

EDINBURGH TRAM (LINE ONE) BILL COMMITTEE

Monday 7 November 2005

Session 2

£5.00

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EDINBURGH TRAM (LINE ONE) BILL COMMITTEE

† 19th Meeting 2005, Session 2

CONVENER

*Jackie Baillie (Dumbarton) (Lab)

DEPUTY CONVENER

*Phil Gallie (South of Scotland) (Con)

COMMITTEE MEMBERS

*Helen Eadie (Dunfermline East) (Lab)

*Rob Gibson (Highlands and Islands) (SNP)

*attended

THE FOLLOWING ALSO ATTENDED:

Mark Hallam

Alan Jones

Mrs Odell Milne

Graham Scrimgeour

Malcolm Thomson QC (Counsel for the Promoter)

Kristina Woolnough

THE FOLLOWING GAVE EVIDENCE:

Andy Coates (Environmental Resources Management Ltd)

Dick Dapré (Steer Davies Gleave)

Professor Brian Evans (Gillespies)

Jim Harries (Transdev Edinburgh Tram Ltd)

Roger Jones (Transport Initiatives Edinburgh Ltd)

Andrew Oldfield (Mott MacDonald)

Angus Walker (Bircham Dyson Bell)

CLERK TO THE COMMITTEE

Jane Sutherland

LOCATION

Committee Room 1

† 18th Meeting 2005, Session 2—joint meeting with Edinburgh Tram (Line Two) Bill Committee.

Scottish Parliament

Edinburgh Tram (Line One) Bill Committee

Monday 7 November 2005

[THE CONVENER opened the meeting at 10:17]

Edinburgh Tram (Line One) Bill: Consideration Stage

The Convener (Jackie Baillie): Good morning everybody and welcome to the 19th meeting in 2005 of the Edinburgh Tram (Line One) Bill Committee. We are at the consideration stage, which is when the committee considers the detail of the bill. Our job is to consider the arguments of the promoter and the objectors, and ultimately to decide between any competing claims. All parties are well aware of the procedures for taking evidence, so I propose not to reiterate them, other than to say that brevity in both questions and answers is always appreciated.

Before we start considering oral evidence, members will note that one of the papers for today's meeting, ED1/S2/05/19/22, provides further written evidence from the promoter on two amendments that the promoter proposed at our meetings on 27 September and 3 October. Those amendments seek to place the landscape and habitat management plan and the noise and vibration policy in the bill. The written evidence has been circulated to the relevant lead objectors. Do members agree to note the contents of the paper, which will be part of our consideration stage evidence?

Members indicated agreement.

The Convener: Members will note the response from the promoter on the issue of title conditions, which was raised by group 43. In his original rebuttal witness statement, Mr Bijlani responded that the promoter was investigating the issue. By last Wednesday, I had become slightly concerned that we had received no further update on the investigations, so I requested that any update that the promoter might have should be provided by Friday lunch time. Having considered that response, I cannot understand why the information was not available on 12 August, which was the rebuttal witness statement deadline. That said, I am concerned that it contains new information, for example on access and adoption, which the committee has not had sufficient time to consider before taking oral evidence from the witness. Do members have any views on that?

Phil Gallie (South of Scotland) (Con): We should hold it over until the next convenient opportunity, which might be 29 November.

The Convener: Indeed it would be. Therefore, I seek members' agreement not to take oral evidence from Mr Walker on title conditions today—he is spared. I propose that we hear evidence on title conditions from Mr Bijlani on the morning of Tuesday 29 November. Are we agreed?

Members indicated agreement.

The Convener: Excellent. Rahul Bijlani was due to give evidence today on the European convention on human rights, but is unable to attend due to exceptional circumstances. Angus Walker will give evidence on the ECHR in his place.

The first five witnesses for the promoter for groups 33, 34, 35, 36, 43 and 45 are Andy Coates, Andrew Oldfield, Brian Evans, Roger Jones and Dick Dapr . Before we commence oral evidence taking, I remind the witnesses that they are under oath.

The first witness is Andy Coates, who will be questioned on impacts on ecological interests by the promoter's representative, Malcolm Thomson QC. He will then be cross-examined on his witness statement and rebuttal witness statement by Tina Woolnough for groups 34 and 45 and Alan Jones for group 35, before being re-examined by Mr Thomson. People will be pleased to hear that I do not propose to say this rather lengthy introduction for each witness. I refer all questioners to the helpful guide and timetable for oral evidence, which has been sent to lead objectors and which clearly indicates which groups may cross-examine the witness and what type of cross-examination they may undertake. Where a questioner is questioning on behalf of two or more groups, I ask that they clearly identify the group to which each question relates.

Malcolm Thomson QC (Counsel for the Promoter): Madam, I apologise for the inadvertence that caused a draft version of paper ED1/S2/05/19/22 to be lodged in place of the proper one. There was nothing sinister about it—it was a pure and simple error.

The Convener: We found it very interesting, but your apology is accepted.

Malcolm Thomson: Mr Coates, can you start by giving us an update on the badger mitigation plan?

Andy Coates (Environmental Resources Management Ltd): I can indeed. Since my previous evidence to the committee, we have produced a draft version of the badger mitigation plan. The draft was made available last week and I

apologise to the committee and others for the fact that they have probably not had sufficient time to consider it before today's meeting. Due to the sensitive information about badger sett locations that it contains, the document will be confidential, but it is currently with Scottish Natural Heritage and the Edinburgh and Lothians badger group, who will be consulted on it; we propose to take comments from them.

Malcolm Thomson: What will happen after comments are taken on the draft?

Andy Coates: The badger mitigation plan is very much like the LHMP that we have already produced—it is an evolving document, which is based on information that is available on the design to date. We see it evolving along the lines of the LHMP.

Malcolm Thomson: Will it be enforced as part of the landscape and habitat management plan?

Andy Coates: We see the badger mitigation plan as being a confidential annex to the LHMP, which as you know has been recommended for inclusion in the bill and would be enforced through that mechanism.

Malcolm Thomson: Will you remind us briefly what the difference is between an outlying sett and a main sett?

Andy Coates: It stems from the use of the sett. The main sett is the focus for badger activity, and it will tend to be a slightly larger sett, containing more animals, and with well-used paths. An outlying sett is sporadically used and can be anywhere in the badgers' territory.

Malcolm Thomson: What sort of sett will the tram construction affect?

Andy Coates: The only setts that will need to be closed for the tram are outlying setts.

Malcolm Thomson: Will you update the committee on the habitat retention figures along the corridor?

Andy Coates: We have considered habitat retention along the corridor and we have estimated that an area of approximately 3.4 hectares of habitat in the corridor is available for foraging within the social groups, 1.1 hectares of which would be lost as a result of the proposals. Based on the estimates of a 50-hectare foraging area for the individual groups, that equates to about 1 to 2 per cent of the foraging territory for the animals along the corridor. In essence, we are saying that more than two thirds of the habitat along the corridor will be retained and will be available to badgers as foraging territory.

Malcolm Thomson: From a badger point of view, is that significant?

Andy Coates: As we have mentioned before, there is little evidence of significant foraging by badgers along the corridor. Even so, only about 1 or 2 per cent of the area will be lost; typically, a loss in the order of 25 per cent is required before the effects on habitat are considered to be significant.

Malcolm Thomson: Will the loss of trees have an impact on the quality of the foraging areas for badgers?

Andy Coates: Not a significant one, because the food resource that badgers typically favour is earthworms. They eat fruit at certain times of the year. One of our proposals in the landscape and habitat management plan is to plant more fruit-bearing trees in the corridor.

Malcolm Thomson: Will you briefly summarise the survey work that informed the landscape and habitat management plan and the badger mitigation plan, and any further survey work that is proposed?

Andy Coates: As the committee has heard, in relation to badgers, surveys were carried out in December, January, March and April, which covered information on setts and used reverse bait-marking techniques to identify suitable locations for artificial setts.

Malcolm Thomson: Thank you, Mr Coates.

The Convener: I call Ms Woolnough for groups 34 and 45.

Kristina Woolnough: I ask you to bear with me, convener, as I will ask questions based on a number of Mr Coates's rebuttals to other witnesses. I will try to be focused, but I am afraid that this is my special area of research.

Mr Coates, we have just heard Mr Thomson talk about the percentage of foraging territory that will be lost. Your colleague Karen Raymond corrected some figures. I think that the figures that you just gave are the ones in your statement. Do your figures require to be corrected as a result of her corrections?

Andy Coates: The figures that I have just given are the corrected figures. Overall, about 68 per cent of the habitat will be retained for badgers, which is just over two thirds.

Kristina Woolnough: Most of my questions are about designations. In your statements you appear to say that some species are unprotected, therefore they do not matter, and that some have low-grade protection, which we should not worry about too much. There is a lot of subjectivity about whether something is protected or not. Will you help me by clarifying the designations?

Andy Coates: Several species, such as badgers and bats, are statutorily protected. A

number of other species, such as some bird species, are on the red list because of conservation concern, but they are not statutorily protected. To have an effect on a statutorily protected species, one must have consenting approval, which grants permission. Other species that do not have statutory protection are covered by permissions, but there is no legal requirement to protect them.

Kristina Woolnough: In the interests of ecological protection and the environment, although there is no legal requirement to conserve and protect red list species and even notable plant species, is it not desirable to do so?

Andy Coates: I agree. In any scheme that we examine, we consider the interests and try to build in mitigation to protect them in the long term.

Kristina Woolnough: I have a general question. As an environmental person, if you could have avoided using the Roseburn corridor, would you have done so?

Andy Coates: That is going back to route selection. It depends. The decision to use the Roseburn corridor was taken according to a range of issues, including environmental concerns.

Kristina Woolnough: My question might be unfair, but it is important. You have argued that, from an environmental point of view, you can achieve mitigation and various other aims. Your approach strikes me as somewhat pragmatic. Is that correct?

10:30

Andy Coates: Our approach is based on whether the Roseburn corridor can be used once the mitigation has been incorporated. Our view is that it can be.

Kristina Woolnough: Is it not the case that, for the wildlife, it would be better if the Roseburn corridor were not used?

Andy Coates: From an ecological point of view, that depends on the alternatives that are being considered.

Kristina Woolnough: But it might be better if the corridor were not used.

Andy Coates: Yes, it might be.

Kristina Woolnough: In your statement, you refer to bats, birds and badgers. How will links between the Roseburn corridor and other foraging grounds be maintained? I presume that the links are informal and are not necessarily signposted.

Andy Coates: The Roseburn corridor is quite wide. The designated site boundary is more specific, but the foraging areas used by wildlife in the corridor extend much further beyond its

confines into local gardens. Our surveys have shown that there is access at various points. Obviously, access is easier for birds, but surrounding areas are well used.

Kristina Woolnough: Informal links are created by animals burrowing and so on. Once construction starts, fences will be erected to stop people trespassing, and our community is concerned about how access for wildlife will be maintained.

Andy Coates: We do not think that the fencing that will be erected during construction will restrict badgers' movement. In fact, we have highlighted the need to erect other fencing to protect habitats that we are not infringing on, mainly to ensure that vehicles do not go into them. That would not preclude badgers' movement and, in any case, much of their movement takes place outwith the corridor on the tops of the slopes.

Kristina Woolnough: But badgers will need to cross the corridor to access their various areas.

Andy Coates: Even if fencing is erected at the bottom of the slope, it will not preclude the movement of badgers during the construction work. We are also introducing other measures in that respect. For example, if a ditch is dug at a known crossing route, planks will be put over it to allow badgers to walk over. Indeed, that is the traditional approach in many jobs, especially work on pipeline routes.

Kristina Woolnough: What about the destruction of the food chain for other small animals during construction?

Andy Coates: I do not think that we have ever denied that there will be some disruption to wildlife along the corridor during construction. However, our measures will not preclude the movement of other wildlife.

Kristina Woolnough: Have the links between foraging grounds for badgers and other species such as foxes been assessed and plotted? Have you introduced specific measures in that respect? Moreover, is it not the case that many mammals move randomly? They might have their preferred little routes, but how can you ensure that access will be maintained?

Andy Coates: Many areas, especially those on the upper slopes, will be retained; indeed, we have already pointed out that at least 68 per cent of the habitat will remain. As a result, many foraging areas in the corridor will still be available to animals, even during construction works.

Kristina Woolnough: Some foraging grounds might well be left, but the animals might be too frightened to use them because of the noise and vibration of the construction works. Has that situation been measured and assessed?

Andy Coates: I apologise for referring to badgers again, but much evidence suggests that animals such as badgers are a little bit more tolerant of disturbance than many people think. There is evidence that, on lines such as the channel tunnel rail link, badgers have lived happily in their setts within 20m of construction work and have still used the foraging grounds. Inevitably, some wildlife might be disturbed for a short period, but in general the works will not have any long-term effect.

Kristina Woolnough: But you cannot really measure that until work begins.

Andy Coates: It can be difficult to measure individual human responses. Animals are no different. Sometimes they respond in different ways.

Kristina Woolnough: So there is a risk.

Andy Coates: There is always a risk, but we feel that it is quite small.

Kristina Woolnough: There are potential impacts between humans and badgers—you have spoken about foraging grounds in people's gardens. Has the extent of that interface been estimated? What do you propose to do about it? Evidence submitted by the Edinburgh and Lothians badger group suggests that residents are tolerant and supportive of badger foraging, but what will happen if the foraging increases?

Andy Coates: It will depend on whether that happens. As you suggest, much of the badgers' foraging appears to be outwith the corridor—and we estimate that they will lose only 1 or 2 per cent of the area that is available to them. Evidence from surveys does not suggest that the badgers are using large areas of the corridor; most of their activity takes place outside the corridor anyway. That will not change; their present area will still be available to them.

Kristina Woolnough: But they might decide to move.

Andy Coates: We are saying that they will lose 1 or 2 per cent of their foraging territory, so there is a possibility that they will move. But the percentage is small and we feel that the risks of movement are not great.

Kristina Woolnough: Is it possible that the badgers will move sett if they are disturbed? Recent work on the corridor suggested that new setts were being made.

Andy Coates: That is right.

Kristina Woolnough: Is it not the case that the badgers will up sticks and move into someone's garden?

Andy Coates: That is unlikely. The new setts that were being created along the Roseburn corridor were mainly outlying setts, and they appeared at the time of year when there is a lot of badger activity, with animals moving around the corridor. That is not atypical at all.

We thought that there was a risk of disturbance to one of the main setts, which is why we proposed the artificial sett. The matter has been discussed at length with the badger group and SNH and we have agreed to put in an artificial sett, not because the main sett will be closed or disturbed, but because we thought that there was a risk, which we hope the artificial sett will address. If the badgers are disturbed, they will have somewhere else to go to in the meantime. Their main sett will still be there for them, but they will also have a more sheltered place to go to.

Kristina Woolnough: I presume that they may not necessarily choose your artificial sett.

Andy Coates: The evidence from artificial setts is quite encouraging. Badgers can be lured by honey and peanuts, which seem to draw them to artificial setts quite happily. In many schemes, usage of artificial setts is good.

Kristina Woolnough: Did you change the original location of the site that was proposed for an artificial sett?

Andy Coates: We did. After discussions with the badger group, we investigated another site and we all concluded that the new site was better.

Kristina Woolnough: I will move on to bats. In our evidence, we said that the bat surveys that were undertaken were not adequate in identifying roosts. Do you agree with that?

Andy Coates: I have talked in some detail with the people who did the bat surveys. Obviously, they had been out with detectors. The species in question is the pipistrelle bat and the vast majority of pipistrelle bat roosts are in houses. Ironically, they usually go for new houses—they obviously prefer modern, warmer buildings. The chances are that the bats will be roosting on the margins of the corridor. Bats will certainly forage along the corridor, but the people who did the surveys felt that the corridor did not offer many opportunities for roost sites.

Kristina Woolnough: In paragraph 1.7 of your statement, which we have rebutted, you say:

"No roost sites for pipistrelle bats were recorded."

