



The Scottish Parliament
Pàrlamaid na h-Alba

Official Report

FORTH CROSSING BILL COMMITTEE

Wednesday 17 March 2010

Session 3

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FORTH CROSSING BILL COMMITTEE
5th Meeting 2010, Session 3

CONVENER

*Jackson Carlaw (West of Scotland) (Con)

DEPUTY CONVENER

*Hugh O'Donnell (Central Scotland) (LD)

COMMITTEE MEMBERS

*Joe FitzPatrick (Dundee West) (SNP)

*David Stewart (Highlands and Islands) (Lab)

*attended

THE FOLLOWING GAVE EVIDENCE:

Alan Duff (Transport Scotland)

Mike Glover (Transport Scotland)

Frazer Henderson (Transport Scotland)

John Howison (Transport Scotland)

Graham Hunter

Christine Kirkcaldy

Ken Kirkcaldy

Ramsay MacDonald

Lawrence Marshall (ForthRight Alliance)

Andrew Mather (Cramond and Barnton Community Council)

Alan Richardson

Gerald Stevens

CLERK TO THE COMMITTEE

Sarah Robertson

LOCATION

Committee Room 5

Scottish Parliament

Forth Crossing Bill: Stage 1

Forth Crossing Bill Committee

Wednesday 17 March 2010

[The Convener *opened the meeting at 10:32*]

Work Programme

The Convener (Jackson Carlaw): Good morning, everybody, and welcome to the fifth meeting of the Forth Crossing Bill Committee. Agenda item 1 is consideration of an update to the work programme that we agreed on 3 February. The update does not take matters terribly much further forward but, for anybody who is following the progress of the committee's work, it would be useful if we could express our contentment with it and post it on the website. Are members content with that?

Members *indicated agreement.*

10:33

The Convener: Item 2 is stage 1 evidence on the Forth Crossing Bill. I ask everybody to ensure that they have their BlackBerrys and mobile telephones turned off, as they will otherwise interfere with the sound recording. As has been the format previously, we are delighted to welcome witnesses to give evidence to us in panels. The main purpose of today's meeting is to hear from some of the objectors to the bill. We have not been short of objections to consider, and some of the ones that we have received are extremely detailed. We have read all the objections in detail, in order to absorb their content. There is a déjà vu element to some of them, as there are common themes emerging. However, at this stage of the proceedings, the committee is considering the general principles of the bill, so we have invited the objectors to speak to certain aspects of their objections to the whole bill.

We appreciate that some objections contain several different topics and headings. Nevertheless, we might ask rather specific questions instead of going through every aspect of every objection that we have received. I hope that, over the course of our evidence sessions, all the strands that are raised in the objections will be heard and discussed by the committee. I look forward to hearing more about some specific issues that we have addressed earlier in our consideration—the choice of routes to support a crossing and whether there is a need for another crossing—although it is possible that other, incidental issues will arise as the discussion progresses.

I welcome our first panel of witnesses: Alan Richardson; Andrew Mather, from Cramond and Barnton community council; and Ken Kirkcaldy and Christine Kirkcaldy. Good morning to you all.

We will start with Mr Mather, and move straight to questions. We have received detailed submissions from people, and our practice has been not to invite people to make opening statements, as they would no doubt repeat a lot of the evidence that is in their submissions.

We will begin with questions on issues to do with the A90. Can you expand on the information relating to your objection? For example, where do the data underpinning your concerns about the increase in traffic volumes at the Barnton junction come from? On 24 February, when the issue was raised by the committee, Transport Scotland told us that there would be little increase in traffic going

into Barnton on the A90. Why do you think differently?

Andrew Mather (Cramond and Barnton Community Council): We accept the point that the new bridge will increase traffic only marginally on the A90 and through the Barnton junction. That is a reasonable assumption to make. However, Transport Scotland states that the natural growth of traffic is 2.5 per cent a year—that happens automatically. Using that figure, we can see that, by the time the new crossing opens, there will be 20 per cent more traffic crossing the Barnton junction.

The Convener: So you have hypothesized on the back of assumptions that are made about traffic growth generally.

Andrew Mather: Yes.

The Convener: Do you have any information on the history of accident rates on the A90? Obviously, you have a view about the impact that the new crossing might have on accidents.

Andrew Mather: We have no specific information to justify any point that we make, to be quite honest.

We do not anticipate the new crossing having a significant effect on accident rates. We think that traffic will slow down, which might make the roads safer. We do not believe that accident rates are a major factor in the discussion. There have been one or two fatal accidents, but they have involved pedestrians doing silly things, in the main.

The Convener: In essence, therefore, the concern that you have is to do with the volume of traffic; you are not suggesting that the A90 is a dangerous road that could be made more dangerous.

Andrew Mather: That is right.

Joe FitzPatrick (Dundee West) (SNP): You say that the automatic growth in traffic will mean that 20 per cent more vehicles will be using the junction by the time the bridge opens. Do you have any information that the bridge will add to that and, therefore, be responsible for more congestion and loss of amenity in the area?

Andrew Mather: We are not blaming the bridge per se. I have had the benefit of receiving a detailed presentation from John Howison on the bridge and its design features, and I was very impressed, particularly with the work that has been done on the bridge's access and exit routes. However, that work stops about half a mile from the bridge. There is a suggestion that the increase in the provision of park-and-ride facilities might help public transport initiatives and that the use of the old bridge for public transport might reduce crossings by other vehicles. The airport growth will

increase traffic requirements in the area, but I understand that work on that is being prioritised as well.

The situation is like a jigsaw puzzle. Several bits of the puzzle—the bridge, the flow of traffic and so on—need to be put together to make the whole thing work. Unfortunately, bits of the jigsaw are in different boxes and it is unlikely that we will be able to put them together in time, which means that we will be unable to deliver the benefits that we hope to gain from the new bridge.

Joe FitzPatrick: You do not have a problem with the bridge; you simply want something to be done to deal with the problem at Barnton in parallel with that process.

Andrew Mather: Yes, because I believe that the bridge will fail to achieve its aims if that is not done.

Joe FitzPatrick: You are not the first person to make that point.

Your submission says:

“the reduction in air quality can be expected to be marked at the Barnton and Davidson's Mains shopping areas”.

Do you have any evidence for that?

Andrew Mather: We believed that to be true until we saw John Howison's presentation. His figures seemed to contradict that view, so we might withdraw that element. We have no specific evidence on the matter, other than the evidence from John Howison that contradicts our point.

Joe FitzPatrick: Okay, thanks for that.

To deal with the kind of problems that are highlighted in your submission, what solutions should be brought to the table?

Andrew Mather: I feel—or, rather, the community council feels—that it is very important to have an integrated transport policy around the bridge. That issue is not the bridge's fault. The bridge provides an opportunity to pull the different bits together to make the whole thing work. It is a bit like putting a pacemaker into a patient. If it is not connected, the patient will die. The pacemaker might be fine—we might have a beautiful bridge—but it will not fulfil the purpose that it was designed for. Without such a policy, the bridge will not provide the economic corridor that we want up the east side of Scotland. We are frustrated by that.

Joe FitzPatrick: That is helpful. Thank you.

The Convener: That concludes our specific questions to Mr Mather. After we have put some questions to the other witnesses, we will come back with more general questioning, in which all witnesses will be invited to participate.

David Stewart (Highlands and Islands) (Lab):

My questions are specifically to Mr and Mrs Kirkcaldy. Before I move on to more general criticisms, let me start by asking about the submission from them that we have just received, which I have had a quick look at. On the final page, the submission asks:

“In order to assess and determine the effects on human health can a detailed independent environmental health impact assessment be undertaken as a matter of urgency?”

Will you summarise your arguments on the need for such an assessment?

Christine Kirkcaldy: The health impact assessment was published only on 25 November and was not part of the documents that were presented to us at the open meetings. The existence of the assessment did not become apparent to us until after we had lodged our objections. We found it only through trawling through Transport Scotland’s website.

As a health care professional, I have always been very concerned about the health impacts on the people who live near the bridge construction works. I feel that the health impact assessment is very generalised and considers matters only at a high level. The assessment does not get down there and look at the recorded evidence, including research that has been undertaken by experts in the medical field, to find out exactly what the effects are.

From section 8, “Noise”, and section 7, “Air quality”, of the health impact assessment, it is very apparent what can happen to people who live close by a construction site. Particularly during the six to seven-year construction phase, we will face an enormous amount of noise in and around Queensferry, including within 5m to 10m of our garden.

When putting forward our objection, we decided to try to give a sense of how the construction of the bridge will impact on us personally, but the same issues apply generally to the people around the building site. I just do not feel that the health impact assessment is independent enough and has considered expert evidence in a sufficiently detailed manner.

As I say in the submission before you, I just ask you to consider how it makes you feel—you do not live beside the construction site—when you see words such as “Metallic hammering”, “Welding”, “Blasting” and “Bird Song”? How does it make you feel to see words such as “Compressors”—which will be going 24/7—and “Drilling”, “Excavation Works” and “Heavy construction vehicles”, which will be driven within 5m to 10m of our property? Those vehicles will be rumbling around on poor-quality road surfaces, which will not match the quality of road surface on the bridge that is

mentioned in the environmental statement. During construction, the road surfaces will be of much poorer quality. Those enormous vehicles will be travelling in and around the construction site and within 10m of our back windows.

David Stewart: I think that you have identified very well a gap in the market. Basically, your argument is that we should have an independent environmental health impact assessment using the criteria that are laid down in the other comments in your submission. Is that a fair assessment of your view?

Christine Kirkcaldy: Yes, I believe so.

David Stewart: Let me turn to more general questions. First, let me congratulate you on all the work that you put into providing such a detailed main objection, which must obviously have taken a lot of time and effort to prepare. Obviously, the objection has many strands, some of which are about the whole bill and some of which are about provisions within the bill. Can you quickly summarise your grounds for objecting to the whole bill?

10:45

Ken Kirkcaldy: We have looked at it from our own perspective, as well as the perspective of people living in Queensferry. We just cannot see how the proposal for a third bridge across the Forth, whose connecting roads will totally encircle Queensferry, has considered how Queensferry itself will be affected. We wondered whether at this stage—as the width of the bridge has changed—it would be worth reconsidering quickly the tunnel option or whether the bridge itself could be redirected to land on the south side further west of the communities. The road could connect directly to the M9, rather than connecting around to the south of Queensferry.

