



SUMMARY OF THE PANEL DISCUSSION

The Future of UK Infrastructure

This panel discussion was organised by DLA Piper UK LLP, and took place on 15 September 2021 at DLA Piper's London office (160 Aldergate, EC1A 4HT). The aim of the discussion was to look at the future of UK infrastructure, post-COVID and post-Brexit. This would include how the Government, in conjunction with the public and private sectors, can plan and pay for our infrastructure, the challenges of the Government's Build Back Better and Levelling Up objectives, and how we can do all this whilst achieving the green agenda.

The participating panellists were:

Rt Hon Jesse Norman MP, former Financial Secretary to the Treasury

Sir John Armitt CBE, Chair of the National Infrastructure Commission

Dr Gemma Tetlow, Chief Economist at the Institute for Government

The panel discussion was moderated by DLA Piper partners Howard Bassford (Head of UK Infrastructure, Construction & Transport) and William Naunton (Head of UK Real Estate).

Main points made during the panel discussion

Traditional and new infrastructure – where is Government policy taking us?

- When looking at the purpose of the UK Infrastructure Bank, not only were the types of infrastructure the UK wanted to support considered but also the goals that were trying to be met from a national public policy perspective. These goals include Levelling Up and Net Zero. By thinking in this way, a number of what could be considered non-traditional types of infrastructure came into the frame such as carbon capture and storage, electricity distribution, green hydrogen and so on.
- The UK Infrastructure Bank will create a pool of expertise that can work between Government and businesses, and can educate Government on where emerging areas of infrastructure will be.
- Traditional infrastructure will continue to be supported, as demonstrated by the National Infrastructure Strategy which contemplates around £600 billion of public and private investment, and also supports the goals of Levelling Up.
- The Government, working closely with the National Infrastructure Commission, is considering what the infrastructure of tomorrow will look like. Specific market situations and cities are also being considered.

“Overall, we are thinking about standard infrastructure. We have got enormous amounts of money going into railways and roads but we are also very much trying to attune ourselves to think about what the infrastructure of tomorrow is going to be ... it is an extraordinarily rich and interesting time to be in this area.”

— Rt Hon Jesse Norman MP

Are we investing enough, and in the right places? What should the Government be doing to spot its targets and meet its objectives?

- A large amount of the UK's infrastructure is invested in by the private sector, this makes us different to many other countries.
- The National Infrastructure Commission must be able to demonstrate that its recommendations to government are consistent with gross public investment in economic infrastructure of between 1-1.2% of GDP in each year between 2020 – 2050. This covers all sectors in the Commission's remit: energy; transport; waste; water and wastewater; flood defences and digital infrastructure. The rest, about 50%, comes from private investment, and Government policy influences the private sector.
- Our infrastructure is good, if you compare us to other countries, and the UK public believe the same, although many think of mainly transport when talking about infrastructure, whereas digital is becoming the ubiquitous element of infrastructure for the future.

“If you look at our infrastructure overall, I think we're pretty good compared with other countries and if you take public satisfaction with infrastructure services it is actually quite positive.”

— Sir John Armitt CBE

If we are looking at increasing infrastructure, are we looking at increasing the amount of investment from the private sector? How can the Government send clear signals to the private sector about what it wants?

- The Government needs to provide clear leadership, particularly in energy, which is complex and has the most challenges. For example, how can we convert domestic heating from gas boilers to heat pumps or hydrogen? To achieve this, private sector will need to co-operate with local authorities, agencies and so on. They will be significantly influenced by the structure put in place by the regulator as to how they will get their revenue streams back. This may require Government support as we have seen in off-shore wind, which has been highly successful.
- Fundamentally, with the decarbonisation of heat, this area is going to become more complex over the next ten years.

“The Government needs to provide good and clear leadership, particularly in energy ...”

— Sir John Armitt CBE

If we did need to change how our homes are heated, would this cost fall to the public? If so, what would this mean for an investor, especially if many people in the UK cannot afford it?

- It was suggested that, with regard to Net Zero, we do not have a clear sense of what the Government strategy is. We do not know who is going to pay for the adjustments needed to achieve Net Zero – will it fall to tax payers or be added to our consumer energy bills? Not knowing the answer to this makes it hard for the private sector to understand where their returns are going to come from.
- The Treasury is currently working on a paper which will outline how Net Zero will be paid for, it is important we see this as soon as possible, in order for the private investors to plan and to gain public mandate.
- If energy bills are increased, this is likely to affect those on lower incomes and if income tax is increased, this will most likely affect those on higher incomes.

“Particularly with the transition to Net Zero, we don’t have a clear sense of what the Government strategy is ... Parliament has passed the commitment to get to Net Zero but we don’t know who is going to pay for the adjustments needed to achieve it ...”