That does not mean that there are not any.

Andy Coates: Bats are a bit nomadic; they tend to move around roosts. Even if we had recorded a roost on one particular survey, there is nothing to say that it would be there the next time we went out or that bats would ever use it again.

Pipistrelles can use 25 or 30 roosts at any one time.

Kristina Woolnough: All the roosts are protected.

Andy Coates: They are. In the LHMP and other information that we have provided, we say that all trees will be inspected before being felled. If there is any indication that there might be a roost, a licensed bat handler will investigate the tree further.

Kristina Woolnough: On bat foraging and feeding requirements, I assume that, if you take away trees, you take away insects and other bat food. Do you expect that the bats will go elsewhere to find food?

Andy Coates: Again, the bats are not restricted solely to the area. Obviously, they forage around the margins of the wider area of the corridor. As part of the proposals, we are looking to plant considerably more trees in the area. That will provide better foraging habitats for bats in the long term.

Kristina Woolnough: Surely there will be a time delay, though. The same argument applies to birds, does it not?

Andy Coates: Sure.

Kristina Woolnough: The birds might go away and not come back.

Andy Coates: The bat survey found that the main use of the area was by foraging bats, although use was quite low. Again, our view is that there will not be a significant effect on the bats along that area. Even though new habitat will be introduced, the situation will pick up quite quickly for them.

Kristina Woolnough: You can understand the concerns of local people and people who care about nature conservation about the displacement of bats, birds and badgers. It may be long term or short term, but it is of great concern to everybody.

Andy Coates: There is always a possibility of some displacement. It is difficult to get away from that in any scheme on this scale. However, the effects will be fairly minor.

Kristina Woolnough: You are aware of my evidence that the surveys could have been done to a higher standard. Is it your view that the surveys were done to the industry norm? Does the standard survey involve a detector gun for bats?

Andy Coates: Using a bat detector is an important part of bat surveys, as are daytime surveys, when people go out and look for roost sites. The answer is yes. Much of the methodology that was used is standard practice; it is well recognised.

Kristina Woolnough: Again, you are aware of the evidence that I submitted on how and when bat and bird surveys should be done. Plant and vegetation surveys should be done on a seasonal and thorough basis. My evidence was supported by documents from relevant bodies. What I am getting at is whether what you did is the industry norm. Is that all we can expect, especially when the promoter is a local authority?

Andy Coates: What we have provided is the level of information that we feel is necessary for a reasoned judgment to be made about the corridor. For badgers, it was necessary to do something much more detailed.

A bat survey can vary hugely. If you were to ask any recognised bat surveyor, they would say that the best thing is to do a survey much closer to the time, because bats change their roosts. We know that they are present in the corridor and that they forage there. We have seen no evidence of roost sites nor do there seem to be many opportunities for significant roosts along the corridor. The time to examine the position is much closer to the development stage. We should build in mitigation measures at that time. Bats are so variable about their roosts.

Kristina Woolnough: But it would be too late then to consider changing the route.

Andy Coates: Nothing that we have found in the area—and we stand by the information—gives us great cause for concern about bats. It would have been different if there had been a major roost along the corridor, but that is not what the surveyors who undertook the survey work said.

Kristina Woolnough: There seems to be a lot of chicken and egg in the information that you have submitted. Is that a fair assessment? If no surveys have been done, no species are there, but if you do a survey, you suddenly find species. Is that not the case?

Andy Coates: We have done surveys.

Kristina Woolnough: But you have not done one on invertebrates, have you?

Andy Coates: The ecological guidelines for doing invertebrate surveys recommend that surveys should be done in areas where particularly important habitats are to be found. I am talking about areas such as ancient woodland and fens. There is no such habitat along the Roseburn corridor. It is a good wildlife corridor, but there is no important habitat along the corridor that would trigger the need to do an invertebrate survey.

Kristina Woolnough: How about surveys of fungi? I note that you often refer to the biodiversity action plan, which says that there is to be a

campaign to promote awareness of fungi. Have you undertaken a fungi survey?

Andy Coates: Again, from doing the phase 1 habitat survey and looking at the original phase 1 habitat survey that the council did, it was felt that there was no need to undertake such work. That is in accordance with the guidelines for ecological survey work.

10:45

Kristina Woolnough: However, from the public's point of view, unless you do the survey, you do not know that a species is there, do you?

Andy Coates: We are talking about the level of survey that is required to be able to make a judgment, not necessarily about knowing every last species that is in an area. The aim is to know what the interest in the area is and, if there is any significant interest, to build in enough mitigation to make the scheme acceptable.

Kristina Woolnough: However, it would be too late to change the alignment if your composite picture, devised from different surveys, showed that there were quite a lot of different notable species. The composite picture—the corridor—has a designation, so I presume that it has some status, but it would be too late, would it not?

Andy Coates: The Roseburn corridor has the status of a wildlife corridor, which is about the movement of wildlife around the city. Typically, such habitats are of no more than local interest; they are not always particularly important habitats per se. Obviously, where there are protected species, we have looked into the matter further.

Kristina Woolnough: Are you able to give any evidence on why the 2005-09 biodiversity plan was different from the 2000-04 plan? One accepts the existence of the tram and the other does not.

Andy Coates: I am afraid that that is not something on which I can comment. That is a council document.

Kristina Woolnough: You describe the percentage of the habitat and the foraging ground that is to be retained. The percentage of the habitat that is to be retained is an average, is it not?

Andy Coates: We have taken the areas of habitat that we feel are available for badgers within their territory and have assumed that they forage in all of that area. As I have said, survey work does not necessarily support that; however, we have assumed that they do. We have then taken the loss out of that area.

Kristina Woolnough: So it is an actual amount.

Andy Coates: Yes—based on the figures that are available at the moment.

Kristina Woolnough: So, is 80 per cent, or two thirds, of their foraging ground in each circumstance being retained, or are there some areas where it will be wiped out completely and other areas where it will be kept completely?

Andy Coates: The amount is within the badgers' territory.

Kristina Woolnough: So there is an average.

Andy Coates: Sort of.

Kristina Woolnough: Can you tell us whether there are worst-case and best-case scenarios at different points in the Roseburn corridor?

Andy Coates: No, I do not think that we have looked at the corridor in its entirety. We tend to consider the overall picture of effects on species rather than the effects just at specific points. We feel that that is a more appropriate approach.

Kristina Woolnough: You will understand the concern about the fact that there could be a range of habitat loss. In some places it might be 5 per cent; in other places it might be 60 per cent.

Andy Coates: Within the overall territory that the badgers use and the areas in which they forage, the overall area that will be available to them is still important.

Kristina Woolnough: The landscape and habitat management plan, with its various mitigations, is an evolving document. Is it an aspirational document? What is the likelihood that everything in it will happen?

Andy Coates: The LHMP is an illustrative document that is based on the design as it is at present. It is an indication of what could happen. The final detail to be spelled out in the LHMP will depend on the final detailed design.

Kristina Woolnough: Have you had experience of other LHMPs and the reality versus the illustrative version? How do they compare?

Andy Coates: We have had some experience of situations in which there has been a specimen design and something has happened. Quite often, the reality and the LHMP are reasonably similar.

Kristina Woolnough: I presume that they are not always similar.

Andy Coates: No—not in every case.

Kristina Woolnough: We understand that the landscape and habitat management plan is to be included in the bill, which we welcome. When will it be finalised? Will that be the day before construction starts?

Andy Coates: The document will evolve as the design progresses: it will be built in as part of the design. If the design moves, the work on the habitats will go with it and it will all evolve together. The LHMP will certainly not be an add-on at the end of the process; it will be an evolving science in which the two documents will work in partnership.

Kristina Woolnough: Will there be a final point when the document is finished and construction starts the next week?

Andy Coates: Yes, there will be a final point when the document is finished.

Kristina Woolnough: Can you understand the concern that, when construction starts, there may be unforeseen consequences or things that people hoped would not happen? How will such things be accommodated?

Andy Coates: As with all such arrangements, the document will be agreed with bodies such as Scottish Natural Heritage and the council. Any changes to the document will be discussed before it is finalised and any change to the design will be accommodated.

Kristina Woolnough: Will there be general consultation of local people?

Andy Coates: There will be consultation of the council, but I cannot comment on whether it will go wider than that. I am sure that there will be opportunities for you to offer input to the process, as there have been to date.

Kristina Woolnough: Actually, there have not been such opportunities. We have just been shown the document.

Andy Coates: Comments that have been made at various council meetings and other local meetings have been taken on board in producing the document.

Kristina Woolnough: On enforceability of the landscape and habitat management plan, would the ideal situation be that an independent watchdog would look after that?

Andy Coates: That would be perfectly acceptable: it is mentioned in the bill. Independent people from SNH and other bodies will have to give their views on the LHMP and agree to it. That will happen as part of the natural process because it is part of the bill.

Kristina Woolnough: Will those people be involved in the LHMP other than in connection with badgers?

Andy Coates: Certainly—we will always give them copies of the plan to read, comment on and agree with.

Kristina Woolnough: Can we rely on those people to be an independent watchdog?

Andy Coates: I think so.

Kristina Woolnough: Our concern, as you can perhaps understand, is that the council is the watchdog and also the developer, which is not, I presume, a common circumstance. The council is normally the watchdog for such habitat plans when another body is involved as the developer.

Andy Coates: The two functions will be carried out by different parts of the council. I have no doubt that they will follow the due process, so I do not really have any concerns about that.

The Convener: While you are considering your next question, I would like to tell people that not all modern buildings are warm. You may have noticed the open window, which we are trying to get closed. The computer says that it is closed, but we can see different, so when we break for lunch at half past 12, scaffolding will be erected in order to close it. If anybody feels desperately cold, please help yourself to an overcoat—whether it is yours or not is probably irrelevant—and we shall press on.

Kristina Woolnough: I shall take an overcoat with money in the pocket, if I might.

Mr Coates, you describe the breeding season for badgers as being from 30 November to 1 July. Is there also a designated period for the nesting of birds?

Andy Coates: That period is often taken as being from about the middle of March to about the end of July, although some birds breed later than that.

Kristina Woolnough: Are there any other such time factors that the contractor will need to take into account?

Andy Coates: There are seasonal implications for bats.

Kristina Woolnough: What is their danger zone?

Andy Coates: Again, a lot depends on whether you are talking about roosts. If there were a summer roost, we would not want to foul that while the bats are using it, so we would leave such work until later in the summer.

Kristina Woolnough: What is the window of opportunity for construction? It looks awfully small.

Andy Coates: That will depend on interests and on what restricts construction, but it will be an issue only in certain locations. One reason why licences will be applied for is so that work can be done at certain times of the year. For the badgers, however, we are building artificial setts and trying

to build in provision that will, we hope, make things easier for them.

Kristina Woolnough: Can we assume that construction will take place only between July and November?

Andy Coates: We must also consider how to deal with birds' breeding season, for example. Habitat removal is obviously a key factor and one of the ways of addressing that would be to remove some of the habitat in the areas that were to be worked in before the breeding season started. That would avoid any problems during the breeding season.

Kristina Woolnough: Who will manage all that? The process sounds complicated. Removal will have to be considered on a tree-by-tree basis, depending on what species are involved.

Andy Coates: The contractors will have written procedures for the work. Method statements will be drawn up, which will refer to agreements and codes of construction practice that they must honour. That is all documented.

Kristina Woolnough: Will the contractors employ an expert?

Andy Coates: Yes. The contractors—whoever they are—will have their own experts. They will need to bring in licensed bat handlers and licensed badger experts to advise them.

Kristina Woolnough: Has the badger mitigation plan that has been mentioned this morning been factored into the code of construction practice, the timetable and so on?

Andy Coates: I presume that much of the detail of that is still to be addressed because we have yet to go through the detailed design stage. However, it will be addressed as part of the next stage of the process.

Kristina Woolnough: Will construction of the bridges, badger tunnels and so on impact on the ground stability of the embankments and cuttings? There are many elements to the work, including tree felling and dealing with badger setts by making tunnels and installing fences to protect trees or to stop badgers doing this, that and the next thing. Surely that will all have an impact on ground stability.

Andy Coates: We drew up the badger mitigation plan in full consultation with the engineering and design team. As the plan incorporates that team's views, we are confident that it will address those issues.

Kristina Woolnough: The main sett, which is near the Holiday Inn, has been there for 40 years and is fairly extensive. Can you be sure how far underground it spreads?

Andy Coates: With a badger sett, the entrance is the furthest bit out and the sett goes back from there. In the area you are talking about, we will be working some distance from the entrance and the work will all be going in the other direction, so there is no danger of the sett being affected.

Kristina Woolnough: I have not seen the mitigation plan, so it is difficult to know what is in it. Does it show where the badger fencing will be during construction and when the tram is operational?

Andy Coates: It does not show that at this stage, although it contains a commitment to put in badger fencing. We have some outlines of designs for tunnels that would maintain longitudinal use along the corridor and at the corridor's crossing points. Obviously, such tunnels will be linked in with the badger fencing. Much of that will be dependent on the detailed design work, which is the next stage of the process.

Kristina Woolnough: I presume that although badger fencing is low, it must go quite far down into the ground.

Andy Coates: It is necessary to sink the fencing down into the ground by a few hundred millimetres and to pull it back underneath because badgers have a tendency to dig down and under it. If the fencing is pulled back underneath, badgers cannot dig through it. Typically, badger fences are 1.3m high.

Kristina Woolnough: Where would such fencing be? Would it be on the sides of the cuttings and embankments?

Andy Coates: That will vary, depending on whether we want to guide the badgers longitudinally underneath an existing bridge, for example. There are various options on that—we might want to bring the fence right down almost to track level to guide the badgers through the opening underneath the footway, or we might want to put it a bit higher up to guide them through the abutment.

Kristina Woolnough: Has the badger mitigation plan been costed?

Andy Coates: Yes. An allowance has been made for the elements that are included in the plan at this stage.

Kristina Woolnough: Are we allowed to know what the figure is?

Andy Coates: I cannot tell you the figure at the moment.

Kristina Woolnough: Has that cost been included in the full budget? Was it factored into the original costing for the tram project?

Andy Coates: You will probably have to ask Transport Initiatives Edinburgh about that.

Kristina Woolnough: Will the contractor follow SNH's construction guidelines in relation to hand digging and so on near setts?

11:00

Andy Coates: Very much so. As part of the licensing process, SNH will have to approve the BMP.

Kristina Woolnough: I will move on to your rebuttal of my evidence. As we mentioned, you describe the surveys as "adequate". You also describe what is legally required. Given that the promoter is a council, can we reasonably expect it to go a pitch higher than that and do what the public might expect?

Andy Coates: The issue is about doing what is required to obtain the information that is needed for the job, rather than what anybody expects. That is the work that is being undertaken.

Kristina Woolnough: There has been no invertebrate survey, no fungi survey, no other mammal survey and no plant survey.

Andy Coates: A phase 1 habitat survey was carried out and a report was produced. Under the ecological guidance, several detailed surveys were not deemed necessary, on the basis of what is present in the corridor.

Kristina Woolnough: I want to talk about wild onions. The species was listed as notable in the evidence that I lodged. You say that the species does not matter, because it did not appear in the biodiversity plan. Does it matter whether it is notable?

Andy Coates: If the wild onion had been a notable or protected species, that would have more credence. Through the LHMP, we are trying to enhance the remaining habitat with native species from the area. Wild onion occurs there and in other places, but it is not a notable species in its own right.

Kristina Woolnough: But it is a notable species.

Andy Coates: It is not on any of the red lists or notable species lists.

Kristina Woolnough: I lodged evidence that the species is on somebody's register of notable species.

Andy Coates: I remember seeing a table, but wild onion was not down as a notable species on the list.

Kristina Woolnough: That is why I am seeking clarification. The Lothian wildlife information centre gave me a list of two species.

Andy Coates: I remember that table, but when I looked at it, I found that it did not refer to wild onion as a notable species.

