

## Re-thinking rail's future

### *There's no more money*

Investment in rail is being squeezed, harshly. For Network Rail it means essential renewals suitably prioritised on busier lines, and inching forward on a couple of upgrades.

We have been here before: the 1980s, a decade that began with a warning of the 'crumbling edge of quality and ended with a 'not even renewals' diktat for Regional Railways/Network South East in the final years' run-in to privatisation.

And larger-scale investment? It was also in the 1980s that interested local authorities made the case for Midland Main Line electrification to Sheffield. Thirty five years later, the wires are yet to reach Leicester.

In the years from the '90s onwards, HM Treasury's grip relaxed. It had got its way with the structure of privatisation. Fleet replacement costs were no longer on its balance sheet, and neither was the network once Railtrack was sold off. Major renewals held up for decades could now proceed on the West Coast Main line, with a major upgrade added on (WCRM).

Network Rail was also able – at last – to progress its Thameslink project; Reading station and its junctions were modernised; electrification got underway in North West England; and with a commitment to around half of Crossrail's costs being met by London and its businesses, it too got a belated go-ahead in 2008, re-specified to serve London Docklands and inner London too. The orbital London Overground was also created (co-funded by TfL) transforming inner east London living. In Scotland, electrification progressed across the busy central belt, and for the north of England, the Northern Hub scheme emerged in 2009. Focussed on Manchester, five years later the scheme had shrunk to building the Ordsall Curve without the complementary improvements to make it work. It was the end of a golden age for rail investment.

What finished it off was the 2014 Office for National Statistics (ONS) reclassification of Network Rail as a public sector body, said to be because of changes in European statistical rules. It meant that Network Rail's £34 billion debt now counted as Government debt. Network Rail, which had been able to secure funding from a multitude of 'patient capital' players across the world, was brought to heel, its credit card scissored. The significance of this 2014 change is easily overlooked.

Unlike the state-owned railways of our European near-neighbours – SNCF, SNCB, DB for example, which are allowed to raise some funding from third parties – in the UK there is just one source of money for rail investment. Even where transport is devolved – Scotland – its Government isn't allowed to borrow. It was Harold MacMillan when Chancellor of the Exchequer at around the time of Suez crisis that first determined that national industries such as BR would not be allowed to borrow: instead Government would do it on their behalf. Treasury finances for rail are again tightly managed, especially so with a General Election in sight and after the painful lessons of covid and then the Government's failed September 2022 mini-budget.

But with HS2 funding in place, from 2014 onwards the implications of tighter rail funding were not being recognised. Instead, the new idea – Northern Powerhouse Rail (NPR) – was to be hitched, where possible, to the HS2 band-wagon, hoping the risk of HS2 scope-creep would pass by unnoticed. Political and professional ambitions trumped strategic planning.

The largely Japanese styling of HS2 as a free-standing network in any case sat poorly alongside a lack of planning for the existing network. Common sense projects like Manchester Airport's western rail

access would be held up before the altar of an HS2 airport station, and the trans-Pennine Route Upgrade became over-shadowed by its bigger sibling, NPR.

### ***Transformational Rail Projects***

What HM Treasury wants is economic growth, higher productivity levels, more private sector investment and the increased tax receipts that should follow. And it wants costs to be controlled. Rail investment, properly directed, can help achieve these aims.

More rail capacity and faster services can widen employment and business catchments. Higher levels of productivity and growth then follow. Existing centres of business activity benefit most and stimulate economic expansion. This was the (then Chancellor) George Osborne's proposition behind the Northern Powerhouse. Launched in 2014 – note the unfortunate timing – six northern cities clubbed together to identify a core network of improved city-city rail links that would support the economic re-birth of the north. Better connections between cities would deliver 'agglomeration' benefits, with strengthened economies. "The money will be found", Osborne re-assured an enthusiastic Manchester audience at the time.

When strategic planning returned in the Government's *Integrated Rail Plan (IRP)* with its price tag of £96bn seven years later, its budget wasn't enough to deliver the full Northern Powerhouse Rail project nor all of HS2, so it got a poor reception from city/regional leaders.

As of now, some parts of the IRP are on hold, and a key part of HS2 (the Golborne link) has been removed. Reviews of other parts of the IRP have not started. This bold attempt at coherent strategic network planning is stumbling at the first hurdle due to budgetary indigestion. Government professes its full support time and time again, but the Treasury can't live with the annual expenditure to be incurred over the next couple of years. Long term planning, financial crises and electoral cycles, it seems, make poor bed-fellows.

It may look to *RAIL* readers as if the rail sector is being singled out for harsh treatment. It isn't. It was the overall *transport* capital budget that was so savagely treated in the Treasury's 2023 Spring budget statement. The largest road capital projects are being deferred too.

But yes, it means key rail projects will come later, reducing their benefits. They will cost more to deliver. The period of their adverse impacts on local communities during construction will be extended. Regeneration and private sector investment will be delayed. Any economic uptick from rail investment will have to wait.

