LRT Consultation

Response from the Transport Planning Society

The Transport Planning Society is an independent institutional body in the UK, established to facilitate, develop and promote best practice in transport planning and to provide a focus for dialogue between practitioners and others interested in the field. It is supported by four long established professional institutions – ICE, CIHT, CILT and RTPI - all of whom have an interest in transport planning as well as their own core activities.

The Transport Planning Society administers its own Professional Development Scheme for transport planners, leading to award of the Transport Planning Professional (TPP) qualification which is the only professional qualification uniquely aimed at transport planners. The Society has 1400 individual members and 35 corporate member providers of transport planning services in the UK and elsewhere. Many of our members are active in strategic transport planning, including railways.

Although our individual members may have views on a range of detailed issues, as a Society we would like to respond on the more strategic aspects of LRT. Our response has been drafted by the Policy Group within the Transport Planning Society Board, all of whom were elected by the membership as a whole. The Policy Group is in constant dialogue with other members of the Society and we seek members' opinions on a wide range of transport issues through our annual Members' Survey. The views expressed here may be taken as representative of those held generally by our membership.

Call for Evidence Questions

Q1 What is the potential scale of the opportunity for further light rail (or other rapid transit) systems to be introduced in England?

Light rail has a potentially useful role to play in all our major cities. Key cities without it (or without a significant Underground/Metro) are Glasgow, Liverpool, Leeds and Bristol. In addition, there is potential for developing the tram-train concept and converting existing suburban rail lines in smaller cities to light rail operation, with the routes being extended into or through the city centre. We expand on this in our response to Q9.

Q2 Is there an appetite for new systems to be introduced in our cities and towns?

Yes and no. In professional circles, it is regarded as desirable. In the Transport Planning Society annual Members' Survey, investment in urban rapid transit was among the members' top five priorities. There is a general public perception that light rail is a "good thing" and politicians tend to give it their support in principle. Generally, people and politicians consider that their town or city would benefit from light rail, to the extent that many "non-starter" systems have been investigated in towns or areas unlikely to offer the traffic necessary to justify them.

However, it is another matter when the direct impacts of proposed systems (especially street running), construction impacts or funding come into play.

For example, the GLA's proposed West London tram floundered largely on objections from affected frontagers and street users and then failed to gain local political support. Local bus operators can be vociferous in their objections if they foresee an abstraction of traffic or other impacts on their services (eg stop relocations, rerouteing, lower priority for buses than trams at traffic signals). Proposals for Leeds, Liverpool and Portsmouth (for example) made good progress through the planning and legislative processes (ie Transport & Works Act) but failed to be funded.

While the past decade has been one of austerity, it is notable that no new light rail systems have been implemented in England for 15 years (since Nottingham in 2004) and only extensions to existing systems have been progressed. Apart from the short pilot line in Preston promoted by Tram Power (which has planning approval but not yet funding), there are no entirely new systems in the pipeline beyond the study/feasibility stage.

We conclude that is a "grassroots" appetite for light rail but much less so when the realities of impacts during construction and operation (especially street running) and funding are taken into account.

It will need a shift in attitudes towards urban transport for this to change. This may come about through environmental restrictions on car use or the creation of City Regions and Combined Authorities able to take a broader view of transport in wider areas – especially if the Mayor is enthusiastic – and Sub-national Transport Bodies. But a change in thinking and funding availability appear to be prerequisites for momentum to be regenerated.

Q3 Is there evidence to support this appetite?

While "appetite" needs to be clearly defined, we note that a number of feasibility studies are taking place into light rail (or other high quality public transport systems) (eg in cities such as Bath, Coventry and Cambridge). The systems in Nottingham, Birmingham and Manchester have been significantly extended in the last decade, and extensions to the systems in Blackpool and Edinburgh are committed. Elsewhere (eg Croydon Tramlink) planning for extensions is well advanced. Where light rail already exists and its benefits evident, there is a strong appetite for further lines and extensions.

Q4 What would the environmental, economic and congestion benefits be?

Q5 What impact would it have on jobs?

Q6 Does light rail open up new housing or business developments or improve the urban fabric of the area?

