HADRAG response to National Infrastructure Commission request for evidence on rail in the North and Midlands, May 2020

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A General comments and specific objectives

A1 Introducing ourselves and our concerns.

HADRAG is a campaigning rail users’ group, founded in 1985. Our efforts are based on the principle that transport must be designed to improve the environment locally and globally. Concern to support a zero-carbon transport system, to suppress global heating and fight climate change is therefore at the centre of our present objectives.

We are acutely aware of the challenge to public transport of the present coronavirus pandemic. We enlarge on this in A2 below.

From our foundation, HADRAG campaigned for reopening of the line through Elland and Brighouse. We were successful in May 2000 when Brighouse station (but not Elland) and the lines between Halifax/Sowerby Bridge and Mirfield/Huddersfield (hereafter defining the Elland/Brighouse Corridor) reopened to passenger traffic. There is a current plan to open a station at Elland which has achieved outline business case with work progressing to full business case through Calderdale Council/West Yorkshire Combined Authority with WY+ Transport Fund approval. Brighouse station saw massive footfall growth over the ten years from 2008, but is now limited by poor service.

HADRAG continues to campaign for tactical and strategic improvements to the Calder Valley Line train service.

HADRAG’s geographical focus is the 3-station triangle of Halifax, Sowerby Bridge and Brighouse but our interests are much wider, with our Calder Valley rail links radiating to Bradford, Huddersfield, Dewsbury, Leeds and York; via upper Calderdale and Rochdale to Manchester and Chester; and via East Lancs to Preston and Blackpool.

Three further points emerge here:

• HADRAG, with other user groups, strongly supported the commitments and aspirations of the 2016 Northern rail franchise including an additional service every hour between Bradford and Manchester, extended via the Ordsall Chord to Manchester Oxford Road and Piccadilly and continuing to the Airport. There is great disappointment this has not happened, not especially because we want to get more people to the Airport, but because of the diverse work, educational and cultural and leisure destinations along the southern fringe of the city, as well as wider connectivity. A key limiting factor has been infrastructure capacity in Manchester. Although the Ordsall Chord was completed in 2017, work that had also been planned by 2015 to enhance the Castlefield Corridor has still not been given the government’s go ahead.

• An even greater disappointment has been poor service performance, also exacerbated by the same lack of track, junction and platform capacity.

• It was disappointing that the franchise promised little significant improvement for the Elland/Brighouse corridor. Again, infrastructure limitations are in play, notably conflicts at Bradley and Heaton Lodge Junctions on the 2-track Huddersfield to Dewsbury route. Brighouse essentially has an hourly service albeit on two routes, Manchester-Calder Valley-Dewsbury-Leeds, and Bradford-Huddersfield. Half-hourly services should be the minimum for two towns Brighouse and Elland (when the latter station opens) each of which potentially serves a population roundly equal to the combined population served by two upper Calderdale stations (Hebden Bridge and Todmorden) which have a much better train service. We make a similar argument for improvement of frequency at Sowerby Bridge.
- HADRAG is one of the four founding groups\(^1\) of the Electric Railway Charter (ERC), supported by two branches of the national Railfuture, a campaign initiative launched May 2018 in Halifax. The Charter campaigns for railway electrification, particularly across the North of England, and reminds influential bodies and individuals of the “Northern Sparks” report in March 2015 of the Northern Electrification Task Force, which recommended 12 routes for an initial 5-year plan. The top-ranked route was our full Calder Valley Line. We seek a rolling programme of electrification across the North based on the NETF recommendations.

- Other issues include the difficulty of timetabling on the Calder Valley Line. Regular freight trains are a disruptive issue for pathing passenger trains that are 4/hour through upper Calderdale to Manchester plus potential additional services. The freight includes imports of biomass via Liverpool to Drax Power station, giving the Calder Valley Line an international dimension.

**A2  Re-purposing rail post-Covid19 and to tackle the climate crisis
– and the need to prioritise urgent modernisation of classic routes over planning long term high-speed proposals.**

At time of writing during the Covid-19 pandemic, lockdown is only just beginning to ease. Social distancing will continue for an as yet unknown time. Trains are running for essential journeys only by key workers, and operating at a small fraction of capacity. As lockdown is eased commuters are urged to walk or cycle – good sustainable options for journeys of suitable distance – but to use cars rather than public transport. It is of course essential – first priority – to continue social distancing if we are to overcome Covid-19. It might be said, however, that we are entering a “dirty phase” of easement from lockdown, with potentially more cars on the road, burning more fossil fuels, causing more global heating.

