

# NICK RICHARDSON



## Are trolleybuses on a return journey?

Nick Richardson, Transport Planning Society policy director, heralds the dawn of a new form of urban passenger transport

► Leeds looks set to introduce New Generation Transport (NGT), an extensive trolleybus system. This is a major milestone for Leeds but also a highly significant step forward in urban transit with implications for other areas. The press release following the allocation of Department for Transport funding quotes the chairman of Metro, James Lewis, claiming that NGT will be “job-creating, economy-boosting, environment-improving, time-saving, carbon-reducing, congestion-busting”. He continued: “Transport is a key driver of productivity and investment in local transport infrastructure is investment in the long term economic future of the Leeds City Region. NGT will speed up our recovery from recession, boost our economy and enhance our ability to compete on the national and international stage.” This is bullish stuff so why doesn’t everyone have an NGT-type system in their sights?

### What went wrong previously?

Government has indicated that it will fund £173.5m towards the scheme, its first award for a trolleybus scheme so it’s worth investigating further. Looking at events of the past, the reasons that trolleybuses were purged from the UK were relatively straightforward: the infrastructure needed renewal in most places, service flexibility was needed and the image of urban transport was changing. Considering this in context, it was probably the last factor that was most influential.

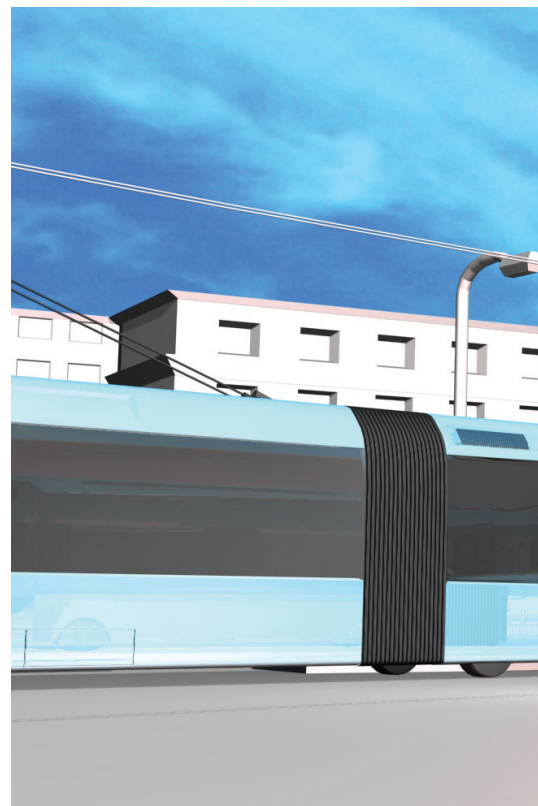
The growth of car use and the rise of the

diesel bus, then perceived to be an ideal replacement for trams and trolleybuses, meant that a new wave of mass transit took hold with the bus as the way forward. With hindsight, the other reasons don’t seem too persuasive. Infrastructure can be renewed, especially if a maintenance and upgrade programme is planned rather than happening all at once - if this didn’t happen, urban railways and other systems would have faded long before and experience from Europe suggests that infrastructure and fleet renewals and confidence in the trolleybus remained. In addition, many core routes didn’t change much over time so there wasn’t a need to extend or transfer infrastructure.

So it seems that it was mainly the emergence of the diesel bus that pushed trolleybuses into obscurity. The new order was not influenced by the environmental concerns that we would be considering today - the 1960s was not a time when fuel costs and urban pollution were on the agenda. In fact, the obliteration of tram and trolleybus systems constrained opportunities to expand mass transit at a time

