

EDINBURGH AIRPORT RAIL LINK BILL COMMITTEE

Tuesday 6 June 2006

Session 2

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EDINBURGH AIRPORT RAIL LINK BILL COMMITTEE 3rd Meeting 2006, Session 2

CONVENER

*Scott Barrie (Dunfermline West) (Lab)

DEPUTY CONVENER

*Mr Jamie McGrigor (Highlands and Islands) (Con)

COMMITTEE MEMBERS

*Mr Charlie Gordon (Glasgow Cathcart) (Lab)

*Christine Grahame (South of Scotland) (SNP)

*Iain Smith (North East Fife) (LD)

*attended

THE FOLLOWING GAVE EVIDENCE:

Marwan AL-Azzawi (Scott Wilson Railways)

Susan Clark (TIE Ltd)

William Gallagher (TIE Ltd)

Mark Graham (PricewaterhouseCoopers)

Derek Halden (Derek Halden Associates)

Peter Hawkins (Spokes)

Derek Hendry (Scottish Airports Group)

Sue Hodges

Tim Hodges

Richard Jeffrey (Edinburgh Airport Ltd)

Paul Lewis (Scottish Enterprise)

Mary McLaughlin (Scottish Enterprise)

Kenneth Wardrop (City of Edinburgh Council)

CLERK TO THE COMMITTEE

Jane Sutherland

LOCATION

Committee Room 1

Scottish Parliament

Edinburgh Airport Rail Link Bill Committee

Tuesday 6 June 2006

[THE CONVENER *opened the meeting at 10:09*]

Edinburgh Airport Rail Link Bill: Preliminary Stage

The Convener (Scott Barrie): I welcome everyone to the third meeting of the Edinburgh Airport Rail Link Bill Committee at the preliminary stage. Today we will begin to hear oral evidence on the general principles of the bill. We will focus mainly on policy objectives, economic growth, tourism growth and sustainability.

The committee has a number of questions for the witnesses and I ask that responses be brief and focused. That will allow us to make good progress while ensuring that we explore all areas of interest.

Before I introduce the first panel of witnesses, committee members will recall that we agreed to seek oral evidence from VisitScotland at today's meeting. VisitScotland has provided written evidence, which members will find in paper EARL/S2/06/3/1; however, VisitScotland has disappointingly been unable to provide any witnesses for today's meeting.

Christine Grahame (South of Scotland) (SNP): I do not know whether VisitScotland gave evidence to the Glasgow Airport Rail Link Bill Committee. I would be disappointed if it had given evidence to that committee but did not feel that it should give evidence to this committee.

The submission from the Scottish Enterprise network mentions the Borders railway and says that improved links

"will further enhance those benefits, especially in relation to the business and tourism markets."

I would have liked to hear witnesses from VisitScotland talk about how the airport rail link would enhance tourism in the Scottish Borders by linking up with the Waverley line. I am therefore disappointed that VisitScotland is not giving oral evidence.

The Convener: I am not sure whether VisitScotland gave evidence to the Glasgow Airport Rail Link Bill Committee. However, I share your concern that it has chosen not to give oral evidence today. Your comments are noted.

Iain Smith (North East Fife) (LD): I would have thought that the potential economic benefits of tourism—particularly in the north, which is presently poorly served with transport links to Edinburgh airport—would have been a major issue for the committee to consider. The potential for tourism in Fife may be greatly enhanced by this scheme and I am really disappointed that VisitScotland has failed to provide oral evidence to the committee on a subject that is very important to those of us who live north of the Forth.

The Convener: I am looking at the other two members of the committee and it seems that these views are shared by all members.

Mr Charlie Gordon (Glasgow Cathcart) (Lab): People will draw their own conclusions from the non-appearance of VisitScotland. I presume that part of the economic justification of the rail link has to do with Scotland's tourism industries, so VisitScotland's non-appearance is really quite astonishing.

The Convener: I have been told that VisitScotland provided written evidence to the Glasgow Airport Rail Link Bill Committee but did not provide oral evidence.

Christine Grahame: I do not think that that exonerates VisitScotland. I hope that it will make the effort to read our report.

The Convener: All those comments have been noted, and I certainly agree with them.

I apologise to our witnesses for that slight delay, but I now welcome panel 1. Representing Scottish Enterprise are Paul Lewis, who is the senior director of competitive place, and Mary McLaughlin, who is the director of transport. You are our first witnesses on our first day of oral evidence.

Iain Smith: As I have perhaps just hinted, an issue that we have to explore is whether the economic benefits of any rail link to Edinburgh airport will be spread as widely as possible—especially to areas that do not have particularly good connectivity at present. Your submission says:

"To spread the economic benefits of the airport as far and wide as possible, any new airport railway service should provide maximum connectivity".

Does the EARL project achieve that, and if so, how?

Paul Lewis (Scottish Enterprise): Our view is that the EARL project as proposed maximises connectivity in Scotland, especially with the through routes both north and west. We believe that those routes are fundamental to improving connectivity in Scotland.

Iain Smith: What are the key target industries that EARL will assist in attracting to Edinburgh, Fife and the rest of Scotland?

Paul Lewis: When we consider Scotland's economy and its prospects for growth, certain industries will—from Scottish Enterprise's perspective—receive a particularly significant contribution. Two in particular will gain important benefits from EARL: financial services, and tourism, which has already been mentioned. The financial services industry is hugely important to Scotland; it employs more than 113,000 people and it generates £6 billion for the economy. Tourism is worth about £4 billion to the economy every year and brings in about 18 million visitors. Improved connectivity is important to those industries. Scotland's tourism product is relatively strong, but the Executive has set some ambitious growth targets for it. The city plays an important role in tourism, but a number of important international destinations are outwith the city—not least the Cairngorms, St Andrews and Loch Lomond. We believe that EARL will enhance connectivity with those locations.

10:15

The Convener: How would financial services grow because of the rail link? I am not sure that I fully understand the connection between the financial services sector and an airport rail link.

Paul Lewis: In connectivity terms there are two dimensions. Airports themselves and connectivity to airports are important for financial services, which is a global industry. The airport provides an important link to United Kingdom hubs such as London, to major European centres such as Frankfurt and Munich, and to other international hubs. The enhanced connectivity that would be provided by the EARL proposal is also important because of its role in addressing labour market issues. That will benefit an industry such as financial services. If one thinks about the distribution of financial services around Scotland, there are clearly some important hubs in our main cities—in particular in Edinburgh and Glasgow—but important locations around that, such as Dunfermline, West Lothian and Stirling, will be enhanced by EARL because it will improve connectivity.

The Convener: I am sure that we would all support the increased growth of Dunfermline.

You mentioned financial services and tourism. Could any other priority industries be developed as a consequence of a rail link to Edinburgh airport? What sort of growth might an airport link create?

Paul Lewis: I will deal with your first question. We have identified six industries that we believe

are of great importance to Scotland's economic future. I have mentioned financial services and tourism. Food and drink is the third industry. Energy, life sciences and what we call electronic markets—that refers to the digital media and electronics—are the others. Although the current contribution of some of those sectors to Scotland's economy is relatively small, they have strong growth prospects. We believe that many of those industries are already global.

Industries such as life sciences, in particular the biotechnology sector, would stand to gain substantially from increased links to Edinburgh airport. The industry is located in Edinburgh and Glasgow, but also in Tayside and Aberdeen. Increased connections to an international gateway such as the airport are really important for companies in the life science industry in the north of Scotland.

The Convener: Will the proposed rail link be important for economic growth in west Edinburgh in particular, or will the benefit be distributed throughout the whole of Scotland or east-central Scotland?

Paul Lewis: We see the real benefits of EARL as being more about Scotland's connectivity. There may be some local benefits in west Edinburgh, but the main advantage of the scheme that is being promoted is that it benefits connectivity in Scotland. As I have mentioned, links to the west and to the north are very important.

Mary McLaughlin (Scottish Enterprise): Another issue, given that we are trying to develop new services out of the airport, is the need to reach as wide a catchment area as possible. The EARL proposal will improve the catchment area. Therefore, because a wider pool of people can access the airport, more services might be provided from it.

The Convener: Is the rail link an economic growth driver for Edinburgh, the east of Scotland, central Scotland or Scotland?

Mary McLaughlin: Scotland.

Paul Lewis: From our perspective, the rail link is a strong proposition for Scotland.

The Convener: Is there any estimate of the level of growth that a rail link could provide?

Paul Lewis: It is very difficult to provide direct growth forecasts. The promoters have estimated the economic impacts of the scheme, but beyond that we have no direct forecasts of economic growth created by the airport link. However, we have growth forecasts for the six priority industries that I have mentioned. We can provide those forecasts to the committee.

Christine Grahame: It would be useful to have those statistics, convener.

The Convener: That is noted.

You make the obvious assertion in your written evidence that increased road congestion can seriously constrain economic development. Two committee members live north of the Forth and we know all about road congestion. How will EARL increase economic development and assist future growth of the airport? How confident are you that it will reduce road congestion? Or will we just have an alternative means of travel and will road congestion still increase?

Mary McLaughlin: I think that road congestion will increase, as you said, but the rail link will provide an alternative. The aim is to provide certainty of journey. People—especially if they were coming from the west—might use a direct rail link to Edinburgh airport, rather than flying from an airport that has no direct service and going somewhere else for a connection. When people are deciding how to set off on their journey to the airport, they will be more certain of their journey with a rail link, so they will choose that mode.

Paul Lewis: Your first question was about growth at the airport. The projections of passenger numbers at the airport in the next couple of decades are pretty significant. As Mary McLaughlin said, the key point from a business and economic development perspective is certainty for passengers about when they will reach the airport and how quickly they will pass through it and reach their flight and their destination. That is the key constraint. The EARL proposals provide more certainty for the business community than current road transport provides alone.

Christine Grahame: You might not be able to answer the next question. Is it part of your thinking that flight times and train times will be co-ordinated and that if a train is delayed, a flight will be delayed? You talk about certainty of journey, but things happen to trains, too.

Paul Lewis: I would not like to stray into airport operations; I know that airport representatives will give evidence later.

Christine Grahame: But you can state a case.

Paul Lewis: Rather than holding a plane to wait for a train to arrive, the issue is frequency of service to ensure that people can still reach the airport on time if trains are delayed. Perhaps the airport representatives will have a view on that.

The Convener: It is bad enough to hold trains sometimes for connecting services without holding planes, too.

How important to economic growth are other problems on the rail network in east-central Scotland, such as continuing congestion on the Forth rail bridge and the thorny issue of capacity at Waverley station?

Mary McLaughlin: Both issues are important. Scottish Enterprise has said on the record that transport is a key dependency. Anything that will improve transport in Scotland will help economic growth. As Paul Lewis said, if we are to compete in the future, transport in Scotland must improve. We must be able to connect all our cities better and to connect to the rest of the world better. We support developments such as those at Waverley station, the Borders rail link and the majority of the Executive's proposals for its transport plan. We think that proposals are missing from the Executive's plan but, as you know, the Executive is undertaking a strategy review, and what is key to us in that is links between cities—improved links that are faster and have more capacity. All of what you mention is important to the economy.

Mr Jamie McGrigor (Highlands and Islands) (Con): You state that to influence modal shift, the rail service will need to be better for speed, cost and reliability than the private car. Please explain how you believe that the bill will achieve that.

Paul Lewis: We are merely stating the obvious. If the rail link is to achieve that kind of modal shift it will need those attributes. We believe that EARL provides those attributes because it offers speed and reliability for travelling from one point to another—Edinburgh to the airport—and because it has through connectivity to the north, south and west of Scotland. It will therefore provide businesses and individuals in Scotland with a real choice to make a modal shift.

Mr McGrigor: Does your statement also apply to a possible tram service?

Paul Lewis: We see the benefits of a tram service, but we believe that EARL is a different proposition to the Edinburgh tram. The tram will provide point-to-point connectivity between central Edinburgh and the airport. It will have a role to play for the airport and the broader development of parts of Edinburgh's economy; we recognise that the tram has a wider remit than just travelling from the airport to the city. EARL is a different proposition, however, because it provides connectivity to Scotland. In answer to the convener's earlier question, we see the project as a very Scottish proposition as opposed to something that is distinctly for Edinburgh.

Mr McGrigor: How important are the rolling stock upgrades to the creation of the image of a high-quality rail link?

Paul Lewis: I am not sure that I am fully competent to comment on the quality of the rolling

stock. We believe that investment in EARL will provide image and perception benefits for people who choose to visit, do business and invest in Scotland.

Mr McGrigor: Do you think that the EARL service should look new?

Paul Lewis: Image and perception benefits can be achieved through the quality and image of the rolling stock, yes.

The Convener: On the question of rolling stock, is there a possible disincentive in the different types of traveller that might use the services? For example, would business travellers be put off using the service if it was full of people with large cases, rucksacks or whatever because of the tourism market? Will the trains on the line be able to cope with the possible variety of users?

Paul Lewis: Clearly, sufficient capacity needs to be built in and a product needs to be provided that will appeal to the different markets that you are looking to attract. Although it is not comparable to EARL, because it is a point-to-point link, the Heathrow to Paddington express link successfully mixes business and leisure travellers. It is just a question of how the rolling stock will accommodate that.

Mr McGrigor: You mentioned the Heathrow express. Is your vision of a service that is as direct and quick as that?

Paul Lewis: We have a different vision to the Heathrow express because EARL is a different proposition. It will not be a point-to-point service. It will be a wider service that offers connectivity. Certainly, the reliability and quality of service will be very important for achieving the modal shift that is sought from EARL.

Mr Gordon: Surely we already have a comparator in Scotland in the scheduled train services that call at Prestwick airport station; conventional rolling stock in a fixed timetable is trying to cater for the needs of commuters, budget tourists and some businesspeople. How attractive has flying from Prestwick airport been for the business traveller?

Mary McLaughlin: There are several incentives for travelling from Prestwick airport and high numbers of people arrive there. Part of the reason for that is the cost: it is relatively cheap to travel there by train. Most people going to the airport choose the train because of the low cost and because it gives direct access to the airport. People do not bother much about the mix of traffic. If the price and the service are right, people will use it. Prestwick has some of the highest figures in the UK for people going to and from the airport.

Mr Gordon: I was suggesting that the operational experience with EARL might be more

akin to what happens at Prestwick at the moment. I am not quite clear how what Mr Lewis said a moment ago about image and perception fits in.

10:30

Mary McLaughlin: I do not think that that is the case. If people are going from the airport to elsewhere in Scotland they will have the option of going elsewhere directly, rather than having to come into the city centre and change. That is the attraction and the reason why people will choose to use EARL.

Mr Gordon: So the experience will be more like that at Amsterdam Schiphol, where the airport is a transport hub?

Mary McLaughlin: That is right.

Paul Lewis: I tried to avoid answering a question on rolling stock, because I am not qualified to do so. The image and perception benefits are exactly as have been described: we believe that people who decide where to do business, invest and visit will be influenced by the reality of EARL and the fact that Scotland has decided to go ahead with it.

Christine Grahame: You say in your submission that you look to have

"a world class travel interchange in the centre of Edinburgh."

Why not have it at the airport?

Paul Lewis: We are saying that EARL will create that interchange at the airport; it will be an intermodal hub for the train, planes, buses and taxis. As Mary McLaughlin said in response to another question, it will be enhanced by the proposed upgrade to Waverley station to ensure that we have the right capacity.

Christine Grahame: Are you talking about having two similar world-class travel interchanges: one at the airport and one at Waverley?

Mary McLaughlin: No. In the main, people who use transport make choices. It will be like having networks. If someone who is going to Aberdeen arrives at the airport, they will interchange there. If there was no point at the airport where they could change to go to Aberdeen, they would go into the city to change. We are saying that people will make the choice to change at the airport—or even to use the airport—because they can get where they are going directly.