Inchgarvie will be totally surrounded within a construction site, as I think you are aware. Queensferry will also be surrounded in a construction site. I visit building sites from time to time and I know that although, with the best will in the world, people try to keep within the normal working hours, it is questionable whether the contractors will stick to their working hours. For Queensferry, it is not just about the construction works but about travelling to the construction site. The whole thing will be a nightmare for the five or six years during which the construction takes place.

David Stewart: Thank you for that summary. You also said that you are very concerned—and understandably so—about the disruption to your business from the construction of the crossing. On page 5 of your submission, you state that the business will be

“unsustainable due to the impact on earnings caused by the long term adverse effects”.

That is clearly very regrettable. Have you had any thoughts or discussions about compensation from Transport Scotland? You might be aware that evidence was given to the Finance Committee that the compensation limit will be around £10 million. Do you have any outline thoughts on that? What will be the effect on your business?

Ken Kirkcaldy: We have had very brief conversations with Transport Scotland but no detailed discussion about my specific losses or potential losses. I am a practising architect. Clients come to my studio to look at designs, as do consultants and contractors. Given that we will be in what could be viewed as an island surrounded by constant construction traffic flow, access will be a problem. It will also be a problem to create an environment in which it is comfortable to meet and concentrate on work, given all the thundering traffic that will be going by.

David Stewart: Has your assessment been that there will be a reduction in business—I think that you have identified that—or that you will be unable to continue with your business once the bridge construction starts?

Ken Kirkcaldy: During the construction phase, it will be very difficult to continue my business there. I would probably have to think about relocating during that period. I am not too sure of the effects of the bridge once it is in use, because I do not know what kind of mitigation will be put in place.

One of the major points that we made was that, despite the fact that we are in a listed building and we are dramatically affected by the works, when you look through the headings in the environmental statements, you will see that we are mentioned only a couple of times. There has been quite a severe omission in relation to our premises probably because a large part of the effect on us will be from the temporary access road down to the shore, which is a contractor’s design element and therefore in effect a side issue, rather than one of the main issues. One of our main concerns is business performance and productivity under those circumstances.

David Stewart: In your submission, you say that you are very concerned about noise—again, that is understandable. You say that you believe that the noise might breach the Noise Insulation (Scotland) Regulations 1975. What contraventions have you identified and do you see any arguments for modifications to the code of construction practice?

Ken Kirkcaldy: I would be better able to answer that if some monitoring was happening in and around our premises. When we asked Transport

Scotland to monitor the pre-construction work situation, we received a negative response, the response being that there is a noise monitor in close proximity, in the neighbouring residential area. We do not have a benchmark to start with. I believe that it is the elevated level that has to be considered and not the end level.

Christine Kirkcaldy: Although the committee visited the area around Inchgarvie lodge, you may not have had the benefit of coming into the courtyard and seeing the raised garden. Our house turns its back to the noise from the current Forth road bridge and the prevailing winds carry the noise away. As Ken said, we have constantly asked for a noise monitor to be put on the house to demonstrate that just a few hundred metres away the noise levels can be a lot higher. We are secluded where we are, and the courtyard encompasses the property. As Ken says, we cannot benchmark without having had the benefit of monitoring.

David Stewart: Have you considered in detail the code of construction practice?

Ken Kirkcaldy: As far as I can, yes. We have read through it. It is quite a complicated document. I am by no means an expert on noise, because noise is a particularly difficult subject to understand. I would probably rely on experts to give us that information.

David Stewart: We heard in a previous evidence session that work will start earlier in the day than in other examples. The start time for the Airdrie to Bathgate railway line, for example, was 8 am, I think, as opposed to 7 am in this case. Obviously, that has implications for noise. Were you aware of that? What are your thoughts on that?

Christine Kirkcaldy: We are currently experiencing that. As you probably know, the contractors have moved into the area. We had been told that no further heavy vehicles would be coming up and around the private driveway of Inchgarvie lodge once things had started, but these are pre-works, and of course the vehicles are back again. The road surface is already deteriorating. We have had tractors and construction vehicles up and around that private drive, not only churning up the drive but waking us up just after 7 o’clock in the morning at the weekends.

David Stewart: How long have you been advised that the works around your property will last? Do you have any solutions to the problems that you have raised that would make life a bit easier for you during the construction phase? You have already mentioned the independent environmental health assessment.

Ken Kirkcaldy: The length of time is difficult to predict because some of the work may be in advance of the contract. A new sewer was put in relatively recently. It goes on three sides of us and has to be relocated for the whole road. There are works to underground electricity lines. All of those works may happen as pre-contract works, which would extend the period of the works beyond the five or six years that we have been told they will last. We are not absolutely sure—it depends on the contractor's programme—how much of that time the works will be in our vicinity or that of Queensferry, because the programme includes all the other infrastructure works.

Christine Kirkcaldy: So upwards of seven years, probably. The only mitigation that we can really see is that we are afforded the opportunity to be relocated during the construction phase.

David Stewart: Are there any other points that you want to make at this stage?

Ken Kirkcaldy: We have tried to be helpful by outlining in our submission what we see as solutions to some of the problems. We have made quite a few suggestions, although I do not have the information in front of me so I cannot run through the whole list. Like most people here, we are not experts in any particular field. We are really talking from the point of view of being property owners and residents within a community. We can use only our best endeavours to comment on the various detailed aspects and make suggestions for what we see as solutions.

David Stewart: Thank you for your evidence.

Hugh O'Donnell (Central Scotland) (LD): I have two questions. You are perhaps aware that the code of construction practice removes from the local authorities control over aspects such as noise and vibration, to which you have referred. If that control remained with the local authorities, would that give you more confidence about the issues that concern you? Furthermore, has anyone had any indication of who the contractors are that you said have been around the area recently?

Ken Kirkcaldy: No, we have had no information. Basically, there have been a dozen people in yellow jackets, walking up and down and having a look-see. We assumed that it was this committee having an advance look around the area.

I am sorry—what was the other question?

Hugh O'Donnell: The other question was on local authorities having control over noise levels.

Ken Kirkcaldy: Speaking for myself, I think that that would be a great comfort. Noise and vibration are two of the main concerns that we mentioned to our local MSP, and it would give us an authority to

go to if there were a problem. We understand that there will be some representation from Transport Scotland on site, although we do not know whether it will be one person or a group of people. When the work goes ahead, we will need a direct contact with whom we can raise any concerns that develop during the contract period.

The Convener: You are right that the committee has visited the site—I have just reminded myself with some of the photographs, and we were wearing yellow jackets. However, we were there in the middle of the morning, and I hope that we were not an unnecessary disturbance. We were trying to be discreet.

We will speak to Transport Scotland later. I thought that I understood you to say that there had been additional heavy construction works recently at 7 o'clock in the morning, involving tractors and lorries. Can you remind me of that? We can ask Transport Scotland about it.

Ken Kirkcaldy: I presume that it was test boring.

The Convener: When you say recently, what do you mean?

Ken Kirkcaldy: It is happening just now.

Christine Kirkcaldy: Right now. I could have taken photographs this morning—I thought about it. There are big drills boring into the ground, and there are construction vehicles travelling up and down the drive. The workers are moving down, looking at the potential haul road and coming closer and closer to our property with the construction vehicles.

Alan Richardson: Perhaps I can help. A letter came from Transport Scotland to indicate that the further investigative work would be carried out by the contractors that are bidding for the work. I assume that that is what is happening at the moment.

The Convener: So you got a letter, but Mr and Mrs Kirkcaldy did not get one.

Christine Kirkcaldy: A letter came some time ago to say that that work might take place.

The Convener: Did it indicate how long the work would last?

Christine Kirkcaldy: No.

The Convener: That brings us to you, Mr Richardson. My colleague Hugh O'Donnell will put some questions to you.

Hugh O'Donnell: Good morning, Mr Richardson. Again, the questions are fairly detailed ones on your objection. On page 7, you state:

"It is important to note that neither the STAG assessment work outlined in the ES nor the DMRB Stage 2 Corridor Report included an option with the Queensferry Junction as per the current preferred location and configuration ... There is no evidence that a detailed technical assessment ... of this option has been undertaken".

Do you still believe that to be the case, or has anything changed since your original objection was submitted?

Alan Richardson: As far as I am concerned, no detailed assessment of an alternative option to the current proposal has been undertaken. I specifically put the question to Mr Howison and his team from Arup-Jacobs, and they advised me that it was a natural progressive decision from the original proposal, which was the link road near the Scotstoun interchange.

Hugh O'Donnell: You also refer to your belief that Transport Scotland has departed from the Scottish transport appraisal guidance process. Where and in what way has it departed from that?

Alan Richardson: I am not sure that I mean the STAG process. I am more concerned about the traffic modelling, especially the independent audit of such models and the procedures that are laid down in the design manual. For instance, it is a mandatory requirement on Transport Scotland that a validation report be made on all local models, but that has not been done. The same goes for a forecasting report, which has not been carried out. Also, although Transport Scotland assured me last summer that an independent audit would be carried out, Mr Howison now says that it is not required.

11:00

Hugh O'Donnell: Did he say why it is no longer required?

Alan Richardson: No.

Hugh O'Donnell: It is just not required, full stop.

Alan Richardson: That was his answer.

Hugh O'Donnell: You referred to the mandatory requirement; I see that point on page 10 of your objection.

Alan Richardson: The fact that no audit is required is concerning. You would think that, for a project of such size, Transport Scotland would ensure that everything was checked, all validation and forecasting reports were accurate and an independent audit was obtained. Given that I was told in the summer that the project was subject to an independent audit, I suspect that an audit was done and the project did not pass. In other words, my suspicion is that Transport Scotland did not like the results and so decided not to require the audit.

Hugh O'Donnell: On page 12 of your objection, you state:

"everything reasonably practicable regarding assessing the environmental impact has not been undertaken and as a result the Environmental Statement"

is

"seriously flawed, thereby inadequate."

You also say that aspects of the preparatory work

"fail to comply with the relevant guidelines and have not been demonstrated to comply with good working practice."

Again, on the specifics of those comments, what do you think has not been undertaken? What relevant guidelines are you referring to, and how does the current proposal not comply with them?

Alan Richardson: That all relates back to traffic modelling. I understand that the environmental statement is a high-level assessment, usually carried out through the strategic transport model for Scotland modelling, with some input at the local level. As Mrs Kirkcaldy said earlier, the impact on residents and communities is local and severe, and in my opinion no great assessment work has been put into the environmental statement on a local level. It is not good enough to rely purely on strategic modelling.