**“NGT will enhance our ability to compete on the national and international stage”**

Cllr James Lewis, Metro

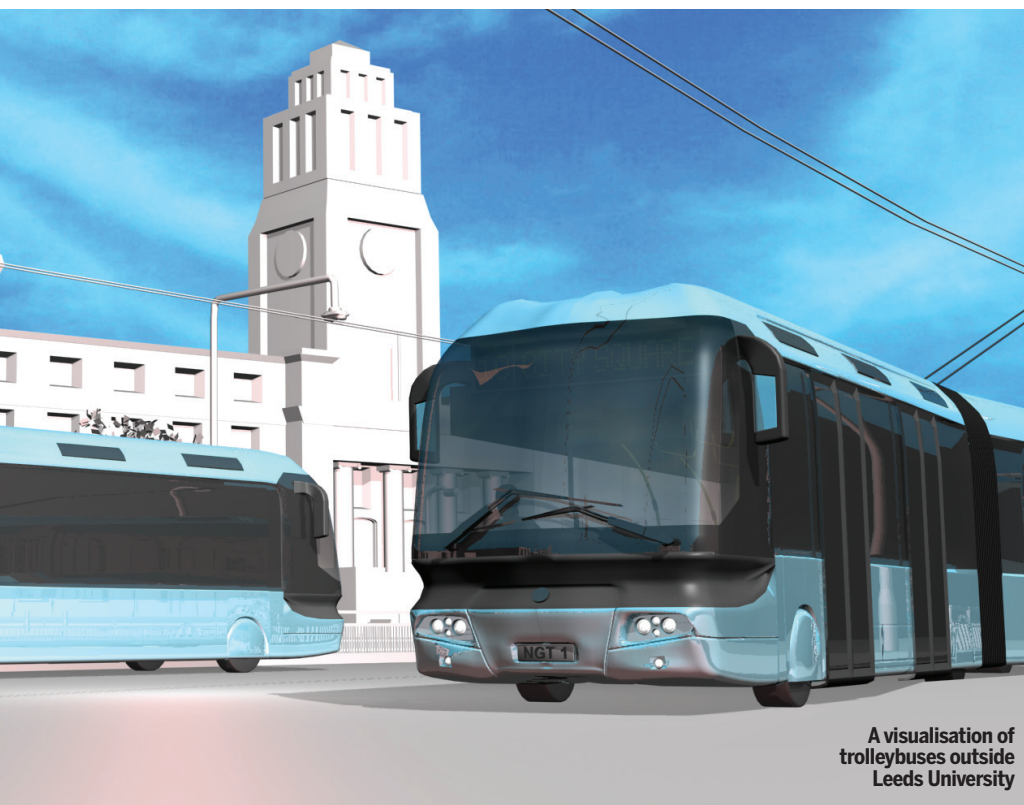


when it was most needed. The consequence has been that we are trying to recreate what we had before but threw away - efficient and environmentally conscious mass transit systems which could be linked to development scenarios in a coherent way. Some of the car dominance we are experiencing now can be attributed to the demise of those urban transport networks.

### Seeking clarity on the procedures

The provenance of NGT also explains why trolleybus has been resurrected. Leeds failed to obtain government backing for a light rail network; the 2005 decision to reject the Leeds Supertram scheme on the basis of its cost (along with the South Hampshire Rapid Transit scheme and Manchester Metrolink expansion proposals, the latter being pursued subsequently) left a hole. Part of the justification for schemes relies on some investigation of other options and the working up of an alternative. This presents a problem - why promote a scheme if there is a Plan B? Surely giving the option of something else which has to be lower cost invites the question of why go for the chosen scheme in the first place?

In the Leeds situation, the prospect of an



A visualisation of trolleybuses outside Leeds University

extensive bus network, even a high quality one, was not viewed with much enthusiasm by DfT. More of the same was not going to have the impacts expected i.e. shifting significant numbers of car users to mass transit. Environmental concerns raised the prospect of bus-based systems powered by electricity, exploiting the huge advantages of trolleybuses. They have of course been operating effectively for many years overseas so the benefits should be demonstrable. What can the trolleybus offer that other systems can't? Vehicles are quiet, ideal for an urban setting. There are no emissions at point of use, although there will be emissions at point of generation which makes calculating the impacts more complicated. Importantly there is a likely to be huge boost for the image of passenger transport. The advantages of electric traction apply in a Yorkshire setting with lots of power uphill and regenerative braking downhill. It's all very promising. In the absence of an electric bus that offers the same benefits, trolleybus must fit the bill.

However, there is the inevitable downside of having infrastructure in the streetscene. This requires careful planning and no doubt objections will be raised to the detailed plans. After all, this is more street furniture when we

aspire to have less. However, it is using streets in a fresh way, defining what is important, permanent and new. The power supply will be less visually intrusive than anything from the 1950s but defines the network in a reassuring way. Compared with conventional buses, this is something sleek but it's the wider network that is important. As always, it's the function of the network that matters, not what form it takes. So a high quality, high capacity service is of huge value in delivering the promised economic, social and environmental benefits. The way forward is a revitalised package of core corridors, a dense network of buses linked with the Metro rail network, all bound together by strong marketing (and easy ticketing) and hopefully a coherent integration with land use planning and a close eye on employment needs.

### Sticking with it

The intention is to have the system in place by 2018 which requires numerous hurdles to be negotiated through the Transport and Works Act Order Application, public inquiry and associated planning consents, all of which can take considerable time. Add to this the necessary detailed design of the system, its stop arrangements, depot and maintenance

arrangements, procurement of the vehicles, a good communications strategy and ongoing political support. In DfT's terms, 'programme entry' is a reasonably fixed commitment provided that the scheme promoter can contain costs. In other words, the emphasis is on delivering as planned, not always easy when obstacles emerge during the elongated implementation processes. Cost increases will not be tolerated which, given the length of time needed to promote the scheme to delivery stage, can be difficult. It may be worth reflecting on the fact that it is likely to take at least 13 years from 2005 for the new system to be introduced and this may be extended for various procedural reasons. Add to this the time that was taken to promote the earlier light rail scheme and it shows some determination by Leeds and Metro to achieve success. In addition, there is the cost to swallow of pursuing such major schemes which is all at the risk of the promoter.

Approval for a trolleybus system in the UK represents a new era which should not be allowed to remain as a demonstration scheme; other applications should be waiting in the wings to realise the advantages that trolleybuses offer. The pressure is on Leeds NGT to get it right, to demonstrate significant operational and environmental benefits and to gain popular support. Importantly, it needs to prove that motorists will take to it and use it regularly. To achieve this it needs priority in the highway. It's not a tram but it will fulfil a significant role that deserves to be considered more widely. ■

### ABOUT THE AUTHOR

► Nick Richardson is policy director of the Transport Planning Society, which provides professional development and a meeting place for all those working in the transport sector and leads the response to emerging policy challenges. See [www.tps.org.uk](http://www.tps.org.uk) for further information.

Richardson is also a Project Director at transport consultancy Mott MacDonald. He chairs CILT UK's Transport Planning Forum and the board of PTRC Education and Research Services Ltd. In addition, he has held a PCV licence for 25 years.