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# Another green transport world

If we can join the dots on climate then public transport can thrive. It's about doing all the right things, and all at the same time

► The weather is losing some of its British reserve. Changing from introversion to extroversion. Records are now there to be broken - and regularly. The hottest, the wettest, the most extreme. As the weather intensifies we need to expand the capabilities of transport infrastructure and its supporting built environment to cope.

We have a problem though - which is that we have already built our transport system. The wiring, the drainage, the track were built for a world that's gone. Or as ScotRail's Alex Hynes recently (and succinctly) told the Railway Industry Association's Annual Conference in London last week: "The railway in this country can no longer cope because of climate change."

Note that Alex is talking about now, not some time in the future.

This has massive implications for transport investment - implying that investment isn't just about expanding capacity it's also about making sure the capacity we already have can function as the weather becomes more technical and less monotone.

It also requires a different way of thinking about transport infrastructure. We need to make it spongier because at present we have too much rain bouncing off hard urban surfaces and then racing into drains (joining that which is pouring off deforested hillsides), to form implacable surges of flood water which overwhelm flood defences before submerging great tracts of land (and its transport infrastructure). As rainfall becomes

more intense than this is going to happen more frequently.

In the heroic modernist engineering age the answer to this (as to most things) would have been to build more large objects and pour more concrete - in this case larger flood defences and bigger drains. It's what the Netherlands used to do - but now things are changing. It's always worth looking at the Netherlands, given how much of their country is situated below sea level (their water boards are one of the oldest democratic institutions on the planet).

Go to Rotterdam and they have built a huge water tank above the underground car park of Rotterdam Centraal's rebuilt station to first capture, then hold and then slowly release excess rainfall. Within a short walk of the



London's eco-bus depot in West Ham

station you can also find water parks (which feature recessed areas which can be used to hold water when rainfall is intense), urban farms on spare railway land (which in normal circumstances would be wasteground), formerly buried watercourses opened to the sky and plenty of green roofs. The aim of this approach is not the traditional one of deflecting the water (with the danger that somewhere else takes the hit) but to temporarily detain it until the weather calms down.

Now there are clearly good reasons why the Netherlands is taking this kind of strategic approach to climate adaptation on rainfall. There are also some good examples of initiatives in the UK on adaptation and decarbonisation of the built environment (from Accrington's eco-station to London's eco-bus depot in West Ham). But given the scale of the challenge we also need to get more strategic - because as well as joining the dots on adaptation we also need to join the dots on climate between transport and energy.

It was very sobering to see a piece by Roger Ford in a recent edition of *Modern Railways* showing how disappointing diesel trains are on carbon emissions when compared with air travel. Most striking of all is that our main provider of long distance cross country rail services (the Voyagers) are only 50% better than a plane for a journey of London to Edinburgh dimensions. Meanwhile, in the Netherlands and Switzerland, because they electrified their rail networks to a far greater extent decades ago, they are better able to promote the hell out of its climate credentials today. They can do this with a clean conscience because their trains are powered by clean and renewable energy (in the Swiss case mostly by their own hydro power plants).

The public doesn't really give a monkey's in the UK about the corporate branding we use to sell train travel these days. However, people do care about the climate - and a proper climate strategy for public transport would be cracking on with electrification so we can sell rail travel on that basis. Electrification should also be part of a broader systematic national sustainability strategy for rail.

Again, as a comparator, the Swiss railways are part of a wider 'Exemplary in Energy' initiative which brings together the Swiss Government with key state-owned entities and major national and regional organisations (including

# “The railway in this country can no longer cope because of climate change” Alex Hynes



Rotterdam Centraal



Accrington's eco-station



Swiss railways are part of a wider Exemplary in Energy initiative



Hammarby Sjöstad

Swiss Post, Swisscom and Services Industriels de Genève, a major utilities provider) who are working together to achieve a binding action plan to improve energy efficiency. The initiative comprises 39 joint measures in three action areas, plus a series of specific measures determined by each organisation individually. Among the energy measures the Swiss railway are taking include 'green wave' systems to give drivers extra information to reduce unnecessary stopping and starting and new tech that optimises when train heating and point heaters switch themselves on and off. The annual reports show how each of the organisations involved are delivering on their commitments. It's this kind of transparent and coordinated approach which means you can market the sustainability benefits of public transport off the back of having its environmental credentials in order.

As well as taking a strategic approach to

joining the dots on climate at a national level we also need to do the same at a city region level. In our new report on this topic we feature two cities that we think are ahead of the curve - Munich and Nottingham. We argue that one of the reasons they are doing more is a greater level of municipal control over both public transport services and utilities than is the norm in their respective national contexts. This means it's been much simpler for these cities to join the dots on climate - as they can just do things rather than have meetings with other organisations with completely different priorities about maybe, sometime, never doing things. So already both cities are powering their public transport systems with renewable energy provided economically by their own energy company (trams in the case of Nottingham and trams plus the wider urban transit network in Munich).

Another green public transport world is

possible and sometimes you get glimpses of it. Like Stockholm's wondrous new tram-centric, eco-housing development at Hammarby Sjöstad or Berlin turning a redundant railway goods yard and an entire disused airport into parks, or travelling on trains powered by the turbines you can see from their windows. An optimistic take on the future goes like this. It's about doing all the right things on transport, energy and the built environment - and doing them all at the same time. You are going to love it. ■

## ABOUT THE AUTHOR

▶ Jonathan Bray is the director of the Urban Transport Group. Throughout his career in policy and lobbying roles he has been at the frontline in bringing about more effective, sustainable and equitable transport policies.