



The Scottish Parliament  
Pàrlamaid na h-Alba

## Official Report

# TRANSPORT, INFRASTRUCTURE AND CLIMATE CHANGE COMMITTEE

Tuesday 2 March 2010

Session 3

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**Tuesday 2 March 2010**

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**TRANSPORT, INFRASTRUCTURE AND CLIMATE CHANGE COMMITTEE**  
**6<sup>th</sup> Meeting 2010, Session 3**

**CONVENER**

Patrick Harvie (Glasgow) (Green)

**DEPUTY CONVENER**

\*Cathy Peattie (Falkirk East) (Lab)

**COMMITTEE MEMBERS**

\*Rob Gibson (Highlands and Islands) (SNP)

\*Marlyn Glen (North East Scotland) (Lab)

\*Charlie Gordon (Glasgow Cathcart) (Lab)

Alex Johnstone (North East Scotland) (Con)

\*Alison McInnes (North East Scotland) (LD)

\*Shirley-Anne Somerville (Lothians) (SNP)

**COMMITTEE SUBSTITUTES**

Alasdair Allan (Western Isles) (SNP)

Murdo Fraser (Mid Scotland and Fife) (Con)

David Stewart (Highlands and Islands) (Lab)

Jim Tolson (Dunfermline West) (LD)

\*attended

**THE FOLLOWING GAVE EVIDENCE:**

Gavin Booth (Bus Users UK)

Barry Colford (Forth Estuary Transport Authority)

Martin Gallagher (Queensferry and District Community Council)

Colin McPhail MBE (Dalgety Bay and Hillend Community Council)

Juliette Summers (Bridge Replacement Interest Group (South))

**CLERK TO THE COMMITTEE**

Steve Farrell

**LOCATION**

Committee Room 2



## Scottish Parliament

### Transport, Infrastructure and Climate Change Committee

*Tuesday 2 March 2010*

[The Deputy Convener *opened the meeting at 14:01*]

### Decision on Taking Business in Private

**The Deputy Convener (Cathy Peattie):** Welcome to the Transport, Infrastructure and Climate Change Committee's sixth meeting of 2010. Members and members of the public should turn off mobile phones and pagers.

I have received apologies from Patrick Harvie.

Under agenda item 1, we are asked to agree that agenda items 4 and 5, and any future draft reports on the Forth Crossing Bill, be taken in private. Are we agreed?

**Members** *indicated agreement.*

## Forth Crossing Bill: Stage 1

14:02

**The Deputy Convener:** The second item on the agenda is the final evidence-taking session in the committee's scrutiny of the Forth Crossing Bill. As with the evidence-taking sessions in previous weeks, we will examine the Forth Crossing Bill's specific proposals to create a public transport corridor. We will then report to the lead committee—the Forth Crossing Bill Committee—which is considering the bill's general principles.

We will hear first from witnesses from local community councils, organisations that represent community interests and other public transport users. The second panel of witnesses will be representatives from Forth Estuary Transport Authority.

I warmly welcome Martin Gallagher, who is the convener of the Forth replacement crossing sub-committee of Queensferry and district community council; Gavin Booth, who is the chair of Bus Users UK; Juliette Summers, who chairs the bridge replacement interest group (south); and Colin McPhail MBE, who is the chairman of Dalgety Bay and Hillend community council. I thank them for their written evidence and ask whether they wish to make small, brief statements. Does Gavin Booth wish to say something?

**Gavin Booth (Bus Users UK):** No—nothing. I wanted to introduce myself but I am jumping ahead.

**The Deputy Convener:** That is fine. Are there any statements?

**Colin McPhail MBE (Dalgety Bay and Hillend Community Council):** I am a chartered civil engineer and member of the Chartered Institution of Highways and Transportation. I have been chairman of the community council since 1988.

**Martin Gallagher (Queensferry and District Community Council):** I have been on Queensferry and district community council for about five years now. We are interested in the public transport proposals that will have an impact on Queensferry. I thank you for the opportunity to speak to the committee.

**Juliette Summers (Bridge Replacement Interest Group (South)):** I thank the committee for letting me speak on behalf of BRIGS.

**The Deputy Convener:** What are your views on retaining the current Forth bridge for use as a public transport corridor?

**Gavin Booth:** As a representative of bus users, I welcome anything that gives buses priority, and it seems to be the ultimate bus priority to retain the

existing bridge in that way. I have concerns, which I may voice later, about inconvenience that might be caused to passengers, but I welcome retention of the existing bridge for buses.

**Juliette Summers:** We have concerns about the reliability of public transport once it exits the bridge and, for ourselves on the south side of the Forth, the journey times into Edinburgh. We see the bridge as a welcome public transport corridor, but it needs to be extended to allow the journeys to continue and to make them desirable for users.

**The Deputy Convener:** Do you mean that the infrastructure should be extended?

**Juliette Summers:** Definitely. We believe that in order to permit modal shift, the infrastructure development should be in place before any new crossing is opened.

**Martin Gallagher:** QDCC does not see the retention of the Forth road bridge as a public transport corridor as being at all viable. Under the proposal, the existing Forth road bridge would carry something in the region of 0.73 per cent of all cross-Forth traffic. It would be the most expensive bus lane in the world, representing a cost of about £172 per bus crossing, based on the current annual maintenance budget.

Traffic growth across the Forth has been consistent. Since the Forth road bridge opened, the traffic using it has grown fivefold, which is in excess of the national average. There is no sign of that trend being reversed, and simply to leave the bridge standing, mainly empty, would be a poor use of an important resource.

QDCC argues for a continued role for the Forth road bridge in carrying a limited amount of general traffic—cars and light vans—while removing the most damaging heavy goods vehicles. We could have an arrangement similar to that at Kincardine, with the older bridge acting as the local route and the new crossing taking the long-distance strategic traffic.

**The Deputy Convener:** You do not agree with the idea that the current Forth bridge should be simply for public transport.

**Martin Gallagher:** All the estimates show that, by the time the new bridge opens, traffic levels will have grown by 40 per cent to 92,000 vehicles per day. The new bridge will have the same capacity as the existing bridge, albeit with the possibility of hard-shoulder running, so it will be congested on its first day. As such, there will be a need to release some of the dormant capacity on the Forth road bridge.

**Colin McPhail:** In 2004, a seminar that was held by the south east of Scotland transport partnership and FETA showed the distribution of flow across the existing bridge. At that time, 19 per

cent of the total traffic was destined for central Edinburgh. We support the use of the existing bridge for public transport, but there is a concern about the attraction into central Edinburgh if the journey times are longer with public transport. That is the downside. I hope that countermeasures to that can be put in place, certainly in central Edinburgh.

**The Deputy Convener:** Some of my colleagues will ask questions about infrastructure.

**Juliette Summers:** We agree with Queensferry and district community council about the problem of an empty, or relatively empty, Forth road bridge, but we would like the measurement to be of cross-Forth journeys rather than cross-Forth traffic. We agree that there is a need for additional cross-Forth journey capacity, but we would prefer it to be addressed through public and sustainable transport infrastructure development that would facilitate the extra capacity in journeys rather than traffic numbers.

