

Treasury Committee

Oral evidence: Infrastructure, HC 250

Tuesday 14 November 2023

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Members present: Harriett Baldwin (Chair); Dame Angela Eagle; Drew Hendry; Siobhain McDonagh.

Questions 1 to 119

Witnesses

I: Sir John Armitt, Chair, National Infrastructure Commission; James Heath, CEO, National Infrastructure Commission; Nick Smallwood, CEO, Infrastructure and Projects Authority; Stephen Dance, Head of Infrastructure, Infrastructure and Projects Authority.

Examination of witnesses

Witnesses: Sir John Armitt, James Heath, Nick Smallwood and Stephen Dance.

Chair: Welcome to the Treasury Committee session on infrastructure. Can I please start by inviting our witnesses to introduce themselves, starting with you, Sir John?

Sir John Armitt: I am Sir John Armitt, chairman of the National Infrastructure Commission.

James Heath: I am James Heath, chief executive of the National Infrastructure Commission.

Stephen Dance: I am Stephen Dance, director at the Infrastructure and Projects Authority.

Nick Smallwood: I am Nick Smallwood, the chief executive of the Infrastructure and Projects Authority.

Q1 **Chair:** Thank you so much for being here today. Infrastructure is such an important topic. Everyone says that one of the keys to improving the growth and productivity of the UK economy is improving our infrastructure and yet we have this reputation as a country of having very expensive infrastructure and being very slow at delivering it.

I wondered whether you could start by telling the Committee what role



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your organisations play in getting us to a better place in terms of infrastructure.

Sir John Armitt: Our role is to look forward 25 or 30 years and, against a remit from the Government that is driven by economic growth, to ensure that that growth takes place across the whole country, to do that in a sustainable way, recognising the obligation we have to achieve net zero by 2050, and essentially also to try to raise generally the quality of life in the UK. Those are the criteria to which we work.

We are then given a fiscal remit by the Government. Government expenditure within infrastructure should be contained between 1.2% and 1.3% of GDP. We are looking at the long term and saying, "These are the policy issues that need to be addressed to deliver the infrastructure required".

Q2 **Chair:** That is your remit. Does the remit of the Infrastructure and Projects Authority align with that?

Nick Smallwood: Our remit is captured in the mandate on GOV.UK. It primarily focuses our efforts on administering the Government major projects portfolio. That is supporting all the complex, challenging, novel and contentious major projects and programmes, the majority of which are infrastructure projects. We carry out the stage gate assurance reviews on those projects, and we provide advice and support to the Departments that are accountable for delivering those projects.

In addition, we also support the function of project delivery across Government. I have a small team who provide all the training, support and guidance to the individuals delivering projects.

Q3 **Chair:** How do both of your organisations work together in terms of scrutinising Government-funded infrastructure projects?

Sir John Armitt: I would not use the word "informal", but, fundamentally, the four of us meet together every month and talk about the issues we can see from our different perspectives. We exchange knowledge and information about how we see the challenges. There is no formal connection.

Q4 **Chair:** You meet once a month and you look at projects. Nick, you specifically used an interesting word: "contentious". Is it only the contentious infrastructure of projects that come to your organisation?

Nick Smallwood: No, it is those that meet the criteria for going on the Government major projects portfolio. This could be a project that is above the delegated authority of an individual Department, has novelty in its technology, is contentious from a planning or delivery point of view, is extremely challenging or requires enduring financial commitment. The criteria are set by the Treasury. If it meets those criteria, it becomes a GMPP project. Then it is exposed to our assurance and advice.



We do give Treasury input after Sir John's team have delivered their national infrastructure assessment. We sit with Treasury and give our advice and opinion on that assessment on how we should deliver. That ultimately gets translated into what is called the national infrastructure strategy. The last one was published in 2020.

Q5 Chair: Sir John, your organisation was set up about a decade ago to try to improve the country's track record in terms of delivering long-term infrastructure. How is that going?

Sir John Armitt: We were set up, yes, in particular to try to achieve consensus so we did not get wild swings of policy between different Governments. We try to ensure that, when proposals are brought forward, we have road-tested them with all the stakeholders, including different political parties.

We do that every five years; it is every five years that we produce this long-term forecast. As Nick has just said, in 2018 we produced the first one. That resulted in the national infrastructure strategy, or NIS, two years later.

In between times, the Government, normally the Treasury, will ask us to do specific pieces of work on particular issues that are concerning them. The last one we published, in April, was on the planning system. We were asked to have a look at the challenges surrounding the planning system and why that is potentially causing delay in the bringing forward of major projects.

Q6 Chair: In the decade you have been in existence, can you point to some major ways in which the existence of the organisation has improved infrastructure delivery in the UK?

Sir John Armitt: We were very clear on the importance of the rollout of gigabit broadband and the digital rollout. That was running at about 5% a few years ago. Now 75% of homes have gigabit access. That has been a success, I would argue, between DCMS and the private sector, which essentially deliver this together with the regulator Ofcom.

We recommended setting up a national infrastructure bank as a consequence of coming out of the European Union. The EU used to provide funds towards infrastructure, so we said it would be useful if we had an infrastructure bank in the UK. The Government have set that up.

Of course, we were very strong on the importance of renewable energy going forward in order to meet our net zero challenges. In fact, we have seen a very significant take-up in offshore wind and solar to the extent that, on a good day in terms of weather, as much as 70% of our electricity can come from renewables. Those are some of the successes.

Q7 Chair: These are some of the things in your vision where you have played an active role as an organisation in making sure they were on track and publicising the need for them. Generally, you regard them as



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things that have been successfully implemented or are on track to be.

Sir John Armitt: Yes, we provide the vision. We provide the long-term strategy. We say, "These are the things we need to achieve over periods of time".

On water, for example, we identified the need to get to a point where we have an extra 4 billion litres a day by 2050. We said that that could be achieved in three ways: by cutting down leakage from the existing system, by creating new capacity for the supply of water, or by reducing consumer demand.

That has been taken up by industry. It recognised that need, particularly on leakage, and set forward programmes to reduce leakage. Capacity is a more challenging issue for industry. We will get involved in the planning process because of the scale of some of the reservoirs that will need to be built. On behaviours, that went back last year. We were running at 140 litres per capita per day; it has increased to 150. That creates another series of questions and challenges possibly around the pricing structure of water.

I would argue that 80% of what we have recommended has been accepted by Government.

Q8 **Chair:** Have we built any reservoirs? No.

Sir John Armitt: We have not. To build a reservoir, you are probably talking about 12 years, with two years to fill it up at the end. You have to go through extensive planning issues. There has always been resistance. We have not built a reservoir since the mid-1980s. For example, a new one out to the west of London near Abingdon has been on Thames Water's wish list for a very long time, but it has been met with resistance both from Government at times, through the Environment Agency, and from people in the area.

One of the key challenges that we are addressing—it was a reason for our report back in April—was the recognition that at the moment the planning system for nationally significant projects is not working as well as it did when it was first introduced in 2010. The amount of time taken has gone up by at least 60% and the number of judicial reviews has gone up fivefold. There has been a massive increase in judicial reviews. That all tends to hold up the process of getting consents.

Q9 **Chair:** There was nothing in the King's Speech that addressed any of these points you are making.

Sir John Armitt: No, not that I recall.

James Heath: There was nothing in the King's Speech on further planning reform, no.

Q10 **Chair:** No, or on any of these important issues.



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I now want to move on to the highest-profile infrastructure project that we have recently gained an international reputation for not delivering, which is the northern leg of HS2. Can you go through your involvement in that decision taken by the Prime Minister, Nick?

Nick Smallwood: We gave stage gate advice at the time the final business case was presented.

Q11 **Chair:** When was that?

Nick Smallwood: That was in 2019. That is the point at which the estimate of £44.8 billion was tabled to deliver phase 1. We recognised at that time that there was a risk because it is the first of its kind. It is the fastest railway ever. It has significant cuttings, longer tunnels and lots of environmental mitigations that were built into its scope. It was a challenging project to go forward.

We have had concerns about deliverability consistently; maybe I can invite Mr Dance to talk about some of the detail. Our last two stage gate assessments have resulted in a red RAG rating. I can tell you a little bit about what that means going forward.

Q12 **Chair:** I am all ears, Stephen.

Stephen Dance: We could talk for a long time about this so I want to make sure I try to answer your questions directly. From an IPA perspective, the cancellation of phases 2A and 2B was not a thing we were advising Government about. That was a Government decision. It was a policy-based decision. That was not a decision the IPA was involved in or consulted about.

Q13 **Chair:** You are not consulted at all about this major decision.

Stephen Dance: Yes, that is correct, though I would also say this. As Nick has quite rightly said, we have been looking at the estimated costs and the programmes for phases 2A and 2B for some time. We have continued to express concern around the costs and the way in which the lessons from phase 1 might be translated into phases 2A and 2B.

Q14 **Chair:** Is this what you would have said, if you had been consulted?

