

# Public Accounts Committee

## Oral evidence: Sheffield-Rotherham Tram-trains Project, HC453

Monday 30 October 2017

Ordered by the House of Commons to be published on 30 October 2017.

Watch the meeting

Members present: Meg Hillier (Chair); Bim Afolami; Heidi Allen; Geoffrey Clifton-Brown; Martyn Day; Luke Graham; Nigel Mills.

Sir Amyas Morse, Comptroller and Auditor General, Adrian Jenner, Director of Parliamentary Relations, National Audit Office, Rebecca Sheeran, Director, NAO, Matt Kay, Director, NAO, and Richard Brown, Treasury Officer of Accounts, HM Treasury, were in attendance.

Questions 1-72

### Witnesses

I: Bernadette Kelly, Permanent Secretary, Department for Transport, Mark Carne, Chief Executive, Network Rail, Brian Etheridge, Director of Network Services, Department for Transport, and Rob McIntosh, Route Managing Director for London North Eastern and East.

Written evidence from witnesses:

– [Add names of witnesses and hyperlink to submissions]

## Report by the Comptroller and Auditor General

### The Sheffield to Rotherham tram-train project: investigation into the modification of the national rail network (HC 238)

#### Examination of witnesses

Witnesses: Bernadette Kelly, Mark Carne, Brian Etheridge and Rob McIntosh.

**Q1 Chair:** Welcome to the Public Accounts Committee on Monday 30 October 2017. We are here today to look at two Reports from the National Audit Office. One is an investigation into the Network Rail and Department for Transport project for delivering tram-trains from Sheffield to Rotherham. That is what we will be starting off with. We will then move on, we hope in about 45 minutes—that is a hint to witnesses to keep answers short, and to Members to keep questions short—to the HS2 Report and accounts, so that we can cover that off as well. They are both very important issues.

I am delighted to welcome as our witnesses for the first section, from my left to right, Brian Etheridge from the Department for Transport—I do not have your job title, Mr Etheridge; can you just tell us?

**Brian Etheridge:** It's Director of Network Services.

**Chair:** Sorry, I should have known that; forgive me. Bernadette Kelly is the permanent secretary at the Department for Transport. Welcome to you. Of course, you were in charge of rail at the Department for some time before becoming permanent secretary, so you have good knowledge and background to all this. We also have Mr Rob McIntosh from Network Rail, who was the senior responsible owner for the tram-train project. Is that right?

**Rob McIntosh:** Yes, I am the Network Rail Route Managing Director, and this project is part of my portfolio of responsibilities.

**Chair:** And now you are in a slightly different role.

**Rob McIntosh:** Yes—initially projects; now within the overall operations.

**Q2 Chair:** I am going to have to ask you to speak up. Although the acoustics in here are better than in the other room, we still need to speak up. We also have Mr Mark Carne, who is the Chief Executive of Network Rail. Welcome back to you, Mr Carne.

I have to say that this project was pretty amazing. We have Clive Betts, the MP for Sheffield South East—formerly for Sheffield Attercliffe—to thank for raising it with the National Audit Office. As a local MP, he was watching



## HOUSE OF COMMONS

the fact that this project was not being delivered to his constituents, who have had to wait two and a half years longer for the project to be delivered, and the cost of the project has risen by 400% from its inception. My first question to you, Mr Carne—if you remember, we asked similar questions on your last visit—is: why did you get your estimates of costs so wrong?

**Mark Carne:** Thank you very much, Madam Chair. The first thing to say is that, as you say, I have been here before, on the Great Western railway upgrade project, and the root causes of the issues that we are dealing with here are in fact very similar to those on that project, with some differences. If you remember, on the Great Western project we talked about the very early cost estimating being of an inadequate standard, and about the fact that the specification and, indeed, design of the system were not at an adequate stage to support the cost estimates. Also, Network Rail's funding was in a different regime than it is today, which led to a culture, collectively, of agreeing to costs before the proper design work had been done.

All those factors are also at play in this case; it is really a very similar set of circumstances. However, there is a critical difference: this project was also a pilot project that looked at using new technology—and at developing technology, actually—for the first time on any railway system, so there was an additional technical risk involved in this.

Q3 **Chair:** Did your estimates include the trialling of that new technology?

**Mark Carne:** Some of those risks materialised as the project developed, so the emerging specification for the project changed, which introduced additional technical risk.

Q4 **Chair:** It seems extraordinary to me that Network Rail, which is responsible for this project, working with the passenger transport executive in South Yorkshire, could not have anticipated some of these things. Mr McIntosh, I believe that this operates somewhere else in the world. Had you been to visit any tram-train projects elsewhere before you took on this project?

**Rob McIntosh:** I have not personally been to visit any tram-train projects in the world—

Q5 **Chair:** You haven't?

**Rob McIntosh:** I have not, no, but—

Q6 **Chair:** Did anyone in Network Rail visit any tram-train projects?

**Rob McIntosh:** I think early on some Network Rail predecessors went and visited some other sites. It is important to note that while other countries in the world have adopted this principle, the way we have gone about this in the UK—the deployment here in the UK—is unique, both because of the application of the dual voltages and because it would be the first such operation to be introduced under the new safety legislation we have to comply with.



## HOUSE OF COMMONS

Q7 **Chair:** Mr Carne, were you aware of other projects around the world? You were here more recently than the beginning of this project.

