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Transport Infrastructure Investment:

Capturing the Wider Benefits of Investment in Transport Infrastructure

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Policy Paper

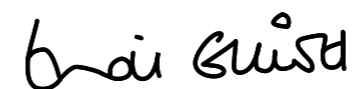
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About the RTPI's policy and research work

With 23,000 members worldwide working in the public, private, charitable and educational sectors, the Royal Town Planning Institute (RTPI) is the largest professional institute for professional planners in Europe. As well as promoting spatial planning, the RTPI develops and shapes policy affecting the built and natural environment, works to raise professional standards and supports members through continuous education, training and development. Everything we do is inspired by our mission to advance the science and art of planning (including town and country spatial planning) for the benefit of the public.

Our policy and research work reflects this mission. In addition to this policy paper on transport infrastructure, we are developing papers on strategic planning, economic growth, and local budgets. Through our Small Projects Impact Research (SPIRe) fund, we have commissioned work on housing need, regional growth, Local Enterprise Partnerships, and the impact of planning. In addition, our Policy Horizons projects, to be published as part of the RTPI's 2014 Centenary Year, will take a long term as well as global view of planning and its role in responding to some of the major challenges we face in the 21st Century.

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Trudi Elliott CBE

Chief Executive, RTPI



Executive Summary

Throughout history and across the world transport provision has been a crucial and dynamic element in the economic and physical evolution of human settlements. It follows that providing for transport must be more than a passive response to travel demand. Yet in the United Kingdom (UK) the decision-making processes surrounding transport investment are passive, mechanistic and narrow. Moreover the amount of investment has for decades been low compared with other developed economies.

This paper examines the underlying causes of this state of affairs, and proposes some broad changes in approach that might begin to address them. Our aim is to widen the current debate, to argue for greater use of strategic and integrated planning in guiding decisions about transport infrastructure provision, and to promote greater understanding of the role of transport infrastructure in delivering for the UK the kinds of places where people want to live, work and invest.

Having held a series of roundtable discussions with transport planning experts and professionals across the four corners of the UK, we have captured what we believe are the main challenges blocking the way we understand the benefits of transport infrastructure and therefore preventing its effective delivery - something which we will show can lead to significant negative economic and social consequences.

Within the broad scope outlined above, we have identified seven major challenges for the UK, in relation to each of which we have proposed a set of corresponding recommendations. We look forward to vigorous debate which will move the country on from its unsatisfactory current position.

7 Key Challenges and Recommendations

- 1 Evidence from across the UK points to an existing lack of consensus and narrative about how, when and why infrastructure should be delivered in the UK. This situation exists both at a local, scheme-based level, and a wider, national-strategic level.

Policy makers need to deliver a visionary narrative of the real benefits that transport infrastructure-led schemes, programmes and strategies will make to the areas in which they are implemented.

- 2 A lack of joined up thinking about how infrastructure provision can tackle problems in other sectors means project costs and rationale often seem unpalatable when viewed in isolation, whilst in reality they may have the potential to deliver far-reaching and hugely valuable benefits.

Governments need to operate in a way that enables transport infrastructure schemes to be integrated with wider policy priorities across different sectors.

- 3 A lack of broad vision for inter-modal transport strategies from policy makers and analysts means that infrastructure which could have far reaching benefits towards developing a future of sustainable growth is not being considered as the solution that it could be for many current challenges.

Those responsible for planning and designing future transport infrastructure must ensure that individual schemes are integrated into broader strategies for inter-modal transport over relevant areas – national, sub-regional or local.



Berlin Hauptbahnhof

- 4 The general model for infrastructure delivery incentivises developers, infrastructure providers, authorities and communities to deliver to maximise their own organisational interests instead of communicating and cooperating to deliver greater, common benefits.

Cooperation amongst key delivery partners and their stakeholders is essential to the successful delivery of transport infrastructure projects and infrastructure-led developments.

- 5 Fear of cost-risk and a lack of power and accountability at the non-national level is a disincentive to local and regional areas that want to use infrastructure to transform their localities.

The role of revolving funds, in combination with strong public sector leadership, can help deliver infrastructure-led development.

- 6 A legacy of some examples of sub-optimally planned transport infrastructure has left a false impression of what good infrastructure investment in the 21st Century looks like. Proper incentive systems of cost recovery, in combination with effective planning and leadership are currently lacking.

Governments need to devolve funding mechanisms, including better systems of cost recovery, to local areas looking to implement viable, transport infrastructure-led schemes.

- 7 Infrastructure projects which could unlock economic growth and development in a range of industries are held back through not meeting rigorous but limited Government appraisal processes.

Policy makers, including local and national leaders, must only use limited cost benefit analysis as a guide to infrastructure investment decisions and not as the final arbiter.





The problem today

Physical infrastructure, whether it is in the form of the transport networks which allow us access to employment and recreation, the utilities that deliver us energy to fuel our homes and businesses, or the schools and shared facilities that allow our communities to thrive, is of central importance to the economic and societal framework of the UK. How best to plan and deliver infrastructure is a complex question, but due to its importance for the success and quality of the places in which we live and work, it is also one that clearly cannot be ignored. Although we hope that many of the recommendations we put forward in this paper will be applicable to a wide range of types of physical infrastructure, because of the scale of the topic, this paper specifically focuses its analysis on the planning of transport infrastructure.

According to a 2012 report by the World Economic Forum, the UK languished in 24th position in its global league table for overall quality of transport infrastructure provision, amongst the bottom places for developed nations¹. This is despite the UK being home to some of the best trained engineers and planners in the world who are delivering projects on an ambitious scale, including Europe's largest current engineering project, Crossrail. Unfortunately however, these projects are too few and far between, with too little consensus supporting their implementation. Therefore, there are clearly barriers preventing the UK from delivering the volume of high-quality transport infrastructure enjoyed by most developed countries in the 21st Century. In order for the UK to compete globally, and ensure sustainable economic development across the country, the RTPI believes that we need to find new and better ways to ensure that the importance of infrastructure provision, as a key driver of growth and transformation, is fully recognised. This will enable greater consensus to be achieved, and the barriers removed.

The RTPI believes that the effective planning and delivery of infrastructure has the ability to deliver much wider, transformative benefits for regional areas, local communities, and the UK as a whole, than are commonly perceived to be the derivatives of transport infrastructure provision. This paper sets out what we believe these benefits are, and how we can achieve them.

We have refined our propositions into recommendations aimed at policy-makers, researchers, professionals, and those with a broad interest in the field.

From the input received as part of our evidence gathering processes, and our succeeding analysis, we are confident in restating not just the importance of transport infrastructure delivery to economic development in the UK, but also the importance of its role in defining the shape and trajectory of national and local development and quality of life.

The shape of the current debate

In compiling this report, the RTPI has held evidence-gathering discussions in Scotland, Wales, Northern Ireland, and across the regions of England, inviting input from experts in the fields of infrastructure delivery and planning. We have analysed the challenges to good infrastructure delivery in the UK, the ways in which these challenges can be overcome and the reasons why it is critical that they are overcome.