Christine Grahame: Can you give us an example of such world-class travel interchanges—such as the one that my colleague Charlie Gordon mentioned—and describe what a punter would be able to do there?

Mary McLaughlin: Most places in mainland Europe are like that; people arrive at the airport and have several choices of destination from there. Your colleague mentioned Amsterdam. The situation is the same in Frankfurt and Madrid, but not in Scotland or the UK—we are not used to it.

Iain Smith: The design of EARL—which will not be electrified—means that the large intercity trains, such as the Great North Eastern Railway trains, will not be able to use the link, even if they wished to. Is it a disadvantage of the project that the link will be available only for what are in effect Scottish local services?

Mary McLaughlin: The proposal is to connect the airport to as many cities as possible. When people are considering journeys, they consider the whole journey time and convenience, rather than speed. Of course if a service is faster it will be better for them, but they will use a service as long as the journey time is sensible.

Iain Smith: I was thinking that at Schiphol people are able to connect with large intercity and international services, whereas EARL will, in effect, serve Scotland-only services, not GNER services to London, so people will not be able to choose to go to Edinburgh as a destination in Scotland in order to travel to London.

Mary McLaughlin: Perhaps that is what we will have in the future.

Christine Grahame: You also say in your submission:

"The total number of passengers travelling through Edinburgh Airport is forecast to increase significantly—

as are flights—

so we consider it important for the airport rail link to provide swift passenger transport in all directions."

Given the major concern about global warming and air travel's contribution to that, do you really think that the growth in such travel is sustainable?

Mary McLaughlin: In the short to medium term, yes. In comparison with similar regions, Scotland has underperformed in the provision of direct international flights over the past 10 to 12 years and is only now catching up in that respect. The concern about global warming means that there are questions about the future role of aviation, but there is enough growth in the Scottish market to produce more direct air services. Scotland is a peripheral region—

Christine Grahame: Well—

Mary McLaughlin: It is peripheral to the rest of Europe.

Christine Grahame: Scotland is a nation.

Mary McLaughlin: Okay. However, it is important that Scotland connects directly to mainland Europe instead of using an alternative, indirect route.

Christine Grahame: So, you do not think that the growing anxiety about global warming, not only with regard to air flights out of Edinburgh but to air travel in general, will change your predictions?

Mary McLaughlin: That is possible. After all, predictions are only predictions, and we have based our growth predictions on the current figures and proposals. Of course, they could change as a result of changes to tax, the cost base and so on. However, in the main, the UK has tended to underestimate aviation requirements.

Iain Smith: Because of the airport rail link, services from some cities into Edinburgh will take longer. Will longer journey times have a negative economic impact on certain areas?

Mary McLaughlin: Which services are you talking about?

Iain Smith: Well, some services from Glasgow and from Fife and the north will take longer, because they will have to divert through the airport. Indeed, I believe that in some cases journey times from Fife might increase by four or five minutes.

Mary McLaughlin: Well, if the journey time increases by four or five minutes—

Paul Lewis: Any increase in journey times as a result of EARL will be outweighed by benefits such as increased connectivity and improvements to the economy. We do not think that it will be a major constraint on economic growth.

Iain Smith: A number of witnesses who have submitted written evidence have suggested that the proposed £500 million or so investment in EARL would be better spent on improving rail links between cities to ensure, for example, that journeys are quicker. Do you agree, or do you feel that investing in EARL is the best way of improving Scotland's economy?

Paul Lewis: I think that this question has already been answered. We feel that this investment is necessary because the project is very important to Scotland's future economic performance. However, as Mary McLaughlin has pointed out, we are keen to find out how we can improve connectivity between Scotland's main urban centres and, indeed, have begun work on that matter. That would mean a step change rather than an incremental change to current services. After all, connectivity between cities and city regions is also pretty important as it, too, drives economic growth.

The Convener: I want to return to a point that Mary McLaughlin made earlier. Given that resources are finite, could greater economic growth be achieved by spending the £500 million on this airport link, on another rail project or on upgrading Waverley station to increase capacity on the rail network?

Mary McLaughlin: That is difficult to answer. One issue in Scotland is that we are not starting with a blank sheet of paper to develop the network that we want to meet the needs of our economy. We support the Executive's decision first to deliver the projects on its 10-point plan and then review transport requirements in developing the transport strategy from 2012 onward. In Scotland, we often develop projects but then do not get round to delivering them. We spend a lot of time debating whether we should stop doing one thing and do something else. We support the Executive's view that we should get on and deliver the projects that are proposed in the Executive's plan and also consider what is needed in future, such as the development of rail links between our cities. To answer the question whether the money could be spent better, we would have to have a full strategy and option appraisal of various projects.

The Convener: I did not expect a definitive answer, but the question was worth asking.

I thank the witnesses for their evidence, which has been helpful in starting our discussions on economic growth. We will have a short hiatus while the witnesses for the second panel take their seats.

I welcome Tim and Sue Hodges. As members will know, Tim and Sue represent the group of people who lodged objection 14, which raises issues about the whole bill. I hope that they are not too intimidated by the committee.

Mr Gordon: Objection 14 argues that the promoter's assertion that the bill will encourage economic growth is flawed. Why do you dispute that assertion?

Tim Hodges: It is a common assumption that air travel encourages economic growth. However, when examined in detail, one can see that it is mainly a perception. There is little empirical evidence to support the assumption that increased air travel leads to economic growth. Just this weekend, because I knew that I was coming to give evidence, I browsed through the Office for National Statistics website, which has figures on the amount of tourism that is generated by air travel. During the 12 months ending March 2006, overseas tourists spent £14 billion in the UK, which is a substantial sum, but UK tourists spent £32 billion on holidays overseas. In the tourism industry alone, there is a deficit to the UK economy of £18 billion. In the previous year the

deficit was £17.5 billion, so in one year the figure has gone up by £0.5 billion. As the availability of cheap air travel increases as a result of more runways and greater accessibility to airports, that loss will continue to grow.

Sue Hodges: The bill is based entirely on a set of optimistic projections for air travel. If the committee considered the existing proposal with less optimistic projections, I am not sure that it would find that it still made sense to go ahead with the project.

Christine Grahame: That sort of takes us on to my question. The objection mentions the impact that restrictions on carbon emissions will have on air travel. I alluded to that issue in a previous question. Can the objectors develop that argument a bit?

10:45

Sue Hodges: There are two angles to the issue. First, as we all know, climate change is an increasing concern for people not just in the United Kingdom but across the globe. Secondly—this is not connected to the rail link, but the issue is not unconnected—there is the argument around peak oil. Peak oil refers not to our running out of oil but to our declining capacity to continue to pump oil at the rate that the world needs. The impact of both those issues will mean that we need to change our behaviour to deal with climate change and with the increase in the oil price as peak oil kicks in. Those changes are bound to have an impact on all modes of transport, including air travel.

Christine Grahame: Let me pursue those two issues separately. The objection seems to contain a contradiction, but please explain it. The objectors state:

"When air travel starts to decline in popularity due to its financial and environmental cost, it will be hard to justify having spent over £500m".

However, having stated that air travel will decline, they say with their next breath, in the second section of the objection:

"The introduction of EARL will not reduce congestion on the roads as the link will only mop up a small part of the predicted increase in the use of the airport."

How do those two statements fit?

Tim Hodges: Timescales for peak oil are undoubtedly uncertain, but a lot of evidence suggests that the peak will occur within the next five to 10 years. In that timescale, the price of air travel could start to rise. However, the predictions in the UK Government's white paper on air transport suggest that air travel will increase and, therefore, that the amount of traffic heading towards the airport will increase. I am sure that

that increase in air travel will continue in the short term, but only a small part of the traffic is projected to be mopped up by EARL. If we provide EARL and growth in air travel continues in the short term, the benefits of EARL will be minimal, given that it will reduce emissions by only 0.4 per cent by 2011. Even if we assume that things carry on as at present and that peak oil does not occur soon, EARL will still provide us with no benefit in hitting our emissions targets.

Christine Grahame: I take it that the point is that, in any event, there will be a change in people's attitudes to travelling by air.

Sue Hodges: Yes. Even if people do not make that choice for altruistic reasons, the price of air tickets will make them choose not to travel by air.

Christine Grahame: I am coming to that point. Is there evidence from elsewhere to show that increases in the price of aviation fuel have had an impact on air travel? Can the committee be given examples of that?

Tim Hodges: At the moment, that is difficult to see because of the global nature of the air travel industry. The international agreements that are in place prevent Governments from taxing aviation fuel for flights between countries, although some countries in Europe are now putting VAT on fuel for internal flights.

The price of aviation fuel, like the price of oil, is a global figure, but we have not yet seen an impact from the increase in the price of aviation fuel. Although the price of oil has doubled in the past two to three years, many of the airlines have managed to keep their prices down by extreme cost cutting—in the case of the Ryanairs and easyJets of this world—and by hedging the price of oil. Basically, hedging involves finding someone who will bet that the price of oil will stay down and buying oil via that person. Hedging might work in the short term, but when the markets realise that the price of oil will rise and that it is unlikely ever to come down again, hedging will no longer be possible and the price of aviation fuel will start to climb steeply. At that point, the price of air tickets will start to increase.

Christine Grahame: If VAT has been put on aviation fuel for internal flights within some European countries, what impact has it had on the cost of flights and on usage?

Tim Hodges: I do not have the figures to hand. However, further to the committee's earlier discussion about high-speed rail links, I know that following the opening of the high-speed rail link between Paris and Marseille, the airlines shut down their routes overnight because the train provided people with a faster, cheaper and more efficient alternative. If they are given the right

framework in which to work, trains can compete with airlines.

Christine Grahame: But not across the sea. Convener, could we find out about the impact of VAT on those internal flights? It would be useful to see whether there has been an impact on tickets and usage.

The Convener: We can certainly try to find that out.

Mr Gordon: The objectors state that air travel will decline in popularity due to its financial and environmental costs. When do you believe that that will occur and do you know of any evidence that it is starting to occur already?

Tim Hodges: It is difficult to predict when that will happen. A number of figures are available for when peak oil will hit. The most optimistic predictions suggest that it will hit around 2020 or 2030. Some people say that peak oil has already hit and that it happened in 2000, which is when the price of oil started to go up. There was a consequent recession, which made the price of oil come down due to the reduced demand for oil in the declining economy. However, now the price is starting to go up again and inflation rates are going up, which means that we could be heading towards another recession. We might be entering a period of peaks and troughs in the economy and the price of oil. Eventually, the oil that was discovered in the 1950s and 1960s will be used up and the amount that we are able to produce and pump will be less than the amount that we are consuming. When that happens—a number of independent sources suggest that it might be around 2011 or 2012—the markets will realise that the price of oil will stay high and continue to rise.

Mr Gordon: You suggest that the promoter has not allowed for all of the emissions that it will directly create with this project. Could you elaborate on your views on the emissions that you believe will be generated during the construction phase?

Tim Hodges: I am curious to know more about the amount of concrete that is going to be used. I have not verified this figure but, from what I have read on the internet, I believe that 1 tonne of CO₂ is produced for every tonne of concrete. I do not know how much concrete this project will use, but I imagine that it will be quite a lot, especially if the tunnel option is chosen. The promoter's figures offset the emissions of vehicles involved in the construction of the rail link against the benefit of reducing traffic congestion. However, I do not see that any allowance has been made for the amount of CO₂ that will be produced in providing the projects' construction materials.

The promoter argues that the projected growth in travel at Edinburgh airport will happen, based

on the Government's white paper, and that therefore it is its duty to provide the rail link. That seems to be a fairly good argument, but it rings a bell because it sounds like the predict-and-provide approach that was used in relation to roads in the 1980s and 1990s. It was assumed that more people would use cars and that therefore it was necessary to build more roads. More roads were built and—hey presto—everyone jumped in their cars and we ended up with roads that were still congested. My argument is that, if the rail link exists, people will use it, but that will lead to a net increase in emissions because more people will use Edinburgh airport.

Mr Gordon: Could you expand on your comment that improving the capacity of the rail links between Scotland's cities would be a better use of £500 million?

Tim Hodges: I am no expert on rail links or on how much that suggestion would cost, although I am sure that it would not be cheap. High-speed rail links from Edinburgh to Glasgow or London will not be cheap, but they need long-term planning and we need to start thinking about the associated issues right now.

The comment was made earlier that Scotland is geographically on the edge of Europe. It is therefore important that we have a high-speed rail link to Europe. London is nearer to Paris by rail than it is to Edinburgh so, if the Edinburgh economy and the Scottish economy are to survive and prosper, we need high-speed rail links to the rest of the country. To put all our eggs in the air-travel basket and rely completely on it for our future economy would be totally irresponsible.

The Convener: Has the promoter taken into account emissions from lorries that congest our roads in determining any economic benefit that the rail link would have for freight?

Tim Hodges: I do not see how that would help. With 110,000 lorry movements around the Edinburgh area—

Sue Hodges: That is the figure for lorry movements during the construction period. I do not have the figure to hand, but I think that the promoter said that there would be more than 100,000 lorry movements during the construction period.

Tim Hodges: The tunnel, which is the main cost of the project, will not help to get haulage off the roads. It has already been stated that Great North Eastern Railway-type services will not be able to go through the tunnel but will have to find an alternative route. I do not see any benefit from that.

Sue Hodges: If the projected figures are correct, 18 per cent of passengers will get on or off

at Edinburgh airport. That does not strike me as a significant number and, if air travel declines in popularity due to cost or the imposition of emissions charging, the number will have to reduce.

The Convener: You mentioned lorry movements during construction. Do you want to expand on that?

Sue Hodges: That figure that I gave was the response that we were given to a letter that we submitted to the promoter. The promoter said that the figure was the number of lorry movements that it anticipated, that it did not expect them to contribute significantly to emissions and that the net benefit would be a reduction in emissions.

The Convener: I presume that your point is that the promoter has not taken the lorry movements into account.

Sue Hodges: Perhaps it has taken them into account—that was its response to us. However, our point is that it has not taken account of the contribution of project construction to emissions.

Iain Smith: One of the arguments in favour of the tunnel option for the rail link to the airport is that it provides more than just a rail link to the airport; it also supplies an interchange with the various other transport modes at the airport—trams, buses, taxis and bicycles—and an opportunity for an interchange between different rail services, such as Fife and Glasgow services. Would those advantages go some way to mitigating the disadvantages to which you have referred?

Sue Hodges: I imagine that the advantages would be only fractional. If only 18 per cent of passengers get on or off at Edinburgh airport in the first place, I do not consider its use as a hub to be of significant advantage.

The Convener: Do you want to make any points that the committee has not covered in its questioning? Perhaps you could say what the key message is that you want the committee to hear.

Sue Hodges: We came today with a desired outcome, not because the project is near us. When we started to examine the project, our initial concern was that it would be near where we live but, after considering the issues further, we realised that the issues are much bigger than that. It is irresponsible to base the decision on whether to proceed with the bill purely on the basis of overoptimistic air travel projections. If the scheme were reconsidered using statistics that take account of the possible long-term impact of climate change, carbon emissions restrictions and peak oil on Scotland's economy and people, the committee would be likely to conclude that the scheme does not make sense for Scotland.

Indeed, given the speed with which those issues are gaining greater prominence in the public consciousness, the decision to introduce the bill could be criticised for a lack of foresight. We strongly believe that the £610 million—which will undoubtedly increase—could be better spent on improving Scotland's wider transport infrastructure and putting truly cost-effective, efficient, low-pollution, sustainable transport initiatives in place, as that is what Scotland will need in future.

11:00

The Convener: Thank you very much for those concise remarks, for your written evidence and for coming to today's meeting. Your evidence has been helpful.

Again, there will be a slight hiatus while witnesses change places.

I welcome to the meeting our next panel. Richard Jeffrey is the managing director of Edinburgh Airport Ltd and Derek Hendry is the development director of Scottish Airports group.