Trains, buses and trams carrying 10 per cent of their capacity can not be sustained. The climate emergency is still with us and becoming more urgent. The burning of carbon-based fuels will still have to stop. We shall need new infrastructure to generate carbon-free electricity. In towns and cities, we have to make our streets safer and more pleasant for users of sustainable transport. It is good to see plans for wider pavements and cycle tracks as a response to Covid; we hope also there will also be plans for easier street-use by people with disabilities. Beyond Covid, we have to get away from congestion, pollution and climate damaging CO\(_2\) emissions. Public transport must come back stronger, enabling people to travel and behave as the social beings that we are. We must re-start the modal transfer to less polluting and more sustainable modes meaning buses, trams and trains propelled by zero-carbon, zero-emission energy, as well as walking and cycling.

**So we shall assume in this response that that people will, as the Covid crisis is overcome, again be enabled to travel in groups, even in comfortable crowds. “Normal” travel by bus, tram and train will indeed in due course become possible.**

However, we must expect a possibly permanent reduction in city-working and hence both commuting and city-city journeys. Even before Covid, city workers were beginning more often to work from home. Commuting in overcrowded trains was seen as a punishment for working in the city, not a benefit. If in the future on-line working reduces the need to visit the office to perhaps just a few hours a week that will bring an end to the rush hour as we used to know it. But even within cities, office working is only part of the picture. Retail, hospitality, arts and service workers and their customers also need to travel.

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\(^1\) The Electric Railway Charter groups are HADRAG, Bradford Rail Users’ Group, Upper Calder Valley Renaissance Sustainable Transport Group and STORM (Support the Oldham-Rochdale-Manchester Railway), and the Charter is supported by the Yorkshire and North West branches of Railfuture, the national campaign for a better rail network.
There are clearly opportunities here:

- Commuting can become a pleasurable, relaxing start and finish to the day (perhaps for many only one or two days per week).
- Train operators will be able to spread capacity, providing better services for what we now call off-peak journeys, for purposes that will be an increasingly important part of our sustainable, green economic, zero-carbon recovery.
- Rail in the future should better serve the communities through which it passes: villages, towns and also cities, attracting modal transfer and playing a full role in combating the climate crisis. Trains need to draw people away from congested roads for a much wider range of journey purposes supporting people’s needs – not just for work, but for culture, outdoor and indoor leisure, the arts, socialisation... Actually, trains were already doing that. In the future they need to do that better, and do it more. These purposes have always been part of rail travel: they are not trivial purposes but may be part of a new view of growth which prioritises human wellbeing. People will in the future wish to visit cities, and our towns and country areas, but may do so for a different mix of reasons. We still need to work, but good quality transport can add value to the quality of life. Investment in infrastructure is required to make rail an attractive means of doing that.
- In light of the above, getting rail to better serve communities in the near future should be a more immediate and urgent objective than the planning of long-term high-speed projects for a future we are unable yet predict.

A3 Key infrastructure objectives

We emphasise that the following are not in order of priority. Aspects of A3.1 and A3.2 (a), (b) and (c) are complementary.

All of A3.1 to A3.4 are schemes that should go ahead in the short to medium term, by which we mean significantly earlier than the time when HS2 (ph2B) and NPR high-speed lines will be able to deliver benefits.

A3.1 Electrification – need for go-ahead for “Northern Sparks” rolling programme prioritising the Calder Valley Line


www.electriccharter.wordpress.com

The Northern Electrification Task Force was an all-party group of MPs and local authorities with officer and rail industry expert support. NETF’s “Northern Sparks report remains current, and should be seen as setting out a rolling programme of electrification across the North. NETF ranked schemes on economic, business and environmental criteria. Three lists were produced, the first being 12 routes for an initial 5-year plan. The top-ranked full Calder Valley Line was effectively defined as the route from Leeds via Brighouse and from Leeds via Bradford and Halifax, through upper Calderdale, to Rochdale and Manchester, and also through East Lancashire to Preston. This is effectively a network complementing the TransPennine Route Upgrade (York-Huddersfield-Manchester) electrification scheme, and a start on the Calder

2 The NETF assumed that Leeds to Mirfield would already be electrified as part of TransPennine Route upgrade.
valley would naturally follow TRU. The East Lancashire arm of the Calder Valley scheme would also link with a reopened Colne-Skipton line which would logically itself be electrified linking to the Skipton-Leeds electric route. (The default positions should surely be that all new lines are electrified.)

