Smarter Spending to boost the economy

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Executive Summary

There is increasing interest in using transport spending to help promote economic growth. This briefing identifies projects and means of delivering them – it also warns against using big road projects, especially toll roads, as part of this approach, but suggests that other approaches, notably improving local bus services, should be considered.

We argue that this would be more effective in stimulating the economy (including unlocking our cities for growth), better value in terms of spending, and would be more equitable, enabling more social groups and more areas of the country to benefit.

Transport spending can help the economy through a wide range of effects, including reducing congestion and improving reliability, so boosting productivity for workers, businesses and freight transport, creating jobs within the projects themselves and in their supply chains, and improving physical connections to work, new developments and between businesses (agglomeration effects). As part of wider packages, high quality transport projects can also provide the backbone of regeneration for whole areas.

There is a tendency to focus on big projects in transport, but in fact the big economic benefits will come from improving and making better use of existing networks and services. The briefing lists a range of infrastructure projects that could be delivered quickly, including:

- increased maintenance for roads and footways
- local public transport improvements, including bus projects, new and redeveloped interchanges and stations, new and upgraded light rail lines,
- rail improvements, including new and refurbished trains, electrification, upgraded stations, new or reopened links and rail freight projects
- cycling projects

The advantage of schemes like these is that they:

- can be delivered, or at least delivery can be started, within this Parliament
- create or safeguard jobs in construction and engineering, including in areas currently suffering from recession and from cuts in public spending
- have wider economic, social and environmental benefits, in terms of promoting alternatives to car dependence, reducing congestion, improving safety and personal security, and promoting regeneration of the areas around the transport networks. We cover these in more detail below
- support and enhance existing communities and settlements, rather than undermine them with new out of centre car-based development
- improve and make better use of existing transport networks, rather than relying on expensive and long term new projects
- offer an opportunity to address the imbalances in the economy and shift transport investment to cities in the North and Midlands, which faced under investment under the last government
- beyond the emphasis on capital funding, there is also a need for other transport measures to support the economy, including support for local bus services, which are vital for many people to get access to employment, and joining up transport networks through door-to-door initiatives such as improved information and smart ticketing
However, some are arguing for a spending programme of big new roads. This would do less for the economy because big roads don’t have the wider economic impacts that are needed and create fewer jobs than spending on public transport schemes or ‘smarter choices’ programmes, which combine smaller scale capital investment with behaviour change approaches.

New road schemes are expensive and not easily deliverable in the short term, with costs rising from when they receive initial approval to completion. Their economic impact will also be very limited in this Parliament. Toll roads in particular pose big risks; the M6 Toll has not worked for users, the surrounding area or investors.

The UK already has a developed network of transport infrastructure, which needs maintenance, small scale investment in projects like junction improvements, and support for public transport to unlock the potential of UK cities.

Big new road schemes also do not deliver the promised benefits – they have been shown to fail to cut congestion, instead attracting more traffic and often just moving where the congestion occurs. This is not to argue against all road improvements. In fact, one of the problems with big schemes is that they stop smaller scale safety and other improvements from happening in the short term.

It is sometimes argued that big roads are economically justified because they have high "benefit:cost ratios" (BCRs) in Government appraisal frameworks. However:

- promoters have a tendency to exaggerate benefits and underplay costs, so the BCRs can be misleading
- BCRs, and the time savings that underpin them, don’t assess the full range of economic impacts and are not on their own a good measure of value for money in promoting sustainable growth
- BCRs do not include a number of important factors, especially environmental and equity factors, and the underlying modelling does not generally fully reflect wider economic and land-use change
- if looked at correctly, other transport projects can have high BCRs but also score well in broader appraisal

We argue therefore that the Government can and should deliver a package of transport measures as part of its growth programme, and that these are readily deliverable using existing processes.

There is a clear choice for Government – repeat the mistakes of the post-war era which led to an unbalanced and unsustainable economy or invest wisely in transport programmes and services which can deliver flexible labour markets, productive cities and sustainable logistics.
1. Transport and growth: practical projects and programmes

With the continued slow pace of recovery in the economy, there is currently interest in accelerating capital spending on infrastructure to kickstart the economy. Speeches from ministers at the recent Conservative and Liberal Democrat conferences focused on this approach as a way to remain consistent with deficit reduction targets while still providing more of an impetus to the economy. Recent media reports have discussed the potential for pension funds to invest in infrastructure, including toll roads.

Given the pressure for results, there is a danger of untargeted spending; approving any schemes that happen to be to hand, even if these will in fact do little or nothing for the economy. It is therefore worth looking at ways in which transport spending can in fact help the economy. These include:

- increasing productivity, for example by reducing congestion or by increasing journey time reliability
- improving access to employment, thereby helping employers with broader labour markets and improving access to jobs for those out of work
- improving connections and communication between firms (agglomeration)
- creating jobs, including direct employment on transport projects and indirect employment through supply chains for those projects
- supporting regeneration of run down areas, as part of a wider package of measures
- supporting developments by providing site access
- improving freight transport efficiencies and access, including to ports

Ministers have also talked of a broader objective: to rebalance the economy away from reliance on financial services and towards skilled private sector manufacturing especially in low carbon industries.