We must also remember that Transport Scotland developed a special Forth regional traffic model specifically for the project, but it was not available in time. It is now available, but it was never used on the project. Its local models have not been audited, either.

Hugh O'Donnell: Sorry, I did not hear the last part.

Alan Richardson: As I explained earlier, the local models have not been audited. We cannot trust the information that has been put into the environmental statement. That, in a slightly technical form, is where I am coming from in my objection.

Hugh O'Donnell: Thank you for that.

The Convener: This discussion has been quite specific, and those are the questions that we had to put to you this morning. We have digested much from your submissions, and we will put further questions to Transport Scotland that arise from them and what we have heard this morning. If no one wants to take the opportunity to make any further comment, I thank you all.

11:03

Meeting suspended.

11:05

On resuming—

The Convener: I am delighted to welcome our second panel this morning: Mr Graham Hunter, Mr Gerald Stevens, Mr Ramsay MacDonald and Mr Lawrence Marshall, who is representing the ForthRight Alliance. We have received apologies from Mr Minogue, who has had to cancel for personal reasons, and, unfortunately, from Carol Davidson, who was to represent the Springfield residents group but who has indicated at the last minute that she is unable to join us.

The questions for this group of witnesses are not specific, but general, so I will ask the witnesses to comment on various points. We are grateful for the detailed submissions that have been received and will go through the questions that we want to put. I ask the witnesses to resist the temptation to broaden out their comments and to speak about 101 things at the same time; we hope that we will come to the points that they want to make.

Why do you believe that the current Forth bridge should be maintained and that it would be better to maintain the existing bridge per se?

Lawrence Marshall (ForthRight Alliance): The existing bridge can be fixed at much lower cost to the Scottish taxpayer or the Scottish Government than building a new additional bridge, which will cost more than £2 billion, will exacerbate climate change emissions and will increase traffic beyond even trend growth. Although there will be some disruption if cable drying does not succeed and the cables have to be replaced, that disruption is not worth £2 billion of public expenditure that could be better used for much more worthwhile projects across the land.

The Convener: My colleague David Stewart will seek your opinions specifically on issues relating to the cables on the existing bridge.

Ramsay MacDonald: I have seen nothing in any of the presentations that have been made to suggest that the proposed bridge will provide a sustainable solution to current traffic issues. I fear that in 15 or 20 years we will be back to saying that there is virtually a car park between the bridge and Edinburgh, and asking what we can do to reduce the traffic. What is proposed is a kind of halfway house that involves the existing bridge being maintained for 800 buses a day, or whatever the current figure is. What will be the capacity of the future bridge? Regardless of whether it can hold all the traffic, I do not think that the road network can. If we will not get anything better than the current bridge, surely all efforts should be made to identify what will offer the biggest bang for our buck and the most sustainable solution, especially given some of the indications that we

have in relation to dehumidification and cable replacement. I do not think that the case has been proven.

Gerald Stevens: I come from the same place. We should consider whether the existing bridge can be repaired at much less cost than building a new bridge. The proposal is badly thought out. There seems to be a rush to get another crossing built, on the basis that we badly need it. I would prefer us to have a good look at repairing the old bridge, to see how long it will last. That would buy us time to select the right place for a new bridge, where it should be at less risk to the environment and so on.

Graham Hunter: It seems slightly idiotic—I do not mean to be personal about anyone here—to keep two bridges. If a new bridge is required, we should delist the current bridge so that it can be demolished. The economic disruption that would be caused by repairing the existing bridge would be much less significant than that which would result from the traffic delays that would be associated with building a new bridge.

The road network is geared up to connect with the existing bridge; the M9 spur has just been built at great expense to do that. The traffic plans that show how traffic would get on to the new bridge do not look like the most efficient way of doing that. It makes much more sense to have a traffic network that is reasonably joined up, as is the case at the moment.

I do not think that sufficient steps have been taken to reduce the flow of traffic over the bridge. If there is a problem with heavy traffic, surely it could be diverted over the Kincardine bridge. In my experience, most of the heavy traffic travels from the east of Scotland to the west via the Forth crossing.

On a personal level, I believe that a second bridge will make the town of Queensferry claustrophobic. Under the current design, the approach to the bridge is very close to the town and people will feel very hemmed in, which will have a psychological effect on the residents. I might be unemployed in six months and I have no prospect of selling my house at the moment. Unless the decision is taken that at no future point will the bridge be built, it is highly unlikely that I will be able to sell my house and there is no provision in the bill for the house to be purchased compulsorily, which would allow me to move away from the area to seek a job.

The Convener: Thank you, Mr Hunter. You have anticipated my follow-up question about the effect of a new crossing, were it to be built, on each of you personally. I ask Mr Stevens for that information.

Gerald Stevens: It will be horrendous. Before the bridge is even being built, the surveys—the practice piling, if you like—and everything else are shaking the house. I started working for Lothian Buses about three years ago and I am on a three-shift pattern. Even with the surveys that are going on just now, there are generators running at 7 in the morning and trucks going up and down. Before, we did not have any problems with noise pollution anywhere in Springfield, all the way down the field. Also, you have visited Springfield and will know that the views are stunning. So, as a 59-year-old—it was my birthday just the other day—with only six or seven years to retirement, what do I have to look forward to? A building site on my doorstep. Even when the bridge is constructed and everything is done, I will still face more pollution and noise, and I will not have any views at all. It is just catastrophic. I have had serious discussions with my wife and our best way out seems to be either to try to let the house or to rent it out to the people who will be building the bridge and just go. I just do not see any other way around it. In the new crossing and where it will be placed, there is nothing in my favour at all.

The Convener: Thank you, Mr Stevens. You are all familiar with the fact that we visited the area extensively. We have here a panoramic photograph of the area in which you live and we can see it for ourselves.

Ramsay MacDonald: The effect on me will be similar. When we moved to the area we liked the views, particularly over the current iconic rail bridge. The prospect of having a four-lane motorway 100m from our bedroom is not something that we planned on when we acquired the property. We will lose the view completely and will look out on to a bund. We are not even convinced that the planting will be mature; we think that it will be some horrible immature forest to start with. The noise of the piling for the new road is a concern, as is the effect of the piling on the structure of the house. We will also lose completely the greenbelt land in front of our house and all the amenity on the Dundas estate where the new road will go, which is one of the principal attractions of living there. That is all going to go.

There is also the issue of the lighting gantries. We have tried to get some detail from Transport Scotland about where those are likely to be and how many of them are needed as part of the much-touted traffic management system. I have seen them on the M42 down in Birmingham, and the prospect of such gantries being situated a couple of hundred metres along the road is horrible. What is now a rural setting will become a very industrial environment.

The Convener: I am sorry—we are just getting the correct photographs to remind us of where you

are talking about. That is where the banking is allegedly going to go.

Ramsay MacDonald: That is right. We asked whether the road could be lowered or hidden, but we have been told that that cannot be done for technical reasons, although it has never been fully spelled out whether cost is behind that rather than technical reasons.

11:15

The Convener: We stood and looked across at the road. At which end of that bit is your property? Are you at the immediate road end or at the furthest end?

Ramsay MacDonald: We are at the immediate road end, right on the right-hand corner. Ours is probably the closest property to the road.

The Convener: Mr Marshall, will the new crossing affect you personally?

Lawrence Marshall: I stay right beside the Forth, just a few yards from Portobello beach, which is somewhat distant from the construction site. We have some active members in the South Queensferry area, in particular, but our objection—in a private capacity rather than in the public interest—is more about the use of taxpayers' money.

The Convener: Okay. Thank you.

Let us return to maintenance of the current bridge. I do not know whether you have had an opportunity to hear any of the evidence that we have taken or to follow our proceedings. What specific arguments on maintenance of the current bridge that have been used as a justification for the new crossing are you not convinced by? Mr Marshall touched on that. Would you like to expand on what you said?

Lawrence Marshall: There are obviously issues with the current bridge, many of which one would expect with a bridge that is almost 50 years old. Issues that were anticipated include the need for the main expansion joints to be replaced. The original joints were only meant to last 30 or 40 years. The main issue that has given rise to the renewed campaign for another crossing relates to the cables and the discovery in 2004 of a degree of corrosion in the cables that was not anticipated when the first internal inspection of them was carried out.

A new bridge would bring benefits such as easier maintenance and a greater ability to cope with heavy HGV traffic, but we do not think that those benefits are worth spending £2,000 million on when we will end up with a denuded existing bridge and probable overcapacity on the new bridge. As I said in my objection, 53 per cent—

more than half—of the HGV freight with a UK destination that is lifted in Fife stays in Fife. Only 12 per cent of it is directed towards Lothian and the Borders, and a similar percentage goes down to Humberside. The majority of HGV traffic is directed towards west central Scotland and north-west England. That is quite evident if you live near the bridge. The new M9 spur road basically takes away the lorry traffic that used to crawl along the A8000 when it branched off immediately south of the bridge.

I think that HGV traffic, particularly from north of Fife, can be directed away from the bridge. HGV traffic from Aberdeen, Inverness, Perth or Dundee would be much better going via Kincardine. The distance that would be travelled would be almost exactly the same; in some cases, it would be shorter. That is certainly a much more direct route than using the current Queensferry crossing. I do not think that the HGV argument is particularly valid.

The work that is about to commence on the anchorages of the bridge will be a world first, just as going into the cables was a world first, but I do not see it as being any different, in essence, to recabbling, because if recabbling is necessary, new anchorages will be necessary, too. I think that those two issues would mesh into each other.

The Convener: Our colleagues on the Transport, Infrastructure and Climate Change Committee have been taking evidence on similar topics, to which we have access. I was trying to remember what the figure on resistance to the bridge was—I think it was 18 per cent. There are issues with the deterioration in the cabling of the existing bridge.

Lawrence Marshall: The cables have deteriorated. It is difficult work, because you need a couple of points on the curve and, if you've just gone into the cables for the first time, you have only one point and you have to try and work things out. The first time the Forth Estuary Transport Authority reckoned that there was an 8 per cent loss of strength in the cable; however, after going in a second time—I think that it was in 2006, but I am not exactly sure—they reckoned that the rate of deterioration was not as severe as they had originally thought. They reckoned the loss of strength was 10 per cent. The bridge cannot be operated if there is a 20 per cent loss of strength in the cable; the factor of safety was 2.5 when it was built, and the bridgemaster will not operate it below a factor of safety of 2. The idea behind the cable drying is to halt corrosion and ensure that the loss of strength does not go much beyond 10 per cent. In effect, the bridge will last for the rest of its service life, which was originally 120 years.