Members will be aware that Edinburgh Airport Ltd is an objector to the bill. I ask members and witnesses to focus their questions and answers on Edinburgh Airport Ltd's written submission, which is in section 18 of the green evidence folder, as its objection is only to the detail of the bill. Members will recall that it will be more appropriate to examine objections to the detail of the bill at consideration stage, if the bill and the objections progress to that stage. Does any member have questions for the panel?

Mr McGrigor: Yes. Will members of the panel elaborate on what they believe is the future growth potential of Edinburgh airport?

Richard Jeffrey (Edinburgh Airport Ltd): The recent Government aviation white paper and our internal forecasts assume a growth rate of approximately 4 per cent a year, which will lead to air traffic at Edinburgh almost tripling by 2030. Currently, the airport handles around 8.5 million passengers a year. It has been forecast that there will be in the region of 20 million to 26 million passengers by 2030.

Mr McGrigor: One of EARL's policy objectives is to assist the sustainable future growth of Edinburgh airport as part of Scotland's transport infrastructure and economy. In what way can EARL assist in those two areas?

Richard Jeffrey: Anything that increases the public transport options for airport passengers is desirable. The promoter's figures suggest that without EARL public transport usage at Edinburgh airport is likely to rise to 37 per cent, but that with it public transport usage will increase a further 7 percentage points to 44 per cent. We do not object

to the proposals in principle, because the project will provide public transport options for people who want to use the airport. However, I am concerned that benefits will not be delivered if some significant risks that still exist in the project are not properly addressed. In particular, I am concerned about the potential for disruption to the airport during the construction phase, the potential for longer-term disruption to the airport and issues that have already been mentioned relating to the project's dependence on a separate rolling stock project and so on. There are significant risks that will prevent the delivery of the potential benefits of the project if they are not properly addressed.

Mr McGrigor: How important is reducing local road congestion to realising the future growth of Edinburgh airport and EARL?

Richard Jeffrey: It is one of our key environmental strategies. We have five environmental strategies, one of which is surface access. Historically, we have set targets to improve public transport usage at the airport. The figure for public transport usage is currently 20 per cent, which is higher than the figure for some airports that have rail links and is certainly a high percentage compared with those airports that do not have rail links. We worked closely with Lothian Buses and Stagecoach on the launch of bus services, which are heavily used, and recently we reconfigured the airport forecourt to give priority to public transport. We take public transport seriously. That is why I said that we welcome any project that improves public transport choices at the airport.

Mr McGrigor: You said "any project". Do you think that the proposed tram service is just as important as EARL?

Richard Jeffrey: Yes.

The Convener: What is the estimated growth in passenger traffic at the airport based on? How realistic have your previous estimates of growth been? That information will give the committee a feel for whether the growth figures that you mentioned are realistic.

Richard Jeffrey: The primary driver for the predictions is general economic growth, particularly gross domestic product growth. Traditionally, air traffic has grown on average at twice the rate of GDP growth. GDP growth of 2 per cent gives us traffic growth of about 4 per cent.

The Convener: Over what period?

Richard Jeffrey: Over the past 30 years.

That is the current economic model for forecasting. We then have to add in local factors. For example, the tourism industry in Edinburgh has grown faster than the national average, particularly in the past five years. In turn, that has

led to faster growth at the airport. The growth in low-cost carriers has added further growth. Our compound annual growth rate over the past 10 years is nearly 8 per cent, which is twice the rate that we are predicting for the future.

In response to your second question, historically our forecasts have tended to be cautious. We have tended to grow at a faster rate than the forecasts.

The Convener: Has there been an equal growth in tourists travelling to and from Edinburgh? Are more people coming from abroad into Edinburgh or are more people from Scotland travelling abroad?

Richard Jeffrey: There is growth in both directions, but there is higher growth in inbound tourists.

Iain Smith: I can understand the logic of the growth predictions being based on previous growth, but given the rising price of oil and the carbon emissions issues, is it realistic to continue to project forward in the same way as you have done in the past? Those factors are likely to have an impact, but they have perhaps not been fully accounted for in the projections to date.

Richard Jeffrey: There is a short answer and a long answer.

Iain Smith: Could we have a medium one, then?

Richard Jeffrey: The short answer is yes. I am confident. For example, I believe that, in real terms, the oil price is still lower than it was in the 1970s. Our view is that, although oil prices will continue to rise, that will be more than offset by the competitive pressures between airlines. Overall, the real cost of air travel will not rise significantly and it will certainly not rise to the point where it will discourage people from travelling by air. I think that our forecasts are reasonable. I add that they are similar to the UK Government's forecasts.

Iain Smith: I do not necessarily believe everything that the UK Government tells me.

Richard Jeffrey: Neither do I.

The Convener: I will let that one go.

I have another question on your answers to Jamie McGrigor's questions. Will you elaborate on your concerns about the cumulative temporary and permanent impacts on the airport of tramline 2 and EARL being constructed at the same time?

Richard Jeffrey: First, the rail link is probably one of the most complex civil engineering projects to be undertaken in Scotland for decades. The tramline and the rail link will run adjacent to each other through the middle of the airport. Given the

number of operational constraints and the constrained nature of the site, airports are notoriously difficult places to do construction projects.

The opportunity for the projects to trip each other up is enormous, as is the opportunity for them to feed off each other. In addition, the airport will not stand still; we have a major construction programme and we will be undertaking it at the same time as the tramline and rail link are being constructed. The bill as introduced does not enable the projects to feed off each other. Indeed, the bill creates the opportunity for conflicts to arise.

The Convener: That leads to my next point. You may know that the committee had the opportunity to visit the airport. We saw where the extension to the terminal would be constructed and where the rail link's station is to be sited. That period of airport expansion will see a heck of a lot of activity, all of which has to take place on a pretty constrained site and while the airport continues to operate.

Richard Jeffrey: When committee members were at the airport, you saw the construction of what we call the south-east pier. That is a great example of the opportunities that I am talking about. The rail link will pass under the pier. By working with TIE, we were able to design and install something like £2.5 million-worth of foundations underneath the building—an investment that will facilitate the future construction of the rail link. My principal concern about the bill is that the opportunity for such co-operation does not exist in it.

The Convener: What changes will be required to allow that to happen?

Richard Jeffrey: We need a formal legal agreement between the airport, the promoter and Transport Scotland, such as that which was developed between the promoter of the tram project and the City of Edinburgh Council. Also, amendments are needed to the bill to give credibility to that sort of agreement. With the appropriate legal agreement and the amendments to the bill, the risks will be avoided and opportunities realised.

Back in November, we forwarded a copy of a legal offer to Transport Scotland and TIE, but we have not had a substantive response. We are not at committee today to discuss our objections, but it is a great shame that we remain an objector to the proposal, particularly given that we have given Transport Scotland and TIE every opportunity to address our concerns.

Derek Hendry (Scottish Airports Group): In terms of disruption at the airport, we need to think not only about the construction period, but about

the period thereafter. Trains will pass under the runway, turn under a taxiway and then under the south-east pier and next to the terminal, all of which present risks. Risk is also associated with operational disruption to the road system. As we heard, there will be about 110,000 lorry movements around the airport.

Two rivers have also to be diverted and the airport sits on a flood plain, so there is also the risk of flooding. Other obvious safety and security issues need also to be dealt with. If the necessary legal and partnership arrangements are not put in place between the airport and the rail link operating companies, there could be operating conflicts after the rail link is in place. I guess that that could also lead to restrictions in how we grow and develop the airport.

The committee has heard about the significant growth that is forecast for our passenger numbers. In order to achieve that growth, we need to be able to develop the airport flexibly. In saying that, we need to bear in mind that the railway line will, in effect, cut the airport in two.

The Convener: Okay—I will pull us back from straying too much into the areas of the objections. What is the likely impact on the airport of other strategic transport initiatives not being undertaken? The question is a follow-up to one that I put to Scottish Enterprise. I am thinking primarily of improvements to the strategic road network and the capacity of Waverley station.

11:15

Richard Jeffrey: Surface access to and from the airport is very important for a host of reasons including passenger convenience, road congestion, environmental impact and so on. However, I do not believe that it is a fundamental constraint to growth of the airport. From experience, I suggest that the roads will get more congested and people will simply allow longer for their journeys and some road users may choose to use public transport when such alternatives exist. The congestion will be inconvenient and will have a cost, but it will not stop the airport growing.

The fundamental driving force that will cause the airport to grow is people's desire to fly to and from Edinburgh. That, in turn, will be driven by the strength of the local economy, by the strength of the tourism product and by whether people have money in their pockets to pay for tickets and so on. The demand for growth is met by airlines, which decide which airports they will fly to and from. Airlines' decisions are primarily driven by whether they will make money. Can they sell enough tickets at the right price to cover their costs and make a profit? All those factors determine whether an airport can grow. The

surface access debate therefore becomes a debate on the consequences of growth in terms of congestion, environmental impacts and so on. The debate is desirable rather than essential, and the same is true for other forms of surface access.

The Convener: In your experience, is it a disincentive for overseas travellers if an airport does not have an obvious link to where they want to go?

Richard Jeffrey: I do not have statistics to back this up, but my gut feeling is that it is not a disincentive. We can apply the common-sense test. When we choose our holiday destination, is the presence of an airport rail link a factor in our choice? I suspect that the answer is that it is not. If the answer is yes, I suspect that it is only a marginal factor. People come to Scotland because of the quality of the tourism product.

The Convener: The promoter has given an indicative cost of about £3.75 for a single fare. Would that fare address your concerns about the impact of the cost of travel on the attractiveness of the service?

Richard Jeffrey: My principal concern about the attractiveness of the product is not related to price, although I have a number of concerns. Group travel is an issue—if four people are travelling together, the fare will not be £3.75 but £15, which is roughly the same as a taxi fare.

The airport's peak time for arrivals and departures pretty much coincides with the peak time for the railways. Therefore, when trains stop at the airport and the doors open, will there be room for passengers to get on and off with their luggage? Similarly, if trains are full of people going to or coming from the airport, will there be space for commuters? I have not heard those concerns answered. The link between this project and the rolling-stock project is vital. Significant risks still exist because of the stage at which the rolling-stock project is.

The Convener: Is your concern related to the question that I asked the witnesses from Scottish Enterprise about the different types of travellers who would use the service, and about whether or not the rolling stock would be able to cater for both?

Richard Jeffrey: Yes.

Christine Grahame: On surface access, I think I heard you say that the A8 will not get more congested.

Richard Jeffrey: No—I think that it will get more congested.

Christine Grahame: Do think that the A8 will get substantially more congested?

Richard Jeffrey: You can use whatever word you like, but it will get more congested.

Christine Grahame: I am thinking about what happened last weekend. With the gardening Scotland event, there was a one-hour tailback on the Forth road bridge for people coming south. Anyone who was coming from the west of Edinburgh would have had great difficulty catching a plane if they were not aware of the traffic. That area is very congested and that will happen more and more.

Richard Jeffrey: I think the saying is, "You don't build the kirk for Easter Sunday." There will always be occasions when exceptional circumstances lead to the sort of gridlock that we saw at the weekend. That is typically the case when there are major events on at the Royal Highland showground. I do not believe that it is prudent to expect the rail link to solve such problems—it will not do so. Ultimately, the rail industry, just like the aviation industry, must plan a level of capacity that is sensible for most of the time. Exceptional occasions such as the Royal Highland Show and the gardening Scotland event will always create congestion as long as the showground is in its current location.

Christine Grahame: I challenge you that the cause of congestion is not just the showground but the alterations to the Forth road bridge, the tolls and all that. We will have further problems if a second bridge is built. It seems to me that we are looking at the requirement for the rail link as an urgent matter.

Richard Jeffrey: You are right. All those congestion issues exist and will continue to do so. The question that the committee needs to ask itself—it is not one that I can answer—is whether the rail link will solve those problems.

Mr Gordon: Gentlemen, I have detailed questions for you, but I want to start with a broad question. It looks as if your company may be about to be taken over.

Richard Jeffrey: It does.

Mr Gordon: Might that have an effect on the EARL project's future?

Richard Jeffrey: Our principal concerns over the project are founded in my and my team's views as professional airport managers and engineers. I do not believe that our concerns would change because of a change in ownership. Ultimately, the views on the project that we represent are not our shareholders' views on it. What might change over time is the attitude to whether BAA is prepared to contribute to a project such as this. However, I am not in a position to comment on what future owners will do, if we have different owners in the future—that position is not

certain and I cannot speculate about what any new owners' approach or attitude may be. The views in our response about the project's principles and our detailed objection are the views of my team and me as professional airport managers and engineers, rather than as shareholders.

Mr Gordon: I accept that, but if ownership of the parent company changes, it is conceivable that there could be a change in company policy. The new owners might want to go down the road of making more money from assets through, say, an increase in airport car parking charges. That could have implications for the current company position on the EARL project.

Richard Jeffrey: I guess that anything is possible in the future.

Mr Gordon: Yes.

You have said quite a bit already about the construction of the project and on how it might impact on the airport. Can you say a bit more about how the timing of the construction and the operation of the EARL project in situ will fit in with future expansion plans for the airport?

Derek Hendry: The timing for the EARL project is that the construction period will be from two to three years, to about 2011. We have significant investment plans for that period. As was indicated, the airport is growing strongly; certainly, international traffic is doing so. We are completing an extension to the terminal—the south-east pier—and further phases are planned for extending that pier. We are considering expanding the terminal building through an extension to the departure lounge. We also have plans for more car parking, which we will need before the rail link is completed. In addition, we will resurface our runway at some point, which could well coincide with the railway works.

For all those reasons, we believe that it is essential that the airport have appropriate protection through the bill, and that we have the legal agreement that will allow us to influence the project properly and to exert some control over it. Our desire for that is not just to safeguard the airport's operation, but to ensure that the EARL project is delivered safely and cost effectively. We think that we have something to bring to the party.

Mr Gordon: Can you elaborate on how or, indeed, whether BAA's surface access strategy fits with the EARL implementation?

Richard Jeffrey: Our current surface access strategy runs until 2007. It is a five-year strategy, so, obviously, we published it in 2002. We are drafting a new strategy, which will—I hope—be published towards the end of the year, in time for 2007. That strategy will set targets to 2012.

The nature of surface access at the airport will potentially change so fundamentally with the delivery of the rail and tram projects that we will have to consider scenarios that include and do not include those projects to see what their impact will be. We want to move away from making blanket statements about public transport and to look much more closely at the origins and destinations of our passengers. Basically, we want to consider where they come from, where they go to and their public transport choices. Where there is a public transport option, we will set very aggressive targets for its use. It would, of course, be nonsensical to set a target where there is no such option.

I think that around 30 per cent of our passengers travel to or from Edinburgh city, which is clearly a key rail and tram target market. A further 30 per cent of our passengers travel from the Lothians. We need to think about those passengers' public transport options and whether it is realistic for them to come into the centre of Edinburgh on public transport, change to a tram or train to go to the airport and so on. Similarly, we need to consider Fife and further afield in terms of the whole surface access strategy on a geographical rather than a blanket basis. We remain committed to increasing use of public transport, which is why we support the principle of the project, as I have said, but my main concern is that if the project is not delivered properly, potential benefits will not be realised.

Mr Gordon: In its response to the committee's questions, the promoter commented on road and parking plans in BAA's master plan. I refer to paragraph 281 and onwards of its response. In the light of those comments, will BAA focus its transport aims on increasing public transport share or on promoting improved or new road access?

Richard Jeffrey: I see the two aims as being entirely compatible. Public transport options need to be improved, which is why we support the project, but it must also be recognised that, even with EARL, only 44 per cent of our passengers will use public transport, according to the promoter's figures. Therefore, 56 per cent of our passengers will still have to find their way to the airport using road-based transport. Catering for them is also important.