**Mark Carne:** Yes, absolutely; I joined in 2014, and this project had its inception some years prior to that. Absolutely, people did visit other tram-train systems around the world, but as my colleague Mr McIntosh said, there were some unique aspects to this project that made it different. But I do not want to—

Q8 **Chair:** But surely the dual voltage issue is not just a British issue.

**Mark Carne:** I am not trying to defend the performance of this project at all. What I would say, as I said at the last hearing, is that we have put in place a number of measures around our controls and our governance of these sorts of projects that will prevent these sorts of early promises from being made at too immature a stage in a project's life cycle. This is fundamentally the problem here: a commitment is made to deliver a project before you really understand the delivery mechanism for that project and what the—

Q9 **Chair:** But as you have highlighted, it was innovative technology—well, not so innovative; it has happened before, but it was new technology to the UK, to deliver a new gain. It was untried and untested technology. How was that planned in? This might not be the last bit of innovative rail structure that you look at. How can we be sure that you are planning in the challenges of dealing with new technology at the point at which you are planning the costs?

**Mark Carne:** Could I take that question in two parts? First, how do we now ensure that we have a robust stage gate process for any type of project, and that we will not give a commitment to a cost and schedule before we reach a certain point in time? That is now embedded in our design assurance process with our colleagues in the Department. We do not reach a final investment decision or give a cost and schedule until we have done adequate design and specification assurance of the project. That is the first critical control that applies to all projects.

Q10 **Chair:** But that is from now onwards.

**Mark Carne:** That has been in place for the last two years or so, and I am really pleased to say that it is working very well.

Q11 **Chair:** But it was not in place at the time we are looking at.

**Mark Carne:** It was not in place with the rigour that was necessary. That was the root cause of this.

The second point is around technology. Generally speaking, we want to ensure that when we deliver a project, we have a really good understanding of the capability of the technology that we are delivering. We have a stage gate approach to the management of new technology. On a scale of one to nine, where one is very immature and nine is off the shelf, we try wherever possible to use technology that is at level eight or nine. When this project was born, I would say that we were at the one or



## HOUSE OF COMMONS

two stage, because nobody had actually used this kind of technology before.

- Q12 **Chair:** But that was the whole point of going ahead with it as a pilot—that that was acknowledged and understood, and that there would be lessons learned from it. Mr McIntosh, why were those controls not built in? You were there right from the outset.

**Rob McIntosh:** I was not there from the outset. I came on to the project in 2014, when we first began to really uncover some of the understanding and the technology risk associated with some of the novel technology. At that time, we really began to get greater depth and understanding on how you would have a dual voltage system for the UK railway, and that is when the cost began to escalate up towards the £44.9 million—

- Q13 **Chair:** That is staggering. So it was only in 2014 that there was an understanding of the need to address the dual voltage issue.

**Rob McIntosh:** The first notice of the change in the dual voltage was given earlier than that, but our understanding at that time, as Mark said, was in the very, very early stages. What we should have been more clear about with our colleagues in the Department at that time was the level of risk associated with that deployment of technology, and our ability to understand the risk at that stage.

- Q14 **Chair:** It feels like we are talking about this as though it were not a serious issue. At the beginning, it was a pilot, and it was recognised that there were challenges in running two types of vehicle on the same line, yet you say that it was not until 2014 that there was a real understanding. Maybe I can turn to Bernadette Kelly. Where was the Department in all this? You were watching taxpayers' money going down this particular hole—potentially for good benefit, but without seeing that there was slippage in the programme at that point. Or did you notice the slippage then?

**Bernadette Kelly:** We had certainly noticed by 2014 that the costs were increasing, but I would say that the analysis from the Department's perspective around what happened here is very similar to the one that Mr Carne has outlined. At the point in 2012 when Ministers decided to go ahead with this project on a budget of £15 million, I do not think we had the level of understanding of costs or assurance of costs that we should have had. But as I say, it was a pilot. It was an inherently risky project in that respect, and it is not surprising that at least some of those costs did not become apparent until later in the project's progress.

- Q15 **Chair:** Do you think the project was deliberately undervalued to get it across the threshold?

**Bernadette Kelly:** I am not sure if there is any evidence of deliberate undervaluing. I am sure Network Rail provided the best cost estimates they had at that time. There was probably an element of optimism bias that we wouldn't endorse now, based on the experience we have. Indeed, you can see that from the fact that a cost estimate of £18.7 million resulted in a budget of £15 million, because we assumed efficiencies would



## HOUSE OF COMMONS

be identified to bring the costs down. I think there was a level of optimism, but I do not think there was a level of deliberate underestimating of costs.

- Q16 **Chair:** Mr Carne, in 2012 Network Rail was not open to public scrutiny. This Committee could not look in detail at your books, and the NAO did not have access. Do you think that contributed to this dribbling along in the way it did, with the costs escalating—it not being open and transparent to taxpayers how their money was being spent?

**Mark Carne:** As an independent body, it was not reportable to the Public Accounts Committee, as you say, but it was a regulated body, and spend on capital projects was subject to regulatory scrutiny. The regulatory scrutiny was really to determine whether or not the costs were efficient and could therefore be added to the RAB. As we discussed at the previous inquiry, that is part of the problem. In 2012, it did not really matter—if I can put it this way—if the cost estimate was not particularly good at an early stage, because later we would agree with the regulator on the actual cost, and if they agreed that it was efficient, it would go on to the RAB, and that was it. The incentive structure in the industry as a whole was, in a way, a bit perverse.

