Great British Railways Whole Industry Strategic Plan: Call for Evidence

Transport Planning Society Response

About the Transport Planning Society

The Transport Planning Society (TPS) is the only professional body focusing entirely on Transport Planning in the UK. With almost 1500 members, we aim to facilitate, develop and promote best practice in transport planning and provide a focus for dialogue between all those engaged in it, whatever their background or other professional affiliation.

Preliminary observations applying to the answers to the questions

Where a corporate body or its predecessor's records are concerned, including the British Railways Board, Local Authorities, Passenger Transport Authorities/Executives and Manufacturers, if further investigation of evidence quoted is wanted it is assumed their records can be accessed. References to documents are in footnotes including links where source material or pointers to it are available on-line. Each answer (including the question summary for reference) starts on a new page. **Three fundamental points are discussed before answering the questions on the response form:**

The end-users of rail services

The outcomes required from Great British Railways (GBR) are high levels of service performance for its passengers - individuals or families or business travellers undertaking journeys on behalf of employers - and the consignors of freight and parcels businesses or industry whose scale may encompass parcels, containers, wagonloads or complete trains. The better the aggregated perception of these diverse end users the better the performance of GBR in the public eye. Good customer perceptions are likely to be accompanied by acceptable financial results, probably minimising Government support levels. So the ultimate customers for GBR are not any of the internal stakeholders, such as councils or other bodies with transport or planning or maybe funding roles, not even the UK Government as the majority provider of support and ultimate owner of the infrastructure and concession rights. They are the end users from Great Britain's diverse communities, businesses and industries. Each individual or entity will have views which deserve to be heard. Effective consultation, feedback and monitoring are essential to good planning whether strategic or tactical.

Running through all outputs is the essential requirement to cater for those unable because of disability (physical or otherwise), age, childhood or other barriers to mobility. Amongst the key objectives of GBR to be considered across all its activities is that GBR must create a railway system that is genuinely accessible to ALL, not only customers but also all its workers. Those excluded by physical or communication barriers must be reduced to an absolute minimum number, if not literally zero. As written, the WISP principles document is, not unexpectedly, focussed on rail industry

objectives but the Plan must not lose sight of the Railway's end-users. The National Infrastructure Commission's Second Assessment[1] calls for evidence concurrently with the WISP and deals with strategic challenges across topics of fundamental importance to the rail industry such as Power and Digital Networks and Decarbonisation. TPS has responded to that consultation also.

Spatial dimensions for rail planning and corresponding governance structures

As transport planners we are interested in the performance of the rail industry at spatial levels from all Great Britain to the area of influence of each logical unit of rail organisation. This may involve geographical definitions for one or more externally defined catchments. Alternatively, catchments may be defined for infrastructure, inter-city passenger or freight purposes, for example corresponding to the area capturing more than ninety percent of commuting trips into and within a conurbation.

Local Government is rarely stable for long and the UK Government is minded to rationalise the County Council areas to replace both upper and lower tiers with one or more unitary council in each county and to create further mayoralties. The local governance structures of England are complex[2] with ten (nine mayoral) Combined Authorities[3] with strategic functions including transport, unitary Districts (except within CAs) responsible for all functions, local and strategic, County Councils with more strategic functions than CAs) and "old style" District Councils within Counties with no formal strategic transport or planning roles. Cornwall County Council effectively has CA powers (but no mayor) for transport. In London, by far the most populous metropolitan area, the Greater London Authority is the strategic authority and the London Boroughs effectively correspond to metropolitan districts within the metropolitan Cas.[4] Metropolitan CAs are those containing a Passenger Transport Area as defined in the Transport Act 1986 as amended[5] by later legislation.

Other bodies with influential roles in respect of rail are the Sub-national Transport Bodies (STBs). Of these, Transport for the North has statutory status but in practice has not influenced national decision making in the way intended (although it has done much useful work with various rail stakeholders in the North including pioneering work in digitalisation and customer facing systems). Eight other STBs have been established or proposed by groups of local councils on a voluntary basis.

Local Economic Partnerships (LEPs) are associations of local councils, business and industry representatives based in conurbations or other key centres. They represent the voices of business and industry better in establishing strategic policies and programmes for their areas, usually at a regional level. They figure prominently in proposals in the Levelling Up White Paper.[6]

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[1] National Infrastructure Commission. (2022) Second National Infrastructure Assessment: Baseline Report. [https://nic.org.uk/studies-reports/national-infrastructure-assessment/baseline-report/]

[2] House of Commons Library. (2020) *Local government in England: structures.* [https://commonslibrary.parliament.uk/research-briefings/sn07104/]

[3] Local Government Information Unit (LGIU). (2021) *Combined authorities and the role of a combined authority mayor.* [https://lgiu.org/combined-authorities-and-the-role-of-a-combined-authority-mayor/]

[4] London Councils. (2021) The essential guide to London local government. [https://www.londoncouncils.gov.uk/who-runs-london/essential-guide-london-local-government]

[5] Transport Act 1986, c.73 (1986) *Updated version incorporating amendments in subsequent legislation.* [https://www.legislation.gov.uk/ukpga/1968/73/contents]

[6] Department for Levelling Up, Housing and Communities (2022*) Levelling Up the United Kingdom*. [https://www.gov.uk/government/publications/levelling-up-the-united-kingdom]

Matters are relatively simpler in Scotland and Wales where smaller populations, generally more stable governance structures and easier access to seats of government mean more discussion and faster outcomes [this is the view of a member with experience in England, Scotland and Wales]. Transport will always cross boundaries and use of artificially defined boundaries such as individual districts, in some cases even counties, may cause additional work and complexity. The traditional view that all services should be administered on the same boundaries no longer holds, if indeed it ever did. For example, the logical areas for planning power distribution networks may not be the same as for NHS services, different in turn to rail planning. The Wales Spatial Plan Update 2008[7] used "fuzzy boundaries" that could be adapted in creating plans for different railway geographies or traffic flows.

Trend Analyses and IT Applications

The questions ask for responses on dealing with trends 5, 10 and 30 years out from the WISP base date. National Rail and National Highways both have 5 year financial settlements set by Government. At the time of writing (February 2022), most trends tracking human behaviour and costs are disrupted by the impact of two years of the pandemic. Covid-19 has not yet become endemic even if the later variants are proving less deadly. We suggest that, in such circumstances, the best that can be done is to use scenario testing, whether based on simple extrapolation of long-term trends at different rates of change or analyses using more sophisticated techniques.[8] [9]

Information Technology is evolving rapidly and Artificial Intelligence (from machine learning by rote to neural networks capable of rational analysis) will have major applications in many fields from modelling to major control systems in production, transport and many other contexts. It will be wise for major enterprises to delay investment in such systems until there is confidence in their veracity and stability.