**The Deputy Convener:** What discussions have you had with Transport Scotland on the public transport provisions that are outlined in the Forth Crossing Bill?

**Juliette Summers:** None.

**Gavin Booth:** None.

**Martin Gallagher:** Queensferry and district community council was concerned about the original junction layout, which placed the South Queensferry junction to the south of the town in the Echline fields. The aim of that initial proposal was to try to reduce the distance that buses would have to travel. As a result of our discussions with Transport Scotland, the plans were revised to incorporate dedicated bus slip roads, but we believe that the proposed routes are still unacceptable. They will result in much longer journey times because they will put buses through signal-controlled junctions on roads that have a 30mph limit. We are arguing for a direct link to the M9 instead of a link to the A90 because that would keep a link in place to enable buses to access the Forth road bridge directly.

**Juliette Summers:** We are aware of no direct community consultation about public and sustainable transport; we believe that such consultation is needed. Transport Scotland ought to be collecting information on local communities' additional needs and desires. There should be integration with cycling and pedestrian networks to allow bus transport to be accessible and desirable to people but, as far as we are aware, such consultation has not taken place.

**Colin McPhail:** We have not been directly consulted by Transport Scotland, but the additional bridge will undoubtedly result in an

increased flow of traffic. The additional bridge is the attraction for everybody, but the danger is the effect that it will have on public transport.

**The Deputy Convener:** Taking that a wee bit further, I am interested to hear about any discussions that you have had with Fife Council or City of Edinburgh Council about improvements to cross-Forth bus and rail services to be introduced in conjunction with the Forth crossing project. You may not have had discussions directly with Transport Scotland, but what discussions have you had with the local authorities?

**Colin McPhail:** Certainly on our side of the Forth, there have been no discussions with our local authority, which is Fife Council. The only thing that we have had is the exhibition in various libraries, including Dalgety Bay library, and the papers that were available there. I note what Fife Council has said about the proposal to have park-and-choose schemes at Rosyth and Halbeath, but that does not help us in Dalgety Bay. The commuters from our side use the Ferrytoll park and ride, so there is a question about whether the proposals will work for us. The congestion will be not on the bridge itself but at the interchanges.

**Martin Gallagher:** The same applies on the south side of the Forth. We have had no direct discussions with the local authority regarding the development of bus services. The limited discussions that we have had regarding bus access were with Transport Scotland.

**The Deputy Convener:** So, there has been no discussion with the community councils.

**Martin Gallagher:** We have not had discussions with the local authority, nor with SEStran, for that matter.

**Colin McPhail:** Can I express a caveat to that? Fife Council is producing a new local plan for south-west Fife, and in the middle of last year we gave the council our ideas on transportation in our issues and options return. The draft local plan was published about a week ago and we have yet to make our observations on that. The observations that we make to the council will be in addition to what we have already said.

**Juliette Summers:** We had an initial meeting with the City of Edinburgh Council at which we discussed issues including sustainable transport in the west Edinburgh area. The meeting was organised by Councillor Kate MacKenzie, and Natalie Hoy from the neighbourhood partnership was involved, as well. We hope that we can take the matter forward as an addition to our partnership working to try to achieve better results within the process as it stands.

14:15

**Shirley-Anne Somerville (Lothians) (SNP):** What are your views on allowing traffic other than public transport to use the existing bridge? I am particularly keen to hear whether people from South Queensferry think that if the new crossing reaches full capacity and the existing one has to take even more traffic it will impact on what is already a very busy area.

**Martin Gallagher:** It is accepted that traffic will continue to grow whether or not there is a new crossing. Every day, Queensferry is adversely affected by the congestion on the approach to the Forth road bridge. Every evening, there are tailbacks on the A90 on the approach to the former toll plaza with the merging down of lanes from five to two and the various junctions. With no increase in capacity but continued growth in traffic, the problem is only going to get worse.

The bottleneck is actually the Forth road bridge, which acts as a filter. The bridge itself is not congested—after it has merged into the two lanes to cross the bridge, the traffic is relatively free flowing. If capacity is not increased, the congestion is only going to get worse, which will have an even worse impact on Queensferry. The traffic flow is such that any incident—a breakdown, high winds or other types of bad weather that require speed restrictions to be imposed—results in gridlock in the local network. Transport Scotland has made much of the new crossing's proposed hard shoulders, but its proposal that they be used to carry general traffic in times of congestion means that any benefit will be lost and the impact on Queensferry of each incident will remain the same. It would be a much better use of the resource if the existing bridge were used to address the problem of the bottleneck of having only two lanes in each direction across the river.

**Shirley-Anne Somerville:** BRIGS obviously represents a wider area; its written evidence, for example, is from Cramond, Barnton and Drum Brae. How might people there feel about increased capacity in Edinburgh? Do we need to think about how the measure will affect different communities?

**Juliette Summers:** For us, the issue is that increased road capacity, which would be the result of opening both bridges to road traffic, would mean that the extra traffic would come from the bridgeheads into road networks that are already at capacity. If you build a new road, you will generate more road traffic capacity, and residents not only in west Edinburgh but in West Lothian—after all, we also represent Newton—are particularly concerned that that road traffic will become congested and that there will be gridlock at the junctions at Barnton, for example, or along the A8, which are, as I said, already at capacity. That will

have knock-on effects for the local communities, including an increase in pollution in the living environment from queuing start-stop traffic, increased journey times and increased unreliability of bus transport, which will be pushed on to those roads. The bill contains no provision for extra public transport infrastructure such as priority routes or greenways running into Edinburgh through Barnton or Corstorphine.

The people whose views are represented in our submission would be very concerned if both bridges were opened to traffic and would be much more supportive of capacity's being increased through public transport such as buses and, indeed, rail—which, I have to say, has not really been discussed. Could we, for example, increase capacity on the oldest bridge in the area to facilitate cross-Forth journeys without drastically increasing the number of cars on the roads and the pollution that they generate? After all, we are trying to get people out of their cars and into more active forms of transport and, at the same time, reduce emissions.

**Shirley-Anne Somerville:** We have covered the next question to some extent, but Stagecoach highlighted in its evidence that bus access on northern and southern approaches to the bridge, as proposed in the bill, will cause problems because buses will still be held up in traffic when they reach the original road network. We have heard from some of the witnesses on that, but I want to ensure that we give everyone—Gavin Booth in particular—an opportunity to say whether they have concerns about it.

**Gavin Booth:** My remit is broader than just South Queensferry and Fife: I am concerned about all bus and coach passengers. It seems that although the present Forth road bridge is not the specific problem, the approaches and exits on either side could be, and bus passengers could end up being inconvenienced. Although they would have their own bridge to cross, I understand that the planned approach to the current bridge will involve buses taking lengthy detours through traffic lights and restricted roads. As has been said, it is about persuading people to consider public transport as an alternative to the private car. If the private car seems to have the advantage of being able to sweep across the new crossing as the buses are making a fairly tortuous journey across and perhaps getting caught up in traffic, we might lose that advantage and people might still consider the private car to be the better option. Clearly, we would like that balance to change.