**Chair:** Definitely. I think we agreed that in previous hearings. So effectively, as I suggested to Ms Kelly, there was an unrealistic cost up front, which got it over the line, whether it was difficult or not.

**Mark Carne:** I would agree with Ms Kelly that there was not a deliberate subversion at all, but equally there was no rigour and no requirement to get it much better, because the regulatory process allowed you subsequently to catch up.

- Q17 **Chair:** That's the regulatory process. Ms Kelly, the Department was looking at this. How confident are you that the Department was looking realistically at the costs that Network Rail identified, if they were so out of kilter with the final costs? Was there proper rigour?

**Bernadette Kelly:** We would acknowledge that in 2012 there was insufficient rigour in those cost estimates. That is unquestionable. The cost estimates were not as strongly assured, by either Network Rail or the Department, as we would currently expect. I think we see, from 2014 onwards, a great deal more rigour attached to those cost estimates, and a great deal more work being done to properly understand the likely cost of the project and the drivers of costs.

- Q18 **Chair:** And yet it will not be delivered until next year, four years on from 2014, and the cost has continued to increase. What confidence can you give us that you have learned lessons at the Department about managing and scrutinising the realism of Network Rail's cost estimates?

**Bernadette Kelly:** Certainly at the wider level of project scrutiny generally, we have wholly different governance and programme oversight now for all of Network Rail's large enhancements programmes, and we can happily describe those. Those were extensive changes in governance and



## HOUSE OF COMMONS

oversight, introduced within Network Rail and the Department in the wake of the Bowe and Hendy reviews in 2015. Our whole governance structure, and assurance and oversight, for enhancements is very different. In relation to this specific project, I point to the additional work done in 2014, which the NAO Report helpfully describes, to establish the drivers of the cost increase to £44.9 million; they are spelt out in some detail in paragraph 2.6 of the auditor's Report. Also, further work was done in 2016 to establish a clear and properly assured assessment of the costs of this project. We believe that the costs as they now stand are as thoroughly assured as you would hope and expect them to be.

- Q19 **Chair:** At this point, if they were not, that would be extraordinary, but indeed it has still gone up 400%. Did you inquire about the risks when Network Rail first took on this project?

**Bernadette Kelly:** I think the risks would have been taken into account. This was identified from the outset as a pilot programme, as something intended to trial innovative technology using underused heavy rail infrastructure for tram-trains. We knew there was a level of risk associated with that, and that was why it was a pilot.

- Q20 **Chair:** Did you ask Network Rail to quantify that risk?

**Bernadette Kelly:** I do not think we had a quantified risk assessment as such.

**Brian Etheridge:** No. I think that illustrates the biggest difference between then and now. If this project came forward now, we would exactly ask for a—possibly independent, depending on how big the scheme was—quality-assured assessment of the cost and schedule. Those things would be necessary before we would press “go”.

- Q21 **Chair:** I do not want to rake over the past too much, but although Mr Carne has said that this was a reflection of the regime of regulation at the time, Departments had that sight, and could surely see that there were issues around the way Network Rail operated, which Mr Carne has acknowledged, here and at previous hearings. Did you not think that more could be done to safeguard taxpayers' money in this situation, and of course get this service up and running for passengers in and around Sheffield and South Yorkshire?

**Bernadette Kelly:** I do not think that at that point we had seen some of the difficulties and challenges that we have seen in the last three or four years in relation to the costs and delivery of those programmes. We certainly did not have, as Mr Etheridge has said, the same processes in place at that time, nor would we necessarily have learned the lessons and expected things to pan out as they did in relation to some of the complexity of delivering a project of this sort.

- Q22 **Chair:** Mr Carne, you talked about the old regime where things would be agreed, and where the regulator would agree the price at a later stage, and so long as you got through that, it sort of didn't matter—I paraphrase—but the Treasury must have been watching this as well.



## HOUSE OF COMMONS

What was the Treasury doing to make sure the cost estimates were coming in at a level that was close to the original agreed price, and to watch for any overruns?

**Mark Carne:** The Treasury was not really previously involved, because as an independent body, we had the ability to borrow money in the private markets, so long as we had the agreement of the regulator to do that. The regulatory scrutiny was, if you like, the check and balance on that. That was not an appropriate way to run a major capital programme, and one of the most positive aspects of the reclassification of Network Rail is the injection of capital discipline in the way the railway organisation works. That is a really positive thing. The controls that we now have, which Mr Etheridge has spoken about and which we put in place two years ago, are consistent with best practice in major capital-intensive industries and, I think, are making a huge difference now in our ability to confidently predict and deliver projects of all scales.

Q23 **Chair:** I hope so. The proof of that will be in the future. Ms Kelly, what about the Department's relationship with the Treasury? I am sure Departments want to work independently. We know the Treasury breathes down your neck, quite rightly watching taxpayers' money. Was there no concern from the Treasury as costs escalated, or no demand to look at the risks?

**Bernadette Kelly:** There was an exchange of letters at the point at which approval was given to proceed with the project, then at a budget of £15 million, between the then Rail Minister and Chief Secretary. From recollection, there would have been the usual wording around the importance of securing value for money, as well as the innovative benefits of a pilot, in that correspondence. I do not think the Treasury was very closely involved in subsequent iterations, in part because, as Mr Carne has said, in the initial stages of this project, typically Network Rail, which was not classified at that point as a public sector body, did not receive the level of scrutiny and attention that it rightly receives now, since reclassification.