Stephen Dance: No. Let me just be clear, Chair. We were not consulted on the policy decision to cancel phases 2A and 2B. We have been involved while those projects were proposed to come forward. Phase 2A would have come forward for construction over the next two years or so, and phase 2B would have come along thereafter. The timing is slightly uncertain because the Government had taken some delay decisions before the announcement to cancel.

Q15 **Chair:** You are Government. This is why I am not really understanding why you were not involved in any of these decisions. Are you not the group in Government that is meant to be really across the detail here?



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Stephen Dance: We do not take policy decisions. In this context, our job is to advise the Government on the deliverability, the commerciality and the way in which policy gets delivered.

Q16 **Chair:** What was your advice, then? You were asked for advice.

Stephen Dance: Yes. I might pass you back to Nick to explain the red rating.

Chair: You were not consulted, but you were asked for advice.

Stephen Dance: That is correct, but not on the decision to cancel. It was on the deliverability of the proposals that were out there, because it was only two months ago that the decision to cancel was taken. The project had been running for some years before that. We have been advising on that during that time. Nick, do you want to say what it means for a project to be rated red?

Nick Smallwood: We changed our assurance ratings two years ago to bring laser clarity to the deliverability of a project. We went from five RAG rating colours to three. In green, you essentially have high confidence that you will deliver all the promises, so cost, schedule and benefits. In amber, there are risks and there are risk-based actions that need to be taken to ensure a higher level of confidence in deliverability. In red, we have no confidence that you are going to deliver on the cost, schedule or benefits that were stated in the business case.

That is important because it means that you have absolute clarity on what needs to be done to fix the project. In the case of HS2, we have done that. We also do a follow-up with various projects, which we call the after-action review. If you get a red rating, 12 weeks later we will revisit a project to see whether the necessary actions have been taken.

We have been extremely successful in that programme. Seven in 10 projects have moved from red to either amber or green. It is much more challenging with a project the size of HS2 because the company itself took the decision to reset the project and programme for phase 1. That work is ongoing as we speak. Sir Jon Thompson is busy looking at what needs to happen to keep within the envelope.

Q17 **Chair:** I want to go back to this advice you were giving on the sections north of Birmingham.

Nick Smallwood: That was ongoing advice to the Department for Transport.

Q18 **Chair:** Was it always flashing red?

Nick Smallwood: We have given a red rating for phases 2A and 2B for the last 12 months or so.

Stephen Dance: Before that it was amber.



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Q19 **Chair:** It was always amber, and then it flashed to red 12 months ago.

Stephen Dance: Yes.

Q20 **Chair:** What happened that made it flash red?

Nick Smallwood: It was due to the experience of phase 1 and the significant cost impact from inflation. In one year alone there was 26% material price inflation. We are now seeing labour inflation costs come through. The cost premises for the later phases will be impacted by those inflationary pressures.

I have seen a significant extension of design duration on projects as a result of hybrid working. When you had designers in one office all working collaboratively together, the durations were pretty normal. What we have seen post-pandemic is a nine to 12-month extension of those durations. That translates into cost and delay.

Q21 **Chair:** Are you talking about working from home slowing things down?

Nick Smallwood: This is about designers working from home.

Q22 **Chair:** Designers working from home is slowing down HS2 and has moved it into red.

Nick Smallwood: It is slowing down all infrastructure projects.

Chair: This goes across all infrastructure projects.

Nick Smallwood: They are all impacted in the design phase, if those designers do not work directly in the office.

Q23 **Chair:** There was a moment when you went from amber to red in your advice. Can you remember what the date of that was?

Nick Smallwood: We would have to look at the date of the review.

Q24 **Chair:** Could you follow up in writing to the Committee on that?

Nick Smallwood: Yes.

Q25 **Chair:** Then what happens? Who suddenly takes note, sits down with you and goes through what you have just looked at?

Nick Smallwood: Our advice goes to the senior responsible owner in the Department, in this case Alan Over, and the accounting officers.

Q26 **Chair:** This is in the Department for Transport.

Nick Smallwood: Yes. The Department for Transport holds accountability for the deliverability of the project.

Q27 **Chair:** There is continuity in that post.

Nick Smallwood: Yes.

Q28 **Chair:** You do not know what happens after that or whether that then



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gets escalated.

Nick Smallwood: We do, if we follow up with an after-action review. We would have that conversation. If it is still red, we would agree a timeline to take further actions. In the case of HS2, there is not a quick turnaround with a major scheme of that nature.

If you look at Ajax, which was a defence project, it took 18 months for it to move from red back to amber, with lots of interventions. HS2 is of a scale that means it is going to need the same kind of reset in terms of the order of magnitude and the duration to turn it around.

Q29 **Chair:** “Turn it round”—but it has been cancelled.

Nick Smallwood: I am talking about phase 1.

Q30 **Chair:** So phase 1 is flashing red.

Nick Smallwood: Phase 1 is flashing red.

Q31 **Chair:** The main things that have caused it to be red are designers working from home—

Nick Smallwood: Yes, and the inflationary pressures on material and labour.

Chair: —and the inflationary pressure on material inputs.

Nick Smallwood: I would also suggest there was an underestimation of the scale of the design work necessary to deliver the project, as it was first of its kind.

Q32 **Chair:** That must have been right at the beginning.

Nick Smallwood: It was underestimated at the beginning.

Q33 **Chair:** There are allegations in the press that the company itself was hiding the scale of some of these cost issues. Is it not your job to try to get to the bottom of those things?

Nick Smallwood: We only have the material and data have made available by HS2 Ltd. We have the same data the Department got. We did our analysis on the basis of that data. If material was not included—

Q34 **Chair:** Do you audit that data when it comes in?

Nick Smallwood: I would not use the word “audit”. I would say we reviewed that data.

Q35 **Chair:** Just so I understand, you reviewed that data, but you were given data that has subsequently turned out to be incorrect. The company was giving you data that has subsequently turned out to be incorrect.

Nick Smallwood: That is not entirely correct. What are appearing are a number of potential contractor claims that were not in the monthly



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report, which we would not have known about and we are now seeing creep out. Our concern was primarily on the basis of the cost forecasts.

The cost performance index and the schedule performance index were significantly below one. That is a measure of your efficiency of delivery. If you are 15 percentage points below one, that means you are going to take 15% longer to deliver. That was where our concerns were really focused.

There was a promise from the company that it was going to revisit the cost and schedule and come back with an improvement plan. It has really not yet demonstrated to us that it can deliver the cost and schedule.

Stephen Dance: Could I add a bit more colour to what Mr Smallwood has said? We did get the management data from HS2 Ltd and we challenged it in the way Mr Smallwood has explained.

I have just looked at my notes. It was 12 months ago that the project went red; it was Q4 2022-23. We can write and confirm that that is the case. The reason is really that we were concerned that both the cost and programme were no longer going to deliver the outputs within that cost envelope and programme envelope.

There were quite a lot of detailed reasons why we considered that was likely to be the case. Some of them Mr Smallwood has mentioned. Others included the fact that the detailed design of elements of the first phase of the project, which is currently in construction, have still not been completed.

In terms of phases 2A and 2B, the cancelled phases, those were quite a long way still in the future. We had time to reset those, had we wanted to do so and been able to do so. I believe we could have and would have been involved in doing that, had the decision not been taken to cancel those projects.

This is not a case of saying, "It was red and nothing was going to happen about it". It was a case of saying, "It is red", and the process that Mr Smallwood referred to was being taken forward. Those discussions were happening with the company. We were talking to it about how we get costs down or at least get the costs and the programme to be estimated properly in order to take those phases forward. The decision was then taken to cancel, which meant we were no longer involved in those discussions.

Q36 **Chair:** Just for clarity, the first phase is currently still red. Are we ever going to get the line from London to Birmingham?

Stephen Dance: I would say yes. It is being built as we speak.

Q37 **Chair:** We will be able to ride on it in our lifetimes—our actuarially predicted lifetimes.



Nick Smallwood: I certainly hope so.

Stephen Dance: I hope so, for all our sakes.

- Q38 **Dame Angela Eagle:** Just sticking with HS2 for a minute, we are in a situation where, before the whole world, we cannot deliver a project from start to finish that was trumpeted when it was announced as being absolutely crucial. We will end up delivering high-speed trains, if phase 1 happens, only to Birmingham and not to any of the areas of the north, which I seem to recall were instrumental in delivering most of the benefits in the original plans. Why was it not started in the north rather than the other way around?

Stephen Dance: I do not think any of us on this panel will know the answer to that, unless Sir John does. I certainly do not.

- Q39 **Chair:** Let us bring in Sir John and Mr Heath, then, on the HS2 saga. It is clear from the work you have done over the last decade that you think it is important that we have better connectivity between our great cities. It cannot be very reassuring for you to hear the evidence we have just heard about HS2.

As you say, you think the country should be spending 1.3% to 1.5% on infrastructure. We are not getting the output from that spend at the moment. Sir John, what are your observations on this whole saga?