Q4-6. The benefits of light rail are well explained in the Consultation paper and there are many examples around the country of areas being opened up for regeneration, jobs and housing creation, and associated improvements to the public realm.

A study undertaken for the Transport Planning Society in 2014 (ref. 1) estimated the accrued wider economic benefits produced by Line 1 of the Nottingham Express Transit one year after opening to be already approximately twice the construction cost of the line. The study focused on property values and social wellbeing, and excluded direct system user benefits.

Q7 What can we learn from the experience of other countries in adopting new systems?

Referring to western European countries, the key difference from the UK appears to be their better integrated planning system combined with full regulation of urban public transport systems. Their planning systems create transport and land-use change/development in a more integrated and holistic way than is usually the case in the UK. Improved transport (including but not limited to light rail) becomes an integral part of the future economic and development strategy for the city.

For example, in the Netherlands, there are examples of tram lines having been built to serve development sites before the construction of the development is even underway. The tram is therefore operating from Day 0 and all using the development (whether during construction or in its completed form) can be assured of quality public transport from the outset.

Regulation of urban transport systems means that all public transport modes (plus highways, traffic and public realm) in a city are planned and specified by a single city authority. In that way, maximum benefit can be gained from implementing light rail by ensuring that other modes are fully integrated with it (both operationally and in ticketing) and that wasteful competition between modes is minimised. Some individual journeys will be inconvenienced by this approach (eg where a change of mode is introduced) and highway capacity for car travel may be constrained but there is overall benefit to the city and the population as a whole.

While not being familiar in detail with the legislative and funding regimes in other countries, we have the impression that once a decision in principle is taken to implement light rail, the legislative process is much quicker than in the UK (albeit possibly less democratic at that stage) and that funding is guaranteed. For example,

Paris has constructed 7 tram lines and covering 80km of routes in broadly the same time that London has built Croydon Tramlink.

It remains to be seen whether the new sub-national transport bodies, city regions and combined authorities will gain the powers to act in a similar way, including regulation or similar powers to control public transport.

Q8 What issues have helped progress light rail schemes or acted as barriers to their development?

Increasing travel to cities with light rail systems (especially in Europe) by individuals, civic leaders and the media have raised the profile of light rail in the minds of the UK population and persuaded them that it is a "good thing". Public enthusiasm for the mode, coupled with a growing realisation that urban car use must be constrained for environmental reasons, have provided an impetus to the progress of light rail over the past 30 years or so. Even so, it is fair to say that it has been long and hard work to get new systems implemented, and the extent of light rail in the UK lags well behind many of our continental neighbours.

We have already alluded to some of the barriers to the introduction of light rail in the UK and these may be summarised as our consultative democracy, our planning and legislative process, and cost/funding. Within our accepted societal norms, there is good reason why these barriers exist but they may have been introduced for other reasons with their challenges to the implementation of light rail being an unforeseen consequence.

Our consultative democracy usually prevents decision making without letting every voice being heard. On the one hand, this has become a democratic right and in many cases, schemes have been beneficially modified to mitigate previously unrecognised impacts on affected individuals, businesses etc.. On the other, the risk is that the vociferous voices of those who consider themselves likely to be adversely affected by a new light rail line (even if only during construction) are loudly heard while the voices of those who will benefit from the new facility for decades to come seldom speak. While most concerns are legitimate and well informed by the objector's experience of living in the locality, unfounded concerns can also be expressed based on hearsay or a lack of understanding of what is proposed. It is difficult to get a balanced view from the community as a whole and local politicians will often by swayed by the concerns of the vociferous minority.

Technical and legal experts acting for the promoter of the scheme will of course make the best possible case in its favour but we mentioned the example of the West London tram which was swamped by local objection. We cherish democracy but perhaps it needs amending in the case of public works so that consultations and inquiries into new light rail schemes produce a more balanced outcome.

Our consultative process is linked to the planning and legislative process. Due to the need for open consultation at every stage of the planning process, followed by a potentially lengthy inquiry, deliberation by the Inspector and subsequent decision

making by the Secretary of State (in the case of a Transport & Works Inquiry) the whole process leading up to the implementation of a light rail scheme is drawn out. Five years would be a usual minimum from first identification of a scheme to gaining powers for construction but it is often longer, especially if a judicial review is involved at any stage.