Q24 **Chair:** I have just been passed a very useful letter, sent to the right hon. Norman Baker, then Under-Secretary of State at the Department for Transport, from the then Chief Secretary to the Treasury, Danny Alexander. Forgive me if you do not have a copy in front of you. I will not read the whole letter, but it clearly shows an interest by the Treasury in this project, flagging it directly to a Minister, including a sentence saying: "I would like your officials to continue to keep officials in my Department"—that is, the Treasury—"updated on the progress of this pilot and engage them in my final evaluation of its results, which will inform future decisions on the tram-train model." That is the direct hand of the Treasury in it. Mr Carne and Ms Kelly, what do you have to say to that?

**Mark Carne:** First, I think the references in there are specifically to the fact that this was a pilot that had much broader—

**Chair:** I should have said that this was in May 2012.



## HOUSE OF COMMONS

**Mark Carne:** Exactly. It was recognising that this was a pilot that had broad strategic interest around the country as a whole. Clearly we have a huge problem with urban congestion in this country, and if we can find a way of relieving that congestion by bringing low-emission trams right into the heart of city centres and using the heavy rail system to bring more people into the city centres, that would be a good thing to do. That was the strategic rationale behind this project, and that was probably behind that particular letter, recognising that this had long-term learning value—which it still has, by the way.

We have been through a tremendously painful learning curve here, but we have developed new technology and are in the process of getting that type-approved and so on, so that for future projects—whether it is Glasgow, Manchester or Cardiff—we should be able to deliver tram-train projects with much greater confidence.

- Q25 **Chair:** I do not want to keep quoting from this letter, because it is only one letter, but it just demonstrates that the Treasury had an interest. For example, it approved the pilot on an exceptional basis to allow you to carry out further, more detailed evaluation of the value for money of tram-trains. Those are all the things we expect to happen, but somehow, between this letter in May 2012 and 2014, costs rapidly increased. It is funny that everyone here was not involved until around 2014. It always seems to be the case that the worst happened before our witnesses were responsible. Ms Kelly, did you have the Treasury breathing down your neck? Clearly, Ministers did, so what information was being provided within the Department to Ministers as the project costs ramped up?

**Bernadette Kelly:** What I notice is that the letter specifically asks for full engagement in the final evaluation of the project, which obviously we have not yet done because the project itself has not yet concluded. The letter is also clear that the rationale for the project is as a pilot, which was why the Treasury was comfortable for it to proceed despite relatively poor value for money at that point.

- Q26 **Chair:** I think we all recognise that value-for-money assessments do not necessarily quite apply in the same way for a pilot, because there are wider benefits. How did you evaluate and categorise what those wider benefits would be?

**Bernadette Kelly:** The evaluation has yet to conclude, because the pilot itself has not yet come into operation. We have a detailed plan for evaluation, which I—

- Q27 **Chair:** But there must be things you could have evaluated along the way: for instance, dealing with the knotty problem of dual voltage, or some of the other construction aspects of that. Do you have things that you can tell us now about lessons you have learned?

**Bernadette Kelly:** Some of those things are described in the NAO's own investigation. Obviously, after the initial assessment of why costs had increased, there was a review commissioned by the Department in April 2015 to ensure that we picked up the learnings from the project as it



## HOUSE OF COMMONS

progressed. There was a further full analysis, led by Network Rail, in June 2016 to ensure that we fully understood some of the cost drivers. I would absolutely say that there were constant review points throughout its progress.

Q28 **Chair:** But it was supposed to have been delivered in 2016.

**Bernadette Kelly:** It was indeed.

Q29 **Chair:** So it is kind of late in the day to be looking at problems.

**Bernadette Kelly:** Yes. That is why the full benefits of this are yet to be evaluated, because as you rightly say the project has not yet been concluded.

Q30 **Chair:** Mr Mills will come on to the benefits and the analysis of them in a moment, but I wanted to ask about the extra £5 million. What is the figure for the money spent on the electrification of the midland main line? It was an initial £5 million spent on the tram-train project. I do not know what to say, Mr Etheridge. Was that a waste of money, since that is now not going ahead?

**Brian Etheridge:** This was a very difficult decision, but at the time there was a realistic proposition that that part of the line would be electrified in the future. The Department sought a change to the scope of the programme. We would accept that, given that this was a trial and there were a number of issues under investigation, that introduced additional risk and indeed cost, possibly way beyond the £5 million that is quoted in the Report. That is a difficult decision. If the reverse had been true and we had stuck with the original design and it had been electrified, there would have been a considerable cost to come back and redo the work. It was based on a realistic proposition, at that time, that the line would be electrified in the future.

Q31 **Chair:** Who was responsible for that decision, Ms Kelly?

**Bernadette Kelly:** Decisions on change of scope would have been decisions for the Department.

Q32 **Chair:** Mr Carne, do you agree that that £5 million was the cost for the extra electrification? Is that a figure that you recognise?

**Mark Carne:** I recognise it as the initial cost estimate, but it is certainly not the final cost. Running a tram system on both 25,000 V AC and 750 V DC, and having a signalling system that is immunised to run in both systems proved to be very challenging and complicated, particularly meeting the new safety standards required on our railway system. The eventual cost was significantly more than that. Mr McIntosh, maybe you could—

Q33 **Chair:** Can you give us an idea of the real costs, Mr McIntosh?