Strategic objectives of the Whole Rail Industry

Six external trends have the potential to significantly impact rail over the next 30 years
Trends will not evolve in isolation: also important to consider impact of wider Government policy which will impact trends

Future Trends	Hypotheses & current observations
1. Increasing importance of sustainability	• Increasing **sustainability** awareness **likely to play a role in modal choice:** 63% consumers would switch from air to rail travel for trips <5hrs[1] • HMG is **committed to net zero;** rail 6 x more energy-efficient than road[2] • **Significant investments by other modes** to improve sustainability • Rail infrastructure will also need to adapt to changing climate, especially heat & floods
2. Changing mobility behavior	• **Greater everyday mobility** driven by commuters and new mobility; **more travel** (29% growth in rail travel in decade pre-covid[3]), **less car ownership** • Significant **uncertainty on how Covid and future pandemics impact long-term** (including rise of homeworking, changing retail consumption patterns & rise in home deliveries)
3. New forms of mobility	• **Autonomous mobility on demand** has the potential to reshape travel over next 30 years – though significant uncertainty remains • Digital micro mobility (often shared vs. owned) has the potential to re-shape **first & last mile in urban spaces**
4. Accelerated digitisation & innovation	• Digitisation is changing **customer expectations –** 324% Year on year increase in trainline digital ticket sales[4] • Digitisation also enabling **process optimization** (yielding up to 20% capacity improvement and 15% reductions in opex in peer case studies[4]) • New **technology and innovation** in materials also creates opportunities
5. Demographic change	• Demographic change is bringing **workforce pressures** with 120k staff required over the next 10yrs for new rail projects[5] • Elderly pax (rising to 31% pop. By 2050[6]) will **need greater accessibility** • Overall pressure on government funding will grow
6. Changing flows of goods	• **Trade** is changing with a long-term trend to globalization & containerization recently **challenged by cancelled trade agreements** and a drive towards **local production & consumption -** 31% increase in UK freight over 10yrs[7]

1. Consumer mobility survey, May 2021; 2. Eurostat Energy Statistics 2018; 3. ORR - Passenger Journeys 2018-19; 4. Report "Why the Future of Rail Operations is Digital", 2018; 5. The Rail Journal; 6. ONS Projections - UK Population in Age Groups; 7. DfT 2019

[9] Dynamic Causal Modelling. (2022) *Long-term forecasting of the COVID-19 epidemic*. UCL. [https://www.fil.ion.ucl.ac.uk/spm/covid-19/forecasting/]

a) How would you apply these objectives to rail in your region or to your area of expertise within the transport sector? Do you have evidence you can share with us of how you have applied similar objectives in relation to rail, and do you consider the objectives to have missed any key areas?

b) How is it possible to make progress against a number of the objectives simultaneously? Do any of the objectives have larger barriers associated with them than others, or do any objectives pose possible barriers to others? Where would you make the trade-offs?

c) What long-term trends in wider society, the economy, and the environment will affect these five objectives over the next 5, 10, and 30 years? Please give evidence to support your response.

d) What are the key uncertainties you consider that the Strategic Plan must be resilient to in order to be effective over the next 5, 10 and 30 years?

e) Over the next 5, 10 and 30 years, which steps should the sector take to improve integration of rail with the wider transport system (including walking and cycling) in pursuit of these objectives?

a) TPS welcomes the ambition of the Whole Industry Strategic Plan (WISP) and hopes that its members nationwide will have the opportunity to contribute as GBR develops from the evidence base through option generation to completion of the national plan. We have already identified our belief that the most appropriate metrics for evaluating the Plan will assess the impact of WISP outcomes on end users. For passengers we suggest that the statutorily independent Transport Focus[10] might be involved both in the formulation of those metrics and in monitoring the outcomes. For freight, bodies such as the CBI and FTA might be asked to suggest an independent monitoring and assessment body.

The WISP itself should, as the question suggests, generate sub-plans for each region or other logical component of the national scene. Involvement of Local Authorities responsible for shaping the spatial, economic, social and environmental contexts is essential, as is representation of business, for example through LEPs and Chambers of Commerce and Trade, and other key local stakeholders.

TPS considers that:

> ➤ **The most appropriate metrics for assessing will assess the impact of WISP outcomes on end users.**

> ➤ **The National WISP should lead seamlessly to the development of sub-plans for its components whether geographical, business sector or activity based.**

> ➤ **STBs, Local Authorities and community.**

Evidence can be found in the Passenger Transport Areas[11] established by the Transport Act 1968 together with their political authorities and executives. An historical cameo of over three decades of experience in Strathclyde and West Yorkshire Passenger Transport Executives is given in Appendix 1 as evidence of what can be achieved by partnership working with one or more stakeholders. The outcomes can be summarised as:

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[10] Statutory duties of Transport Focus. (2015) *Transport Focus, London.* [https://d3cez36w5wymxj.cloudfront.net/migrated/Statutory%20duties%20of%20Transport%20Focus%20 2015.pdf]

[11] Parliament, c.73 (1968) *The Transport Act 1968* [incorporating amendments from subsequent legislation]. [https://www.legislation.gov.uk/ukpga/1968/73/contents]

- Introduction of multi-modal zonal fares structure and incorporation of rail services into the Metro family of pre-paid tickets - Metrocard travel cards, Metropermit for concessionary travellers, Saverstrip magnetic carnet tickets (12 rides for the price of 10), Day Rover all network tickets. Introduction of family group tickets.

- Delivery of the first production Pacer trains (class 141). Although Pacers came to be disliked by railwaymen and customers, some well qualified TPS members and railwaymen maintain that but for the Pacers many regional lines would have declined and closed. The 141s had short lives and BR substituted them with 142s.

- The first diesel trains specified and funded by a PTA; the Class 144 Pacers based on coach built bodies from Walter Alexander Ltd rather than the Leyland National components used on the widespread class 142s.

- A bespoke centre car for the class 144s, ordered and financed directly by WYPTA through Metro. These may have been the first rail passenger vehicles used on BR public services that it did not own and were an early example of the now familiar concept of leasing (through Lloyds Bank plc).

- 10 class 155 Sprinters using Leyland National bodyshell components were acquired to WYPTA specification in 1987. These were for use where Pacer capacity was insufficient. Rather later some were converted to single unit Class 153s to give operators more flexibility to strengthen 2 car Sprinters. In fact, this degraded passenger service as a single 153 was frequently used to cover failures or units late from depot leading to overcrowding particularly on the Harrogate line.

- Also leased, a sub-class of 10 class 158 Sprinter trains for the long distance service started for a merged building society with head offices in Blackburn and Bradford that negotiated with BR to introduce a basic service re-opening the Copy Pit line to regular passenger traffic. The service was successful and the WY partners agreed to extend it from York to Preston and then to Blackpool. The class 158/9s were intended to upgrade this but in practice were used network wide by the RRNE operators causing some irritation in WY service as this was contrary to the spirit of the Plan.

- Leadership by WYPTA of technical transport planning work for the consortium of local authorities opposed to the closure of the Settle-Carlisle line in the 1980s. The case was won by weight of public objection and the Councils' demonstration that the line had not been properly marketed nor sufficiently maintained. Its traditional role as an Anglo-Scottish main line was no longer viable, but it had significant value to the local communities for work, education, leisure and tourist traffic

TPS considers that the preceding discussion and evidence demonstrate the feasibility of addressing a number of objectives simultaneously. The West Yorkshire partners were consciously addressing 1, 2, 4 and 5 in the introduction to this question.