The Convener: I will come back to you in a moment on what you foresee happening if the

crossing does not go ahead and maintenance issues arise.

Mr MacDonald, what in the arguments for maintenance of the current bridge does not persuade you of the need for a new crossing?

Ramsay MacDonald: I do not think that we have enough evidence of how other bridges in the world have lasted longer than the current Forth road bridge. I find it pretty shocking that it appears to be time-expired after 46 years. I believe that its design life was 100 years, which is similar to that for the new crossing. Moreover, no traffic reduction proposals, whether for HGVs or private cars, have been put forward and it is very hard to find any evidence on traffic figures. I was very interested to hear earlier comments about the traffic modelling—

The Convener: You are aware that the Freight Transport Association and the Road Haulage Association have very strongly supported the new crossing because of concerns about maintenance. Although the bridge had a certain life expectancy, the current volume of traffic is way in excess of anything that was originally foreseen.

Ramsay MacDonald: Quite—so what is being done to ensure that the same mistake is not made with the new bridge?

The Convener: I am asking about the maintenance issues on the current bridge being used as justification for not needing the new crossing.

Ramsay MacDonald: That is another argument. Would reducing the traffic on the current bridge in some way extend the bridge's life span? I have seen nothing to suggest that it would.

The Convener: Mr Stevens, what in the arguments for maintenance of the current bridge has not persuaded you of the need for an additional crossing?

Gerald Stevens: I am not denying that at the end of the day we will probably need another crossing; I just think that this project has been ill thought out.

The bridge does need maintenance. However, I spoke to a few of the engineers who were doing the cabling and the fact is that, despite Transport Scotland's claims last year that the cables cannot be fixed, that it will cost too much money or whatever else, they can be fixed—at a cost. It just would not be the cost of a new bridge. If we were to proceed with that maintenance and get a bit more life out of the current bridge instead of just jumping in with a new bridge, it would give us a lot more time.

I also think that the current location is out of order. As was said earlier, and as I know from my 12 years in the area, most of the traffic, including HGVs, heads west. I do not see why the new crossing cannot be located further up and then tied on to the M9 to allow the traffic to be taken west and through to Glasgow. Such a move would alleviate things in Newbridge, Barnton and everywhere else on our side. After all, if traffic is going to increase on the bridge, the traffic in those places is also going to increase.

Graham Hunter: I am not an engineer, but I have spoken to a number of engineers who are involved in the maintenance on the existing bridge and they say that it can be repaired, albeit at a cost. I do not believe that there is a firm estimate of the cost, or if there is, it has not been put in the public domain, as far as I know. However, the cost should be a lot less than the cost of building a new bridge as the infrastructure is already in place.

I would be the last person to say that we do not need a Forth road crossing. We do—but we need one that is fit for purpose, given the volume of traffic. Alternative approaches can be considered in the context of traffic management around the whole Forth estuary. We already have two road bridges across the Forth, and more effective use could be made of them. For example, if the worst came to the worst and no heavy vehicles could cross the existing Forth road bridge, traffic could be diverted.

The current estimated cost of a new bridge is just over £2 billion. As somebody with considerable project management experience, I think it highly unlikely that the cost will end up being much less than £3 billion—bearing in mind all the unknowns that are still to be resolved—and it could be much more. That additional cost would have to be paid for by increasing Government debt, and given that interest rates are set to rise, that would put an economic burden on the country. The cost of building a new bridge is likely to be a lot higher than the cost of keeping the existing bridge open.

The Convener: I do not think that there is any doubt that building a new bridge will have an additional cost.

Graham Hunter: If I understand the position correctly, the maintenance work that is being talked about will have to be carried out at some point if the existing bridge is to stay. The cost of that will not go away.

The Convener: We are exploring that as well.

What would happen if the new crossing did not go ahead? You have all expressed the general view that the current bridge could be properly repaired. What would be the economic impact of

that and what disruption would such a major refurbishment of the bridge cause?

Ramsay MacDonald: I think that everyone agrees that there is a need for a crossing. My fundamental problem is with the timescale and the rushed way in which the matter is being approached. I would like a more sustainable platform for the discussions. We need more time to think things through and to consider whether a tunnel in a different location would be a better option than a bridge or whether there is a bridge option that would genuinely mean that we had just one crossing rather than two. That is what I would like to see, with the road network to the south, including the M9, and the infrastructure linked in. We need a sustainable programme that takes some of the HGV traffic off and moves traffic to off-peak hours, and we should perhaps introduce tolls to discourage some of the traffic from crossing the bridge. It would be better to consider the matter on a far wider timescale of five to 10 years.

Graham Hunter: To build on those comments, there will be disruption whatever happens—whether the existing bridge stays or a new bridge is built. It is a question of considering which option will have the minimum impact. Repairing the existing bridge would probably have the minimum impact as a lot of the work would be done offshore. The marina developments would probably still have to be done if the foundation work was required, so there would probably still be a lot of disruption around Port Edgar because that would probably be the base for the work, as it is in the current plan.

However, a lot could be done to incentivise redistribution of the traffic that travels over the bridge. There is an appetite among the public for some sort of road charging, which has been accepted in a number of English locations where it has been introduced. It seems that people do not balk at paying £9 or £10 to drive into the centre of London. I know that it was Government policy to remove the tolls from the bridge, but if effective road management was introduced along with some sort of charging structure, such as road charging on the bridge at peak times, people would accept that approach.

Also, terms should be included in the maintenance contract to ensure that the contractors give an assurance that the work will be done to a certain standard so that they cannot come back in 10 years and ask for more public money to fix anything that has not worked. It should be the contractors' responsibility to do that. The same should apply to the contracts for the work on the new bridge. The public purse is not bottomless.

The Convener: I would be slightly surprised if the minister was quite as enthusiastic about the public appetite for tolls.

11:30

Graham Hunter: I do not think that he would be as enthusiastic, although he might be pleasantly surprised.

Hugh O'Donnell: In fact, the people of Edinburgh rejected such a suggestion a couple of years ago.

Graham Hunter: That was a couple of years ago, but the green movement is much stronger now. I am not a whole-hearted supporter of that movement—do not take it that way. However, from an economic perspective, road charging is now regarded as acceptable.

Gerald Stevens: I agree with that. The issue is all about time; let us not rush in but let us have a look at the existing bridge and see how long we can do with it. Let us be honest: if we charge on now and spend all the money on the new bridge, we will just have the most expensive bus lane in Europe, because we will have to fix it and do something with it. As for bus lanes for Edinburgh, that issue will not affect South Queensferry, because Lothian Buses does not go there.

Lawrence Marshall: Obviously, we would hope that the cable drying, which is now fully installed, will work and will halt the corrosion. We cannot undo the corrosion in the main cables.

The Convener: We will not know for quite some time, though, whether that has worked, will we?

Lawrence Marshall: It is not “quite some time”! It was exactly two years ago that the cable drying was installed in—I think—the mid-span of the west cable. They say that it takes about two years to dry the cable out, so we would be able about now to go into the mid-span of the west cable and have a look. I think that they are talking about waiting until the summer of 2012 to go back in and have a look at all the cables. However, that is not so far away. They had encouraging results when they went in the second time to the main cable and looked at what was happening: they found that the humidity was decreasing, which was why the restrictions that were originally posited for 2014 to 2017 were moved to—I think—2017 to 2021. We therefore hope that the cable drying will work. Frankly, if it does, no one will notice any disruption. As I said, there will be the usual maintenance issues on the bridge as would have happened anyway.

If the cable drying does not work, the bridge can be closed for three years for recabbling. No one has suggested that, though; it was not in the report to the Forth Estuary Transport Authority in February

2008. Instead, a roughly seven-year programme was proposed: in years 1 and 2, all lanes would be open; in year 3, all lanes would be open for 26 weeks, but one lane would be closed for 26 weeks; year 4 would be the same as year 3; in year 5, all lanes would be open for 46 weeks; in year 6, all lanes would be open for 32 weeks; in year 7, all lanes would be open for 26 weeks, but two lanes would be closed for 26 weeks—that would be the worst year; in year 8, all lanes would be open for 39 weeks; and in year 9, all lanes would be open for 45 weeks. That is all in that report that, interestingly, is no longer on the FETA website since it was revamped. To give it its proper title, it is now the “Forth Road Bridge” website, as it is apparently no longer a transport authority—in action anyway.

I think that that work could be done. As members will know, the work would cost less than the cost of demolition, although no one is proposing demolition of the existing bridge. I always knew that it would still be there when I go to my grave. It is a grade A listed structure that can be fixed. In any case, what would you do to mitigate some of the existing bridge's problems with traffic loading? Some people have long argued for another bridge because they want the extra road capacity that another bridge would provide. To be fair to the Forth bridge replacement team—I have never liked the word “replacement”, because the new bridge would be an additional crossing—they have planned to move all the traffic across to the new bridge, and the old bridge, if I can call it old, will be left with hardly any traffic. However, we can do other things.

Another problem is that I do not believe that the existing bridge would retain just 400 buses a day. I am pretty sure that there would soon be pressure to open up the old bridge to general traffic again, albeit maybe not HGVs.

The Convener: We are straying slightly at this stage. Can you stick to what you think the implications would be if the new crossing did not proceed?

Lawrence Marshall: This is something that you should be doing anyway. The south east of Scotland transport partnership and Fife Council have given evidence to the committee that roughly 800,000 vehicles a year could be removed from the bridge corridor if park-and-ride and park-and-choose facilities were in place at Halbeath and Rosyth. SEStran has included those in a package of measures that would cost £50 million and which are outlined in annex C of its written submission. Those measures would help to increase the number of people who cross the bridge, but not the number of vehicles that cross it. A lot could be done to increase the capacity of the road network

to carry people, not vehicles, without building a new bridge.

The Convener: Okay. David Stewart will pursue the matter.

David Stewart: I will stay on the theme of the work that needs to be carried out on the existing bridge. We took evidence from the current bridgemaster, who argued that it would take between seven and nine years to repair the main cables, as Mr Marshall identified. The bridgemaster told us that the minimum cost of that work would be around £122 million and that economists have argued that 3,000 jobs might be lost in Fife if the bridge were closed for even half a year. Witnesses have already identified some of the other problems with the bridge—with the expansion joints and anchorages, for example. On one level, there seems to be good reason for considering an alternative crossing. I ask Mr Marshall for his views, bearing in mind the points that the bridgemaster made to us.

Lawrence Marshall: The £2 billion may be available in the Scottish Government's budget, but you will have to slash and burn throughout the land to find the money to build the new bridge over that seven-year period. Sorry—I have forgotten your main point.