The questions around how and why transport infrastructure should be delivered are currently some of the most heated debates in the UK. At the national level, the Armit Review², produced for the Labour Party in the autumn of 2013 has delivered recommendations to depoliticise the infrastructure



Oxford Circus

delivery process by proposing that parties should make statutory commitments to independently compiled, long-term infrastructure plans. Meanwhile, there is a continuing discussion around HS2, with interested stakeholders, both for and against, clashing over the proposed costs and benefits of the project. And most recently, in December 2013, the Davies Commission released its interim shortlist of proposals to increase airport capacity in South East England by 2030, all of which are being strongly contested.

At the regional and local level, smaller versions of these discussions are taking place everyday, as local leaders, businesses, developers, infrastructure providers, and citizens debate the delivery of infrastructure in their areas.

The wider benefits of transport infrastructure

Transport infrastructure, as a facilitator of physical interactions between individuals and businesses, has always been a key component in ensuring that demand within an economy is able to be released and transformed into growth.

Towards the end of the 20th Century and into the 21st, questions around the sustainability of earlier models of expansionary growth and development led to an additional focus on how transport infrastructure can dynamically transform already existing places, rather than predicting and providing for sprawling growth into new places. Urban Development Corporations and city-based transport models such as The Newcastle Metro and tram systems in Manchester and Leeds are testament to the regenerative and revitalising effects of innovative transport infrastructure provision which can help to ensure better quality of places through efficiencies of concentration. Similarly, the prioritisation of Active Travel, which has recently become law in Wales³, can also have a significant influence on the future development of places by fundamentally altering the way people interact with them.

With globalisation, companies have had to become more flexible in pursuit of narrow and rapidly shifting 'global niches', requiring places that can offer complex and specialised infrastructure, along with the support of local clusters of complementary businesses and services. In addition to this is the need for 'quality of life' factors to attract the highly-skilled workers of the knowledge economy, such as an unpolluted

environment, secure social fabric and good public services - including transport.⁴ The economic success of places is far from uniform, and depends greatly on how well they have been able to exploit the potential arising from concentration of economic activity, partly determined by the quality of their transport infrastructure.

Additionally, while advances in communications technology have allowed the expedition of many business processes, it is clear that individuals and organisations still prefer to carry out many of the crucial aspects of commercial interactions, from building relationships to finalising deals, as well as non-commercial and leisure activities".

Transport infrastructure therefore remains a core component in the functioning of modern society, and it still has an almost unrivalled capability to shape the direction in which our lives unfold.

As our population grows, the evidence of capacity limitations on road and rail are becoming increasingly stark. However, as will be highlighted in detail below, viewing transport infrastructure solely as something which provides the capacity for people to move from A to B in varying degrees of time is a trap that policy makers and the wider public repeatedly fall into. Transport infrastructure also shapes peoples' decisions about where to live, work and invest, it can transform and regenerate places, and it can facilitate the operation of industries which ostensibly are unrelated to it. By improving connectivity, it can help ensure greater social and economic inclusion, distributing further and wider the proceeds of growth. Moreover, it delivers wider social benefits, including providing access to healthcare and education, and greater choice for consumers across markets generally.

Nevertheless, it is not simply the case that all investment in transport infrastructure will automatically lead to the accrual of benefits. In fact, sub-optimally planned transport infrastructure, or the failure to think about and plan transport in this wider regard, can produce wide-reaching negative impacts and can act as a restraint on overall economic potential. Today, examples such as travel demands preventing care

¹ The Telegraph, 2013, <http://www.telegraph.co.uk/finance/economics/10287504/Take-warring-politicians-out-of-infrastructure-planning-says-Olympics-chief-John-Armit.htm>

² Armit Review - <http://www.armittreview.org/>

³ <http://wales.gov.uk/legislation/programme/assemblybills/active-travel-bill/?lang=en>

⁴ Michael E Porter (1990) 'The competitive advantage of nations', Free Press



Dundee Waterfront

How to deliver the wider benefits of transport infrastructure

1

The Challenge

Evidence from across the UK points to an existing lack of consensus and narrative about how, when and why infrastructure should be delivered in the UK. This situation exists both at a local, scheme-based level, and a wider, national-strategic level.

The Solution

Policy-makers need to deliver a visionary narrative of the real benefits that transport infrastructure-led schemes, programmes and strategies will make to the areas in which they are implemented.

A common theme in all our round table discussions, whether they were attended by engineers strong on transport modelling skills, or urban planners deep into delivery of homes and places on the ground, was the need to move beyond analysis into narrative. While modelling skills are vital, and there is no point in building empty roads and running empty trains, ultimately the overriding question is “what is the story”?

The focus of present transport decision-making is scheme-by-scheme: even where proposals form part of a wider strategy, they are appraised individually in a competitive bidding process managed by the Department for Transport (DfT). Thus it is entirely possible for an integrated strategy to secure both public and government support, but for key elements then to fail to secure funding, negating the whole purpose.

In a recent BBC2 documentary on infrastructure, the seasoned journalist Evan Davies concluded that decisions on matters such as London’s airports “go far above the pay grade” of people in the aviation industry.⁷ These are questions about what kind of country do we want to live in. It is this aspect of transport – and indeed much other – investment which is lacking from traditional appraisal methods, such as cost-benefit analysis. It is this aspect which requires public debate not just on projects as we are wont to do, but on principles.

Case Study 1: Vision and strategy in Dundee

The vision of the project underway to transform Dundee’s waterfront is an example of how local authorities can take bold steps to transforming places and realising the value of better places. The project also shows an understanding of the central role of infrastructure, and the criticality of ensuring its early development as being at the heart of successful growth and regeneration projects.

By taking a more holistic view of the current challenges related to the pre-existing infrastructure and spatial make-up of the area, a masterplan was developed to enable the extraction of benefits across a range of sectors, including the creation of new capacity for retail, the arts, leisure and tourism, as well as the expansion of space for the vibrant further education sector.

Up to £1bn of inward investment is expected to be realised from the completion of the project, the key component of which is the realignment and reshaping of connector roads for the Tay Bridge crossing.⁸ The previous road layout, running horizontally between the city centre and the waterfront (originally developed to serve Dundee’s industrial port) had the adverse impact of disconnecting these two areas, and preventing the transformation of land with huge development potential. The new road layout has been transformed into a grid system, whilst the on-ramps for the bridge have been made more compact, connecting the city centre and the waterfront, allowing efficient use of all land in the vicinity. The project highlights how infrastructure can be both a preventative and enabling factor depending on the vision with which it is implemented, as well as how a relatively modest upfront outlay for infrastructure investment can deliver multiple benefits across a range of industries.