### ***Project Appraisal***

#### ***(i) how much to spend?***

The use of cost-benefit analysis to decide where best to devote capital expenditure has been with us for five decades – early examples include the Victoria Underground line and the M1 motorway. Its use allows consistency in assumptions – such as on likely 'background' traffic growth – and comparability across transport modes. It encourages adoption of projects that bring operating efficiencies, extra revenues and consumer benefits. Written into the Treasury bible – the 'Green Book' – its rigour is much admired around the world, and will remain an important measure of value for money.

An interesting departure from reliance on cost benefit analysis arose when the National Infrastructure Commission (NIC) was asked to advise Government on the transport needs of the North and Midlands as a prelude to the IRP. The Commission avoided using cost-benefit analysis

entirely, knowing that its repeated use over the decades had led to prioritising investment in London and the South East, where congestion – and so benefits and efficiencies – are highest. This is, after all, why we have had an un-balanced pattern of national rail network development.

The Chiltern line is the only major route in the South East that is *not* electrified: compare and contrast with trans-Pennine routes in the North, or main lines in the East Midlands, or in Wales or in South West England. More cost benefit analyses might well point to funding Chiltern line electrification before the lines across the Pennines. Using cost benefit ratios alone to rank projects would have undermined the very regional re-balancing that the IRP (which looked as far south as Oxford-Cambridge/EWR) was meant to deliver.

So, instead of using cost benefit analysis to rank candidate projects, the NIC focused on *allocating* a rail investment budget to the North and Midlands (which, taken together, account for five of the nine English standard planning regions). It did this in effect on a *per capita* basis, although a lot of other budget splits (such as road/rail) had to be taken as a given. But it was unusual in being visibly fair to use population levels to decide how much funding should go into these two mega-regions.

There is no reason of course why this approach couldn't be used to allocate out the rest of the national rail budget for the English regions (for the East of England, for South East England and for South West England – the latter largely untouched by electrification). The NIC ensures that rail and other capital budgets are consistent with the limit that Treasury sets on overall capital spending (it is not allowed to exceed a fixed percentage of total national GDP). We have been given a means for allocating capital budgets for regions: so if a fair slice of the cake is the aim, why not try using it, across the whole of Great Britain?

**(ii) and which projects to spend it on?**

Investment in electrification and many other upgrades that can be fashioned as add-ons to essential renewal projects bring efficiency savings, and often some degree of revenue growth. Projects like HS2 and Northern Powerhouse Rail – which add new line capacity and offer faster travel times into city centres – both deliver so-called agglomeration gains. These effects might have been diminished by recent switches to 'working from home' which reduce the advantage of businesses co-locating. But more research into how this trend develops is needed before considering how agglomeration values in investment appraisals should be valued in future. Meanwhile, history suggests that city economies will rebound, as they have over the centuries. And assessing project benefits will be a continuing requirement, no doubt.

With a sizeable funding contribution from London businesses, Treasury was nudged towards approving London's Crossrail investment around 15 years ago, apparently in part persuaded by an analysis of its agglomeration benefits. Only rail offers this particular type of economic catalyst. And Crossrail, having opened at the end of the Covid period, is carrying more demand than forecast.

Passenger railways in the UK in the 21<sup>st</sup> century are for cities in particular. The prospects for city economies and the rail sector are unavoidably linked. A decision to invest in new/better rail links is a commitment to renew and regenerate major urban areas, in effect a strategic land use planning choice too. Cities are the green, low-carbon, places to live. The alternative to rail investment is unappealing: more roads and costly rural and green belt land-take to support additional car-based travel and sprawling development. Housing pressures are growing not receding. Development and growth should be focussed on places with existing (or prospective) rail connections.

**Why is Government so reluctant?**

Yet rail doesn't feel like it's flavour of the month in Government circles, does it?

Treasury remains grumpy that while rail ridership may now be back at pre-pandemic levels, the pattern of passenger use has shifted and revenue is lower. It is one thing to call for rail passenger growth to increase revenue, another to deliver it. A review of fare levels, and a new structure for rail fares simplified for users is a vital first step. In the inflationary 1970s, a mid-year fares rise would have been applied without hesitation to help balance the books.

An upward rail revenue trajectory will help win Government support for rail investment. In the short term – so prior to the next election – this should be an area of prime policy attention, one that will help make our railways great again (to borrow a phrase).

True, there is a lack of relevant organisations to help nurture coordinated transport and economic development. Not only has Great British Railways apparently been given the long finger, but regional agencies ('sub national bodies') such as Transport for the North appear to have been largely reduced to an advisory role. The LEPs – who could piece together local private/public funding packages – are on the way out. Meanwhile, DfT remains in control, where Treasury can keep a close eye on spending.

Government seems to have settled on city mayors – or rather, 'Mayoral Combined Authorities' as preferred local counter-parts. Maybe it has taken heart from the resurgent West Midland economy centred on Birmingham, partly stimulated by HS2 construction. But Government currently denies itself the industrial and economic development strategies that other countries use to nurture the wider economic benefits that transport investment brings.