David Stewart: There will be costs involved in repairs, which could take up to nine years to complete, and there is the potential for job losses in Fife as well as problems with the expansion joints and anchorages.

Lawrence Marshall: That is what I wanted to get back to. The Roger Tym and Partners report—which I have not seen, although it is listed as a background paper in the February 2008 report on the replacement or augmentation of the main cables—talks about a loss of economic output in Scotland of more than £1 billion as well as 3,000 job losses, some of which would be lost permanently. However, I have not seen that report and do not know where to find it.

When the bridge is resurfaced every seven or eight years—every three or four years on alternate sides of the bridge—to repair the damage that is caused by HGVs, rather than cars, pounding the bridge, a huge congestion problem arises from the contraflow arrangements. If there were a 26-week closure—to take the worst-case scenario—for recabling, I do not think that there would be the same level of disruption day in, day out for six months. Mitigating measures would be put in place, such as park-and-choose or park-and-ride facilities and ferries across the Forth. Some of those measures might be in SEStran's plans already. People would move to high vehicle occupancy, and HGVs would go via Kincardine, for the most part. I am not sure that the cost to the

Scottish economy that Roger Tym and Partners projected—which was gargantuan, to say the least—would materialise. In the same way, I do not believe that Transport Scotland's figure of £18 million for the cost of the disruption that would be caused by the construction of the new bridge, principally at Ferrytoll, where there would be contraflow arrangements to enable the new interchange to be built, is comparable with the figure of £1 billion, although it demonstrates that the building of the new bridge would create disruption to the road network, too, particularly in the Ferrytoll area.

David Stewart: Thank you. Does any of the other witnesses want to add anything?

Graham Hunter: You mentioned the £120 million cost of repairs that the bridgemaster talked about and 1,000 job losses—

David Stewart: Three thousand job losses.

Graham Hunter: The difference between £120 million and even the low estimate of £2 billion suggests that there is an awful lot of scope for job creation, even if those job losses materialise. However, as Mr Marshall said, that is only a consultant's view, based on the significant delays that are already experienced in traffic flow across the bridge. A couple of weeks ago, traffic on the bridge came to a halt because of the cold weather, and issues would arise as a result of planned maintenance on the new bridge, too. If maintenance work on the existing bridge would cause job losses, that would be an issue with the new bridge as well, unless the traffic were transferred back on to the old bridge. Like Mr Marshall, I suspect that if there were two bridges, public demand would force the politicians to make the second bridge available in such a situation. The cost of repairing the existing bridge will arise much sooner even if all the traffic is taken off, if it then has to go back on again.

David Stewart: Do Mr Stevens or Mr MacDonald wish to put forward any arguments at this stage?

Ramsay MacDonald: The point has been made that we will have to spend £120 million on repairing the old bridge anyway, if it remains. There is also the issue of trying to reduce our carbon footprint. We have all signed up to the protocols to reduce carbon emissions, and although that may mean that there is a bit of disruption and that we need to explore ways to increase vehicle occupancy and reduce traffic, it should be at the forefront of everything that we try to do with regard to the crossings.

Gerald Stevens: I am fine for now.

Graham Hunter: We have a very good rail network across the bridge, and additional jobs

could be created by increasing the amount of trains that run on that line. That would involve construction work, and the additional trains would reduce the traffic flow.

David Stewart: Mr Marshall, your submission to the committee states:

“while 92,000 vehicles per day cross the new bridge in 2017, the ‘old’ bridge will carry a mere 300 buses per day.”

You describe that as equivalent to

“six minutes’ worth of traffic in an entire day.”

Your solution is to keep

“the existing bridge ... for general traffic—with variable charging ... to better utilise current capacity”

to move people across the bridge. Can you briefly amplify your thoughts on that?

Lawrence Marshall: I think that I said in evidence—to either this committee or to the Transport, Infrastructure and Climate Change Committee; I cannot remember which—that around 425 buses per day use the bridge at present, so we ought to get Transport Scotland to increase that figure from 300 to 425. That is extraordinarily poor use of the existing bridge, given the cost of fixing and maintaining it.

If the existing bridge was to continue as the only crossing at Queensferry, you would hope to implement many of the projects that I have just outlined, and which Fife Council and SEStran support, such as the park-and-ride and park-and-choose schemes at Halbeath and Rosyth, and longer trains. You could certainly increase the length of trains to around nine coaches on the Fife circle, for instance; only the station at North Queensferry might present a problem in that regard.

You could put an extra signal on the Forth rail bridge. Such an argument has been made for years, yet there has been no movement, despite the fact that there is a signal in the middle of the Tay bridge, which is exactly analogous to the situation with the Forth rail bridge. There would be no health and safety implications that are not already experienced in relation to the Tay bridge. We could move forward on some of those projects to try to reduce the number of single-occupant vehicles crossing the bridge.

Variable tolling already applies on the railway system: you have to pay much more to come into Edinburgh at peak periods than you do off peak. That type of pricing mechanism is not a magic bullet, but it is one way to try to increase high-occupancy vehicle use, by encouraging people to share cars, or the use of the bus or train. You will not get a dedicated bus lane on the current bridge if it is kept as the only bridge, but you can—this has always been the case—try to increase the use

of public transport and car sharing across the bridge.

The Convener: I thank you all and bring this session to an end. We will be joined in a moment by witnesses from Transport Scotland.

11:43

Meeting suspended.

11:45

On resuming—

The Convener: We move to the third panel, and I welcome back those from Transport Scotland who are with us again. John Howison is the interim project director—I notice that he is accompanied by a racy-looking motorcycle helmet this morning; I do not know whether that is competent evidence, but I am intrigued. He is joined by Mike Glover, commission project manager; Alan Duff, team leader for traffic; and Frazer Henderson, bill manager.

We will pick up on some of the issues that have been discussed this morning and then return to one or two questions that have arisen from evidence that we have covered previously.

I begin with the evidence from Cramond and Barnton community council, which is slightly contradictory. In its submission, the community council said that the

“Speed of vehicles on the A90 is already a problem with a high accident rate and this will be exacerbated.”

However, Andrew Mather did not confirm that in his oral evidence to the committee this morning. I am interested in that issue, as you said that you anticipated very little increase in traffic on the A90. Is that still your position? It now seems to tie in a bit more with the evidence that we heard from Mr Mather.

John Howison (Transport Scotland): Yes—there will be very little difference in traffic volumes in relation to the construction of the new bridge. West Edinburgh is heavily affected by a lot of development at the moment, such as the housing developments at Kirkliston and in the Winchburgh area, and the work at the airport. There are extreme pressures on that area.

The Convener: Have you any information on accident rates on that road in particular?

John Howison: No, I do not have any specific information on accident rates. As a local resident, I am not aware of any specific problem with accidents on that road.

The Convener: That was kind of what Mr Mather said, although the community council said the opposite in its submission.

Joe FitzPatrick: I think that Mr Mather almost withdrew his objections on those points when I questioned him, as I am sure you heard when he was talking about increased pollution and loss of amenity.

Mr Mather mentioned an increase in traffic of 2 per cent per year, which would lead to an overall increase of 20 per cent. Do you agree with his analysis that the new crossing will have no impact on that, and the traffic will increase whether or not the new crossing is built?

John Howison: Yes.

The Convener: To return to that point, Mr Mather had made an abstract calculation in relation to significant increases in road traffic. You projected a 2.5 increase per year, from which he extrapolated an 18 to 20 per cent increase in traffic on the A90. That was the basis of his concern about a substantial increase in traffic volume. What is your response to that?

John Howison: Our traffic modelling was undertaken not on that basis, but on the basis of local authorities' plans for development in the area. That is why we predict the current figure of around 66,000 vehicles a day to grow to around 82,000 without the Forth crossing scheme. On whether the bridge scheme will produce an increase, as we have explained, the traffic largely travels southwards on the M9 and westwards on the A904; very little of it is attracted on to the A90 into Edinburgh.

David Stewart: You will be aware that we took evidence earlier this morning from Mr and Mrs Kirkcaldy. I am not sure whether you saw that evidence on the monitor.

John Howison: I did.

David Stewart: You will be aware that Mr Kirkcaldy runs his own architecture business from his home. He was very concerned about the disruption to his business and felt that the business as a whole would not be sustainable. He might have to move out during the construction phase. How can the effects on and potential disruption to his business be mitigated?

John Howison: The first thing is to see what the actual level of the impact would be in the context of our compliance with the code of construction practice. The area that Mr Kirkcaldy is in is quiet at the moment. The environmental statement contains three distinct classifications of area. His would be in the lowest category, which is category A. The environmental statement contains a requirement as to the daytime level of noise that will be allowed. Generally, at 65dB, that level is somewhat below the absolute level in the code of construction practice, which is an umbrella figure. In Mr Kirkcaldy's area, that will be reduced. I refer

to the noise level outside his building, but we need to consider what that means in general terms. I ask Mr Glover to add to that.

Mike Glover (Transport Scotland): The Kirkcaldys are in a unique position, which we are very sympathetic to.

I will explain the noise regime. The number of noise impacts that the Kirkcaldys will experience in their location is related to the construction of the approach viaducts and the use of the haul road. Those impacts will not be of a large scale—they will be when they occur, but they will not be continuous throughout the construction phase. All the same, they will cause peak noises, which, as John Howison said, are given in the environmental statement as being 65dB. The level is measured 1m outside the property boundary. It is misleading, in some respects, to talk about internal environments. The level in the internal environment—inside the property, with an open window—will be about 10dB to 15dB lower. If the windows are closed, it will be much less—about 25dB less. That brings it down to about 40dB. That is not to say that the level will not be above the levels of noise disruption that the Kirkcaldys are experiencing at the moment, but I wanted to put it in context.

I hope that that helps.

David Stewart: I will move on to another aspect.

The Convener: Hugh O'Donnell is keen to pursue that last point.

Hugh O'Donnell: I am interested in Mr Glover's observation about the windows being closed. We are talking about a construction phase of potentially five years. Given the nature of major construction, it could stretch beyond that time. I am surprised that you have suggested that keeping the windows closed for five or six years might mitigate against whatever level of noise those people are likely to suffer.

Secondly—I touched on this with Mr Howison last week—has Transport Scotland taken any steps to assess the ambient noise, depending not on decibels or energy, but on perception? Has anything been done to engage with the Kirkcaldys about how different the ambient noise will be, either at peak times or at any point on the curve of construction? It is not just about the time when work will be undertaken; people will probably arrive at the sites about an hour before their work starts, and they will take some time to depart from the site afterwards. The working times will be extended by an hour. Has anything been done about all that?