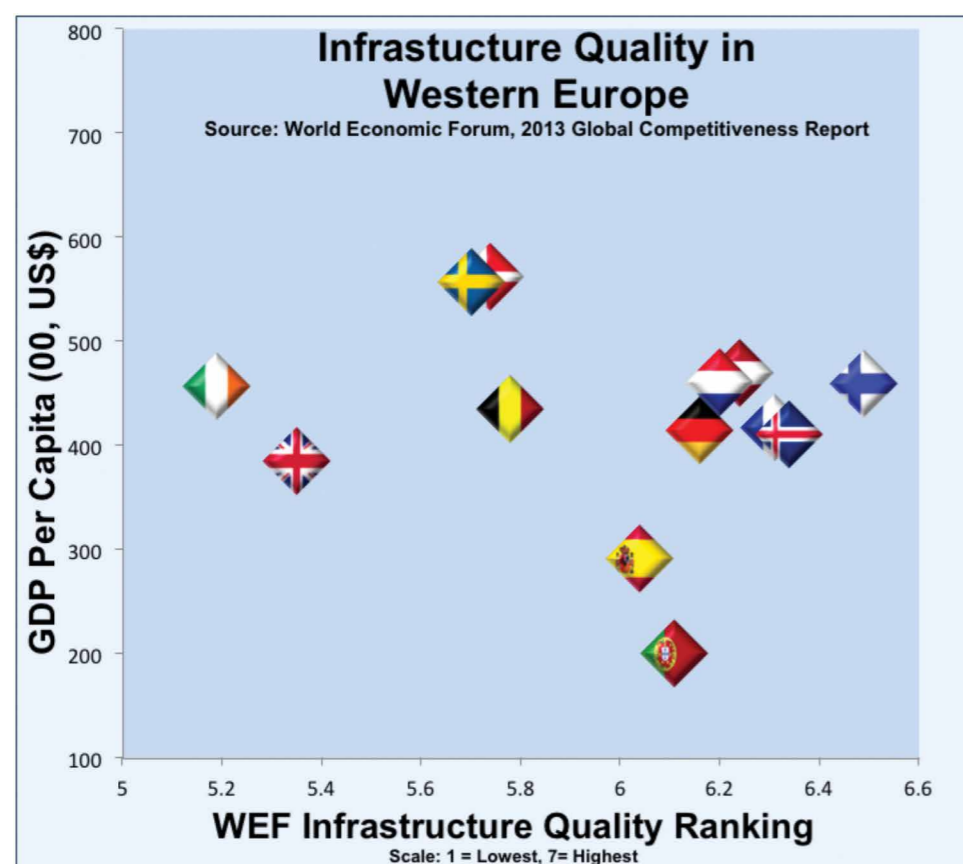
workers from spending more than 15 minutes with those dependent on them, the negative environmental and social effects of poorly planned and sprawling residential communities, the continued legacy of industrial decline in badly connected communities, and the current housing crisis in many parts of Britain and Ireland, are all side effects of either initial sub-optimal planning for transport infrastructure, or are challenges which integrated transport planning today could go a long way to solving.

Planning for transport infrastructure provision therefore needs to be carried out in combination with the development of national, regional and local priorities for, amongst other things: housing provision, business development, tackling unemployment, social care services, energy supply, global economic competitiveness, and environmental sustainability, and in fact the majority of essential components for any town, city or nation that wants to deliver smart and sustainable growth or maintain standards of living.

This kind of integrated planning is how we will capture the true scale of the wider benefits from transport infrastructure investment.

According to data from the World Economic Forum’s Global Competitiveness Index, the UK is outpaced by all its major Western European trading partners for overall quality of transport infrastructure, regardless of relative wealth⁵. In separate analysis, consultancy firm KPMG, and think tank Policy Exchange have both estimated that the UK has an infrastructure funding deficit of around £400bn up to 2020.⁶

Nevertheless, funding is only one aspect of delivering quality infrastructure, and the challenges already highlighted allude to the other areas where planning can play a unique role in delivering the infrastructure that we need in the UK. The following analysis will explain how our recommendations are targeted to solving the challenges outlined so far.



⁵World Economic Forum, 2013, The Global Competitiveness Index, <http://www.weforum.org/issues/global-competitiveness>

⁶Delivering a 21st Century Infrastructure for Britain, Policy Exchange, <http://www.policyexchange.org.uk/images/publications/delivering%20a%2021st%20century%20infrastructure%20for%20britain%20-%20sep%2009.pdf>

⁷Built in Britain, BBC2, 17 October 2012, <http://www.bbc.co.uk/programmes/b01ngs45>

⁸Discover Dundee Waterfront, <http://www.dundee waterfront.com/Home/>



*DLR station,
Canary Wharf*

The reluctance of analysts to fully consider wider benefits may come from bitter experience of past projects which had only political purposes. However, evidence from our round table events suggested that “we probably have fewer projects than we should” as a result of overly-cautious evaluation.

Where there is underlying demand in a local or regional economy, infrastructure has a hugely important role to play in unleashing that growth potential and in helping markets to function.

Of course, there are significant examples of poor use of capital spending on infrastructure, where expensive investments recouped minimal growth benefits to the serviced areas. This is particularly relevant for transport infrastructure, where, physical connections that are not driven by demand requirements, such as the Marine Bridge in Hamada Japan, appear unable to justify the scale of their investment⁹.

Nevertheless, there are also examples of other projects, which were strongly contested on the grounds of their need at the time of their development which have created opportunities and growth which could not have been foreseen prior to their implementation. The Docklands Light Railway was grossly under-sized in its initial form because the wider effects were discounted. It nevertheless played a key part in kick-starting the entire Docklands development process. The expansive property developments following the completion of the Jubilee Line extension and the role played by HS1 and the attractiveness of its international connections in securing the Olympic Games for London are two other such examples.

In the context of existing demand, there are additional economic benefits of infrastructure development which are not currently as well understood as they should be given the positive effects they can have on areas.

Transport infrastructure can play an important role in unlocking land for development through connectivity, making sites viable and thus providing either the private or public sector with the opportunity to

deliver developments where there is demand. To look specifically at residential developments, this is particularly relevant in those parts of the country, such as much of the South East of England and London, as well as parts of Scotland including Aberdeen, where housing demand far outruns supply. However, it is rare that strategic planning is adopted as a tool to help the infrastructure / development relationship to flourish. The existing model for provisioning sites for house building, whether small or large scale, sees key infrastructure provision, often the cornerstone for whether a development will go ahead or not, as a bargaining tool between stakeholders, who all recognise its crucial importance, but are often not prepared or able to meet each other’s expectations, as well outlined in our September 2013 Housing Policy Paper.¹⁰ This is a significant failure of the system as it mismatches the allocations of cost and benefits between communities.

According to Bridget Rosewell, former Chief Economist to the Greater London Authority, “the consequences of an investment are always unknown, and decisions require a balance of judgement of risk”, however, in the UK, our political economy culture “has buried an ability to make a judgement based on the balance of risks”, with the key risks here being “the future of the economy and what it needs to improve, grow and trade”.¹¹



*Olympic Park,
East London*

Case Study 2: The value of infrastructure development in Cardiff and South Wales

In 1989 the Cardiff Bay Development Corporation was tasked with undertaking one of the UK’s biggest regeneration projects to date, and by the time it was wound up in 2000, had created thousands of new homes and jobs, as well as a leaving a legacy of a positively transformed place for employment, residence and recreation.

Funding for the extensions to the A4234 and A4232 ensured that the development was able to thrive with good connections to the city and to West Cardiff and beyond. Although the project has received criticism for delivering an oversupply of new housing stock, it has provided an example to other parts of the country where housing is in much more critical need, that infrastructure led development can in fact unlock housing development at the significant annual rates that those places require.