Benefits for 3 emerged too as the main processing centre for the merged Building Society came to Bradford facilitating relocation of the bus garage to a cheaper site (in fact on unwanted BRB land!), sale of surplus land at Bradford Interchange and reconstruction of the bus station deck to provide a state of the art enclosed bus terminal with electronic information displays, and eliminating risks to customers crossing the bus carriageways present in the original building. A revenue stream was obtained by construction of additional retail units in the shared concourse and letting the remaining garage area on long term leases for leisure and parking use.

A rail-oriented description of the history of Bradford Interchange is given by Wikipedia.[12] The rather more interesting history of the bus facilities and the commercial negotiations that largely eliminated substantial inherited liabilities for both Metro and the commercial operator (now First Bradford) will be retrievable from archived records but for public purposes must remain commercially confidential in view of the length of the agreements reached.

TPS considers that:

➢ **It is feasible to address multiple objectives simultaneously;**

➢ **Opportunities to address other objectives should be sought (and adopted where possible).**

b) Rail business resilience is a difficult topic post-pandemic until patronage trends settle down. Stability will depend on the time taken for changed working and leisure practices to become established, notably the extent to which home-based working replaces office occupation in the medium and long terms. So 1, 2, 3 and 4 will all pose problems, probably best addressed by scenario based planning until trends stabilise sufficiently to adopt statistically reliable forecasting models. 5 on the other hand depends also on developments in understanding of environmental harms and their mitigation, and on the Governments will to achieve its big targets on the route to net-Zero.

Freight, 6, may appear different, having performed well with a relatively smooth transition to the post-pandemic situation but it demonstrates the impact of perturbations caused by external circumstances.

Currently there are shortages of HGV drivers and of containers, consequent disruption in supply chains exacerbated by over full stacking areas in a number of ports. Hopefully these will be short lived and not have great impact on the long-term trends. They may be regarded as analogous to noise in electronic systems. There is growing use of forecasting suites that differentiate between short term "noise" and longer lived impacts,[13] and such tools can be expected to be refined as Artificial Intelligence (AI) tools become more widely available.

TPS consider that:

➢ **The main social and economic trends have not yet stabilised sufficiently to enable planning beyond a 5 year horizon to be done other than on a scenario basis;**

➢ **Trends that are technologically or politically driven can be more reliably projected into the longer term;**

➢ **Long term forecasts can be improved by use of software tools that separate the impact of short-term perturbations ('noise') from longer term trends ('signals,).**

c) Plans should be under frequent review, whether annually as was the case with the West Yorkshire Rail plans, or every 5 or "x" years as in the current financial settlements for National Rail and National Highways. So whilst a look ahead is always useful, particularly to maintain awareness of the impact of replacement cycles, it is in the short term that "accurate" plans are required to provide the frameworks for both capital and revenue expenditure.

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[12] Bradford Interchange. (wiki updated 2022) *Wikipedia.* [https://en.wikipedia.org/wiki/Bradford_Interchange]

[13] Logility inc. (2021) *Separate Demand Signals from 'Market Noise'*. [https://www.logility.com/blog/separate-demand-signals-from-market-noise/]

TPS would urge that revenue and hybrid alternatives should always be considered alongside capital options. For example, a hypothetical project to reinstate quadruple tracks to increase passenger and freight capacity might cost £100 million. As an alternative a hybrid project consisting of platform lengthening and signalling alterations to enable longer trains to be run could be considered. For this project, a single carriage might cost £1 million, basic platform lengthening and signalling alterations on the route might cost £25 million. 50 carriages (say 10 5-car trains) could be obtained for £50 million, offering sufficient capacity for expected growth. If both infrastructure and trains have a 30 yearbook life, with mid-life refurbishment and life extension possible and net support of £0.5 million per annum is required for the enhanced service, the hybrid project is financially better use of funds requiring £15 million support over the life of the project saving £10 million for other uses. It is quite possible that adding in other community and environmental benefits, cost benefit analysis would show the hybrid project to be more worthwhile.

TPS suggests that:

➢ **As planning should be done on the basis of continuous monitoring and periodic review, rolling forward at each review, there is little advantage in taking a long-term view except on a scenario basis;**

➢ **The potential of alternative revenue and hybrid capital and revenue options should always be tested against capital projects.**

d) Unfortunately, British railway geography is not as conducive to modal interchange as appears to be the case in continental Europe. This might be because the development of railways in the UK was led by freight so that transhipment yards from carts to trains could be arranged so the railway took the best possible route. In Europe meeting the needs of passengers had higher priority and although geography may (and still does) mean that the railway passed at some distance from the original settlement, the town developed in response to embrace the station. The passenger station thereby became a focal point at which interchange of passengers between modes was facilitated.

In this case, there is advantage in looking to a long-time horizon. Current thinking is that focussed, relatively self-contained, communities should be planned on the principle that each part of the settlement is within a 15 to 20 minutes walking distance of a core that contains local shops, community facilities and a mobility hub[14] or full transport interchange. There is thus a strong case for planning regimes that direct development focussed on current and proposed stations. This will require strong advocacy by GBR and its industry partners.

The principles of interchange between modes whether buses, other shared transport (including taxis, DRT, MaaS, shared cars and lift giving) and cycles have been examined both theoretically and practically for many years.[15] [16]

Walking is perhaps the mode that suffers most with indirect routes largely shared with road traffic (for example from Didcot Parkway to the business and industrial premises near to the Thames Valley

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[14] CoMoUK. (2019) *Mobility Hub Guidance, produced for the EU Interreg Share North project*. [https://como.org.uk/wp-content/uploads/2019/10/Mobility-Hub-Guide-241019-final.pdf]

[15] Blow C. (2006) *Transport Terminals and Modal Interchanges, Routledge, New York.* [https://www.routledge.com/Transport-Terminals-and-Modal-Interchanges/Blow/p/book/9780750656931]

[16] Andres Monzon-de-Caceres A and F Di Ciommo – Editors. (2019) *CITY-HUBs - Sustainable and Efficient Urban Transport Interchanges*. [https://www.routledge.com/CITY-HUBs-Sustainable-and-Efficient-Urban-TransportInterchanges/Monzon-de-Caceres-Ciommo/p/book/9780367138981]

Signalling Centre: this is typical of many others). For the fit and active the inconvenience may not be great. For those less able, including the temporarily encumbered or injured, the challenges are sufficient to make cars the mode of choice. The failure is not of the railway per se, except perhaps in the location of station entrances and exits which are oriented more to revenue protection than passenger convenience, again a contrast to Europe and many railways elsewhere in the world which trust their passengers far more but punishes them harshly for ticketless travel and failure to validate tickets. The message is again partnership in this case with the railway as stakeholder in the local planning process led by the appropriate level planning authority.

For freight we draw attention to the rising importance of cargo bikes, drones, autonomous delivery vehicles and the like which are the focus of much attention by the freight and logistics community.[17] Cargo hubs where freight can be transhipped from rail to road for onward distribution will be increasingly important and GBR can play a major part, probably at conurbation level.

