

Business

Long after Beeching, rural rail could be back on track

Robert Lea Industrial Editor

On the one hand, you have a property developer unsure what to do with a disused railway running through the middle of a would-be housing estate; on the other, a rail engineer in want of a test track for a next-generation electric battery "trainpod". The meeting of the

two could herald the end of too many dirty diesel units carrying too few passengers on branch lines and rural links and the arrival of zero-emission, track-charged, single-car trains. It also could rehabilitate parts of the network axed by the Beeching cuts six decades ago.

Where the West Midlands sprawl recedes into rural Shropshire, just out-

side Ironbridge, a crucible of the Industrial Revolution, an old coal-fired power station has been decommissioned. The land has been acquired by Harworth Group, a property developer. Work has begun to build a thousand homes.

It is a pretty spot overlooking the River Severn, more so now that the

cooling towers are gone and rewinding has taken root, but its industrial past has not been wholly erased. A rail track for coal-bearing freight trains is still in place. Intriguingly, there is an adjacent disused passenger line, complete with rails and sleepers, part of the old Severn Valley Railway that ran as far north as Shrewsbury. Much of it was dug up after the 1960s, but parts remain in operation, in steam heritage mode, comprising a dozen or so miles south between Bridgnorth and Kidderminster.

It is just the sort of line that the government's Restore Your Railway Fund initiative envisages resurrecting, in this instance connecting a new community — the old power station plot is now renamed Benthall Grange — by train with the old town of Ironbridge and into Telford.

Irrespective of whether this particular instance will ever make commercial sense, the line has become a testbed for a train venture whose ambitions are in its name: Revolution.

Revolution Very Light Rail, or RVLr, is a commercial initiative between Transport Design International, a Warwickshire-based engineering consultancy, and Eversholt Rail, one of the big beasts of the rolling stock leasing sector. Now, ten years into RVLr's development, Eversholt has commissioned three vehicles to begin trials on branch lines around the country in 2026. Over a 12-month period, seasonal demand and machine performance will be assessed to see whether a promised 15 per cent reduction in total cost of ownership compared with conventional trains can be delivered: in short, proving that such zero-emission trains have commercial viability.

The RVLr vehicle comprises a single car, nearly five metres, or 20 per cent, shorter than a conventional carriage, with a capacity of 56 seats, more than a typical single-decker bus. It is engineered to run on two or four batteries with 60 kilowatt-hours or 120kWh of capacity, at the upper end of the sort on large electric vans but significantly lower than that of an electric bus.

RVLr originally assumed that it would need to fix a range-extending diesel engine, but, thanks to the development of battery capability and recharging innovations, that has been scrapped for an electric-only future. The vehicle is designed to be recharged when stationary via a two metre-long, fast-charge third rail installed at stations, connected to a trackside bank of batteries in turn connected to the electricity network.

According to Tim Burleigh, the Eversholt director leading the RVLr project, the sweet spot for such a vehicle is "relatively short routes, typically a shuttle service between two points with frequent stops". The key points are that they can go into service without expensive civil engineering on overhead electric lines and stanchions; and that at a maximum speed of 60mph, line-of-sight driving minimises the need for expensive signalling systems (the trains could be engineered to operate autonomously, but the necessary advanced technology, on-train and trackside, would make the whole venture prohibitively expensive). Depending on certifications and



The new, short electric trains have the capacity to seat almost 60 passengers

authorisations, the company argues that it means the RVLr could be rapidly deployed and diesels trains more rapidly retired.

This is a very limited market. The relatively low speed of the vehicles bars them from operating on main lines and that restricts the addressable market in Britain to about 150 units, even factoring in some reopenings of lines axed in the Beeching cuts. However, for Transport Design International, there is a greater prize: export potential. It has had interest already with agencies from Mongolia to Morocco and, most significantly, the United States, where there are hopes for a renaissance in passenger train travel.

The company is scouting for a manufacturing facility near its Long Marston home and going into production would swell the business to more than 100 employees. Depending on demand and because of the ease-of-assembly modular design, Geoff Newman, Transport Design International's chief of operations, believes that "we could get to a build rate of three per month".

With a nod to the Department for Transport logjam of decision-making on the railways, not least the fiasco over the northern legs of HS2, Burleigh said of potential RVLr markets: "These aren't grand schemes in either cost or delivery. These can be deployed within an electoral cycle. We could be substituting existing rolling stock on a rural line or with a start-up service on a reopening Beeching line. The recurring message from Treasury is around finding private sector funding and how best to invest scarce funds. This fulfils both these criteria."