Growth also needs to be environmentally sustainable, promoting development that reduces carbon emissions and other pollution, protects and enhances biodiversity and improves the quality of life. It should also be socially inclusive, helping everyone in society and in all areas, not just those on higher incomes in South East England. It is sometimes argued that there is a choice between protecting the environment and promoting economic growth, but in transport, it is clear that there is synergy between environmental benefits, social inclusion and economic growth. Schemes and projects that make most sense in environmental terms also help the economy.

A unifying approach here is the concept of ‘car dependence’, where combinations of policies and developments make it difficult for people to access goods, services, employment, friends and family without access to a car. In this case, car use moves from being a choice to being a necessity. As we have shown, car dependence is not inevitable, nor is it linked to increased economic activity – many areas with high per capita income and successful economies, both in the UK and in other European countries, have low car dependence, while areas with high car dependence are not necessarily economically successful. In particular developments that are based around the car, for example business parks at motorway junctions, will tend to generate increased congestion on the surrounding road network, damaging the wider economy, as well as resulting in increased carbon emissions and being inaccessible for those without cars.

Given this analysis, what transport spending can best support sustainable economic growth? Much
transport debate focuses on big projects on road and rail. In particular, there has been much talk of toll roads and of bringing forward planned Highways Agency schemes. As we point out below, it is questionable whether big new road projects can really help growth now, and there are specific questions on toll roads. However, in reality, it is spending on improving and making better use of the existing transport system that will provide the best economic value and will deliver speedy economic and transport benefits. Improving local transport networks can have real benefits: most journeys that people make are fairly local and, for businesses, the state of local roads and reliability of local public transport are the transport issues that matter most to them. The economic benefits mentioned above can therefore come from a myriad of local transport improvements, rather than major schemes involving big trunk roads or motorway projects.

This means that there are a wide range of transport projects that can be started quickly and that will provide the support to the economy in the ways described above.

Increased maintenance for roads and footways

Even if all the roads listed in the recent CBI and RAC Foundation reports (and in recent transport strategies from the devolved Governments) were built, they would add a tiny percentage to the length of the road network in the UK. Overwhelmingly, what matters to business and to private road users is the condition of existing roads. Here, there is a backlog of maintenance, with an annual shortfall in maintenance funding of £783 million in the last financial year.\(^1\) There is a tendency to neglect maintenance of existing roads at the expense of building big new ones, but this brings costs in terms of injuries to pedestrians and damage to vehicles.

The Government has already provided some funding for local road maintenance; further funding would feed into immediate improvements to local roads and would lead to immediate extra employment. It is important that extra maintenance funding goes to footways and the minor roads as well as to major roads, since these provide access to homes and businesses. A further non-spending measure here would be to move ahead with “lane rental” schemes, currently the subject of government consultation, to improve incentives for utilities to minimise road works and improve the quality of reinstatement.

Improved local public transport

It is worth saying that some major public transport improvements are already under way in a number of towns and cities across the country. A major expansion of Manchester’s Metrolink tram network is under way, with new lines being built to Oldham, Rochdale and Manchester Airport. Nottingham is finalising the details of two new light rail lines. Luton and Gosport are getting guided bus schemes.

These are already set to create significant local employment in construction and have been justified on local economic development grounds. These benefits can be spread to other areas. In urban areas especially, there are many “oven ready” projects which could improve public transport significantly. These include:

- Bus projects, including guided bus services, rapid transit services and bus priority initiatives. Examples include:
  - Coventry Sprint
  - South Yorkshire bus rapid transit
  - Bristol rapid transit
  - Merseyside statutory bus partnerships
  - Leeds New Generation Transport trolleybus scheme
New interchanges and stations
  ○ Heworth interchange
  ○ Kirkby bus station
  ○ Carr North station
  ○ Stockport interchange
  ○ Chesterton station, Cambridge

Light rail upgrades
  ○ South Tyneside Metro

Redeveloped stations
  ○ Sunderland
  ○ Wakefield

Park and ride schemes
  ○ Birkenhead

New links
  ○ Halton curve, Merseyside
  ○ Croxley link, Hertfordshire

New light rail lines
  ○ Merseytram
  ○ Metrolink extension to Trafford and Port Salford
  ○ Midland Metro Black Country link

All of these can be delivered within the lifetime of this parliament; many can happen within the next 18 months.

Rail improvement
There is already investment going into some major rail projects, and into tackling a maintenance backlog on the rail network. There has, of course, been significant attention paid to the importance of this in terms of skilled jobs in manufacturing recently. For example, in relation to the Thameslink trains order and the loss of jobs at Bombardier, and also in relation to new inter-city trains and potential new employment in County Durham. In the light of this, it is worth considering further investment projects that could be delivered reasonably quickly and would help the economy in the ways described above. Examples include:

- Refurbishing and upgrading existing trains, especially the older and substandard diesel unit fleets in the north of England, Cardiff Valleys and the South West. There are around 1000 vehicles from the early 1980s which are due for overhaul anyway within the next five years, and could be given additional refits, new interiors, better engines, information displays etc. Almost all this work would be done in the UK, in private sector engineering works in places such as Preston, Crewe, Derby and East London. This programme would thus support the Government’s objectives of promoting a rebalancing of the economy; it could be privately financed by the rolling stock companies but with government guarantees of support in future franchises.