The Electric Railway Charter sees the Calder Valley Line (CVL) as an ideal candidate for electrification, as a strategic route across the Pennines linking five major centres – York, Leeds and Bradford, Manchester and Preston - with almost a dozen medium to large towns between, including Brighouse and Halifax in Calderdale, Rochdale, and the east Lancashire towns. Most sections of the route (really a network) have a train frequency of 4 trains per hour with potential to increase. Rochdale-Manchester is 6 trains/hour and Halifax/Bradford-Leeds has potential to increase from 4 to 5 or 6. Burnley to Preston is 2 trains/hour, but 3/hour Burnley-Blackburn, again with potential to increase, particularly when Skipton-Colne reopens. The Brighouse corridor has a poorer service which needs to improve particularly given the plan for Elland station.

Other relevant points include:

- **Frequent stops on the Calder Valley line will be favoured by the higher acceleration of electric trains.** We want to see a more frequent service at for towns such as Sowerby Bridge, Elland and Brighouse as well as the smaller communities such as those surrounding Mytholmroyd and the recently reopened and successful Low Moor station.

- **Electric trains are quiet, lightweight, cheaper in terms of purchase and operating costs, and more energy efficient.** They will make the Calder Valley Line into a truly modern transport system that people in its communities want to use.

- **Electric trains can have more coaches and more seats than a diesel or (in the future) alternative fuel or bimode train costing the same amount of money.** Bimode trains carrying fuel are heavier than pure electrics and tend to have poorer performance. Electrics can also use regenerative braking to return energy to the supply (or to batteries) when slowing down.

- **There is clear evidence (see for example RIA’s report at [https://www.riagb.org.uk/RIA/Newsroom/Stories/Electrification_Cost_Challenge_Report.aspx](https://www.riagb.org.uk/RIA/Newsroom/Stories/Electrification_Cost_Challenge_Report.aspx)) that a rolling programme of electrification will reduce costs of the order of 50%.** So it is essential that the teams working on TransPennine Route Upgrade (TRU) (and, we sincerely hope, completing the Midland Main Line wiring from Kettering to Sheffield) always have a next project to move on to.

- **“The hydrogen dream”** – We accept that hydrogen may be an alternative fuel for some branch lines, but not for strategic routes such as the CVL. Hydrogen is only acceptable if generated by zero-carbon methods (which most is currently not). We look for renewably-generated electricity driving electrolysis to make hydrogen but even then we have an energy efficiency of very roughly 50% in production and then a further 50% in on-train fuel cells to regenerate electric current, meaning very roughly 25% efficiency in energy distribution overall (or 75% wasted). This is several times worse than energy distribution through the grid system and overhead line electrification. **We do not accept that energy wastage should be dismissed even if it comes from renewables.** An IMechE report on prospects for hydrogen trains actually concluded that electrification of main routes was the number 1 recommendation [https://www.imeche.org/policy-and-press/reports/detail/the-future-for-hydrogen-trains-in-the-uk](https://www.imeche.org/policy-and-press/reports/detail/the-future-for-hydrogen-trains-in-the-uk). (We also accept that hydrogen generated by steam reforming of hydrocarbons, with greenhouse gas CO\textsubscript{2} as by-product, may be acceptable if the CO\textsubscript{2} is sequestered into places where it cannot further pollute the atmosphere; but this requires development of a whole new infrastructure for which the urgent decarbonisation agenda can not wait.)