During that period, political power may change hands. New ideas may emerge and other priorities may take precedence. Transport policy may change. All are obstacles to progressing the scheme in a purposeful and timely manner.

Finally, cost and funding. Lack of availability of funding has stopped or delayed a number of schemes even after powers for implementation have been achieved. For example, while quality transport rather than light rail, the Leigh Guided Busway in Greater Manchester was granted its Transport & Works Order in 2005 but it was a further 7 years until funding became available for construction.

Some funding is normally required from central government and the Treasury has many demands on its funds. While the Department for Transport receives allocated funding in each Budget, if funding is not ring fenced for a particular scheme, that scheme will then have to compete for funding with other transport projects. Or even health, education etc. if additional Treasury money is required. The political wind of the day may also determine which cities are favoured for funding at any given time.

In our experience, these are the many barriers to implementation of light rail in the UK. Within our established laws and procedures it is not clear how they may be effectively overcome. However, perhaps devolution of powers and funding to city regions and combined authorities may help. Especially if each can then adjust procedures and policymaking to suit its own circumstances and priorities.

The London Docklands Development Corporation had extensive powers within its remit (eg land appropriation, planning powers, funding) and as a result, the Docklands Light Railway demonstrated the most expeditious example of light rail introduction in the UK in recent decades. That shows what can be done.

Q9 What and where are the future opportunities here in England for new light rail systems or alternatives?

As we stated or implied in previous responses, we see the opportunities for light rail lying in :

- those major cities which do not have light rail (Glasgow, Leeds, Liverpool and Bristol)
- extensions to existing light rail systems

In addition, there may be scope to develop :

- other light rail lines in outer London as links to the existing rail network, as well as serving local regeneration objectives (as Croydon Tramlink)

- the tram-train concept
- conversion of existing railway lines into and out of our major cities entirely to light rail operation, with the lines then being extended into the city centre. This has been suggested for the Valley lines in South Wales (with extensions into central Cardiff).

Using existing rail lines for a significant part of a light rail route avoids the complexities of street running and reduces the impacts on "frontagers" who are already accustomed to passing trains. This approach can also provide significantly improved accessibility to the corridors served (additional stations, more frequent tram services than the rail services they replace) and improved accessibility to city centres, interchange with other modes etc.. Once a light rail line or lines have been established in a city centre, it/they could also pave the way for additional light rail lines serving corridors not previously served by rail.

A study of potential new rail stations in Greater Manchester almost 20 years ago found a marked difference in the attractiveness of Metrolink services for travel into the city centre compared with rail services on other lines, due to the factors mentioned.

Conversion of existing rail lines to light rail should be most fruitful where :

- a city has at least 2-3 suburban rail lines suitable for light rail use
- there are no remaining conflicts with residual heavy rail services (eg freight or passenger services on part of the converted route) unless these can be managed
- the existing city station is remote from the city centre or other key central area destinations, and improved accessibility to the city centre is a significant benefit
- there are plans or potential to encourage development in the corridors served

Our view is that if it is feasible to focus light rail/development on the opportunities that we have identified, that will be more productive than spreading the net wider and investigating a host of other ideas or aspirations.

Q10 What are the key issues that are preventing light rail schemes from being delivered?

We noted many barriers to the development of light rail in our response to Q8. These are all impediments to the delivery of light rail schemes but, in our view, the key issue preventing light rail delivery must be funding. They are expensive to construct and represent significant investment. However great the potential benefits, the schemes will not be delivered if they are unaffordable.

As a result, there is increasing interest in cheaper modes of quality public transport. For example, after years of discussion, proposals for a light rail route in east Belfast

have been replaced by the Glider on-street BRT system, which is now operational. Non-diesel powered buses are in vogue elsewhere such as Cambridge.

Unless significant fund raising powers are devolved and implemented by city or regional authorities, this remains very much a matter for the Government and the extent to which it wishes to commit to light rail in our cities.