Kristina Woolnough: I asked the Lothian wildlife information centre about notable species and was given a list of two. I took that to mean that there was such a notable species.

Section 2.2 of your rebuttal of my evidence refers to soil nails. What are they, if that is not a misprint? They are something to do with construction and holding things up.

Andy Coates: Could you point me to the paragraph?

Kristina Woolnough: It was to do with loss of trees. At the end of the first paragraph in section 2.2, you state that

"special measures (such as soil nails)"

might be deployed.

Andy Coates: I think that that is about stability.

Kristina Woolnough: Perhaps your tree expert wrote that for you.

Andy Coates: I might have to come back to you on the issue.

Kristina Woolnough: We will leave it, in that case.

I am not sure whether your rebuttal of my evidence states that trees may be lost.

Andy Coates: Where there are mature trees, we will look to replace them on a one-for-one basis. Where there are younger trees, the basis will in effect be more than one-for-one, although that will be the minimum. Under the LHMP, there will be more trees, rather than fewer.

Kristina Woolnough: Will we have the canopy effect that we have at present, with an overstorey and understorey and the other ecological structures?

Andy Coates: We will try to build in a good structure. Younger trees will often be put in because they establish better, but in areas where we will lose mature trees, we will try to put in standard trees, which are much bigger to start with. There will be a mixture of trees. We are trying to create a structure with a ground layer, shrub layer and canopy.

Kristina Woolnough: Will there be a canopy over the corridor? To use a non-technical term, we have a green tunnel at present. I understand that an issue arises in respect of the overhead cables.

Andy Coates: I think that it would be difficult to achieve such a canopy because of the overhead lines, which will need to be kept clear. You would not necessarily get the complete—

Kristina Woolnough: The complete join at the top of the green canopy. Do you agree that that is a special feature of the Roseburn corridor?

Andy Coates: It can be. However, in some areas, it can shade out a lot of light, which means that some of the understoreys are devoid of plants. There are pros and cons.

Kristina Woolnough: You talk about the role that trees play in absorbing carbon dioxide and noise, which were issues of concern locally. You say:

"The role of trees in absorbing carbon dioxide has no impact on local air quality but only on global climate change."

That is quite an important impact, is it not?

Andy Coates: The amount of trees that we are talking about along the Roseburn corridor is probably quite small in terms of global impact.

Kristina Woolnough: Have you conducted an environmental loss/gain measuring process in relation to using the Roseburn corridor, on one hand, and having a tramline, on the other?

Andy Coates: From what sort of—

Kristina Woolnough: From a wider perspective. Earlier, I asked you if you would use the Roseburn corridor if you could choose not to.

The Convener: I gave you considerable leeway earlier; however, we are dealing with ecological impact, not route selection.

Kristina Woolnough: Okay. Under paragraph 2.3, you talk about formal arrangement of planting. Again, as you can imagine—can you?—local people are concerned that the character of the area will be lost if, at platforms, we are to have rows of petunias or something. It will not be what we are used to.

Andy Coates: That would be a bit out of character.

Kristina Woolnough: You talk about a slightly more formal arrangement of planting, but that need not mean that it will be what we might call "parks style".

Andy Coates: No. We are looking to blend some of the areas that will have an element of formal planting into the more natural look of the corridor. However, we will use the same species. We will not introduce a load of ornamental species.

Kristina Woolnough: At the end of paragraph 2.3, you say:

"Whilst the proposals will have an adverse impact they do present an opportunity to enhance the remaining vegetation".

There is an issue there: because the process has not been properly managed, there is a big

question of trust. The council has not managed the corridor to date and that fact has, in promoting the bill, been used as a justification for using the Roseburn corridor. Is not it the case that, had the council managed the corridor properly, you would not be able to say now that the tram will enhance the corridor?

Andy Coates: I cannot really comment on the previous management issues relating to the corridor. We are dealing with the corridor in the state that it is in at the moment.

Kristina Woolnough: Would you be able to use the same argument if you were arguing for another developer in a similar situation? It seems to me that neglect has become a merit. That is unlikely to wash in another context.

Andy Coates: We treat every situation as we find it, regardless of how the situation has arisen.

Kristina Woolnough: Reverting quickly to the survey issue, you say that the bat survey was adequate. Was it an example of best practice or was it just adequate?

Andy Coates: The survey was conducted using methods that are accepted as being best practice.

Kristina Woolnough: Did the survey have regard to seasonality and other factors that are included in best practice?

Andy Coates: One could argue—as I think you have—that it might have been better to conduct a survey earlier in the year or in the middle of the summer. Again, the view of the specialists who undertook the work was that, if they had undertaken the survey in June, for example, they would have found perhaps one or two more bats. That would not have changed much in terms of the outcome.

Kristina Woolnough: In terms of the insects and the fly that I was asking you about, is it true that the fact that there is no record of something does not mean that it does not exist?

Andy Coates: That is true.

Kristina Woolnough: Good. We are agreed.

What I am asking is this: is it for the promoter to disprove the existence of a protected species or is its role to hope that there is none, and is it for the objectors to prove that such species are there?

Andy Coates: In the surveys, we have looked for protected species that are likely to be of interest along the corridor. There was no reason, based on the habitats that were present along the corridor, to do detailed insect surveys.

Kristina Woolnough: What will the impact of the loss of vegetation and trees be on birds, bats, insects and other animals—the whole food chain?

It seems to me that the construction period is, as it were, the most dangerous period for the functioning and maintenance of the wildlife corridor. What impact is construction likely to have?

Andy Coates: We see the impact as being small and very short term. Work along the Roseburn corridor will be done pretty quickly. There is a lot of forage for all species outwith the corridor as well as within it; I do not see the work being a grave issue for the Roseburn corridor.

Kristina Woolnough: Your survey showed that four red-list species of bird were present, but again you seemed to suggest—"So what? They are red-list species, but they are not uncommon, so it does not matter." Does it or does it not matter?

Andy Coates: We are not saying that it does not matter. We have acknowledged that there are some red-list species along the corridor; in doing the work for the landscape and habitat management plan we have built in mitigation to try to do our best for birds by providing more habitat by putting in fruit-bearing trees and providing more nesting habitat—perhaps more than there is now.

Kristina Woolnough: What do you guess would be the time delay between the planting of young trees, bushes or whatever and when they might fruit or become a suitable habitat for nesting?

Andy Coates: That will depend on the species. We sometimes find that different species use areas when they are newly planted. A lot of ground-nesting birds—some warblers—will take well to some of the new areas because they nest on the ground and some grass might grow between the trees. The situation is not black and white; it will not be all doom and gloom for one or two years or whatever. As soon as there is planting, species will start to colonise the area.

Kristina Woolnough: But the area might change.

Andy Coates: Some things might change.

Kristina Woolnough: What can be done if the impact of construction on badgers, for example, is disastrous in that they start running out on to roads and so on?

Andy Coates: None of the evidence that we have seen from elsewhere points in that direction.

Kristina Woolnough: I will move on to your rebuttal of Sue Polson. In some areas of the corridor the removal of trees and vegetation will be virtually wholesale. After the tram becomes operational, no vegetation will be left in the area that birds inhabit near Mrs Polson's garden. In some areas there will be not only temporary displacement but total removal of, for example, bird life.

Andy Coates: Some species will be displaced. At one or two areas along the route there are narrow points, which may be left with vegetation on one side rather than the other, but that does not mean that we are taking away all the vegetation. The species could use other areas, which is why we are planting up other areas to try to provide additional habitat.

Kristina Woolnough: I will move on to your rebuttal of Patricia Alderson, who is a badger group representative. You offer reassurance about the drainage and the tunnels. We have heard residents talk about drainage issues in the Roseburn corridor. Are you satisfied that that is no longer an issue?

Andy Coates: Yes. Various designs for tunnels have been built into the BMP. One of the designs provides the option that when a tunnel goes down a cutting there is a filter drain to ensure that the tunnel does not flood.

11:15

Kristina Woolnough: Convener, I am concerned that the badger mitigation plan may contain the answers to some of my other questions and I do not know whether we should hold fire until we have seen it.

The Convener: The only opportunity that you will have for questioning will be when you, as objectors, lead your own witnesses. As we heard earlier, the plan has been sent to SNH and the Edinburgh and Lothians badger group. If you want to hold off until you have seen it, you could lead your own witnesses on areas of concern.

Kristina Woolnough: Okay. We will do that.

I have articulated some of our anxieties about badger foraging activity. Will badgers be channelled into people's gardens, in effect?

Andy Coates: One thing that we seek to do is maintain badger movement in the corridor. That is important. Obviously, badgers go into people's gardens at the moment and we will not change that, but we will ensure that tunnels are available so that they can keep their longitudinal movement and can move across the corridor.

Kristina Woolnough: Has research been done on whether badgers prefer to go across someone's nice green lawn or into a tunnel if they have a choice?

Andy Coates: I am not sure whether specific research has been done on that matter. Badgers both use tunnels and go across people's gardens.

Kristina Woolnough: So they make individual choices.

Andy Coates: Yes. They have individual trails.

Kristina Woolnough: Okay. Currently, there are grass verges along most of the cycle path in the corridor. Will they be lost?

Andy Coates: On some of the immediate sections, yes, but we are certainly looking to plant more grassland areas and to provide more foraging areas as part of the LHMP.

Kristina Woolnough: Will the grass track that we are not sure will exist attract badgers on to it?

Andy Coates: We will try to keep badgers off the track by tunnels and fencing. Obviously, other issues are involved. We do not want badgers to wander around the track.

Kristina Woolnough: Has the marriage of grass, trams, track and badgers been tested elsewhere? Has trying to divert badgers been tested elsewhere?

Andy Coates: I am not aware of any information on that matter.

Kristina Woolnough: I refer to paragraph 2.3 of your rebuttal to my witness statement for group 45, which is about mammals. Do you accept that the mammals that are mentioned may, with or without protection, inhabit the Roseburn corridor?

Andy Coates: Are you referring to your rebuttal statement?

Kristina Woolnough: No—I am referring to your rebuttal of my witness statement for group 45, paragraph 2.3 of which deals with other mammals.

Andy Coates: I have no doubt that some of those species are present along the corridor and that they use it.

Kristina Woolnough: They are obviously part of the food chain and the corridor's biodiversity, which we have discussed. Do you know what the impact of construction will be on the food chain and on those smaller mammals?

Andy Coates: One reason why we want to retain as much habitat as possible along the corridor is that there will be effects on those mammals. We will retain as much habitat as we can in the area in order to make as much area as possible available to them.

Kristina Woolnough: You say that, under the legislation, construction should not

"inflict unnecessary suffering on wild animals".

That is a fairly catch-all phrase. Who will measure the suffering that has been caused?

Andy Coates: It is all about good practice, which will be built into the contractors' working methods. Such practice is well established from schemes of a similar size and scale elsewhere.

Kristina Woolnough: What can be done if someone complains that they have seen a mammal that has come from the cycle path crawling across their lawn?

The Convener: For the committee's benefit, may I ask you where you are going with your line of questioning? Where is your end point?

Kristina Woolnough: My end point is that no protection is afforded to some mammals that are a crucial part of the food chain in the designated wildlife corridor, which is why it is as successful as it is. It seems to me that we must look at the wider picture in the context of the food chain as well as the legal protection.

The Convener: Perhaps posing that as a question would draw the information out of Mr Coates. Do you regard that as a problem, Mr Coates?

Andy Coates: No. In essence, we are maintaining the function of the wildlife corridor, which is important. All the species will still be able to move along the corridor; we are not going to prevent that.

Kristina Woolnough: I think that I am done. Everything is going to be fine then, is it not, Mr Coates?

The Convener: It is interesting that you are not under oath, Ms Woolnough—we might just include that in our report. I call Mr Jones for group 35.

Alan Jones: Mr Coates, did you say earlier how badgers would go on road bridges, such as the one by St George's School?

Andy Coates: We are looking at various options on bridges. There could be tunnels going through the abutments at the side—there could be fencing to lead the badgers in so that they could go straight through and along the embankments. We could look at options that take them down underneath the walkway, again with fencing to push them down towards the entrance and take them under and through. We could use a range of options.

Alan Jones: I mentioned the bridge at St George's, because the road track there goes down about 2m, so there will be a high wall. If animals get on to the tram track, how will they get off again?

Andy Coates: We are trying to prevent animals from getting on to the track. There will be very few areas where they are able to access the track. On the odd occasion when one or two animals get on to it from a pedestrian access, they might have to wander along to the next access point. Given the measures that we are going to put in, the chances of that happening will be very much reduced.

Alan Jones: That was my only query.

The Convener: Thank you, Mr Jones. Do committee members have any questions?

Helen Eadie (Dunfermline East) (Lab): My questions have been asked.

Phil Gallie: At one point, Mr Coates, you talked about the construction periods of the time of year, but the construction period is liable to run for quite a long time. You also said that you will try to ensure that the removal of trees and so on avoids the nesting season and that other seasonal conditions with respect to other species are taken into account. Will that be built into the landscape and habitat management plan against a timescale base?

Andy Coates: To be able to do the work, the constructors are going to have to time everything to produce a proper programme. The commitment to that and the process of it will be in the landscape and habitat management plan, the code of construction practice and employers' requirements. It is difficult to comment on the timescales at the moment, because they are dependent on further development of design and contractors' proposals for development. All those issues will be built in and taken account of. That is a standard part of any big development scheme.

Phil Gallie: I have been involved in some big developments in civil engineering. With projects like this one, which can be extensive and are carried out over a reasonably lengthy period, I cannot remember being able to build in requirements to preserve all species' breeding and foraging habits. Do you think that there will be a timescale base built in for the contractors that might allow them to do some things between July and November and not allow them to repeat them until the following year?

Andy Coates: There might well be. That is the sort of approach I would envisage, but I cannot comment on the matter in detail, because it is something for the contractors to consider when they draw up their final ways of working. It would be taken into account.

Phil Gallie: Okay. It should be built into the plan.

Andy Coates: It will be.

The Convener: As there are no further questions for Mr Coates, I thank him for giving evidence today.

The next witness is Andrew Oldfield, who will address his group 34 rebuttal witness statement on access to the walkway. Mr Thomson?

Malcolm Thomson: Thank you, madam. I have no questions for Mr Oldfield at this stage.

The Convener: Thank you. Ms Woolnough?

Kristina Woolnough: Good morning, Mr Oldfield. In your statement, under loss of amenity, you state that the survey that was undertaken by Mott MacDonald shows that the cycle path

"is used predominantly as a commuter route."

Did you survey the path at the weekend to see whether usage is similar?

Andrew Oldfield (Mott MacDonald): I believe that the survey was done during the week.

Kristina Woolnough: Are you aware that our survey was done at the weekend and shows that usage of the path at the weekend is exactly the same as usage during the week?

Andrew Oldfield: Yes.

Kristina Woolnough: So your statement that the path is predominantly a commuter route is not correct, is it?

Andrew Oldfield: Not at weekends.

Kristina Woolnough: You mention the average usage and you claim that cyclists' and pedestrians' journeys will be spaced out. As our surveys demonstrate, that is not correct in terms of actual usage. Are you aware that cyclists and pedestrians do not space out their journeys conveniently so that they do not collide?

Andrew Oldfield: My understanding is that the flow of cyclists and pedestrians is not what the Scottish Executive would describe as high. The frequency of usage is unlikely to lead to conflict between cyclists and pedestrians.

Kristina Woolnough: Have you experienced the Roseburn corridor to assess whether that is actually the case?

Andrew Oldfield: I have visited it on a number of occasions.

Kristina Woolnough: Did you find that everything flows freely and that there is no risk to pedestrians from commuter cyclists, for example?

Andrew Oldfield: I have seen no problems at all.

Kristina Woolnough: Okay. Mott MacDonald undertook its survey on 4 August. Are you aware that that was during the school holidays?

Andrew Oldfield: Yes.

Kristina Woolnough: So you were unable to factor in the children who walk or cycle to school as part of the general usage and m  l  e.

Andrew Oldfield: Yes.

