

LONDON'S TRANSPORT INFRASTRUCTURE: Minding the Gaps

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The National Infrastructure Commission has a key role to play in ensuring a limited investment budget is spent where it will produce the best returns for the country. As London strives to compete with other world cities for investment, transport capacity will continue to be a top priority. However, having enjoyed a greater share of national investment since the Jubilee Line was extended out to Canary Wharf and High Speed One was opened up, and with the benefits of Crossrail One still to come, it will be very hard to make the case for more major projects on transport grounds alone.

Hence it vital to avoid 'vanity projects' and to consider not only 'agglomeration economies' but also the environmental and social benefits that would come from better planned growth at the edges. This brief paper suggests how 'smarter growth' could be secured, drawing lessons from Paris, Rotterdam and Copenhagen so that transport investment mobilises private investment in sustainable forms of development, especially new housing. It argues that the NIC should apply Multi-Criteria Analysis (MCA) to assess the impact of options on property investment and affordable housing.¹ In a sentence, and in the words of the familiar cry on London's Underground, the NIC should '*Mind the gaps.*'

1. Economic and social challenges

While London has reversed the economic decline of the 60s and 70s its economic position is precarious for three main reasons. First it is an exceptionally expensive city to live in, with high housing and travel costs.

¹ Recommendations on the use of MCA are set out in the final report of UCL's Omega 3 project 2010-
<http://www.omegacentre.bartlett.ucl.ac.uk/wp-content/uploads/2014/10/OMEGA-3-Final-Report.pdf> and in the RAMP handbook (Risk Analysis and Management for Projects, ICE 2014

Second the difficulties of finding somewhere to live and work could provoke more of the riots that damaged centres like Ealing and Clapham Junction a couple of years ago, and that have hit Paris. Third with English being spoken throughout Europe, the jobs in economic success stories like media and education could easily relocate to cities such as Paris, Rotterdam or Berlin, where not only are premises much cheaper, but it also easier and often more pleasant to get around. The problems are most acute in Outer London, as revealed in government wellbeing surveys, as well as in research URBED undertook for the Greater London Authority.²

In making national infrastructure investment decisions there are many choices and factors to be considered. For example The Guardian, in its lead editorial of December 8th at the height of the flooding stated:

‘Surely this is the time for the builders to build the infrastructure that people want and need. It’s time for government to put its money where its mouth is.. Flood defences are much greater priorities for those affected by these recurrent floods that HS2 or a third runway at Heathrow. Every pound spent on keeping communities dry and protected saves £10 in damage’.

Simon Jenkins’ s headline *London must stop sucking cash from the rest of Britain* says it all.³ The priorities for transport investment in London MUST therefore be linked to wider objectives such as opening up more affordable housing while retaining the stock of business premises around major stations such as Waterloo, London Bridge and Euston, and not just enabling long distance travellers to go further faster.

Annual study tours URBED ran for the TEN Group of London planners to European cities have brought out the potential for comprehensive planned mixed use developments with transport at their heart.⁴ Comparative data reveal that mid-sized European cities enjoy much shorter (and cheaper) commuting times to work, thanks to their metro rail systems.⁵ They also provide much better and safer conditions for cyclists and pedestrians, as the example of Copenhagen vividly illustrates. As a result these cities have benefitted from ‘smarter growth’ in which transport investment and development go hand in

² See for example A City of Villages: promoting a sustainable future for London’s suburbs, SDS Technical Report 11, Greater London Authority August 2002

³ Simon Jenkins Guardian Opinion, December 24th 2015

⁴ See for example Learning from Berlin, www.urbed.coop 2008 or Living Suburbs: London vs Paris, 2013 www.urbed.coop

⁵ Ed. Nicola Schuller et al, Urban Reports, gte Verlag, Zurich

hand, and reinforce each other, a point Professor Sir Peter Hall has highlighted.⁶ While taxes are a little higher, this is because citizens invest in their ‘common wealth’, rather than borrowing to fund consumption, which helps keep their national economies in balance.

2. Strategic options

Given the state of public finance, the big projects for the next couple of decades in London are likely to be the sort of project recommended in the Eddington report that tackle ‘*growing and congested urban areas*.’⁷ A general principle should be to protect and expand places that already have physical infrastructure and social and environmental capital, rather than making it easier for people to travel from ever further away into Central London.