Mike Glover: I will hand back to John Howison in a moment, but—

The Convener: I am quite sure that you did not mean to make a “Let them eat cake” remark. Do you wish to respond on that point?

Mike Glover: I am sorry. There was no intention even to suggest that the Kirkcaldys’ windows might be closed for that period of time. I was just trying to give the committee a feel for the levels of mitigation. The amount of construction time at their location will be quite discrete. It will not be like the motorway construction, including the earth moving, which will be a relatively continuous exercise.

Hugh O’Donnell made a point about operatives arriving at and leaving the site at the beginning and end of the day. That will not occur at the Kirkcaldys’ location—the disruption will occur as a result of the commuting of operatives from the compound site on the A904 to the southern bridgehead. We fully accept that that will be a disruption. However, the number of vehicles that will be involved is fairly limited. Mr Kirkcaldy put the number in his evidence. It is not of the scale that one would expect of a very high number of vehicle movements. However, that is not to take away from the fact that we are sympathetic to the Kirkcaldys’ position.

I hope that that helps.

Hugh O’Donnell: It certainly does. I made an observation about the windows because Mr and Mrs Kirkcaldy are still sitting in the public gallery and I wanted you to put on the record your assurance that that is not your thinking on the issue.

Mike Glover: No, it is not.

Joe FitzPatrick: You said that 65dB would be the limit in that area. To help our understanding of that, will you give an indication of what other things make that sort of sound? Is it the same as a tractor or a lorry chugging away outside, or something else that we might understand?

Mike Glover: The peak construction period will be related to the construction of the concrete piers, which will be on Inchgarvie land, and the abutments behind. There will be a combination of plant and the placing of concrete—that sort of thing. We are not talking about general vehicle movements.

Joe FitzPatrick: But can you give us an example that we might understand of something that makes a sound of about 65dB?

The Convener: An analogy.

Joe FitzPatrick: Yes, an analogy.

Mike Glover: This is a very dubious analogy, but 60dB is the level in a busy office environment, and 65dB is above that.

Joe FitzPatrick: That is the level outside the house.

Mike Glover: Yes, that is outside. Inside, even with the windows open, there is mitigation because the wave front of the noise is much reduced. I hope that that gives you a feeling for the issue.

David Stewart: Are there measures in the code of construction practice to provide for additional soundproofing to the homes of individuals who are affected, such as the Kirkcaldys? If someone has to move out of their home temporarily during the construction phase, will a compensation package be available? If a business is lost or severely damaged for the five-year period, will compensation be available? Am I right in thinking from reading evidence to the Finance Committee that there is a ceiling of £10 million on the compensation package? If that is correct, the figure appears to me to be fairly low, considering some of the issues that have been raised in objections from people throughout the area.

John Howison: To pick up on that final point, the £10 million is not a ceiling or a cap; it is simply our estimate of what the compensation will amount to.

I ask Frazer Henderson to answer your other questions.

Frazer Henderson (Transport Scotland): The code of construction practice addresses most of the questions. The contractor will have to use best practicable means to control, mitigate or monitor noise—it will be under that obligation at the outset. The contractor will also have to produce a noise and vibration plan, which we must approve before it can start any work. Therefore, that gives a degree of assurance that what the contractor is proposing will be sound—no pun intended. The contractor will also have to undertake a risk assessment of adjacent properties, which might lead to structural or dilapidation surveys if properties are at risk. That is another degree of comfort to householders.

If particular residences endure the noise impacts as set out in the code of construction practice, they will be eligible for grants for noise insulation work. We go one stage further than that. If the period is long, consideration will be given to temporary relocation from the property to another place during that period. I do not wish to overly personalise the issue, but Mr Kirkcaldy mentioned that he has a business that operates from his property. The same holds true for that—consideration will be given to the temporary relocation of his business should that mitigation measure be required.

In conclusion, we think that a clear process is set out in the code of construction practice, which

contains measures to make payments or grants for noise insulation. There is also the possibility of relocating residents if the noise impacts will be severe.

12:00

David Stewart: If someone loses their job or source of employment because of the work and is unable to relocate, can any compensation be provided for the loss of the business as a whole?

Frazer Henderson: In relation to Mr Kirkcaldy, I would argue that there is a strong possibility that we could relocate his business elsewhere in the near vicinity, should the occasion arise.

David Stewart: In general—I am not referring only to the Kirkcaldys—is compensation for business loss an issue?

Frazer Henderson: We would have to consider each case individually.

David Stewart: Right.

Mr Howison, I understand that the £10 million compensation limit is an estimate. Is it factored into the contract price as a whole?

John Howison: It is factored into the project price, not the contract price.

David Stewart: I concede that working out compensation is quite difficult. If you get the sum wrong and find that the figure is nearer £100 million than £10 million, will the taxpayer be responsible for that as part of the overall package?

John Howison: It is perhaps worth explaining that compensation issues and estimates are not handled by us; they are handled by the district valuer, who is part the Valuation Office Agency. Broadly, district valuers have undertaken such work for us for at least as long as I have been employed by the Scottish Government, which is nearly 40 years. They have gained huge experience of estimating over that period.

David Stewart: My final question is also about noise. You heard Mr and Mrs Kirkcaldy arguing that there should be an independent environmental health impact assessment. The reasons for such assessments have been referred to. What are your views on that? Is it possible to arrange for such an assessment to happen?

Mike Glover: I confirm that all the air quality and noise issues and all the technical issues that support the health impact have been independently audited. A health impact analysis is extremely subjective—Mrs Kirkcaldy rightly referred to the issues that are considered in it—so it is traditionally not independently audited as such; the issue is the supporting constituent parts that lead to it. We have made it quite clear that the

Kirkcaldys are in a unique position, and we are sympathetic to finding ways in which we can help to mitigate their situation. Clearly, we will research what we can do to give them that assurance, but I would mislead members if I said that we will do what is being proposed, because that might not be physically possible.

David Stewart: Could you at least look into the matter and report back to the committee?

Mike Glover: Yes. We will look into it.

David Stewart: The general point is that noise is not, of course, just an issue for the Kirkcaldys, although their situation is very difficult and acute. The problem of noise has been raised in other evidence that we have taken. In earlier sessions, we heard that construction will start at 7 am, I think, which is earlier than when work on the Airdrie to Bathgate rail link started. It is clear that there are noise issues that will affect the community in general. If the convener agrees, it would be useful if the panellists went back and considered that.

Mike Glover: Yes.

The Convener: Yes.

I would like to follow up on what has been said in relation to the Kirkcaldys. I thought that, when we discussed the matter previously, you characterised the earlier start time as an opportunity to get people out into the river so that they could do the work.

Mike Glover: It is.

The Convener: That is as opposed to starting to dig outside front doors at that time in the morning. Will you clarify that?

Mr and Mrs Kirkcaldy detailed on-going work on the site at the moment. Will you confirm what work that is? How long do you expect it to take?

Mike Glover: Your description is absolutely right. I think that I spoke before about a warm-up and a cooling down at the end of the day. The first half hour, which sometimes extends to an hour, is when the operatives organise themselves and carry out what we call toolbox talks—in other words, the briefing to the operatives before they go out to the work site. Often it is too late to brief people when they get out to the site. Conceptually, what you portray is right—turning on the big machines and getting the large bulldozers, or whatever they might be, operational in that warm-up period of half an hour to an hour is quite modest. There will also be traffic movements that impact on the Kirkcaldys, because part of the operation will be to transport operatives in light vans down to the foreshore, although there will not be heavy plant. I hope that that addresses your points.

The Convener: And in relation to the work that is currently under way?

John Howison: Two ground investigation exercises are going on at the moment. One is a marine ground investigation that started on 1 March and the second is a land-based investigation on the south side of the estuary that started on 22 February. They are proving surveys of the work that we have already done, so they are lesser in nature than the ground investigation works. We expect the surveys to last about eight weeks.

The Convener: Eight weeks more, or from when they started?

John Howison: From the starting date of 22 February. I add a further point as general background. The situation with Inchgarvie lodge will be difficult to manage as part of the construction programme. We have undertaken an assessment of the extent of the impacts. However, it is worth mentioning that in the absence of the new bridge being built, the land in Echline fields would not remain as open fields; a planning consent is currently in place. That is not of our doing; it is a commercial arrangement between Cala Homes and the City of Edinburgh Council, which felt that it needed housing in that location to match its requirements. Therefore, whether or not the bridge goes ahead, significant building and construction works in that area will affect both Inchgarvie lodge and the houses at Clufflats, Springfield and Echline.

Hugh O'Donnell: That is true, although I guess that the developer would hope that it would not take it six years to build some houses.

This might be naivety on my part, but if you are working on the project all year round, are people in close proximity to the construction site likely to experience some artificial light pollution, as there is in compounds or on haul roads? We have spoken about noise and vibration pollution, but have we failed to take into account artificial light pollution, or have you professionals taken it into account?

John Howison: We have not failed to take it into account. We recognise that in the winter in Scotland it is dark for much of the day, particularly at the times when building works will be being prepared. I ask Mike Glover to say more about that.

Mike Glover: The compounds will be lit for security reasons as much as anything else, but the haul roads will not. If Parliament decides that the site should be to the west, the main compound will be quite some distance from the properties, but there will be light. When we form the embankment as part of the construction, the site will not be so vivid. There should be no major impact from that

light on the areas to the south—Clufflats and Springfield. That is all that I can add.

John Howison: The marine works will be lit 24 hours a day when operatives are progressing them so they will include a light source in an area that is currently fairly dark. However, the light issue is referred to in the code of construction practice at paragraphs 3.7.4 and 3.7.5, which require the contractor to comply with the requirements of the roads authorities in relation to lighting on or adjacent to public roads and with the requirements of the Environmental Protection Act 1990 to prevent nuisance due to artificial lighting in areas away from existing roads.

The Convener: We will stay with you, Mr O'Donnell, if you would like to move on to consideration of Mr Richardson's evidence.

Hugh O'Donnell: Mr Richardson was particularly interested in a couple of points about the traffic modelling. While you were waiting to give your evidence, you will have heard his observations about a tool that has recently become available to you that was not used in your modelling for the proposed crossing. Have you any comment to make on Mr Richardson's observations, particularly in relation to the differences between strategic modelling and traffic modelling that is done at a local level?