Kristina Woolnough: You state:

"No more than 1100 people per day use the ... corridor."

Are you aware that our survey was conducted only between 8 am and 5.30 pm, so the many users before and after that period were not counted?

Andrew Oldfield: My understanding is that those people are included in the 1,100 people per day.

Kristina Woolnough: That is not the case. There are 1,100 people per day within that timeframe. Is it not the case that the cycle path is used each day by many more people than either your survey or our survey identifies? The surveys were carried out within set periods of time.

Andrew Oldfield: I had not understood that from the survey information that was made available.

Kristina Woolnough: Okay. You state:

"The operational tram scheme will not have an adverse effect on cycling provision."

Will it have an adverse effect on cycling amenity?

Andrew Oldfield: There will be impacts, but people's enjoyment of the space as they cycle through it is a subjective matter. I would not like to comment either way, because that is not my field.

Kristina Woolnough: Okay. You go on to say:

"The promoter is committed to maintaining, and in some areas widening the existing pedestrian/cycle route".

Where will you widen it?

Andrew Oldfield: In some locations the cycle path is narrower. At those locations, it will be widened so that it is 3m wide.

Kristina Woolnough: So it will not be wider than 3m.

Andrew Oldfield: No.

Kristina Woolnough: Is it also the case that you will narrow it at a number of points?

Andrew Oldfield: At some of the bridge locations, yes.

Kristina Woolnough: To what width will you narrow it?

11:30

Andrew Oldfield: The narrowest point would be about 2.5m, but as that is not in my rebuttal I do not know off hand.

Kristina Woolnough: I think that it is less than 2.5m, if that helps you. You also say:

"Lighting levels will be improved creating a much safer environment".

Where is your evidence that the environment is unsafe now? Where is your evidence that it will be safer?

Andrew Oldfield: My understanding is that Mr Turner has consulted the police, who feel that safety would be improved by the additional lighting.

Kristina Woolnough: But there is no evidence to support that, is there?

Andrew Oldfield: Not as yet.

Kristina Woolnough: In the next paragraph, under the "Issues in dispute" heading, you average out pedestrian users throughout the day. Your survey of peak times—in the school holidays—did not show the number of pedestrians who normally use the corridor. Do you agree that that is possible?

Andrew Oldfield: It is possible.

Kristina Woolnough: Okay. You also spread the number of pedestrian users over a 10-hour day and work out pedestrian usage as less than two persons a minute. Is it fair to say that statistical modelling does not show how humans behave?

Andrew Oldfield: Yes, there will be perturbations rather than a continuous average.

Kristina Woolnough: You say:

"Ms Woolnough's concerns over conflicts between pedestrians and cyclists on a narrow cycleway would appear unfounded."

Is that statistically unfounded, as opposed to unfounded in experience?

Andrew Oldfield: As I say, I have visited the Roseburn corridor several times, including at peak hour, and have not experienced any problems.

Kristina Woolnough: You have not conflicted with cyclists?

Andrew Oldfield: No. I am not aware of any conflicts.

Kristina Woolnough: Would you like to come with me and my children to the Roseburn corridor on a school morning?

Andrew Oldfield: I would be happy to do so.

The Convener: I am not sure how relevant this line of questioning is to the bill, Ms Woolnough.

Kristina Woolnough: It was a question; it was an invitation.

The Convener: Regardless of whether it was a statement or a question, I am not sure about its relevance to the bill.

Kristina Woolnough: Okay. Mr Oldfield, your rebuttal also states that none of the accesses to the corridor is compliant with the Disability Discrimination Act 1995. You say that cyclists and pedestrians would still have full access to the

route. Is it fair to say that access and amenity are not the same thing?

Andrew Oldfield: Yes.

Kristina Woolnough: As part of your evidence—and some of your colleagues have made the same points—you say that making some accesses DDA compliant would be a benefit of the tram. Could the council not make accesses DDA compliant now?

Andrew Oldfield: It could certainly improve the present position.

Kristina Woolnough: Therefore, DDA compliance is not necessarily a benefit of the tram. It is—

The Convener: Ms Woolnough, we would get on better if we stuck to the tram. I am not sure that this point is relevant, either.

Kristina Woolnough: I will not go into the planning stuff, because it is not for today.

Mr Oldfield, under the heading “Tram impact”, you say:

“Based on the current timetable there will be only 1 vehicle every 3.75 minutes”.

How many motorised vehicles use the Roseburn corridor at present?

Andrew Oldfield: Almost none.

Kristina Woolnough: None to one vehicle every 3.75 minutes is a considerable increase, is it not?

Andrew Oldfield: It is an increase.

Kristina Woolnough: An exponential increase. You say:

“Group 34’s concern appears to be primarily that of the interaction between cyclists and pedestrians and the tram system.”

I think that we dealt with speed and suchlike. Your colleague Scott McIntosh will come later. Are some of your views in support of trams subjective, as opposed to evidence based? I refer to your comment that the access to and security of the corridor will be improved.

Andrew Oldfield: That is not evidential.

Kristina Woolnough: Thank you. That is all.

The Convener: Thank you very much, Ms Woolnough. Do committee members have any questions? There are no questions. Does Mr Thomson have questions?

Malcolm Thomson: No, thank you.

The Convener: On that basis, I thank Mr Oldfield for his evidence.

The next witness is Professor Brian Evans. To assist with evidence taking, I have divided his oral

evidence into two parts. The first part will concern the visual impact of overhead line equipment in relation to groups 33 to 36, 43 and 45. I call Mr Thomson.

Malcolm Thomson: Professor Evans, will you remind us of the scope of your involvement in the design manual?

Professor Brian Evans (Gillespies): I was director of the team in my practice whose members acted as facilitators and co-ordinators with the line 1 team, the line 2 team, the promoter and other agencies in leading up to producing the content of the draft design manual, which was achieved in March 2004.

Malcolm Thomson: Have you had any involvement since then?

Professor Evans: No. The promoter has developed the design manual since then.

The Convener: I call Ms Woolnough to ask questions for groups 34 and 45.

Kristina Woolnough: I am sorry; I have not divided my questions according to your subjects, but I will try to do that as I go along.

The Convener: I will keep you right.

Kristina Woolnough: Professor Evans, will there be a visual impact on the Roseburn corridor from within the Roseburn corridor, which your witness statement does not take into account?

Professor Evans: There will be visual effects.

Kristina Woolnough: I am thinking of the vistas and views from places such as the Coltbridge viaduct, which is part of the conservation area. The impact of the overhead line equipment on them will be significant.

Professor Evans: Not necessarily. If you are talking about views out from the viaduct, we did not assess them in detail. We considered more the effects on viewing into the structures—when they are seen from outside.

Kristina Woolnough: Does that mean that you have not assessed that impact?

Professor Evans: You asked whether a significant effect would take place. The answer is not necessarily—that depends on the viewer’s position. If a viewer is on the tram or standing immediately adjacent to an upright, they will experience a visual effect, but if they move aside and look out, that will not occur, because they will not see the upright.

Kristina Woolnough: We understand that at the Coltbridge viaduct a path may be on either side of the tram track so that, where people have a view in either direction from there at present, their view will be impeded.

Professor Evans: If people look into the corridor as opposed to viewing out—I am sorry; you asked me about views out. If people look into the corridor, they will see the OLE, which will have a visual intrusion.

Kristina Woolnough: I think that we misunderstand each other.

Professor Evans: I am sorry.

Kristina Woolnough: The evidence and rebuttals to your statements that I submitted were about assessing the impact of the OLE when people are in the Roseburn corridor.

Professor Evans: I have answered that. The OLE will have a visual impact on the Roseburn corridor.

Kristina Woolnough: For users of the corridor?

Professor Evans: Yes.

Kristina Woolnough: I have questions about the status of the design manual. Will it be incorporated in the bill?

Professor Evans: On the development of the design manual, I defer to my colleague Mr Jones. He will discuss how it is being developed.

Kristina Woolnough: Going from being a designated urban wildlife site to having the streetscape features associated with a tram will have a complete character-changing visual impact on the Roseburn corridor, will it not?

Professor Evans: The character will change. I agree.

Kristina Woolnough: Were you aware, when you wrote your witness statement, that Historic Scotland was considering listing some of the bridges such as the Coltbridge viaduct and that a conservation area designation was pending for the Coltbridge viaduct?

Professor Evans: I am aware of the fact that Historic Scotland is keeping the various elements under review. However, I based my evidence on the actual designations.

Kristina Woolnough: Has your view changed, now that the Coltbridge viaduct is part of a conservation area and its outstanding views have been noted particularly?

Professor Evans: Not necessarily.

Kristina Woolnough: That is all, thank you.

The Convener: Thank you, Ms Woolnough. Do committee members have any questions?

Rob Gibson (Highlands and Islands) (SNP): Are there any other conservation sites in Edinburgh where the introduction of electricity lines, telephone lines and so on has altered the

visual landscape of the architecture since it was first built?

Professor Evans: Yes, there are numerous conservation areas in Edinburgh. Almost the whole of the centre of Edinburgh is designated as a conservation area in one way or another. Being a modern, vibrant city, Edinburgh is subject to constant change. I believe that it is the objective of the body politic to ensure that that change is undertaken in as mature, composed and elegant a way as is possible when dealing with the historic fabric.

Rob Gibson: Do you think that the proposals that have been made—reference has been made to the viaduct and so on—will comply with that kind of approach?

Professor Evans: In general, I do. To answer your question, I need to take a step back. In my view, as an urban designer, the decision to use a route such as the present one is sensible, as the Roseburn corridor was once a corridor through the city. Of course, such corridors change over time. Taken over historic time, these are the sort of changes that one understands might be introduced into cities. Therefore, in general, I agree with the assertion that the level of change is acceptable in relation to the historic fabric.

The Convener: There are no further questions from committee members. Mr Thomson, do you want to ask any follow-up questions?

Malcolm Thomson: No, thank you.

The Convener: Okay. Professor Evans, I move you on to address the issue of the effect on the world heritage site, in relation to groups 33, 34, 35, 36 and 43. Mr Thomson.

Malcolm Thomson: Professor Evans, in paragraph 4.2 of your witness statement, you refer to the world heritage site. Can you clarify for us the extent of the world heritage site at this particular point?

Professor Evans: Yes. That sentence would be clarified by the introduction of the words “the immediate setting of” in front of the words “the World Heritage Site”. The issue is that the world heritage site splits the Coltbridge and Wester Coates conservation area. The world heritage site boundary runs through the centre of that area—part of the conservation area is within the world heritage site and part of it is not. The route of line 1 runs along the edge of the conservation area. Its implications are, therefore, for the setting of the world heritage site rather than for the world heritage site itself.

11:45

Malcolm Thomson: Does that make any difference to the exercise that you have carried out

when it comes to assessing the sensitivity and care that any change in the area might require?

Professor Evans: No, I do not think so. The sensitivity and care scrutiny that is needed in this area is just as important, primarily, but not solely, because of its designation as a conservation area.

Malcolm Thomson: Would you agree with the general proposition that the less the tram impacts on the world heritage site, the better?

Professor Evans: Yes, as a general proposition, I would indeed agree with that.

The Convener: I call Ms Woolnough for group 34.

Kristina Woolnough: Mr Thomson has kindly sought the clarification that I wished to seek about the world heritage site boundary. The suggestion that you have just made is that the more the tramline is out of the world heritage site and is in places such as the Roseburn corridor, the better. Why, then, is another former railway corridor not being used? Why is there a preference for the tram to go on-street everywhere else?

Professor Evans: I cannot answer questions about the engineering or operational decisions on where a tram is routed.

I will take your first proposition as being that one always seeks to minimise intrusion into historic areas. When my practice was involved in work on the assessment and development of the design manual, we would always consider the most direct routes available along an alignment. Where the route runs through the world heritage site, is it running in a direct alignment from point A to point B? That is what we were thinking about. What would its alignment be within the streets and will the trams be best introduced into those streets?

Kristina Woolnough: Are you aware that we are proposing a much shorter alignment and that some of your criteria might therefore be met by it?

Professor Evans: Our work has related to the alignment that is proposed in the bill.

Kristina Woolnough: I understand that. Is there not an argument that the tram and the street furniture that goes with it are more in keeping with a streetscape than with an urban wildlife corridor?

Professor Evans: I hinted at my view on that earlier. My view is that cities grow up. A city has grown up around a railway line. That is inevitable, to an extent, because the railway line was a linear corridor that needed to be kept free. When the railway line ceased to be used, the corridor became a wildlife corridor over a period of time. I think that, from an urban design point of view, it is legitimate and valid to consider whether it could now become a tram corridor. I understand that effects will be generated by that, some of which

are environmental. My colleagues in ERM have sought to understand, study and speak to those. I think that considering the satisfactory use of the corridor is a legitimate proposition when it comes to achieving the overall strategic objectives of the project.

I quite understand that local opinion is different from strategic opinion in some instances. That comes under the balancing process that needs to be undertaken when we come to a view about a project such as this.

Kristina Woolnough: I accept what you say. Is it fair to say that, if we take a strategic opinion, bearing in mind what you say about conservation areas and the world heritage site, as much of the tramline as possible should run along former railway corridors?

The Convener: I think that we are once again straying into the question of route selection. I will allow that question, but I ask for no more on that subject.

Professor Evans: I understand that the principal aim in urban design of creating a transport project is to link up areas where people have a need to move. In the case of Edinburgh, that means the city centre in particular—it is not solely about bringing peripheral areas into the city centre. The city centre is the world heritage site, outstanding conservation areas and parks and it is full of listed buildings, so we must try to achieve the strategic transport objective in a way that minimises intrusion, but it is a desirable thing to do from an urban design point of view.

Kristina Woolnough: A number of your colleagues lodged photographs of trams to show how visually non-intrusive they are. Almost all the photographs were of streetscapes in urban, city-centre settings. Do you accept that the overhead cables, for example, might sit more comfortably in settings with telephone and electricity wires? You talk about the city being built around the railway, but is the city not built around roads now?

Professor Evans: Not entirely. I referred to the evolution of the city form. The city has evolved around many things—its landscape and its communication corridors, some of which are railways, but many of which are roads. As an urban designer considering the landscape of the overall city, I think that it is as legitimate to introduce a tram route into landscaped areas as it is into streets. That introduction needs to be well designed and properly assessed, which is the process that is being followed.

Kristina Woolnough: I understand what you say. Thank you.

The Convener: There are no questions from committee members. Do you have any follow-up questions, Mr Thomson?

Malcolm Thomson: No, thank you.

The Convener: On that basis, I thank Professor Evans for his evidence this morning. The next witness is Roger Jones, who will address the visual impact of overhead line equipment on behalf of groups 33, 34, 35, 36, 43 and 45. Mr Thomson?

Malcolm Thomson: I have no initial questions.

The Convener: Then I invite Mr Scrimgeour to come to the table—sorry, we should have invited you to the table earlier. We will wait until you catch your breath.

Graham Scrimgeour: I will try to avoid duplicating questions that have been addressed to Professor Evans, but some of mine will sound similar.

Mr Jones, you refer in your rebuttal statement to the design manual. When I looked at the manual, I found that it deals mostly with street locations. In its final form, will it address design issues for places such as the Roseburn corridor?

Roger Jones (Transport Initiatives Edinburgh Ltd): The design manual is intended to address any location by the application of general requirements against which submissions for approval will be judged.

Graham Scrimgeour: Will it cover things such as fences and path surfaces for the Roseburn corridor? It does not appear to at the moment.

Roger Jones: It does not address issues in detail in any specific location; it contains general rules that would be applied to every location. The specifics would be judged by the people who do the judging. The manual is not designed to give specific advice or to set out specific requirements.

Graham Scrimgeour: Do you agree that it appears to describe how one integrates a tram with a street, as regards kerbs, surfaces and other paraphernalia around a street-based tram?

Roger Jones: The design manual does that by reference to general requirements that can be applied to other situations as well.

Graham Scrimgeour: Okay, I will stop my questions on that issue at this point.