Rather than more ‘grand projects’ we need many more small projects that are linked to great ideas. This is exemplified by the way an extension of the Northern Line south of the river is opening up privately funded development at the old Nine Elms market and Battersea power station, and by the impetus that Crossrail is giving to developments in run-down areas such as Woolwich. However such sites close to the centre of London, such as Kings Cross Goods Yard, are now very rare.

It is also going to be increasingly important to avoid ‘planning blight’, and focus investment where it will produce the best return. Living close to Euston and Kings Cross, it is clear that the much-trumpeted ‘regeneration benefits’ of starting High Speed 2 or bringing Crossrail 2 to Euston are largely illusory, as there is so little undeveloped space. Apart from the redevelopment of the offices at the front of the station, the benefits could only be achieved by demolishing perfectly good social housing in Somers Town and somehow relocating the tenants to some other part of London. The result would probably be another riot, and will be strongly resisted.

So instead it would be far better to look for places where there is under-used space for development, and where connectivity could be improved. As examples these include the inner stretches of the Great Western Railway and Paddington Arm of the Grand Union Canal, or the edges of growing towns on

⁶ Peter Hall with Nicholas Falk, *Good Cities Better Lives: how Europe discovered the lost art of urbanism*, Routledge 2014

⁷ The Eddington Transport Study: the case for action, HM Treasury 2006

the edge of London, such as at Chelmsford, Watford, Slough and Redhill that already serve as junctions, or at Brentford, where there is a freight only line running to Southall, and where quality development is at last underway.

If ‘grand projects’ are needed, a really great opportunity is the potential for redeveloping Northolt Airport as a new garden city taking advantage of the three underground stations that serve it, rather than reserving it for relatively few Royal flights. Similarly there are good arguments for pressing on with extending Old Oak Common to create a commercial centre on a scale that matches an area like La Defence or Stratford, as well as a major transport interchange between Crossrail and other railway lines.

3. Getting more value from Crossrail

If we applied sound economic principles such as the minimisation of waste and environmental impact, and the promotion of social justice to locations that could benefit from new transport infrastructure, what would we do differently? The first place to invest is where capacity constraints are being relieved, for example by connecting up Crossrail One with the Great Western so that people can interchange readily without coming to a London terminal. The same principle could be applied to High Speed Two, thus saving a large part of the investment budget and a construction programme that could block the vital Euston Road East West link for as much as seven years.

Indeed wherever property demand is high and space is under-occupied, there are strong economic arguments for ‘smarter growth’ to get much more value from any public investment. Transport turns out to be a necessary but not a sufficient condition for growth, as the long delays in developing Ebbsfleet or the Greenwich Peninsula demonstrate. Of course talk of new transport encourages speculative investment in buying land, but it does not build anything substantial that will stand the test of time.

So to get more benefits it is essential to follow European practice in dealing with land that is identified for growth so that the subsequent uplift in land values can be ploughed back into the project, as in Germany, for example.⁸ This depends on taking a more European or proactive approach to spatial planning, which in short might be called ‘Minding the gaps’. In other words we should be focussing on using transport to open up sites that are ‘ripe for development’,

⁸ Barry Munday and Nicholas Falk, *The ABC of Housing Growth and Infrastructure*, The Housing Forum, 2014

and to reduce congestion and overcrowding on local links. This can include copying the German approach of SBahn or fast local trains, which is now being promoted under the name Swift Rail.⁹

Because there are lots of branches on Great Western (due to Brunel's ambition of getting to Bristol as swiftly as possible), there is great potential for attracting people away from their cars for journeys to work in the parts of Outer London that are particularly prone to congestion. This should be combined with the greater use of bikes as in Copenhagen or Dutch cities, which would enable people to get to work in less time and with much less stress. Of course it means providing more bike parking (as in Cambridge Station, for example), as well as safe bikeways alongside direct roads.

4. Funding transport infrastructure

As well learning from Europe on how to secure 'integrated' transport where different modes support each other and offer the preferred alternative for many people to the private car, we can also relearn from European cities how to pay for improvement by linking transport with development. Once the benefits are tapped, as they were when the Metropolitan Line was built from Baker Street out to North West London, or as has partly happened with the development of the Railway Lands at Kings Cross, we no longer have to rely on an over-subscribed transport budget, which can be directed instead at regeneration areas where demand is weaker. While land value uplift will only fund a proportion of the cost, it can 'lever' up public investment, as for example happened in extending the Jubilee Line out to Canary Wharf.