Q11 How can we deliver systems within a budget as has happened?

Delivery within budget requires :

- thorough and detailed system planning in advance of construction so that key obstacles to construction can be identified (eg land acquisition, environmental constraints, hidden underground features)
- careful and comprehensive planning and programming of construction, taking into account the interests of all key stakeholders
- cross-party political support, especially at a local level, so that the scheme is not paused, reviewed or altered if there is a change of political power
- use of the most appropriate contractual means of procuring all the works, vehicles etc., designed to ensure that risks are allocated to the party best able to manage them
- ensure that all parties have the same aims. If budget is paramount, then all contractors and their suppliers need to be striving to achieve this.
- close monitoring of progress and expenditure throughout the procurement phase so that remedial action can be taken as early as possible if the budget is threatened
- inclusion of a contingency sum within the budget, or a ready means of agreeing that the budget can be varied, if (despite all the careful preparations) unforeseen events occur

Q12 What are the key lessons from Europe in progressing light rail and in what way are these different to the U.K.?

We have largely covered this in our response to Q7 but in summary :

- European countries tend to integrate land-use and transport planning more closely, so that quality transport is seen as an integral and essential part of the future development of a city
- City authorities tend to have wider regulatory powers than in the UK with governance over highways, traffic, public realm and public transport services, generally. That facilitates integration of light rail with other transport modes and ensures that it plays an optimal role in transport policy
- The democratic and legislative systems in other countries appear to streamline the planning and implementation of light rail. Once a decision in principle is taken to implement a new light rail line, funding is granted and all parties have a common and strong focus on delivering the project. Strong civic leadership also provides drive.

Q13 What does the future of light rail look like with new generation transport schemes coming forward?

We believe that the essential concepts of fixed track largely segregated from other uses, comfortable vehicles, and a quality environment both inside and outside the vehicles will remain.

We expect to see alternative means of propulsion (other than by electricity from overhead wires) developed and extensively introduced. We expect to see new thinking in the way that underground services are dealt with to reduce construction costs. We expect to see more automated light rail operation. We expect to see more real time information available to passengers to enhance and ease their journey experience, including travel to and from light rail stops.

All of these are in the pipeline already.

Q14 How do you see light rail aligning with new initiatives such as autonomous vehicles; cycling and walking; and wider Mobility As A Service initiatives?

In the future, we expect all transport modes to be better connected and light rail will play its part. There will be scope for physical and information improvements at light rail stops to improve accessibility to the system by other modes. Integrated ticketing, including a single payment through MaaS for the whole journey including the light rail sector, can be ramped up. If automated vehicles eventually become the norm on our highways, there is scope for improved realtime interaction between light rail vehicles and other traffic, potentially enhancing the priority given to light rail.

Q15 How can promoters leverage funding from sources beyond central Government?

The London Underground Northern Line extension from Kennington to Battersea is a groundbreaker in terms of funding from non-government sources and sets an example. Essentially, the aim must be to try and capture more funding from those who will gain the greatest benefit, in addition to passengers. Developers, property owners and local businesses are chief among these beneficiaries. Section 106 payments and the Community Infrastructure Levy are already in place for new developments. More attention needs to be paid to raising funds from Business Rates and Council Tax from incumbents in the area.

Devolution of greater fundraising powers to city regions or Combined Authorities may stimulate new ideas for funding light rail locally, with a clear link being established between funding provided and subsequent benefits to be gained.

Other Rapid Transit System Alternatives

Q16 Is there an appetite for considering Very/Ultra-light rail or Personal Rapid Transit as an alternative transport solution to light rail?

Within special circumstances, yes. The low capacity of such systems renders them unsuitable as the core of a citywide transport system. Their application is more likely as short feeder routes to a core system (eg the Stourbridge Town railway branch line) or as part of specific large developments (eg airports, large retail centres, theme parks). There, they can serve to provide access to the development (eg from remote car parks or a local transport interchange) or to move people within it.