Sir John Armitt: Major projects have always had these challenges, not only in the UK but around the world. Academics have written books on major projects across the world and have found these sorts of issues in many countries. This country is not alone in that.

We were not alone in it 170 years ago. When Brunel was building, he very often frustrated his shareholders because of late completion, extra costs and extra funds needing to be found from the shareholders to meet the cost of the railway programmes, particularly, which he designed and supervised the building of.

Very often on these projects you do not have all the information when you start. You cannot know exactly what the ground conditions are going to be on the whole of the route. When the initial estimate is made, very often you do not know, particularly these days, the extent of the mitigation that you may be required to design in or the amount of tunnelling you will be required to include as opposed to running on the surface because of environmental considerations.

The hybrid Bill process allows people, through their legal representation in the process, to ask for changes, and those changes can be granted in the hybrid Bill process. If you have to tunnel rather than running on the surface, for example, that will lead to significant increases in cost. Your original budget is under challenge from the day you publish it. One of the difficulties is that people always want to know what it is going to cost.



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The conclusion about what it is going to cost is made before you have a full understanding of what you are going to physically build.

- Q40 **Chair:** You mentioned international comparisons, but you have to acknowledge that the UK does seem to be disproportionately expensive and liable to breach cost envelopes. You have to acknowledge that.

Sir John Armitt: This is particularly the case for rail. You will see a significant difference between the cost per mile of a high-speed rail line in Spain, France and the UK. You have to be absolutely sure you are comparing apples with apples. It is much cheaper to build a high-speed railway line across the plains of France than it is to build one between Euston and Old Oak Common or, indeed, through the Chilterns because you will have a lot less tunnelling in the flat and low-housing-density areas in Europe.

Spain now has the largest length of high-speed rail, and it is the cheapest. Part of that will be due to the fact that, if you are churning out hundreds of kilometres of high-speed rail each year, you become very slick at it. You can get the costs down and you can get the design refined to a point where your unit costs become a lot lower.

- Q41 **Chair:** It has been alleged that we rather over-specified something that was absolutely at the cutting edge when something somewhat more functional would have done the job. What do you think about that?

Sir John Armitt: I tend to agree with that. It was decided that the railroad should run at 450 kilometres an hour initially. That is faster than any high-speed line in Europe. The Eurostar, which is designed for 300 kilometres an hour, does not travel at 300 kilometres an hour. I have been in the cab across to France. It runs at about three quarters of that speed because that is the optimal energy take. In order to keep the operating costs down, you run the train slower, but the passengers are happy with the duration of the journey, so it works. You can keep your operating costs down whilst not using the full speed capacity of the line. There was an ambition here and one could ask, "Was this overambitious?"

- Q42 **Chair:** Was it the National Infrastructure Commission's ambition?

Sir John Armitt: No, it was not ours at all.

- Q43 **Chair:** Who had that ambition? It has ended up with us over-specifying—it is much too expensive and far too difficult to deliver, and we might end up not delivering it—compared to other European countries.

Sir John Armitt: That decision would have been made within the team that was set up in the early days of HS2, working with the Department for Transport. This was owned by the Department for Transport. It set up a company called HS2 Ltd, which was then charged with delivering the project.

- Q44 **Chair:** At some point it made the decision to be very ambitious on the



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speed, the cutting-edge technology and all the rest of it.

Sir John Armitt: It makes all the specification decisions.

Q45 **Chair:** Have you ever raised concerns about that in your reports over the last decade?

Sir John Armitt: No, because we are not required to. We came into existence after the decision to build HS2 had been made. We have supported it since we came into existence on the grounds that it was going to enable economic growth, particularly in the north, connecting into Manchester, Leeds and so on, and connecting Birmingham to Nottingham. There were a whole series of benefits from intercity connectivity, which drives economic growth.

Q46 **Chair:** Would it have been completely out of scope for your commission to mention concerns about the fact that you thought it might have been slightly too ambitiously specified?

Sir John Armitt: When it was specified, we did not exist.

Q47 **Chair:** I understand that, but you have published reports since you came into existence.

Sir John Armitt: Yes, but I would argue it was outside of our scope to comment on the technicalities of the project at that stage.

Q48 **Chair:** Was it outside your scope at the Infrastructure and Projects Authority to raise concerns about the fact that you thought it might have been too ambitious and too cutting edge?

Nick Smallwood: The first advice I gave was in 2019, shortly after I joined Government. I made the comment that it was probably overengineered and over-specified. To change at that late point, at final business case, means recycling. It means delays of several years and changing the planning applications. There would have been a cost saving and a cost penalty of doing that. The advice we gave was probably to carry on.

Q49 **Chair:** What year are we talking about there?

Nick Smallwood: That was 2019. My experience of these novel first-of-a-kind projects is that they almost invariably trend to a P90 cost envelope.

Q50 **Chair:** Please translate "P90 cost envelope". Does that mean there is a 90% probability that it will meet the cost envelope?

Nick Smallwood: If you have an equal chance of delivering a project and you are neither going to be overspent or underspent, that would be called a P50. There is a bell curve around the P50. Where you have a first-of-a-kind project, you typically do not have a bell curve. You have a skewed curve, which means the most likely outcome is going to be the



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P90, not the P50. That is just historic. It is on the basis that they are challenging and difficult to estimate, just as Sir John said.

Stephen Dance: It is otherwise known as “difficult projects always go up”.

Chair: We will no doubt come back to some of these themes, but I am going to bring in Dame Angela.

Q51 **Dame Angela Eagle:** I am just wondering about this. Clearly, you have to say whether a project is green, amber or red in the moment. If it goes to red, you have to do your best as it is going on to get it back down to amber and do all of those things, which is entirely understandable.

In an era of sudden increases in material costs, such as the inflation spike we have had, you are never going to be able to deliver a project that was costed prior to a completely unforeseen sudden increase in cost, which is exogenous to the project. Therefore, everything will go into red.

That is not a reason for abolishing all infrastructure investment, is it? Sir John is looking through the near term to the medium and longer term. If everybody were to take your red RAG signs literally, everything would stop by definition because it was too costly in the near term.

It seems to me that what you are doing is useful to try to keep projects on track if we are talking about endogenous issues, but you cannot blame anyone for unexpected exogenous cost increases. Therefore, Governments have to look through some of that and think more in terms of the benefits that will come from the infrastructure existing.

If Brunel had not been able to build these bridges or none of the railways had been made, we would still be using the canals. I suspect we are quite pleased—even though sometimes on Avanti West Coast it is very difficult to feel pleased—that Brunel and the Victorians delivered, even if it was over budget. Who takes that longer view rather than looking at the near-term red RAG ratings?

Nick Smallwood: We are moving in that space. We are looking specifically at how to do a better job of setting up projects for success in the first place, especially these longer-term projects. You still need to do a cost estimate. In my personal view, you should be looking at what the inflationary pressures are likely to be in the forward phase. You are right: you cannot predict everything.

Q52 **Dame Angela Eagle:** How about the benefits of having the infrastructure there for 100 years? Who is calculating that?

Nick Smallwood: Indeed, so increasingly there is really good guidance in the Treasury Green Book on doing not just a business case analysis—and, in the case of a railway, you calculate a BCR, which drives you to the fastest journey time—but also looking at the investment case from a social value point of view and a growth point of view.

Q53 **Dame Angela Eagle:** We do not have that in place—that is what you are



saying.

Nick Smallwood: We have, but we need to do a much better job going forward in that space. I do not accept that just because you see inflationary pressures you have to make a black and white choice of stopping or carrying on and accepting the cost. We are pushing very hard on the idea that you can introduce productivity measures, smart technologies and automated design. You can look at what you can do in the field to introduce new technologies in order to make yourself more productive and offset the cost pressures that come from inflation.

- Q54 **Dame Angela Eagle:** I do not disagree with that, but I am worried. Here we are. Sir John has to find ways—whichever Government it is, they should be spending about 1.2% or 1.3% of GDP—of looking through the near term to the next 25 years so we can be properly equipped with the infrastructure we need to be a functioning society.

If there is a sudden exogenous move that increases cost, all of the other analysis will be saying, “Stop everything now”. That is no way to proceed, is it?

Stephen Dance: Would it help to give a couple of examples? What you are, very rightly in our view, pointing to is what has happened when a flat cash settlement to Departments meets a situation in which the cost of delivery—

- Q55 **Dame Angela Eagle:** That flat cash reduces in real terms. It reduces more quickly in real terms if there is an exogenous shock.

Stephen Dance: That is correct. Therefore, all Departments are facing that problem: they can no longer deliver their programmes. Either they have to have more money to deliver what they said they were going to deliver or they are going to have to deliver less with the same money.

- Q56 **Dame Angela Eagle:** That wastes a lot of money that has already been spent.

Stephen Dance: That is a decision that the Government of the day can take, whether to give more money or borrow more money. It has to come from somewhere, does it not? Those are policy decisions, not our decisions.