John Howison: As far as the regional model is concerned, what Mr Richardson said is correct. Although the original aspiration was that the model would be used for the project, it was simply not developed in time.

I go back to the evidence that I gave last week when I was questioned about the modelling. Have we followed best practice? We have gone further than best practice on this scheme; we have gone to state of the art. Because we have done that, I am going to ask someone who knows a lot more about it than I do to give you an answer. I will hand over to Alan Duff.

Alan Duff (Transport Scotland): The Transport, Infrastructure and Climate Change Committee declined my offer to give a lecture on traffic modelling—

Hugh O'Donnell: As will I.

Alan Duff: Bear with me though, because I have to set some sort of context.

Effectively, we are using three models. The high-level strategic traffic model for Scotland is the one that we use for all the economic assessments and estimates of demand—how much traffic will use the crossing and how much will switch between different modes of transport. That is our fundamental model, and it is the one on which we based most of our work for the stage 3 report.

In addition, we need to do two things. We need to produce a more detailed assessment of the intelligent transport systems and we also need to look at the details of the operation of the proposed junctions. To do that, we cannot use the high-level strategic model because it is not refined enough, so we have another two models.

The intermediate model—what we call the corridor model—is a detailed model of the network from Halbeath down to Newbridge and on in to Barnton. The purpose of that model is to estimate the impact of implementing intelligent transport systems and to measure the interaction of traffic coming on and off the main road, how queues will build up and dissipate, and how putting in all the gantries and speed controls will benefit us.

Finally, we have very detailed models of each of the junctions, which allow us to estimate how many entry lanes there are on junctions, how wide the gyratory carriageway is on roundabouts and so on. We use them to produce very detailed operational refinements.

On auditing and validation, we have done several things. The traffic model for Scotland is fully audited and validated separately and outwith the Forth crossing. The model is produced by Transport Scotland and there is a process for auditing it. I believe that all that information is on the TMFS website.

There is no absolute requirement to validate the intermediate and smaller models, in as much as they are operational tools. Our organisation has checks and validations to ensure that the modelling is done properly. We have also worked with Transport Scotland's auditors, who have been involved in developing and checking the corridor model in particular. No formal report says that the corridor model has been validated, but we have been engaged with the auditors on bringing it through. I hope that that shows how we have approached the modelling for the project, which I believe to be very robust.

12:15

Hugh O'Donnell: Yes, it sets the context. On the last part of that very helpful introduction, is there a method by which people who have concerns about the modelling can have access to the documents? For example, are they on Transport Scotland's website? That would give them some comfort that there has been a much more detailed analysis.

Alan Duff: We have done two things. For the high-level model, the documents are available.

Hugh O'Donnell: Yes, I know that.

Alan Duff: For the intermediate ones, at the request of the Transport, Infrastructure and

Climate Change Committee we went to South Queensferry to give people an appreciation of what the traffic modelling entailed and to answer questions on it. Next week, we are going to North Queensferry, and a date has yet to be set for Kirkliston. We are trying to go out and explain what we have done.

The question of documentation is difficult, because there are audit trails—e-mails, discussions and meetings—so it is harder to point to something that we could hand out, other than the reports that are already in the public domain. However, you may feel that we should address that.

Hugh O'Donnell: Does that tie in with other criticisms or observations by Mr Richardson that Transport Scotland has departed from the STAG process or guidance?

John Howison: I do not believe that we have departed from the STAG process or guidance. I would like to address the suggestion that an intersection between the connecting road and the A904 is a new idea. In fact, that is a natural place for a junction, and it was temporarily moved from that location because of other considerations. Although junctions were not looked at in detail under the STAG process, the outline plans that indicated the proposals for the link to the bridge showed south of the bridge a toll booth, a junction at the A904 and a further junction at the M9. To suggest that a junction has sprung from mid air is to look at the situation the wrong way round. The junction is in the natural place, and there would have to be a reason for putting it in a different position.

Hugh O'Donnell: On page 10 of Mr Richardson's objection, he mentions a

"Design Manual for Roads and Bridges (ref. Vol 5, Section 1, Part 4, SH1/97, para 6.1)"—

sorry about that. It provides that a

"Forecasting Report' should also be produced as a 'mandatory requirement of trunk road schemes costing over £1m in Scotland'. The technical enquiries section of this document lists a certain 'J Howison' as the appropriate contact at the (then) Scottish Office",

who would therefore

"have a thorough knowledge of the contents of that document."

Is that forecast report mandatory? Have you produced one? If not, why not?

John Howison: I think that I would have signed that document in my role as chief road engineer. As a result, you will perhaps forgive me for not springing to the exact reference that you quoted.

Hugh O'Donnell: I am not surprised at all; it took me long enough to say it.

John Howison: The technical memorandum sprung from the fact that we, the Highways Agency, the Welsh Assembly Government and the Northern Ireland Office need to keep some form of control over the way that various projects are developed by our consultants. The reports were therefore meant not to be an administrative requirement on ourselves but to provide guidance on how the people whom we charge with undertaking work should undertake it.

In this particular scheme, the amount of supervision that we have given directly to our consultants is unprecedented, so we do not regard some of the requirements that are stated as mandatory as binding on us. However, I again ask Alan Duff to comment on the particular reports.

Alan Duff: The forecasting in the forecasting report is all about how much travel demand there will be if we do something. All of the travel demand forecasting that we have done for the project comes from the TMFS and is included in its documentation; I am not sure whether it is in a separate report or whether it is included in the model development report. There is no specific forecasting report for the Forth crossing, but all of our forecasts are derived from the TMFS, which has the supporting documentation.

Hugh O'Donnell: Does the documentation for the proposal that is before us contain a provision that rescinds the mandatory nature of the item to which I have referred in relation to the Forth crossing, or does that remain a requirement? If so, is that an oversight in relation to the project?

John Howison: No. As I explained, the wording that is used in the design manual for road and bridge works is targeted at people whom we charge with undertaking such work on our behalf. It is for us, as signatories to the document and the appropriate authority for the works in Scotland, to take individual decisions on individual schemes, should that be more appropriate.

Hugh O'Donnell: Thank you for that clarification.

Joe FitzPatrick: I return to the discussion that we had about traffic modelling and traffic flow. In evidence from our second panel, Mr Marshall suggested that up to 70 per cent of the HGV traffic that goes across the current bridge is travelling west and could be diverted to the Kincardine bridge. Is his suggestion correct? If so, could we move more traffic across the Kincardine bridge? Does the bridge and the road network in the area have the capacity to allow that?

John Howison: We have a mature road network in central Scotland. Traffic from Perth that is going south has a range of options: it can travel down the M90 and over the Forth bridge; it can travel down as far as Kinross, along the A977 and

over the Kincardine bridge; or it can take the A9 directly to the M80 and the west coast. Because the network is mature, flow preferences are well established. We do not need to model them again—there is a big model called the road network that shows the way that people want to go.

People may use the Forth crossing rather than the Kincardine bridge because the A977 is not a particularly modern road. We regard the Kincardine bridge as a more localised part of the trunk road network. You will be aware that the aim of the network's reorganisation in 1996 was to ensure that every authority in Scotland was served by a trunk road; that was the reason for taking the road over the Kincardine bridge to Clackmannanshire. The route was not designed as a long-distance, high-volume route. The same does not apply to the route along the A9 to the M80, which is a clear arterial route.

I have forgotten your second question.

Joe FitzPatrick: I asked first whether the suggestion that 70 per cent of the HGV traffic that goes across the current Forth bridge is heading west was accurate.

Alan Duff: The majority of HGV traffic that goes across the bridge does a right turn and goes to West Lothian or beyond, but I cannot recall whether the figure that has been cited is accurate. We can check that.

Joe FitzPatrick: That would be useful. Our concern relates not to traffic to West Lothian but to traffic to Glasgow: at issue is whether such traffic could take the more direct route, if we were to enforce that choice in some way.

The Convener: This morning we heard—mainly from the second panel, but also from the first—about the overall costs of the project. Various assertions were made, some of which are familiar to us from the evidence that we have heard so far from various organisations, but there were one or two slightly different propositions.

One witness commented on the fact that, given that the project cost is £2 billion, if the cost of repairing the current bridge even went up to as much as £200 million, that would leave £1.8 billion that could be spent on unemployment mitigation rather than on the construction of a new bridge and all the disruption that that would cause. Another witness said that the on-going maintenance of the existing bridge requires carriageway closures and contraflows, so people are used to a level of disruption and, albeit that it would be for a more protracted period, it would be perfectly possible for them to come to terms with the disruption from repairing the bridge. Can you respond, in general terms, to some of the

assertions that the witnesses this morning made about costs?

John Howison: Traditionally, we analyse the value for money of a particular project in terms of traffic economics. That analysis is set out in the policy memorandum. The benefits from the scheme obviously exceed the cost of the scheme. The way in which the benefits to the economy—rather than the traffic economics—are calculated is very formulaic. The matter is being looked at by other people in different ways.

We have heard from Barry Colford that the work to replace the existing cables might impose an impact of about £1 billion on businesses. That figure was the result of a series of interviews and consultations with businesses in Fife that would be susceptible to disruption in the transport network. We also heard the opinion of the Scottish Chambers of Commerce on what it believes the impact would be on the economy in Scotland. The figure that was mentioned was much larger than the £2 billion to which you refer.

If we consider the existing crossing—we must take Barry Colford's evidence as the expert evidence; apart from being the chief bridge engineer on that bridge, he has the benefit of a huge amount of consultancy work that supports his view on the matter—it is subject to disruption due to regular resurfacing. Such work would become more regular as traffic increases. FETA has managed to keep that work largely to the weekends, so it has not really interrupted businesses during the week, and it is pretty well trailed and advertised, so people are given the opportunity to make arrangements to get around it, although it nevertheless causes substantial disruption for traffic from both Edinburgh and Fife.

The nature of recabbling work would be entirely different. It would be done over a prolonged period and would take place at weekends, overnight and during the day. It would be very disruptive and it would take place over a time horizon such that people would say, "If I want to relocate to Fife, will I do that with this much disruption? Where else could I support a business?" It would be a different order of impact.

The Convener: I will summarise. Although Mr Marshall, I think, told us that people were used to this level of disruption, the disruption would take place over a much longer period and it could not be contained within non-peak driving hours—it would have an impact outwith that period. A totally different level of disruption would therefore be required to undertake maintenance of the existing bridge at the level that is envisaged.