- Further railway electrification: the Government has already initiated a rolling programme of electrification with schemes in the North West and on the London–Bristol–Cardiff line. The industry analysis suggests that further electrification would be commercially justified. Some ‘infill’ electrification of missing links or to places close to the existing electric network would allow more efficient operations and also to move some diesel trains to other non-electrified lines where they can help reduce overcrowding. Examples of such infill schemes that could be justified and be done quickly include Lancaster–Morecambe, Windermere–Oxenholme, Liverpool–Wrexham, Reading–Redhill (partially electrified already), Crewe–Chester and the Cannock Chase route (Birmingham–Rugeley). Beyond this, there is a strong case for electrifying the Midland Main Line between London, Leicester, Nottingham, Derby and Sheffield. It has already been identified
in the rail industry’s Initial Industry Plan as having a very strong case, and at least some initial work could be brought forward. There is also a case for continuing electrification past Sheffield to Leeds via Wakefield to create an alternative route to the East Coast Mainline.

- New carriages: as part of, and in advance of, the Midland Main Line electrification, electric transformer cars could be added to the existing diesel Voyager trains. This would allow them to be used on existing electric routes, including the electrified parts of the Midland Main Line.

- Missing links and reopenings: there are a number of places on the rail network where putting in new or reopening old connections would allow more direct services. The Government has already agreed in principle to give Regional Growth Funding to reopen the Todmorden Curve in the Pennines, which will almost halve the journey time between Burnley and Manchester. Other such missing links include the Halton and Burscough curves in Merseyside, Ebbw Vale–Newport line in South Wales and Lewes–Uckfield in East Sussex. In addition, there are larger reopenings that have strong local authority and community and business support: East–West Rail (Oxford/Aylesbury–Milton–Keynes–Bedford–Cambridge), Skipton–Colne in Lancashire, Tavistock–Plymouth in Devon. The last of these is being promoted by a private company in association with housing development and will require no public subsidy; many of the others could be at least partly privately financed.

- Rail freight upgrades: rail freight has been a success story, with an increase in mode share and significant increases in particular markets, such as ports, and new traffic, such as supermarkets. The industry has developed a plan for a Strategic Freight Network (SFN), and a number of schemes have already been funded, with significant success; one completed project, upgrading the line from Southampton to the Midlands to take higher containers, has seen a growth in rail’s mode share at Southampton from 28 to 35 per cent since February this year, and this is still increasing. Further SFN schemes could be brought forward, including further capacity on the Felixstowe–West Midlands lines and extra Southampton–Midlands routes. These initiatives can reduce road congestion, reduce costs and increase choice for freight users – they also can reduce carbon emissions.

**Cycling routes and schemes**

There are strong health and traffic benefits from increased cycling, and a number of projects are already being funded through the National Lottery and other sources, as well as the Government’s new Local Sustainable Transport Fund. Further projects available include:
● Links to schools: safe routes to schools already exist in some areas, but more are needed and would be popular

● Links to stations: improved cycling and walking routes to stations can reduce congestion around stations and also improve local connections and personal security. Secure cycle parking at stations also encourages more cycling and can take the pressure off car parking

● New and upgraded cycle routes: the National Cycle Network, set up and maintained by the charity Sustrans, has been augmented by local cycle networks run by local councils, often in association with Sustrans and other charities

More of these schemes are available and can be delivered through national charities as well as through local authorities. For example, a £1.8 million package of cycle route schemes in Leeds and Bradford has been worked up and is ready to be delivered. The Leeds network would provide new radial links to the city centre and the Bradford cycle routes would link housing estates with employment areas.

Traffic management, public realm and streetscape

There are many opportunities to help reduce congestion with an increasing awareness that high quality street design can act as a catalyst for regeneration and can encourage inward investment. Several cities have taken steps to redevelop old-style ring roads and underpasses into more attractive places. Birmingham, Nottingham and Ashford are three examples of major redesigns of ring roads to make them more pedestrian-friendly with less clutter, while keeping good access to the cities by all modes of transport. More such schemes are available, including for example the Chantry Way junction in Wakefield, where removal of the roundabout and underpasses would help traffic flow, buses and pedestrian safety. Many of these public realm schemes can attract funding from the private sector, through development or through initiatives such as Business Improvement Districts.

These kinds of scheme vary greatly in size and scale. However, they have a few things in common:

● they can be delivered, or at least delivery can be started, within this Parliament

● they will create or safeguard jobs in construction and engineering, including in areas currently suffering from recession and from cuts in public spending

● they have wider economic, social and environmental benefits, in terms of promoting alternatives to car dependence, reducing congestion, improving safety and personal security, and promoting regeneration of the areas around the transport networks

● they will support and enhance existing communities and settlements, rather than undermine them with new out-of-centre car-based development

● they will improve and make better use of existing transport networks, rather than relying on expensive and long-term new projects

In terms of delivery, the schemes listed all have clear delivery paths and partners, including different sections of the rail industry, local authorities and in some cases private sector interests such as developers or financing and leasing companies. It is also worth noting that charities and not-for-profit groups can be used to deliver these projects. We return to this below.