The Infrastructure and Projects Authority’s advice on this is about making sure the projects we decide to build are properly funded and properly programmed so we can deliver them and we can deliver the long-term benefits.

- Q57 **Dame Angela Eagle:** I am actually worried that your red RAG marking—

Stephen Dance: It does not mean “cancel it”.

- Q58 **Dame Angela Eagle:** In all of these exogenous shock circumstances, the costs are going up and the resources available to meet those costs are going down. This is capital investment, remember. It is not current



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investment.

Stephen Dance: It is capital.

Dame Angela Eagle: This is capital investment. There is an argument for looking through the near term to try to deliver the benefits the infrastructure is designed to deliver in the first place.

Stephen Dance: There is; we would agree.

Dame Angela Eagle: I am worried that your assessments are not taking proper account of the future benefits that are being lost if things are cancelled.

Stephen Dance: If you take the roads programme as an example of this, being red does not mean, "You should stop". It means, "You need to reset your ambitions to be deliverable". Do not forget that these projects and programmes quite often take 10 years to deliver. If we are saying, "We think you can deliver this for X cost" and X suddenly increases by 30%, there is no point in kidding ourselves that we are not going to have to find the extra 30% to pay for it.

Therefore, provided that the extra 30% is found, the project can go back to green or amber, depending on the risks, et cetera. However, there is no point in us advising Government, "Do not worry. You can deliver this project", whether that is a road, rail or energy project, in a world where it is clearly not funded and they do not have the funding.

Q59 **Dame Angela Eagle:** I am worried about the benefits of infrastructure investment not being properly accounted for when those decisions are being made in a period of unexpected exogenous cost increase. That is what I am worried about. It may not be your role to have that view, but somebody has to have a view and an assessment of what the benefits of continuing would be and what you are going to lose if you cut or stop it. The money that has already been spent therefore becomes completely worthless rather than at least perhaps delivering an infrastructure improvement that we will benefit from presumably for years.

As an individual, I have been in Parliament for 31 years. It now takes me an hour and a half longer to drive to my constituency than it did when I was first elected because the road system is so awful and the congestion is so bad. If I try to get on the train, despite the welcome electrification of the West Coast Main Line, which happened a few years ago, we now have Avanti, which does not seem to be able to run the railways in a coherent manner not least because it has not trained enough drivers.

We are failing at all levels to renew and modernise our infrastructure. This is without the demands of net zero. It strikes me that 1.2% to 1.3% of GDP, when we have until 2050 to decarbonise everything, Sir John, is not really adequate. What do you think?

Sir John Armitt: Public expenditure only is really spent on road, rail and flood defence. All our other infrastructure is provided by the private



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sector: water, digital, telecoms and energy are all provided by private sector investors. Their willingness to invest—

Q60 Dame Angela Eagle: They are using increased bills to get customers to pay for the investment while delivering massive dividend payments to foreign owners. That is what you mean by that, is it?

Sir John Armitt: That is not what I mean by that. We made a decision a long time ago now, politically, that we would privatise these previously state-owned enterprises. People will point to the various benefits and difficulties that are the consequences of those privatisation processes. It is the regulator's job to make decisions around the impact on the consumer.

Dame Angela Eagle: I also have problems with how the regulation is being done.

Sir John Armitt: There is a criticism that says there has been too much focus on keeping the costs down, which has resulted in a lack of investment. The private sector cannot invest if it is being told by the regulator, "No, we do not want you to invest anymore because we want to keep the costs down for the consumer". You have this trade-off all the time between trying to keep costs down and at the same time, in these different sectors, the private sector investing for the future.

Q61 Dame Angela Eagle: Is 1.2% to 1.3% enough, in that context?

Sir John Armitt: The 1.2% to 1.3% of GDP investment only goes on road, rail and flood defences.

Q62 Dame Angela Eagle: How do you think that is going, given my own experiences of trying to use these infrastructures to get to and from my constituency?

Sir John Armitt: Those are invested in by the private sector.

Q63 Dame Angela Eagle: I am talking about roads and railways here.

Sir John Armitt: In terms of railways, the Government are in fact investing in infrastructure. The private sector invests in the rolling stock and in the service that is provided. The Government provide the infrastructure—the track, the signalling, et cetera—but the private sector buys the rolling stock. The private sector leases it to the train operators. The train operators then enter a franchise, which is let by the Government.

Q64 Dame Angela Eagle: I am well aware of that, but why is it taking me an hour and a half longer to drive up to my constituency on the roads that are meant to be being provided? Why are the train services that we all use day in and day out so inconsistent and so bad?

Sir John Armitt: The railways have been in trouble for the last couple of years as a consequence of industrial action. In fact, they have had a shortage of staff. Some of the operators were relying on overtime to



deliver the service that was required. If the drivers decide they are not going to work overtime, the operators cannot run the service they have previously agreed to run.

Q65 Dame Angela Eagle: What about the roads?

Sir John Armitt: On the roads, you just have increased demand. There is this vicious circle argument from some, which says that if you keep building more roads it simply attracts more traffic, and therefore you do not necessarily get the full benefit you are hoping from by investing in the roads.

That is why we have argued that it is very important to improve the public transport systems in and around our cities to reduce congestion in our cities. That is responsible for a lot of the congestion in getting from A to B. Particularly if you are driving out of London to get to Birmingham, it will take you twice as long to get to the M1 as it did 15 years ago. That is my own personal experience.

Q66 Dame Angela Eagle: It certainly does. I can attest to that—at whatever hour of the day or night you try.

James Heath: On the point about the funding we are proposing, in the national infrastructure assessment we are talking about a significant increase in public investment in infrastructure. Over the last 10 years we have invested on average about £20 billion a year in public infrastructure, primarily roads and railways. We are talking about increasing that to £30 billion a year, i.e. 1.3% of GDP, and sustaining it at that level for the next 10 to 20 years, which are not the current long-term projections for where public investment in infrastructure will be.

That would be a significant increase. Clearly, we need to spend that money well, but we are talking about a significant increase to deal with the challenges of infrastructure. Alongside that, we are talking about an even bigger increase in private investment. We are looking for private investment to materially increase over the next 10, 15 or 20 years in energy, water and digital.

Overall, we are looking at a situation of investment in economic infrastructure, both public and private, of around £70 billion to £80 billion per year for the next 10, 15 or 20 years versus the current position of spending around £50 billion. We are talking about a material increase in investment to deal with a number of challenges that you are talking about.

If you take transport as an example, the package we have set out would allow us both to invest significantly in our national road and rail infrastructure and to invest in local transport. It is not a choice between the two. We thought you could have invested in the integrated rail plan and HS2 in full as well as in increasing the transport systems of our major cities. Both of those were affordable within our budget, which was given to us by Treasury.



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Q67 Dame Angela Eagle: Can I just ask about water, flooding and resilience against flooding? Your national infrastructure assessment has recommendations on flood resilience, but it does not have any quantifiable long-term risk-reduction targets for flooding. With the changes to the climate, we see much more frequent flooding events. There is that phrase about things happening with a “100-year chance”, but those events seem to be happening every other month.

Sir John Armitt: We made a very clear recommendation in 2018 that in fact there should be national resilience targets for flooding, one for rural areas and another for urban areas. In fact, those have been rejected by Government.

To be fair to Government, they doubled for the next five years the amount of money being spent on flood protection at that time from about £2.5 billion to £5 billion for that single period, but we were saying that you need to set long-term targets to reduce the risk of flooding. The Government have said they do not like the idea of having national targets for this.

Subsequently, we have had discussions with them about agreeing levels of risk protection in different parts of the country according to different circumstances rather than having a single mandated level. That is where we are today. There is a recognition that we need to improve resilience and reduce the risk, but a single national level of improvement has not been set.

Q68 Dame Angela Eagle: Is it being set more regionally? Is it being palmed off to local authorities?

Sir John Armitt: Local authorities have their flood protection units. Yes, it would be a discussion—

Q69 Dame Angela Eagle: But national Government are refusing to have a single target.

Sir John Armitt: Yes.

Q70 Dame Angela Eagle: How might that affect what actually happens? Will people just not be able to check against a national target that the right amount of money is being spent? Will it make it more obscure to find out whether we are increasing resilience against flooding?

Sir John Armitt: It is like so many of these things. You need a long-term target, and then you need to set the investments that are going to be necessary to meet that long-term target and hold to that over a significant period of time.

That is the difficulty with all this major infrastructure. It can take anything from five to 15 years to plan and deliver, and sometimes even longer. It is about consistency of policy, which everybody in the infrastructure sector will call for. Against that policy, you need to have the consistent financial resource to deliver it.



If you are in the public sector, the Treasury will make the final decision. If you are in the private sector, investors will say, "Yes, there is a good certainty about the policy here. I know I will be able to make a return", and therefore they will invest. The less certainty there is around the policy, the more difficult it is for everybody to invest.

Q71 Dame Angela Eagle: The national infrastructure assessment notes the interdependency between different infrastructures. Do the Government have a good sense of that interdependency?