Further on in your statement, paragraph 4.3 refers to “natural screening”. It also states:

“the tram route follows existing urban form and complements the use of the public realm.”

That is an attractive sentence, but I am not sure what it means. What impact do you expect that aspiration will have on the design of the tram’s integration into the Roseburn corridor?

Roger Jones: I can only say that the design will fit into and be appropriate to its surroundings to

the greatest extent possible. The basic form of overhead line in that area will be chosen to minimise the inevitable visual intrusion. The design will be subject to approval under the prior approval process.

Graham Scrimgeour: None of us is an expert on the matter so I will not spend a lot of time on it, but will any specific considerations be applied in order to achieve that? What will be done differently in the Roseburn corridor?

Roger Jones: For overhead lines, the sorts of considerations that will apply will be whether we can take supports out of pedestrian areas and place them in locations where the visual intrusion—I cannot say that they will not intrude visually, as it is clear that they will—will be minimised by the use of other elements in the corridor, such as trees and other vegetation and existing structures such as retaining walls and bridges. When we are considering views, we will try to avoid having a line of columns that act together to create a larger visual intrusion than would otherwise be the case. For instance, we might tend to put columns on the inside of a curve to allow them to merge into the side of the corridor rather than put them on the outside where they would be more visible. Such general approaches can be taken in the detail of the design.

Graham Scrimgeour: What can you tell us about the design of the poles and their colouring materials?

Roger Jones: All such items are for approval in the formal prior approval process. Clearly, the form of the poles chosen can be changed, as we can choose from a wide variety of metal sections of pole. We can also choose the colour that is the most appropriate for the situation. Undoubtedly, that will be different in different locations. Again, that will form part of the approval process.

Graham Scrimgeour: Has that kind of issue been considered in any detail?

Roger Jones: No, it has not been considered in any detail at the present time and remains to be developed.

Graham Scrimgeour: Later in your statement you refer to the need to balance engineering, environmental, aesthetic, financial and operational pressures. Our concern is that if financial pressures increase at a later stage in the process, TIE might need to backtrack on its aspirations and to decide that, in this location, the balance will move towards dealing with the financial pressures rather than the aesthetic or environmental ones. Can you assure us that the balance will not be pushed too far in one direction? How can that be enforced in the finalisation of the bill?

12:00

Roger Jones: The key issue is that the overhead lines, supports and fixings are specifically identified in the bill for consideration in the prior approval process through a committee of the City of Edinburgh Council's planning department. That body exists and operates under its own statutory authority and has its own interests and an agenda to address. I would point to that as the protection that you seek.

Graham Scrimgeour: We are concerned that the council, as the parent body to TIE, is also the promoter. We are looking for a commitment at this stage that will bind the future application of the development and design. Do you agree that it would be appropriate to confirm some of those aspirations and commitments now in a more formal manner?

Roger Jones: I do not think that I can comment on that topic.

Graham Scrimgeour: In paragraph 4.4, you mention the consultation with objectors and, presumably, with other residents who have not formally objected. We welcome that. How will that consultation be achieved? Is there a commitment to do it and to take the results on board?

Roger Jones: The details of how that will be dealt with through the outline and detailed design process, for all aspects of the design, are not yet in place. The designers who have been appointed are in a start-up phase. There is a clear commitment to consultation, but I am afraid that I cannot yet say how that will be translated into detail. That is something that will be developed over time.

Graham Scrimgeour: This is our last opportunity to influence the process, unless there is a guarantee that we can have influence at the consultation stage, so we are looking for a commitment to that consultation now.

Roger Jones: There is clearly the opportunity in the application of the prior approval process, as applications for approval under that process will be advertised in the normal way for planning applications. That is a clear statutory opportunity to have influence and express views.

Graham Scrimgeour: What you have described would probably go beyond that; you are talking about a consultation process beyond the prior approval process.

Roger Jones: I would expect so, but I do not know the details.

Graham Scrimgeour: It is something that we would look for a commitment on, but that concludes my questions.

Kristina Woolnough: Would it be fair to say that the OLE aspect of trams is the part that is of

most concern to the public? Overhead lines are not generally perceived as a benefit or a nice addition to streetscapes, are they?

Roger Jones: That is fair. It is certainly one of the elements of most concern to the public.

Kristina Woolnough: Where are we at with overhead or underground cables? Your witness statement spends a lot of time describing the bedded-in type of cables. Is that still a possibility, or not?

Roger Jones: Our assessment is that there is not a system that is sufficiently proven or available to offer an alternative without overhead contact lines. I have recently been in Bordeaux, where one system that is commonly quoted as being the most available and most practical is installed. I can say that there are still extensive concerns about safety, reliability, the impact on procurement, value for money and whole-life costs that lead us to consider that there is not a presently available alternative.

The decision has not yet been made. In Bordeaux, two sections of the existing network are being taken out and replaced with overhead lines, although the whole system is not being abandoned. For the extensions that are in build and proposed in Bordeaux, consideration is being given to whether ground-level current collection should be used to the extent that was initially envisaged. After all the trouble there, those connected with the scheme are reflecting on what to do in the future.

Kristina Woolnough: Is it fair to say that you do not recommend such a system?

Roger Jones: Yes.

Kristina Woolnough: Is the Edinburgh World Heritage Trust aware of that? When I last spoke to representatives of the trust, they seemed to believe that a bedded-in system without overhead cables would be a possibility.

Roger Jones: As I said, the decision has not yet been made. We have not had recent contact with the body that you mention.

Kristina Woolnough: Can we assume from what you said earlier that the poles will be different, depending on their location?

Roger Jones: They are likely to be different in form and colour. There may be a single basic form of pole throughout, but that will not necessarily be the case, by any means.

Kristina Woolnough: So we could have a system with lots of different poles and colours all over the city?

Roger Jones: I am sure that the people who carry out the approvals will want a balance

between achieving a fit with the characters of locations in the city and creating a mishmash. Having similar poles would clearly have economic benefits, but colour is not such a significant matter. That issue will be developed as part of the approval process. We will seek guidance on the balance between bespoke poles and continuity for the tram system.

Kristina Woolnough: Graham Scrimgeour mentioned that the design manual is aspirational. Most of us will agree that aspiring to good design is a good thing. When will the design detail be available so that we can see how the manual translates into reality?

Roger Jones: As I said, our designers for the system are on board, but they are in the start-up phase. We do not yet have a detailed design programme. The design process will be a prioritised sequence that is related to different locations around the system. [*Interruption.*]

Kristina Woolnough: I think that that beeping noise means that the sprinklers are going to start.

The Convener: No they are not; just carry on.

Roger Jones: The priority that sections receive will be based on a number of criteria, such as when construction will start or how long it will take to get approvals. Priorities will be set for the design process, but I cannot give dates as they do not exist yet. We can say that it will be several months before the sort of details to which you refer will start to become available.

Kristina Woolnough: Will you clarify whether a designer is an engineer or—

Helen Eadie: I am sorry to interrupt, but I really think that things have gone beyond endurance this morning, with the noise from the window and the cold. I think that we should take five minutes out.

Phil Gallie: We are near to the end of Mr Jones's evidence. Would you mind, Helen, if we just finished this part of the meeting? We are just about there.

The Convener: There you go. Now that the noise from the windows has ceased, will you please recommence, Ms Woolnough?

Kristina Woolnough: Will you please clarify what a designer is? Is a designer an engineer?

Roger Jones: In the process of designing the overhead line, the designer is an engineer. The designers, in whole, include people who are designers with a capital D as well. The people who are actually doing the design are engineers, but there are others who are involved in the design process.

Kristina Woolnough: I understand. That is all, thank you.

Phil Gallie: Mr Scrimgeour mentioned the natural aspects. I presume that, in the overall costings that have been presented to us for the scheme as a whole, there are definite costings for the provision of overhead lines in the Roseburn corridor area. Given the discussions that we have had this morning and the fact that the adaptations that might be made are necessary for that area, what plus or minus percentage figure would you envisage for the costings that I presume are in place?

Roger Jones: I have no detailed knowledge of the specific costings that have been made, but I do not believe that there would be significantly different costs from those that have already been identified. It is more a matter of all costs at that stage having a contingency applied. It is the choice within a range of options that is covered by the costs. A lot of it is deciding where to place things rather than placing different things or, perhaps, what colour to paint things. That choice between colours does not affect the cost. I do not think that there is any impact on cost from applying a particular approach to a particular location.

The Convener: There are no further questions from committee members. Do you have any follow-up questions, Mr Thomson?

Malcolm Thomson: No, thank you.

The Convener: As there are no further questions, I thank you for giving evidence, Mr Jones. We will reconvene at 1.30 in this room, if the window is closed. If the window is not closed, we will attempt to relocate, having advised you which committee room we have all disappeared to. That concludes the evidence taking for this morning. We will start again at 1.30 with Dick Dapr .

12:13

Meeting suspended.

13:36

On resuming—

The Convener: Good afternoon and welcome back to the Edinburgh Tram (Line One) Bill Committee. The window is now closed and we will not open it again, even if anyone feels too hot.

Our next witness is Dick Dapr , who will address the issue of safety and tram speed on behalf of groups 33, 34, 35, 36, 43 and 45. I invite Mr Thomson to begin.

Malcolm Thomson: Good afternoon, Mr Dapr . I wonder whether you could give the committee an update on discussions with Her Majesty's railway inspectorate.

Dick Dapré (Steer Davies Gleave): Yes. Routine meetings take place between the promoter and HMRI to discuss various aspects of the design as it develops. At the latest meeting, which was held about six weeks ago, there was a useful discussion that confirmed several of the general principles that are proposed for the tramway's operation.

We established about four or five points. We believe that we can safely achieve the speeds that are set out in the Scottish transport appraisal guidance report. We can develop a design based on the speeds that will satisfy the HMRI guidelines and which HMRI can approve. The scheme is not precisely the same as other tram schemes in the country, but it shares many characteristics with schemes that have walkways and cycleways alongside the tramlines. The design, the approvals process and the method of operation that the operator will develop will all be designed to ensure that the system can operate safely.

The detailed design will evolve, but current thinking is that there might be a need for some physical separation, such as a low kick-rail between the footway and cycleway and the tramway. However, there is no perceived need for continuous physical separation. It will be a case of different applications being suitable in different locations; every location will be assessed and risk assessed on its merits.

Malcolm Thomson: That will be done in conjunction with someone from HMRI.

Dick Dapré: Yes. It is the operator's responsibility to ensure safety, but ultimate approval rests with HMRI. Discussions with HMRI will take place as each section of the route is designed.

Malcolm Thomson: In your statements, you refer to barriers in connection with pedestrian crossing places on the proposed tramline in the Roseburn corridor. What do you mean by barriers and how would they work?

Dick Dapré: Barriers on tramways are quite similar to the barriers that you see on streets. They ensure, by channelling the pedestrian flow, that people use crossing points safely. They also ensure that people can see approaching trams; that tram drivers can see pedestrians who are about to cross; and that people do not wander across the track in an uncontrolled way. They formalise the crossing process so that people cross in safety.

Crossing points will be accompanied by appropriate signage and the walkway across the tracks will be clearly marked and different from the rest of the tram tracks. It will be perfectly obvious where the crossing point is.

Malcolm Thomson: And the barrier is a solid railing of some sort.

Dick Dapré: It is similar to pedestrian guardrails that are seen in the street.

The Convener: I call Ms Woolnough for groups 34 and 45.

Kristina Woolnough: Is a speed limit of, say, 15mph or 20mph an alternative to barriers?

Dick Dapré: An alternative to barriers in what sense? In terms of a physical separation?

Kristina Woolnough: Yes. You could do away with the barrier and have an open corridor with a restricted speed limit. Would that be a viable alternative?

Dick Dapré: We would want to avoid a corridor that allowed people to wander freely across the tram tracks, whatever the speed of the tram. It is a segregated tram route. The intention is not that it will be freely available for people to walk across. Even with the speed limits that you suggest, we would not want to encourage people to use the corridor except where they have to cross it.

Kristina Woolnough: Can you understand that a lot of objectors are confused about the proposal for a low kick-rail to be used as a barrier, because it suggests a barrier that is of no substance? It would not be a barrier to small children, dogs or wildlife. Are we likely to get a more substantial barrier than that?

Dick Dapré: A more substantial barrier may be appropriate in certain locations, for example in constrained locations, such as under a bridge. Again, I cannot commit to a more substantial barrier until a detailed design has been produced. The advantage of a low barrier like a kick-rail is that it is possible to cross it if one really has to, so that if someone found themselves by accident on the wrong side of the barrier and on the tram track, they could get to safety. They could not be trapped by such a barrier. Similarly, if someone had reason to move off the walkway/cycleway, it would be possible for them to escape by walking on to the tram track. They would not be hemmed in. There will always be a means of escape from any emergency.

Kristina Woolnough: Can we agree that the most important safety issue is the provision of clear messages to pedestrians and cyclists about the presence of the tramway and the trams going along it?

Dick Dapré: Yes. The design will make it clear where it is safe to walk and where it is not. There will be appropriate signs as well.

Kristina Woolnough: Do you accept that a mixed message with regard to safety will be given by the presence of a barrier that is sometimes a

low-level kick-rail, sometimes more substantial, such as in a tunnel, and which sometimes directs people to crossing points, which presumably will require some kind of barrier? Do you accept that it is beginning to sound like the A9 going from dual carriageway to single carriageway?

Dick Dapré: No, not necessarily. The walkway and cycleway will be clear. It is a strip of tarmac that is separate from the tramway. It will be clear where pedestrian routes cross the tramway. Whether or not there is a separating barrier between the tramway and the footway, the detailed design will make it clear which is which.

Kristina Woolnough: Our contention is that, one way or the other, a substantial barrier will be required along the length of the corridor. That is not our wish, but such a barrier will be required. Is that a possibility?

13:45

Dick Dapré: It depends what you mean by a substantial barrier.

Kristina Woolnough: Waist high or more and of a solid structure.

Dick Dapré: I do not believe that that would be necessary. That is not the current thinking.

Kristina Woolnough: But it is possible.

Dick Dapré: I doubt very much that that would be required along the entire corridor. There may be isolated occasions, however.

Kristina Woolnough: Is it correct to suggest that an element of self-policing is involved in terms of pedestrians not wandering or straying, or stepping over or balancing on the kick-rail? An assumption of common sense has been made, has it not?

Dick Dapré: Clearly, yes. As is the case in a street or another public environment, a certain amount of common sense is needed. The corridor is a public right of way and not—dare I say it—a playground.

Kristina Woolnough: I think that we have never described it as a playground. Is it not fair to say that people can move around it fairly freely, let their dogs off the lead or allow their small children to wander about at the moment? That does not make it a playground, does it?

Dick Dapré: It makes it more than a simple right of way.

Kristina Woolnough: I think that you have fairly acknowledged that the corridor has a recreational purpose. Will that be lost?

Dick Dapré: It is clear that people will not be able to use it in the same way. We acknowledge that.

Kristina Woolnough: The character of the environment will change from one that is relatively relaxed to one in which people have to be more vigilant.

Dick Dapré: Vigilance will certainly be required.

Kristina Woolnough: Thank you.

I turn to the question of barriers—whether there will be no barriers, high barriers or low barriers and where they should be installed. Will that happen at the famous detailed design stage?

Dick Dapré: Yes; the process will be continuous during the development of the scheme. I cannot say very much about the actual programme.

Kristina Woolnough: Okay.

Many different speed limits have been mentioned at various points in the evidence giving. Will there be an upper speed limit rather than one that is simply constrained by the model of tram that is chosen? Will there be a legislative upper speed limit?

Dick Dapré: There will not be a legislative limit. The operator will establish a speed limit that is agreed by HMRI.

Kristina Woolnough: What will that be?

Dick Dapré: We expect it to be either 70kph or 80kph. The decision has not yet been taken.

Kristina Woolnough: You have acknowledged that there are similar schemes elsewhere in Britain. Is there a scheme that has the same density of human and wildlife usage in as tight a location as the Roseburn corridor?