Beyond capital projects
So far, we have looked purely at capital projects and
infrastructure. However, there is a strong economic case for three other types of interventions:

- increased support for local bus services
- support for local sustainable travel initiatives, sometimes called ‘smarter choices’
- door-to-door-journey initiatives, including travel information, smartcards, interchange and connections

**Bus services**

Local bus services matter. They provide access to employment, education and training, especially for the 25 per cent of households without access to a car. They also provide the main public transport in most areas – two thirds of public transport journeys are by bus.

However, a number of different cuts have affected bus services in England:

- reductions in general local authority revenue support
- changes in the funding of the national free travel scheme for pensioners and disabled people
- planned reductions in Bus Service Operators Grant, due next year

In addition, rising fuel costs affect bus operators as well as motorists.

This combination of factors is leading to significant reductions in bus services. Our survey work suggests that 77 per cent of councils have made, or plan to make, cuts in local bus service subsidies, and some have eliminated all funding, especially affecting evening and weekend services. Over 1,000 services have already been cut and some areas, including major metropolitan areas like West Yorkshire, are consulting on new cuts in services. Commercial unsubsidised services are also affected, with at least one major operator planning above-inflation fare rises and some service cuts in 2012.

While many of these are local decisions, they have a national economic impact:

- They add to barriers in the labour market, especially in terms of helping unemployed people get access to jobs or training:
  - almost 40 per cent of jobseekers say that their job search has been limited because of the costs involved. For 63 per cent of them, this results from the cost of travelling to interviews
  - 14 per cent of unemployed lone parents say they can’t afford the cost of transport to work
  - 13 per cent of people say they have not applied for a particular job in the last 12 months because of transport problems. This rises to 18 per cent for people living in low income areas
  - five per cent of people say they have been offered a job but turned it down in the last 12 months because of transport problems. This proportion doubles to 10 per cent for people living in low income areas
  - anecdotal evidence from Citizens Advice suggests that travel difficulties are not always considered by Job Centres and that some claimants are having benefits cut for turning down jobs that they cannot reach due to a lack of available public transport

- They add to disadvantage among young people. Some local authorities have limited or cut previous concessions for young people, especially those in full time education between 16 and 18. The UK Youth Parliament has recently picked transport as its priority issue for the next year, reflecting the impact of the combination of
service cuts, higher fares/reduced concessions and the abolition of the Education Maintenance Allowance (EMA). Research by the last Government's Social Exclusion Unit showed that:

- more than one in five students have considered dropping out of further education because of financial difficulties. Transport costs are the biggest expenditure associated with participation in post-16 education
- nearly half of 16- to 18-year-old students say they find their transport costs hard to meet
- 6 per cent of students have missed college at some point in the previous year because they could not afford transport costs
- they make access to work more difficult for other groups, notably disabled people who rely on specialist or mainstream public transport.

There are wider economic impacts of the bus cuts, including increased congestion and less access to town centre shops.

We therefore argue that on economic grounds the Government should look at ways of mitigating bus cuts, and specifically:

- consider increasing local authority revenue funding to support improved bus services
- retain the Bus Service Operators Grant at its current rate
- fully fund the national concessionary fares scheme
- consider options such as a young person’s travel concession scheme, a renewed ‘workwise’ scheme to support travel costs of people returning to work and tax-free commuter travel benefits

### Local sustainable travel initiatives

There is good evidence now that the way people travel can be influenced, and that measures to do this, sometimes called ‘smarter choices’, can help tackle congestion and provide alternatives to car travel. In particular, the last Government funded three Sustainable Travel Towns in Darlington, Worcester and Peterborough; the assessment of these found profound effects on car use and the take up of sustainable travel:

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<th>Car trips</th>
<th>Bus trips</th>
<th>Cycling</th>
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<tr>
<td>Darlington</td>
<td>-10 per cent</td>
<td>+11 per cent</td>
<td>+131 per cent</td>
</tr>
<tr>
<td>Worcester</td>
<td>-10 per cent</td>
<td>+24 per cent</td>
<td>+23 per cent</td>
</tr>
<tr>
<td>Peterborough</td>
<td>-10 per cent</td>
<td>+43 per cent</td>
<td>+17 per cent</td>
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The Government is now funding more such projects through the Local Sustainable Transport Fund, with the twin aims of helping the economy and cutting carbon emissions. So far 39 local authority projects have been funded and applications from a further 55 have been received. We think it important that this programme is fully evaluated and that evidence of what has worked is disseminated.

### Door-to-door journey initiatives

Transport infrastructure and services are provided by a wide range of different bodies, including different arms of central and local government and different private operators. However, businesses and transport users are interested in door-to-door travel, for people and goods. If different providers do not communicate with each other or do not join up their services, this adds to business and private costs and increases inefficiencies. There are a number of areas where Government can have a role in promoting door-to-door seamless travel, including:

- information for travellers, before and during journeys, and especially during times of disruption. By promoting opening up of data, with appropriate quality safeguards, the Government
can help private sector providers develop new information services, such as mobile phone apps giving real time information

- door-to-door ticketing: the Government is committed to delivering a national smartcard scheme by 2014, and it is important that this provides multi-operator and multi-mode travel, as the Oyster card in London already does

- interchange and connections: transport modes need to link with and connect easily with each other, and this needs to be specified in franchises and licensing where necessary

We have set out more detailed ideas in this area in our report *Seamless Journeys.*

We therefore believe that transport’s involvement in the growth strategy should be broader than simply capital projects – improved bus services, local sustainable travel initiatives, and initiatives to promote door-to-door seamless travel can all have significant economic benefits.