Today, debate continues in South Wales about future infrastructure delivery and whether the benefits outweigh the costs for projects including the M4 relief road south of the Bryn Glas Tunnels and the Cardiff Bay Eastern Link road between the capital and Newport. Whatever the options, the most densely populated area in the South West of the UK, with a functional economic area of 2.2million people, or three quarters of the population of Wales itself, deserves its policy makers to take responsibility for the long term strategy and vision that will deliver economic success for the region.



The Severn Bridge

⁹ “New York Times, (<http://www.nytimes.com/2009/02/06/world/asia/06iht-06japan.19977986.html?pagewanted=all>), Bridget Rosewell, 08 2013, <http://www.bridgetrosewell.com/the-political-economy-of-risk-taking-and-how-hs2-is-misunderstood>

¹⁰RTPI, Delivering Large Scale Housing, 2013, <http://www.rtpi.org.uk/knowledge/core-issues/large-scale-housing-development/>

¹¹Bridget Rosewell, 08, 2013



Aerial view of Heathrow Airport

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The Challenge

A lack of joined up thinking about how infrastructure provision can tackle problems in other sectors means project costs and rationale often seem unpalatable when viewed in isolation, whilst in reality they may have the potential to deliver far-reaching and hugely valuable benefits.

The Solution

Governments need to operate in a way that enables transport infrastructure schemes to be integrated with wider policy priorities across different sectors.

There is a risk that some policy makers are influenced by a narrative that regards the surface of the country as a featureless plain, which impedes an understanding that one parcel of land is hugely differentiated from another by its connectivity.

Economic-based arguments have sought to correct this misunderstanding by factoring in the role of connectivity in influencing prices: better placed land will attract higher prices. But this would only be satisfactory in a world in which no transport investment ever took place. It is of limited value in assisting joined up decision making regarding new transport and housing investment. (A process we could term “planning”.) Because decisions (usually led by government in some form or other) hugely affect the relative connectivity of places it is not sufficient to regard this as a fixed constant. Yet a solely market-driven approach to deciding where development goes cannot adequately take this into account, since the decision to invest in transport is a political process.

Some transport investment is essentially regarded as necessary in order to maintain a network, rather than achieve development goals for a country or sub-region. Transport officials and their colleagues in agencies will seek to involve developers in mitigating the impact of development on transport networks, rather than seeing transport networks as the means to creating better and more prosperous places. In this attitude they have been strongly influenced by four factors:

- 1) The fragmentation of transport and other infrastructure provision as a result of privatisation and a wider culture of “agencification”.¹²

- 2) A short term concern to drive down organisational costs almost to the exclusion of any other factors, and irrespective of the consequences of simply passing on those costs to others.
- 3) A related long term tradition of reducing overall investment in the case of roads by environmental and political factors and in the case of rail by formerly falling demand.
- 4) A view of spatial planning as a process of mitigating impacts of proposals initiated by the private sector which originated in the very different context of the United States.

Tackling national infrastructure challenges individually, or on a sector by sector basis, is a highly inefficient process.

The recent brief issued to the Davies Commission on Airport Capacity in 2012 sheds some light on the consequences of using a single-issues approach. The Commission is charged with examining the need for additional UK airport capacity and recommending to government how this can be met in the short, medium and long term.

However if the brief had been to look into a wider range of strategic challenges facing London and South East England, opportunities for dual benefits could be properly addressed and the enormous potential positive influence of transport scheme choices on other matters could have been more carefully examined, and vice versa. These are, to follow the media, matters of very great pressing concern to residents. A process which asked “what options should be considered for meeting London and the South East’s needs for land for housing, economic growth and transport purposes?” might come up with different results. We will never know.

An airports-only inquiry leaves many questions unresolved. This includes the possibility that the provision of the necessary excellent surface access to airports could perform a dual role – such as meeting the difficult challenge of providing housing land which is accessible to where jobs currently are, and where they are likely to be generated. An airports-only inquiry runs the risk of leading to decisions which have a huge impact on housing and economic growth whilst at the same time substantially fettering future decisions in respect of these issues.

The UK faces a variety of economic and demographic challenges, both existing and forecast, in the coming years. We believe that issues such as the need to supply major rail infrastructure to boost capacity and journey speed on our most overcrowded mainlines, should not be tackled in isolation from other challenges, such as, for example, solving the housing crisis, and accounting for rapid demographic change. While major national rail projects clearly do have the capability to improve the UK’s transport outlook, they also have the ability to unlock large-scale sites for housing provision, which in turn could be developed according to demographic needs. This form of strategic planning at the national level, which is desperately required, is not easily accommodated by treading too closely the path laid by appraisal criteria and decision-making processes within departmental silos.

Case Study 3: Infrastructure-led regeneration in France

Research by Sir Peter Hall and his associate Chia-Lin Chen has shown how the economic benefits of higher speed rail depend crucially on the degree of integration with local transport networks, and with complementary spatial and business support measures¹³. In north-east France the old mining/ industrial conurbation of Lille-Turcoing-Roubaix has upgraded its tram system and created a new Metro, ahead of TGV. They also ‘irrigated’ the wider region by upgrading and electrifying the regional railway system in the Nord-Pas de Calais area as a whole, with great emphasis placed on achieving seamless interchange. In addition, specialised business parks were developed to capitalise on improved accessibility and engage other local resources (businesses, skills, infrastructure). Leadership by a powerful local Mayor (and former French Prime Minister) was a crucial enabling factor.

In the UK, there have developed important economic differences within the North-west between cities served by the UK’s rail upgrades of the 1970s and beyond (‘low-speed high-speed’) and those not on this network. The productivity benefits of the extended labour market linking London and the greater South East region are to a large extent the result of the higher levels of rail investment and greater rail connectivity enjoyed by this part of the country.

Policy makers need to place greater emphasis on strategic planning and its unique capacity to develop infrastructure to tackle multiple challenges.



TGV at station

¹²Agencification here referring to attempts from the late 1980s onwards to create a client-service provider model between Government departments and appointed agencies in the management of public services. Morphet, ‘How Europe Shapes British Public Policy’, 2013

¹³Chen, C.-L., Hall, P. ‘The wider spatial-economic impacts of high-speed trains: a comparative case study of Manchester and Lille sub-regions’. J. Transp. Geogr. (2011).

3

The Challenge

A lack of broad vision for inter-modal transport strategies from policy makers and analysts means that infrastructure which could have far reaching benefits towards developing a future of sustainable growth is not being considered as the solution that it could be for many current challenges.

The Solution

Those responsible for planning and designing future transport infrastructure must ensure that individual schemes are integrated into broader strategies for inter-modal transport over relevant areas – national, sub-regional or local.

To achieve the greatest benefit from transport infrastructure, modal linkages need to be effectively planned to derive greatest user and long term planning efficiency. There are two key aspects to be considered in this regard.