Dick Dapré: I do not have information on the density of use by either humans or wildlife. The closest parallel in physical terms is the midland metro scheme—I mention it in my evidence—which has sections that are as constrained as the Roseburn corridor is. However, it varies a lot along its length; some parts are fenced and others are not.

Kristina Woolnough: Will the tramway be segregated—I think that that is the term we should use—from pedestrians?

Dick Dapré: Yes. The term “segregated” is used when the space in which the tram operates is not shared with other users.

Kristina Woolnough: Will it be an offence under a byelaw or any other legislation to go on to the tram tracks except at designated crossing points? Will the tramline be like a railway in that respect?

Dick Dapré: I cannot answer a legal question like that. Certainly, there will be signs that say, “Do not walk on the tramway. Keep to the path”. If

someone were to contravene those instructions, I do not know whether it would be an offence in law.

Kristina Woolnough: What is the current status of the Roseburn corridor? Is it defined as a road, a footpath or a highway? What will it become? Will it become a railway, as it were, with a walkway next to it?

Dick Dapr : I believe that it is defined as a road in Scottish law, but one on which the right of way is on foot and cycle only. There is no right of way for motor vehicles.

As I understand it, the bill provides for the current footway and cycleway to be stopped up and a new footway and cycleway to be provided alongside the tramway. I believe that the tramway will be a tramroad, which is an off-street tramway.

Kristina Woolnough: I have several questions that arise from issues that you raised in your rebuttal of Mark Clarke. I am speaking to a number of rebuttals for a number of individuals; I will try my best not to duplicate questions.

Do you agree that clause 245 in the HMRI guidance, which allows trams to travel at higher speeds than other road traffic, applies only to the segregated on-street section?

Dick Dapr : Literally it does, but there is no such restriction on off-street tramways.

Kristina Woolnough: Do you agree that clause 245 does not apply to the Roseburn corridor? Do you think that it does not apply?

Dick Dapr : Clause 245 is—

Kristina Woolnough: Does it apply to the Roseburn corridor?

Dick Dapr : Clause 245 is about segregated on-street tramways; therefore, it does not apply to the Roseburn corridor.

Kristina Woolnough: Do you agree that a carriageway is only one element defined by the HMRI guidance as a highway?

Dick Dapr : I am not sure that I understand the question.

Kristina Woolnough: It was someone else's question; I am not sure that I understand it either. Perhaps we should leave it.

Dick Dapr : Perhaps I can provide clarification. The importance of there being a carriageway alongside the tramway is that vehicles travel at vehicular speeds and when a carriageway is alongside the tramway there is a danger that people may perceive that the tram is travelling faster than them and be encouraged to speed as a result. That does not apply when there is only a cycleway and footway alongside the tramway. The issue of tram speeds alongside carriageways is

different from the issue of tram speeds alongside a cycleway and walkway.

Kristina Woolnough: Could it reasonably be argued that the obverse is the case and that trams should not exceed the speeds of cyclists and pedestrians?

Dick Dapr : No, because no cyclist would try to race a tram.

Kristina Woolnough: Do you understand that people have a safety concern about the low kick-rail and that they would prefer the tram to travel at a reduced speed in a residential suburb with safer routes to school?

Dick Dapr : I can understand why people are concerned, but having seen such systems in operation I think that they can be operated perfectly safely.

Kristina Woolnough: Are not the consequences of acts of vandalism, acts of terrorism, derailment and the like greater at the faster speeds at which you say the trams can travel?

Dick Dapr : Higher speeds will increase the severity of an accident if it occurs, but it is important to remember that trams, like road vehicles, are driven on sight. Trams are driven within a sight distance within which the tram driver can stop. If the tram driver sees something untoward—or even somebody who may do something untoward—he or she will naturally tend to reduce speed in case something happens. There is a clear culture of defensive driving—perhaps much more so than there is on roads. A tramway is certainly different from a railway network, in which the driver relies on signals and proceeds if he sees a clear signal; a train driver will look for things on the track, but he does not expect to be able to see an obstruction.

Kristina Woolnough: Can you understand that, in the context of the Roseburn corridor, people are concerned about the method of driving that you describe? Given the number of people who use the corridor with pets, small children and what not, the higher speeds are of great concern.

Dick Dapr : I can understand that people are concerned.

Kristina Woolnough: In one of your rebuttals, you say that a road that carried only 16 movements an hour would be considered a quiet country lane. That comparison is between a tramway and a road, but at the moment the corridor is a cycleway and footway. Do you accept that you are not comparing like with like?

Dick Dapr : I am saying that, by any standard, the flow of vehicles along the corridor is very small.

Kristina Woolnough: I meant in comparison with now, when no vehicles use the corridor.

Dick Dapré: Yes, clearly there are none at the moment. It would be an infinite increase.

Kristina Woolnough: You go on to say that tram speeds will be reduced at various points. Will that be enforceable?

Dick Dapré: Yes, very much so.

Kristina Woolnough: Will there be speed restrictions at crossing points or on the approach to stations, for example? Rather than the commonsense speed limit that one would expect a driver to apply, will there be guidelines so that people can say, "It's going faster than that" or, "It's meeting the speed limit"?

Dick Dapré: Yes. The speed limits on the tramway will be signed and tram drivers will be expected to keep to them. If they do not, that will be a disciplinary offence.

Kristina Woolnough: Will the speed limits vary at different sections of the Roseburn corridor?

Dick Dapré: Yes. When it comes to the final design, any points at which the sightlines are not particularly good will have a plated, marked speed restriction on them.

Kristina Woolnough: Has that been factored into the journey time of the whole loop?

Dick Dapré: Yes.

Kristina Woolnough: Under 3.9 of your rebuttal, you say that there is no need to cross the tramway. Again, there is an assumption that because there is no need it will not happen. We touched on whether it would be illegal to cross the tramway. People may cross the tramway, may they not?

Dick Dapré: There is nothing to stop them doing so, but the fact that there will be nothing on the other side to get to, except at access points, is the sense in which there will be no need to do so. There will be a clearly marked right of way alongside the tramway and at various points people will be able to cross to get to something on the other side.

Kristina Woolnough: On the issue of safer routes to schools, you say that the 20mph limit around schools is not relevant because it refers to on-road situations. Are you aware that the Roseburn corridor is part of many children's safer route to school? They will therefore anticipate an environment in which traffic is moving at 20mph.

Dick Dapré: The environment is still very different from a street environment.

Kristina Woolnough: But the side path fits into the context of walking to school, which is what the 20mph designations are for.

Dick Dapré: Yes, but I suggest that any child who is walking to school unaccompanied should be sufficiently mature to cross roads and that it is not a route to school that is entirely without any need to cross a road. If children are able to cross roads, it will be perfectly safe for them to cross the tramway. Because of the design and the way in which it is set out, it will be easy to cross the tramway. The simple rule is that if someone sees a tram, they should wait for it to pass.

Kristina Woolnough: The low-level kick-rail will be an unfamiliar streetscape feature for most people. Do you think that habit will enable people to realise how to behave accordingly?

Dick Dapré: It will be more than habit. People will take a while to get used to having the tram there, but it will be clear from the outset what the safe route is for walking, which will be on the footway. Signing, and the design as a whole, will make that clear.

Kristina Woolnough: There is a lack of clarity. Would it be fair to say that although something is clear in your mind, some concerned residents, including myself, perhaps cannot quite see it on the Roseburn corridor? Would it help to reassure local people if more detailed designs were produced more quickly?

Dick Dapré: I do not think that I can speak about the design development process, but we would certainly expect such designs to be produced and consulted on.

14:00

Kristina Woolnough: One of your rebuttal statements concerns our survey on the Roseburn corridor, which said that 70 per cent of the people who enjoy the corridor think that their usage of it would be affected by the building of the tramway. You state:

"We do not believe that it is possible to draw any conclusions from people's stated intentions in response to an imagined situation."

Are we not being asked to do the same thing—in other words, to take your word for it that, in the imaginary situation in which a tram with a low kick-rail ran along the Roseburn corridor, people would simply oblige by keeping well off the tramway?

Dick Dapré: At this stage, we cannot give full details on what the scheme will look like when it finally comes to fruition. The safety aspect to which you refer will be covered by discussions with the inspecting authority. As I said, the operator will be responsible for ensuring safety. If any aspects of the proposals give cause for concern, HMRI will ensure that the design is safe. At this stage, we cannot say much more about the detail.

Kristina Woolnough: If any issues arise once the tram is operational, who will be responsible for safety? Will HMRI be responsible?

Dick Dapr : The operator will continue to be responsible for safety, but if any problems arise, HMRI may well get involved in discussions about how to resolve them.

Kristina Woolnough: I am trying to juggle between several rebuttal documents, but I think that I have probably finished my questions.

The Convener: Mr Hallam will ask about group 35.

Mark Hallam: I want to ensure that we are all clear about what might happen if a tram were to hit someone at 70mph or 80mph. Surely such a collision would be catastrophic.

Dick Dapr : The tram will be travelling at 70kph to 80kph.

Mark Hallam: I beg your pardon.

Dick Dapr : I do not have any statistics on the severity of accidents.

Mark Hallam: Have a guess, then.

Dick Dapr : One would imagine that such a collision would be fatal, if the tram were travelling at the speed that you mentioned.

Mark Hallam: Many of the arguments in your rebuttals use the term "safely". What does that mean in relation to the acceptability of accidents? Are there guidelines on that?

Dick Dapr : Ultimately, what is acceptable is based on a quantified risk assessment in which all possible occurrences are identified and likelihoods and probabilities are set against them. There is a principle of reducing the risk to the lowest amount that is practical, but we know that, in life, nothing is 100 per cent safe and it would be false to claim that any transport system was guaranteed to be 100 per cent safe.

Mark Hallam: That brings us back to the idea that a trade-off will be made between potential safety aspects and the viability of the tram. Is that correct?

Dick Dapr : Every transport system works on that basis.

Mark Hallam: Are you happy to agree that a slower running tram would significantly lower the risk of serious injury in the event of an accident?

Dick Dapr : It would tend to reduce risk, but whether that would save lives would depend on how high the risk was to start with.

Mark Hallam: I am not asking that. I was talking about in the event of an accident.

Dick Dapr : Any lower-speed accident would be less severe.

Mark Hallam: In paragraph 3.15, you contend that pedestrians and cyclists will continue to find the walkway pleasant to use. I note that you did not say, "as pleasant to use". Do you agree that it will not be as pleasant to use, bearing in mind that it is used for recreational purposes?

Dick Dapr : There are some uses for which it will no longer be suitable. That is certainly true. As a right of way, it will be as pleasant. As a way of getting from A to B, it will be as useful as it is now.

Mark Hallam: We are not talking about that; we are talking about recreational purposes.

Dick Dapr : I am talking about speed and safety.

Mark Hallam: You brought up the issue in your rebuttal statement, so you must think it is relevant.

Dick Dapr : There are some uses for which the current footway and cycleway will no longer be suitable.

Mark Hallam: You note at paragraph 3.5 that people will have become familiar with it. Will there be any concessions on speed to start with to ensure that everyone is happy with the running?

Dick Dapr : I cannot find the paragraph, but I will try to answer the question anyway. Could you repeat the question please?

Mark Hallam: You talk about people becoming familiar with the corridor in its changed form. As we said earlier, there will be a lot of changes. The kick-rail as a safety feature will not be familiar to a lot of people to start with. Will any concessions be made regarding speed in the early running of the tram?

Dick Dapr : There will certainly be a period of test running, in which people will start to get used to the tram. I suspect that people will get used to it mainly by treating it with extra caution.

Mark Hallam: You refer to a culture of safe driving, with regard to the uses of the tram. You refer to a country road. When I am driving along a country road and I see people walking beside it, I slow down. Does that mean that the drivers could slow down when they see small children or pets running by the side of the track?

Dick Dapr : Certainly. The tram drivers will be trained in hazard recognition, specifically.

Mark Hallam: Does that mean that they will slow down?

Dick Dapr : Yes, if they see something that they regard as a potential hazard.

Mark Hallam: That will do me. Thank you.

The Convener: Thank you, Mr Hallam. I call Mrs Milne for group 43.

Mrs Odell Milne: On what grounds do you consider that people allow their children to walk to school only if they are able to cross roads?

Dick Dapré: My assumption is that it is normally necessary to cross roads in order to get to school.

Mrs Milne: Not if you live beside a cycleway. My children were able, from age 3 upwards, to walk to school without crossing any roads. Do you consider therefore that I was irresponsible in allowing my children to walk to school when they did not know how to cross roads, because they did not have to cross roads?

Dick Dapré: No, not at all. I would say that in some cases where it is possible at the moment to walk to school without crossing roads, parents might want to reconsider whether they let their children go unaccompanied if they have to cross the tramline.

Mrs Milne: Do you agree that if my children were still aged 8 and 11, which is approximately when they started regularly going to school on their own, I would not be able to allow them to walk safely, because they would have to cross the tramline in two different locations to get to school?

Dick Dapré: If they had to cross the tramline where they would otherwise not have had to cross a road, one would have to treat the situation as if they had to cross a road.

Mrs Milne: So from the point of view of children and safe access to schools, which Tina Woolnough mentioned, you are significantly changing the position.

Dick Dapré: I suggest that that is the case only for the minority of children who can get to school without crossing a road.

Mrs Milne: I think that Ms Woolnough produced evidence to show that a large number of people have walked to school along the route. I do not know whether you have seen the evidence that the objectors provided on that.

In your rebuttal of my statement, you say:

"My rebuttal addresses only ... tram speed and safety".

Do you agree that paragraphs 3.1 to 3.11 are irrelevant because they are nothing to do with tram speed and safety?

Dick Dapré: What do they concern?

Mrs Milne: They concern whether or not there is dog mess on the pavement and things like that. You have a copy of the rebuttal, presumably.

Dick Dapré: We are talking about the change between the current situation and the situation with the tram.

Mrs Milne: Yes, but in paragraph 1.2 you state that you are giving evidence only on tram speed and safety.

Dick Dapré: Yes.

Mrs Milne: You have not been produced as a witness with regard to the choice of route.

Dick Dapré: No.

Mrs Milne: So paragraphs 3.1 to 3.11 are not relevant and should be disregarded.

The Convener: That is a matter for the committee, but thank you for drawing that to our attention.

Mrs Milne: Okay. I am going to ignore them, anyway.

In paragraph 3.13 you state that you disagree with my statement that the corridor is a constrained space. You have admitted that there will have to be boundary fences—or fences of some kind—in various places. Do you agree that, with such fences, the cycleway and walkway will be constrained rather than open, as it is now?

Dick Dapré: It may be more constrained. At present, there are places where it is possible to walk alongside the tarmac, but there are other places where it is not possible to do that. There are areas that are quite overgrown and in those places the available width is not very different from the width of visible tarmac.

Mrs Milne: Yes, but that scrubby land is what I call wobble room. Do you agree that, in many parts of the corridor, the tramline and cycleway will not leave enough wobble room for small children who are learning to ride their bikes? At the moment, the worst that can happen is that they veer off the tarmac and into the nettles. That might be painful, but it is not fatal. However, if they veer off the cycleway into the path of a tram it is likely to be more than just painful.

Dick Dapré: I do not think that I can assess the risk of a child getting on to the tramway. However, I suggest that the envisaged kick-rail will be sufficient to prevent a child cyclist from doing so.

Mrs Milne: How high is the kick-rail?

Dick Dapré: My impression is that it will probably be about 400mm.

Mrs Milne: Could you put that in feet, please?

Dick Dapré: It is between a foot and a foot and a half.

Mrs Milne: If a child who is travelling at full tilt while learning to ride a bicycle hits the kick-rail, is there not a real danger that they will fly off the bicycle into the face of a tram?

Dick Dapré: It depends. If they are riding a full-size bicycle, that is possible.

Mrs Milne: I would have thought that children tend to fall off when they bump into things. Is that a reasonable assumption?