TPS believes that:

> ➤ **Achieving greater integration between modes, both passenger and freight, will be important throughout the planning horizons identified;**

> ➤ **Walking is an important, and generally insufficiently provided for, access mode to stations and interchanges;**

> ➤ **GBR should be a key stakeholder in local and strategic planning led by statutory planning authorities.**

Meeting customers' needs

When considering your responses, please take account of the likelihood of changes in levels or patterns of passenger and freight demand over the next 5, 10 and 30 years, what that would mean for the rail system, and what will the interventions be over that period that will provide the maximum value for money.

Question 2

a) Passenger: how will rail passenger expectations, including accessibility requirements, evolve over the coming 5, 10 and 30 years, what will be the driving causes of these changing expectations, and how can they be most effectively met by the rail sector?

b) Passenger: in your experience, how can we most effectively monitor and assess customer satisfaction? What is a stretching yet realistic ambition for this objective and what measures can we most effectively use to consider success over the coming 5, 10 and 30 years? What evidence can you share to support your view?

c) Freight: what evidence can you provide regarding the advantage(s) of transporting goods by rail and what evidence can you share for how that could develop in the next 5, 10 and 30 years? What do you consider to be the most effective role for rail freight in the existing supply chains served and those that it doesn't? How could this change over that period? In answering, please explain and take account of likely developments in technology and in the wider economy.

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[17] Huber, S, J Klauenberg and C Thaller,. Eur. Transp. Res. Rev. 7, 32 (2015) *Consideration of transport logistics hubs in freight transport demand models.* [https://etrr.springeropen.com/articles/10.1007/s12544-015-0181-5#article-info]

d) What is a stretching yet realistic ambition for this objective and what measures can we most effectively use to consider success over the coming 5, 10 and 30 years? What are the interventions over that period which will be the maximum value for money, and what evidence can you share to support your claim?

Preliminary: Access for ALL

Applying to all answers relating to passengers in this section is the essential requirement that all current disability legislation is complied with and the likelihood that wheelchairs and mobility scooters will become larger but not necessarily more manoeuvrable requiring attention to both door and ramp design and interior layouts. It would be helpful for UK standards to be defined and maintained under the supervision of the statutory DPTAC[18] in consultation with public transport operators and equipment manufacturers. GBR might ask DPTAC to convene such discussions.

TPS suggests that:

> ➢ **GBR should convene discussions with DPTAC to promote the production of UK standards for disabled persons' access to and accommodation within public transport vehicles of all modes.**

a) In passenger markets an instructive test is look at the cars of, say, the year 2000 and compare them with equivalent current models. The cars will incorporate additional features such as seats that can be adjusted to the users' profile, climate control, Wi-Fi charging etc. all designed to make the car an extension of the home environment. By contrast in public transport (many bus operators as well as trains), changes are often perceived to be for the worse, for example less comfortable seats in class 7xx and 8xx units.

Commercially focussed bus operators are generally more adventurous, for example Blackpool Transport with Palladium branded vehicles and digital information network.[19] [20] Transport Focus frequently probes passengers' priorities, for example "Return to rail: what do passengers want?"[21] published in July 2021. For both rail and road passenger services up to at least 2030 there will be a double challenge from car competition as manufacturers market electric cars vigorously as the end of sales of petrol and diesel vehicles approaches, whilst garages (backed by manufacturers) seek to run down stocks of fossil fuelled vehicles.

The design of a rail fleet fit for purpose and reflecting modern customer expectations should have greater priority in assessing outcomes. Financial cost or return to the Exchequer are not the only factors. The importance of "smarter choices", a preferred term to "soft factors" in transport planning

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[18] Disabled Transport Advisory Committee. (established by Transport Act 1985) [https://www.gov.uk/government/organisations/disabled-persons-transport-advisory-committee]

[19] Cole J. (2017) *Investing in change and laying foundations for future.* Intelligent Transport Magazine. [https://www.intelligenttransport.com/transport-articles/71058/blackpool-transport-fleet/]

[20] Walker A. (2021) *Blackpool transport network goes digital to meet tourism boom*. Intelligent Infrastructure Magazine. [http://www.infrastructure-intelligence.com/article/oct-2021/blackpool-transport-network-goes-digitalmeet-tourism-boom]

[21] Transport Focus. (2021) *Return to rail: what do passengers want?* [https://www.transportfocus.org.uk/publication/return-to-rail-what-do-passengers-want/]

has been shown to be important in several studies, for example a study of their influence on bus demand for DfT in 2009.[22]

Any form of concession, including the "franchising" model currently in use that allows relatively little commercial freedom to the successful operators, will depend on the terms adopted in detailed contracts prepared by Department for Transport (DfT). In most cases the trains to be used have been specified on behalf of the Department, advised by rail operators. In turn DfT is subject to Treasury influence to drive down costs. Perhaps the most obvious examples of this are the Class 8xx "Inter-city Express Passenger" trains introduced on the Great Western and East Coast Main Lines and increasingly on other routes such as Trans-Pennine and East Midlands. These trains are widely considered by passengers, and privately by many railway staff, as less comfortable than the British Railways designs for the Intercity sector introduced over 40 years ago.[23]

The ability and attractiveness of rail to compete with long distance road traffic is determined by its offer in terms of price, convenience and journey experience. The role of leisure markets is for the near future a key growth area as commuter markets remain constrained. And yet the service pattern, and fleet configuration reflect a commuter market driven railway. This must change to better reflect the mix of markets available. There is a case for designing trains with greater flexibility to make rapid changes to the interior configuration in response to market trends.

Flexible unit configuration with the capacity to accommodate both conventional and non-standard cycles will support a greater integration between Active Travel and rail and there will be potential benefits in considering this in parallel to facilities for disabled travellers.

Concession contracts should be designed so that there are incentives to exceed the originally specified performance criteria and conversely penalties to reflect poor performance with early termination the ultimate sanction. London Buses Ltd offer a useful overview of incentivised contracting in London.[24]

TPS believe that:

➢ **BRF, indeed public transport generally, must recognise that private cars are the principal competitor and likely to remain so for at least 10 years. The ambience and facilities available to rail passengers must be an attractive alternative to the environment of their personal cars;**

➢ **Carriages must be designed for passenger comfort and also to be reconfigured when required as markets change or develop;**

➢ **It is essential that the commercial skills of concessionaires are not suffocated by their contracts;**

➢ **Contracts should incentivise good performance and penalise failure to deliver expected standards**

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[22] AECOM (2009), *The Role of Soft Measures in Influencing Patronage Growth and Modal Split in the Bus Market in England*. [https://cambridge.blob.core.windows.net/public/ldf/coredocs/RD-T-050.pdf]

[23] Walmsley, I. (2018) *Take your seats it's the bottom priority* [https://www.modernrailways.com/article/take-your-seats-its-bottom-priority]

[24] Transport for London. (2015) *London's Bus Contracting and Tendering Process.* [https://content.tfl.gov.uk/uploads/forms/lbsl-tendering-and-contracting.pdf]

b) Transport Focus[25] is a respected independent assessor of passenger satisfaction through its regular Rail Passenger Survey. This offers a lengthy historical perspective on opinions and ad hoc surveys such as the weekly tracking of passengers' views since Covid-19 pandemic travel restrictions were relaxed in 2021.[26] They are open to discussion with operators of specific services so are an ideal party to track passenger experience.