**Rob McIntosh:** A number of the cost estimates were optimistic to begin with about their understanding of the detailed engineering associated with this dual-voltage system. Please forgive me if I go into technical railway-



## HOUSE OF COMMONS

speak, but the immunisation that Mark referred to requires us to protect the signalling and train control systems against both the 750 DC, which we do not generally have on the main line, and the 25,000 V system. There is then the associated civil engineering work to create physical clearance of the structures away from the overhead line for those future works.

**Q34 Chair:** Is there any benefit for the money that has been spent?

**Rob McIntosh:** The benefit at the moment is that the railway is being built now, and will be ready for 25 kV electrification. The benefits will come out of the benefits analysis period: once we energise the infrastructure in May next year, we commence testing of the trams and begin passenger services late next year.

**Mark Carne:** I think the benefit is also that we have had to develop the technology to enable this to happen. In the event that one wanted to have dual-voltage trams in other towns and cities in the country, we would move forward now with much greater confidence, having been through this experience.

**Q35 Chair:** I want to touch at the end on some of the potential future projects, so let's park that for the moment. Ms Kelly, did you not consider at any point seeking a ministerial direction? You considered pausing this in 2014, or stopping it then. Did you consider seeking a ministerial direction to continue?

**Bernadette Kelly:** There was no, I think, consideration of a ministerial direction in 2014. The other key decision point that obviously was relevant to this project was in the period from July 2016, when we discovered a further cost increase in the total cost of the project, bringing it up to the current £75.1 million. At that point, the Rail Investment Board, the appropriate governance board, which I at that point chaired as director general for rail, looked at a range of options for taking the project forward, and indeed for concluding the project at that point. Advice was put to Ministers setting out a range of options, one of which was to cease the project at that point; others were to allow the project to proceed with additional Network Rail funding, to allow the project to proceed with departmental funding and/or to re-tender the project. The decision that was taken by the then Rail Minister was to proceed with the project, on the basis that Network Rail would fund the then shortfall in the budget for the project of around £25 million. My predecessor did not seek a direction at that point, because he was satisfied at that point that the strategic case for progressing the project to its conclusion was still valid and also because, excluding the sunk costs, there was a respectable BCR of, I think, 1.5 million or 1.49 million for the remainder of the project.

**Q36 Chair:** Would you at any point have sought permission or approval from the Treasury to continue? Did you have to do that, or did you—

**Bernadette Kelly:** We did not have to seek approvals. I am looking to Mr Etheridge at this point, just to check my recollection, but I think it fell within the authorisations and delegations that fell to the Department.

**Q37 Chair:** Because we are talking about millions, not billions, I suppose.

**Bernadette Kelly:** Obviously, it is a very significant sum of money, but in the context of overall delegations, it fell within the range of things that the Department could itself determine.

**Brian Etheridge:** Indeed, and discussions with Ministers went on over the whole summer on this. The Rail Minister, I think, wanted to assure himself that there were potential benefits here, and it's probably worth just reminding ourselves of the potential prize. I think work by the Department in 2011 and more recently by UK Tram talks about the average cost of 1 mile of tramway being £20 million to £25 million, so clearly, if we can get this right and can use existing infrastructure in the future, there are significant savings that we can make. During that time, the Rail Minister also sought assurances from Network Rail about the project being delivered. I don't think it was until January that he finally made a decision that said yes, it is a very difficult decision that needs to be made here, but it is still worth going ahead.

**Q38 Chair:** Certainly the benefit-cost ratio was right out of kilter. It was never great for a pilot, in a sense, but that was the understandable cost of a pilot. But by this point, Ms Kelly, was anyone questioning the benefit-cost ratio and therefore whether it was worth spending more money to go ahead? You have just said, Mr Etheridge, that a decision was made because there would be benefits to passengers. I am sure people in Sheffield and south Yorkshire are happy that this is eventually going to arrive, but it is at great cost. Was that the thinking around that discussion in 2014 and then 2016 particularly?

**Bernadette Kelly:** There was very explicit consideration. Let me be absolutely clear: there was very explicit consideration, both in 2014 and in 2016, as to whether the project should continue, given the increase in cost and therefore, obviously, the erosion in the overall BCR. There was very clear and explicit consideration of that point in the advice to Ministers in 2016, and a decision was taken to progress principally, as I say, on the basis that the strategic case for concluding the pilot and therefore seeking to secure the full learnings and benefit of the pilot was sufficient to proceed.

**Q39 Chair:** Mr Carne, we know the Minister agreed the extra £25 million on the basis of it coming from Network Rail funds, so what has been the opportunity cost for Network Rail from spending this extra money on this project, compared with spending it on other projects? What have you not done as a result of spending this extra money?

**Mark Carne:** There's nothing we haven't done. We have a portfolio of about £15.3 billion.

**Q40 Chair:** So you have trimmed a little bit everywhere? Is that what you are saying?

**Mark Carne:** No. We have a portfolio of thousands of projects, which cost a total of just over £15 billion in this control period. When you have a portfolio of projects, obviously some will cost a little more, some will cost



## HOUSE OF COMMONS

a lot more and some will cost less. Part of the processes we have put in place with the Department are for constant management of that portfolio, to make sure that we deliver within that funding ceiling. The opportunity was taken to ask, within that funding ceiling, whether we have enough contingency, if you like, to be able to fund this project without making any explicit deferrals elsewhere. That was the decision that was taken at that time.