Mr Gordon: How dependent on the BAA's master plan and surface access strategy is the development of EARL as a transport hub?

Richard Jeffrey: I believe that EARL is desirable rather than essential. If EARL did not happen, I do not think that our master plan would be undermined.

The Convener: Do members have more questions?

Christine Grahame: I think that I am right in saying that you will have a plan A and a plan B in your surface access strategy. Plan A will be based on the tram and rail projects going ahead and plan B will be based on one project or neither project going ahead. Should we delay consideration of the bill until your plan A and your plan B are published?

Richard Jeffrey: No. I think that the opposite is true. Whether to go ahead with those projects is the more strategic decision. After decisions are made, we will build their implications into our surface access strategy. I do not think that things should be done the other way round.

Christine Grahame: I simply made a suggestion—I did not say that we were going to delay consideration of the bill.

I will ask a question about cyclists that I thought I would never ask, as I have a folding bike that has remained folded for a considerable time. I will be less frivolous. Will you elaborate on plans for cyclists' access to the airport?

Richard Jeffrey: We consider the needs of cyclists and walkers as part of our surface access strategy. Cyclists and walkers will always form a small minority of our passengers, although they perhaps form a larger proportion of our staff. Some of our staff live near the airport, so cycling is an option for them. We provide cycle racks at the airport. As yet, there are no cycle routes, but we have been working with Sustrans on a network of cycleways. We contribute to that where we can.

11:30

Christine Grahame: Where would you put the cycleways? They would have to be off the A8 somewhere.

Richard Jeffrey: Yes. Part of the problem is that there is no sensible cycle route from the top of the airport road to the Gogar roundabout.

Christine Grahame: You gave evidence about increasing road access. How on Earth can that be done, given the disruption to the A8 that was caused by the building of the Royal Bank of Scotland bridge, which had a huge impact on businesses in particular, as well as on humble commuters?

Richard Jeffrey: There are two proposals on the drawing board, neither of which has been submitted for planning, although both are being discussed. One is direct motorway access from the M8 to the airport and the other is direct access from the airport to the Gogar roundabout. We are waiting to see whether the Executive's west Edinburgh planning framework incorporates those.

Christine Grahame: I foresee huge disruption at the Gogar roundabout, with which I am familiar.

The Convener: There are no more questions. Do you wish to expand on anything that we have not covered?

Richard Jeffrey: The committee might want to consider asking an airline representative for the airlines' views on the project.

The Convener: We invited such evidence.

Thank you for your evidence. That concludes our morning evidence session. I suspend the meeting until 1.15.

11:32

Meeting suspended.

13:16

On resuming—

The Convener: I welcome everyone back to the third meeting of the Edinburgh Airport Rail Link Bill Committee. I am glad to see that we have not lost any committee members during lunch. We will recommence our oral-evidence taking. I welcome Peter Hawkins, who is from the planning group of Spokes.

Iain Smith: Given that the promoter asserts that the predicted growth in air travel at Edinburgh airport will continue irrespective of whether EARL is provided, does Peter Hawkins agree that EARL represents an environmentally friendly form of travel to and from the airport?

Peter Hawkins (Spokes): Yes, I agree with that. Our objections are partly to do with the predicted continued growth in air travel. If the predicted growth does not come about—if the growth is scaled back for any reason—there will not be much point in having spent so much money on the infrastructure to take people to the airport. One of the policy objectives is to provide an environmentally friendly way in which to travel. However, the scheme will benefit not only rail travel, but road travel, too. The promoter admits that the number of cars that go to the airport will grow, even with the rail link.

Iain Smith: Yes, but would the growth in car use not be faster if there was no rail link?

Peter Hawkins: That depends on whether demand management measures are implemented for car travel. If not, the present astronomic growth in car use will obviously continue. Again, that scenario may not come about for other reasons.

Iain Smith: Will you expand on the issue of demand management for road travel, to which you refer in your written evidence? What do you mean

by that term and what would need to be done to implement demand management?

Peter Hawkins: Demand management is a way of tackling congestion and other problems differently from the way in which we have tried to tackle them so far. Until now, we have tried to tackle congestion only by building new roads, junctions, flyovers and underpasses. It is now accepted in transport circles that, no matter how many roads we build, we will never satisfy demand; instead, more and more vehicles will be sucked on to the roads. Building new infrastructure simply encourages people to travel by car rather than by other means. People generally talk now about dealing with the problem through demand management. The City of Edinburgh Council's attempt at a congestion charging scheme was one possible system, but there are other possibilities.

Iain Smith: Perhaps you could briefly outline one or two of the other options for demand management.

Peter Hawkins: There would have to be some sort of national congestion charging policy, rather than a local policy. The Edinburgh proposal was a local policy, but we need to consider national policies now.

Iain Smith: In your written evidence, you comment on environmental and resource considerations that may force up the price of air travel. Will you tell me what those are?

Peter Hawkins: The problem is that, at the moment, air travel is hugely subsidised in all sorts of ways and that the so-called external costs of air travel are not covered at all by what the customer pays to fly. Society as a whole absorbs costs such as noise and air pollution. That applies locally—in Edinburgh, we all suffer local air pollution from Edinburgh airport—but there is also the global consideration: flights contribute hugely disproportionately to climate change or global warming but, rather than the people who fly paying those costs up front, they are borne by the planet as a whole. Something has to give sooner or later.

The Government and the big hitters, such as VisitScotland, Scottish Enterprise and BAA, are in denial about climate change. They might say that it is happening but that it will make no impact on what they propose to do. They will go on as they have before, with more cars on the road and more planes in the air. How long can that carry on? We have already seen the impacts of climate change. I speak only as an informed member of the public, as it were, because the effects of climate change are on the news. We see the ice cap melting in Greenland and the Arctic ice sheets disappearing and becoming sea instead of ice. We know that, when the ice becomes water, the sun's rays are not reflected back, as they would be if it was ice,

so the more water there is, the more the impact of the sun's rays will be to warm the water up. It is a vicious circle; it feeds itself.

The dangers are now so obvious that we cannot ignore them any more. I ask myself what I will tell my grandchildren when they say, "You could see it was happening. You knew it was happening. What did you do?" I will have to say that we just carried on flying on our shopping trips to New York and stag parties in Prague. They will say, "You mean you just carried on although you knew that it was happening?" I cannot live with that thought. I feel strongly that, because we know what is happening, it is now up to us to take action.

I am sorry that I am going on a bit. If you want all the facts and figures, there is a lovely little book called "How We Can Save the Planet" by Mayer Hillman, who is a doctor and a respected member of the British Medical Association. He has come up with a load of facts and figures. The book should be required reading for every politician and everybody in authority because it tells us straight what the present situation is. It was written more than two years ago, but the situation has developed since then and things are even worse.

Christine Grahame: Were you present this morning when I asked about cycle links?

Peter Hawkins: No, I was not there.

Christine Grahame: I asked Edinburgh Airport Ltd about cycle links to the airport. It did not seem to me that there was very much in place. You say in your written evidence:

"the promoters have failed to provide the bicycle integration which they claim. It is not just a matter of access to platforms and trains ... but ... cycle routes".

Could you develop that point?

Peter Hawkins: The routes from the airport to Edinburgh and to the Forth bridge are the routes that tourists would probably want to take. There is no cycle route from the airport to the A8. There is a cycle path along the A8 but it is so awful that cyclists prefer to ride among the traffic on the main road. For years and years Spokes has asked for the path to be upgraded; we are always told one story or another but nothing is ever done. When you get beyond Newbridge, there is a much better cycle route. However, there is nothing from the airport to the Forth bridge.

Christine Grahame: Does Spokes have cycle routes mapped out to the airport should the rail link go ahead?

Peter Hawkins: If we were asked, we could easily come up with suggestions. We are already talking to SESTRAN—the south-east Scotland transport partnership, which is the new regional transport partnership—about cycle links from

Edinburgh to outlying areas. One of those links would be from Edinburgh to the Forth bridge. However, a route from the airport to the Forth bridge is a different matter.

Christine Grahame: If the rail link were to proceed, it might be useful if you were just to produce some plans for the promoter rather than waiting to be asked. Many people might be sympathetic to the development of such routes around Edinburgh.

Peter Hawkins: I agree, yes.

Christine Grahame: Spokes is the only group to mention international terrorism in its submission. You make a point that is pertinent when we consider what happened on the London underground and the ramifications of the inquiry. You say:

"The general principles must take account of the risks of international terrorism. A tunnel leading beneath an airport, to an underground 'major transport hub' would obviously provide an attraction for the kind of international terrorism witnessed in recent years."

Why is that relevant for us as we consider the bill?

Peter Hawkins: Because the bill is proposing to build a tunnel under the airport.

Christine Grahame: If you think that a tunnel is not a good idea, do you have a solution?

Peter Hawkins: Yes. Do not build it.

Christine Grahame: If that is plan A, do you have a plan B?

Peter Hawkins: We have already suggested that it could be avoided by using the existing rail network and having a station somewhere else. Gogar has been suggested. All rail travellers coming over the Forth bridge from the north would be able to interchange at Gogar with the tram. That would make very little difference to their total journey time and would save having to dig a tunnel under the airport.

Part of my concern is that it will be not only airport travellers who use the tunnel but everybody—including all the commuters from Fife and Stirling, and half the commuters from Glasgow. They will be diverted into this tunnel under the airport and will be inconvenienced by having an extra stop at the airport. At the moment they do not have to stop there.

There is also talk of a new station at Winchburgh, because the town is going to be expanded. That will be another problem. Is it reasonable to expect commuters to put up with all that just for the benefit of a few leisured people who want shopping trips to New York?

Christine Grahame: Have you put a costing on the savings that your solution would produce?

Peter Hawkins: Sorry?

Christine Grahame: I was just wondering whether there was a cost saving. Am I going to places I should not be going, convener?

The Convener: No—it is just that such questions are perhaps more pertinent for next week, when we will take evidence on the alternative routes.

Christine Grahame: I listen to my convener occasionally, and I am listening now.

The Convener: Mr Hawkins, will you expand on your concerns about EARL benefiting non-public transport users?

Peter Hawkins: Do you mean car drivers?

The Convener: Yes.

Peter Hawkins: If a number of passengers chose to go by rail, it would free up more road space, which more cars could use. That is all that I implied.

The Convener: Why, in your opinion, would that be bad?

Peter Hawkins: It is not sustainable. Rail travel is claimed to be more sustainable than car travel. It is a question not just of congestion but of sustainability. The implication is that we would not gain anything from the development in terms of sustainability.

13:30

Iain Smith: Could not that argument be applied to any rail development? You are saying that those who choose to take the train, rather than using their cars, create space for other people to use their cars, which, in turn, fills up the space. On that basis, you would be as well arguing that we should not proceed with any rail developments, because they are of no value.

Peter Hawkins: No, absolutely not. We have talked about demand management. Another aspect is pricing policy. In some cases, it is cheaper to take the car than to take the train, because car fuel is far cheaper than it should be, given all the external costs, which drivers are not paying. Fuel is cheap, so people are encouraged to travel by car. If we had a marketplace approach whereby all travellers had to pay all the costs up front—including all the external costs—we would begin to see rail as much more competitive.

The same applies to air travel. Edinburgh airport is used largely for internal flights; people fly from there to Manchester, Birmingham and Bristol. We could take a leaf out of France and Germany's books. They are building high-speed rail links between their major cities and are not encouraging internal flights to nearly the extent that we are.

Their policy is far more sustainable and in line with trying to cope with climate change.

I would like to ask the national and Scottish Governments why they are not focusing on building better rail links between cities in Scotland and between Scotland and the rest of the UK and charging air passengers a realistic amount, so that it becomes cheaper to travel by rail. If all the costs were taken into account, that is what would happen. I think that the Scottish Executive is putting up £30 million to encourage cheap airlines to set up in Scotland, which is nonsense from the point of view of sustainability.

The Convener: Before we conclude, do you want to make us aware of anything that we have not covered in questions?

Peter Hawkins: I think that I have covered the main points that I wanted to make. I emphasise the point about linking Scottish cities with better rail links, instead of spending the money on the airport rail link. Have any of you ever travelled by rail from Edinburgh to Perth?

The Convener: Yes.

Peter Hawkins: You have two choices. You either go via Stirling, which adds about 30 miles to the trip, or you have to go on that little winding line that goes all the way around the bays of Fife and then uses a single track from Ladybank through the middle of Fife. Whichever way you go by rail it takes an hour and a half, which is just not on for a 45-mile journey—which is what it would be if the line was direct. Why are we not building a high-speed rail link from Edinburgh to Perth?

Mr McGrigor: Or to Inverness.

Peter Hawkins: Would not that make far more sense than building an airport rail link?

The Convener: We are getting into a bidding process.

The point is well made and the committee takes it on board. Thank you for coming along this afternoon.

Peter Hawkins: Thank you for the opportunity to speak to you.

The Convener: You are welcome.

That concludes agenda item 1. Members might recall that at our meeting on 23 May we agreed that, prior to taking oral evidence from the promoter, we would move briefly into private session to reflect on the evidence that we have heard this morning and the issues that have arisen and to consider which questions we might wish to ask the promoter. We will now move into private session for about 15 minutes.

13:35

Meeting continued in private.

14:03

Meeting continued in public.

The Convener: I welcome everyone back to the meeting. Thank you for waiting patiently while we discussed our approach to the final evidence-taking session.

Our final panel of witnesses comprises witnesses for the promoter. Responding to questions on economic growth and inward investment, we have William Gallagher, who I understand is now chairman of TIE Ltd—I congratulate him on his elevation; Susan Clark, TIE's project director; Kenneth Wardrop, the economic development manager for the City of Edinburgh Council; Marwan AL-Azzawi, principal transport planner for Scott Wilson Railways; Mark Graham, director of PricewaterhouseCoopers; and Derek Halden, director of Derek Halden Associates.

I should say to members that, although we had agreed to restrict the number of witnesses from each organisation to allow us to focus on the oral evidence, I have agreed that the promoter may field a number of witnesses at today's meeting on the understanding that Susan Clark directs her questions to the most appropriate witnesses for response and that all answers are brief and focused.

Christine Grahame: What does the promoter believe will be EARL's single biggest economic benefit? I must ask you to be brief, because there will be specific questions on this subject.

Susan Clark (TIE Ltd): I will give a broad-brush answer. EARL is a national transport scheme that will deliver national, regional and local economic benefits. As well as connecting up the Edinburgh city region, which is a key economic driver for Scotland, the link will provide a fast and efficient means of accessing Edinburgh airport. Moreover, it will directly connect 62 stations across Scotland to the airport, with a total catchment of 3.2 million people or 64 per cent of the population.

To compete internationally, Scotland needs good international connections. Indeed, its peripherality demands greater connectivity. EARL will play a key role in facilitating economic growth and inward investment in Scotland by providing access to fast, efficient and reliable transport services and ensuring that business and industry remain competitive.

The view that EARL can help to unlock economic development is shared by the Executive, enterprise agencies such as Scottish Enterprise and Highlands and Islands Enterprise,

local authorities and the Scottish business community.

Christine Grahame: Which local authorities share that view?

Susan Clark: We have consulted the City of Edinburgh Council, West Lothian Council and Fife Council, and have visited Highland Council.

Christine Grahame: Have you spoken to Scottish Borders Council?

Susan Clark: I think that we have.

Christine Grahame: I am just thinking of the link with another line that I am not allowed to—but which I always—mention.

You say that by 2030 the economic efficiency benefits will amount to £920 million, of which £765 million will be made up of journey-time savings for public transport and road travellers. How does saving on the cost of short journeys equate to economic efficiency?

Marwan AL-Azzawi (Scott Wilson Railways): The savings will filter down to businesses and local communities through efficiency gains, increased productivity, shorter commuting times and shorter business travel times.