**Colin McPhail:** Attached to the bill must be a public transport strategy that has to be agreed with the Scottish Government, SEStran, City of Edinburgh Council and Fife Council. Special measures must be put in place because, as has

already been asked, what will happen if maintenance works or weather conditions close both bridges or one bridge? How would we cope with the traffic, particularly given the importance of public transport?

**Shirley-Anne Somerville:** So, we have not planned for the possibility of both bridges being closed.

**Colin McPhail:** I do not see anything about that in the bill.

**Shirley-Anne Somerville:** SEStran presented to the committee a draft cross-Forth public transport strategy. Have the witnesses had any input to that, such as discussions with SEStran?

**Colin McPhail:** We have not.

**Shirley-Anne Somerville:** That seems to be a no all round. Your nods and shakes are not easy to record in the *Official Report*, so I just need to make things clear.

**Colin McPhail:** Let us face it, there are so many specialists out there—SEStran, which is a bit of a quango anyway, City of Edinburgh Council is a transportation specialist, Fife Council and Transport Scotland. We wait for them to comment on the draft transport strategy or the final version, after which it will come to us for our comments.

**Martin Gallagher:** In its transport strategy, it seems that SEStran has accepted without question all the detail of Transport Scotland's proposal. For example, the dedicated bus slip roads between the Forth road bridge and the A90 will not be able to facilitate movement from the Forth road bridge to the M9 spur. Something like 50 per cent of all traffic that comes across the Forth road bridge goes down that corridor. That figure is taken from the SEStran integrated transport corridor study from 2005. Even though half of all the journeys go down that corridor, there is no provision for buses to use the M9 from the public transport corridor over the Forth road bridge. Buses will therefore have to use the new crossing or no new services will be developed.

SEStran is also talking about there being a high-quality bus interchange at Echline, South Queensferry, which would be part of a park-and-ride facility that was proposed initially by Transport Scotland. That proposal was then dropped in order to keep the link for emergency use as a diversion route if the new bridge were to be closed. SEStran now seems to have gone back to the park-and-ride idea. Park and ride has been successful in the right places, such as at Ferrytoll, but I do not see how park and ride at South Queensferry would help with the cross-Forth strategy; it could conflict with Ferrytoll and encourage people to come across the bridge on the new crossing and park at South Queensferry, which is not what we want.



**Shirley-Anne Somerville:** I think that one of my colleagues will ask specifically about that later, so we might come back to comments on the Echline park-and-choose facility. If anybody has any other points to make on the original question, feel free to do so.

**Juliette Summers:** I have one point on the additional paper. Were you referring to annex C?

**Shirley-Anne Somerville:** Yes.

**Juliette Summers:** My understanding is that what is in annex C is to be welcomed, because there is an additional public transport element, but as far as I am aware it is being added to what is essentially a road network development rather than an integrated public transport consideration from first principles. As far as I am aware, even if that were to be put in place, it would not achieve the percentage modal shift from where we are at the moment. At the moment, the plans that have been put forward by Transport Scotland present us with a modal shift away from public transport. What is in annex C would return us to the current situation. We would like to see a modal shift towards public transport. We do not believe that what is in annex C will achieve that.

**Shirley-Anne Somerville:** I was going to ask for a more detailed response on annex C. I presume from what you have said that we all know what we are talking about—if we do not, let me know now. The public transport strategy included a list of various park-and-choose schemes, whether at Rosyth or Halbeath, and other proposals, which would cost £50 million, at prices from the fourth quarter of 2006. The proposals have been made available to the committee. We have heard about something that was not in there. Are there any omissions from the scheme? Are the wrong priorities in the list? What do people think about what is being proposed?

**Martin Gallagher:** I have to admit that I am not totally familiar with the full report. One thing that I picked up on was the continuing reference to light rapid transit. It was shown that SEStran commented that the replacement of the B800 overbridge over the A90 should be built such that it could facilitate light rapid transit. That seemed to ignore the advice of its consultants in the 2005 integrated transport corridor study, which found that light rail was not viable for many reasons—the same benefits could be achieved through far cheaper options and most of the demand would be abstracted from parallel bus and heavy rail. The continuing focus on light rapid transit is nothing more than an aspiration. Given the problems and costs of delivering the Edinburgh system, I do not think that an extension to Fife is ever going to be at all viable.

**Shirley-Anne Somerville:** Do you feel that that money would be best used on another public transport initiative, rather than on future proofing something that we all know is very unlikely to happen?

**Martin Gallagher:** Yes.

**Juliette Summers:** Like Martin Gallagher, I have not had a chance to look in detail at annex C. Given that we are talking about £50 million on top of an already £2 billion-plus scheme and given the financial constraints that we all face, we suggest that it might be a better use of resources to have an integrated planning and provisions process, rather than tack something on to the end of an already quite expensive project.

**Rob Gibson (Highlands and Islands) (SNP):** Your underlying thinking about increased traffic was contradicted last week by Tom Hart. I do not know whether any of you read his evidence—it is important to do so. He suggested that the increases in car transport have been happening at a much slower rate than was predicted and than the figures that you all seemed to expect—you expected an increased number of vehicles to use the replacement bridge. Do you have any comments on the view that there will not be as many cars as you posit?

14:30

**Colin McPhail:** That might be the case because people are being encouraged to use public transport more; it may also be related to the recession. Many people out there have been made redundant—I think that that applies in Edinburgh, because as I came here today I saw all the “to let” and “for sale” boards on offices, which is not encouraging at all. However, I hope that it means that more people out there are using public transport, which they should be encouraged to do, certainly for commuting.

**Rob Gibson:** We are certainly here to discuss having more public transport. However, you will not discount the fact that fuel prices will rise hugely and that that could affect traffic growth figures. Indeed, the railways and buses are already taking more of a share than was posited five years ago, long before the recession.

**Colin McPhail:** That is a factor.

**Rob Gibson:** So the question of the amount of congestion has to be weighed against such figures.

**Colin McPhail:** They must be weighed against an increase in traffic as a result of the attraction of using a new crossing.

**Rob Gibson:** That is an interesting point of view. However, Juliette Summers mentioned the

part that rail must play. You must be aware that more people travel by rail each year.

**Juliette Summers:** Yes, and there is more congestion on the railways. Rail travel is a desirable form of public transport because it is reliable, rapid, does not get caught in traffic and will take you into the centre of town—for example, it will take you into the centre of Edinburgh. However, the railways are congested. It is very hard, for example, to take a bicycle on a peak-hour train. If we are talking about having active, sustainable transport and moving people from the train station to wherever they work or are visiting, we must try to integrate rail travel with other networks.

On the research that indicated that car use would not increase in the way that had been predicted, car use is still increasing and the modal share for public transport is very small at the moment. We need an active policy that will increase the modal shift to sustainable public transport.