Firstly, effective transport links between modes can help shape sustainable development through demand management. In Greater London, public transport, including the underground network, is the most used and most favoured form of transport for residents' travel choices (42% of all journeys are made by public transport which compares with 36% made by private transport – mainly car¹⁴). While this is in part a natural consequence of market-driven road congestion in a crowded conurbation, policies to dramatically improve and add to public transport services, and constrain the benefits of car use have also been significant.

London has developed in a symbiotic relationship with its transport system, much of which was in place before the great growth in car-use after WW2. In spite of this, most of the privately financed public transport system was in serious financial difficulty by the 1920s, and was increasingly taken into public ownership.¹⁵ The undoubted economic gains to London as a whole were not reflected in the ability to charge fares that produced a sufficient surplus to maintain and improve the system. This has remained the case, with major tube and rail investments requiring more money than could be raised through the fare-box. In transport provision generally, public planning, risk-taking and investment is essential to wider economic gains.

In other UK cities, where road congestion is not as immediate a problem, use and desirability of public and active transport is much lower. For example, the extension of the Jubilee Line had a dramatically positive impact on property prices in the newly served areas, something which is expected to be repeated with both the Northern Line extension and the completion of Crossrail. However, the building of the Sheffield Super Tram network led initially to a depression in property prices in the vicinity of stations in residential areas as citizens weighed the negative externalities (noise, business, pollution) of the extended network more heavily than the positive¹⁶.

Nevertheless, over a longer term period, and in combination with smarter planning of communities around transport choices, efficient public transport networks can help shape the development of communities in a sustainable manner, avoiding urban sprawl. The Cambridge guided bus, and the communities that have developed along its route, such as Orchard Park¹⁷, are good examples of where public transport provision, linked to well designed active transport options from home to station, has become more desirable compared to car-based alternatives and has shaped sustainable and desirable neighbourhoods.

At a national level, good linkages between transport modes can be seen as more strategic priorities which can have major impacts on the competitiveness of cities and the country as a whole. This is plainly seen with regard to major infrastructure, such as airports and the transfer times to and from the major conurbations that they serve. While we can't simply uproot and replace existing infrastructure, there are strenuous debates ongoing in the UK with regard to both major international air and high speed rail infrastructure proposals which must find better ways to be joined together if they are to derive maximum benefits. Integrated transport planning in this regard will clearly deliver a sum of benefits which are greater than those of the individual component parts.

Secondly, long term transport infrastructure planning in any particular mode needs to take closer account of the impacts on other modes, something which is difficult to achieve if different responsible bodies

for different types of infrastructure are developing separate future plans for the development of their networks. To continue the example of the links between rail and air infrastructure, there is currently a lack of cooperation in plan development and a lack of awareness of development plans on future use projections. For example, the Davies Commission is looking into the need for additional airport capacity in the UK. At the same time a parliamentary process has been initiated to grant permission for a high speed railway (HS2) from London to the English Midlands and the North of England. Under certain circumstances high speed rail can be a very successful competitor to short haul air traffic. Therefore it is essential that in this process there is consistency between the assumptions being used. There is otherwise a risk that there would be too many independent variables – namely the attractiveness of air and rail travel for the same journeys – in play for the highest quality decisions to emerge.

An alternative approach would be a single decision process. In England the Planning Act 2008 provides a means for such a process in the guise of a National Policy Statement. A “national networks” (ie road and rail) national policy statement has just been issued in draft. However it explicitly has no role in the key decisions just described. In Scotland there is already a process for this kind of decision making, namely the National Planning Framework.

Plan-making needs to take a closer consideration of what the national goal is for the shape and form of our future transport networks, and develop accordingly.



Bridges of the Tyne

¹⁴TFL, Travel in London Report, 2010 - <http://www.tfl.gov.uk/assets/downloads/travel-in-london-report-4.pdf>

¹⁵Following in this respect the turnpike roads which suffered increasing competition from canals and rail

¹⁶Henneberry, 1998, Transport Investment & House Prices.

¹⁷Orchard Park development, Cambridge, <http://www.scams.gov.uk/content/orchard-park-north-cambridge>

4

The Challenge

The general model for infrastructure delivery incentivises developers, infrastructure providers, authorities and communities to deliver to maximise their own organisational interests instead of communicating and cooperating to deliver greater, common benefits.

The Solution

Cooperation amongst key delivery partners and their stakeholders is essential to the successful delivery of transport infrastructure projects and infrastructure-led developments.

“My hope is that we can go further, and use the experience of the Games to provide a blueprint for making public money work harder in the public interest”

Tessa Jowell MP

The delivery of the 2012 Olympic Games was an excellent example of how the professional expertise of Britain’s planners, developers and infrastructure providers, could be put to great effect, in a targeted and cooperative manner, with the appropriate level of political support. The model has since inspired influential figures, including Sir John Armitt, to advocate new models of infrastructure delivery in the UK, such as his proposal for a politically independent National Infrastructure Commission.

Nevertheless, for less high profile projects, transport infrastructure, and especially its funding, is often one of the major causes of housing or commercial developments being stalled or rejected on viability grounds - as outlined in the September 2013 RTPI policy paper on Delivering Large Scale Housing Sites. A main reason for this is the number of stakeholders who have an interest in the adequate and proper provision of infrastructure, but potentially divergent conceptions of what and how much is exactly required.

It is acceptable and natural that different organisations and institutions with incentive structures that are not necessarily aligned will want to maximise their own interests. However, these are factors that tend to

create a tension pulling away from agreement and away from the delivery of the development. Therefore, it is important for stakeholders to work together to better identify what ‘push’ factors or interests they may share.

In addition to the benefits of helping to ensure delivery, partnerships can also realise efficiency savings, both for individual stakeholders within the relationship and for the project as a whole. Significant savings may be accrued from a lowered overall total cost of strategically coordinating the planning of infrastructure and development. By developing a good understanding and joint vision of the development of a place, infrastructure providers, developers and local authorities can achieve efficiencies by tailoring their investments based on the requirements of the overall strategy. For example, in the new Cranbrook development within the Exeter and East Devon Growth Point (see Case Study 5 below), the composition of the transport infrastructure in relation to a new business park and housing development – which themselves have all been jointly coordinated – has enabled the development of an innovative district heating and energy plant. The output of the plant is designed to operate on a scale to meet the needs of the local community, with excess production being resold to the National Grid. While recognising that not all developments are large enough to reasonably merit coordinated planning across all forms of infrastructure, it is clear that there are benefits to be accrued from strategically planning developments at scale.



Passenger Tram,
Salford Quays



Media City Salford Quays

Case Study 4: Partnership In Salford – The birth of MediaCity

The development of MediaCity in Salford and Trafford (Greater Manchester) was catalysed by draft BBC plans to relocate part of its operation outside London, with the site being identified as a viable space for a large scale development project to house a new major media hub for the UK.

The work of Salford Council and Trafford Council in combination with private developer, Peel Holdings, and the Manchester Urban Development Corporation, was to outline a vision for a major regeneration project of a scale that could accommodate national media production. And while this example of successful, partnership led development is noteworthy in itself, there was also a crucial role being fulfilled for many years previously by local government and business leaders in Manchester who had recognised the importance of infrastructure, and strived to fund its development, in order to put Manchester in a strong position to benefit from such development opportunities.