Christine Grahame: How did you calculate those savings?

Marwan AL-Azzawi: The Government and the Treasury produce standard publications that set out time values for different passenger types and trip purposes. The savings that will be made through journey-time savings are then multiplied by those standard economic values and added up.

Christine Grahame: The gentleman from Spokes said that no savings would be made on short journeys because even if you managed to take cars off the road other cars would simply come in and fill up the space. Have you factored that into these calculations?

Marwan AL-Azzawi: We certainly have. We have undertaken what we call a demand modelling exercise, which takes into account a phenomenon known as trip induction—in other words, some trips will be generated if capacity is released. However, those trips are not new ones. After all, no one buys a new car to take advantage of any road space that has been released. Those people already own cars, but are travelling at a different—perhaps more convenient—time. In any case, the answer to your question is that we have factored that element into our calculation and believe that the benefits that we have highlighted will still emerge.

Christine Grahame: I learn a new phrase every committee meeting: trip induction is the one for today.

You indicate the level of benefits for 30 years and 60 years. Will you tell me why such long timescales were chosen? How can those reflect the actual situation, when the congestion forecasts are predicted to only 2030?

Susan Clark: Treasury guidance now asks us to appraise over a 60-year period as well as a 30-year period. I shall pass the issue of congestion forecasts to Marwan.

Marwan AL-Azzawi: The analysis is carried out using a standard process. The Government requires all schemes, whether major—like this—or small, to follow a standard procedure, so that they can be compared with one another. The congestion analysis is forecast up to what we call a design year—a certain period in time.

Christine Grahame: What did you call it?

Marwan AL-Azzawi: A design year. It is basically a certain number of years after the scheme is open. As you start to project into the future, if you start to include more uncertainty there is an issue of credibility and robustness. Any benefits beyond those estimated for the final year are capped. Because you assume that there will be no growth in any of those benefits, you end up with a much more robust assessment over the 60-year period.

Christine Grahame: Does that mean that the level of benefit stays the same after 30 years?

Marwan AL-Azzawi: Yes. You assume that the level of benefit does not grow after that 30-year period.

Christine Grahame: Does that apply to all rail projects?

Marwan AL-Azzawi: Not just rail, but any type of scheme.

Mr McGrigor: What evidence do you have that Edinburgh's predicted drop in its competitive position as a world city is due to its not having a rail link?

Susan Clark: A recent report was produced for Edinburgh that looked at the competitive position of the city.

Kenneth Wardrop (City of Edinburgh Council): Edinburgh is performing particularly well on gross domestic product, but if we consider competitor cities in Europe, we are not performing quite as well. That is a Scottish phenomenon. The company that produced the report was BAK Basel Economics, which recently did a similar study for Glasgow. One of our issues is the maintenance of our competitive position. Productivity levels in Scottish cities are lower than in other cities—we need to address that. The City of Edinburgh Council has a declared intention of being one of northern Europe's most successful cities. There is

an arc of cities—Dublin, Glasgow, Edinburgh and the Scandinavian cities—that all have the same issues of peripherality. We are removed from what is called the golden pentagon, which comprises the central European cities and is shifting further to the east. Our competitive position is not at a standstill—it is changing, and we are conscious that we need to consider what our competitor cities are doing. Those cities are well connected—connectivity is a significant issue for them. We are at a disadvantage. Prague, for example, is putting in a rail network connection. We have to maintain a level playing field and ensure that we put in the same infrastructure.

Mr McGrigor: By your own definition, hub airports provide links between international and national flights. Edinburgh airport connects with only three destinations outwith Europe and the UK, so how does it qualify as a hub airport?

Kenneth Wardrop: It is not a hub airport. Schiphol was discussed this morning—Edinburgh airport will never be in the same league as Schiphol. The important thing to focus on is international connections. The growth of international connections into Edinburgh has been one of the biggest areas of growth at the airport. International connections are critical not just for Edinburgh but for Scotland's competitive position. Today sees the launch of the new Delta service to Atlanta. There is a trend. We have worked with BAA, Scottish Enterprise and the route development fund, and the strategy for Scotland is to improve the international connections. Undoubtedly EARL will help by selling the proposition for Edinburgh and dispersing that out of Edinburgh across Scotland.

14:15

Mr McGrigor: I see. Comments from businesses based in Scotland on the benefits of EARL are listed in the promoter's written response at paragraph 94. What evidence does the promoter have from businesses based outside Scotland that EARL will attract inward investment?

Derek Halden (Derek Halden Associates): We did not speak to any businesses outside Scotland, or, indeed, to airlines or to those operating in a wider economic context, quite simply because to do a half-hearted exercise as part of an individual project is much less productive than to use existing literature on the international competitive position of Edinburgh and of Scotland and to rely on the powerful evidence that Scottish Enterprise and other organisations have highlighted in a number of reviews. We spoke specifically to those businesses within Scotland from which we needed information in addition to that given by the international evidence. That information is all in the literature that we reviewed as part of the work.

Christine Grahame: I am looking at figure 1.3 in paragraph 93 of the promoter's response, which shows the location of respondents, and I see none from the south of Scotland. However, other evidence suggests that the rail link will benefit the Borders area and other parts of the south.

Susan Clark: We will come back to you on that. I am sure that we have consulted people in the Borders area.

Christine Grahame: It is simply not on your chart at all. It lists "Edinburgh and East Central", "North of the Forth", "West Lothian/Falkirk" and "Glasgow and West Central", but nothing in the south.

Derek Halden: The Scottish transport appraisal guidance approach generally relies on looking at all business sectors and uses existing evidence as much as possible. The specific sectors about which we needed further evidence, because public agencies such as Scottish Enterprise were unable to provide us with the information, happened to be sectors such as optoelectronics and biotechnology, which are based in Tayside, Glasgow, Edinburgh and Aberdeen, so we tended to focus more on businesses in those areas because of the sectors that we were looking at.

Christine Grahame: You also had tourism and house building on that list.

Derek Halden: Absolutely.

Christine Grahame: I would have thought that those sectors were relevant to the south as well. I am just pointing out that we have heard evidence that the EARL will benefit all of Scotland, but that there is a vast area that has not apparently been referred to.

Derek Halden: It is interesting that different parts of Scotland all argued that EARL was the most important scheme for them. For example, Highlands and Islands Enterprise said that it mattered more for its region than it did for anybody in the central belt. In fact, our analysis showed that it matters most for Fife but that it also matters very much for everywhere.

Christine Grahame: That is not the point that I was making. I was simply saying that your pie chart, figure 1.3, appears to show that businesses in the south of Scotland were not among your respondents. That is the only point that I am making. Perhaps you consulted those people, and I would be pleased to hear that you did.

Susan Clark: We can come back to you about that.

Mr McGrigor: Given that businesses are always said to be supportive of publicly funded transport projects, what other evidence does the promoter have that EARL will directly increase business and economic growth?

Susan Clark: TIE has consulted widely with the business community. I mentioned the letters of support that we have received from organisations such as the Scottish Chambers of Commerce and Scottish Financial Enterprise, which surveyed its members—who represent 50 per cent of the financial industry in Scotland—and found that they said that EARL was their top transport priority project. We also consulted Highlands and Islands Enterprise, Scottish Enterprise and a number of other business agencies.

Mr McGrigor: Did you discuss the project with VisitScotland?

Susan Clark: We met representatives of VisitScotland on a number of occasions. One of VisitScotland's key objectives is a dispersal strategy for tourism across Scotland, and it has provided us with a letter of support for the EARL project.

Marwan AL-Azzawi: It might help the committee if I draw members' attention to figure 1.4 of the written response. The Scottish Financial Enterprise survey was undertaken independently of our work and to a different timescale. The industry said that EARL is the number 1 scheme in its recommended strategy. More than 51 per cent of the financial organisations that were surveyed, representing more than 100,000 employees who work to the south of the city and in the city itself, argued for EARL.

Iain Smith: In our evidence taking this morning, we heard a great deal on the different projections of airport growth. How much of EARL's benefits are dependent on growth at Edinburgh airport and the provision of a second runway? What will be the impact on EARL patronage figures if growth slows or the second runway is not built?

Susan Clark: Richard Jeffrey of Edinburgh Airport Ltd spoke about his confidence in the predictions of air traffic growth in the UK. We used the mid-range figures from the Government's white paper as the basis of our analysis. Marwan AL-Azzawi can talk about the sensitivity analysis that we did around patronage and growth in aircraft numbers and about the way in which that may effect the EARL business case.

Marwan AL-Azzawi: As Susan Clark rightly said, we carried out a sensitivity analysis. The assumptions that we used were quite robust; we could have been a lot more optimistic in the assumptions that we carried into the assessment. Where possible, we erred on the side of caution. In addition, we carried out various sensitivity tests to look at what would happen if the rate of passenger throughput at the airport was not as high as either the white paper or BAA predict. Incidentally, the BAA figures are higher than those that are shown in the white paper. The tests

showed that, even with a reduction in passenger throughput, there would still be a demand for travel by EARL and a positive business case.

Susan Clark: Just to close on the point, at the moment, the EARL benefit to cost ratio stands at 2.16 over a 60-year appraisal period. That means that we will generate £2.16 of economic and social benefit for every £1 of cost that is associated with the project. In terms of the robustness of the project, the ratio is at the high end of benefit to cost ratios for a transport project. Willie Gallagher may want to say something further on that.

William Gallagher (TIE Ltd): Before I joined TIE as its chairman, I spent some time as one of the Scotland-based representatives on the Strategic Rail Authority board. Obviously, the projects that the board saw coming forward had various BCRs. I can confirm that a BCR of 2 is at the high end of economic benefit for a rail infrastructure project.

Iain Smith: I will press you slightly on the point. How much is that case predicated on projected growth? You said that you went for mid-range figures and that you were slightly pessimistic in the assumptions that you made. However, growth in air passenger numbers may not increase at anything like the rate that has been predicted. For example, it may stand still at about 10 million and not go up to the 20 million that has been predicted. At what point is EARL no longer financially viable?

Susan Clark: Marwan AL-Azzawi may want to give further detail on the range.

Marwan AL-Azzawi: The question is difficult to answer without sight of the numbers. The Department for Transport also carried out sensitivity tests for its air transport white paper. Basically, they show quite a significant drop in the actual rate of growth. If the committee wants us to come back with an actual break-even point, which I think is what the member implied in his question, we can provide that.

Iain Smith: That would be helpful. It would give us an indication of the margins.

The Convener: It would be very helpful to have that information. If possible, perhaps you could present the information in table format. We would like to see the lowest level of growth that is needed to achieve economic benefit—in other words, from a BCR of 1 to the 2.16 that you anticipate.

Susan Clark: We can do that.

Iain Smith: You state that approximately £1.14 billion of discounted benefits are generated through journey-time savings for both public transport users and road travellers. How does that figure translate into the actual experiences of

public transport users and road travellers? Will they see perceptible savings?

Susan Clark: Marwan AL-Azzawi has explained that those benefits manifest themselves in things such as productivity improvements across Scotland and decongestion benefits.

Marwan AL-Azzawi: There are a number of benefits. I ask members to turn to table 1.9 on page 37 of the written evidence.

Iain Smith: It is on page 17.

Marwan AL-Azzawi: I have it on page 37.

Iain Smith: It is after paragraph 108.

Marwan AL-Azzawi: Is everyone there?

Christine Grahame: It is like being at school. Everyone has to be on the same page.

Marwan AL-Azzawi: I thought that it would be easier if you could see the table, which shows that there are savings in relation to road accidents, as there are tangible reductions in the number of people who are killed and injured. There are highway and public transport time savings. Further, there are benefits in relation to the reduced use of fuel, reduced expenditure on fuel tax, new station facilities and service quality and reliability. Of course, there are also revenue income streams. There is quite a long list of potential benefits that make up the total figure of £1.35 billion.

Iain Smith: To what extent does that total discounted benefit take account of the longer journey times that will be faced by passengers whose trains are being diverted through the station?

Susan Clark: In principle, the disbenefit of those journey times has been included in the overall analysis.

Marwan AL-Azzawi: That is right. Not only have we considered the potential time savings that are gained in the wider network, but we have taken into account the travel time penalties that arise from an additional stop at the station and so on. Even having done that, we end up with a significant positive number at the end because the benefits to society as a whole outweigh the disbenefits.

Iain Smith: As well as providing a service to the airport, the link will also provide a service for people who might not want to use the airport, such as those transferring between Fife trains and Glasgow trains or transferring on to the tram network at the station. To what extent have those potential benefits been taken into account? What percentage of the users of EARL will be people who are using it for non-airport purposes?

Susan Clark: You are right to say that one of the beauties of EARL as a transport project is that it provides real connectivity and transport options. It will provide interchange opportunities between heavy rail and heavy rail—which will cut about 15 minutes off the journey times of people travelling from Fife to Glasgow by rail—and heavy rail and the tram. The tram stop will be located just outside the EARL station. That will allow people to come in from outwith Edinburgh, interchange with the tram and access some of the business locations throughout Edinburgh that the tram will serve.

Marwan, do you want to talk about the size of those benefits?

14:30

Marwan AL-Azzawi: I will summarise. We have carried out sensitivity tests, but they have not been included in the base business case, which we wanted to be robust. We showed that there would be up to an additional 500,000 passengers per annum if the airport station was converted into what in transport planning circles is known as a multimodal interchange, where, as well as facilities for rail interchange, there can be bus feeder services, taxi facilities or improved connectivity with the tram, with escalators and so on. Potentially, up to 4.4 million passengers could use EARL per annum and there might be an additional 500,000 passengers if multimodal facilities are added. However, as I said, the results of the sensitivity tests have not been included in the central business case analysis, because we wanted that to be robust. They are not included in the BCR of 2.16. The BCR would increase significantly if they were.

Iain Smith: I want to ensure that I have understood that correctly. Essentially, the business case considers only those people who will use the airport station to access the airport.

Marwan AL-Azzawi: That is correct.

Iain Smith: That is interesting. Coming from Fife, I would have thought that the other things were much more important.

Marwan AL-Azzawi: We have considered those other things as well.

Iain Smith: Or perhaps they are equally important.

For how many years will EARL have to operate to produce a profit in revenue and positive economic efficiency benefits?

Susan Clark: My recollection is that the break-even year, when the scheme will start to generate a profit, will be within about five years of operation. That comes as a result of our smoothing out some of the renewals expenditure, which can be quite

lumpy over the life of a project, throughout the life of the project. I invite Marwan AL-Azzawi to comment on the break-even point for transport economic efficiency.

Marwan AL-Azzawi: The transport economic efficiency analysis, or TEE analysis, took into account something like the cost to government. That is a standard requirement in the appraisal process. As Susan Clark rightly said, it showed that revenues would start to match or exceed annual running costs between years 5 and 7, depending on what scenario is being examined. By the end of the decade, there should be no requirement for subsidy, assuming that everything else goes in as planned.

Iain Smith: Referring back to the table, I presume that the break-even point for passenger numbers will have an impact on when the break-even point for running costs and economic efficiency will be reached. It might be useful if you could provide an estimate of when those break-even points might come.

Susan Clark: We can produce that.

The Convener: I will let Christine Grahame in but, first, I must go back to table 1.9, and reveal my complete and utter ignorance of figures. Let us return to the matter of transport economic efficiency. The net present value figure that is arrived at, over a 30-year period, is given as £297.3 million. After the necessary addition, subtraction and whatever, almost all of that is contributed by the highway time savings, which give a figure of £289.79 million.

If the modelling that has been done proves to be incorrect and we do not get the highway time savings, however they are calculated—this is where I begin to show my ignorance of figures—how will that affect the final figure should the upturn in car usage on the existing road network be greater than envisaged? Do you understand what I am getting at? The figures are almost the same, which presupposes that the various other pluses and minus come to about zero. The figure will quite often be predicated on that highway time saving. Can someone explain that?