I remember we had a problem with a dam a few years ago. Just as the dam was nearly overtopped, there were problems with an electricity substation. We came very close to losing entire electricity infrastructures because of the weakness of the dam. That is one example of that kind of an interdependency. What is your view of how the Government are dealing with that interdependency with respect to climate resilience?

Sir John Armitt: Again, we have said that it is important that Government decide what level of resilience they require from the different sectors so that a sector can plan for that and say what it is going to cost. That then becomes understood. If I am going to meet that level of resilience in the future, this is what I need to spend. They would then come forward with how they are going to do that.

The regulator could require them to stress-test that in the same way as the banks have to be stress-tested, in an artificial sense, as to what might happen if something goes wrong in the financial markets that impacts their ability to be resilient as lenders and bankers. We think the same process should be applied.

It is very important, we would argue, that the Government are the only organisation that can make these decisions about the level of acceptable resilience. It is what is acceptable to the citizen, at the end of the day; it is what is acceptable to the voter. You say to the voter, "If you want 100% resilience and you never want to be flooded, that is going to carry a massive cost. Do you want to pay for that or do you accept a certain level of resilience? How many times every five or 10 years do you think you might be at risk of flooding?"

People need to be engaged in that conversation, quite frankly. It is not something that should be made in isolation.

Q72 Dame Angela Eagle: I am not sure I have ever seen a conversation like that happening, not only at election time—one would not expect it then—but at all. There is no debate. You see it occasionally when hotels fall into the sea off cliffs or something like that. Then there is a debate about whether one should give some land back to the sea because it is too expensive to try to prevent that from happening. That is just on the very edge of these debates. How can this debate be had?

Sir John Armitt: You have to be open about it. You cannot hold these discussions among experts in what used to be smoke-filled rooms but no



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longer are. You at least need to try to enable more of a public understanding and a public debate. At the end of the day, the public are going to pay for this. They are going to pay for it either as consumers or through their taxes. Arguably, they should be a party to the debate.

One that people probably find easiest to understand in their day-to-day lives is the water supply. Do you expect me to go down the street to a standpipe because there is a drought and we have not been able to create enough water to be able to meet drought conditions? In our estimation, if we looked at that over the next 30 years, it would cost twice as much to deal with that on an emergency basis than it would to invest in what is required.

Water is relatively cheap in terms of infrastructure services. It is one of the areas where we believe the costs to the consumer will have to go up over the next 20 years in order to meet all the challenges that we face around both stopping sewage fouling the coast and the rivers and making sure that we can resist the inevitable increased frequency of drought conditions that we have and, indeed, that we can deal with the excess. These days, we have either too much water or too little. We have to deal with both.

In all these issues, we are only doing this for the citizen at the end of the day, so citizens should be engaged in understanding, at least, as best as can happen in a democratic process, the inevitable costs of that. One way or another, they are going to be footing the bill. There is no magic money tree.

Q73 Dame Angela Eagle: In terms of water, you mentioned earlier that we could have shiny new reservoirs, but they are very difficult long-term infrastructure projects. However, they are projects that water engineers love. There is a bias towards building new infrastructure projects like that rather than doing the boring things like putting bricks in your cistern so that the flushes do not use as much water or mending the pipes so that one does not have leaks. Is there a bias to big infrastructure projects when these more workaday things could have the same effect?

Sir John Armitt: There is always a tendency to solve a problem by building more rather than changing behaviour, but behavioural change, as we have said, can contribute at least a third of the answer in the case of water shortages. That becomes a public communications exercise. That could be done by the water companies or you could incentivise people to use less.

I would argue that there comes a point, in terms of the number of litres you are using a day, at which you should not be paying a flat rate; you should pay an increased rate if you are quite happy to—

Q74 Dame Angela Eagle: The general water metering of the population will probably lead to a position where that might happen.



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Sir John Armitt: They are still paying a flat rate. They are not paying an increased rate.

Q75 **Dame Angela Eagle:** Yes, but one has to have smart water meters before you can apply those kinds of things. I would argue that we need to make people much more aware of what their usage is, which is why you need smart water meters.

Sir John Armitt: We have argued that meters should be compulsory.

Q76 **Dame Angela Eagle:** To what extent do you liaise with the regulator? In a lot of these utility areas where we have to have this transformation, you have pointed out rightly that it is private sector investment, but it is also very regulated. Therefore, that makes the behaviour of the regulators really important. To what extent do you get to liaise with them? Are they just a load of people over there doing their own economic analysis somewhere else?

Sir John Armitt: No, it is one of our key areas. We liaise with all our stakeholders, one of which is the regulator. James, do you want to pick up on this?

James Heath: We absolutely engage with the regulators in all our sectors, although the recommendations we make on policy change and regulatory change are to Government. It is then for Government to decide whether they want to apply those policy and regulatory changes to the regulators. We definitely communicate and engage with regulators, but our advice goes directly to Government rather than to the regulators.

Q77 **Dame Angela Eagle:** How do you find your relationships with Government Departments? You publish this national infrastructure report. You then pronounce in some ways on how progress is going, which I would have thought might irritate some Departments. How would you describe your relationship with different Government Departments? Which Department do you most co-operate with? I was not going to ask you to name names or to shame anybody, but since you laughed I might in a minute.

Sir John Armitt: We certainly have had a good relationship in the main with transport. It asked us to do a significant piece of work on rail. We did a thing called the rail needs assessment for the country, which fed into its integrated rail programme decisions.

Without doubt, the most complex and most challenging area is energy. Energy can be contentious because you have competing technologies. Therefore, we may have views about particular technologies that do not sit at the time with the thinking within BEIS. We will discuss that with BEIS and we will agree to differ at times.

We are independent. As far as we can, we try to reach some sort of agreement with any of the Departments because clearly when we then publish it has more chance of being picked up. The Departments will be



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saying to Ministers, "Yes, we think NIC has got this right". If they are saying to Ministers, "We think NIC has got this wrong", that clearly creates less likelihood of our proposals being taken forward.

Q78 Dame Angela Eagle: Do you find that you get second-guessed like that by Departments?

Sir John Armitt: We are bound to be second-guessed, yes. That is inevitable. You are second-guessed by both civil servants and political advisers to Government.

I have never made any bones about it: there is no infrastructure without politics. Politicians have to make the final judgments on decisions because they are making them on behalf of the voter. You cannot deal with it in a vacuum. You have to accept that it has to meet these wider challenges.

Q79 Dame Angela Eagle: Is there any way in which you think your powers or your ability to publish things for public scrutiny ought to be enhanced, which would make you more effective, or do you think that would just drive conflict where there is not any? You have been very deliberate in separating your job from the politics. That is widely understood and appreciated, certainly on this side of the table.

Sir John Armitt: The obvious change would be to make us statutory. We were created quite quickly in 2015, after the 2015 election, and there was brief discussion about whether we should be statutory. To be statutory would have required an Act of Parliament. Therefore, what Bill are we going to get this in? Is there parliamentary time? "Let us get this show on the road" was fundamentally the decision. "Let us make the organisation an agency of Government rather than a totally independent statutory body". The CCC, which is our sister organisation in a way, looking at very often the same issues, is statutory. Many people have said they think it would be beneficial and give us that extra degree of independence. In a sense, we would be reporting slightly more to Parliament than, rather than reporting as we do to Government. That would be beneficial.

Q80 Chair: Can I pick up on some of those very interesting areas of questioning? I am specifically taking the point of view of a constituency MP here. We have heard about Dame Angela's transportation issues. I am going to now air some of the woes that I have in my constituency on infrastructure. They are very much with these very big, national organisations. National Highways, National Rail and the Environment Agency seem to me, from the point of view of the constituency MP, quite slow, difficult to deal with and unmanageable when it comes to delivering infrastructure. They usually get there in the end, but I have some sagas.

For example, a pedestrian bridge in Pershore to go over the railway, 10 years on, has still not happened. On one of my National Highways roads, the A46, the speed alert site, which any parish council would probably get up in a few weeks, is still not done 18 months later. We have recently



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had some problems with the Environment Agency where it is trying to build two important new flood defences in my constituency, and it has only one firm on its procurement roster. It did not suit that one firm to deliver the project, so we have not been able to get it. The Environment Agency is going to have to now re-procure. It feels like procurement is too bureaucratic, too distant, too complicated and in a big, national bureaucracy. Is that something that any of you recognise?

Stephen Dance: Yes, both personally and as an official. It is difficult to respond to respond to individual things like that, and I am obviously not going to.

Q81 **Chair:** Do you have recommendations for improving procurement, for example?

Stephen Dance: The gap between what is happening on the ground and what seem like big, national institutions is something that we do recognise. There are two bits to it. One, I am afraid to say, will go back to the good old planning system and the fact that a lot of what we have talked about today actually relies on a strong planning system to get the right arguments, have the right debates and allow things to flow through where they can go quickly.

Q82 **Chair:** Are you talking about newts at all?

Stephen Dance: I am not talking about newts. No, I was not, but sometimes they get in the way.