Q41 **Chair:** So you are saying that there is nothing that is not happening as a result of the extra money that you've put into this.

**Mark Carne:** That is correct, yes. Nothing was explicitly traded off or cancelled in order to fund this.

Q42 **Chair:** Not explicitly. As you say, relative to your multibillion-pound budget, this is relatively small in total—although I would not want to say £25 million is small change. Have you had to seek extra savings anywhere else to make sure that you can fill that gap?

**Mark Carne:** We are striving very hard to achieve savings.

**Chair:** Of course, I know that you are trying across the board; you have said that before.

**Mark Carne:** And delivering. In the last two years, we have identified £480 million of savings on our projects, but equally, other costs have gone up by £360 million. This is the sort of trade-off that one is constantly making, looking at things that go up and things that come down. Of course, we also have a contingency element to account for any unforeseen problems. As the control period progresses, you can run down that contingency pot if you do not need to use it, and I think that was really the case here. We felt more confident that we weren't going to need it, so we were able to use that money to fund this.

Of course, you are right that, in the event that we had not had this cost increase, that £20 million could have been used in some other way to deliver some other benefits. However, there was no specific trade-off to make.

Q43 **Chair:** Given what you know now, what benefit-cost ratio do you think Network Rail could deliver for a future project, if the pilot were to be not only a pilot but rolled out elsewhere?

**Mark Carne:** I cannot possibly answer that, because it will depend specifically on the individual case. We have learned from this that it is very case specific, just as Mr McIntosh said. You really have to understand all the bridges you have to move and the signalling systems you have to change.

Q44 **Chair:** Are you looking at the Sheffield-Stocksbridge line, which currently has two freight trains running on it per week? Is that something that has been looked at by the Department?



## HOUSE OF COMMONS

**Brian Etheridge:** We are not looking at any specific—this would be a matter for tramway and South Yorkshire Passenger Transport Executive, rather than the Department.

Q45 **Chair:** But Network Rail need to participate in that. No one has approached you yet about the next project?

**Mark Carne:** Not to my knowledge. I am very enthusiastic about these sorts of technologies.

Q46 **Chair:** What we are trying to get to is whether there is any benefit. Is there anything else in the pipeline that might actually be delivered quicker and cheaper than this long-delayed, overpriced project? Is there nothing that you can recall? Someone in your Department might have a list of people who have written letters in.

**Mark Carne:** I think real interest has been expressed in this project, from Glasgow, Manchester, Cardiff, Blackpool and others, looking at tram-train opportunities. I do not think anything is immediately on the slate to be delivered in the very short term. We have learned a lot, and we have developed technology that will enable us to move ahead much more quickly if people want to pursue this.

Q47 **Nigel Mills:** I suppose, in terms of considering any future projects, you will want a pretty full analysis of what we have learned from this one and how to stop things going wrong. When do you plan to carry out that full analysis, which I think was always envisaged for this scheme?

**Bernadette Kelly:** Shall I start, and then my colleagues might want to add detail? Certainly, as I have said, there is already a body of lessons that are being brought together, from which this project and any future projects will be able to learn. That is an ongoing process; we do not want to wait until the end of the project to begin consolidating that.

We now expect an evaluation in three stages. The first stage will be in May '18 when the infrastructure work will be complete. A further evaluation will happen in early 2019, at which point services will have been running on the infrastructure for about six months. At the end of two years, which is the full time of the trial operation of services, we expect a full and final evaluation. But as I say, we are not waiting for that point; we are busy finding opportunities to consolidate and share learning industry-wide at the earliest possible points.

Q48 **Nigel Mills:** Who is doing those? Is that Network Rail's job or is it joint with Sheffield?

**Brian Etheridge:** We have agreed with Network Rail that it should be joint, and that will be our approach to most things—that we will do these things jointly. We have yet to make a decision about whether we should appoint someone to do that. The initial review will largely be to cover the kind of issues set out in appendix 3 of the Report on the technical nature. Then I think the review will shift from Network Rail to the Department: how do we introduce services? What were the operational issues? What



## HOUSE OF COMMONS

were the transport issues? Then we will fully evaluate those two years later. That will be done jointly.

- Q49 **Nigel Mills:** Will the review look at all the costs incurred at the Sheffield end as well so we get a full assessment of the scheme, rather than just a bit the NAO can look at, which is kind of what we have here?

**Brian Etheridge:** Yes, I think that is very important and why the full review takes two years. It has to take on board all these things that are the challenges that anyone else coming forward with a scheme would be presented with. We have to understand the end-to-end journey and what that means eventually for passenger use and passenger numbers.

**Rob McIntosh:** Madam Chair, to add to what my colleague has said, we will complete the infrastructure phase in May and make the system available for testing purposes. The integration of the trams on to the mainline network will itself be a huge learning. Later in the year, when we begin the operational service and the passenger, fare-paying services, we will be controlling the railway—trams, conventional trains and freight trains—and there will be a phenomenal amount of learning to be gained from that. That is a key part of the pilot and the learning from that will really help the future cases.

- Q50 **Chair:** Can you be clear about the date on which you are expecting passengers to be able to get on this tram-train?

**Rob McIntosh:** We have not publicised a specific date; that is for South Yorkshire passenger transport executive to do. The public commitment is for late next year. Within the project, we are aiming to have everything ready for September.