We also believe that the affordability of public transport also needs to be addressed – this is the subject of a separate briefing.
2. A new programme of major road building won’t help growth now and will create other problems

In discussions about new infrastructure spending, the kinds of schemes and projects listed above have not been given priority. Some politicians, economists and interest groups have instead suggested focusing new spending on major road building, including toll roads. However, this will be problematic in three main ways.

1. Big roads won’t create the wider economic impact that is needed, creating fewer jobs than spending on public transport schemes or “smarter choices” programmes, which combine smaller scale capital investment with behaviour change programmes.

2. New road schemes are expensive and not easily deliverable in the short term, with costs rising from when they receive initial approval to completion and with considerable risks from the process for planning approval, especially those with routes through protected countryside or through built up areas.

3. Big new roads will not deliver the economic benefits that the UK needs. The UK already has a developed network of transport infrastructure, which needs maintenance, small-scale investment road projects for junction improvements, and to public transport to unlock the potential of UK cities. The White House recently commissioned a review of the evidence of how transport can provide economic benefits, which concluded that investment should tackle key bottlenecks, improve safety, move public transport commuters more efficiently and provide improve maintenance. In contrast, big road schemes also do not deliver the promised benefits – they have been shown to fail to cut congestion, attracting more traffic and often just moving where the congestion occurs.

More detail on these problems is set out below.

More jobs will be created through investing in public transport and local transport improvements

The creation of jobs is a frequently cited benefit for many transport initiatives. Employment effects are measured in the appraisal of large transport schemes and the direct effects have been widely studied.

However, there are additional, wider effects of public and sustainable transport initiatives that are not well captured by appraisal. These include the long-term nature of jobs associated with more highly serviced public transport modes (these depend upon revenue funding rather than the initial capital investment) and the more localised spatial distribution of these jobs.

A 2010 study by Ekosgen for pteg, Campaign for Better Transport and Sustrans looked at these issues. Relevant findings are:

- Roads versus public transport: studies on US stimulus spending suggest that public transport investment produced twice as many jobs per dollar, compared with road investment
- Supply chain versus direct employment: the creation of 100 jobs in direct rail employment results in a further 140 indirect and induced jobs, whereas the creation of 100 direct jobs in the motor industry supports only a further 48 indirect jobs
- Local job creation compared with road construction: Public transport jobs are highly service-based, so employment is spread right across the country. The Ekosgen study found this spread to be particularly pronounced in the bus and coach industry. In comparison, road schemes
will often deliver only very localised benefits in time savings and have less extensive supply chains in comparison with public transport.

**Problems of deliverability with road schemes**

There are a number of characteristics of large road schemes that cast further doubt on their value as transport investments. These issues surround the practical implementation of a new road, and often cause grand schemes to remain unbuilt.

1. **Hold-ups and hurdles**

As major infrastructure changes, often cutting through wildlife habitats and countryside, new roads face a large number of regulatory and planning hurdles between the initial business plan and the start of construction. These include:

- consultation on routes and planning, which may result in evidence of public opposition to any road
- a planning application and environmental statement, which will often need to face a public inquiry, and may be called in by central government for a decision
- side road orders and compulsory purchase orders for land for the scheme, which also may result in a public inquiry if there are lots of objections
- securing licences from statutory bodies, for example to make changes to water courses and other natural features or to move protected species

2. **Financial risks**

Many current proposed schemes are based on risky financial models (such as developer contributions or toll roads) which could fail to deliver.

Many of the bigger road schemes currently proposed by local authorities for funding are based on large and increased local council contributions. In five of the road schemes currently being considered for funding by the Department for Transport (DfT), local contributions, totalling £162 million across the five projects, will largely be funded out of council borrowing, based on the assumption that third party contributions from developers and businesses will fill the gap. However, so far, local authorities have secured only £12.2 million in confirmed third party contributions and pressure on local authority budgets generally means that there is little room for manoeuvre for local councils.

With the DfT contribution definitively capped, all the remaining costs, including any overruns, will have to be met by the local authorities. If the planned third party contributions fail to materialise, the viability of these schemes will be cast into doubt. And, as we show below, the risk of overruns is sizeable.

Another risky alternative are new toll roads. The M6 Toll has failed to achieve the cuts in congestion promised. Traffic on the M6 has returned to pre-toll levels and most journeys are only marginally quicker than in 2003. Toll rates have more than doubled and the company running the toll road is losing tens of millions of pounds a year. This has led to comment in the financial press that its owner (Macquarie Atlas Group) could be the target for vulture funds.

If tolling is used to fund new non-motorway roads, freight traffic is likely to remain on the non-tolled roads and could lead to significant opposition from those affected. The risks of toll road investment are the subject of a separate briefing from Campaign for Better Transport: *Briefing on the Risks of Toll Road Investment*.

**Road-building is a slow way to growth**

Even when new roads do eventually get built, the processes outlined above can take many years to work...
Campaign for Better Transport recently assessed the progress of 18 bypasses completed between 2008 and 2011 (see fig 1).

The average time from programme entry (first business plan) to completion was eight years and seven months, with the shortest taking six years and nine months from first approval to opening, and the longest taking 11 years and one month.