The most stretching objective over time is first to benchmark excellent performance, ideally against international comparisons, but at least against time series analysis of GB data. The first iteration is to achieve the benchmark by an agreed (contractual?) date and then to seek year-on-year improvement.

TPS recommend that:

➢ **Transport Focus should be invited to participate in the specification and management of passenger service performance indicators and surveys, including passenger satisfaction;**

➢ **Transport Focus might also be invited to manage annual surveys of factors not already included in their annual Rail Passenger Survey;**

➢ **Benchmarking should be the basis of a stretched objective promoting continuous improvement in passenger service standards.**

c) . Rail freight has reacted to changes in its markets in line with changes in the economy. The loss of traditional flows such as coal from the ports haves largely been replaced by other bulk traffics and strong multi-modal flows have developed both from domestic freight terminals for internal flows and the deep-water ports for international trade. Unlike the passenger markets the demand for rail freight movement held up well during the pandemic.[27] When disruptions in supply chains are rectified, freight can be expected to grow as the economy stabilises.

The future of rail freight could be thrown a lifeline through focussed efforts to support a switch away from long distance road transport. Given the established commitment to remove all diesel only trains from the network by 2040 and to achieve net-Zero carbon by 2050 an accelerated rolling programme of electrification and further research on alternative power for low traffic routes can provide rail freight operators with the confidence to invest.

Freight marketing needs to be based on perceptive analysis of supply chains from inputs to the manufacturing, assembly or aggregation processes and will inevitably expose the need to determine where transfers from origins served by road or sea to rail or vice versa should take place. It is essential that rail freight plays to its major strengths in conveying large volumes over long distances.

There should also be opportunities in shorter flows such as between city pairs like Leeds and Sheffield. This will identify the scope for expanded or new rail hubs and the train capacities required.

In a properly executed national fright strategy, the role of lorries should no longer include substantial end-to-end and trunk haul between road terminals but be almost exclusively providing collection or

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[25] Transport Focus. (current) *Independent watchdog for transport users* [https://www.transportfocus.org.uk/about/]

[26] Transport Focus. (2022) *Rail User Weekly Survey – week 18.* [https://www.transportfocus.org.uk/publication/rail-user-weekly-survey-week-18/]

[27] Office of Rail and Road. (2022) *Freight rail usage and performance.* [https://dataportal.orr.gov.uk/statistics/usage/freight-rail-usage-and-performance/]

delivery at regional or local level as decarbonisation accelerates and suitable freight interchanges are built or extended.[28]

Both rail and logistics are experiencing rapid technological advances. There is a danger of proprietary capture, particularly for early adopters. As networked applications involved in control, tracking and monitoring systems are critical to organisations, interoperability should be specified as a basic requirement. IT markets are too volatile at present to predict what could happen beyond the end of the current planning cycle.

A final point is the train path allocation process that is perceived as prioritising passenger over freight. A useful concept may be to assign a "national value" to each train or class of train representing in broad terms the contribution made to the UK economy. GBR has the opportunity to review this, assigning indices of national value to traffic flows and adopting pathing techniques to allow fast freight to travel "in the wake" of fast passenger trains maximising line capacity, similar to the "flighting" successfully used for West Coast passenger services.

TPS suggests that the freight strategy should be to:

➢ **Ensure that all significant freight routes are electrified early in infrastructure programmes to assist decarbonisation targets through significant modal switch;**

➢ **Play to its strengths in bulk flows and multi-modal trains;**

➢ **Identify opportunities by examination of supply chains and the potential for improved efficiency and resilience based or rail haulage;**

➢ **To switch freight from road to rail so that road's role is essentially local distribution from railheads;**

➢ **Tread cautiously so as to invest only in the most robust technical systems, bearing in mind that some markets will continue to be volatile because of post pandemic and international uncertainties;**

➢ **Ensure that freight is given appropriate priority in the allocation of train paths perhaps using a "national value" criterion for each class of train service.**

d) **TPS suggest that the most stretching objectives appear to be:**

➢ **Once the passenger market has stabilised sufficiently set targets for each concession:**

> **a) to achieve by a given date an appropriate level of performance on a weighted index calculated to reflect passenger priorities from Transport Focus rail passenger data.**

> **b) after the target has been achieved it should be reset so that the objective is continual annual improvement.**

➢ **For freight, the approach would be similar using ORR data in consultation with bodies representing business and industry to suggest satisfaction criteria.**

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[28] Kirk, P. (2021) *UK needs more rail-linked warehousing, Kilbride Holdings.* [https://www.railfreight.com/business/2021/06/09/uk-needs-more-rail-linked-warehousing/?gdpr=accept]

Delivering financial sustainability

When considering your answer to the question below, please consider how we can support greater efficiency (such as joined up operations), innovation, alternative sources of funding and/or cost base reduction. Similarly, what steps you would propose to improve the efficiency and reduce the cost of infrastructure projects, operation and maintenance, and what evidence you have to support your response.

Question 3

a) Where are the most significant opportunities and barriers to delivering financial sustainability in the rail sector over 5, 10, and 30 years and how do we achieve/overcome them?

b) How can we most effectively monitor and assess this?

c) What is a stretching yet realistic ambition for this objective and what measures can we most effectively use to consider success over the coming 5, 10 and 30 years?

d) What are the interventions over that period which will be the maximum value for money?

a) Financial sustainability should not be the dominant criterion in planning a national rail sector to deliver a rail network which works for passenger and freight markets. The previous section suggests that a "national value" should be assigned to each traffic flow as the basis of allocating train paths. This concept might be discussed with a panel including national and local government, business and Transport Focus representatives to scope appropriate measures and how they could be introduced into the planning system.

The point has already been made that the current situation as GB begins to recover from the pandemic remains unstable and GBR should therefore ensure it has agility in both planning and delivery. A succinct review is in "Planning for a new reality"[29] which emphasises also that tight control needs to be exercised on costs.

Decarbonisation will require efficient end-to-end journey planning for both passengers and freight and the overall journey not the rail legs should have prime importance. At regional level TPS would expect local authorities to work with operators and other stakeholders to identify the priorities for rail as de facto inter-community "spine" of the integrated network. At national level, if DfT do not assume a similar role it is suggested that GBR and representative bodies of other transport stakeholders should create a suitable transport advisory conference to develop and review appropriate policies.

The creation of GBR will pose challenges in drawing together teams from organisations with different cultures. In particular the leadership team and its advisory board must ensure that it is seen as a genuinely new organisation encompassing all facets of rail development and operation, not, as some commentators already assume, an enlarged Network Rail. A particular issue that could offer a resolution is the "track/train interface". Now that the UK is no longer part of the EU, the separation of infrastructure from train operation, legally required under European Law since 1991, can be permitted under new legislation if Parliament so decides. Clearly the creation of GBR is a move towards a closer relationship between track and train. However, there are different views as to whether the infrastructure authority should have sole responsibility for determining train paths or that operators (passenger concessionaires, open access passenger operators and freight companies) should have the opportunity to design their own timetables and ask the infrastructure authority to

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[29] Worth, J. (2020) *Planning for a new reality*. [https://www.modernrailways.com/article/planning-new-reality]

integrate them into the total operational plan. If the total operational plan is seen to be a jointly developed, integration across the new company, GBR, will be more evident easing the transitional process.