**Charlie Gordon (Glasgow Cathcart) (Lab):** At the risk of belabouring the point about SEStran's public transport strategy, which has no formal status as part of the Forth crossing project, do you think that that strategy should be given formal status? Should the infrastructure projects in it be included in the bill?

**Juliette Summers:** We very much want to see a commitment to developing the infrastructure projects and having them in place before any new crossing opens. If we are going to achieve modal shift, we need to provide the infrastructure to make journeys by public transport desirable for people. If we open a new bridge and make the roads network more desirable, we will achieve what is predicted in the bill and its accompanying documents, which is a modal shift away from public transport. We therefore want to see the infrastructure in place.

**Colin McPhail:** The short answer to the question is to include the infrastructure in the bill.

**Martin Gallagher:** Many of the measures that are proposed in the strategy have been talked about for quite a few years. For example, Halbeath park and ride was recommended for immediate delivery five years ago in the integrated transport corridor study, as was Rosyth park and choose, bus priority at Inverkeithing and Castlandhill Road, and so on. However, the key issue is funding. Unless there is provision in the bill to include such projects, it is unlikely that they will be delivered independently of it.

**Gavin Booth:** I agree with my colleagues that, if the infrastructure projects are to happen and if they are to achieve what those of us involved in public transport would like to see, they almost

have to be written in stone at this stage, rather than being thought about when it is too late.

**Charlie Gordon:** Previous witnesses have emphasised the importance of modal shift from cars to public transport in improving cross-Forth travel. Do you have any other suggestions about how such modal shift could be achieved? That may well have been covered in previous answers.

**Colin McPhail:** An issue that is not covered by the bill is our suggestion, in the context of the west Fife local plan, that a transport hub could be put opposite Dalgety Bay station. All the buses that came into the town would go to that hub and people could choose to travel further by bus or to cross the road and travel by train. That is not covered by the bill; I am talking on a much broader level.

**Martin Gallagher:** One of the best things that can be done to encourage modal shift is to make public transport more reliable. Transport research has consistently shown that people choose to use their cars over public transport because of the perceived unreliability of the service that public transport provides. Someone who gets into their car has a reasonably good idea of how long their journey will take them, based on the traffic situation and the route that they intend to take. If that person goes for a bus and the bus is late, that is outwith their control and they will go back to using their car.

It is all very well to have a dedicated public transport corridor across the river, but if there is no bus priority system on the adjoining road network to support that, the buses will be in the same congestion as the cars and there will be no incentive to get car drivers off the new crossing and on to public transport. An example that highlights the problem that we face is that an off-peak bus journey from Inverkeithing to the Royal Bank of Scotland at Gogarburn takes 32 minutes, whereas the same journey takes 57 minutes at peak time. That shows the problems with congestion that exist. If buses could get past all that congestion and people could arrive 25 minutes earlier, what better incentive would there be to use public transport?

**Juliette Summers:** We would also like consideration to be given to spreading cross-Forth journeys geographically, so that they are not all made in the Queensferry corridor. The Kirkcaldy to Leith hovercraft, which Stagecoach thinks could take 850,000 passengers per year, is an example of how that could be done. Cross-Forth journeys could also be spread temporally. Teleworking and working at home, for example, would reduce the peak rush. The technology is available to allow existing patterns to be shifted. That can be done. The fact that many people from residential areas on the north side of the Forth travel to work on the

south side of the Forth is also a consideration when it comes to managing the demand for crossing the Forth.

**Colin McPhail:** There is a bus service called the 747—I think that the number was chosen deliberately—from Inverkeithing to Edinburgh airport, which runs every 20 minutes. The people who catch that bus rely on it to get to their flight on time, so it should not be delayed. That is another consideration.

**Marlyn Glen (North East Scotland) (Lab):** My first question is about the timing of the implementation of the measures that have been discussed. Previous witnesses have called for the bus priority measures and the schemes to encourage modal shift to be implemented as soon as possible, before the new crossing opens. Do you agree? If so, which schemes are a priority for development?

**Martin Gallagher:** I agree with what previous witnesses have said. I think that George Mair from the Confederation of Passenger Transport UK said last week that when construction work starts, the delays on the approach to the existing bridge might serve as an opportunity to get people on to public transport—buses and trains—before the new crossing opens.

The work that SEStran did in 2005 identified Halbeath park and ride as having a good benefit to cost ratio, so it should be a priority. In addition, the Rosyth park and choose, which is more of a rail facility that local buses feed into, offers real potential, as do some of the bus priority works that are proposed around Inverkeithing.

Those were all identified five years ago as low-cost quick wins that could be put in place quickly and which would provide immediate benefits. Unfortunately, nothing has happened since then. There is no point in having frequent express buses from Ferrytoll park and ride if people cannot get down there on the local buses in the first place. Ferrytoll is now more of a hub than just a park and ride, because people now go down there to use it as a sort of bus station. I think that most of the quick-win measures in the 2005 SITCOS report should be prioritised.

**Colin McPhail:** I agree with Martin Gallagher on the need for bus priority measures. The introduction of high-occupancy vehicle lanes is another aspect. However, for all public transport strategies, things can change overnight if there is an increase in rail fares or—as happened with Stagecoach twice last year—bus fares. That can alter people's thinking around commuting.

**Gavin Booth:** Timing is an important issue. If we want to influence public perception, it is important that public transport passengers should not be inconvenienced to any great extent in the

lead-up to the opening of the new crossing. Therefore, if any of the quick-fix measures that Martin Gallagher has suggested could be put in place to retain and even to grow the public transport sector, I would certainly support such an approach. That would be better than waiting until the last minute.

**Juliette Summers:** I agree with what has been said. We want to see those infrastructure developments in place before the new bridge opens. For the BRIGS geographical area, the main concern is rapid and reliable running of buses. Priority routes should be put in place to ensure that people who already make journeys on public transport are not inconvenienced and to encourage more people on to public transport. Again, I agree that adequate resourcing is required to encourage people to do that. At the moment, I have not seen anything that suggests that that is part of the package.

**Marlyn Glen:** Do you have any concerns about disruption to bus services during the construction of the Forth crossing—Gavin Booth is nodding. What do you think could be done to minimise the impact of the works on bus services?

**Gavin Booth:** We have huge concerns, as we said in response to the previous question. If it is recognised that there will be disruption and delays, something should be done in preparation for that. Part of the education process will come from private motorists seeing that buses have an advantage in terms of speed, time and reliability. If that is evident in the lead-up to the opening of the new crossing, that will help the growth in public transport. As an Edinburgh resident, I know that the disruption that has been caused by the tram works has had an adverse effect, as people have chosen not to use public transport. I would hate to see the same thing happen during the construction of the new crossing.

**Martin Gallagher:** I agree with all of that.

**Marlyn Glen:** Convener, I think that we have already covered my next question.

**Rob Gibson:** This question is for the Dalgety Bay and Hillend community council representative. Will the public transport proposals in the bill or the public transport strategy benefit residents around the northern bridgehead, or will they benefit mainly longer-distance commuters?