The NIC could therefore innovate in how funding is raised for local infrastructure. Whereas the use of bonds to finance infrastructure is quite common in US cities such as New York and Portland Oregon, it has proved difficult to persuade the Treasury to give local authorities the freedom needed. As a result we end up with a perpetual 'stop go' situation, which increases costs and drains capacity. The latest escalation of costs on the Great Western electrification seem to show the failures of our procurement methods to deliver the forecast outcomes.¹⁰

But the faults essentially stem from the way projects are designed, promoted and selected with little real evaluation of the options, as Ian Wray stresses in his

⁹ Nicholas Falk and Reg Harman, *Swift Rail and Growing Cities*, Tramways and Urban Transit, January 2016

¹⁰ See feature in *Modern Railways*, December 2015

new book *Great British Plans*.¹¹ Examination of recent examples such as High Speed One reveal the British often place excessive value on environmental features such as the Green Belt without regard to the financial implications or the cost of longer journeys to work. The Omega 3 report referred to earlier provides plenty of further evidence on how to improve the design and delivery of major infrastructure projects.

With public funding for investment being in such short supply, consideration will have to be given to tapping private sources, and to using the uplift in land values as a means of reducing borrowing costs. While this falls outside the NIC's remit, there is a host of evidence that makes the case for a charge on land.

¹²Recent examples such as Dublin's LUAS tram system or Nottingham Tramlink, to show how support from employers and property interests can be secured.

5 Lessons from foreign metropolitan areas

As far as London specifically is concerned, much can be learned from major Transit Oriented Development schemes, such as 'Paris Rive Gauche' over the railway lines into Gare de l'Austerlitz, or Rotterdam's Kop von Zuid which is linked to the new Rotterdam Station by the Erasmus Bridge. Another good model is Copenhagen's new satellite town of Orebro, which has largely funded the first line of their new Metro by tapping the uplift in land values.¹³ The National Infrastructure Commission could hugely increase the value for money from infrastructure projects if it not only assessed the full range of options in terms of their wider impacts, but encouraged new funding and organisational models drawing on European best practice.

While direct comparisons are limited, the general conclusion is that

*For the UK, the main focus remains on the directly attributable economic performance of the transport service itself. In most continental European countries, the wider aspects of economic and strategic impact play an important part in considering the return on public funding; the political and technical processes of establishing this are key to decisions.*¹⁴

¹¹ Ian Wray, *Great British Plans*, Routledge 2015

¹² See for example TCPA publications like *Connecting England*, or *The Lie of the Land* in Hugh Ellis and Kate Henderson, *Rebuilding Britain*, Policy Press 2015

¹³ Each of these form case studies in reports of URBED's TEN Group study tours

¹⁴ Reg Harman, *High Speed Trains and the Development and Regeneration of Cities*, Greengauge 21, 2006

So what needs to be done? Sir David Higgins has set out five guiding principles for HS2, which provide a good start:

- Stand the test of time
- Be the right strategic answer
- Be integrated with existing and future transport services
- Maximise the value added to local and national economies, and
- Be a catalyst for change both nationally and locally.

But infrastructure (and HS2) is about far more than just transport, and so projects need to be evaluated against a multiple set of criteria. For example, the connection of Lille to the Channel Tunnel Rail Link to Paris provided the impetus for reversing the decline of a whole region. The case study in *Good Cities Better Lives* shows how local political leadership joined up transport and development.¹⁵ It contrasts with the sorry tale of North Kent, which is a case study in Ian Wray's *Great British Plans*.

Similarly development over the railway lines running into Gare de l'Austerlitz has transformed and reconnected a poor part of Paris with both sides of the River Seine. If such an approach were applied to Euston, it could overcome some of the objections, as at least it would provide additional land for regeneration. The summary of the French and German case studies in *Good Cities Better Lives* concluded that their greater success could be attributed to:

- 1 Municipal leadership
5. Strategic planning
6. Public-private relationships
7. Multi-Criteria Analysis
8. Local taxes on employers
9. Cost control
- 10.Domestic industry
- 11.Urbanism
- 12.City-regional cooperation.

The French approach is not perfect, and they have had much more civil disorder than London has yet experienced. Nevertheless, it does provide a relatively simple model for strategic planning that London could well learn from before it

¹⁵ Chapter 9 in Peter Hall with Nicholas Falk, *Good Cities Better Lives*, Routledge 2014

designs and delivers the next ‘grand project’.¹⁶ Significantly most European cities have adopted similar approaches to managing their own futures rather than depending on passing the begging bowl to government for every project. The National Infrastructure Commission could therefore fill an important gap by commissioning some comparisons in advance of further work on designing projects that may never be built.