Should there be friction between internal stakeholders, and poor co-operation with external stakeholders there will be barriers of varying strengths to be overcome with an inevitable negative impact on rail performance. In an attempt to improve the control of service performance and management of disruptions infrastructure and train operating managers have been collocated. Such arrangement is often referred to as an "Alliance". A guest editorial by Sir Michael Holden in Modern Railways February 2017 edition[30] includes a useful review of practical experience with Alliances between Network Rail and operators. In Scotland the management of Scotland's Railway (Network Rail's infrastructure) and ScotRail, the Train Operating Company for all train services internal to Scotland, was brought under a single Managing Director in 2015.

TPS considers that:

➢ **Sustainability is not dependent only on finance;**

➢ **The value of both passenger and freight rail services should be assessed in terms of their value in economic, social and environmental terms to Great Britain;**

➢ **GBR should initiate with local government and stakeholder representative bodies, including other land transport modes, to create a Transport Integration Advisory Conference on delivery of integrated transport and decarbonisation policies;**

➢ **The track/train interface must not be a barrier. Alliances may be a suitable model to ensure this does not happen.**

b) Work on assessment of national value of services and other metrics should inform the measurement of achievement of sustainability objectives. The metrics should be benchmarked against the complete matrix of players.[31] A source of advice on benchmarking may be the Transport Strategy Centre at University College, London that already runs railway benchmarking groups for suburban rail, international main-line rail, infrastructure asset management and (for a manufacturer) rolling stock. They also have groups focussed on Metros, Light Rail, Buses and Airports.[32]

c) Previous comments on use of scenarios to examine the medium and long terms apply.

d) Projects that make rapid progress with decarbonisation or metrics associated with it are likely to benefit as they give quick results and sustained benefits.

TPS recommends:

➢ **Selection of an appropriate suite of benchmarking metrics to assess national value and sustainability;**

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[30] Holden, M. (2017) *Making the trains run on time* [https://www.modernrailways.com/article/making-trains-run-time]

[31] Credo - for CBT. (2013) *The Effectiveness of the Rail Network Across Great Britain A Comparative Analysis.* [https://bettertransport.org.uk/sites/default/files/researchfiles/The_Effectiveness_of_the_Rail_Network_Across_Great_Britain1.pdf]

[32] Imperial College, London. (current) Transport Strategy Centre [https://www.imperial.ac.uk/transport-studies/transport-strategy-centre/]

> ➢ **For periods longer than the first settlement, scenario based analyses will be more useful;**

> ➢ **Investments that give quick and sustained returns should have the highest priority.**

Contributing to long-term economic growth

When considering your answer to the questions below, please share examples of any relevant local, regional and national growth and productivity, and examples of innovations and technology from the UK and abroad, research into trends that may influence rail's contribution to economic growth, and/ or new ways of thinking that should be used in or for the rail sector over the coming 5, 10 and 30 years.

Question 4

a) As Britain recovers from the effects of the COVID-19 pandemic, what evidence do you have for how rail can contribute to wider economic growth over the next 5, 10, and 30 years? What is a stretching yet realistic ambition for this objective and what measures can we most effectively use to consider success over the coming 5, 10 and 30 years? What type of interventions over that period will provide maximum value for money from rail's economic contribution, and what evidence can you share to support your views?

b) In the context of enabling development and regeneration opportunities both in the immediate vicinity of stations and within the surrounding area, how can rail best facilitate improvements to places and local growth, through improved connectivity and unlocking commercial activity, housing, and employment over the next 5, 10 and 30 years?

c) What innovative and modernising ideas do you have which would benefit the railway while supporting the strategic objectives? Please give evidence and make reference to how they would maintain or enhance the railway's safety record.

a) Rail can play a significant role in supporting economic growth and levelling up the country. The concentration of new housing developments around rail stations is proven to combine economic activity and grow the rail passenger market and beneficial impacts have been shown for new, reopened or improved rail lines and services.[33]

London is probably the best documented evidence for the role of rail in new development and regeneration[34] but references can be found in local or trade media to many regional or local examples such as freight terminals and parkway stations.

TPS suggests that:

> ➢ **It will take some time for new patterns of passenger traffic to stabilise after the pandemic so patronage forecasts should be based on scenarios;**

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[33] Steer Davies Gleave & Cambridge Econometrics. (2018) *Economic Impacts of new or improved rail lines: Executive summary.* [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/939962/eco nomic-impacts-of-new-or-improved-rail-lines-executive-summary.pdf]

[34] Schabas M. (2016) *The Railway Metropolis: How Planners, Politicians and Developers Shaped Modern London* [https://www.icevirtuallibrary.com/isbn/9780727761804]

➢ **GBR should pursue partnerships with Local Authorities, STBs and LEPS to maximise the role of rail in Levelling Up;**

➢ **In some cases, provision of rail capacity will be the basis of development, in others local residential or industrial development will create rail passenger and/or freight traffic;**

➢ **A careful examination of the costs of rail projects such as new stations and track alterations or new sidings should be undertaken as they appear high to prospective partners and stakeholders.**

b) As in Question 1, we expect to see moves to localisation and regionalisation, with the latter most appropriate to rail, become stronger under the decarbonisation, healthier living and communities and levelling up agendas. Rail can, and should, be close to planning and regeneration processes with potential markets in construction, sustainable freight and distribution, commuting and long-distance passenger to be won in competition with private car use. From a decarbonisation perspective, commuters and long-distance passengers are important. They emit a lot of carbon and cause congestion and unhealthy emissions if travelling by car, so that policies, prices and paths that support journeys to work and long-distance travel on rail should be prioritised.

TPS consider:

➢ **GBR should energetically engage with Local Authority and business and industry stakeholders co-operating on spatial planning and how rail can best be integrated into new development and regeneration proposals;**

➢ **The strengths of rail in competition with private cars across the journey to work and long distance passenger markets must be built on to reduce congestion, improve local air quality and health harms from road vehicle pollution;**

➢ **Similarly rail can enable sustainable freight and distribution and provide more environmentally friendly movement of construction materials;**

➢ **Working to these principles may accelerate progress towards the achievement of net-Zero.**

c) Many innovative and modernising ideas could be recommended. A few suggested by members are:

• Retrofitting passenger coaches with comfortable seats designed for the 21st century span of human frames and girth (to increase comfort and competitiveness).

• Require all rail investment or service development proposals to be developed in consultation with, and ideally signed off by, the appropriate regional planning/transport authorities.

• Examine all former rail rights of way remaining in the ownership of National Highways (as successor to British Rail Residuary) to establish their suitability for future transport use. Transfer responsibility for those with good or moderate chances of sustainable re-opening to GBR.

• Develop new designs of rail and road freight vehicles capable of trunk haulage on trains and onward distribution by road for freight accompanied by gauge easing if it is necessary to restrict the route availability of the rail vehicles.