Dick Dapr : That seems reasonable.

Mrs Milne: Yes. Given that children who are learning to ride bikes are unpredictable and often make sudden movements, there is a real risk for small children who learn to ride their bikes in the proximity of trams travelling at 50mph.

Dick Dapr : It is up to parents to decide whether it is safe for their children to learn to ride a bike in that location.

Mrs Milne: Do you agree that, at present, parents can allow their children to ride bikes on the Roseburn corridor and that parents do not need to worry about their children going under a tram?

Dick Dapr : That is true, yes.

Mrs Milne: In your rebuttal you say that the situation will not change much and that people can continue to enjoy the cycleway and use it safely, but, strictly speaking, that is not correct.

Dick Dapr : I do not think that I said that everybody would be able to continue to do that. I admitted that some people will be affected.

The Convener: I think the point is made.

Mrs Milne: Do you agree that, when trams run late at night following football or rugby matches, people who have had more than they should have had to drink are likely to wander about in the proximity of the tramline?

Dick Dapr : Again, I return to the point about defensive driving. Drivers will be able to see such people and, if they are behaving in a way that gives the driver cause for concern, he or she will slow down.

14:15

Mrs Milne: Do you agree that drivers might be distracted by dogs, cyclists, walkers, children and many other things happening at once? For example, a driver might see a child running one way, but fail to see a child running the other way. Perhaps relying on what a driver can see when the tram is going at 50mph is taking an unnecessary risk.

Dick Dapr : Driver training will enable drivers to deal with any risks that come up. If someone decides to run in front of a tram at the last moment, a driver might not be able to do much about it. However, if there is any advance warning, a driver can take action to reduce the risk.

Mrs Milne: In response to my question about risk assessment, you said that you would aim to reduce risk to the lowest practical level.

Dick Dapr : That is the usual principle in these circumstances.

Mrs Milne: Would reducing risk to the lowest practical level include imposing a speed limit?

Dick Dapr : No, because you have to balance these considerations with the benefits for the people who use the tram.

Mrs Milne: But that is not reducing risk to the lowest practical level. We are not talking about balance here.

Dick Dapr : We need to reduce risk to the lowest practical level that is consistent with having a system that does what you want it to do—which is to transport people at a reasonable speed.

Mrs Milne: Do you think that time savings can justify the loss of life of a single Edinburgh resident?

Dick Dapr : I do not think that I can answer that question.

Mrs Milne: Do you agree that having a lower speed limit around schools would be one of the best ways of ensuring a reduction in the number of accidents?

Dick Dapr : In a road safety context, probably yes.

Mrs Milne: Would having slower trams around schools reduce the chances of them bumping into small children and therefore reduce the number of accidents?

Dick Dapr : Yes. The general principle is that reducing speed reduces the occurrence and severity of accidents on any transport system. However, you need to consider what the risk is to begin with.

Mrs Milne: At paragraph 3.18 of your rebuttal of my statement, you say that you

“understand that the Inspector of Railways has been involved in ... discussions”.

Have you personally been involved in the discussions with HMRI?

Dick Dapr : Yes. I was involved in the conversations at the most recent meeting.

Mrs Milne: But when you say at paragraph 3.18 that you

“understand that the Inspector of Railways has been involved in”

those discussions, did you know that at the time, or was that simply an understanding?

Dick Dapr : I said that because I was informed that meetings had taken place and I have seen the various results of the discussions that were held.

Mrs Milne: Do you think that the best witness to what happened at those meetings would have been someone who had actually attended them?

Dick Dapré: That is not a question that I can answer.

Mrs Milne: Has an HMRI inspector visited the site?

Dick Dapré: Yes.

Mrs Milne: Has he identified specific locations where speed is an issue?

Dick Dapré: I do not believe that he has identified any specific locations, but he has walked the whole corridor.

Mrs Milne: When do you expect to identify the specific locations where speed is likely to be restricted?

Dick Dapré: That will be done when the detailed design has progressed to a stage at which the detailed geometry can be seen. Mr Harries can provide more details on that matter from the implementation perspective, but I can say that the process will continue until the day of opening, so that individual sight lines can still be checked. If there are any concerns about whether the tram driver can or cannot see a particular risk situation or a pedestrian in a certain location, speed limits can be changed up to opening day. Indeed, if concerns remain, they can be changed after the tramline opens.

Mrs Milne: At paragraph 3.19 of your rebuttal of my statement, you state:

"If the Promoter and HMRI are in agreement on the safety aspects of the scheme, there can be no reason to consider alternatives purely on safety grounds."

Do you not think that the police, teachers and members of the public might be able to make useful comments about child safety and that they should be taken into account?

Dick Dapré: We take concerns into account, but our argument is that the system can be operated at 70kph or 80kph. The ultimate arbiter of whether the system is safe is HMRI. If it is happy at this stage that the system is safe, that is enough to carry on with. If concerns arise later on, there is nothing to stop HMRI from imposing a lower speed.

Mrs Milne: But the attitude that you seem to state at paragraph 3.19 is that if the promoter and HMRI are in agreement, you would not consider other alternatives. Do you not consider that the committee might have useful suggestions about determining how best to deal with safety and children?

Dick Dapré: Not necessarily. Without wishing to tell the committee its job—

The Convener: That is all right—everybody else does.

Dick Dapré: The final details are settled during the design process. To my knowledge, no other transport scheme has ever had speed limits imposed on it outside the design and safety approvals process. The approvals process is designed to make sure that the system is safe.

Mrs Milne: I refer now to your rebuttal of Roseanne Brown's witness statement. At paragraph 3.5, you state that the tram situation is not comparable with a road situation because of the infrequency of trams. Do you not agree that infrequency could cause danger because of the lack of expectation and the feeling that the environment is safe? That could give rise to carelessness that would not happen in a busy street location.

Dick Dapré: No, I do not think that that is necessarily true given that the design will have copious safety features such as barriers, signs and designated crossing points that are designed specifically to help pedestrians look in the right direction. The safety culture exists to make sure that people take care.

Mrs Milne: I was not speaking about crossing points in particular because you made it clear that there is a barrier and that is fair enough. I meant more that people might wander along without paying much attention because there is no apparent danger or hazard and that that might therefore give rise to a lack of alertness and vigilance.

Dick Dapré: I do not think so; they would be on the footway in a quiet situation.

Mrs Milne: You indicate at paragraph 3.23 in your rebuttal of my statement that drivers drive "on line of sight" and you said that again today. Do you agree that car and bus drivers also drive on line of sight and that they should not be driving so fast that they cannot stop safely?

Dick Dapré: That is the principle enshrined in the highway code.

Mrs Milne: Do you agree that imposing on tram drivers a commitment to keep to a timetable means that they might sometimes drive faster than is safe?

Dick Dapré: It would be a disciplinary offence if they did, and it is possible to detect them doing so. Mr Harries can give you more detail about that.

Mrs Milne: Do you agree that the threat of a criminal rather than a disciplinary offence would be more effective in preventing such a breach of the speed limit?

Dick Dapré: I cannot comment on a legal issue.

Mrs Milne: If a driver is rapped on the knuckles by their boss because they have gone too fast, is that not less likely to impede them from breaking the speed limit than if they were going to be brought up because they had breached a provision of the bill and their employer was penalised for it?

Dick Dapr : Possibly, but the probability of detection is the other major difference.

Mrs Milne: But you said that speeding could be detected through use of the black box. Therefore, one could easily detect whether someone had broken the speed limit—you said so yourself.

Dick Dapr : But the probability of detection on the road is very much less.

Mrs Milne: But I am talking about a way of trying to ensure that if somebody speeds, the penalty has teeth; it should be made a criminal offence to exceed the speed limit, rather than merely a disciplinary matter. That could be done if the bill were amended.

Dick Dapr : I do not know what the relevant law states; there might already be a criminal offence that covers that situation, but I cannot comment.

Mrs Milne: Paragraphs 3.1 and 3.2 have nothing to do with safety. At paragraph 3.6 you state:

“The technical advisors have a close professional working relationship with HMRI”.

Who are those technical advisers?

Dick Dapr : The consultants who advise the promoter.

Mrs Milne: Why are they not giving evidence?

Dick Dapr : I am one of them.

Mrs Milne: When you write “I” in your statement, do you mean “I on behalf of the promoter”? You are not referring to another team of people.

Dick Dapr : A large team of consultants works for the promoter on the development of the scheme.

Mrs Milne: Right. It is just that you keep using the phrase “I understand” in your rebuttal and you talk about third parties so it is difficult for me to know whether you are the third party or whether you refer to somebody else.

The Convener: He is just the one who is unfortunate enough to be here, Mrs Milne.

Mrs Milne: In paragraph 3.10 of your rebuttal of Roseanne Brown’s evidence, you state:

“the rule for crossing is very simple: if you can see a tram approaching, wait. If you can’t, it is safe to cross.”

Do you agree that that response does not adequately address issues with regard to small children?

Dick Dapr : If a child is old enough to be out on their own, they should be taught the rudiments of safety in public places, and the tramway is a public place.

Mrs Milne: I do not think that we will go through all of that again. Do you agree that the situation with trams might not be as simple as you make out? For example, a tram that is sitting at a station might obscure a tram coming the other way. In that situation, a tram driver might not be able to see whether there are children running in front.

Dick Dapr : He would not, that is correct. However, speeds are extremely low as trams enter and leave stations and, again, tram drivers are trained to look out for that risk when there is another tram alongside them.

Mrs Milne: With regard to Mrs Hawkins’s evidence about the nursery school, you state:

“There is no basis for stating that people’s feeling of safety would ‘totally alter’.”

On what basis can you maintain that a change from a situation in which we have a tarmac strip with vegetation on either side, which is used by walkers, runners, bicyclists and skateboarders and only occasionally by police and maintenance vehicles, which travel slowly, to a situation in which trams are travelling in two directions at up to 50mph will not alter people’s feelings of safety?

Dick Dapr : Because the footway and cycleway will still be available to walkers and cyclists. The trams will be alongside that route, not in the shared space. Any perception will be modified when people have experience of how easy it is to walk along that route and have a tram glide past them.

Mrs Milne: Do you know that feeling when, because of other pedestrians, you have to walk close to the edge of the pavement and a car passes at 30mph or 40mph?

Dick Dapr : Yes.

Mrs Milne: In that situation, you do not feel safe.

Dick Dapr : I do not feel safe because the steering of the car is under the control of the driver.

Mrs Milne: Have you ever ridden a bike in Edinburgh?

Dick Dapr : I am afraid that I cannot say that I have.

Mrs Milne: Do you know that feeling when cars are coming extremely close to the bike and you have no room to wobble?

The Convener: I expect that many members of the committee have never ridden a bike in Edinburgh. Nevertheless, we will still make a judgment on this bill. Can we stick to questions that are more relevant than the matter of which form of transport Mr Dapr  favours?

Mrs Milne: Mr Dapr , are you aware that, for Mrs Hawkins, the Roseburn corridor provides a place in which three-year-olds can safely wander, looking at birds and so on, and that they will not be able to use that facility when you put trams along there?

Dick Dapr : They will no longer be able to do so on the sections on which the tram runs; certainly, they will not be able to do so on the side on which the tramway is.

Mrs Milne: Have you investigated the insurance consequences for residents who have high-speed trams operating behind their properties?

Dick Dapr : No, we have not. However, I would ask whether people who have railways running along the bottom of their gardens have to pay increased insurance premiums. I suggest not.

Mrs Milne: I was asking you; I do not know.

Dick Dapr : The other point is that the tram operator has copious insurance that will cover all that liability—and therefore knows how expensive it is.

Mrs Milne: I have no further questions.

The Convener: Do committee members have any questions?

Phil Gallie: Yes. Earlier, when Ms Woolnough asked you a question, you suggested that you would describe the route as a tram roadway. Later, you said that it was not a road. Would you like to define the difference?

Dick Dapr : I am not an expert in the relevant law, but a tramroad is a right of way that is off the normal public road and on which only trams have a right to be. It is a tramroad, not a tram road—it is not a road in the legal sense that you would understand that word.

Phil Gallie: There would be similarities between a tram roadway and an ordinary road if you considered the pavement aspect of the ordinary road.

Dick Dapr : Yes, because it is a carriageway for motor vehicles. A tramroad is a peculiar legal term and it would probably be best not to use it in this context.

Phil Gallie: I did not use it—you did.

I will move on. You said that speeds on the Roseburn corridor could reach 80kph. For the uneducated—such as me—what is 80kph in miles per hour?

14:30

Dick Dapr : It is 50mph; 70kph is around 43mph or 44mph.

Phil Gallie: Okay. I always thought that it was 52mph or 53mph, but never mind—I will accept your better judgment.

Dick Dapr : Speeds of 80kph and 50mph are more or less the same.

Phil Gallie: Okay.

Are there any areas within Edinburgh's city limits where there are cyclists or walkers and where the speed limit is more than 40mph?

Dick Dapr : I do not know the Edinburgh road network well enough to answer that question, although I can think of a fair number of examples from outside Edinburgh.

Phil Gallie: I asked the question because I am well aware that cyclists and walkers are accustomed to traffic passing at 40mph within relatively close proximity, but they would feel different if traffic passed at 50mph. Perhaps feelings of uncertainty would be induced.

Dick Dapr : I would like to know what the average speed is in practice on a 40mph road.

Phil Gallie: It is probably around 40mph for vehicles that come in on the A71. However, you are the expert.

Dick Dapr : I am not an expert on the Edinburgh road network.

Phil Gallie: Okay.

I would like to pick up on another issue. Mrs Milne made an excellent point about wobble factors, children and the height of barriers. The barriers have not yet been defined, but the drawings for the Roseburn corridor include hedgeways as well as barriers. Barriers may have a certain degree of resilience against people going through them, but hedges do not have such resilience. Apart from what is in the documents that are in front of us, has any thought been given to the use of hedges?

Dick Dapr : Yes. Hedges are clearly a possibility. They would provide a cushioned barrier that can be useful in certain circumstances, but it is worth making the point that tramways are unlike roads. We should compare the geometry and cross-section of a tramway with those of a footway. In tramways, there is always a space between the tracks and the dividing point. Being next to a tramway is not like being right alongside a road. A vehicle can legally be driven right by a kerb. If a person is hit by a vehicle's wing mirror as it goes past them, I understand that the driver of that vehicle would not be breaking the law in those circumstances if the vehicle's wheels were on the

carriageway. On tramways, there is always a separation so that trams do not whizz past people's shoulders—they would not come close enough to people to do that. Even somebody who toppled over a barrier would probably not end up on the tramlines.

Phil Gallie: What is the distance between the barrier and the tramline? We should bear in mind the tram's width because there could be an overhang of the lines.

Dick Dapr : Distances vary and I am not sure that I can give precise figures, but in most cases I would expect the distance from the dividing line to the nearest rail to be at least 1.5m to 2m.

Phil Gallie: Is that the distance from the barrier?

Mark Hallam: May I help?

The Convener: No, you may not.

Mark Hallam: That is very unhelpful.

The Convener: Thank you, Mr Hallam.

Phil Gallie: I am sure that this point can be made later, but I will do the best that I can on the issue. You suggest that there is 1.5m between the tram trackway and the barrier.

Dick Dapr : I was referring to the distance between the barrier and the nearest rail. Obviously, the width of the tram overhang needs to be subtracted, but I have given a rough estimate. Distances vary.

Phil Gallie: Are the variations plus or minus variations?

Dick Dapr : It will depend on constraints and circumstances. The distance might have to be reduced in certain locations.

Phil Gallie: What is your involvement with respect to safety and the type of tram that will ultimately run on the line? Are you aware of the dimensions, roughly, of the tram that will run on the line?

Dick Dapr : Yes.

Phil Gallie: What is the overhang, normally?

Dick Dapr : It can be worked out from the width of the tram, which is 2.65m, and the line gauge, which is 1.435m. The difference between those is 1.2m, so the overhang is about 0.6m, which is 600mm or 2ft from the rail to the outer surface of the tram.