- **Linked to the previous point, there is a need to upgrade the electricity generation and distribution system with accelerated development of zero-carbon generation.**

HADRAG: The Halifax & District Rail Action Group: Page 5
A3.2 Capacity improvements close to and benefiting the Calder Valley Line (CVL) and its users

(b) TransPennine route upgrade – capacity improvements to enable wider regional connectivity and service frequency

Network Rail has recently carried out a second-phase consultation on the Huddersfield-Westtown (Dewsbury) 4-tracking and grade-separation (Ravensthorpe) project, prior to TWA application. This is an essential element of TRU (TransPennine Route Upgrade) – essential not only for capacity and speed over the York-Leeds-Huddersfield-Manchester route but also for wider connectivity linked to the Elland/Brighouse corridor on the Calder Valley Line and to the route through Horbury to Wakefield and beyond:

- We expect reinstatement of a 4-track railway from Huddersfield to Ravensthorpe with grade separation at the latter point. This will relieve junction conflicts at Bradley and Heaton Lodge, and provide capacity for a better timetable including increased frequency over routes through the Elland/Brighouse corridor.
- We ask that the TWA application be processed as quickly as possible, and this aspect of TRU be delivered with urgency, and without waiting for decisions about longer term schemes.
- Expanding previous point, we hope that the 4-tracked Huddersfield-Dewsbury line with grade-separated junction at Ravensthorpe now be built, with the early decision to go ahead unprejudiced by future decisions on NPR that are still to be determined. It is not impossible that this central section of TRU might form part of NPR, should present assumptions about the route be changed. We emphasise again that whatever the decision on route options for NPR (and indeed whether or not a high-speed route is built), **full TRU is required now.**

(b) Capacity improvements at key junctions and stations – Manchester’s Castlefield corridor; Leeds, York

(i) Manchester Package C or alternative proposal. Background: the Ordsall Chord was completed for the December 2017 timetable change. First service over the new line linking Manchester north- and south-side routes was an hourly Sunday and intermittent weekday service from the Calder Valley Line to Manchester Oxford Road. This was billed as a stepping-stone to an hourly CVL service to Manchester Airport via Piccadilly. But that did not happen. TransPennine Express started a half-hourly service round the chord to the airport from NE England in May 2018, at which point the Northern service stopped. Ordsall should be carrying at least 4 trains/hr each way but cannot do so because capacity enhancements (Package C) on the Castlefield corridor at Oxford Rd (remodelling and signalling) and Piccadilly (two extra through platforms, 15&16) though planned in 2014-15 and put into the TWA process were never approved by Government. This was the other essential part of the Manchester “Northern Hub”. Because this second part was not given the go ahead, the first part (Ordsall chord) can not function to its intended purpose. So TPE gets to operate half hourly from NE England to Manchester Airport via Ordsall, but Northern is not allowed to operate similarly from Bradford and the Calder Valley Line. The Commission will appreciate the anger that this has caused among people who seek a better deal for local and regional inter-urban services. We request that the NIC report urgently to Government on the need for urgent capacity enhancements on the Castlefield rail corridor...

- which could be implementation of the Package C proposals, as also recently requested by Transport for the North, or...
- ... could be an acceleration of alternative more comprehensive proposals that would deal with the Castlefield capacity issues and also junction conflicts at other points. We hear of proposals for a rail tunnel from a point close to Ordsall Lane Junction to Manchester Piccadilly...
which station would become a major city hub. We would welcome this as an alternative to Package C provided planning can be brought forward to enable completion within the first half of the present decade. If that is not possible then at least some of the Package C work should go ahead.

Complementing either or both of the above, it is also necessary to find an alternative route for freight trains which at present travel through Piccadilly and Oxford Road stations many of them to and from the terminal at Trafford Park. The slow movement of these heavy loco-hauled trains is a serious constraint on the passenger timetable and its reliable operation. New links could be provided between the CLC line, on which the freight terminal is located, and arterial routes west of Manchester; or the Trafford Park terminal could itself be relocated to a more convenient location.

(ii) **Leeds.** We welcome current work to create a new W-facing bay platform (Platform 0) at Leeds station, but bemoan the length of time taken to complete this project:

- Network Rail procedures need to be streamlined to enable faster delivery of projects in future.
- We hope further platform capacity may be provided at Leeds. Initially this might use space adjacent to the new Platform 0 for further W-facing bays, benefitting Harrogate, Wharfedale, Airedale and Calder Valley line terminating services.
- Further development may come in connection with HS2 and development of a regional hub. The terminus-station arrangement of HS2 platforms at Leeds seems unsatisfactory, making through operation to further destinations operationally awkward. Might this be reconsidered?