• Develop a UK mass transit vehicle capable of use on both railways and roads – current tram-trains have not integrated well in UK trials or planning.

- Lightweight but robust passenger and freight vehicles capable of operation on lightly maintained rural lines should also be considered.

- As previously suggested methods of reducing high infrastructure costs in UK railways need to be investigated as a high priority

Levelling up and Connectivity

When answering your questions, consider the ways in which rail can be used to improve connectivity and local economic growth over the next 5, 10, and 30 years.

Question 5

a) What evidence can you provide for how the rail sector contributes to the four levelling up outcomes and to improving connectivity across Great Britain, including through cross-border services? How does this change depending on the type of place where the sector operates (including in cities, towns and rural areas), and what are the most cost-effective ways at the sector's disposal to improve that further during the next 5, 10, and 30 years?

b) How could the rail industry, over the next 5, 10, and 30 years, become more responsive to, and more accountable to, local communities and passengers? Please give evidence and examples in your response.

c) What is a stretching yet realistic ambition for this objective and what measures can we most effectively use to consider success over the coming 5, 10 and 30 years? What are the interventions over that period which will be the maximum value for money, and what evidence can you share to support your views?

a) The Levelling Up White Paper[35] is less ambitious than expected with little commitment to new funding. Of its 12 improvement "missions" the headline for transport is:

- Public transport connectivity across the UK to be "significantly closer to the standards of London" including integrated ticketing and simpler fares.

Ignoring the paradox that Transport for London has been reduced to receiving two successive two week emergency funding settlements and services have been reduced, the ambition equates to more frequent services, particularly buses, operating over a longer period each day, equitably distributed service levels based on accessibility analysis if the London system is faithfully replicated, smart ticketing (some areas outside London already have the benefit of barcode ticketing not available in the capital), simpler ticketing and fare structures, but not equivalent to Oyster unless standard fare scales are imposed on operators, and better access to real-time information on buses, although the Local Bus Services Act 2017 and the National Bus Strategy both require this already. The Transport for London performance based concession contracts provide a good model for both rail and bus.

Of the remaining missions those most immediately relevant to rail are:

- A devolution deal for "every part of England that wants one", with powers "at or approaching the highest level of devolution and a simplified, long-term funding settlement".

- To increase pay, employment and productivity in every part of the UK, with each containing "a globally competitive city" and a smaller gap between top performing and other areas.

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[35] Department for Levelling Up, Housing and Communities. (2022), *Levelling Up (White Paper)*.

- A rise across the whole UK of "pride in place", defined as "people's satisfaction with their town centre and engagement in local culture and community", with a narrowing of gaps between areas with the highest and lowest levels.

The devolution deal offers opportunities to have radical proposals funded in regional or local areas. Already West Yorkshire has been offered the opportunity for a mass transit system, although that precedes the White Paper.

Depending on which cities are selected to be "globally competitive", there could be an impact on GBR investment and service priorities nationally and regionally. For example, if Doncaster were to be selected in South Yorkshire or Sunderland in Tyne and Wear the economic geography of their regions might change quite dramatically. The labour and productivity impacts can be expected to improve demand for railway services.

The "pride in place" mission will also be helpful in generating passenger business. Station remodelling or renovation can contribute locally to improving the "look and feel" of a locality at relatively low cost.

In passing, with West Yorkshire as a good example, the complexity and cost of new wayside stations has risen alarmingly. The requirements to cater for people with disabilities and minimise risks to personal safety are appreciated but the scale of lifts, and ramps is out of kilter with the paucity of covered waiting areas and seating. The costs of new rail connections and private sidings have been similarly criticised.

There appears to be a case for careful value engineering of rail projects particularly if they are to be included in funding bids.

TPS recommend:

> ➢ **That GBR work closely with Local Authorities, LEPs and other key stakeholders on levelling up. Some additional money may be available for rail projects;**

> ➢ **That CBR carry out value engineering to projected costs of projects already in the pipeline and use the latest available methods to reduce costs of new projects as suggested in answering question 4a.**

b) There is plenty of evidence – Scotland, Wales, Northern Ireland, the Metropolitan Counties of England, for example West Yorkshire[36] – that efficiently planned and run rail services contribute to economic and social development in their regions. This can include long rural lines as well as the often commuter based developments in conurbations.

Examining 5, 10 and 30 year horizons against different socio-economic scenarios taking account of the factors that form the market for rail will rely on past performance. The DfT's Uncertainty Toolkit[37] and common analytical scenarios[38] will be useful tools. Producing national projections should be a priority for GBR.

c) Stretching targets can be set by deciding with the local and regional authorities what a benchmark for levelling up looks like (it will not be the same for all areas, nor possibly for all periods). This must

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[36] See Question 1a. and Appendix 1

[37] Department for Transport. (2021) TAG: uncertainty toolkit.

[38] Department for Transport. (2021) Appraisal and modelling strategy: TAG update report

be published and jointly monitored as the basis for subsequent (joint) action programmes and to inform communities of progress. The best examples probably lie overseas: Barcelona, Paris, Madrid come to mind, whilst London, Scotland, Wales and Northern Ireland are all commended for heroic attempts.

Delivering environmental sustainability

When answering your questions, consider the ways in which rail and the rail estate can contribute to wider national and regional environmental policy agendas, support decarbonisation, conserve and enhance biodiversity, improve air quality and increase renewable power generation.

Question 6

a) What is a stretching yet realistic ambition for this objective and what measures can we most effectively use to consider success over the coming 5, 10 and 30 years? What are the interventions over that period which will be the maximum value for money, and what evidence can you share to support your views?

b) What use can the rail sector make of emerging or existing technologies to reduce its impact on the environment and enhance biodiversity over the next 5, 10, and 30 years, and, in a proportionate and cost-effective way, help national and regional authorities to meet their environmental objectives?

c) How can rail best invest in climate resilience, supported by smarter forecasting, planning and technology, over the next 5, 10, and 30 years and what evidence do you have to support your view?

a) It is assumed that GBR will inherit a good asset management system and up-to-date database. If not, it should invest so as to have good current knowledge of all of its estate as soon as possible. There is then a task to prioritise maintenance and enhancement or replacement projects at regional level balancing risk, condition and consequences based on the likelihood of catastrophic events from current knowledge of weather patterns and progress of climate change. TPS note that track condition can now be monitored and reported in real time from service trains, not only from specialised track recording trains.

Although rail has a significant part to play in all of the national and regional policies and programmes identified, its highest priorities must be to ensure that the railway continues to operate safely and consistently even if other lines of communication are disrupted. A good example is the work done in the South West route to restore and improve the resilience of the seawall at Dawlish[39] with further priority work to be undertaken on the Somerset Levels and around Exeter. Projects to resolve frequent flooding incidents[40] are good examples of where joint action with the Environment Agency and local government may share costs and increase mutual benefits.