— Dr Gemma Tetlow

To achieve Net Zero there will be a need, from policy level to implementation, to look at skilling up – how can we do this?

- It is suggested that the many reversals of policy over the years, due to various Governments being in power, has not helped with skilling up. Some policies and strategies have been discarded which might not have been necessary. Similar policies are then brought out many years later, maybe we should continue with some policies.
- Without clarity of direction, it is hard for the private sector to plan and invest and to ensure that we have the skills needed and the technologies in place.
- With regard to Net Zero, it is inevitable that there is going to be policy change. It is an intensely dynamic market. Some initiatives don’t work and you need to move away from them and some do work but not at the price point you need to roll them out. There is often a complex set of competitive conditions and potentially competing interactions which come from parallel industries which need to be managed, especially in energy. This is before you reach the politics of trying to strike the right balance in an equitable way over time, in a non-regressive way, allowing for the political consent which democracies depend on.
- A Government cannot say who is going to pay for the transition to Net Zero over the next 40 years, although it might be able to identify investment periods for particular areas, to assist private investment, as demonstrated in the UK water industry.

“Without clarity of direction it is hard for the private sector to start putting the investments in place, making sure they have got the skills which will be needed and to start investing in the technologies which will be necessary.”

— Dr Gemma Tetlow

“It is inevitable that there will be policy change ... it is a very intensively dynamic market ... some things don’t work and you need to back off those and other things work but not at the price point you need to really roll them out, and there is an enormously complex set of competitive conditions and potentially competing interactions which come from parallel industries which need to be managed, especially in energy. That’s before you get to the politics of trying to strike the right balance in an equitable way over time, in a non-regressive way, so it allows to obtain that political consent which democracies rely on.”

— Rt Hon Jesse Norman MP

Are the measures which are being put in place such as apprenticeships, training and in education working?

- It was felt that the Apprenticeship Levy was not working as intended, and this was particularly evident in the construction industry. It was suggested that this sector is continuing to use the Levy with mixed results, while in some sectors much of the Levy is going unspent. It was acknowledged that government continues to tweak the scheme to try and maximise take-up.
- Since the introduction of the wider levy, we have seen a reduction in people coming forwards for apprenticeships. This isn’t because young people do not want to be an apprentice but because, for SMEs particularly, the bureaucracy around the apprenticeships and getting money from the system, is not worth it.
- 50% of our young people do not go on to university, they need good training in the right skills – we need to provide this.
- It is believed the UK has an over-academic educational system and we need to change this. There is too much focus on higher education compared to apprenticeships and further education.

- It was agreed that regeneration, growth, productivity enhancement and levelling up are more heavily correlated with skills than infrastructure. Skills are the essential counterpart to the investment needed in infrastructure.
- Structural reasons exist which hinder Government’s investment in skills such as it is often funded on an annual basis and you need to ensure money spent will be effective. For example, it is more apparent where the money has been spent if you can point at something you have built, for example, than to point at a newly trained workforce.

“Levies, training, apprenticeships ... they are still not working for all employers ... what has been disappointing but what I personally feel not surprising is that the levy is still not delivering in the way we need it to.”

— Sir John Armitt CBE

“Regeneration, growth, productivity enhancement and levelling up are more heavily correlated with skills than they are with infrastructure ... skills is the absolutely essential counterpart to the investment you are making in infrastructure.”

— Rt Hon Jesse Norman MP

We have been very good at inventing technologies in the UK but not very good at implementing or capitalising on them. Do you believe we can develop new technologies which are part of the new infrastructure required which could be exportable and therefore help self-fund private sector investment and benefit from Government priming new technologies?

- The UK could get itself into a good position, over the next ten years, with the technology development of hydrogen, particularly associated with carbon capture storage. There is no reason why the UK could not lead the world in carbon capture storage. Heat pumps could be another area, this area is accelerating and they are becoming cheaper.

- If the Government could set the standards it expects and its regulations for the next 20 years, this could be enough for a private investor to feel safe investing. It would send a clear signal to the market.
- The USA take more risks and is more successful than the UK at encouraging significant private investment. The UK could learn from them, although there are structural features about the UK which make it less effective such as the size of its domestic market, and its decline in 'industrial spirit' – more time and money should be given to developing new inventions.
- We are in a different phase of Government spending now – after the financial crisis Government investment spending reduced dramatically in order to get borrowing down. The Government spent money on day to day expenditure and private investment initiatives were attractive to the Government. Today, the Government is investing in infrastructure but being careful on day to day spending – they would find it hard not to invest in hard traditional infrastructure and cannot be seen to be frivolous and spend on skills, inventions etc.