The chart below, showing the time from first approval to completion for these recent roads also illustrates the issue of cost increases.

3. Road schemes fail to cut congestion and instead attract more traffic

There is also the fact that the claimed benefits of roads are not in practice achieved. The claimed time savings for motorists are often undermined by increased traffic generated from new developments or from changes in travel patterns as a result of the road being built. In other cases, new roads simply shift traffic jams to a new bottleneck.

None of this is to say that all road building is a bad idea. Most travel in this country is by road, and some improvements to the road network are desirable and possible. Small scale traffic management schemes, remodelled junctions, the ‘managed motorways’ programme such as that implemented on the M42, can all bring benefits. In fact, the pursuit of big road schemes can stop small-scale sensible measures being implemented while everyone waits for the big solution. There is, for example, no dispute that improvements are needed to the A14 in Cambridgeshire, but the pursuit of the previous major scheme has in fact stopped consideration of small-scale safety and traffic measures that could improve things now.
Transport spending and value for money – why benefit:cost ratios don’t tell the whole story

Another argument made by those promoting new roads as a major component of any new infrastructure package is that road schemes are very good value for money. The Department for Transport has a sophisticated appraisal framework, which assesses the value for money of transport projects in terms of costs and benefits, and the resulting ‘benefit:cost ratios’ (BCRs) are used to rank projects and, increasingly, to justify them. Despite some changes to this appraisal process, big road schemes still seem to come out reasonably well, with sometimes quite high BCRs. So it is argued that in looking for schemes to kickstart the economy, major roads perform better than other transport projects.

However, there are a number of reasons why these BCRs do not tell the whole story, and why other transport projects might better support long term sustainable growth and economic development. These include:

- BCRs are part of a wider appraisal framework with 5 business cases, and should not be used as the sole basis for decision-making
- BCRs, and the time savings that underpin them, don’t assess the full range of economic impacts outlined at the beginning of section 1 and therefore are not on their own a good measure of value for money in promoting sustainable growth
- BCRs do not include a number of important factors, especially environmental and distributional factors, and the underlying modelling does not generally fully reflect wider economic and land use change
- Promoters have a tendency to exaggerate benefits and underplay costs, so the BCRs can be misleading
- If looked at correctly, other transport projects can have high BCRs but also score well in broader appraisal

BCRs are part of a wider framework

The Government rightly set out in the coalition agreement a commitment to “reform the way decisions are made on which transport projects to prioritise, so that the benefits of low carbon proposals…are fully recognised”. This resulted in a new “business case” approach, announced in April 2011, which requires investments to be justified with a five part business case:

- A strategic case, to show that the project fits with wider public policy objectives
- An economic case, to demonstrate value for money
- A commercial case, showing the project is commercially viable
- A financial case, showing the project is financially affordable
- A management case, showing that it is achievable

The BCR for a project forms just one part of the economic case and should not be taken on its own. In particular the strategic case is vital: as we have seen, transport projects are means to an end rather than ends in themselves, and it is critical that transport investments are justified against wider public policy objectives, including but not solely fostering economic growth.

BCRs don’t assess a full range of economic impacts

In the first section, we set out a range of ways in which transport investment could help the economy.
BCRs do not measure all of these, and in fact are not designed to – they are used to rank the transport benefits, notably time savings, casualty reduction etc. Time savings form a major part of the benefits for many transport projects; the value they are given varies by journey purpose, and they are calculated by comparing forecast journey times with and without the project. Even tiny time savings, valued over a 60-year period, can build up into an apparently impressive benefit. However, the respected transport economist Phil Goodwin has pointed out that these savings do not represent a real economic benefit, because they assume major traffic growth, based on past trends continuing. They are therefore not actual improvements over current journey times but instead are the difference between worse times expected with the scheme and the ‘nightmare’ do-minimum scenario. In other words, the benefits represent traffic getting worse more slowly than it otherwise might.

All the research on time savings shows that these small time savings are not valued by users, and instead what transport users want is reliability. A business person will not lose business from having to travel for an hour but could if he or she can’t rely on travel times and it takes an hour and a half instead. An emphasis on time savings is likely to prioritise investment in increased road capacity, whereas a focus on reliability will instead tend to prioritise maintenance and management of existing roads and supporting moves to encourage and enable people to shift to more sustainable forms of transport and to therefore cut congestion.

In any case such benefits ignore wider economic impacts of transport projects. Job creation and access to employment are not really part of the equation, and the wider benefits of transport projects within, say, a regeneration area are also not included, though it will be part of the wider value for money and strategic cases. To capture broader impacts, there is increasingly a move towards including ‘wider economic benefits’ within BCRs, specifically around agglomeration benefits. These were first calculated for the Crossrail project in London, and were specific to that project. A study into the impacts of Crossrail looked at the effects of agglomeration of economic effects and concluded that “the economic impacts of Crossrail on business productivity valued in this way were both very large and entirely additional to the transportation impacts. The implications are that the UK has been underinvesting, in urban rail infrastructure in particular, by ignoring the wider economic benefits”.

However, there has been a tendency, most notably in some recent local authority road schemes, to simply add a percentage to the transport benefits to represent wider economic benefits. This has been criticised as inaccurate and misleading – and ignores the possibility of negative impacts. An extensive study on transport and the economy noted that “roads are two-way” and that some transport projects could have negative as well as positive impacts on the local economy.