Through consultation and joint working, opportunities should be identified for interventions designed for rail to be extended to other infrastructure (or vice versa), for example strengthening of embankments incorporating features for local flood defence or easing of curves that enables resilient settlements or other development on the former rail alignment and other released land. A stretching

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[39] Modern Railways. (2019) *Dawlish sea wall plans approved.* [https://www.modernrailways.com/article/dawlish-sea-wall-plans-approved]

[40] Cornwall Council. (2021) *Looe Flood Defence and Regeneration Scheme.* [https://letstalk.cornwall.gov.uk/looe-flood-defence-overview]

set of regional targets might be to bring all infrastructure up to the best safe condition affordable over a number of years and to then monitor condition so as to ensure infrastructure is maintained above safe minimum levels. This will focus on best value for money by ensuring that the railway is running safely with major renewal or replacement projects not developed until necessary for safety or to progress infrastructure enhancements to facilitate service improvements.

Rail can assist with lessening pressure on the national power grid through regenerative braking which is available on all newly introduced trains. It can also look to ways in which it might sustainably generate power, for example by installing wind turbines or solar panels to provide some or all of the "domestic" demand at stations and depots, examples of solar panels being London Blackfriars and London Bridge stations and where there is trackside equipment requiring a low power supply that is not safety critical. There may be land owned or subject to wayleaves around ventilation shafts on remote moorlands where small windfarms might be erected. It is also possible that small scale hydro power generation could be harnessed were embankments form part of water management systems. More ambitious ideas such as a rail crossing forming a tidal barrage in the River Dee Estuary reducing distance on the North Wales main line and generating power from tidal ebb and flow are unlikely to happen. b. TPS is aware that Network Rail

b) TPS is aware that Network Rail already does a significant amount of work to encourage biodiversity and minimise negative environmental impacts on surrounding communities. Construction of large projects is inevitably disruptive and minimising environmental damage should be an objective in every project. Opportunities to work with regional partners should be actively sought.

c) Technology, particularly digital, is progressing at a rate that to non-specialists makes forecasting of maturity and readiness for market exceptionally difficult. Artificial Intelligence, 3D printing and nanotechnology are all examples. The answers to all of the subsections of Question 6 point to the need for GBR (in association with ORR, RSSB and other interested parties?) to establish a strong monitoring and research unit to support both infrastructure and operational businesses.

TPS concludes that:

➢ **Up-to-date, comprehensive asset management systems are essential to control GBR's estate effectively. It must be ensured that these are available;**

➢ **GBR must continue Network Rail's excellent support for biodiversity and environmental protection;**

➢ **There are significant benefits from joint working with regional and local partners;**

➢ **Technological market awareness is invaluable and GBR should work with rail industry partners to establish a research library to keep "ahead of the game"**

Appendix

Achievements of the West Yorkshire Rail Partnership

This Appendix gives an indication of some of the pioneering (at the time) work done around the Section 20 agreement between West Yorkshire PTA (Metropolitan County Council before 1986) and Regional Railways North East and holders of the corresponding franchise when first let and renewed.

Under Section 20 (S20) of the Act each Authority had the power to enter into agreements with the British Railways Board to jointly plan and administer passenger rail services in the area and up to 25 miles beyond. The Authorities (PTAs), initially Metropolitan County Councils in England and, for the Greater Glasgow PTA, Strathclyde Regional Council in Scotland, administer areas based on the travel to work areas of their conurbations. Although local government structures have changed, Section 20 agreements have ended and the Railways have been privatised and are again being restructured as GBR, PTAs live on within the CAs in England and as Strathclyde Partnership for Transport in Scotland. In Wales the Regional Transport Consortia of Local Authorities were involved in the production of the Wales Transport Strategy.[41]

Useful evidence, documented contemporaneously and presumably retrievable from archival records, is to be found from West Yorkshire where the S20 agreement was not finalised until 1979. In 1979, the local services from Leeds and Bradford to Ilkley and Skipton were run so as to maximise in service mileage by the diesel multiple units used on services proposed for closure in 1963.[42] This may have minimised costs but it had the opposite impact on patronage. One of the first fruits of the S20 agreement was the introduction on all lines in the newly branded Metro.train network of even interval timetables. This removed the absurdity of what should have been the most heavily used train from Ilkley delivering commuters into Leeds after the 09:00 end of the city-centre starting time window. Metro.train branding was introduced on stations, printed materials and media advertising with logos applied to the dmus, pending delivery of replacement vehicles. Almost as soon as the new arrangements came in patronage started to rise and continued to rise at a year on year rate averaging 7% into the early 2000s by which time of course other investments had been made and the Regional Railways North East franchise had commenced in 1997, jointly awarded by the Office of Passenger Rail Franchising and WYPTE (trading as Metro). A useful account of how British Rail's Regional Railways Sector transformed a basket of "no hope" routes into a coherent group of better performing regional services is given in a book based on the experiences of Gordon Pettit[43] , one of its Managing Directors and repays study as do the corresponding volumes on the Inter City and Network South East Sectors. Reverting to RRNE, West Yorkshire Metropolitan County Council as PTA proposed what became an annual series of West Yorkshire Railplans and Reviews based on the success of similar arrangements in Strathclyde. These should be retrievable from archival records. These plans were genuinely joint productions, the PTA, Metro and RRNE with advice from other parts of the BRB organisation when required working in genuine partnership. Some of the fruits of this joint endeavour are described in Appendix 1 at the end of this evidence.

Continued growth on the Airedale (Skipton) and Wharfedale (Ilkley) lines such that even with Sprinter units there was overcrowding. By co-incidence a European funded programme for regeneration in the Bradford area was drawing to a close and underspent. The Metro representative suggested that the whole District could benefit from electrification and by hard work from all concerned a bid was put to the EU and UK Governments so that the Doncaster electrification team

[41] Welsh Assembly Government (2006), Wales transport strategy - consultation document. Connecting Wales https://www.thenbs.com/PublicationIndex/documents/details?Pub=WAG&DocID=279192

[42] British Transport Commission. (1963) *The Reshaping of British Railways Part 1 – Report.* [https://www.railwaysarchive.co.uk/docsummary.php?docID=13]

[43] Pettit, G and N Comfort. (2015) *The Regional Railways Story: Sectorisation to Privatisation - Three Decades of Revival, Crecy Publishing.* [http://www.crecy.co.uk/the-regional-railways-story]

finishing work on the East Coast Main Line project could continue onto the North West Leeds electrification scheme as BR insensitively described it, forgetting that the primary beneficiary should be Bradford. This is not a trivial point; it took time to placate the Bradford politicians without whose approval the scheme would not have been funded. The Airedale and Wharfedale lines have remained consistently good performers. Despite having switched to electric traction using trains from the 1950s cast off by Network South East, it is now receiving its second generation of new rolling stock under the auspices of Northern Rail.

This cameo of more than two decades of local rail in West Yorkshire demonstrates that partnership is a very effective way of ensuring that an array of objectives and trends can be satisfactorily dealt with. Allowing for the tangential impact of rail passenger services on freight and logistics (by removing cars from road and improving business communication), all six of the external trends were of interest to the majority of stakeholders. However, the pace of life in the late 20th century was slower than it is currently, principally because of the rate of technology change and the need to evaluate different scenarios as to the likely shape of post-pandemic trends in social and economic activities.

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