Marwan AL-Azzawi: The figure is not made up only of the highway time savings; it is also made up of the public transport time savings. Buses, coaches and taxis were included in the highway modelling. Therefore, the figures do not take into account only car passengers. It is not only car passengers to the airport who will benefit from the scheme; movements of freight on lorries, which are known as large goods vehicle movements, will also benefit. Therefore, even if all the road space for car passengers filled up—I do not say for a minute that that will happen—a significant number of other modes, purposes and travellers would still

benefit from the decongestion effects. In addition, the time savings are not just road based; they are also rail based. That aspect would not be affected at all by any highway capacity changes because, as you know, the rail network is segregated.

The Convener: Okay. I think that I understand some of that.

Christine Grahame: I have a question about international terrorism. The question is not entirely fanciful—it is serious. Does the estimated cost of £500 million take into account the necessary capital spend to secure the scheme against terrorist attack, particularly the tunnel beneath the airport? What is in the business plan on that? Further, what provision has been made for security in the projected running costs? As I understand it, there will be a central tunnel with lots of trains going through it, which will be a prime target.

Susan Clark: We have consulted several agencies that are involved in security but, because of the commercial and confidential nature of the issue, I would like to respond to the question in writing.

Christine Grahame: I was not asking for specific plans, because revealing those might undermine security. I was asking simply whether the costs have been factored in.

Susan Clark: We have assumed a certain level of security infrastructure in the capital cost estimate.

Christine Grahame: Does that take account of the current situation?

Susan Clark: I will have to come back to the committee in writing on precisely what we have assumed, if that is okay.

Mr Gordon: I return to roads-related matters. You predict that EARL will attract investment and assist economic growth. As we know, economic growth in turn tends to generate increased car ownership and use. How will the transport economic efficiency benefits be realised if the freed-up road capacity is taken up by new road users?

Marwan AL-Azzawi: As I have said in answer to previous questions, we have taken into account the effects of trip induction in the analysis. In addition, as I said a few moments ago, even if 100 per cent of the capacity for car users was filled up, we would still have bus, taxi and rail passengers and other public transport users on the network who would not be affected.

Mr Gordon: So there will be benefits for multiple occupancy vehicles.

Marwan AL-Azzawi: Yes, among others.

Mr Gordon: Table 2.5 shows a degradation for physical linkage and no change in benefit for connection times. Will you explain how EARL can be a passenger interchange if two of the components will be no better than in the “Do Minimum Situation”?

Marwan AL-Azzawi: As I said, to obtain the most robust business case in the central business case analysis, we did not take into account the potential for expanding the new station to be what is known as a multimodal interchange. We took that decision consciously at the outset because we wanted to provide as robust an analysis as we could. No one is saying for a minute that there would be no additional benefits if the station were expanded to include other things. However, we took a conscious decision at the outset to err on the side of caution so that we could provide a robust appraisal of the scheme’s benefits.

Mr Gordon: So you are not selling the scheme as a multimodal hub at this stage.

Susan Clark: One of the original difficulties was that the tram bills had not gained royal assent, so there was uncertainty around whether the tram scheme would proceed. Additional benefits for the tram scheme and EARL now need to be factored in.

Mr Gordon: Given that there are no proposals to increase the number of stations, particularly in west Edinburgh, how will people access the airport if there is future economic development in areas such as west Edinburgh? They will need to travel to an existing station.

Susan Clark: Kenneth Wardrop might want to talk about the west Edinburgh planning framework.

Kenneth Wardrop: One of the key areas in west Edinburgh is Edinburgh Park, which already has approval for an additional 2 million square feet of office space. The Royal Bank of Scotland headquarters is at Gogarburn. My planning colleague John Inman may be better able to answer questions on the west Edinburgh planning framework at the next session, but we are basically saying that west Edinburgh should be an area for high-quality international HQ development. The railway link will add to the attractiveness of that area.

On modal shift, if someone came in on the railway line, then switched to tram or bus, they would be right at the edge of the west Edinburgh area. The railway will enhance further the attractiveness of west Edinburgh. Edinburgh Park station is already up and running and a key station, but a rail link to the airport will transform the current situation. Edinburgh Park is one of the additional bits. We must consider all the different component parts cumulatively rather than single

out any one as getting the bigger benefit for west Edinburgh.

Mr Gordon: The promoter indicates that EARL will generate directly 84 full-time equivalent jobs and indirectly 139 FTE jobs. How does that compare with other rail-link projects? In your view, does that represent a good job creation level for the cost of the project?

Mark Graham (PricewaterhouseCoopers): The direct employment benefits that were identified are based on ratios that relate the costs of operating a rail project to employment levels. They are very much based on passenger levels and the cost of providing a service to passengers. Similarly, the additional indirect jobs are based on the Scottish Executive multipliers for the rail industry that say that for every direct job there will be about two indirect jobs in industries that support the operation. The comparison is just an average drawn from UK data.

The Convener: I have a question about table 4.1, which is on the effects and evaluation of the socioeconomic significance of the project. Given that improved access to jobs and efficiency in business logistics are indicated as having the highest return in generating employment, what factors do you think could prevent those benefits from being fully realised?

14:45

Mark Graham: First, I want to differentiate between what have been described as the overall transport benefits of the project, which Marwan AL-Azzawi has gone through in discussing cost-benefit ratios—that is a standard approach that is used to compare and contrast transport projects—and our endeavour to capture the project's wider impacts. It is important to stress that some impacts do not depend on the total number of passengers. We considered different types of potential passenger demands and what they imply about wider impacts. For example, greater connectivity and therefore greater transport efficiency will increase the travel-to-work area to the north, south and west and therefore employers' potential to take on more people within the catchment area. That will be a benefit for local residents that, given the demand projections in the area, might lead to an uplift in local employment.

On tourism, additional tourists might be attracted to Scotland as a result of the airport's greater interconnectivity with the whole of Scotland. Derek Halden's survey shows that specific tourist target markets might be drawn to Scotland. The benefit that we have identified is that, because of the greater connectivity, those tourists could come to Scotland and spend time here that they would not have spent if the link did not exist.

On efficiency effects for indigenous companies and inward investors, I return to the evidence that exists on inward investment. Significant national evidence exists; I refer to the survey that was undertaken by the Invest in Britain Bureau some time ago, for example. Access to airports is a key issue when people are making decisions about inward investment and where to locate. We had to draw on indirect evidence, so we considered experience in Europe and the experience of similar city regions. The evidence indicates that there will be uplifts in efficiency, in access to the labour market and in the ability to develop land. Most important, such things together change perceptions about locations, regions and countries, and there can be a cumulative effect that brings employment benefits. We came up with the figure of around 3,000 jobs, which was based on evidence from elsewhere.

You asked what would be a constraint to such benefits. We must consider each element of demand and ask what the constraints are. The constraint on local labour is the demand for that labour. Scottish Enterprise has suggested that there will be an uplift in demand so that 34,000 people will be required in Edinburgh and the city region over the next 10 to 15 years. Where will that demand come from? The proposals will give access to a greater labour market and will therefore help to meet that demand.

I suspect that how the benefits of increased interconnectivity in Scotland can be maximised and how tourists can be drawn in who are not currently being drawn in are questions for VisitScotland, but the case should be made that Edinburgh has better linkages than other cities and city regions do if the aim is to encourage inward investment. It is therefore not simply a matter of saying what would constrain the wider benefits. A series of demand strands will have a series of impacts and a number of issues will have to be addressed in order to maximise benefits.

Susan Clark: It would be useful if Kenneth Wardrop said something about competitive place issues.

Kenneth Wardrop: The BAK Basel Economics report highlighted the importance of maintaining our competitive position and the many things that we hear about that our competitor cities are doing. We are not in a standstill situation.

We know that huge investment is being made in the infrastructure in English core cities. We are not in the golden pentagon of the key cities in central Europe, so we must do anything that we can to improve our competitiveness. The Scottish Enterprise witnesses talked about that this morning. There are strong sectors in Edinburgh, such as financial services; financial services in Glasgow and Edinburgh represent 66 per cent of

the sector total. Glasgow, Dundee and Edinburgh are the cornerstones of life sciences in Scotland. We have to improve connectivity. Scotland is a small place by global standards. To use the terrible terminology, we have to consider the importance of the critical mass. We have to look beyond the boundaries of Edinburgh to the metropolitan region and central conurbation of Scotland to see where we fit in terms of global competitiveness.

The Convener: You have mentioned the BAK Basel Economics report a couple of times. It would be useful for the committee to have a copy of the report, or, if it is a huge tome, a summary of it.

Susan Clark: It is quite succinct.

The Convener: It would be useful for us to have a copy so that we can put your evidence in context.

Charlie Gordon asked about EARL utilising existing stations. How will that lead to land or property being brought into developments, especially in the area south of Edinburgh Park?

Susan Clark: Are you talking about west Edinburgh?

The Convener: Yes, the greater west Edinburgh area that Charlie Gordon mentioned earlier.

Susan Clark: Do you want to talk about west Edinburgh, Kenneth?

Kenneth Wardrop: I do not know what I can add to what I have said about the importance of that area of the city. We have just published our 2040 vision for the city, in which we acknowledge that the west Edinburgh area is fundamental to the growth of Edinburgh. In Scottish terms, it is a significant growth area. I said that the Royal Bank of Scotland—the fifth largest bank in the world—has its world headquarters there. We acknowledge that the area will be important if Scotland is to attract international headquarters. It is not about competing with other parts of Scotland, but about our position in relation to the UK and internationally. Edinburgh Park is one of the most successful business parks in the UK. As I said, it still has significant room for expansion. The west Edinburgh area is a real driver for Edinburgh and the growth of the Scottish economy.

The Convener: Much of the area around Edinburgh Park and South Gyle, however, has already been developed, so it must be areas further from the station that are still to be developed. How will the rail link help in getting people to the jobs, given that it might be better to have other forms of public transport that go directly to where people need to go, rather than their having to get to a station from somewhere else?

Kenneth Wardrop: It is not correct to say that Edinburgh Park has been developed out, because 1.2 million square feet is available at the moment. A second phase of Edinburgh Park, which is much denser in its development, represents another 2 million square feet. It is one of the biggest potential growth areas in the city. It will be connected by the tram and by EARL to the airport and to the city centre. It is a huge development opportunity for Edinburgh and Scotland.

The other big growth areas in the city are the exchange district and the areas around Haymarket and Fountainbridge, which link directly into Haymarket station. The accessibility to the city centre from the airport by EARL and the tram will be huge.

The Convener: Forgive me if I have got this wrong, but, as I understand it, approximately half the trains will be coming via Edinburgh Park and half will go via South Gyle. I presume that not all the trains will stop at Edinburgh Park, given that the express Edinburgh to Glasgow Queen Street service does not stop there at the moment and we will not want to increase journey times. The potential for people to use the airport as a hub and then to transfer to another train service will not be that great. Even if you get to Edinburgh Park station, you may still be quite distant from the bit of Edinburgh Park that you are trying to get to. Perhaps the Edinburgh Park developments that you and Mr Graham were talking about would be more easily reached by other forms of public transport.

Susan Clark: If I can answer that in the context of the package of transport options, EARL is a project to link Scotland to Edinburgh airport; it is not necessarily a project to link the west of Edinburgh to Edinburgh airport. The tram project will access west Edinburgh as well—it will link up those areas. We have always seen EARL and the tram project as offering complementary services. The tram offers people the ability to get from the airport to some of those business locations on the west of Edinburgh and the waterfront, while EARL provides a direct connection into Edinburgh city centre, Edinburgh Park and South Gyle. More significantly, EARL disperses that economic activity across Scotland and provides access from Edinburgh airport across Scotland, including Glasgow, which is particularly important in the on-going work on city collaboration.

The Convener: Are there any plans to implement freight services on EARL?

Susan Clark: We have not assumed that freight services will stop at the airport because we provide alternative access around the airport. The main cargo handling centre for the airport is not in the terminal building area; it is to the east of the airport, in the Turnhouse area. We have no plans

to provide a freight service utilising the EARL station.

The Convener: So no freight would go from the airport link.

Susan Clark: We have assumed that no freight will use the airport link through the airport.

Mr Gordon: I gather that you are future-proofing the infrastructure proposed for EARL, especially in relation to tunnels and bridges, in as much as you are making allowances for possible future electrification of the line.

Susan Clark: The tunnel and any structures have been designed with overhead clearances, to cater for future electrification.

Mr Gordon: Similarly, is it future-proofed for freight use? You may not know that there are plans afoot to consider different gauge clearances for intermodal freight vehicles and the like. Is it conceivable that in the future the new EARL infrastructure could be used for rail freight?

Susan Clark: We have not assumed that freight will use the new routes going through the airport. We are bearing in mind the European interoperability regulations, which require the standardisation of designs for all rail services throughout Europe, but we have not assumed that the EARL station and the routes leading to EARL will deal with freight. Alternative routes, using the existing Edinburgh to Glasgow line and the existing Fife lines, will still be available for freight services.

Mr Gordon: On the basis of what you have just said, would it be possible to fit continental-style double-decker passenger trains on to EARL in the future?

Susan Clark: We have not assumed that.

Mr Gordon: You have not built that in.

Susan Clark: No.

The Convener: If there are no further questions from committee members on economic growth, I thank the witnesses for their answers.

We move on to tourism and sustainability. I understand that Mr Gallagher will be replaced at the table by John Inman, the strategy manager in the planning department at the City of Edinburgh Council. Who would like to start?

15:00

Christine Grahame: I will, if you like, convener; I will let the witnesses get sitting comfortably and then we will begin.

What is the principal benefit to tourism that EARL will deliver?

Susan Clark: The analysis of tourism markets and surveys of tourism businesses that we have undertaken have identified that EARL will help to unlock growth in several tourism markets, including business tourism. The main growth sector in tourism in Scotland is the short-break sector, which is most sensitive to travel time. EARL opens up much more of Scotland and distributes those trips throughout Scotland. That is a key objective for VisitScotland, which is particularly concerned with year-round growth for the tourism market.

Kenneth Wardrop: VisitScotland's submission highlighted the importance of international tourism to Scotland. It is a particular growth sector for Edinburgh, as we heard this morning from Richard Jeffrey from BAA.

Business tourism is a key growth area for the city. That means conference tourism: Glasgow and Edinburgh account for 90 per cent of International Congress and Convention Association business in Scotland. We believe that EARL is highly attractive for business tourism.

International tourists do not want to drive; they want to travel by train. They are not used to driving on the wrong side of the road, so public transport is more attractive to them and improves accessibility. North America and western Europe remain key growth markets. There has been significant growth in direct international links from Edinburgh airport.

VisitScotland's policy and the aim of the Scottish Executive's tourism framework for change are to grow revenues and tourism in Scotland. Undoubtedly, EARL is a key project among all the packages of transport infrastructure projects in helping to advance Scotland's attractiveness and the dispersal of visitors. Time is of the essence for international travellers, particularly in the short-break market, and anything that can reduce travel time is critical.

Christine Grahame: You are selling to me the idea that visitors will travel to places other than just Edinburgh and Glasgow—or even just the Highlands. They might go further afield on short breaks.

Kenneth Wardrop: Yes. If you look at VisitScotland's marketing strategy, you will see that it sells city breaks as a combination of a city experience and a country experience.

Christine Grahame: Or an historical experience, if we are talking about North Americans.

Kenneth Wardrop: Yes. Accessibility to good, integrated public transport is essential if that strategy is to be successful.

Christine Grahame: I do not want to meet people driving on the wrong side of the road. I was just thinking about that when you mentioned it.

In its short written submission, VisitScotland emphasises that EARL should not prevent further expansions of the airport. Do you agree?