New methodologies have been applied to capturing more precisely the economic value of transport projects. KPMG, in studies for Manchester authorities and Network Rail, have focused on Gross Value Added (GVA) as a better measure of economic benefit from transport investment. This tends to give priority, in urban areas certainly, to public transport investment, since this promotes denser development, economic ‘clusters’ and agglomeration.

BCRs omit a number of important factors
BCRs concentrate on putting together factors that can in theory be given money values, such as time savings, road casualties, noise etc. These values have themselves been criticised, and we and other groups have made the case for considering some factors.
such as carbon emissions differently. In economic terms, BCRs and their underlying modelling do not capture a wide range of important factors, notably distributional effects and wider economic and land use changes. They will not therefore tell us which income groups win or lose from particular transport schemes; at most they can give some indications of impacts on communities and types of travellers. The wider economic and land-use changes wrought by transport schemes – knock on effects such as new developments taking advantage of a transport investment – are not usually in BCRs and even sophisticated transport models find it difficult to include these changes, yet these are precisely the issues of most interest in thinking about transport’s contribution to growth.

Promoters overplay benefits and understate costs
We have already noted the record of cost overruns on roads schemes, which promoters tend to ignore. Recent research shows that promoters are also exaggerating benefits and minimising impacts of schemes. In particular, the Kingskerswell bypass ignores the likely knock-on effects of congestion elsewhere in South Devon15, while the landscape values at Hastings were downgraded to reduce costs. In the case of Hastings, researchers calculate that the real BCRs could be as low as 1.3, as opposed to the claimed value of 3.5 (and potentially even lower at -1.2 if wider factors are considered)16.

Other transport investments have good BCRs and also score well on wider appraisal
Many of the public transport and other projects listed in section 1 have good benefit cost ratios but also score well in terms of the other economic impacts listed in that section, notably in terms of access to employment, as well as other social and environmental measures.

In particular, there is good evidence of the value of small-scale measures. The 2006 Eddington study on transport infrastructure found that small projects such as walking and cycling schemes and small targeted junction improvements offering better returns than more expensive schemes17. The study suggested that this was because they may be “targeted on particular problems and pinch points that provide significant benefits”.

We have already highlighted the benefits of ‘smarter choices’ projects and the Sustainable Travel Towns18. The 2010 evaluation study of the Sustainable Travel Towns estimated that, allowing only for congestion effects, the benefit:cost ratio of the programme was 4.5. They suggested that including environmental, consumer-benefit and health effects would broadly double this figure to a BCR of 9, with further refinements to this assessment likely to increase the benefits. The evaluation also pointed strongly to the synergistic effects of carrying out these measures in concert, under a common banner. In addition, the interventions were most effective when also accompanied with clear improvements in the quality of services, particularly for buses.

This point about synergies applies more widely. Traditional transport modelling and appraisal does not necessarily assess packages and synergies well. So the ‘door-to-door initiatives’ mentioned earlier will not necessarily score highly in a traditional benefit:cost ratio calculation, but as mentioned earlier the efficiencies they generate are important.

New approaches to value for money
Professor Phil Goodwin, in work for the Commission for Integrated Transport, looked specifically at how authorities could get the most from transport spending, including on smaller projects19.

As well as examining current value for money
findings, this study also looked ahead at the effects of changes to appraisal, such as a new treatment of fuel taxation, changes to the length of comparison times for smaller schemes, and comparison with ‘before’ rather than ‘without’ cases. It concluded that, taken together, future appraisal methods would see an increase in the benefits of public transport and smarter travel programmes compared with roads.

The study also looked at the important consideration of diminishing marginal returns in mature fields of investment. This factor has tended to be obscured when looking at average value for money figures across categories of transport investment.

Goodwin proposes that there is a strong potential for high value for money in ‘virgin territory’ sectors, suggesting “that the more is spent on a particular area, the lower the benefits, and hence that mature areas where expenditures have proceeded for a long time are likely to have lower average rates of return on the remaining projects, than new areas whose best has not yet been carried out”.

These new estimates in the table below show the effect of investing £750 million over five tranches, and a resultant BCR for each tranche. The BCR estimates range from 22 in the first tranche to 3.7 for the final £150 million of investment.

<table>
<thead>
<tr>
<th>Tranche of expenditure (£150m)</th>
<th>Representative BCR for that tranche</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>22</td>
</tr>
<tr>
<td>2nd</td>
<td>11</td>
</tr>
<tr>
<td>3rd</td>
<td>6.6</td>
</tr>
<tr>
<td>4th</td>
<td>4.4</td>
</tr>
<tr>
<td>5th</td>
<td>3.7</td>
</tr>
<tr>
<td>Total £750m</td>
<td>11</td>
</tr>
</tbody>
</table>

Goodwin’s study, published by the University of the West of England in 2010, concluded that transport investment at a time of constrained spending should be stepwise:

1. For the first £2 billion: a large number of small, relatively cheap projects aimed at local safety schemes, smarter choices, cycle improvements and some quality improvements to bus services.

2. For the next £2 billion: the next best value for money could be obtained from some remaining bus, cycle and smarter choices projects, one or two tram systems, the first tranche of spending on ISA (speed limiters), and the best of the Highways Agency schemes.