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Flight Club group hits the bullseye

James Hurley

The rise of “competitive socialising” has been underlined by sales of more than £100 million last year at the group behind Flight Club and Electric Shuffle.

Sales at Red Engine rose by 28 per cent compared with 2022, while like-for-like revenue grew by 10 per cent. The group, which opened its first site in Shoreditch, east London in 2015, now has twenty-five venues, ten of which are operated by franchise partners. Flight Club is a drinks and food venue combined with a spin-off of darts, providing fast and simple group games based loosely on the sport. Electric Shuffle does something similar with shuffleboard, a game in which players shuffle pucks along a table aiming at a marked scoring area.

Steve Moore, the group’s co-founder and chief executive, said there were plans to open eight more venues in 2024, including in New York, Philadelphia and Washington in the United States.

He said the sites were proving to be a “jewel in a tough market. In Shoreditch, the waiting list to play can be months, but people are coming just to eat and drink. Our site in Glasgow has been our best-performing ever. It’s proving popular in so many places, from Cheltenham to Las Vegas.” Moore, 46, a former futures trader, said there was a squeezed middle in the hospitality market. “If you’re a shabby little café or at the other end doing something exceptional, you’re probably doing well. It’s the mid-market that is dying. What we saw a few years ago in middle-market dining is happening in bars now as well.”

Excluding franchise venues, Red

Engine’s sales reached £67 million, producing earnings before earnings before interest, taxes and other charges of £12.2 million. Moore, a fan of unusual adventures who once drove a fire engine across twenty-eight countries and five continents, said the company was likely to pursue a fundraising round towards the end of this year.

Flight Club is based around a camera-based “vision” system that tracks darts as players throw them, scores them and instantly replays on a large screen next to the board.

The technology was developed by Jason Dale, a computer vision expert who previously had worked on a Nasa project to develop autonomous in-flight refuelling systems.



Steve Moore co-founded the Flight Club venues based around darts

Behind the story

After the Second World War, with the rise of the motor car and local bus services and the end of petrol rationing, the lattice of loss-making lines that the national rail network had created over the previous century was done for (Robert Lea writes). The year after a

report into the industry by Richard Beeching in 1963, a thousand miles of rail track was stood down from active service.

Before the pandemic hit in 2020 and with train usage at high levels not recorded since the 1920s, the government set up its Restoring Your Railway Fund initiative. An initial

200 or so bids to revive lines cut years previously were put forward.

A handful are on track to make their return, notably the revival of the Varsity Line between Oxford and Cambridge. There are hopes for the reopening or the beginning of substantial works on: the Northumberland Line re-connecting

Ashington with Newcastle; restoring the link between Levenmouth on the north bank of the Firth of Forth to Edinburgh; around Bristol, with projects to reconnect Portishead and Avonmouth to Great Western main line; and around Birmingham, focused on the Camp Hill line south of the city.

Adsilico wins backing for medical tests technology

Katie Prescott
Technology Business Editor

A company that makes digital versions of human bodies for testing medical devices has raised £3.5 million in seed funding, including from Northern Gritstone, the investment company. Adsilico, which was spun out of the University of Leeds, mixes computer modelling with healthcare to create virtual twins of people on a computer so that doctors can experiment with the impact of different treatments on synthetic populations.

The models can create specific virtual conditions or can target specific groups of people or characteristics. They also enable testing on vulnerable groups, such as pregnant women, who do not take part in medical trials. The company claims that this speeds up the bench laboratory testing process, eliminates the need for animal involvement, gives more accurate responses from trials and personalises therapies.

Digital twins are also used in sectors such as aviation, where scientists model the impact of flight conditions and temperature on virtual aircraft.

Alex Frangi, 51, the company’s co-

founder, said that in medical applications Adsilico helped scientists to “fail faster and earlier. Testing doesn’t necessarily need a fully human model, we create a model of a particular area of interest. We can test the specific therapies and specific analyses.”

The Argentina-born Frangi, who has just been awarded British citizenship, said the investment would be used “to turn concepts, prototypes and ideas into a service that is robust, that is efficient and meets standards. Also to start attracting our first clients.”

Founded in 2022, Adsilico emerged from research at the Centre for Computational Imaging and Simulation Technologies in Biomedicine at the University of Leeds. Frangi researched the subject as a Royal Academy of Engineering chairman in emerging technologies.

Duncan Johnson, 53, the chief executive of Northern Gritstone, which is chaired by Lord O’Neill of Gatley, the economist and former government minister, emphasised the emergence of Adsilico from the science sector in the north of England, adding: “Computational modelling has the potential to revolutionise the MedTech industry and reduce risks to humans.”

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