Susan Clark: We have built into the project provision to protect future expansion of the airport. For example, we have designed the tunnel under the area of the proposed second runway to allow a second runway to be provided. We have worked hard with BAA and examined its master plan to select the station's location and try to minimise any future impact on the airport's expansion.

Christine Grahame: I do not think that I am treading on anyone's toes by asking about this. VisitScotland's submission says:

"A rail link from Edinburgh airport to the city centre would therefore assist Edinburgh in competing for new routes."

That is fine. However, VisitScotland also says that it would be

"extremely keen to ensure that disruption to visitors to the airport during the construction of the rail link is kept to an absolute minimum."

The construction seems to be a major operation. Are there fears that for a period there will be a negative impact on tourists coming into Scotland? You might be able to tell me how long that period would be. I am speaking about delays and not just about nasty dust.

Susan Clark: The tunnelling methodology that we have selected aims to keep the runway open by using a tunnel boring machine, rather than cutting through the runway, slabbing it over and then reinstating it. We have selected that tunnelling methodology to ensure minimum disruption to the airport.

We have also worked closely with BAA to understand the impact that construction might have and have agreed to set up a construction group involving representatives from BAA, TIE and the tram project to align the construction of the projects and ensure that, in formulating the timelines, we bear the other projects in mind. By doing so, we will maximise the opportunities that Richard Jeffrey and Derek Hendry highlighted this morning.

Christine Grahame: How long will the development take?

Susan Clark: We expect the main construction activity for EARL to begin in 2008 and conclude in 2011. However, that does not mean that the airport will be disrupted for three years because, under the project's construction methodology, the tunnel's main construction site will be to the north of the airport, well away from the main terminal

building. Because we will tunnel from north to south, much of the spoil will be removed to the north and taken to the main trunk road network via the haul routes that we will create. The construction has been designed to have minimum impact on the airport.

Mr McGrigor: Why has the bill been introduced now instead of being delayed until the BAA master plan has been completed?

Susan Clark: Work on developing rail links to Edinburgh and Glasgow airports has been ongoing since 1999. After the initial feasibility study, a study carried out by Sinclair Knight Merz recommended the runway tunnel option for the Edinburgh link. In 2003, TIE got involved in developing the project to the point of being able to submit a bill to the Scottish Parliament for powers to construct the link. BAA has been working on its master plan on the same timescale, and we, the City of Edinburgh Council and the Scottish Executive have commented on the master plan proposals. Indeed, Richard Jeffrey himself said that we should not delay the bill for the publication of the master plan.

Mr McGrigor: How does EARL deliver the reliability, journey time and journey quality that the promoter says are important to the short-break market?

Kenneth Wardrop: The short-break market is very time-bound. A short break—for example, the typical weekend city break—is usually less than four days, and visitors have a magic figure of three hours for getting from door to door. At the EARL interchange point, people will be able to travel from the airport to the city in 10 minutes, which is a great time saving—and, obviously, the journey will be more convenient.

Again, this kind of facility is already available in our competitor cities and is what visitors on a city break expect. According to surveys that have been carried out in Edinburgh, visitors now perceive us alongside Prague, Barcelona and Amsterdam. We are truly a European cultural and city-break destination. However, with more air routes opening up eastern European cities such as Prague and Cracow, the number of cities competing for short-break destinations has increased. EARL not only provides convenience but meets visitors' expectations from their experience in other cities. It also addresses the fact that visitors on a city break are time-bound and, in fact, have to count the hours to cover everything that they want to see or do.

Mr McGrigor: How do you respond to the point that although the individual fare of £3.75 was reasonable, a group of four would be as well taking a taxi?

Susan Clark: That example was based on a group of four people getting a taxi from Edinburgh city centre at a cost of £15. Someone who was getting a taxi from Stirling, at a cost of £60, might view the situation differently. The comparative fares from Stirling to Edinburgh airport will be more or less as they are at the moment.

The Convener: Mr Wardrop, you have made a couple of comments about Edinburgh's position in the short-break market and the desirability of fast links between the airport and the city centre. Is there any evidence that there is a disincentive for people to come to Edinburgh as opposed to any of the other places that you have mentioned? Speaking personally, when I have been choosing where to go for a short break in Europe, I have never considered whether the airport has a fast train link. Usually, people make such decisions based on the attractions that they want to see. Sometimes, unless I am very pressed for time, part of the attraction of a place is the ability to travel by public transport and see things. I was in Berlin in October and there is nothing like an airport link there. There was a fast bus and it was not that bad, sitting looking out of a window at somewhere that I had not been before. What evidence do you have to support your contention?

Kenneth Wardrop: I do not know whether there is evidence. The issue is about choice and EARL certainly adds to people's choices. Some people find a rail link to be more convenient and others do not. Our competitor cities, such as Rome, Copenhagen, Oslo, Dublin and Prague, either have a rail link or are putting one in. We have not done an analysis on this subject; we simply know that we are in a competitive market. This morning, we heard Richard Jeffrey talking about the fact that Edinburgh has exceptional growth. We want to maintain that.

We have talked a lot about leisure tourism, but one of the biggest growth areas for Scotland and Edinburgh is business tourism, in which regard the convenience factor is important.

People in the UK have not developed a habit of using fast rail links into cities, but people who live in cities that have them, such as Rome, will almost expect simply to get a train to the airport and not have to think about getting an airport bus and taking 25 minutes at best. The fact that it is possible to get from the city centre to the airport in 10 minutes is highly attractive to such people.

The Convener: I accept what you are saying about choice. However, is not one of the main factors in people's choices about where to take a break the availability of the route rather than the availability of a rail link from the airport? Sometimes, people simply want to know that there is a direct route to the place that they want to go to

and that they will not have to reroute through another airport.

Kenneth Wardrop: That is part of it. However, we are getting more and more direct air routes into the city—Copenhagen and Helsinki have been added in the past year and British Airways introduced a Hamburg service this week. That is a benefit, so why not keep adding to that benefit? EARL does that.

We can concentrate too much on the capital. We have to look beyond Edinburgh. In that regard, Susan Clark mentioned Stirling. We have talked about connectivity from the airport to other parts of Scotland, such as Perth, St Andrews and Glasgow. Stirling is pushing itself as a city-break destination and other parts of the country are doing the same. We must look at the situation in the round.

Christine Grahame: You salvaged your answer at the end. Although EARL is being put to us in terms of its Scotland-wide inward-tourism benefit, I did not hear much of that when you began speaking. You were talking about business breaks, short breaks and trips in which time is of the essence. That did not sound as if the people about whom you were talking would be going beyond the Edinburgh conurbation. I acknowledge that you ended your answer by talking about other places in Scotland, but that is not how you started.

15:15

Kenneth Wardrop: There are two distinct markets. One is the international tourism market. With Americans, for example, we are talking about a nine-day break. It is necessary to differentiate between the different markets. The question was about short breaks, but I previously addressed the issue of longer-stay visitors. There are many different markets. VisitScotland makes some points in its written submission about the international market for longer breaks of nine days or more in Scotland. Those also come into the equation.

Christine Grahame: That is fine. I sought clarification because of the way the discussion was going. I was beginning to think that the proposal that we are considering is Edinburgh-centric.

Derek Halden: Obviously, Kenneth Wardrop will speak for Edinburgh as he is the City of Edinburgh Council's economic development manager. However, we conducted tourism studies that considered the impacts across Scotland.

Edinburgh is an international magnet. It is doing very well, but Scotland as a whole is not. A key point about the airport link is that it will build on Edinburgh's international competitiveness and

spread the benefits to 3.2 million people across Scotland. That is what VisitScotland is trying to do. It is trying to ensure that more empty rooms are filled for more of the year.

The short-break market is a big one for Scotland. It is important to get Inverness and Aviemore within the three-hour journey time that makes them practical for the short-break market. EARL does that, whereas none of the other proposals that we have considered do that. It is the same story as with economic development in general. It is about building on Edinburgh's economic success and spreading the benefit across Scotland through the rail network.

Mr Gordon: Given that rolling-stock upgrades do not form part of the bill or its estimate of expense, how confident are you that the quality and reliability of the EARL service can be delivered?

Susan Clark: We are working closely with Transport Scotland, which delivers the overall rolling-stock strategy for Scotland. We have developed a specification that highlights the requirement for a train that has enhanced performance but is also able to deal with multi-users, commuters, ordinary rail travellers and tourists with luggage. That specification is with Transport Scotland, which is working hard to develop the rolling-stock strategy. I know that it shared the specification with some of the world's rolling-stock manufacturers when it met them in January. The matter is a key agenda item at the EARL project board every month when Transport Scotland comes together with TIE, First ScotRail, Network Rail and BAA. We review progress on the rolling-stock delivery programme every month.

Mr Gordon: I can see why the issue would be near the front of your mind at board meetings. Paragraphs 536 to 538 of the promoter's response refer to rolling-stock solutions, new class 22 diesel multiple units and a range of other types of rolling stock that are currently on the network. That all makes sense. However, is that not part of the real cost of EARL? Those trains, including the new ones, will have to be leased. The cost of leasing them will not necessarily fall on the promoter of EARL, but the public has a right to know the real cost of the scheme. How much will it cost to rent those trains?

Susan Clark: We have included the leasing charges within the overall business case analysis for the project. Therefore, the costs are built into the overall appraisal and form part of the overall benefits analysis that we talked about earlier. We can provide details of the lease charges that we have included if you require that information.

Mr Gordon: Thank you—that would be helpful.

How confident are you that EARL will meet the needs of business travellers? At the times when

business travellers travel, train services could be reduced.

Susan Clark: We have analysed the peaks for rail travellers and airport travellers, and they are slightly different. Based on the demand on the existing rail network, we are confident that we can meet the demand that will be placed on the Edinburgh airport rail link service. We have built additional rolling-stock capacity into the business case to cater for that demand.

Mr Gordon: The peak time for business travellers will not clash with the peak time for commuters, and that is a potential operational advantage. However, business travellers are people in a hurry and they will not want to wait too long for the next train. How confident are you that you have the balance right? What kind of frequencies are we talking about?

Susan Clark: We propose to divert existing services via EARL. For example, in one hour, two Glasgow to Edinburgh trains will go via the airport, as will both the Dunblane to Edinburgh trains, two of the Fife to Edinburgh trains, an Aberdeen to Edinburgh train, and probably a Perth to Edinburgh or Inverness to Edinburgh train. A range of services will stop at the airport. There will be regular services—eight services an hour—into Edinburgh city centre. There will also be services from Edinburgh airport to a range of locations across Scotland.

Mr Gordon: So there will be quite a low average waiting time.

Susan Clark: It depends on where someone is going.

Mr Gordon: Well, there you go.

The Convener: Are you confident that trains run early enough in the morning to meet what may be a demand from air travellers either coming into Edinburgh on very early flights or, more likely, going out of Edinburgh on very early flights?

Susan Clark: Our assumption of demand is based on the current hours of operation of the rail network. In discussions, Network Rail has said that extending the hours of operation would eat into network maintenance periods. That would give Network Rail real difficulties. However, our prediction is based on hours of operation from around 5 am until around midnight. That period caters for the demand that we have assumed in our overall business case. Extending outwith that period would require a great deal of further discussion with Network Rail about its ability to maintain the network within a reduced time.

We have built some duplication into the system. We have provided signalling that allows one tunnel to be used while the other is out of operation. That signalling will allow trains to run in both directions.

It is possible that we could consider an early-morning service from Edinburgh, but further discussion with Network Rail would be required.

The Convener: Funnily enough, it was not Edinburgh I was thinking of. I do not know about other parts of Scotland, but the main services from Fife do not start until around 7 am. The first train from Dunfermline is at 6.55. Leaving at that time, and allowing for the time taken to check in, someone would not get a flight much before 9 or half past 8.

Iain Smith: From Edinburgh, there are other surface options such as buses and possibly trams—although I am not sure when the tram service will start. The problem arises when people are travelling from further afield. Those people cannot use public transport because they cannot get directly to the airport or they cannot get to Edinburgh city centre in order to travel out to the airport from there. Some of the potential benefits of EARL will be lost if there is no improvement in early-morning or late-evening accessibility.

Susan Clark: The benefits that we have calculated and presented are based on the current hours of operation, so the benefits would be even greater if we were to extend the hours of operation.

Mr Gordon: Paragraph 21 of the promoter's memorandum mentions train frequencies. Do you feel that trains will be frequent enough to constitute direct accessibility to major tourist attractions in parts of Scotland outside the Edinburgh region?

Susan Clark: As we have said, the EARL scheme will give direct access to 62 railway stations throughout Scotland. For example, if you were heading to Stirling, there would be two services an hour that would allow you to get on the train at the airport and get to Stirling. The same would be true if you were going to Glasgow. There would be at least one service an hour accessing Dundee and Aberdeen, and less than one train an hour to Inverness. For some of the Fife locations, there will be two services an hour.

Mr Gordon: With a three-hour window, the person on a short break will, if they just miss the Inverness train, have to wait a wee while until the next one.

Derek Halden: We can compare that with the Prestwick experience, where that is exactly what we have seen. For example, retimed flights from Frankfurt can mean that crowds of German tourists are suddenly arriving to climb different Munros. We must not forget that what we cannot analyse is the market response to EARL by the airlines, but we can say that we know from international research on the competitiveness of airports and the general decision-making patterns

of airports that, if Edinburgh airport has a rail link, it will be more likely to attract more international flights that will run according to the market requirements of their customers, which might be to get to particular places based on a preset rail schedule within Scotland. Let us not forget that things such as air flight times are not fixed—there will be a market for German tourists coming to fit in with the railway times that are available.

Mr Gordon: I am unlikely to forget Prestwick, Mr Halden. I actually cited it this morning when I asked another witness about potential operational experience, because I am interested in how we balance the needs of business travellers, budget tourists, commuters and so on.

Derek Halden: That is one of the key issues in respect of a line into Glasgow through Prestwick. One of the interesting things about EARL is that it will provide at the airport a hub at which Fife to Glasgow trips can interchange.

Mr Gordon: You will recall that, in answer to an earlier question, the promoter's witnesses agreed that they are not selling the scheme as a hub, per se.

Derek Halden: There are different aspects to the project. What Marwan AL-Azzawi was saying was that the transport economic efficiency analysis did not take account of the hub benefits in order that it would allow him to follow the standard practice that was required of him in comparing EARL with other transport schemes, using the TEE appraisal methodology.

However, there are other aspects of the Scottish transport appraisal guidance methodology that require us to consider the wider economic benefits. Mark Graham and I have been involved in that sort of work. In that context, the hub issues are extremely important. Some businesses said that it would be great, because people could park at the airport and get the train to London; they would have secure car parking and access to the rail network without having to drive into Edinburgh. There is a whole range of interchange, hub-type—

Mr Gordon: That ain't going to happen under the scheme as currently proposed.

Derek Halden: Obviously, one would have to change trains at Waverley, but the fact that it is possible to access the rail network on the west side of Edinburgh is a big benefit for many reasons, not least for a Fife to Glasgow trip, in which a time saving of approximately 15 minutes could be made. That is a significant rail-time saving—it is not the two minutes that one might be concerned about on other trips.

The Convener: I do not want to be too parochial, because that is not like me, but I would like to comment on the Fife example. It is all very

well to say that there are two trains an hour to Fife, but they split at Inverkeithing, so it is not two trains an hour but one train an hour going in two directions, I presume, which is not quite the same as two trains, because it means that if you miss the one that you hoped would get you to Kirkcaldy or Dunfermline, you have the best part of an hour to wait. An interchange at Edinburgh airport is great if you want to travel by train and save 15 minutes, but it will still be quicker to go by bus from Dunfermline to Glasgow—even with the new improved services—than it is to go by train via Edinburgh airport. I am not sure that it is quite the saving that you were suggesting.

15:30

Derek Halden: Clearly, in terms of the extremes and the margins, the people who will be most likely to make the modal change are those who will benefit most; those who benefit by only by a few minutes will be less likely to do so.