3. Spending at greater levels than this brings in the next tranches of spending on ISA, some local roads schemes, and more tram schemes. With some caveats, the bank of data from past benefit-cost appraisals suggest, at face value, that there is closer competition among a mix of bus, tram, local road schemes, highway agency schemes and national rail schemes: under each head, there exist schemes which are better than the worst ones under other heads, and deserve higher priority.

In conclusion:

- headline benefit:cost ratios don’t tell the whole story on value for money, and will have biases towards major road schemes, especially in the South of England
- full assessment, including of the strategic case for projects, is needed to get a full picture
- once a full range of factors are taken into account, public transport and small scale projects perform well in economic terms
4. Conclusion: where do we go from here

This briefing has suggested that:

- there are a number of ways in which transport measures can help promote growth in the economy, and especially growth that is sustainable

- the biggest short-term benefits come from improving the existing transport networks, especially increased road maintenance, improvements to local public transport, rail upgrades and cycling projects. There are a number of 'oven-ready' schemes in these categories

- capital spending is only part of the story. The availability and affordability of local bus services is important to give people, especially those without cars, access to employment, education and training. Bus services have been cut and fares increased as a result of various cuts and changes in bus funding. In addition, local small scale sustainable travel measures, and measures such as better information and smartcards that join up transport services and providers, will also be good value for money and help economic efficiency

- by contrast, major road schemes will not in practice promote growth, and face significant delivery problems and cost overruns. Headline positive benefit:cost ratios for roads do not tell the full story, and other measures perform better when a full range of factors are taken into account

If Government wants to pursue the projects suggested here, there are a number of immediate opportunities available.

The ‘development pool’ of local authority major schemes

The Government is considering proposals for 45 major transport schemes from local authorities. Known as the 'development pool', decisions are expected shortly. The DfT budget for contributions towards these schemes amounts to £600 million; the final bids for the 45 schemes came in at £1.2 billion. However, four road schemes in this pool account for nearly 40 per cent of the bid total. These schemes, which face significant local opposition, are:

- the South Devon Link Road (Kingskerswell Bypass)
- the South Bristol Link Road
- the Norwich Northern Distributor Road
- the Bexhill-Hastings Link Road.

There are a number of reasons why we believe these schemes are not justified, face delivery problems and should not be funded. If the Government were not to fund these schemes, much of the rest of the pool could be funded, including high quality public transport schemes supporting growth in conurbations such as Greater Manchester, Leeds, South Yorkshire, the West Midlands and Bristol.

Integrated Transport Authorities

The ITAs, which cover the six conurbations outside London, are single-purpose transport authorities with a track record of delivering public transport investment. Many of the schemes listed in the first section are 'oven-ready' ITA schemes, which could be delivered with special funding for them.

Rail schemes

The rail schemes listed could be progressed, as previous additions have, by asking the relevant players in the rail industry to add them to existing programmes, such as the National Stations Improvement Programme, 'Access for All', the North West electrification scheme and the Strategic Freight Network. Train refurbishment
could be negotiated with the rolling stock leasing companies (which have already proposed some of these ideas) and train operators.

The Government can also use the Rail Policy Command Paper, now due in the New Year, and the High Level Output Specification for the next railway Control Period, due in July, to support longer term rail investment, both by train operators and Network Rail and by others such as local authorities, devolved Governments and private sector.

Road maintenance and local transport schemes
Extra road maintenance can be funded via local authority road maintenance capital funding, which is a DfT programme. Similarly, there is an ‘integrated block grant’ which could be boosted and could fund small scale capital schemes. Further local sustainable transport schemes are also in the pipeline - the Local Sustainable Transport Fund will in December be receiving bids for major (up to £50 million) projects from 13 areas, with decisions due next May.

Local buses
As noted already, it would be possible to improve local bus services through changes in funding:
- holding off planned cuts in the Bus Service Operators Grant
- fully funding concessionary fares schemes
- adding to council revenue funding, as was done in relation to household waste collection

Other funding for bus travel targeted at specific groups, such as jobseekers and young people, should also be looked at.

Third Sector delivery partners
The Government should also consider using not-for-profit organisations to deliver local transport projects. These could include:

- Sustrans, the national cycle charity, which has regional offices and long experience of delivering local cycle and other infrastructure in partnership with local authorities
- The Association of Community Rail Partnerships, which brings together partnerships on local rail lines and stations and which has a track record of bringing disused rail buildings back into use and overseeing small scale improvements to local rail services
- The Community Transport Association, which is already involved in delivering extra community transport funding to local projects

Other national charities that have been involved in delivering local transport initiatives include Groundwork, which is involved in some rail station schemes, and Living Streets, which can deliver streetscape and public realm improvements. The Government should consider using such partners more strategically to deliver local transport improvements.

This means that, as already noted, there are clear delivery processes available for many types of transport projects that will support sustainable economic growth. We believe that the Government should take advantage of these and use its autumn statement and following weeks to authorise such projects.

November 2011
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Campaign for Better Transport’s vision is a country where communities have affordable transport that improves quality of life and protects the environment. Achieving our vision requires substantial changes to UK transport policy which we aim to achieve by providing well-researched, practical solutions that gain support from both decision-makers and the public.

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