**Colin McPhail:** We will benefit as long as a public transport strategy that is sufficient is put in place. As I said, a hub opposite the station would benefit us no end. We already have fairly good bus services from Ferrytoll to Edinburgh—I came here via Ferrytoll today—so it would be sufficient if we got a rapid connection from Dalgety Bay to Ferrytoll. We got a new train station in the early

1990s that has helped no end and has been quite a success story.

14:45

**Rob Gibson:** We were thinking about longer-distance commuters, such as people who travel from Perth, who would benefit from better public transport. We would not expect such people to get off at Dalgety Bay.

**Colin McPhail:** I think that the attraction for people who come from Perth would be to stop at Halbeath or even Ferrytoll to use the park and ride. That is what they will be encouraged to do, but I have my doubts about whether the approach will work.

**Gavin Booth:** I anticipate that bus companies will choose to use the new crossing rather than the existing crossing if a longer-distance, end-to-end journey is planned. If we look at the maps, we can see the attraction in that. It would make for a quicker and smoother journey.

**Alison McInnes (North East Scotland) (LD):** I apologise for arriving late and missing the early part of the evidence. Shirley-Anne Somerville mentioned the possibility of park-and-ride facilities being developed on the redundant carriageway at the Echline junction when the new Forth crossing is open. What does BRIGS think of the proposal? Should it be included in the public transport strategy?

**Juliette Summers:** We are not convinced that that would serve the interests of any of the people in our geographical area. As far as we are aware, nobody has been consulted locally on whether such a facility is desirable or would be used. We do not think that there is evidence that it would be well used, given the amount of space that is available.

We very much doubt that someone who has driven across the new bridge will park at Echline and wait for a bus to take them to town, especially if there are no bus priority measures on the routes that they choose. If we were to be convinced that the project should go ahead, we would need to see adequate surveys of demand for and concerns about the proposal.

The development of park and ride at that spot on the southern side of the existing bridge would take out that part of the network. The current proposal is that public transport and taxis will divert on to the B800 to pick up people and take them across the bridge, which will mean longer journey times. I agree that there will be a strong incentive for buses to use the new bridge and not to stop at Queensferry and give us a better service in both directions. We are not convinced that the proposal is viable.

**Alison McInnes:** That is helpful.

In written evidence, you asked for a new round of consultation with local residents on possible transport improvements. When should that consultation happen? What form do you want it to take?

**Juliette Summers:** We want it to happen as soon as possible, given the stage that we have reached in the process. If such consultation is to be meaningful, we would like the process to be slowed down, so that adequate consultation can take place and be assessed.

It is clear that the traditional forms of consultation that have taken place have been inadequate and costly and have not provided the results for which either party hoped. There must be an alternative way of accessing community interests and views that is more open and communicative than the approach that has been taken in the past. We would welcome much more partnership working across the board with different agencies, to enable us at least to voice our views, which we do not feel that we have had a real opportunity to do.

**Alison McInnes:** Is BRIGS in a position to offer to lead a community-based, bottom-up approach to that consultation? Would that be more effective?

**Juliette Summers:** Any such approach would need strong leadership, strong ambition and a very good team behind it. BRIGS is a volunteer group and would welcome such an approach but there are other agencies, such as the neighbourhood partnerships and other volunteer groups within Queensferry. Queensferry ambition, for example, works in partnership with many local groups and agencies. There is potential for a process, in which BRIGS would certainly want to have a part.

**Alison McInnes:** Would there be better, more significant take-up if there was a further consultation at this stage now that people have engaged effectively with the limited consultation that has taken place so far?

**Juliette Summers:** I hope so. BRIGS has worked very hard to communicate with the communities. We have done a leaflet drop of every household in Queensferry, held many public meetings and disseminated written information, such as regular web updates and regular e-mail updates, so we have developed a strong way of working with our members and of trying to communicate as broadly as possible. We have also developed ways of working with the local authorities—we try to work in partnership with different agencies.

The way in which the bill has been constructed means that we need new ways of communicating, understanding what is happening and feeding into the process. That is why we call for a more integrated process. Consultation of local communities should be at the core of that.

**Alison McInnes:** In your written evidence, you call for the bill to be amended to include additional transport improvements. You have touched on much of that already, but will you clarify whether you are referring only to the improvements that are proposed in the draft cross-Forth public transport strategy?

**Juliette Summers:** Are you referring to annex C of the strategy?

**Alison McInnes:** Yes, the famous annex C.

**Juliette Summers:** The answer is yes, but we would also like detailed consideration of rail transport to be part of that, because we are talking about three bridges, not just two.

**Colin McPhail:** Will there be questions on the maritime side? I have some points to make about the bill in that regard.

**The Deputy Convener:** I will come back to you if those questions are not covered and there is something on which you would like to comment.

I have a question for Bus Users UK. Are there any examples of innovative bus services over major road bridges elsewhere in the United Kingdom that might be applicable to cross-Forth bus services?

**Gavin Booth:** I am not conscious of the same problems with similar crossings. In the case of the Severn, there are now two crossings, which has dealt with any problems that there were with congestion and public transport. Buses and coaches use both bridges as appropriate. Traffic on the Humber bridge is relatively low. There is not a lot of natural traffic from one side of the Humber to the other. Therefore, I think that the concentrations on both sides of the Forth and the flow of commuters are sufficiently large to be almost unique. I cannot think of any lessons that we could pick up from similar crossings in the UK.

**The Deputy Convener:** If the witnesses feel that we have missed anything that is relevant to our inquiry, they should feel free to mention it. Colin McPhail was keen to share something with us a few moments ago.

**Colin McPhail:** Section 5(1) of the bill concerns consultation on bridge markings and lighting. It talks about consulting Edinburgh airport, but it should also include consultation of a navigational party.

Section 6 concerns interference with navigation. It includes:

“temporary closure of the Firth of Forth, or a part of it, to navigation”.

**The Deputy Convener:** Those are important issues, but they have to be taken to the bill committee. We are looking only at transport, on which we will feed in views to the lead committee.

**Colin McPhail:** Oh, I see. Fair enough.

**The Deputy Convener:** It might be better for your community council to feed that information to the bill committee.

**Colin McPhail:** My final point is that liaison committees are often formed for consultation. I believe that the formation of a liaison committee should be included in the bill.

**The Deputy Convener:** Good.

Thank you for your evidence this afternoon. I suspend the meeting for a few minutes to allow a changeover of witnesses.

14:55

*Meeting suspended.*

15:01

*On resuming—*

**The Deputy Convener:** Our second panel consists of Barry Colford, who is the chief engineer and bridgemaster at the Forth Estuary Transport Authority. Would you like to make an opening statement before we move to questions?

**Barry Colford (Forth Estuary Transport Authority):** No, I am happy to answer questions from the committee on any aspect of the bridge.

**The Deputy Convener:** Thank you. In evidence to the committee, John Howison of Transport Scotland said:

“We expect that the Forth road bridge will carry on for about another 80 years”.—[*Official Report, Transport, Infrastructure and Climate Change Committee*, 2 February 2010; c 2549.]