Q83 **Chair:** We have had to move a lot of newts.

Stephen Dance: Bats can get in the way and badgers can get in the way. They were all lovely creatures, by the way, just to be clear.

Q84 **Chair:** We are pro-newt, definitely, but they can take some time to move.

Stephen Dance: We are pro the natural environment as well as everything else. Sir John and James referred to it earlier. There is an issue with the national planning system, which also impacts right the way from what we are seeing with the big, complicated national programmes that Mr Smallwood, Sir John and I have been talking about. That comes right the way through, down to parish councils, bridges over railways, et cetera. Planning would be one of the points.

On flooding, I think you made an Environment Agency point.

Q85 **Chair:** Yes, the Environment Agency in my region just has one firm as its contractor.

Stephen Dance: That does not quite ring true to me; I am not saying it is not true in this case. It just is not something that we have experienced. In the flood defence programme, for example, it has a number of contractors that are frameworked for it to do flood defence work. I am surprised that you are being told it only has one.



Q86 Chair: There is one firm called Jackson, which is on the procurement framework for my part of the country.

Stephen Dance: I do not know the answer to that.

Nick Smallwood: Can I maybe add a few positive notes? We recognise that post-pandemic we came out of a construction industry that was pretty unproductive. There are very small margins and a lack of investment in technology and people. The industry actually approached us during the pandemic and said, "We do not want to go back to that world. We want to change".

A lot of good work was done between the procurement group in Government, the IPA and industry itself, to create what is called a construction playbook and really reset our expectations of how we could work together to focus far more on better outcomes, more productive outcomes and more profitable work for the contractors.

We are on a journey. We are not there yet, but, where the principles of the construction playbook have been applied, we are seeing some really great results. If you look at the PPP contract in Sellafield, at where we were going to go on Phase 2A of HS2, looking at design partnership, or at the hospital programme and school building, we are moving away from zero-value frame agreements where people do not actually have committed work to focusing on teaming up and partnering with people to do an amount of work that gives them confidence and certainty over a period of time, in which they can invest in people and technology. There is huge opportunity in that space to do more.

Q87 Chair: Planning is a solution.

Nick Smallwood: Planning is a solution.

Chair: Procurement reform is a solution.

Nick Smallwood: Yes, and the Procurement Bill actually became an Act last week.

Chair: Yes, that will help.

Nick Smallwood: That is an opportunity. That will help, absolutely.

Q88 Dame Angela Eagle: I am interested in the construction reform, because IT does provide huge increases in productivity, potentially. One of the problems with the building and construction trade has always been what was known as the lump of apparent self-employment and the incoherence that creates, the need to support margins and all of that. Are you doing anything about that as part of your construction framework?

Nick Smallwood: The construction playbook is trying to get around that problem, by creating alliances or integration partners to work collectively together. If you build a railway, it is not just the main earthworks. You have the people who lay the track and the people who deliver the



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signalling systems. If you do it in isolation, you move from one to the next.

Q89 Dame Angela Eagle: Likewise, if you go to a building site, if you are HMRC and you are wondering whether anyone is going to pay any taxes, and you are told that every single person on that site is self-employed, it is not a coherent thing, is it? It is about time we got a grip of that. I am sure that would also improve productivity.

Nick Smallwood: No, I see that. IR35 has helped in that space, actually, to drive different behaviours. We want the main tier 1 contractors to do far more to integrate across the whole of the supply chain, rather than just subcontract. We are seeing pockets of excellence, even on HS2 phase 1. If you look at some of the joint venture partners, they are delivering outstanding results. They are using technologies, digitalisation and 4D modelling, and they are starting to show what is possible in this country. We have to do more of it and consistently more on every major project.

Q90 Chair: That is really helpful, to start hearing some solutions from you as to how we can move on from this failure, it seems to me, to deliver large infrastructure projects successfully.

I wanted to come back to the story we are being told that there is now, as a result of the HS2 cancellation, £36 billion to be spent on urban and interurban transport. Of course, in the National Infrastructure Commission's work, one of the things that you do really highlight is how difficult it can be to get around between smaller towns, cities and urban centres. Certainly in west Worcestershire I can attest to that on public transport. What would be the best way, in the view of the National Infrastructure Commission, to spend that £36 billion?

Sir John Armitt: I would have a very careful analysis of where you intend to spend it and where you can get best value for it.

Q91 Chair: You have done a lot of that analysis, have you not?

Sir John Armitt: No, because we tend not to go down to individual projects very often. We tend to focus more on saying, "This is the nature of the change that you want to introduce". In our latest report, we have identified a whole series of areas on the road network across the country where connectivity is poor.

Q92 Chair: They are specific road projects that you think are best.

Sir John Armitt: We have identified areas where we say, "On this route and on that route we know that traffic moves very slowly. Therefore, you need to look at that and decide what are going to be the best interventions that could be made to improve that". Clearly, that would require money to allocate to do those sorts of schemes.

In the case of the announcement, a lot of those projects are not on the drawing board yet. Some are already on the drawing board. We had an



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integrated rail programme before the decision on HS2, but we now no longer have an integrated rail programme, because the projects were all interrelated.

Somebody now has to sit down and say, "We have £36 billion. We are not going to spend it in the next three years. It is going to be spent over probably the next 15 to 20 years. What are the projects that the money is going to be allocated to and in what order? Which are the right ones to take forward?" What we do not want is just a string of names of projects without any integrated thinking or plan around it. That is what we have recommended the Government should do.

Q93 **Chair:** You would look to the Department for Transport to provide that then. It would not be the job of your commission.

Sir John Armitt: No, it would not be the job our commission; it would be the job of the Department, in the same way as the Department produced the integrated rail plan a couple of years ago, of which HS2 was an integral part, connecting into the east-west connectivity in the north, and a whole series of projects, of which the Department said, "These are the ones that we want to spend £108 billion in total on over the next 20 or so years". That is now been, in a sense, dismantled by the decision around HS2. It would be a very well worthwhile exercise to go back and review that, not just leap into, "We might do this; we might do that. We are not sure we are going to do that", and have a bit of a hodgepodge of projects. They are not all rail—they are road and rail.

James Heath: We have offered to advise Government on what that new strategy should look like, because we advised on their previous strategy that we no longer have with the cancellation of HS2. We are very happy to advise on how they take their list of rail programmes.

Q94 **Chair:** You have not been commissioned to provide that advice at this point.

James Heath: We have not been commissioned yet, but we made that offer in our national infrastructure assessment.

Q95 **Chair:** Have you been commissioned to provide that advice on the £36 billion?

Nick Smallwood: We just joined the working group looking at the proposals.

Q96 **Chair:** A working group has been set up, has it?

Nick Smallwood: It has, but it is very early days. We are one week in.

Q97 **Chair:** That is to be continued then. What would be your founding, guiding principles in that working group?

Nick Smallwood: We want to see a robust approach to setting up projects for success. Our interests will primarily focus on the Government major projects, not the projects delivered by the local authorities. That



would be about whether we have the right funding going to the right place. After that, we would not have oversight of the projects.

James Heath: One of the key challenges is how that £36 billion of savings is allocated. That is not clear. Our back-of-the-envelope calculation suggests around 30% of that saving would be allocated to rail only, whereas the rest will go into local transport, potholes and roads. How that differs to our approach is that we have said you need both significant investment in local transport and significant investment in rail. There is a false choice between the two. We want to try to get away from a model where we are Peter and Paul on transport. We need investment in both.

Certainly on the local side, the level of investment that is talked about in Network North, increasing local investment, looks to be broadly mirroring the level of investment that we are talking about in the national infrastructure assessment, as long as it is sustained at that level for 20 years going forward.

In the national infrastructure assessment we talked about investing £22 billion in mass transit in our major cities, because we see that as one of the key growth opportunities for the UK. If UK cities can perform at the same productivity levels as their same-sized European counterparts, there are tens of billions of productivity per year available. We think a significant investment in local transport is needed, so we welcome that within Network North.

We also need to solve the longstanding problems in rail investment of capacity and connectivity, which HS2 and the integrated rail plan was designed to do. If that is no longer there, we need a new long-term rail strategy.

Q98 **Chair:** That is very helpful. I could go on about that all day. I want to touch on a really important topic, which is the decarbonisation of transport, particularly cars. Again, my own experience has been that, where people are keen to put in more electric charging points, the grid has not been adequate. I know the National Infrastructure Commission does a lot of work on the energy grid. The grid has come in and said it wants to invest £16 million across west Worcestershire on improving the grid, but then the regulator has come in and said, "No, that is too much. You must only invest £11 million", to pick some numbers from my memory. That seems to be a massive problem. How do we solve that?

Sir John Armitt: It comes back to my earlier point about the importance of the Government being very clear in its directions to the regulators and not leaving the regulators to almost be making national policy. The policy should be made by Government, and it should be stated very clearly as to what the priorities are and what the Government see as being in the national interest. That should be a direction to the Planning Inspectorate, as well as the regulators. "These are the things that are in the national



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interest, which need to take priority and need to be considered when you are looking at the counterfactuals”.