(iii) **York** is more distant from HADRAG’s core area, but is important for CVL passengers as a destination (commuting and leisure) and as a connecting point for journeys to the Yorkshire coast, the North East, and Scotland. We experience delays through insufficient platforms and lack of tracks to allow parallel moves in and out of the station; trains from the Leeds lines are often delayed coming into the station. North of the station Harrogate line trains have to share tracks with East Coast Main Line (ECML) services in both directions, resulting in conflicts and timetabling constraints. Potential new or improved services between York and points south are inhibited by lack of platform capacity. We suggest:

- Additional crossovers at south end of station to allow parallel movements between the Leeds lines and platforms 6, 7 and 9.
- New tracks and possibly platform to allow running to/from the Harrogate Line (Skelton Junction) independent of the ECML.
- Additional south-facing bay platform alongside platform 1 for services toward Hull and possible new services via Castleford.
- The provision of grade-separated junctions should also be considered to eliminate conflict with East Coast Main Line services by services Leeds etc to/from Scarborough and by southbound services from north of York crossing to the Leeds line. (These would not need to be immediately close to the listed historic station building.)
(c) **Capacity improvements close to the Calder Valley Line – passing loops, additional platforms e.g. at Halifax**

(i) Passing loops enabling better pathing of passenger trains around freight paths could be accommodated at points in upper Calderdale between Sowerby Bridge and Todmorden, and at points west of Summit Tunnel in Rochdale district.

→ In the longer term we look for alternative routes for rail freight across the Pennines relieving both the Calder Valley and the parallel Huddersfield (TRU) line.

(ii) The arm of the CVL through Halifax and Bradford has potential for more frequent passenger services. Recent work at Bradford Interchange (a terminus where all trains must reverse causing unavoidable conflicts) has provided for more parallel movements. **At Halifax station** there is the possibility to reinstate a third platform which would enable future timetable development, particularly if more trains are required to terminate at Halifax or reverse at Halifax; it would also allow for timetables where semi-fast trains are able to pass stoppers at this point (though all trains would call at Halifax itself). Longer term, reopening of the Bowling-Laisterdyke curve bypassing Bradford might be considered, though if NPR provides a new line through Bradford this might be adapted to provide such a solution (see A5).

A4 **Further objective enabling enhanced or additional services over existing under-used routes where infrastructure already exists**

Under-used parts of the network around the Calder Valley include to following.

(a) The “Copy Pit” line (“Roses Rail Link”) from the East Lancs route to Hebden Bridge/Todmorden carries 2 trains per hour – the well-used Blackpool-Halifax-Leeds-York semi-fast and the Blackburn-Todmorden-Manchester service. Additional services over this route could improve on this connectivity Preston/East Lancs to West Yorkshire and beyond. Examples might be Preston-Huddersfield, Preston-Dewsbury-Leeds/York, Preston-York via Wakefield and then route (b) below.

(b) Castleford-Milford(York) line. This line currently has no advertised passenger trains but is regularly used by diversions as well as by freight. It is a direct route from Wakefield (Kirkgate) to York, avoiding Leeds, and an obvious possibility for a regional semi-fast service along the lower Calder Valley line serving Wakefield and Castleford and then direct to York. Several possible services include Preston-East Lancs-Calderdale-Wakefield-York (as above), and an extended TransPennine Express service Manchester-Huddersfield-Wakefield-York. These services would give a substantial boost to rail connectivity in Wakefield and Castleford and connections could be available from other Wakefield district stations. Not all journeys need to go to Leeds!

Most of the above service suggestions would also use the Elland/Brighouse line, giving an opportunity to provide additional services at these Calderdale stations as well as stations in upper Calderdale such as Sowerby Bridge.

The routes suggested exist, are already used, and would require little if any local work on the track. But it should be noted that:

- (b) would require reinstatement of the second platform at Castleford.
- Additional platforms might be required at terminal stations such as at York (such as the additional south-facing bay as in A3.2(b)(iii) above) and Preston.
- Timetabling would be eased by completion of the TRU proposal (A3.2(a)).
A5 Northern Powerhouse Rail and a Leeds-Manchester high-speed route.

How could this benefit Calder Valley Line and other local rail-served communities?

As we understand them, current plans for NPR envisage a high-speed line Leeds-Manchester, with one intermediate station in Bradford. The line would pass through Calderdale but not serve the district and we understand there would be a similar situation in Rochdale. The expectation is that much of the line would be in tunnel, but a greater length of over-ground sections might reduce cost. It seems likely there would be significant local environmental objection to a new high-speed line crossing the Calder Valley above ground when there was no station on the line serving Calderdale district.