The costs of installing such systems may be less than light rail but they are still expensive. Providing segregated track, especially within established urban fabric or where grade-separation is needed, is not cheap and the resulting capacity may offer poor value for money as a standalone transport system. On the other hand, if such a system is an integral part of a larger commercial operation, there are much wider revenue benefits to be gained. In the case of a new development, designing in a route for such systems at the outset will also be easier than retrofitting them to established fabric.

Q17 What are the estimated costs of delivering such systems and the wider benefits on offer? Please provide evidence.

We are unable to offer any cost estimates – although in any event they will be very sensitive to the type of system installed, whether it is an integral part of new build or retrofitted to established build etc..

However, existing systems demonstrate the type of benefits on offer.

We have already noted the function of the peoplemover operating on the railway branch line to Stourbridge Town. It provides a valuable feeder to the core railway system in the West Midlands and facilitates rail accessibility to Stourbridge. That said, the current vehicles have a limited capacity and carry both a driver and a conductor, so staffing costs are high relative to revenue.

At Heathrow Airport, the Pods carry customers between the Business car parks and Terminal 5. They replace the previous bus service between the two (saving those costs) but their main benefit lies in improving the convenience, attractiveness and image of Heathrow as an airport for business travellers. In theory, at least, this should generate enhanced income for the airport from landing fees and increased rents from commercial outlets within Terminal 5.

Similarly, the cable-hauled system between Birmingham Airport and Birmingham International railway station makes access to the airport, particularly by rail, more

attractive and again, that should generate increased revenue for the airport and the Train Operating Companies concerned.

Peoplemover systems within theme parks enhance the general experience of enjoying the Park, as well as serving a useful distribution function. Again, the financial benefits accrue from Park entry fees and revenue generated at other outlets in the site.

A hypermarket at Toul, France, offers automated peoplemover vehicles to transport customers between the extensive car parks and the retail outlets. Once again, financial benefits accrue to the hypermarket in terms of enhanced patronage and higher rent income from retail outlets.

Cable cars and funicular railways could also be considered as ultra-light peoplemover systems and interestingly, there are circumstances where these form part of a city's transport system (although both also have many specialist applications in mountainous tourist areas). Where there are cliffs or very steep slopes, peoplemovers of this type provide the only mechanised means of changing level by a direct route. For example, steep local terrain in Lyon (France) and Valparaiso (Chile) support use of funicular railways while cable cars are a core part of the transport system in similarly steep terrain in La Paz (Bolivia). Arguably, the Emirates Airline in London serves a limited transport function as well as being a tourist attraction.

There are many other examples but to date, we would contend that ultra or very light rail is unlikely to find applications outside niche circumstances, and often where the investment is justified only by the wider commercial benefits to be gained by the promoter.

Q18 Should such a system be a concept that is promoted?

In our view, not for general city transport but there are niche circumstances where such systems have a role to play.

Q19 How would this system provide a positive contribution to the economic productivity and development of a city or town? Please provide evidence.

In special circumstances, such systems may be a useful means of providing low capacity links and connections within a wider network. Consideration has been given to peoplemover links between the HS2 station at Curzon Street in Birmingham and Birmingham New Street station, and between HS1 at St Pancras and HS2 at Euston. These are good examples of short, key transport gaps that such a system might fill.

Our response to Q17 highlights the existing uses of such systems to improve accessibility to the rail networks at Stourbridge and Birmingham airport, while specialist systems in South America and France offer direct mechanised transport where other modes have to follow long and circuitous routes.

Q20 What are the barriers for developing such systems, particularly those with elevated sections? For example, public acceptance, or environmental sensitivities?

Both, but cost, value for money and low capacity are key barriers to their implementation as a major part of a city's transport system. Nevertheless, there may be opportunities for such systems to plug critical gaps in a wider network to generate additional income on the modes it connects.

As an integral part of major developments, the cost of such systems is less of a problem as the scheme promoter can recoup the cost through other income streams. Public acceptance and environmental sensitivities are also less of a problem if the system is carefully designed into the development from the outset.

References

(1) Stuart Northall – "Improving the political case for transport investment : an ex-post evaluation of the external benefits of the Nottingham Express Transit LRT Scheme" Available on the TPS website (www.tps.org.uk) under TPS>Policy>Bursaries.