warrington and Liverpool where they consider that expansion of the existing stations will be sufficient.

They further reject options for a single new line from Manchester serving both Leeds and Sheffield (presumably the former Woodhead route) in favour of an upgrade and electrification of the Hope Valley Line between Manchester and Sheffield, where some works are already underway.

Waterway Impacts

The new lines now proposed again appear to be aspirational only, with no published route details, and their impacts on the waterways are therefore speculative. Finding a new route between Manchester and Standedge through hilly terrain and dense built development will be a challenge and it remains to be seen how much of it will actually be new as against localised improvements of the existing line. There was a relief line from Stalybridge to Standedge to the east of the Huddersfield Narrow Canal, closed in the 1960s and partly built over, which could be reinstated but it was never a high speed route. Reopening the two original rail tunnels at Standedge would affect the current operational safety measures for the canal tunnel.

DfT should make more information available about the routes of new sections of NPR line, and where widening of existing lines outside the present railway land take is planned. They should also make clear if they plan to re-open the two original singe track tunnels at Standedge.

Routes Through Warrington

The new NPR Liverpool-Manchester route between Warrington and its connection with HS2 West will need a further crossing of the Manchester Ship Canal and of the Bridgewater Canal. As the favoured route is via reinstated low level platforms at Warrington Bank Quay, this may involve rebuilding the closed viaduct over the Manchester Ship Canal at Latchford, as space is otherwise very limited. However, the condition of this viaduct is poor and access to rebuild it will be problematic. In the other direction from Warrington, it is proposed to electrify and upgrade the "virtually disused" Fiddlers Ferry freight line which runs for several miles right alongside the St Helens (Sankey) Canal and crosses it at low level on a former swing bridge at Sankey Bridges. Although an adjacent low level road crossing and the nearby A57 already create problems for the restoration of this key section, retaining a fixed low level major rail route crossing would permanently prevent full restoration. Either a raised crossing should be provided or if this is not feasible than a different route for NPR through Warrington Central should be considered.

Connections to Leeds

The media reporting of IRP has portrayed Leeds and West Yorkshire as the big losers from 'broken promises' of both the full HS2 East and a new high speed NPR line via Bradford (HS3). But Leeds will get an improved connection to London via the upgraded ECML, and HS3 was never more than a political aspiration. There appears to have been no detailed engineering study to show how a high speed line could be constructed via Bradford across the difficult Pennine terrain without very extensive, and expensive, tunnelling. Upgrading the existing route via Huddersfield will be more affordable, although how practical the promised new high speed section from Manchester to Marsden will be is yet to be demonstrated. Bradford will have an improved line to Leeds from the existing city centre station which will be better than a new station on the outskirts.

There will also be a study of "the most effective way to run HS2 trains to Leeds including the most optimal solution for Leeds station capacity" so the possibility of a new station is not entirely ruled out. But the emphasis is sensibly on increasing capacity of the existing well-connected through station by improvements and by diverting some local services onto the promised West Yorkshire Mass Transit (tram) system, rather than building the previously planned new terminal station serving only the London direction. There is also a suggestion of continuing the MML improvements north from Sheffield to Leeds.

Summary

Overall the Integrated Rail Plan seem sensible and more practical than the previous plans for the HS2 Eastern Leg and the ill-defined NPR plans for a completely new Transpennine line via Bradford. Upgrading the existing MML and ECML offers earlier improvements with improved journey times not much less than HS2 and considerably less expensive and disruptive. Upgraded existing lines may not be as fast as new high speed lines but they serve more places, and their connectivity, capacity and reasonable speed for more locations are together more valuable than extreme speed for only a few.

However, the IRP still has major flaws in proposing two new sections of NPR without any proper engineering plans in areas where physical constraints make this very difficult. The remaining HS2 East link on its own has a dubious business case and its scheduling after everything else indicates a less than convincing commitment.

Whilst many waterways in Derbyshire, Nottinghamshire and Yorkshire will not now be affected, it is frustrating that the blight on the Chesterfield Canal restoration at Staveley has not been lifted and the threat to the Ashby Canal restoration at Measham remains. In the west, major concerns remain about the impacts on the Middlewic**h** Branch and on the Trent & Mersey Canal, and there are new concerns about the St Helens Canal restoration.

Recommendations

As explained above, IWA has the following recommendations:

- The safeguarding should be removed from the discontinued route through Derbyshire, Nottinghamshire and South Yorkshire.

- The HS2 East route around Measham should be amended to minimise disruption to the commercial and housing sites and to allow the developer funded restoration of the Ashby Canal to proceed.

- There should be a comparative cost/benefit analysis of the remaining HS2 East route against upgrading and electrifying the existing Birmingham to Derby and Nottingham lines.

- The whole Crewe to Manchester section of Phase 2b needs to be paused and go back to the drawing board to optimise its engineering, route, station design and connectivity with NPR and Scotland.

- The new station in Manchester, whether at Piccadilly or Salford, should be a through station, essentially east west aligned, and provide connections via Preston to Scotland as well as being at the centre of the Liverpool to Leeds, Sheffield, Hull and Newcastle NPR system.

- The connection with HS2 Phases 1 & 2a from Crewe should avoid the worst of the Cheshire salt field, probably by taking a route further west than the current proposal and using more of the existing WCML corridor towards Warrington. It could then follow existing surface rail corridors into Manchester.

- DfT should make more information available about the routes of new sections of NPR line, and where widening of existing lines outside the present railway land take is planned. They should also make clear if they plan to re-open the two original singe track tunnels at Standedge.

- At Sankey Bridges a raised crossing of the St Helen Canal should be provided or if this is not feasible than a different route for NPR through Warrington Central should be considered.

IWA hope that these comments and recommendations will assist the Transport Committee in their Inquiry.