This is not to say that we oppose NPR as an improved network linking our wider region, possibly with some high-speed routes. The inclusion of a major city such as Bradford is very important. However we do question the focus on city-centre to city-centre journeys, particularly in a post-Covid world where city work may be substantially reduced. As discussed in A2 above, we would expect a repurposed railway in the future to be much more community focused, supporting a wider range of journeys.

If the NPR high speed line is built and has a station in Bradford (whether city-central or in the outskirts), and assuming a target journey time Leeds-Manchester of 30 minutes, we would expect Bradford-Manchester to be little more than 20 minutes. It is true that this would release capacity on Calder Valley Line trains serving the intermediate towns and smaller communities. However the journey time from Halifax to Manchester would remain more than 40 minutes; Halifax-Bradford-Leeds would remain little (if any) less than 35 minutes. On this basis the benefits of a high-speed rail route to Calderdale district (or indeed Rochdale) appear to be very limited.

We hope that two possibilities be seriously considered if the decision is taken for the high-speed route (HSR) via Bradford to go ahead:

1. With a focus on connectivity rather than speed the provision of an intermediate station on the high-speed line in Calderdale district. This should be an interchange where the new line crosses the Calder Valley Line, enabling Calderdale communities to easily access the new route. A similar interchange could be provided in Rochdale district. We suggest these additional stations would slightly increase journey time but could spread the benefit of any new line to a greater population with wider economic benefit.

2. Rail junctions to be provided between the new line and existing Calder Valley route, enabling CV services to be accelerated by using HSR for part of the journey. For example if CV trains towards Leeds could cross over to the new HS route in Bradford, Halifax-Leeds journey time would be reduced from the present typical 35 minutes to about 20 minutes. The new line could also be linked in Bradford to the Wharfedale and Airedale lines that at present terminate in Forster Square station. This would allow through services from Ilkley, Keighley and Skipton to access not only the Calder Valley Line but also to use the new high-speed route to Manchester. In effect this would unite the NPR Manchester-Bradford-Leeds proposal with a Bradford “crossrail” scheme.

Clearly either or both of the above would increase capital cost. Qualitatively, however, we believe the benefits would be more than proportionately higher.
A6  Integration and fares.

Real journeys are not usually single-mode station to station. Nor are they usually city-centre to city-centre. People may start at home, maybe on a bus, and may go to an office, hospital or college outside another town or city. The North of England needs an integrated transport system at least as good as that found in Greater London. At present the subjective impression is that every combined authority and county is working to reinvent a system of smartcard ticketing that is not quite as good as the London Oystercard. If we are to get modal transfer to more sustainable, less damaging forms of transport – public transport – we need simple fares that are seen as affordable, attractive and value-for-money, with a simple means of paying for a whole journey. Systems must be compatible and between different county areas.

There must be high-capacity, fast-operating digital infrastructure to support that.

A7  Conclusion – to fast-track the classic rail projects

The fast-tracking of projects to enhance the classic rail network needs to be prioritised. Some of the most important of these projects have already been either largely planned or at least recommended for several years. Action is required without further delay. These projects and recommended programmes include:

- “Northern Sparks” rolling electrification programme of routes as recommended by the task force report, 2015.
- TransPennine Route Upgrade
- Manchester Castlefield corridor etc unblocking

The above are interlinked and therefore not prioritised. But they are urgent.

We believe, therefore, that there should be an early interim report prioritising quick starts on these schemes including electrification and other infrastructure enhancements on classic routes, ahead of planning high speed routes for the more distant future which when they arrive may yield only very limited benefits to local communities in districts such as Calderdale.

Rail is supported by all taxpayers and should serve the whole community, promoting an environmentally attractive and modern alternative to congested and polluting roads, tackling the climate emergency. If city working and business is reduced post-Covid this provides a dual opportunity to make commuting a better experience, and to make rail services attractive for a wider range of journeys. This is the repurposing of a transport system, and the infrastructure improvements – including some already proposed – will be needed to provide new services over new routes and better services on existing routes for the communities they serve.

Rail must work with other modes, with seamless ticketing. Smartcard solutions require fast and reliable digital infrastructure.

Finally we highlight an emerging theme, the importance of provision for freight as well as passenger services with the infrastructure provided to enable them to co-exist better than they do at present on lines such as our, the Calder Valley. New routes for freight may be at least as important as NPR high-speed city links.