Do you share that view?

**Barry Colford:** I certainly hope that that will be the case. We have several maintenance challenges ahead of us and it is my job and the job of the team who work on the bridge to try to overcome those challenges, notwithstanding the issues with the main cables and the anchorages.

**The Deputy Convener:** Okay. That is good news. John Howison also told the committee that FETA has access to information on the condition of the Forth road bridge’s main cables that Transport Scotland does not have. Will you outline what that information is and explain why Transport Scotland does not have it?

**Barry Colford:** The Forth road bridge is managed, maintained and operated by Forth

Estuary Transport Authority independently of Transport Scotland. That work is not part of Transport Scotland's remit. We have carried out a series of inspections to try to determine the strength of the cable and its potential future life. We have carried out two inspections to date. In the most recent one, in 2008, we determined that the loss of strength in the cable was approximately 10 per cent. We will carry out future inspections to try to determine the extent of the strength loss. It is a function of the condition of the cable that we will probably have to carry out evaluations, inspections and monitoring for the remainder of the service life of the cable. The information resides with FETA but we make it known; we are a public body with a public board that is made up of councillors from both sides of the river. The information is in the public domain.

**The Deputy Convener:** So if Transport Scotland is looking for that information either it is in the public domain or Transport Scotland could drop you a note and find out. Is that what you are saying?

**Barry Colford:** I have to say that I am slightly puzzled by the suggestion that it has not been known because, as I said, it is in the public domain.

**The Deputy Convener:** Thank you. Perhaps Transport Scotland will read the *Official Report* of today's meeting and then it will know.

**Shirley-Anne Somerville:** No doubt you have read the continuing speculation about the success or otherwise of the dehumidification. I want to ask you about the cable acoustic monitoring system, which determines and can report back on whether there have been further wire breaks. It has been suggested in the papers that you will know within a couple of months what will happen with the future lifespan of the bridge. Is that true?

**Barry Colford:** I do not think so. When I gave evidence to the Forth Crossing Bill Committee, I stressed that, as a professional engineer, I am unlikely to give an absolute guarantee. I cannot give an absolute guarantee that the dehumidification system will work on the Forth road bridge, simply because it is a fairly new technology applied to the main cables on a structure as old as the Forth road bridge. We have a degree of confidence that it will work, but I cannot give an absolute guarantee.

The confidence that the system will work will increase through time, and each inspection we carry out will give us further confidence—that will grow in future. We plan a further inspection in 2012, which will be another point on the curve to show the state of the main cables on strength versus time.

Acoustic monitoring is an early-warning system. It does not tell us the past—it will not tell us how many wire breaks occurred before August 2006, when it was installed. Between August 2006 and the end of January 2010, we had 51 wire breaks—there was one in January—out of 11,618 wires on each cable. It is not a significant number compared with what some of my colleagues have had on other bridges.

Acoustic monitoring tells us what is happening but it does not tell us the future—it will not predict the wire breaks in the future—but it is a useful early-warning tool and it is another tool in the box to enable us to determine how the strength loss will go in the future. I do not have a crystal ball; I can use only engineering judgment based on a pretty small sampling of the main cables.

**Shirley-Anne Somerville:** We have heard from you and your predecessor about the problems with the cable anchorages. As the current bridge is to continue to be used for public transport, can you give us an update on the anchorages? If any maintenance is assumed or planned for them, will that have an impact on the availability of the bridge for the public transport that we are considering?

**Barry Colford:** The anchorages are a unique design. They were very innovative at the time the bridge was built. They have post-tensioning strands in a concrete tunnel, which is bored in the rock, so each main cable is anchored into the rock. There are about 14,000 tonnes of load in each cable, and there are four tunnels—two on the north side and two on the south side.

The anchorage system was considered a fairly radical piece of engineering when it was designed in the late 1950s. The tunnels were built in 1961, before the bridge was constructed—the anchorages on a suspension bridge have to be built before the cables can be spun. The anchorages were innovative, but unfortunately the post-tensioning in concrete that was used in bridge decks throughout the UK—as it was in the rest of Europe—began to cause problems in the 1960s, 1970s and 1980s, when bridge engineers found that the post-tensioning strands on bridge decks were corroding.

One problem that we have is that we cannot get in to see the condition of the post-tensioning strands in the anchorage tunnels. There is no sign of movement in the base of the cables—where the cables are anchored to the tunnel—and there never has been, so there is no sign of distress. The issue is therefore not one of safety but to determine the long-term structural integrity of the anchorages.

If I, as a professional engineer, can access somewhere to inspect, I have to get an inspection

programme to do that. The work is an investigation to prove the long-term structural integrity of the anchorages. At the moment, we have no concerns about safety, but the work is designed to give us comfort and determine the long-term future of the anchorages.

**Shirley-Anne Somerville:** As Cathy Peattie's first question suggested, we are asking about the lifetime of the bridge and how long it will be available for the public transport services that we are considering. Considering the long-term future of the anchorages, can we go ahead with a bill that is heavily dependent on the use of the current bridge? Can any issues that you find under inspection be dealt with while the bridge is being used by a limited amount of public transport as opposed to the general transport that is currently on it?

**Barry Colford:** That is a decision for others—probably for Transport Scotland. I can only report on the condition of the existing cable and the anchorages; the decisions that are made after the engineering reports are written are really for others to take, balancing the risk.

At the moment, there is no sign of distress in the anchorages. All bridge owners have a duty to carry out principal inspections of all parts of the structure and, after carrying out my duty to inspect the parts that I feel I can reach, we have concluded that by carefully excavating down to the top of the tunnel we can look at the post-tensioning strands. Given the adjacency of the viaduct piers and housing it will be a fairly difficult civil engineering job, but that is not something that civil engineers are unaccustomed to; indeed, my colleagues who are working on the M74 are facing similar problems with excavation and building new structures around existing ones. The project is challenging, but we take comfort from the fact that these sorts of things have been done before.

**Shirley-Anne Somerville:** What impact will the removal of general traffic from the Forth road bridge have on its lifespan?

**Barry Colford:** Heavy goods vehicles have the most impact on the bridge. In the late 1950s, when the bridge was designed—and indeed in 1964 when it opened—the maximum vehicle weight on United Kingdom roads was between 22 and 24 tonnes; now, vehicles of 40 and even 44 tonnes use our roads. To take that weight, various parts of the bridge—for example, the towers—have been strengthened, but the deck itself is probably the most sensitive. Given that the layer of mastic asphalt over the steel plate is only 38mm—or an inch and a half—thick it takes a bit of a hammering from those 40-tonne vehicles and the removal of HGVs would mitigate some of the damage caused by traffic.

The irony is that cars dilute the load; three and a half to four cars, weighing a maximum of five or six tonnes, can fit in the space of one 40-tonne lorry. Removing HGVs, which cause the problem, will relieve a lot of the load on the bridge, although I should add that 86 per cent or so of the load in the cables is caused by the weight of the bridge itself. As a result, if we are talking about removing load from the bridge, I have to say that there is not much room for restricting load.