We can be sure that, regardless of electoral outcomes, the next Government will return to the question of a better balanced economy, to the obvious need for improved productivity and better balanced growth across the English regions and the devolved nations. This will require targeted Government transport expenditure which needs to be in rail (along with mass transit schemes in large cities) to strengthen city regional economies.

### ***The Climate Crisis and the Railway***

There is a second, even more fundamental reason why investment must be directed into rail, which is that otherwise we won't reach the nation's environmental targets. This in turn will inhibit international business location decisions, in a world where corporate investment decision-making is increasingly seen through a sustainability lens.

Indeed, rail is largely absent in Government thinking on the greatest challenge we collectively face: climate change. And this is the hinge likely to turn round the case for rail investment. But before we get to decarbonisation, we need to check out two other climate emergency-related issues: air quality and a less well-understood concept: climate change adaptation.

First, air quality. There are increasing concerns about the health impact of air pollution. Recent Imperial College research shows that 52% of small particle pollution from road transport comes from tyres (which contain toxic chemicals) and brake wear; a further 24% comes from abrasion of road surfaces. Just 15% of particulate emissions come from car exhausts and a further 10% from vans and HGV exhausts. Electrifying the road fleet does *not* resolve the impact of particulates on air quality and human health. For that we need less road traffic.

Second: the need for climate change *adaptation* measures. On this subject, Network Rail has plans to ensure the railway can cope with the various effects of climate change: higher temperatures,

increased flash flooding, embankment failures, and rising sea levels among them. As the Climate Change Committee (CCC) has pointed out, this may mean measures such as switching to the use of parallel parts of the network as well as drainage and earthwork improvements. Expect to see an increased proportion of available funding dedicated to keeping the national network intact. Maybe, as in previous decades, the cost of some line restorations following storm damage will not be justifiable.

### **Decarbonisation**

Transport is the largest emitting sector of greenhouse gas emissions in the UK. The Department of Transport released its Decarbonisation Strategy in 2021. The fixes it proposes centre on road fleet electrification and a switch to active travel modes and local public transport to reduce the number of car trips – a reduction needed given forecasts of continuing road traffic growth in all scenarios.

But there is a problem, as uncovered in recent work by Greg Marsden of ITS Leeds.<sup>1</sup> In March 2023, Government's Carbon Budget Delivery Plan (CBDP) was published. It shows that, *alongside road fleet electrification, a 20% reduction in road traffic levels against current expectations is needed as soon as 2030* to meet the decarbonisation trajectory. The policy goal already set in Scotland is likewise for an absolute reduction in car kilometres of 20% by 2030. But the behaviour change measures necessary to achieve these reductions will most likely involve additional road vehicle user charges and are nowhere to be seen. The measures are, no doubt, judged to be politically inexpedient.

Rail offers an answer. While DfT's 2021 Decarbonisation Strategy speaks of the importance of modal shift, this seems to be limited to short distance car travel (where walk/cycle and perhaps bus might be an option) and to freight. The *Omertà* is longer distance personal travel.

Not only can rail substitute for long distance air travel; it can also replace the need for longer distance car travel (which is anyway the toughest challenge for electric vehicles). Look how important this is:

**“Longer distance trips of over fifty miles account for under 2% of the trips people make, but nearly 30% of their travel mileage. It is travel mileage that is relevant when it comes to assessing carbon emissions and the measures necessary to reduce them.”**

Source: <http://www.greengauge21.net/wp-content/uploads/Modal-shift-matters>, p13 which draws on analysis of National Travel Survey 2015-2017 using data by Jillian Anable.

Rail – metros aside – is largely a statistical irrelevancy for short journeys. But over longer distances, it's the only possible choice to get transport on target for carbon reduction.

### **Conclusion**

Government policy on rail now casts a long shadow: major investment promised, but not yet delivered. Meanwhile, both the under-performing, south-east weighted economy and the carbon challenge – and many would say, the planet too – cannot wait much longer.

Rail can and surely must be a key part of policy to deliver economic stimulus *and* transport sector decarbonisation. Overlooked thus far, the rail network capacity required to accommodate modal shift needs to be identified and delivered. This offers a political advantage: the carrot to accompany whatever additional charges road users will have to face in future to adhere to the committed carbon

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<sup>1</sup> [Reverse gear: The reality and implications of national transport emission reduction policies – CREDS](#)

trajectory. Meantime, there are plenty of quick wins to be had to keep key parts of the rail network up to scratch.

Our response to the climate crisis is going to need an unprecedented rail renaissance.

The next article in this mini-series of three articles will explore exactly how modal shift to rail – for longer distance freight and passengers – can be achieved. The key is providing the extra capacity needed.

The third article will examine what's needed from rail in cities, and the challenge of reconciling national needs for more longer distance freight and passenger travel, with expanding city-region network ambitions.

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