“One of the most interesting areas is hydrogen and I would hope that, over the next ten years, the UK can get itself into a position with the technology development of hydrogen, particularly associated with carbon capture storage ... we ought to be able to lead the world in this area ... similarly with heat pumps ... we are talking about two world-wide markets.”

— Sir John Armitt CBE

“You can't pin down the next twenty years of how these things [i.e. hydrogen, heat pumps etc] are going to be structured and how they are going to work but one thing you can pin down are the

standards which you expect and the regulations which are going to be put in place for 2030 – if these are clear, a manufacturer will have time to invest and time to develop and will be ready for it. The Government can step in here and it will send some very clear signals to the market.”

— Sir John Armitt CBE

“We are in a different phase of Government spending now ... we actually had a period after the financial crisis where Government investment spending took a real hit and was really squeezed as a way of getting borrowing down, so in that environment Government had a real incentive to spend money in a way that looked like day-to-day revenue spending and private finance initiatives were really attractive to Government. We are now in an opposite world where the Government has a big amount of money available for investment spending but has tight plans on day-to-day spending. This makes it hard for Government ... spending money on skills and training, in order to make the capital investment work, may not be easily achievable.”

— Dr Gemma Tetlow

Can we discuss the housing agenda and what infrastructure is going to be required to support it? There is a commitment to building 300,000 homes a year. Most will be built in the South East where there is a shortage of housing. However, levelling up is needed mainly in the North. How do we correlate the two together and how do we ensure the right infrastructure is there to support the housing – the transport, the town centres, how do we regenerate towns?

- During the pandemic the Government has spent a lot of money on town centres, supporting retail, hospitality etc, especially with furlough.
- It is highly likely our towns will change in the future, we will see more housing, especially with neighbourhood development plans and 'change of use' rules coming in. More people will probably want to live in town centres, as we once did before the retail boom, especially as we get closer to achieving Net Zero.
- The South East has an unusual structure – much of the region is a transport area dominated by London, it has excellent commuter qualities.
- Towns and cities will require huge investment and continued leadership at the local level. Devolution was discussed and whether fiscal responsibility should be given to regions if they can demonstrate good leadership. The NIC has consistently been in favour of greater devolution of money. This would come with many responsibilities though, and can be complex and cause tensions i.e. who is responsible for what areas? The answer could be a balance of the two – a lot can be done on a local level with a small amount of money e.g. tens of millions each year, to enable them to carry out, over the years, a series of smaller projects. These would be easily identifiable and they should be able to take their electorate with them.
- The Government has been talking about giving regions more devolution as part of the Levelling Up agenda but no policies have been announced to date.
- Currently, local authorities bid for extra money from central Government funds (which can have narrow boundaries). Discuss if this uses up valuable council resource or does it allow councils to demonstrate their entrepreneurial spirit.

“Fiscal devolution sounds very attractive to local areas because it sounds like you just get more money but if you have tax raising powers, it also comes with greater risk as, if your economy does not do well, you will receive less revenue ... with more power comes more responsibility.”

— Dr Gemma Tetlow

There is an apparent paradox that we have a demand for housing in the South East yet levelling up directs infrastructure to the North – is the paradox real?

- The demand for housing is in the South East and London (there is a huge shortfall especially in affordable housing) and over recent years, the most money has been spent on infrastructure in the South, and future projects are planned e.g. Lower Thames Crossing. Yet, there are no large infrastructure projects planned for the North. Rail improvements are needed in the North and we may see plans for this in the Integrated Rail Programme which is due to be published this autumn.
- Levelling up is not only about infrastructure, social and economic issues are more important. For example, if you are an investor, the skills, the quality of education and nature of the community in a region will probably be top of your agenda.
- The Towns Fund is interesting as the institutional requirement has been to build a board alongside the council, which is privately and voluntary sector led, which can then become the entity through which other ideas and plans can be developed and other funds raised, so it has a very interesting institutional counterpart. There is a place for this, it rewards energy, drive, entrepreneurship and leadership.
- Other forms of localisation such as Enterprise Zones, have done really well if they have had good leadership. Freeports are also likely to do well, if they have good leadership (the drive and energy behind a number of them can already be seen).

“You need to be very careful, you need to put the resources where they are really needed, housing is incredibly locally political and is very difficult. The Government can’t make a decision about how many houses might be needed in an area or the type needed, the local authority needs to do this and involve its local people, and sometimes make tough choices.”

— Sir John Armitt CBE

Question from the audience

There are considerable challenges, particularly in relation to hydrogen power technology, with the related dependence on power distribution infrastructure managed by National Grid and local network operators. Relying purely on private sector co-operation is not going to bring this technology forwards in a timely manner. What steps are proposed to better manage this interface, and facilitate faster development of hydrogen plants by ensuring the necessary power network connections are available?