We have attempted to outline answers to the 11 specific questions asked by NIC in Section B below:
## B HADRAG and Electric Railway Charter responses to NIC’s 11 specific questions

<table>
<thead>
<tr>
<th>Question</th>
<th>Broad part A ref.</th>
<th>Response – based on points in part A above.</th>
<th>Additional Resources</th>
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<tbody>
<tr>
<td>1</td>
<td>A3</td>
<td>The following should be seen as urgent with a start as close as possible to immediate and substantial completion in ten years:</td>
<td>Greengage 21 response to this consultation: <a href="http://www.greengauge21.net/the-rail-needs-of-the-north-and-the-midlands/">http://www.greengauge21.net/the-rail-needs-of-the-north-and-the-midlands/</a></td>
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<td>• Solution to capacity issues, including Manchester (inc. Castlefield corridor), either by approval to Package C proposal or alternative tunnel based proposal if this can be advances with due speed – enabling, for example, regular services from Bradford and the Calder Valley Line to the south side of Manchester including Manchester Airport.</td>
<td><a href="http://www.electriccharter.wordpress.com">www.electriccharter.wordpress.com</a> – blogs on the website provide a number of references to recent reports.</td>
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<td>• Full completion of TransPennine Route Upgrade (capacity + 100% electrification), enabling improved local/regional connectivity (e.g. along the Brighouse corridor and towards Wakefield) as well as improved journeys along route itself</td>
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<td>• Additional city-hub and regional capacity enhancements on classic routes, enabling new and increased services, and performance improvements.</td>
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<td>If NPR (as well as HS2 ph2B) is to include new high-speed lines these must be integrated fully with the classic rail network. If NPR is to provide a high speed line from Leeds to Manchester serving only Bradford as intermediate stop, this must have physical rail junctions with the Calder Valley Line, for example a junction in the Bradford area could allow CV services to run via the new line from Bradford to Leeds reducing Halifax-Leeds journey time from the present 35 minutes to about 20 minutes. A similar argument can be made for the opposite end of the new line between Rochdale and Manchester.</td>
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| 2 | Which set of rail investments do you believe would, together:  
(a) best unlock capacity within the Midlands and the north?  
(b) best improve connectivity within the Midlands and the north? | A3 | We must see capacity in terms of the ability of the rail network to attract traffic off the roads. Making reasonable assumptions about the post-Covid world this is no longer primarily about city-based work.  
In terms of serving communities and opening up rail travel to more and more people, investments that target modernisation and capacity enhancement on classic rail routes are likely to deliver both increased capacity and connectivity for the greatest number of people, the greatest fraction of the population. |
| 3 | Within the set of investments you identified, which individual investment(s) should be the highest priority?  
– Please explain your rationale for this and how this would affect the phasing and sequencing of the full set of investments you identified. | A3 | The items we have identified are inter-linked; for example electrification and capacity improvements.  
The most urgent two schemes in terms of time, and which need to be completed in the next five years are:  
- Manchester Castlefield corridor (etc) capacity either by Package C or tunnel-based proposal if that can be advanced with sufficient urgency.  
- TransPennine Route Upgrade (TRU) including full capacity works Huddersfield 4-tracking and grade separation at Ravensthorpe + 100% electrification. Also in parallel with TRU Midland Main Line to Sheffield and linking to Leeds.  
Following TRU it would be logical for the electrification teams to move on the other schemes in the Northern Sparks (NETF) recommendations including as a high priority the strategic Calder Valley Line.  
Other capacity works would be coordinated with the wiring programme. |
| 4 | What supporting policies need to be in place to deliver the benefits of the investments you identified? If there are any dependencies with other investments/policies, how confident are you that these supporting policies will be put in place? | A3, A6 | Examples include:  
- Renewable energy development to supply a zero-carbon electric railway and wider sustainable energy needs.  
- System of “fair fares” to support modal transfer from car and road freight to rail.  
- Upgrades to digital infrastructure required to enable integrated multi-modal ticketing with smart cards. |
| 5 | What impact would the investments you identified have on greenhouse gas emissions? In particular, how would they affect the UK’s ability to meet its domestic and international targets, including the Paris Agreement and net-zero?  
– In answering this question, it would be helpful if you could consider the expected decarbonisation of road transport, as set out in the Commission’s National Infrastructure Assessment and Freight Study. | A1, A2, A3 | By definition CO₂ etc emissions would be greatly reduced, the aim being a zero-carbon transport system of which mainly electrified rail would be a significant element. It is clear road transport decarbonisation is also essential. Rail will help by expanding and providing capacity to take traffic off the roads, for example by providing more capacity for both bulk freight and freight distribution as well as passenger services that must be developed to attract car users reducing local congestion and pollution.  
Even with present electricity generation electric railways are lower carbon than road transport; but to achieve a zero-carbon transport system rail must itself decarbonise. |
### 6 In addition to greenhouse gas emissions, what are the potential environmental effects (positive and negative) of the investments you identified?