**Shirley-Anne Somerville:** Will the removal of general traffic prevent the need for replacement or augmentation or, indeed, change your plans in that respect?

**Barry Colford:** When we discovered corrosion in the main cable we carried out a study into whether it would be better to augment the cables—in other words, supplement the existing cables with new ones—or replace the existing cable with two new ones. The conclusion was that replacement was probably the better way to go but of course it is difficult to replace cables on an operational bridge. At the time, I said that the optimum way of carrying out the work would be to close the bridge for three years, which would remove any risk to users and is the least expensive way of replacing cables on a suspension bridge. We would be able to carry out the work while keeping the bridge operational, but there would be significant disruption to users: it would take seven to nine years to complete and we would have to close carriageways for 26 weeks at a time, which would substantially disrupt the economies in the east of Scotland, especially Fife. It can be done but it would be difficult.

**Shirley-Anne Somerville:** I take it that augmentation, or your preferred option of replacement, could be carried out if the bridge were open only to public transport, due to the much smaller amount of traffic on it.

**Barry Colford:** Yes, if the work was required. That would be determined by the results of dehumidification and the inspection. I hope that in future we can be more confident about the cable's condition. The study was carried out simply to have it on the shelf in case we needed to carry out the work. It would be easier if traffic was removed from the bridge because that would remove the risk for users. We can do the work when 65,000 to 70,000 vehicles cross the bridge each day, but it is quite difficult and it involves managing risk; we put large steel elements on top of the existing towers some 90m to 100m above the traffic. It is easier if the bridge is open to only 500 or so vehicles a day, because we can put them on one carriageway and work on one cable at a time, which reduces the risk significantly.

15:15

**Rob Gibson:** Are you saying that, by using only one carriageway, bus, pedestrian and cycle traffic could use the bridge while a cable was being replaced?

**Barry Colford:** I am fairly confident that we could do that without disrupting or restricting public transport, cyclists or pedestrians. Doing work on the bridge in that way would also reduce the cost, because the contractor would not have to work with restricted carriageway closures; we could have carriageway closure for a more significant amount of time. It would still be a challenging project, though.

**Rob Gibson:** I am sure it would. How often are buses prevented from crossing the Forth road bridge because of high winds?

**Barry Colford:** It happens fairly frequently during the winter months from October up to March or April. Our records show that such traffic diversion varies—for example, in one year we will have 40 hours of diverting not only buses but high-sided or wind-susceptible vehicles, but the next year we can have 260 hours of diverting. Those are the extremes of diverting traffic. When we divert, we have a significant impact on the people of South Queensferry and Kirkliston, because the local road network becomes gridlocked. Obviously, given the variance in the diversion figures, we cannot accurately predict when such events will occur.

**Rob Gibson:** So there is no way in which plans could be made to help with such circumstances—for example through the types of slip road that are envisaged for the replacement bridge. Could we just divert buses?

**Barry Colford:** At the present time, buses and heavy goods vehicles are diverted to Kincardine in the event of high winds. Obviously, a second Forth crossing would make the situation much easier because buses would not have to be diverted to Kincardine. It does not help anyone, for example, if we must divert the Edinburgh to Dundee bus to Kincardine. We feel sorry for people in the bus when we have to turn it at the Forth road bridge due to high winds; it means that they have to think about how long it will take them to get to Dundee.

**Charlie Gordon:** Do you continue to allow cyclists and pedestrians to use the bridge during periods of wind-related restrictions on buses and high-sided vehicles?

**Barry Colford:** We have a fairly strict procedure for diverting types of vehicle, which is based on experience. How much a vehicle is susceptible to wind depends a lot on the driver and how he reacts to the conditions. We restrict pedestrians and cyclists when winds gust at over 50mph. We

have a lower restriction for double-decker buses, which are restricted first. However, because of that, the bus companies usually operate only single-decker buses across the Forth road bridge. When we get double-decker buses, they are tourist buses and buses going to T in the Park, but winds are down a lot in July. The bus companies are aware of the problems, so they usually run single-decker buses, which are restricted only when winds reach the higher speed of 65mph.

**Rob Gibson:** Would the installation of wind shielding around the bridge towers reduce the number of days that the bridge is closed to buses?

**Barry Colford:** No, it would not.

**Rob Gibson:** So there is no way of wind shielding the existing Forth road bridge?

**Barry Colford:** We are looking at a form of limited wind shielding at the towers at the moment, but that is specifically to try to prevent high-sided, empty, curtain-sided articulated lorries blowing over at wind speeds below that at which they should blow over. We have had three incidents recently where empty, curtain-sided vehicles have blown over on the carriageway after they have passed the towers because of the vortex effect. Those vehicles have crossed at wind speeds of below 50mph. The wind speed goes up and down quite a bit, so there is quite a variance, and they have been hit by a spike—an intense increase in wind speed over a short period of time. The lorries were perfectly entitled to cross at wind speeds of 50mph, which is the limit—that is when we start diverting wind-susceptible vehicles. The lorries crossed when the wind was at 50mph but were hit by a spike of wind at 60mph and the drivers lost control. That was exacerbated by the lorries being empty—all three were empty, curtain-sided vehicles.

We have a specific problem. If we put wind shielding up it would be to try to protect those vehicles. The effects on the network and on South Queensferry when such incidents occur are pretty severe. The congestion can be there for a long time, because it takes us a while to pull the vehicles over. We cannot just pull them over when there is such wind speed; we have to let the wind drop before we can pull them over safely.

**Shirley-Anne Somerville:** I want to pick up on the point Charlie Gordon made about cyclists and pedestrians. Do you foresee any circumstances in which cyclists and pedestrians would be prohibited from using either side of the bridge because it was closed for maintenance?

**Barry Colford:** No. We have not done that to date and I do not intend that it should happen in the future. We strive to keep at least one cycle track/footway open at all times for cyclists and pedestrians. Cyclists and pedestrians are as



important to us in general traffic terms as motor vehicles and buses. We are part of the national cycle network. We are aware that people use the crossing on foot and by bike. In high winds we frequently try to get one of our pick-ups to take people across, because if they cannot cross where do they go? If the wind is still gusting above a certain level but someone wants to get home, we will take them across. Obviously, the guys are out doing other things but, where possible, we will put the bike in the back of the pick-up and take the cyclist across so that they can go home from there.

**Shirley-Anne Somerville:** So there are measures you can take to assist in high winds.

**Barry Colford:** We do so unofficially, but we do not like to publicise it too much—he says on television—simply because one of the priorities is to ensure that the traffic is safely diverted. Diverting causes all sorts of issues. When people turn up at the bridge having ignored the signs telling them to divert, they still get relatively angry when they are told that they have to spend two hours going around by Kincardine. That is one of the unique features of the Forth road bridge. The diversion is 32km to Kincardine. We are in a unique situation in the UK in relation to the volume of traffic and accessibility to another crossing. The Erskine, Clyde and Kingston crossings are all very busy, but there are alternative routes—there are surface street routes in Glasgow, too. We are unique in that there is quite a way to go for a diversion. The Tay is similar, but it does not have the strategic traffic that we have.