- Q51 **Chair:** What are relations like between you, Mr McIntosh, or Network Rail, and South Yorkshire passenger transport executive?

**Rob McIntosh:** I think it is fair to say, on a project like this, that it has been a journey.

- Q52 **Chair:** Everyone is on a journey. If we had a fiver for every journey, we would not be sitting here!

**Rob McIntosh:** They have rightly been quite demanding, but I have to say, in a constructive way. Since we took steps to restructure the project and bring in a new project team in early 2016, which led to the first phase of reviews, South Yorkshire passenger transport executive have been very complimentary about the team and about how Network Rail has been delivering the infrastructure. They are working together really well.

- Q53 **Chair:** Okay. I hope that your Department, Ms Kelly, will be talking to the South Yorkshire passenger transport executive; I am sure you are already.

**Bernadette Kelly:** Absolutely, we certainly are. We very much hold the responsibility for ensuring that not just the infrastructure but the programme as a whole—



## HOUSE OF COMMONS

- Q54 **Chair:** One of the concerns here is that if this is supposed to be locally driven, it does not send out good signals to people that Network Rail has done very well so far, for all that Mr Carne has said about it being fine next time round. The question is whether all the money spent on this pilot is really going to deliver tram-trains in future. If there are no further tram-trains in the UK as a result of this pilot, will that not be a sign of failure? What do failure and success look like?

**Bernadette Kelly:** The nature of a pilot is that you cannot absolutely define what success looks like, because you do not know what the pilot will conclude.

- Q55 **Chair:** But it works; if it is opening next year in one area, the technology can work.

**Bernadette Kelly:** Yes. Certain things will have been proven and developed as a consequence of this pilot and will not need to be re-tested or redeveloped for any future tram-train project. Clearly, things which Mr Carne and Mr McIntosh can talk to around the technical standards, for example, will have been established. Without any question, there will be a body of learning from this that will be applicable to future tram-train projects. We cannot yet anticipate which projects or project might emerge as good value for money and attractive transport propositions, but there is still every reason to suppose that tram-train projects will come forward. There is a logic in using underused rail infrastructure in this way in busy urban centres. As I say, a number of cities are very interested.

- Q56 **Chair:** Clearly, there are a number of different types. You can have unused rail lines and rail lines that are in use; you can have electrified lines and not-yet-electrified ones. Is there any prospect of bi-mode trams at any point?

**Brian Etheridge:** Yes, there is.

- Q57 **Chair:** That would be diesel and trams?

**Brian Etheridge:** Or battery. Things move on. That is absolutely the case. In answer to your previous question, one of the things Ministers considered very carefully was the continued support that they had locally from South Yorkshire, who also sit on the project board.

- Q58 **Chair:** The thing is, you would have support at that point, because once all that money has gone in, you want to make sure it is delivered locally. The challenge is, if you have bi-mode trains and different types of rail line, how many of the lessons from this particular pilot will apply to the next project that could be viable, because of the geography, the availability of the land and that sort of thing. There is a limited number of options, but they are not all going to be exactly the same as what has happened in Sheffield.

**Brian Etheridge:** No, that's true. However, as colleagues have said, what we have banked is an awful lot of the technical challenges to trams using a mainline railway. That is there now—it is banked, it is already in use and, in fact, some of that information is already shared with people. We still



## HOUSE OF COMMONS

feel optimistic about this and still think that, as a natural course of learning, the problems and costs and deliverability of future schemes will benefit enormously from what has taken place so far.

- Q59 **Chair:** Mr Carne, will you or one of your team be visiting any other tram-train projects elsewhere in the world to see if there are different lessons from the ones you have learned in South Yorkshire?

**Mark Carne:** Well, we do. We always have a campaign of learning from other projects in the world, not just on tram-trains but on all forms of technology. We strive to be at the cutting edge of technology.

- Q60 **Chair:** So someone in your team would go out now if you got an inquiry from another part of the country to seriously progress one. Would you go and look at something similar, if there was something more similar?

**Mark Carne:** Absolutely. If there was a serious inquiry to progress a tram-train project, we would be the first to want to support it and explore it as an opportunity.

- Q61 **Chair:** And to visit one that was perhaps more like it than the one you have delivered? It could be that the next tram-train project is substantially different.

**Mark Carne:** It could well be. Also, as Mr Etheridge said, technology moves on, so we should not assume that this is now the answer and everything should look like it, because it may not be appropriate in other cases. However, some important lessons have been, and will be, learned here.

**Chair:** That is another damning indictment of the delay. As you say, technology moves on, so a delay could be a problem. I am going to bring in Nigel Mills and then Sir Amyas Morse.

- Q62 **Nigel Mills:** I have a couple of questions. I guess I can understand you not having a proper cost estimate if a Minister drops a project on you and says, "I want to do this", and there is not enough time to really evaluate it; but was this project not first approved in 2009 and then re-signed off in 2012? Was there not quite a lot time to get the costs right on this in the first place, Mr Carne?

**Mark Carne:** That is a very fair comment. A really critical decision is: when is a project approved? We now have a collective understanding that a project is approved at the point in time when Network Rail has done all the necessary studies that give the funders confidence in the delivery and the timeframe of that project, and is not approved until that point. Otherwise I fear that, as we have done here, we set all sorts of expectations running that can sometimes not be met, and that damages the reputation of the industry and our company.