The Association of Greater Manchester Authorities (AGMA), a voluntary organisation bringing together representatives of the 10 councils of Greater Manchester after the dissolution of the Greater Manchester County Council in 1986, drove the process toward creating a unitary transport fund and body, today Transport for Greater Manchester (TfGM), that would push for and develop crucial and pioneering infrastructure projects, such as Metrolink, which underpins the viability of MediaCity as a development.

Many promising infrastructure projects fail to get underway because of a lack of buy-in and shared vision amongst interested stakeholders.

Early identification and engagement of core stakeholders, something which is receiving ever increasing focus in project management spheres, is also critically important in delivering infrastructure. Repeated examples show that failure to engage stakeholders and communities at an early stage can lead to bottlenecks and hurdles further along the process. By contrast, proper engagement strategies, especially the presentation of choices and willingness to compromise or incorporate feedback have helped to facilitate end-to-end delivery.

However, effective partnerships are about more than just good stakeholder engagement. Any infrastructure development will have a range of interested parties, from the local authority that wants to unlock growth in its area, to the developer who will need to contribute to its funding, as well as the various infrastructure providers, businesses and chambers of commerce, and local residents. In many cases, there are significant efficiencies to be accrued from a planning process that combines the interests of all the varied stakeholders and actually delivers greater benefits to all than if their respective interests were planned in relative isolation.

For major infrastructure developments within a local authority’s jurisdiction, there should be an obligation on authorities to establish a development strategy with identified, relevant partners.



Cranbrook looking North East,
©Still Imaging

5

The Challenge

Fear of cost-risk and a lack of power and accountability at the non-national level is a disincentive to local and regional areas that want to use infrastructure to transform their localities.

The Solution

The role of revolving funds, in combination with strong public sector leadership, can help deliver infrastructure-led development.

“Manchester is at the forefront of innovative development, using private sector investment and new schemes such as earn back to deliver key infrastructure such as the expansion of Metrolink”

Lord Deighton¹⁸

The public sector is able to borrow for projects such as infrastructure at rates preferable to that of the private sector. This ability is based on trust and historical responsibility and should therefore not be abused or treated irresponsibly. However, there are many examples where development has not taken place, or is at risk of not taking place, because the private sector has been required to take on positions of risk, related to the funding of infrastructure, which it deems too costly. In these situations the public sector, or potentially in England, Local Enterprise Partnerships (LEPs), could play a role in absorbing risk to facilitate development where it believes this will enable growth in the local area.

More than this, the public sector, especially in the shape of local authorities, can play a unique role in bringing together the kinds of partnerships as outlined above. Indeed, although partnerships should have a large representation from the private sector stakeholders who will develop the area as the drivers of growth, as developments will require local authority support, and local authority, or LEP, ability to access central Government funding pots, it makes sense that the public sector plays a central role in partnerships from the start.

Case Study 5: Revolving Funds in South West England

The South West Regional Infrastructure Fund (RIF) was set up by the South West Regional Development Agency (SWRDA) in March 2008 as a revolving fund for infrastructure provision – the first in the country. The principle was to help provide forward funding for infrastructure provision that would unlock projects and realise development potential in the South West.

The fund worked highly successfully in combination with the Exeter and East Devon Growth Point Partnership. While the partnership brought together a delivery team of private, public and civil society interests, the RIF helped to forward fund three critical pieces of infrastructure, namely: the main access road, a new by-pass, and the first primary school. The funds are then repaid on a roof-tax basis as development proceeds, as is happening presently.

The forward funding was secured at a time when the impact of the recession was being keenly felt. The provision of the funding, using public money made available on a repayable basis, enabled the risk associated with large scale infrastructure provision to be absorbed and shared. By working in tandem with a willing development partnership construction of the Cranbrook new community commenced in June 2011. As such, a key barrier to delivery, namely high up front costs, was overcome.

Cranbrook is being developed in close proximity to new strategic employment sites. As the aerial picture demonstrates, the new, part-RIF funded Clyst Honiton by-pass helps to bond the different developments together within the wider growth area.

St Martin's Primary School opened in September 2012. It provides space for 420 children but initially opened with less than 40. By September 2013 this had increased to 186 and is expected to be over 200 by January 2014. The trigger for the provision for the school in the section 106 agreement was 500 occupations. As a direct result of the availability of the forward funding it opened at a time when there were less than 30 homes occupied. The presence of the school is seen as the one of the main factors driving house sales with over 500 households expecting to be living on site by the end of 2013.

This education-led approach is being continued in to phase 2 of Cranbrook. The then Housing Minister

Mark Prisk visited Cranbrook in December 2012 to announce a further £20m package of forward funding to bring forward the second primary school and first secondary school and extend the main access road. This was the first investment announced under the HCA's Local Infrastructure Fund.

Cranbrook is physical proof of the success of the role that the public sector can play as a risk minimiser to kick start key developments. Its current rate of construction and sales outpaces many comparable developments. Additionally, the partnership is another example of how public and private sector interests are more likely to achieve their aims by working together and improving the efficiency of development.

The current system for sharing the costs of infrastructure development can often be disproportionately burdensome for some developers, usually first-movers.

A more equitable system of sharing the costs of infrastructure based on more efficiently identifying beneficiaries will increase the overall chance of successful infrastructure delivery.

By putting the responsibility for infrastructure development on the private sector, developments may not take place because of the private sector's risk minimisation preferences.

Those in leadership positions in the public sector need to be acutely aware of the importance of planning, and especially infrastructure planning in defining the future of their communities. Planning in this sense is not a reactive mechanism to respond to place-impacting propositions, but it is the ability to develop a vision and strategy for achieving successful places where people want, and are able, to live, work and flourish. Effective infrastructure planning and implementation can, in this regard, be seen as an activity that can return strong economic and social benefits. For this reason, local authorities need to regard it more as a desirable community good which they can pro-actively seek to shape and deliver, instead of waiting to respond to private sector initiative.

Additionally, regarding infrastructure-led development, it is reasonable and fair that those who benefit from uplifts in land value are required to make contributions to infrastructure funding. However, in some cases, when private sector contributions are required in advance of development, and potentially putting development at risk, this is a gamble which local Government should not always consider a responsible one to take. Instead, by leading partnerships, and describing a vision that will attract investment, the public sector can play a role in absorbing, but also crucially minimising, risk.

Public sector leadership in infrastructure delivery reduces uncertainty and minimises risk.

Finally, through informative discussions with engineering consultancy Atkins, the RTPI sees the requirement to produce Strategic Economic Plans for Local Enterprise Partnerships (LEPs) in England also provides an opportunity for local areas to plan in broader, more integrated terms, and lead the process of shaping the future growth and development of their area.

Strategic Economic Plans take a different approach to conventional transport studies, being driven by an economic development and growth-led agenda. The starting point is to assess the economic opportunities and challenges for the area and identify objectives that are focused on the needs of businesses, people and place. The role of transport (and other infrastructure) is then considered in the context of addressing the needs of the area's priority sectors, supporting improvement of skills, promoting innovation, encouraging business growth and unlocking delivery of housing and new employment land.