**Charlie Gordon:** Stagecoach has raised concerns about the impact that the proposed changes to the approaches to the Forth road bridge will have on bus services. Do you share those concerns? Do you want to comment on them?

**Barry Colford:** I have to say that the authority's remit is to manage, maintain and operate the bridge; I do not want to comment on those public transport issues, which I think are a matter for Stagecoach and Transport Scotland. If we are going to have a public transport bridge we will do what we can to ensure that those services are carried across.

**Charlie Gordon:** Our difficulty is that this committee is about public transport.

**Barry Colford:** I understand.

**Charlie Gordon:** The committee has heard calls for action to encourage modal shift to public transport to begin as soon as possible. Does FETA have any plans to improve the flow of buses across the Forth road bridge before the opening of the Forth crossing?

**Barry Colford:** Again I am sorry, but our remit is fairly narrow as far as the crossing is concerned. FETA certainly wants to encourage more public transport use and we recognise the issue, which is that to free up the road space to allow buses to cross the Forth there has to be an alternative, because currently the buses are stuck, whether they are northbound or southbound.

Much is made of the fact that commuters come into Edinburgh from Fife, Perth and Kinross and other places north of the city and go home again at night, but as well as a northbound pm peak there is a significant southbound pm peak on the bridge, which is sometimes ignored. There is a peak spread, too. We are getting more and more traffic in the saddle between the peaks—we see that phenomenon when we try to put out traffic management overnight.

**Charlie Gordon:** Are there problems with buses on the current Forth bridge at any time?

**Barry Colford:** Once buses have got to the bridge, especially southbound in the morning, there is no longer much of a problem and there is free flow across the bridge. It is getting to the bridge that is the problem.

We have a bus lane southbound, which was constructed some time ago, and there is a series of bus lanes into Edinburgh further along the A90, but there is a problem northbound out of Edinburgh. There are problems getting to the bridge at the northbound pm peak and the southbound am peak, but there are significant peaks for travel in the opposite directions, too.

**Alison McInnes:** I understand that FETA plans to spend more than £100 million on bridge improvements during the next 15 years, which excludes the cost of several major projects such as expansion joint replacement. What are the total expected costs of improvement and maintenance in the years up to and following the opening of the new Forth crossing?

**Barry Colford:** Our published capital plan shows spend of approximately £132 million over 15 years. The bulk of that is the cost of painting the truss of the suspended structure. It is unfortunate, but we must paint the truss whether the bridge is carrying 70,000 or 500 vehicles a day. It is an environmental issue. The £132 million includes the cost of expansion joint replacement. That is our capital programme for the period.

**Alison McInnes:** Is it your programme for the period up to and including the opening of the new bridge?

**Barry Colford:** It is our programme for 15 years.

**Alison McInnes:** Okay. Do you expect to revisit and revise the programme in the light of future discoveries?

**Barry Colford:** The £132 million includes the cost of investigation into the anchorages but excludes the cost of new anchorages, if they are deemed necessary. It also excludes the cost of replacing any of the main cables.

**Alison McInnes:** Will that investment give value for money, given the new role of the bridge?

**Barry Colford:** We have to invest in our infrastructure. The Forth road bridge is a strategically important crossing that will have a role to play after the new crossing opens. I hope that it will continue to provide a service during the next 50 to 80 years—the remainder of its lifespan. It must be maintained, so the answer to your question is yes.

**Alison McInnes:** Given that the existing bridge is regarded almost as part of an integrated Forth crossing package—at least, that is how the Government presents it—should the existing bridge and replacement crossing be managed by a single body? If so, should that body be FETA, Transport Scotland or another body?

**Barry Colford:** The people who work at the Forth road bridge have a wealth of experience and knowledge of maintaining large estuarial crossings. We are in the best position to maintain and operate both crossings. On the Severn and in Dartford, where there are two crossings at nearby locations—in Dartford, one is a tunnel—the crossings are maintained by one authority. That is the most economical model and the optimum way of maintaining the two bridges.

15:30

**Alison McInnes:** Do you foresee any problems if the bridges are managed and maintained separately?

**Barry Colford:** There are cost benefits in having one organisation: we have an established infrastructure and a maintenance facility in place and are close to the second crossing, which is a tremendous advantage. If FETA does not look after the crossing, its work will have to be replicated somewhere else, which would be a disadvantage. There is an advantage in having one organisation operating two bridges. The Severn bridge has wind shielding and has never closed, as far as I am aware, due to high winds, but it closes because of other incidents and accidents. If one operator maintains both crossings, it is much easier to operate them together.

**Alison McInnes:** Those comments are helpful.

**Shirley-Anne Somerville:** In previous evidence, we heard that some people have concerns about what will happen to public transport when it is moved on to the new bridge and there is a breakdown, because the breakdown will be moved on to the hard shoulder and will get in the way of the buses that are using it. To show how long it would take to clear such a breakdown, a comparison was made with the current Forth crossing. However, I understand that much of the delay in removing breakdowns is due to the fact that your service vehicles get stuck in traffic and have difficulty reaching breakdowns to deal with them. Is it fair to compare how long it takes to remove simple breakdowns or accidents—not HGVs that have gone over—on the current bridge with what will happen on a bridge that has a hard shoulder?

**Barry Colford:** One restriction that we face is the fact that there are steel upstands at the edge of our carriageways, which are the old 24ft carriageways, so there is no room at all. Our vehicles can move to the side and flap back their wing mirrors, but it is difficult for us to get to vehicles that have broken down simply because there is no hard shoulder. That causes a delay.

Because we have vehicles on site, we can respond quickly and take cars away. Unfortunately, the most common cause of breakdowns on the Forth road bridge is people running out of petrol. We carry petrol to allow them to leave under their own steam, which gets rid of them. Shunts and bumps are another fairly frequent cause of breakdowns; in those circumstances, we must tow vehicles off. There is no question but that having hard shoulders on the new bridge will be advantageous. There is a severe disadvantage in the fact not only that the current bridge lacks hard shoulders but that there is no running space either side of the steel upstands.

We cannot move a vehicle that has been involved in an accident if there is an injured party; we must wait for the paramedics to move the person if they have suffered an injury such as whiplash. That causes delay on the bridge.

**The Deputy Convener:** Thank you for your evidence this afternoon. I suspend the meeting for a few minutes to allow the witness to leave.

15:34

*Meeting suspended.*

15:35

*On resuming—*

## **Subordinate Legislation**

### **Scottish Road Works Register (Prescribed Fees) Regulations 2010 (SSI 2010/23)**

**The Deputy Convener:** The next item on today's agenda is consideration of a negative instrument. No motion to annul has been lodged. Do members wish to comment on the instrument?

**Members:** No.

**The Deputy Convener:** Does the committee agree to make no recommendation in relation to the instrument?

**Members** *indicated agreement.*

15:36

*Meeting continued in private until 15:56.*



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