**A2, A3**

Improved local and regional, inter-urban and community railways based on the classic rail network can make an environmental impact many years before high speed projects can come to fruition and deliver environmental benefits based on train services becoming more frequent and comprehensive, attractive for a much wider range of journey purposes – arts and cultural, sporting, leisure generally, social interaction as well commuting for work and business-based journeys between city-centres both of which are likely to decrease post-Covid.

These environmental benefits include:

(a) within and close to the railway itself:
- reduced air pollution and noise in and around stations through electrification

(b) through modal transfer to rail:
- reduced road congestion, with benefits for continuing car users and also making roads more usable for buses and tram systems
- improved road safety, with easier routes for pedestrians and cyclists
- reduced air pollution and noise providing a healthier atmosphere for all.

### 7 Aside from those delivered by improved connectivity and greater capacity, what broader impacts on people’s quality of life could the investments you identified have?

**A2, A3**

- Environmental benefits as in previous promoting physical and mental health and general wellbeing.
- A clean and modern transport system that provides an attractive alternative to congested roads.
- Dependable rail travel for a multiplicity of purposes.

### 8 How would the costs and benefits of the investments you identified be distributed economically, socially and geographically?

**A6, A7**

Public transport should be seen as a public service, supporting the growth of human wellbeing which goes beyond traditional notions of economic growth. The need to “level up” the North in terms of investment and economic prosperity is very much an issue of the day. Investment in rail in the North (and Midlands) needs to catch up with that in SE England.

All taxpayers will pay to a greater or lesser extent in terms of investment and revenue support; it is right that all should benefit. Fares should be set to encourage modal transfer to rail by travellers across the range of wealth and income.
| 9 | Which set of investments would best improve rail connectivity with Scotland?  
   − If these are different to the investments you identified above, please explain why. | Package of measures should include development and capacity enhancement of northern parts of East and West Coast Main Lines, linked to HS2. However, high speed rail seems likely to only connect with Scotland’s major cities and largely bypass the Scottish border areas. Other beneficial projects could include:  
   • In Northern England, improvement of services over the Settle-Carlisle route with the possibility of regional services linking Yorkshire with southern Scotland. In infrastructure terms increased linespeed and enhanced signalling for capacity could passenger service benefits.  
   • In Scotland (but crossing into Northern England), extension of the highly successful Borders railway from Tweedbank to Carlisle (The Waverley Route) where it would connect with Northern English services. | These are different, additional points to main investments identified in this response because our main concerns have been with connectivity across the central belt of Northern England. |
| 10 | What would be the impact of the investments you identified on connectivity between the Midlands and the north, and other parts of the UK?  
   − Please explain where and how impacts would occur. | A3 | As an example, our call for regular Calder Valley services through to Manchester Piccadilly would enable connections with inter-city services going through the Midlands and towards the South and South West, as well as Wales. Calder Valley line passengers would have a greater choice of access points to the proposed high-speed rail network. | |
| 11 | What would be the impact of the investments you identified on international connectivity across the Midlands and the north?  
   − Please consider the impact on both ports and airports. | A3 | We have been mainly concerned with internal services. But we called for a regular service from Bradford and the Calder Valley Line (which would include Rochdale) to Manchester Airport enabled by Castlefield capacity. This would transform international connectivity.  
   In addition international freight traffic to and through our area would be benefit from some investments suggested:  
   • new freight routes across the Pennines, passing loops on existing routes would benefit traffic such as the biomass trains from Liverpool port to Drax, whilst also reducing constraints for local/regional passenger services caused by freight on the same route  
   • international freight from ports such as Felixstowe and Southampton | |