If we do that, what are the consequences going to be? Will there be an impact on consumers’ bills? The regulator needs to be given very clear direction. Without that, in a sense he is left to make this up as he goes along as to what he thinks the Government’s last set of priorities were.

Q99 **Chair:** They are independent regulators, are they not? No one can regulate what they regulate.

Sir John Armitt: They are there to make sure that the utility companies are efficient. They will demand efficiency improvements on them. They are there to arbitrate, in a sense, on what is a reasonable level of return. Is it 2.5%? Is it 3%? What might the long-term level of return be for these investors? They will act as the judge on that, at the end of the day. If the companies do not like that return, then frankly they will vote with their feet to go and invest somewhere else. The regulator is there to try to achieve that balance between the consumer interest, the investor risk and the investor interest.

Q100 **Chair:** Does everyone agree with that characterisation? Are there any points to add?

James Heath: One additional point I would make is that we need a model shift around net zero to one, both on transmission infrastructure and on distribution infrastructure and electricity, where we are investing ahead of demand—what is called anticipatory investment. The stranding risk on those assets seems increasingly low, given we know the wall of demand there is going to be for EVs, for heat pumps and for industry decarbonisation. This is John’s point about Government setting the outcomes and being clear on strategic priorities for regulators. One of those strategic priorities is investment ahead of demand and making sure that energy infrastructure does not become a constraint on growth in some of those areas.

Alongside that, on the distribution grid, probably the key issue we need to fix is upstream on the transmission infrastructure that the distribution grid plugs into. How do we roll out that transmission infrastructure that the grid is in charge of at a faster pace, which gets us back to planning, to enable more capacity on the distribution side? You still then have the queuing system, which you alluded to. The queuing system to connect the distribution grid as well as the transmission grid also needs reform. We are hoping we will see action from Government and Ofgem on that shortly.

Chair: You have all mentioned planning, which is a very important topic. I know, Siobhain, you have some extra questions on planning.

Q101 **Siobhain McDonagh:** First to you, Sir John, how would you characterise the mood among private infrastructure investors at the moment?



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Sir John Armitt: It is confused. I was asked the same question by the Rail Industry Association a couple of weeks ago as to how I saw the mood in the rail industry at the moment; I said "confused". The constant shifting of policy objectives leaves investors confused. It can be as simple as, for example, the windfall tax, which is a bolt from the blue, if you like. It is clearly a political decision, but it is not one that helps future investment. When you are talking about utilities and infrastructure, these are not quick, short-term issues. You are investing money where you may not see a return at all for 10 years, because of the length of time it takes to actually build the infrastructure out.

Therefore, when you make that investment "go" decision, you need to have confidence that in fact the policy environment, when it comes to actually switching it on, is going to be the same as when you made that calculation. People will say, "You are in the private sector. You have to take that risk", but there is risk and risk. Therefore, it is important that the broad thrust of the policy remains the same if we are going to be able to encourage the private sector.

Q102 **Siobhain McDonagh:** Is UK infrastructure attractive to investors? Is the UK competitive compared to Europe and the US?

Sir John Armitt: We look at different factors. People will say in the investment community that the rule of law is strong in the UK, so that is something that attracts them. The democratic process, if you like, the system of government, is more stable than in some other countries. Those are factors that they will take to account. Then they set that alongside, for example, the planning regime and they say, "We can get planning a darn sight quicker in other countries than we can get it in the UK. Therefore we stand to see a return earlier", so that becomes a factor. They are trading off these different parameters. Certainly if you have America throwing money through the IRA at investment in green technologies and so on, then that becomes attractive as well.

The investment community will always say there is no shortage of money. What there is is a shortage of investable projects. That is what they are looking for: projects which they deem to be investable against the criteria that they have as investors. The UK will not be top of the tree, by any means, in that list. There will be other countries. It can change from time to time, of course, as to which is attractive and which is not. Some of the eastern European countries were very popular 10 years ago. You could get planning consent to build a private motorway, for example in Poland, extremely quickly, far more quickly than you would ever achieve it here, where you would probably be looking at 10 years to get planning consent.

Q103 **Siobhain McDonagh:** What are the key changes that could be made in Britain to make us more attractive?

Sir John Armitt: It is policy. It is these national policy statements, as they are called, which come from Government and come from Parliament,



but they are voted on. In fact, we have not seen one in energy now for 10 years, during which time the whole landscape of energy has changed enormously.

We would say one of the most important things is the new national policy statement for energy. I know Government are working on it, but we still do not have it. Then we have also recommended in our report that those should be reviewed and updated every five years to take account of whatever changing circumstances there may be.

On the national policy statement, there are some challenges here and difficult choices. I accept that these are very political issues, but what is in the nation's interest in terms of the growth that we are seeking to achieve right across our country, in all different areas of the country, and what is in the local inhabitants' interest in their local community will be in conflict at times. Somebody has to make the hard decision that the national interest has to come before the local interest. It is very political, I know, but we should not dodge that issue.

Q104 **Siobhain McDonagh:** Why is it taking so long to get the updates?

Sir John Armitt: It is debate, I suspect, within the Civil Service and with Ministers.

Q105 **Siobhain McDonagh:** To the other members of our panel, the National Infrastructure Commission's assessment mentions that £1 in every £6 of planned capital expenditure has gone unspent. Why is that and how can we do better?

Stephen Dance: We are back to planning again, largely. A large number of the roads programmes have been mired in different types of planning debate. Lower Thames Crossing would be an example of that. A lot of our social infrastructure investment, prisons for example, is mired in planning dispute.

Q106 **Chair:** There are three prisons that are being held up by planning issues.

Stephen Dance: That is correct. You can say the same about roads and pretty well every project that one cares to mention, unless it is entirely underground and nobody sees anything, in which case they care less. That means that, where you have a profile of proposed spend, you cannot get your project through the system. Therefore that proposed spend is not spent. It goes back to the Treasury, which decides to spend it on something else, probably. That is probably the biggest reason for underspends.

Another potential reason is a little bit of overoptimism on occasions, where projects and programmes come through into our purview as the Infrastructure and Projects Authority. We might say, "Actually, that is a bit optimistic to take that sort of programme through in that timescale". Nevertheless it is funded on that profile and on that basis, and sure enough it does not quite get there. The reasons it might not get there



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would be planning, of course, as I have said, but also capability and capacity within the department to deliver.

As Mr Smallwood was saying earlier in this session, the IPA has quite a lot to say and do about capability and capacity across Government to deliver these projects and programmes and to set them up for success. Those would probably be the two main reasons that I would point to.

Q107 Siobhain McDonagh: You have probably already answered this. How effective are the Treasury and wider Government at making sure that both consumers and the taxpayer get privately sponsored developments that are practical, affordable and provide good value for money?

Stephen Dance: Am I allowed to refer to the Thames tideway tunnel on this?

Siobhain McDonagh: You can refer to whatever you like.

Stephen Dance: That is my favourite go-to. It is a good example of where the UK Government, together with the regulator, together with the private sector, have combined to set up a project that the construction is certainly on track to complete. Touch wood, as we have not actually put any sewage into it yet. That is an example where the centre of Government and the private sector, through both Thames Water and the new investors that have come in, created a project and a programme that was attractive to that investment. It has so far delivered on time and broadly speaking to budget, despite inflation and Covid, and will drive a good deal for consumers.

I was in the room when we were planning that project and there was a lot of talk about the impact on bills being several multiples of what it will actually be as a result of that programme having gone through. We would like to see the culture in that programme repeated where it is appropriate to do so. That is Government policy, too.

Q108 Siobhain McDonagh: Why was that a success when in so many other areas we do not tend to be as successful?

James Heath: That is one example. Back to your question about what would make the UK more competitive in terms of attracting private investment, there are three big levers: policy certainty, pro-investment regulation and the ability to build things more quickly with planning reform.

A really good example of a sector that has been transformed by applying those in the last five years is our broadband sector. The UK was a laggard in broadband five years ago. We had about 3% fibre gigabit penetration. We now have 75% gigabit penetration and over 50% fibre. What has happened in the UK is that we had clear, consistent policy goals right from the top, Prime Minister down, about what we were trying to do. We had a regulatory model that was aligned with the policy, we had the creative flexibility and the ability to make returns, and we had a



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Government who cleared some of the barriers to reduce the cost of rollout. With those things together, the market has responded with billions of pounds of investment over the last five years, which has transformed the availability of broadband.

The UK can do this. We know what the levers are. I am not saying that applying them in different sectors is easy, but to replicate those sort of models or, indeed, in individual projects, the model Stephan talked about on tideway is what we need to try to do more often.

Nick Smallwood: The model that we used on tideway is called the rateable asset base. We have actually just started the capital raise for Sizewell C power station using that very same model. There are opportunities going forward to really exploit that opportunity.

Q109 **Chair:** Can you just explain to the general public what the rateable asset base approach is?