This continues to be a rapidly evolving agenda that requires new ways of thinking and development of new appraisal techniques. Whilst WebTAG (see page 20) continues to be the standard for the development of transport business cases, the work of Atkins is helping local areas and LEPs to lead the process to capture wider benefits, including the effects of unlocking new land for housing and employment. We believe that LEPs, through utilising Strategic Economic Plans can lead the process of delivering transport investments to support growth.

¹⁸Lord Deighton, Manchester Evening News, 09, 2013, <http://www.manchestereveningnews.co.uk/business/business-news/uk-can-learn-citys-infrastructure-5920570>

6

The Challenge

A legacy of some examples of sub-optimally planned transport infrastructure has left a false impression of what good infrastructure investment in the 21st Century looks like. Proper incentive systems of cost recovery, in combination with effective planning and leadership are currently lacking.

The Solution

Governments need to devolve funding mechanisms, including better systems of cost recovery, to local areas looking to implement viable, transport infrastructure-led schemes.

Since the late 1970s there has been a continually decreasing appetite for infrastructure, or public sector led development initiatives in general, to be funded from capital expenditure as underpinned by general taxation. Instead, the trend has moved towards funding on a targeted basis, usually from and by the beneficiaries of development, with the private sector increasingly encouraged to provide the finance and accept a portion of the risk and reward in this regard. Nevertheless, where significant sums of public money are involved, and especially in the current economic climate, with limited desire to add significant borrowing requirements to the national debt, it is a logical time to implement existing mechanisms to ensure that those who benefit from infrastructure provision are paying a fair share for the cost of its development and implementation.

The Crossrail project will be completed in 2017 and will connect Maidenhead in Berkshire with Abbey Wood in South East London and Shenfield in Essex, via stations in Central London, at an estimated total cost of around £15.5bn. A 'business rate supplement' (2% on non-domestic property values with a rateable value of more than £55,000) is being raised on companies within London, as a contribution based on the projected economic benefits that the project will deliver. While such a levy is an innovation for UK infrastructure funding methods, the UK lags far behind other countries for the implementation of such schemes. The Hong Kong Metro, for example, was part funded by capturing market driven uplifts in land value from property located in the vicinity of the network. Dramatically reducing the need for any up front borrowing to fund the investment, towards the

end of the 21st Century, the metro system was the only one in the world covering all costs through fare revenue.¹⁹

Additionally, the money raised from the Crossrail Business Rate Supplement is only a fraction of the true scale of the quantifiable economic benefits. For example, increases in land-value for existing property owners of properties that are both, domestic and non-domestic are not captured, as they were in Hong Kong. A recent study has suggested that the projected increases in property values, just for sites within the immediate vicinity of a new Crossrail station, will amount to one third of the total cost of the project.²⁰ This is a clear example of a windfall gain for property owners, on account of a public project, which could be justifiably recouped through a measurable process.

The direct causal impacts leading to land value increases are not always simple to derive, and thus we are not advocating the implementation of such cost recovery schemes on a general basis, due to the complex nature of changes in demand and desirability. However, a process which could isolate value increases (in the form of price rises), for a given period of time related to the implementation of an infrastructure development, within a set distance of access, and at rates above trend inflation, could reasonably and justly be targeted as direct financial benefits from the project.

A fairer and more justifiable system of targeted cost recovery could help remove many of the polemical debates that surround the price tags of high-profile infrastructure projects.



MRT Station, Hong Kong

Case Study 6: Innovating to realise value – Falkirk

Under the leadership of Scottish Futures Trust, Falkirk Council has won a Scottish Government run bid to implement an innovative Tax Increment Finance (TIF) scheme in its jurisdiction. The project will see upfront investment in key transport infrastructure unlocking significant private-sector development, the ultimate proceeds of which will repay the initial funding.

Falkirk is well placed for development opportunities, with 60% of Scotland's population within a 60 minute average journey time, and thanks to a highly skilled and specialised local economy, is already the 4th highest city-contributor to Scottish Gross Value Added (GVA).

Some of the infrastructure investments included in the TIF project involve improving links between Falkirk, the M9 and M8 motorways, and the port area of Grangemouth, which is the centre of Scotland's chemical science industry, and the country's second largest export sector.

The infrastructure will be funded with debt borrowed from the Public Works Loan Board, repaid by income from Non-Domestic Rates (NDRs) accrued from new development sites enabled by the infrastructure investment. After repayment of the initial loan, the on-going receipts from the TIF scheme will be split between Falkirk Council and the national Government, providing a fund for future infrastructure investment in the area.

It is forecast that £67m of initially borrowed funding will spur over £400m of private-sector investment in development sites, creating over 8000 new jobs for the local economy. If successful, the project could provide a pioneering model for methods to unlock essential investment in infrastructure-dependent developments.²¹



Falkirk Wheel

¹⁹ UCL / Ernst and Young, 2010, "Land Value Capture as a funding source for urban investment, Medda.F and Modelewska.M

²⁰ Crossrail, 2012, <http://www.crossrail.co.uk/benefits/changing-spaces-building-communities/55-billion-boost-to-property-values>

²¹ Future Thinking, Make it Falkirk, December 2012, http://www.falkirk.gov.uk/online/files/news/2777_summary.pdf

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The Challenge

Infrastructure projects which could unlock economic growth and development in a range of industries are held back through not meeting rigorous but limited Government appraisal processes.

The Solution

Policy makers, including local and national leaders, must only use limited cost benefit analysis as a guide to infrastructure investment decisions and not as the final arbiter.

“What is needed here is a dose of common sense plus a grasp of history which shows that in Britain – with our historic aversion to major infrastructure investment – we have consistently under-estimated the value of better transport links serving our major population and economic centres.”

Lord Adonis²²

The current appraisal process for transport infrastructure, as detailed in the DfT’s WebTAG documentation, and as influenced by HM Treasury’s Green Book guidance for assessing public investments, is a useful process for evaluating the economic viability of proposed infrastructure projects. However, as outlined in the Government documentation itself, the guidance “does not recommend that consideration should be restricted to those impacts that can be valued”, i.e. the criteria that can be given a monetary value that will be recouped (in most cases) directly from the operation of the investment itself, such as ticket sales or travel time savings. Policy makers and analysts need to avoid the temptation to hide behind or rely too heavily on necessarily inconclusive metrics, such as the associated cost benefit analysis process when making bold and strategic decisions about the future of the UK’s transport infrastructure provision.