6. Filling the gaps

Changing a flawed planning system will not be easy. In the introductory chapter to *Great British Plans* Ian Wray points out the 60% of the country’s infrastructure is now in private hands, the highest proportion in the world. This makes it very hard to secure the level and quality of infrastructure we need. Turning to the Chinese for help will still leave Britain with a long-term financial obligation. Plans often fail to deliver the promised outcomes because values have changed. So predicting what people will value in 30 years’ time is thought impossible, even though most innovations take this time to mature and spread. Yet as the Omega research at UCL has brought out, projects change, often for the better, as a result of debate about options. The techniques exist for making much better transport choices¹⁷. But the benefits can never be realised if projects are conceived and executed in silos, and then implemented for lack of better options. So the centralised nature of both the private and public sectors must be corrected if we are to do more with less, to plan for posterity rather than austerity.

So who would benefit from taking a longer-term and more holistic viewpoint, for example focussing on Britain in 2050, not just up till the next parliamentary election? The immediate answer is our children, and their children as well. So too would the poorer countries whose populations and economies are growing fastest. Less obvious are medium sized cities, such as Oxford, where there is a chance of securing more balanced growth and avoiding the diseconomies of over-crowding and pollution if funds were invested in good local transport systems.¹⁸ Also anyone who owned land on the edge of fast growing cities, especially those that benefitted from improved infrastructure and favourable planning decisions, would receive an unexpected gift from the State, and

¹⁶ Nicholas Falk, Urban Policy and New Economic Powerhouses, Town and Country Planning, August 2015

¹⁷ See for example, Trams for Oxford: could light rail improve our historic cities, report of a UCL/URBED seminar, March 2015 www.urbed.coop

¹⁸ Reg Harman and Nicholas Falk, Developing Historic Cities: the case for an Oxford Metro, Tramways and Urban Transit May 2015

therefore should be willing to accept paying a charge. We might even start rebuilding our lost capacity to engineer and supply transport products.

In short the key to making better infrastructure decisions, as the new National Infrastructure Commission may want to consider, would be to switch from valuing narrow costs and benefits to considering the longer-term impact on capital of all kinds – economic and social as well as physical and natural when it comes to both designing and assessing major infrastructure projects. While this may sound impossibly complex, given the failures of efforts to agree where, for example, London's hub airport should develop, it could be applied to the next big issues on the public agenda such as Crossrail Two, High Speed Three or boosting energy capacity, all of which are on the National Infrastructure Commission's agenda.

7. Conclusions

By using a form of Multi-Criteria Analysis, and analysing property values and trends, it would be possible to assess and value the impact of major infrastructure projects. The NIC could draw on examples from elsewhere to show the wider benefits. For example West London can draw lessons from the area around Charles de Gaulle airport or Schipol in Amsterdam. The Northern cities can usefully learn from the experience in the Dutch Randstad or the North Rhine area of upgrading local public transport. By setting the level of investment needed to match international competitors, and then allocating it where it will do most to close the gaps in living standards, we could reduce inequalities, and at least achieve the goal of social justice.

When the projects then raise productivity, as they should, and help minimise waste, for example by cutting the time taken to get to work or saving the need to build expensive bypasses, we will also score on the economic goals of minimising waste. Of course political judgements will still need to be made, but at least they can take some account of longer-term consequences rather than short-term electoral arithmetic. Going from 'stop go' to planned investment cycles is crucial to rebuilding Britain's productive capacity, and avoiding the kinds of scandals that arise from costs overrunning due to lack of qualified engineers.

Finally, by changing behaviour so we use less energy and natural resources while improving wellbeing, for example through a great increase in cycling and walking or encouraging building new homes in the right locations, the NIC

would provide a model for sustainable development. That alone should be sufficient to overcome the opposition to acquiring land on the edge of growing cities at close to existing use values, and ploughing the uplift in land values back into improved local infrastructure. Of course there is nothing new in this. It is what Ebenezer Howard proposed for Garden Cities and the post-war New Towns started to do. All it needs is for our 'political leaders' to focus infrastructure investment on making the lives of future generations better, a cause that people from all sides should support.

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