- There is a role for hydrogen in green heavy goods vehicles and the like. It is unlikely we will see much electrification in this area soon. However, there is a big issue about district network operators and getting power to where it is needed (the Government is spending a lot of money on this). The question of where you get the hydrogen from to support and permit that wider transfer is a much bigger issue.
- We could debate blue and green hydrogen, are we going to get it from surplus electricity from renewables or are we going to take it from methane and to what extent are we prepared to have a mix? These are challenges for the next few years. This is why we need good leadership from Government and the private sector will come up with a solution. For example, the Government has provided a steer to the private sector with its target of installing 600,000 heat pumps in UK homes, each year, by 2028.
- The time frame we are operating in now is extremely short, to meet Net Zero by 2050, and is going to be incredibly difficult to achieve. We can only achieve it by Government and industry working together.

- Digital infrastructure is ubiquitous across everything now, including in levelling up. 5G is going to have a massive part to play. This has been a recent success – the Government and Ofcom and the industry have worked together to speed up the roll out of fibre. Tackling our heat issue is a lot harder but this shows the Government and industry can work together well, and we can learn from this.

“The time frame with which we are operating now is extremely short. Net Zero by 2050 is a fantastic ambition but it is going to be incredibly difficult to achieve ... we will only achieve it by Government and industry working together well.”

— Sir John Armitt CBE

Will 5G and fibre be eclipsed by satellite broadband?

- Government policy is currently focused on deploying gigabit-capable networks in the hardest to reach parts of the country. However, some places are more remote than others, and the government is exploring the barriers to improving broadband in these locations and how new technologies, including satellite broadband, might help change this. Fibre is cost-effective, relative to digging the hole which is expensive, and we are now catching up in this area with other countries around the world.

What sort of economic strategy do you think the Government should adopt in relation to infrastructure?

- The Government has a difficult balancing act – it needs to create the conditions for the best technology to emerge naturally rather than trying to pick a winner when it is unclear, but you often get to a point where the Government does need to decide which is the leading technology and back it. Off shore wind is a successful example of this. The UK needs to look at what is going on in other countries too, we should choose methods which complement what they choose.

Is it also about consistent policy. For example, we have already had a go at carbon sequestration in the early 2010’s and the initiative was abandoned. How do we maintain consistency, messaging and funding for projects?

- The carbon capture storage project was lined up and the money was pulled in 2015. Government was criticised for this, but maybe it was the correct decision as it would probably have needed heavily subsidising (as similar projects in the world are) and by not spending the money on this project, has enabled the UK to spend it elsewhere.
- Hitting the right point in the S curve for these different technologies is fundamental. A good example would be photovoltaic cells – they used to be very expensive but have now reduced in price by 99%. Government should carefully consider what the take off point is and how early they can invest in order to capture the maximum industrial gains as well as the maximum carbon benefits. The UK Infrastructure Bank should help with this, as it will be operating in a commercial manner.

Is this a way of circumventing the issue of policy changes when you have Government changes, as infrastructure project decisions are taken over a 20, 30, 40 year life span? The UK Infrastructure Bank could take a long term view.

- The UK Infrastructure Commission and the Infrastructure and Projects Authority have built structures of regulation into industry which are relatively politics-proof. This should protect, to a point, any huge changes a new Government may

Key messages from our panel discussion:

- The critical nature of skills.
- The importance of devolution – will it be real, will it be fiscal?
- How do we access the wall of capital which we know is out there?
- The importance of Government expenditure on business as usual as well as capital projects.

Question from the audience

A commitment has been made to end the sale of new petrol and diesel vehicles from 2030. What are the thoughts of the panel on progress being made to roll-out electric vehicle charging points infrastructure across the country in time? Will we see installation activity akin to the conversion from town gas to North Sea natural gas in the late 1960's and early 70's?

make. An example of this would be having PFI in the hospitals sector – this was a huge policy change, at the time of a Government change. Investors do need security when they make their investment.

- The Government has made a few recent announcements on this, particularly about speeding things up. For example, motorway service stations will have at least 6 ultra-fast charging points, all new build houses will have charge points and developments/apartments must have charge points (a percentage for how many properties are built). Local planners can make a real difference here.
- Deciding to buy and own an electric car is, for many, an emotional decision too. People worry about running out of power, even though the majority will be able to charge their car at home and the average journey is only 30 miles.
- The good news for private investors is that they know 2030 is a cut off and new petrol and diesel cars can no longer be sold. The Government needs to find the mechanisms to ensure the private sector invest at the speed which is required over the next ten years. We can feel optimistic we will achieve our target as people will not avoid the opportunity of a market.

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