John Howison: Yes. I add that the work that was done for FETA was done very much at the feasibility study stage. It made some assumptions

about whether it would be possible to continue to run traffic on a carriageway with work being done to weave a new wire directly above it. We should assume that the predictions for disruption that are made in that report are probably at the lower end of what would be likely to occur.

12:30

The Convener: From the evidence that we have heard from witnesses who live in the area and who are familiar with the proposals, it seems that there is a lack of understanding among a wide community of people about the scale of the work that would be required to repair the existing bridge and the effect that that would have. I imagine that the witnesses are representative of general public sentiment, and they feel that the new bridge is unnecessary because repairing the existing bridge would be much less difficult than is thought. What needs to be done to have people understand your perspective?

John Howison: We are suffering from two things. First, there has been a considerable amount of misinformation. For example, it has been said that recabbling the existing bridge will not be that bad. We saw an example of that misinformation today. Secondly, we have not majored on recabbling, because we believe that our scheme will avoid that. We do not want to emphasise how bad the disruption from recabbling would be, because of the impact that that might have on investors in Fife and because we do not think that it will actually happen at the end of the day. We have tried to explain to the local communities, through meetings and other types of consultation, the impacts that the bridge development will have, but people who do not particularly wish the development to go ahead have perhaps given less thought to the consequences of it not going ahead.

Joe FitzPatrick: We had hoped to take evidence from Mr Minogue, but he was unfortunately unable to come along to the meeting. You have seen his objection and his suggestions. Do you have any comments on his suggestions?

John Howison: We believe that the scheme's governance is particularly strong. We do not believe that the extra safeguards that Mr Minogue suggests should be included in the bill, or are necessary or beneficial.

David Stewart: As you will know, we still await the report from the Finance Committee on its scrutiny of the financial memorandum. Can you comment on speculation about controlling costs, particularly for big-build projects such as this? I think that we touched on the issue in the first witness session. How will costs for the proposed

crossing be managed? Panel members will be well aware that there have been general worries in the past about cost overruns in big projects in Scotland, not least for the Parliament building. There is speculation about the Edinburgh trams project in that regard. I think that when you have previously answered such questions, you have made it clear that the taxpayer is generally responsible for cost inflation and that we all find it difficult to predict the future. I think that you also mentioned that inflation in construction costs has tended to be higher than rises in the retail price index and that that obviously is a factor. How, then, will we control costs in the Forth crossing project? The taxpayer will take the inflation hit, so what risks will the successful contractor take? How does the design-and-build route compare with the public-private partnership route? Could you also say a bit about other sources of funding? If my understanding is correct, Trans-European Transport Network Executive Agency funding was unsuccessfully applied for. Could you clarify that? There are a number of questions, then, on how we control costs on the biggest construction project since devolution.

John Howison: Our starting point in setting the framework for the control of costs is that we intend to approach the project through a limited risk design-and-build contract and to secure the contract through competition. Once we have a tender in front of us we will know its likely outturn price, subject to the caveat of inflation, of course, which you mentioned. Our confidence in the approach is borne out by the fact that we have used this type of contract for road projects in Scotland since 1991. During that time, our average tender to outturn price has been about 3 per cent, compared to the average that was experienced before that, when we used a measure-and-value contract, which retains an awful lot of the risk, which ran at 30 per cent—that is not unusual for the industry norm. So, we are using a type of contract of which we have experience and are securing a good price for it through competitive tension.

That leaves a number of risks for the contractor. We expect to mitigate those risks—or at least identify them—by such things as the advanced ground information that we are getting, so that we and the contractor have a very much better handle on what is likely to arise during the construction process than we would with a normal building. That is one reason why the ground investigation is going on in parallel with the tendering.

Because we are running with a design-and-build contract, we are acutely aware that scope change must be avoided at all costs. We took on board that lesson when we started the project and it is no less relevant now than it was then. Once the project has started, we do not expect to make any

changes to the design with which the contractor has taken us forward.

I turn to how that compares with the PPP route. The first thing to say is that a PPP consortium generally comprises a contractor and a financier. The contractor contracts with the consortium on the basis of a design-and-build contract very similar to the one that we are using. At that particular point, the contractor would take the same risks with a PPP contractor that he is taking with us.

With a PPP contract, the risks retained by the client are those that relate to demand. In other words, when you are paying for a service that is related to the number of people using a crossing, if the number of people goes up, the price of the contract goes up.

In addition, we would normally carry an inflation risk for that, not just for the construction period but, one way or another, for the period during the maintenance—in other words, a 30-year period thereafter. I think that John Carson gave evidence on the fact that PPP contracts are generally index linked, although usually to the retail price index, rather than the construction price index, where that is appropriate for the sorts of risks that go on over that period. We are carrying an inflation risk with our approach, but over a five-year period, as opposed to the 30-year period that would happen with a PPP project.

As for other funding, we have applied twice to the Trans-European Transport Network Executive Agency. In each case, it has found a reason to turn us down. We are contemplating whether to prepare a third application.

David Stewart: What is your understanding of the reasons for that refusal? Was it about the demand, the design or the cost benefit of the project? That would be of interest to the committee.

John Howison: We understand that TEN-T EA turned us down on the first occasion because it did not see this as an on-going project but one for which we sought funding for only one year. On the second occasion, notwithstanding our pointing out the relevance of Rosyth for traffic going north and Edinburgh airport for traffic going south, it considered the project to be of largely regional rather than transnational importance.

That said, TEN-T EA works within a fairly limited budget for preparation work, which would have been hard pressed to extend to the scale of expenditure on this project.

David Stewart: In those two applications to TEN-T EA, what amount was applied for?

John Howison: We applied for the preparation costs that we foresaw. On the first occasion, I

think that the application was for one year's costs—

David Stewart: Sorry, how much was that?

John Howison: The grant for preparation work is 90 per cent. I cannot remember the exact figure, but I will provide it later. My recollection is that the first application was for about £10 million.

In the second year that we applied, the application was for a longer period. I will provide the exact figures later.

David Stewart: I understand that European regional development fund moneys are separate and are subject to limitations on budgets. Was ERDF funding also applied for?

John Howison: My understanding is that the area is not eligible for such funding.

David Stewart: An argument could be made that the project has Scotland-wide salience, but we can do that on another day.

I will go back to the competitive nature of the contract. The expected cost of the project has been widely pitched—from memory, the median cost is £2.033 billion. Given that we have only two bidders, how competitive will the tendering process be? We will not get a tender price of £1 billion, will we? We will get something within the range that is known about.

John Howison: We have split up the works into various contracts. At the moment, we are tendering for the principal contract, for which the expected price that has been publicly stated is between £0.9 billion and £1.2 billion. That contract is for only part of the works and does not include inflation, which will add on to the costs during the time that the works are current.

To answer the question, only two consortia are bidding for the project, but each consortium comprises four major international contractors, so eight major contractors are involved in the process. As suppliers, the bidders have a similar number of world-class consultants working for them. Therefore, we have a very large chunk of the world's bridge-building and large-project-building capacity within the consortia.

Whether having two bidders provides competitive tension is always a matter for discussion. The thought is that having a larger number of bidders creates more interest and more tension. The corollary of that is that, if only two bidders are involved, the bidders will obviously see themselves as having a really good chance of winning, so their interest will be much more acute than if they were one of four bidders. The other side of that is that we can support and facilitate the competitive dialogue process—the discussions about design development—much more readily.

We can give a bidder more attention if it is only one of two.

From the discussions that we have had in the competitive dialogue process, my take on the issue is that we have a considerable amount of competitive tension. Provided that we retain the two bidders right up to the bidding point, we will get a competitive price from them. That said, you will probably be aware that we have also taken steps to encourage the bidders to carry on with the process right up to the final point, both by underwriting the success of the bill—a contingent liability was granted parliamentary approval last year—and by providing what we have termed an unsuccessful bidder's premium, under which we will return 50 per cent of the bidder's costs.

David Stewart: The "unsuccessful bidder's premium" must be the best example of an oxymoron that I have ever heard.

John Howison: Yes, that point has been put to me. The answer is that an unsuccessful bidder's premium does not per se suggest that the competition is unsuccessful if we have two bidders reaching the end.

David Stewart: What contingency has been made for the scenario in which, despite the existence of an unsuccessful bidder's premium, one of the bidders pulls out?

12:45

John Howison: The impact would depend on when the bidder pulled out. If it happened at an early stage, the competition would be fundamentally compromised. If it happened at the very end, and a bidder were still making a bid in the expectation that there was competition, we would consider that bid and decide whether it represented good value for money or whether we could do better by some other means.

David Stewart: And the bids must be in by December.

John Howison: Yes.

David Stewart: So a last-minute withdrawal could create a few headaches, if you ended up with only one bid.

John Howison: Yes. That said, the likelihood of a last-minute withdrawal is reduced by the fact that it would cost a contractor more to withdraw at that stage than it would to continue to bid.

David Stewart: You have made predictions about scope change. One of the issues that made it difficult to control the building costs of the Scottish Parliament was the constant changes to the contract. I think that you told the Finance Committee that the design of the bridge is

basically fixed. Could you confirm that? Does that also apply to the road infrastructure?

John Howison: We are acutely aware that we are designing a bridge with a lifetime of 120 years and that the requirements during that period will vary considerably in unforeseeable ways. Therefore, we have built in a considerable amount of flexibility in the way in which the bridge can operate, in relation to the number of lanes, the width of the hard shoulders and so on. From that point of view, the bridge is the bridge that we want to purchase and is highly constrained within the bill and the environmental statement.

We have given a great deal of consideration to what is required in relation to the roads at either end of the bridge. We are confident that we have the best design for those roads at the moment, subject to detailed changes that might be made either by us, in response to objections, or by the contractors, in response to value engineering matters.

Hugh O'Donnell: Two consortia are operating within the bidding process. Would it be appropriate for there to be anything in the documentation for the process that would prevent the losing bidders from bidding for the subcontracts that the winning bidders got, or, indeed, would encourage them to do so? Is my question clear enough?

John Howison: I think so. The winning bidder will need to give us an indication of his key suppliers as part of the contract, although they can be changed with our consent. Further, other areas of work beneath the key subcontract level may also be subcontracted out.

Hugh O'Donnell: Earlier, you mentioned the groundworks that are going on—Mrs Kirkcaldy also referred to them. Who is picking up the bill for those? Are both bidders jointly paying, or is Transport Scotland?

John Howison: Transport Scotland is promoting and funding those investigations. That is our normal practice for a design-and-build contract.

The Convener: Thank you. That concludes the public part of our meeting.

12:49

Meeting continued in private until 13:04.

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