Overall, the analysis provides a robust picture. It shows that locations to the north and west of Edinburgh will make the most significant gains. I am sorry that the project cannot do more for the Borders, although if the Waverley line is built, the benefits will follow for that area. Locations in the east and south of Edinburgh will not benefit in a big way from the project; the benefits will be felt by the people who live north and west of the airport.

Iain Smith: I should also declare an interest. From the Fife point of view, connectivity is a big issue. I am sure that you will agree that the project is not an Edinburgh to Edinburgh airport rail link but a rail link from Edinburgh airport to elsewhere. In addition to the monetary benefit that EARL will bring, what level of benefit will it contribute to the tourism industry outwith Edinburgh as a result of the connectivity that it will bring? Can you quantify that?

Mark Graham: The simple answer is that we cannot. As the debate has clearly shown, different types of tourist will be attracted to Edinburgh, and more widely to Scotland, as a result of EARL. In considering the net benefit, which others did this morning, the fact is that a balance has to be struck. Clearly, if a new airport link such as EARL is constructed, the Scottish population is being given the choice to use it to leave Scotland to go on holiday.

The question is this: What difference will EARL make at the margins? I return to the convener's point on constraints. There is a clear opportunity to attract people whom we are not attracting at the moment. As Derek Halden said, the extent to which we do that is not a matter for the promoter but for the airlines and tourism providers. It is they who will have to find ways to use the link to attract

more Germans to walk up Munros or to attract more US and Japanese customers to Scotland. As we said, every additional 1,000 tourists who use the link to make connections across Scotland will support up to eight full-time equivalent jobs in the tourism sector.

Iain Smith: In paragraph 244, you state that that lengthening of the trains is one way in which EARL could be adapted in the future to meet increased demand. How realistic is that option, given the problems with platform length?

Susan Clark: We talked about future proofing in respect of electrification. We also decided to cater for longer nine-car trains in order to future proof EARL. As the member rightly says, the issue across the rest of the network is how to accommodate those nine-car trains. We took the decision to build the EARL platform long enough to cater for them in case we were required to do so. We felt that it was sensible to future proof in that way.

Iain Smith: What capacity will you have to increase the frequency of services? You referred to your having limited capacity in that regard. To what extent are the restraints that you mentioned to do with the design of the project? Will restraints elsewhere on the network mean that you will not have the opportunity to use the additional capacity that you are planning?

Susan Clark: We need to look at the issue more widely in terms of the capacity of the network. The capacity of EARL is not necessarily constrained by EARL itself but by the ability of the network to accommodate services with EARL.

Transport Scotland is working on a timetable model for Scotland that will allow it to examine all the enhancement projects that are going on in Scotland at any one moment. I know that Transport Scotland will consider development of the transport strategy. Consultation was undertaken on the rail strategy, which involved asking which projects that are in the pipeline should be undertaken next in order to improve the rail infrastructure in Scotland. Should more such enhancement projects be undertaken or should changes be made to accommodate additional capacity in the network?

We must look beyond EARL. We have built capacity into the project, so at Roddinglaw, for example, we have catered for a grade-separated junction to allow capacity for the Airdrie to Bathgate line, if that proceeds. We have taken steps to prepare for future capacity improvements.

Iain Smith: So, constraints on EARL will include the lack of capacity at Waverley station, signalling issues and the capacity of the Forth rail bridge, rather than be functions of the EARL project itself.

Susan Clark: Yes. EARL must be viewed in the much broader context of what the network can accommodate.

Iain Smith: If the Waverley line is constructed and services run to the Borders, will they be able to go to the airport, stop, turn around and return?

Susan Clark: I am looking into my crystal ball now. We have catered for bi-directional signalling to allow that type of thing to happen.

Iain Smith: "Bi-directional signalling" is a fabulous term.

Christine Grahame: I need to write that down—I write down bons mots for myself in idle moments.

Susan Clark: I do not know what the train service to the Borders will be. One of the Dunblane services could run all the way through to Galashiels; if so, it would run through the airport. The pattern of services in the future will be different from what exists now. That is for Transport Scotland to determine through the franchise with the train operator and Network Rail.

Iain Smith: You confirm that it will be technically possible for trains to be bi-directional at the airport station.

Susan Clark: We have provided for that.

Iain Smith: Will that apply to trains from Fife, too?

Susan Clark: Yes.

Christine Grahame: Scottish Borders Council's submission says:

"The railway ... would potentially offer a half hourly service between Tweedbank and Edinburgh Airport with an attractive journey time"—

I like that description—

"of just over an hour and a quarter from Tweedbank",

which is the second stop in the Borders,

"and the airport, assuming the service is operated as a continuation of the Waverley Rail service."

I want to ensure that the Borders are not left out of the grand expansion of Edinburgh's economy, which is spilling over into the rest of Scotland.

Susan Clark: I understand that the team that is working on the Borders rail link considered the benefits of EARL to its project.

Christine Grahame: Yes.

Iain Smith: I will ask about a parochial concern. Two services an hour from Fife will run on the Fife circle line; I presume that the rest of Fife beyond Kirkcaldy will be served by the Aberdeen and Dundee links. I am concerned that the time pressure on those journeys will mean that they can operate only by cutting out all the little

stations, so the likes of Markinch and Ladybank might miss out on direct airport services and people who use those stations would have to use connecting services. You say in your submission that 62 stations will have direct links. Will you consider the overall pattern to ensure that as many stations as possible have direct links and do not require passengers to change at Inverkeithing, for example?

Susan Clark: As we approach the implementation of EARL, we will work closely with Network Rail and the service providers. There is a standard industry process for developing and agreeing a timetable, which involves train operators bidding for paths across the network. Part of that will involve our ensuring that we produce the optimum timetable and stopping pattern. It will be for Transport Scotland to dictate the level of service that it requires as part of the franchise.

Iain Smith: Your modelling indicates that EARL will displace onto trains a significant number of trips from buses, coaches and trams. To what extent does your model take account of a competitive response from bus, coach and tram operators, such as cutting fares to encourage people to stay on the bus, coach or tram?

Marwan AL-Azzawi: As part of the modelling exercise, we carried out several sensitivity tests in consultation with our stakeholders, including the Scottish Executive. For example, we tested a situation in which bus operators reduced their fares by about 50 per cent. That would be a really low, aggressive and competitive fare, but the model still showed a positive case for the rail link.

The Convener: I turn to sustainability issues. Will you briefly summarise the key environmental benefits of the airport rail link?

Susan Clark: We have heard how EARL will introduce a sustainable way of accessing Edinburgh airport and of growing it. Marwan AL-Azzawi can talk about some of the specific environmental benefits, but it is important to understand that the scheme is about contributing to a sustainable way of accessing Edinburgh airport.

Marwan AL-Azzawi: The Scottish Executive has set out a range of criteria that all transport schemes in Scotland, whether they are rail schemes or schemes for other modes, must take into account. The issues that must be considered include whether the changes to air quality and noise levels will be positive, and landscaping and biodiversity issues. For the rail link project, all those matters have been appraised in the environmental statement and the Scottish transport appraisal guidance report. The modal shift from car to EARL will result in significant

benefits, such as reduced emissions, security improvements, reduced noise levels and various other factors. In our written response to the committee's question 21, we summarise the relevant benefits, which include benefits relating to noise, air quality, ecology, cultural heritage, socioeconomics and health and safety.

The Convener: In the response to our question 21, paragraph 330 states:

"in 2011 EARL is predicted to have a minor positive impact on air quality in the study area."

Paragraph 332 states:

"EARL is predicted to result in a slight decrease in CO₂ emissions from road traffic within the transport network."

Therefore, the environmental gains do not appear to be great.

Marwan AL-Azzawi: The environmental gains that are shown in that appraisal are to do with what we call benefits to certain households. That is why table 21.2 has the number of households that will be affected. The appraisal was carried out in comparison to a global network rather than a local network. When we consider the number of vehicle kilometres that will be moved off the road, the effect will be significant.

The Convener: Can you direct me to where that global impact can be found in the evidence?

Susan Clark: Can we come back to you on that in writing?

The Convener: That might be useful.

Finally, will you elaborate on how the integrated ticketing and pricing system will work?

15:45

Susan Clark: That issue rests with the key operators, particularly Transport Scotland. We would need to come back to you on that matter.

The Convener: Are there any further questions?

Christine Grahame: I was going to ask about bicycles.

The Convener: On you go, Christine.

Christine Grahame: In relation to the

"Surface Access Strategy due to be published in December 2006",

your written evidence says:

"As part of these proposals, cycle routes into the airport are being examined along with improving facilities for cycle storage."

I agree with what you go on to say:

"It is considered that most passengers arriving at Edinburgh Airport by train who have used a cycle for part of their journey are likely to park/store their bike at their origin

station using facilities provided e.g. cycle lockers or bike stands."

Further, you state:

"However, given the overall predicted growth in air traffic passengers, it is likely that there will be an increase in the number of passengers accessing Edinburgh Airport by cycle."

We should consider what the Spokes witness said earlier today, as well as Spokes' written evidence. I think that I asked the witness a question about this, although my bit of paper has moved. The Spokes written submission says:

"However, if an airport station is to provide a further such interchange, then the promoters have failed to provide the bicycle integration which they claim."

The submission goes on to discuss cycle routes and so on. I think that you were here when Spokes was giving evidence earlier. It seems that nothing is happening in that regard, and that Spokes is not being spoken to about the matter in relation to the surface access strategy. Are you speaking to that organisation?

Susan Clark: Yes, we have spoken to Spokes.

Christine Grahame: "Spoken to Spokes"—I will write that down. You will have to live that down.

Susan Clark: That will always be held against me.

One of the key points to consider is that EARL is about the provision of the rail link to Edinburgh airport. It facilitates the provision of interchange at the airport. I am sure that BAA's surface access strategy and its master-plan development will take into account how all those things are linked at the airport. We have had a number of discussions with representatives of the airport about the concept of such an interchange facility at the airport itself. I think that Derek Halden will wish to speak a bit more about cyclists.

Derek Halden: It would be very nice to—

Christine Grahame: Are you a cyclist, Mr Halden?

Derek Halden: Certainly, but more of a leisure cyclist, in common with many people.

As part of the process, the Scottish transport appraisal guidance—STAG—requires us to assess accessibility by walking and cycling. It would be lovely if we could fund the west Edinburgh cycle network as part of EARL, but that would be no more appropriate than providing better public transport information at every railway station in Scotland, which would also be making a link to EARL. We have to draw the line somewhere. We have tried to integrate relevant cycle infrastructure in the proposal to ensure that EARL pulls its weight. Equally, it is for BAA to ensure that it is doing everything that it needs to

do, perhaps as part of its surface access strategy, to pull its weight fully and to encourage local trips by walking and cycling. It is a question of where to draw the line and of how much of the cycle infrastructure EARL needs to provide.

Christine Grahame: What does “pulls its weight” mean in concrete terms?

Derek Halden: It is an interesting point—I refer to the whole discussion involving being told off by the Scottish Executive economists. When we were producing the STAG appraisal we discussed the whole concept of fairness in relation to what any individual scheme contains to ensure that it represents all modes fairly—or to ensure that it pulls its weight, to put it simply. It is about taking a balanced approach to ensure that if EARL can do something for the cycle network and can encourage more effective integration with cycling, it should do so. We have taken the decision to have cycle components in the proposal to ensure that EARL integrates with cycling effectively. It is not about seeking to fund the west Edinburgh cycle network.

Christine Grahame: So somebody else funds it. That is what I am getting at. You talk to Spokes and you decide together what a reasonable network would be—with access to the airport—and then somebody looks for funding.

Derek Halden: Spokes does an outstanding job in all sorts of development proposals. It often comes in and points out that cycle issues have been neglected. It is right for Spokes to point out that cycle infrastructure should not be neglected in the proposal. However, we do not think that we have neglected it. We considered it as part of the appraisal. We identified the cycle infrastructure that we think is needed and it is already part of the scheme.

Susan Clark: We heard from the Spokes person who came along that they were going to provide us with some ideas.

Christine Grahame: They did. I asked them.

Susan Clark: The question is whether they should be rightly and fairly incorporated into the EARL project or whether they should be incorporated into Edinburgh airport’s overall surface access strategy.

Christine Grahame: Thank you. We managed to have lots of puns during that.

Iain Smith: Does the promoter have any comments on the evidence that we heard this morning about the absence in the submission of information on carbon dioxide emissions in the construction phase—for example, the CO₂ that is created when the concrete is made?

Susan Clark: We have assessed the construction impact of cement production and the concrete that will be used in the production of

EARL. We will extract five times as much carbon dioxide from the environment as will be generated as a result of the process, so there will be a significant net benefit overall. The 110,000 lorry trips that are mentioned in our analysis are part of the overall calculation.

Iain Smith: Over what timescale will five times as much CO₂ be extracted, though? I presume that there will be a net increase during the construction phase.

Marwan AL-Azzawi: As I said earlier, the appraisal is a standard 60-year appraisal as set out in the Scottish Executive guidance. We carried out the appraisal based on the amount of cement that will be produced during the construction period, but the benefits will come from traffic reductions over 60 years. That is where the fact that five times as much CO₂ will be extracted comes from.

The assessment that Susan Clark mentioned was discussed this morning in connection with carbon dioxide. She is right to mention carbon dioxide, but we have also identified that there will be reductions in other pollutants, including ones that might be more toxic, such as carbon monoxide, particulate matter 10, nitrogen dioxide and hydrocarbons. Over and above the CO₂ savings over 60 years, there will also be savings in those other pollutants.

Susan Clark: As a final comment on that, we understand that cement production is a major contributor to carbon dioxide emissions and, as part of the construction of the project, we will consider ways of minimising that. The cement industry is aware of its impact on the environment and it too is considering ways of minimising that impact. We will discuss that with the industry and consider what measures we can incorporate in the project to reduce emissions even further.

Iain Smith: The figures in table 21.4 suggest that you will reduce total emissions by 7 kilotonnes per year by 2011 compared with the reference case, which I presume is the status quo or a situation in which EARL is not built. However, by 2026 the reduction will be only 1 kilotonne per year. Why is that? It does not make sense to me.

Marwan AL-Azzawi: It is a matter of presentation. The assessment shown in the table is that which is required by Scottish transport appraisal guidance. It looks at the global network, as I said earlier. However, EARL affects only movements to and from one destination. The reference case shows what happens across the rest of the network. That has nothing to do with EARL; it is to do with people travelling in Glasgow, Edinburgh, the Borders and so on. The table relates to movements that are not part of the bill and which, quite rightly, are being addressed

through projects in the Scottish Executive's national transport strategy.

Iain Smith: That explains the table but it does not explain the difference between the saving of 7 kilotonnes by 2011 compared with the 1 kilotonne saving by 2026. That is the question that I am asking. I understand that the reference cases are higher, because of the general network issues, but I cannot understand why the contribution that EARL makes is lower in 2026 than it appears to be in 2011.

Marwan AL-Azzawi: As part of the Government's appraisal process, you have to take into account the effects of improved vehicle engine performance as a result of catalytic converters, better fuel production processes, better fuel burning in engines and so on. Such improvements will result in fewer benefits, if you see what I mean, because technology is improving. These are set assumptions that must be built into our analysis.

Iain Smith: That suggests that by 2036 EARL might contribute more carbon dioxide than is contributed at present.

Marwan AL-Azzawi: I cannot comment on the way in which the Scottish Executive asks us to appraise schemes. However, it will not reach a point at which a negative contribution is made; obviously, there is a cut-off at zero.

The Convener: That concludes our evidence-taking session. I thank everyone who has given evidence.

On 13 June, the committee will continue to take evidence on the general principles of the bill and will focus on transport, route selection and other options for the EARL project.

Meeting closed at 15:58.

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