Stephen Dance: Yes, it is the regulated asset base, which is effectively the asset on which you are able to charge a financial return. If you were taking a water company, it would be all of the water and sewage assets for that company on which the regulator then calculates its return. In terms of Thames tideway, it was set up as a separate regulated utility that only has one asset, which is the super-sewer, the tunnel itself. It is entitled over a period of the life of that asset to make a return on it, which is set by the regulator.

Q110 **Siobhain McDonagh:** The most amazing fact that I understood about the super-sewer was that the average age of the electricians on site was over 66, because the last time we trained UK underwater electricians was when we had a going mining industry. Is it also that a constraint is just the lack of skills?

Stephen Dance: Leaving aside Thames tideway, it is pretty well documented that skills, experience and expertise in our whole construction sector is an issue. It is an ageing workforce. There is nothing wrong with people over the age of 65, by the way, just to be clear on that, but it is an ageing workforce and there is definitely an issue with specific skills and experience in specific areas. Electrical is one of them. There are other technical tunnelling, piling and boring skills that we are also seeking and potentially lacking to deliver.

There is a lot of work going on across industry, between Government and industry, to try to resolve some of that and put some of that in place. Some of that is using technology and some of it is using training and development, and introducing new people into the workforce. You are quite right to raise it as an issue, not just in that project but across the sector generally.

Q111 **Siobhain McDonagh:** My particular passion is building houses and of all sorts of tenures. As an MP in a London constituency, I am just desperate for more housing. I was very excited to see that Keir Starmer, the leader



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of the Labour Party, announced at the Labour Party conference that he was looking at building on the grey bits of the green belt—I could show people lots of sites nobody ever wants to go anywhere near—as an opportunity to build a million new homes. If you could change the planning system, what would you do?

Stephen Dance: We might leave that to Sir John.

Sir John Armitt: I come back to my earlier point. One has to accept there is a real tension in building anything. The super-sewer is underground and therefore attracts less attention. There were objections to where the various headhouses had to be sited, indeed from building developers whose sites were then held in abeyance for two or three years while the site was used, and they could not get on and build their developments adjacent to the shafts that had to be put down.

It is a very tricky question, but fundamentally we have to make a choice as to whether we do things in the national interest or the local interest. So much of planning finishes up back in the hands of local councillors. Local councillors do not get voted in for, in fact, increasing the amount of development in their area, particularly if it then puts strains on other services within the area. Putting a lot more houses in an area without recognising that that requires more schools, more health facilities, possibly more road infrastructure and so on, to meet that increase in the number of people, is a challenge. Clearly people are not going to welcome it.

We do not deal with housing specifically at the National Infrastructure Commission. It is not part of our remit. I have been involved personally with housing for quite a long time, in London particularly. In a particular company I was involved with, we chose the most difficult sites, the sites that had to be cleaned up, the sites that were regeneration sites, because we saw that as being a way of actually getting more value out of the land, by accepting that cost up front to remediate the site and to build accordingly.

It is affordable housing that is of course the real crunch. Everyone will have a different view on how you deliver affordable housing. This is a purely a personal view, but you cannot assume that it is going to be delivered alone by the private sector. The Government have to intervene.

The last time we had a massive programme of affordable housing was way back in the 1960s and 1970s, when 150,000 units a year were being built in what we called at the time council housing; these days we call it social housing. In fact, it is mostly provided now by the housing associations rather than by local councils. The housing associations themselves, of course, have their own pressures and financial challenges.

Without a large-scale social housing programme, personally I do not see how we are going to meet the numbers that we need to meet. This is not in an IC view, because it is not our remit.



Stephen Dance: We do have the affordable homes programme on the Government's major projects portfolio. You may think it is not enough. That is not for me to say, but our assessment of that programme is that it is pretty well run. Obviously, the GLA administers that for the centre of Government. In a purely project and programme view, that is well run. We know that it is subject to lots of pressures, some of which we have talked about today in terms of inflation and a little bit of planning, and obviously London is a particularly difficult and challenging place for this, because some of the economic value does not drive you straight away towards affordable housing, or even housing, as the most valuable use.

Recognising all of that, just to directly answer your question, this is an infrastructure panel and we are infrastructure people. I would go back to Sir John's national policy statements. Those are the critical things that we have to get right for delivering national infrastructure.

James Heath: If I could add, that is along with a much more direct, tangible approach to community benefit.

Q112 **Siobhain McDonagh:** It does seem, from what I understand in France, that local residents near a development get much more out of it personally. Do you think there is a balance to be had where you say to people, "You will get this subsidy on your council tax for the next five years"? Rather than the local authority determining what the levy gets spent on, perhaps people get more of a direct benefit.

Sir John Armitt: We have made that recommendation in our planning report to Government that there are a whole variety of ways in which this could be done. There are some references in the newspapers today, in fact, about people who are closest to, for example, increased solar panel farms or, indeed, increases in onshore wind turbines. If you live near any of these then you should have a reduced electricity bill. Of course, very often the impact is during construction. That is when people feel the pain the most. It does not necessarily have to be a compensation for the next 20 years. It could be a compensation for five years during the upheaval that occurs during construction.

You are quite right that France has always done this on a regular basis. We have section 106, which is meant to deal with that, and the community infrastructure levy, which is another way in which local authorities try to impose it. A much simpler way would just be to have a roof tax and not waste two years arguing about what section 106 is going to be. Instead, if you are building 100 homes, you know that is going to be what you pay as the developer, and the local authority immediately knows for those 100 homes, "That is the financial benefit I am going to get as a consequence of these homes or infrastructure going ahead".

As with all these issues, there is nothing new about any of this. They have all been done before. Equally, there is no magic wand, with which at a stroke everything can be resolved. We do have to address the fact that, if we want to build more infrastructure and build more homes, then we



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have to take account of the impact that has on people, and think of ways in which we can reduce the impact to them and make it more acceptable to them that these changes are taking place.

Q113 **Chair:** I have a couple of very last questions. When we were asking about what would make infrastructure investment more attractive in the UK, none of you mentioned tax changes, full expensing or corporation tax rates. Are those irrelevant to these kinds of decisions?

Nick Smallwood: They probably are. More certainty to the long-term planning proposals is the single determining factor.

Q114 **Chair:** Is that more certainty to tax proposals?

Nick Smallwood: It is more certainty to the whole environment: the planning environment and the taxation environment.

Chair: We have picked up on planning.

Stephen Dance: The IPA does not really get involved in fiscal discussions.

Q115 **Chair:** Do you talk to a lot of investors?

Stephen Dance: Yes, so the fiscal environment obviously has an impact on what investors may think and what they may do, but it is not something we advise on.

Q116 **Chair:** It is not something that has been raised as a specific problem at the moment for the UK on a relative international basis.

Sir John Armitt: We are the same at the NIC. Treasury does not expect us to advise it on what we think tax policy should be.

Q117 **Chair:** No, but you talk to a lot of investors.

Sir John Armitt: Inevitably, for private sector companies—having worked for them—and for any investor, consistency of policy is what you need.

Q118 **Chair:** That is what you are looking for. Then I have just one last quick question on this auction failure for offshore wind. Help me out, because I thought an auction discovered the price at which people would provide. To have an auction failure sounds concerning. Is there no price at which people will provide more offshore wind, Mr Heath?

James Heath: On this, the contract for difference model is auctions. We have done five of them. They are an extremely successful mechanism in bringing down the cost of wind and expanding wind, so we are effectively number two in the world after China. We have seen massive falls in wind.

Over the last year, since the last auction in 2022 where significantly more renewable was brought on, there has been cost inflation in offshore wind in particular. Both inflationary pressures and supply chain pressures we have talked about. Therefore, the maximum price of £44 per megawatt



hour that was made available in the auction was not sufficient to attract offshore wind companies to bid. That is where it failed.

Q119 **Chair:** That price was not discovered through auction. The price was set by the Department.

James Heath: There was a maximum price set. That price was not sufficient to attract the companies to bid. That price actually has not changed that much since the price in 2022, but the cost pressure facing these companies has increased. There is a question when the Government runs the next auction about how they look at pricing and make that perhaps more cost-reflective.

The long-term picture is that these technologies have reduced massively in price and are still delivering electricity at far less than the current megawatt hour of gas or, indeed, the current wholesale price for energy. The long-term picture is good, but given some cost inflation we need to look at the pricing mechanism next time to make sure it is competitive.

Chair: This has been a fascinating session and your expertise has been much valued in terms of listening to this challenge that we have as a country, where we do not seem to be very effective at delivering long-term infrastructure. I heard a range of different recommendations for solving that.

One of them is for the national policy statement to be clear, but also in that perhaps avoiding overspecification. That seems to be something you would look to see coming into that statement. We have heard the reiterated calls for policy certainty, for deregulation of the planning system—it would be fair to characterise it that way—and for procurement improvements. Those seem to be the main recommendations.

This is your last chance to add any further to that. Otherwise, I will declare this session over and thank you very much for your time.