In an analysis of HS1 and the Channel Tunnel development, Bridget Rosewell explains how “it has made possible longer term benefits than investors expected... if as little as 10 per cent of the jobs developed around its stations owe their existence to the railways, it has paid for itself in output terms”. However, assumptions that “transport will not make

any difference to the economy, merely to consumers’ welfare’ are unbalanced in their understanding of the long-term possible benefits of infrastructure investment.²²

Much of the good sense of the existing regime for evaluating major infrastructure investment is that it attempts to ensure that projects are a) viable in their own right, and b) superior to alternative investments. However, many of the wider benefits of infrastructure, such as those that are delivered through strategic, integrated planning, are not currently captured via current processes as they are not necessarily easily assessed or isolated. There is a significant risk therefore that in the UK infrastructure projects and proposals which will deliver strong and far-reaching economic and social benefits are not being implemented because they do not display quantifiable benefits that can be assessed against the existing narrow remit of measurable returns. As an example, consider the potential positive effect of transport infrastructure on the property market, where improved or faster rail links can have significant positive impacts on house or commercial premise prices within the serviced area, or make new sites viable on which new stock can be built, or enable brownfield sites or current low-density areas to be dynamically transformed to provide sustainable homes and businesses for greater numbers near the centres of economic activity. None of these benefits, except a limited focus on regeneration, are assessed under the present appraisal system. Those effects that are measured include: demand for rail tickets, travel time savings and capacity improvements, and although the system does try to take account of ‘wider economic impacts’, as is detailed in Appendix A, even these ‘wider impacts’ do not effectively capture the true scale of the benefits, which will require the strategy and vision of policy makers in order to be realised.

Partly for these reasons, the cost / benefit criteria used by Government have unsurprisingly proved controversial and have come under scrutiny in the past for being inconclusive on both the cost and benefit sides. For example, a recent report by KPMG was able to identify an additional £15bn a year of projected economic benefits from the HS2 project by using different metrics for their analysis to those initially used in the HS2 Ltd.²³ business case. While the report was designed to provide a boost to the HS2

project by highlighting greater economic benefits, for some it served to undermine faith in the Government’s appraisal process as a rigorous and complete method of measurement. Additionally, the focus on the ultimate Benefit Cost Ratio (BCR) figure produced by undertaking the appraisal analysis is something that has been picked up readily by the national media, due to the fact that it enables easy, and arguably over simplified, assessments about value for money, especially in comparison to alternative spending options. However, the very fact that the criteria are malleable, or questionable, as highlighted by the KPMG report, undermines the accuracy of such mechanisms for politicians or advocates trying to ‘sell’ a project to the public. Indeed, DfT itself outlines that its own analysis procedure should only be a ‘guide’ to investment decisions, as they cannot hope to capture the true scope of effects from an infrastructure project, which may be spread out across diverse sectors and derived in widely differing time frames. We believe that such mechanisms should remain as a ‘guide’, or at most as a baseline test, and that both proponents and critics of infrastructure investment need to be better able to understand and describe the strategic and genuinely wider benefits of infrastructure provision.

Current infrastructure appraisal processes fail to capture the true scale of benefits that can be derived from investment.



Jubilee Line station,
Canary Wharf



Battersea Bridge and power station

Case Study 7: Capturing wider benefits in the Borders

The Borders Rail Project is delivering 30 miles of new passenger railway to provide a journey time between Edinburgh Waverley and the settlement of Tweedbank of less than one hour, with 12 intermediate stops serviced at shorter distances. Discussions held with consultancy firm Atkins, have shown us that the main project objective is focused around the proposed benefits that improved inter-connectivity (a focal point of infrastructure provision in Scotland) between rural and urban Scotland would provide; essentially economic growth, inward investment opportunities (such as education, leisure and commuting opportunities), an encouragement of tourism and the provision of sustainable transport methods.

With improved links to Edinburgh (the financial and administrative capital of Scotland), opportunities will also increase for commuters to settle along the rail line. A study undertaken and recently published in the Edinburgh Evening News (August 2013) identified that an additional 451 dwellings had been built in a comparison between the years 2012 and 2011. Four hundred of these new homes it was reported were immediately along the new rail route. Additionally the study identified that the volume of residential sales in Midlothian had risen by 29% between April and June 2013 compared with the same period in 2012. Consequently there was a rise in average property prices of 3.2%.

Additionally the provision of a new, more sustainable mode of transport would provide a significant decrease in carbon emissions with a corresponding reduction in the reliance of private transport. Furthermore the main roads between the Borders and Edinburgh (including the Edinburgh Bypass) would be relieved of current levels of congestion at peak travelling hours.

²² Andrew Adonis, Speech to the House of Lords, 20th November 2013, <http://www.publications.parliament.uk/pa/ld201314/ldhansrd/text/131119-0002.htm>

²³ Bridget Rosewell, 08,2013, <http://www.bridgetrosewell.com/the-political-economy-of-risk-taking-and-how-hs2-is-misunderstood>

²⁴ High Speed Two, Regional Economic Impacts, 09/2013



Conclusion

Appendix

As a nation we need to be more aware of the benefits of transport infrastructure as being far wider than just the benefits to capacity and time savings - which are some of the more high-profile forms of analysis currently being used.

Instead, policy makers and industry influencers must be much more aware of the potential that transport infrastructure can have in shaping and transforming the development and growth of both individual places and the country as a whole.

There are huge and varied benefits to be gained from effective, integrated, and strategic planning of transport infrastructure, benefits which can improve people's lives in far-reaching ways and which cannot be reasonably captured in any current, quantifiable appraisals mechanisms.

However, to fully realise these benefits, we need to become much better at planning transport infrastructure both across and between modes and also in combination and cooperation with development priorities in other sectors.

If we can strategically plan the future of our transport infrastructure in this way, by putting transport infrastructure planning at the heart of our strategic planning priorities, then we have the opportunity to realise sustainable and efficient growth for our country, with lower costs of living, better communities and greater opportunity for all.

Cost/Benefit Analysis in DfT's Appraisal Process

The current Government method for assessing the value and viability of infrastructure projects takes a constrained view of the role infrastructure can play in tackling wider issues than just those directly and observably delivered by the infrastructure itself. This fails to take account of the significant benefits that can be derived from strategic infrastructure planning.

The perceived pros and cons of a proposed infrastructure project are arranged as costs and benefits, according to criteria that the infrastructure is supposed to deliver or expend. The criteria used for these measurements are similar to those highlighted in the table below. These costs and benefits are separated into three sets of criteria according to their level of monetary measurability. That is, 1) those that are naturally monetised or can be easily monetised (e.g. travel time savings, construction costs), 2) those that can be monetised via the application of a function to equate subjective value into monetary value (e.g. environmental impacts), and those which are purely qualitative and not considered easily convertible into monetary equivalents, but are recommended to be strongly considered.

It is worth mentioning that, as we are advocating 'wider benefits' derived from strategic planning, these are not the same as those listed in the Government guidance, and the table below, as 'wider economic impacts'. According to the civil service guidance, these 'wider economic impacts' are benefits attributable to three key factors: 1) agglomeration effects, 2) competition improvements, and 3) connectivity improvements, which are useful considerations of the effect of infrastructure on supply, competition, and labour, but they are only a part of the benefits that are derived from strategic planning.

Appraisal Criteria²⁵

Naturally / Easily Monetised	Can be Monetised	Cannot be Monetised / Judgement
Time Travel Savings	Reliability	Townscape
Capacity Benefits	Regeneration	Heritage
Revenue	"Wider Economic Impacts"	Biodiversity
Noise	Landscape	Security
Greenhouse Gases	Journey Quality	Access
Build Cost		Water
Indirect Tax Losses		

²⁵ The Economic Case for HS2: Value for Money Statement, January 2012, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/3651/hs2-economic-case-value-for-money.pdf



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