- Q63 **Nigel Mills:** Is it fair to say, Ms Kelly, that had the Department known on day one that this would cost anything like £75 million, the project would have been booted back into the long grass with all the other crazy ideas that get sent to you?



**Bernadette Kelly:** It is impossible for me to comment on a hypothetical. Clearly, we did not have that knowledge, and decisions could only have been taken on the understanding and information that people had then. Would we have looked even more sceptically if we had known then that the BCR was 0.3 as opposed to 1? I guess it would have been challenged a little harder, and we would have had to look extremely hard at the burden of proof around the importance of the pilot, but it is impossible to comment on decisions that might have been made with different information when we just did not have it at the time.

- Q64 **Nigel Mills:** If you were a cynical person looking at this inquiry, you would see a project for which the costing had not been done properly, with a low cost-benefit ratio to start with that became horrifically low. You might think there were some politicians in that area trying to get a trophy project, which did not really meet all the rules but got pressured through. Is it fair to say, to your recollection and from the papers you checked, that there was no undue pressure to get a trophy scheme done, and that this was properly considered by all the Departments?

**Bernadette Kelly:** As you pointed out, there was quite a big gap between the interest in principle in Sheffield-Rotherham in 2009 and the decision to proceed with the pilot in 2012. That does not suggest to me that there was massive and inappropriate haste in taking decisions around this, nor is there anything I can point to or any evidence presented in the NAO Report that suggests this was a trophy project.

- Q65 **Chair:** Did you do an evaluation of the Penistone-to-Sheffield line, which was an original programme—

**Bernadette Kelly:** Was that in the original 22, or eight?

- Q66 **Chair:** I am not sure of the exact timings, but it was effectively the precursor to this. It was supposed to have been a similar project. It was not exactly similar. In the end, it was dubbed locally “a train without toilets”, because that is all the difference was. It was basically a tram. Was any evaluation done of that?

**Bernadette Kelly:** I am not sure.

**Brian Etheridge:** We may have to give you a note on that by looking back. What we do know is that a number of opportunities for testing this were looked at. Some were rejected, and this was the one that went forward. Again, the concept that this was a project worth evaluating or trialling came up before any notion of trophy projects.

- Q67 **Chair:** I said I would mention other local lines. We talked about the Stocksbridge one. What about the line to Beighton? Could that go further? Is that even on your horizon? It is within South Yorkshire as well.

**Brian Etheridge:** Again, I think we have to take some advice.

- Q68 **Chair:** It sounds like there is nothing ready on the stocks to take advantage of the lessons learned from this pilot. There is no future plan



## HOUSE OF COMMONS

for anything, because you are leaving it to local executives to come up with a proposal.

**Bernadette Kelly:** No, there is live interest from a number of cities in the project, and in the possibilities for tram-train projects. Mr Carne has referred to a number of them, but we certainly know of interest in Glasgow, Cardiff-valleys, Blackpool and Manchester in learning from this. I am not sure I recognise the particular examples in South Yorkshire you are referring to; you would need to provide some information on those.

Q69 **Chair:** Thank you. I think we are all pretty staggered that this has gone up so much in cost, and we are very concerned about lessons learned. Mr Carne, you tell us it is all great now, because Network Rail is in a different place. Let's hope so. You will be in front of us plenty more times to justify that comment. You have said it before: we are watching. The fact that it ran over cost so much is just not acceptable; I think we would all agree on that. This can't happen again, but the key thing is that now it is happening, and it will eventually deliver for South Yorkshire passengers at about this time next year—roughly; I don't want anyone reading into that that I know any more than Mr McIntosh has revealed today.

That means that there is potential for more schemes to come forward. I have to say that from what you have said, I am not confident that those other schemes will have learned the lessons, given that they could all be quite different from the one that has been put forward. I don't know if you have got anything to add to that, Ms Kelly.

**Bernadette Kelly:** We absolutely share the Committee's determination to ensure that we really do extract the lessons in full for any future projects. We are also absolutely committed to ensuring effective cost estimates and cost controls are in place for all future projects, whether pilots or not.

Q70 **Chair:** So who is responsible for the extra, the overspend, the lack of planning? Who is going to say, "It's down to me"?

**Bernadette Kelly:** In relation to this particular project?

**Chair:** Yes.

**Bernadette Kelly:** Obviously, as I said, Ministers have asked Network Rail to ensure that the additional £25 million is found from within their overall funding envelope. I fully accept, as an accounting officer, that ultimately responsibility rests with the Department for ensuring the success of this programme.

Q71 **Chair:** I have to say that whatever you take from Mr Carne's comments about the regulator—we as a Committee have been critical about the role of the regulator in the past—it is staggering that the Department did not challenge the costs more. We cannot quite believe that that happened.

**Bernadette Kelly:** Without question, we would provide much greater challenge and seek far greater assurance on these project costs now than we may have done back in 2012.

Q72 **Chair:** Can I make you an offer, Ms Kelly? The next time you are looking



## HOUSE OF COMMONS

at a project, this Committee would love to look at it prior to the point at which it is agreed, just to have a good rummage through the numbers. I would be very happy to do that.

**Bernadette Kelly:** I hope that what you would see now is that there is a really rigorous process. If it would be helpful to the Committee to provide some further information on exactly the process that Mr Carne and I have outlined, we would be delighted to do so.

**Chair:** We would be interested to see that. As I said, the offer stands: if you have a future project that you would like us to look through in detail before it spends taxpayers' money, we would be very happy to do that. Thank you very much.