Phil Gallie: So from the outer body of the tram to the barrier, we are talking about something approaching 2ft of a difference.

Dick Dapr : Without wanting to put a detailed figure on it, there would certainly be that kind of separation.

Phil Gallie: From a viewpoint purely of safety, having heard today's evidence with regard to young children's current use, quite rightly, of the corridor and given your earlier comments about there not being much of a material change, do you think that, given the overhang dimensions, the material change in the corridor will be greater than you had originally thought?

Dick Dapr : Only for certain users. We know that a good 50 per cent of the users are cyclists and I do not believe that they will be particularly affected at all. Certain groups will be affected, but in terms of the overall level of use, I believe that most people will still find the corridor a useful and attractive route.

Phil Gallie: There will be a risk to some existing users.

Dick Dapr : Do you mean users who might feel that they will no longer be able to use the corridor for the purposes for which they use it now?

Phil Gallie: Yes.

Dick Dapr : Yes, that is true.

Phil Gallie: That is fine, convener. Thank you.

The Convener: Thank you. No other committee members have questions, but I have a point for clarification. You might not be able to clarify it, Mr Dapr , but I am sure that the promoter will pick it up. My point is about cyclists or, indeed, pedestrians straying on to the tramline. We can find in the bill reference to an offence caused by obstructing the tramline and reference to trespass, but we are not sure whether the latter applies to the tramline itself. If we could get clarification on whether it is, indeed, an offence just to stray on to the tramline, that would be helpful.

Dick Dapr : We can certainly get that clarification.

The Convener: That is great. Thank you. Do you have any follow-up questions, Mr Thomson?

Malcolm Thomson: Yes.

Mr Dapr , as the Roseburn corridor is currently used, would a pedestrian, of whatever age, have to exercise vigilance in respect of cycles being ridden at perhaps two, three or four times the speed of a pedestrian?

Dick Dapr : Yes.

Malcolm Thomson: Do you think that it would be safe for a three-year-old child, for example, to be let out unsupervised in the Roseburn corridor at the present time?

Dick Dapr : No—not unsupervised.

Malcolm Thomson: If we followed to its logical conclusion the proposition that the severity and

incidence of accidents between trams and pedestrians is likely to decrease in some sort of relationship to a decrease in speed, the trams might have to go so slowly that either one would not build the tramline in the first place or any prospective passenger might use a bus instead. If you followed that line of thought and compared the general safety of a tram using the Roseburn corridor with that of a bus with a similar number of passengers using the public road, where would you say the greater risk lies?

Dick Dapr : I would suspect that the greater risk would be with the alternatives to the tram. Some people would drive, of course, which would carry an even higher risk.

Malcolm Thomson: Is there enough statistical experience yet of the use of trams in the United Kingdom to form a view as to whether a tram is generally safer than a bus, or the other way round?

Dick Dapr : Clearly, there are not many tram systems in the UK at the moment, but they have a very good safety record. It is quite easy to get the headline information from HMRI's annual reports. In the three and a half years since April 2002, only one person has been killed and 12 people have been injured by trams while walking along the line, as opposed to crossing the line or being a passenger at a stop. In other words, among people who were on some part of the track where they should not have been, there has been one fatality. From April 2003 until the end of 2004, there were no fatalities in those circumstances.

Malcolm Thomson: How does that safety record compare with that of a bus?

Dick Dapr : Buses operate on public roads and have a higher rate of accidents involving pedestrians than the average vehicle does.

Malcolm Thomson: You told us about driving a tram on line of sight and about the sort of supervision and attention required of the driver. How does that compare with what is required of the driver of a train?

Dick Dapr : It is very different. Trains operate on signalling and are not driven on line of sight. The driver knows the route and knows where the signals are, but he does not know what is on the track in front of him. He relies on the signals being correctly set and he identifies them for his right of way to proceed. In this country, trains travel at 125mph, even in driving rain and thick fog. The signals are designed to be seen at the relevant distance. Of course, if the driver cannot see the signal, he will slow down. If he has a green signal, he knows that he is clear until the next signal and the one after that, so he knows that he can proceed. However, he does not know what is on the track in front of him.

Malcolm Thomson: Is that why railway lines are securely fenced?

Dick Dapr : Yes, indeed.

Malcolm Thomson: What happens if fog descends on a tram while it is in operation in Edinburgh?

Dick Dapr : The drivers will adopt the appropriate driving strategy and will drive within their line of sight; if the distance is reduced, they will drive more slowly.

Malcolm Thomson: You have answered many questions about pedestrians and children walking along a cycle path in close proximity to a tramway. Is that a unique feature of the Edinburgh tram proposals, or can it be found elsewhere on UK tramways?

Dick Dapr : There are several examples of that feature. Most tramways have a footway alongside them at some point. The best example of that where speeds are comparable to those that are proposed for Edinburgh is on the midland metro. Another example is the section of high-speed running on the New Addington branch of the Croydon tramlink scheme—I think that Mr McIntosh has quite a useful picture of that in his evidence, which shows a low kick-rail in place. On that section, speed may be 80kph. There are precedents for what is proposed in Edinburgh. I have looked closely at the midland metro scheme; it is not exactly the same in every respect, but it bears a great deal of similarity to the Roseburn corridor.

Malcolm Thomson: Does your evidence reflect the experience of other UK systems?

Dick Dapr : Yes. Neither the operators nor HMRI identified any particular problems.

Malcolm Thomson: You said that speeding by a tram driver would be regarded as a disciplinary offence. Can you give the committee an idea of how serious a disciplinary offence it would be? Would it be likely to lead to dismissal?

Dick Dapr : It could well lead to dismissal. That question might be better asked of Mr Harries, who can answer from the operator's perspective and give you a more accurate answer than I can.

The Convener: Thank you. I will now ask you to address the issue of frequency and hours of operation in relation to group 34.

Malcolm Thomson: Mr Dapr , what is meant by "run in" and "run out"?

Dick Dapr : Those are the terms that are used to describe what happens when the tram service is starting up in the morning—that is, from when there are zero trams on the network to when a full service is running—and shutting down at night,

when the trams go back to the depot. They are also used to describe what happens when there is a frequency change during the day.

14:45

Malcolm Thomson: How does the proposed frequency of trams on tramline 1 compare with that of tram systems elsewhere in the United Kingdom?

Dick Dapré: It is very similar, although some tram systems have a more frequent service and some have a less frequent service. We are proposing eight trams an hour, which is one every seven and a half minutes. That is roughly in the middle of the range of tram systems.

Malcolm Thomson: How does the proposed frequency compare with the frequency of buses on the Edinburgh bus network at the moment?

Dick Dapré: That is difficult to say. The trams will probably be more frequent than the buses on a single route, but less frequent than the combination of buses on different routes. On some routes, buses run every 10 minutes, but in general they tend to run every 15 or 20 minutes.

Malcolm Thomson: Should the trams' hours of operation be restricted, as some objectors have suggested?

Dick Dapré: No, there is no reason to restrict the hours, any more than there is a reason to restrict the hours of any other transport system. Buses start running early in the morning; the first ones come out at around half past 5 or 6 o'clock, and they run till around midnight. That is broadly the same as the hours that are proposed for the trams—and, again, it is broadly the same as the hours for other tram systems. In fact, other tram systems start up rather earlier than we are proposing that the Edinburgh system should start up.

The Convener: Mr Scrimgeour will ask questions on behalf of group 34.

Graham Scrimgeour: Good afternoon, Mr Dapré. A key question that has arisen from our exchange of documentation is whether, if the Roseburn corridor cycle track had not previously been a railway line, you would now be considering building a tramline on it. There are other tracks in other parts of Edinburgh that have not previously been railways.

Dick Dapré: It is an opportunity. The nature of the corridor as a former railway line makes it a good route between the city centre and Granton. If the corridor existed in its current form but had not once been a railway line—unlikely though that is—it would still be considered a possible route. Its status as a transport corridor, because it is a former railway line, makes it more likely to be

considered. In physical terms, it does not matter whether the corridor was a railway line before or not but, in planning terms, its status as a former railway line makes it more likely that it would be reused.

Graham Scrimgeour: So, when I sought to compare the hours of operation of the previous use of the corridor with the hours of operation of its proposed future use, the comparison was relevant.

Dick Dapré: The frequency of use does not affect the physical characteristics of the route or its suitability as a tram route. What happened on the route many years ago is a matter of history. It is not relevant to what we might do with the route now.

Graham Scrimgeour: We probably will not agree on that, but I will continue to use my point as the basis for my questions.

In support of my case, I presented a timetable from the 1950s. Do you agree with the information on that timetable?

Dick Dapré: I have not checked it, but I assume that your information is correct.

Graham Scrimgeour: In your rebuttal, you say that there was once freight traffic as well as passenger traffic. Do you have any idea how much impact that would have had?

Dick Dapré: I tried to research that but had limited time and resources to do so. A lot of research would have been required. I suspect that the freight service would not have been very frequent but would have been extremely intrusive, with heavy trains being pulled up from the waterfront. For a freight train, that is a considerable gradient. It would have been noisy and smoky.

Graham Scrimgeour: My understanding is that there were very few freight trains and that, if they were heavy and difficult, they would have gone the other way, through the other side of Leith.

My timetable shows that there has never in the history of the corridor been regular rail traffic after 6.30 in the evening or on Sundays. There has never been traffic noise at those times.

Dick Dapré: That appears to be the case.

Graham Scrimgeour: Do you accept that, for many residents, the noise impact of the tram will be more significant at night and at the weekend than it will be during the day?

Dick Dapré: That is a question that ought to be directed to our noise experts.

Graham Scrimgeour: If a resident told you that they noticed the noise more in the evening or at the weekends, would that seem to you to be a fair assessment?

Dick Dapré: That would seem plausible, as background noise levels would be lower.

Graham Scrimgeour: On that basis, we have proposed a number of amendments. For each amendment, I would like to ask why you would not support it—or perhaps whether you would support it. First, we propose to restrict the hours of operation to between 7 am and 11 pm, to prevent a change of use in future to running trams through the night between the hours that are currently proposed.

Dick Dapré: I have never heard of such a restriction being put on any new transport system. There is no restriction on buses, which run a service all night—not on many routes, but on certain routes—and there is nothing to stop them doing that. That would be an unreasonable restriction to place on a new transport system.

Graham Scrimgeour: At present there is generally no noise at any point on that corridor between midnight and 6 o'clock. Does it not seem reasonable that we should attempt to retain that and to ask the committee to protect that situation?

Dick Dapré: I do not think so. I do not think that there is a reason for doing that.

Graham Scrimgeour: You are not proposing to run trams during that period now, so why not prevent it in future?

Dick Dapré: Because there may be times when we need to alter the schedule. If such a restriction were imposed and we then wanted to run services for special events, or if demand changed in some way, we would have to seek additional powers through Parliament.

Graham Scrimgeour: Or use a road system that already creates a noise at night and not use a rail system on a quiet, unused space.

Dick Dapré: Surely the whole point of the tram is that using it is more attractive than using the road system.

Graham Scrimgeour: Perhaps for users, but not for residents.

The Convener: I think that we have got the point.

Graham Scrimgeour: We also suggest restricting the speed earlier in the evening, so as to reduce the noise that is made by trams after children's bedtime—say, from 8 o'clock onwards.

Dick Dapré: Any reduction in speed obviously reduces the attractiveness of the trams. It is just as important to have a competitive journey time in the evening as it is at any other time. My noise expert colleagues would be able to tell you how much the noise would be reduced by a reduction in speed.

Graham Scrimgeour: If the roads were quieter on other parts of the route at that time in the evening, could you not maintain the overall speed on the whole route while reducing the speed on the Roseburn corridor?

Dick Dapré: We are already proposing a lower service level, which is a mirror of the traffic situation. We do not have lower speed limits on the roads in the evenings.

Graham Scrimgeour: There are lower speed limits on the roads all the time in the city.

Dick Dapré: But not for noise reasons.

Graham Scrimgeour: No, but generally.

We have also proposed restricting maintenance so that it does not occur in the evening or at night. Maintenance could create an unusually high level of noise, so why would it be unreasonable for the committee to restrict that?

Dick Dapré: Jim Harries will be able to answer that from the operator's perspective.

Graham Scrimgeour: This is the only point at which we are questioning the hours of operation.

Dick Dapré: There are times when maintenance has to be done outside service hours. The operator has a responsibility to run a full service and is contractually obliged to run a service up to a certain standard over a certain number of days in the year. Within that time, the operator will be allowed to do a certain amount of maintenance, but if that amount of maintenance becomes excessive, it starts to affect the attractiveness of the tram system. However, it must be borne in mind that maintenance of track is carried out very rarely and that such situations will not happen often.

Graham Scrimgeour: So closing the tram one track at a time for one day every two years would not be a problem.

Dick Dapré: Depending on the maintenance strategy that the operator adopts, that may well happen.

Graham Scrimgeour: It would not be unreasonable to aim not to make a noise at night.

Dick Dapré: There will be strategies to minimise the amount of noise at night, but to restrict it entirely would mean that if something went seriously wrong, people might have to suffer a whole week of disruption of service before the problem could be repaired. There has to be some flexibility to allow the operator to respond to such things.

Graham Scrimgeour: We are suggesting the same restriction for weekends, again because of noise and disruption.

Dick Dapré: Again, it would not be a credible service if we restricted the speed in the way that you suggest.

Graham Scrimgeour: But it would have the benefit of not annoying residents.

Dick Dapré: Clearly there would be some reduction in noise. My colleagues would be able to advise you on how much that reduction would be.

Graham Scrimgeour: My final point relates to how the environmental statement is reflected in the bill. I think that there is discussion in that statement about noise and vibration policy.

Convener, this might be an appropriate time to ask about the amendment that was circulated at the weekend. Should we be aiming to respond to that amendment at some point in the process?

The Convener: When you field your own witnesses as objectors, you will have an opportunity to raise any points of concern about what has been stated, either previously or by way of amendment.

Graham Scrimgeour: I just wanted to understand when we should plan to do that.

Those are all my questions. Thank you.

The Convener: Committee members have no questions. Mr Thomson, do you have any follow-up questions for Mr Dapré?

Malcolm Thomson: No, thank you.

The Convener: Thank you for your evidence, Mr Dapré. We shall now have a short break to enable Jim Harries and Angus Walker to take their places at the table.

14:56

Meeting suspended.

15:01

On resuming—

The Convener: Before we recommence oral evidence taking, I remind Jim Harries that he is under oath and I invite Angus Walker either to take the oath or to make a solemn affirmation.

ANGUS WALKER *took the oath.*

The Convener: The first witness will be Jim Harries, who will address the issue of safety in tram speed in relation to groups 33, 34, 35, 36, 43 and 45. Mr Thomson.

Malcolm Thomson: Mr Harries, can you first give us an operator's view of what is meant by driving by line of sight, having regard perhaps, on the one hand, to driving a bus and, on the other hand, to driving a train?

Jim Harries (Transdev Edinburgh Tram Ltd): Certainly. Dick Dapré has already covered quite a lot of this. There are many parallels between driving a tram and driving a bus. The tram or bus driver is always ready to avoid a collision by being able to stop short of anything that is on the track or road in front of him, whereas a train driver relies on signals totally and it may take him over a mile to stop a fast train. Clearly, he cannot see that far ahead. It is the signalling system on the train and the fencing that keep the obstructions and risks out of the way, whereas, on a tram system, it is primarily the tram driver on whom we rely to avoid collisions.

Malcolm Thomson: I presume that a train driver will drive at speeds that are way beyond his line of sight.

Jim Harries: Certainly.

Malcolm Thomson: Can you explain to the committee how tram speeds are set at the outset of a tram operation?

Jim Harries: Yes. Throughout the development and design of the tram system, the speed of operation is revisited again and again. The speed of operation at any point on the route is constrained by a number of factors. There are the driver's sightlines—how far ahead the driver can see in a given circumstance; the alignment of the track itself, which will influence the ride quality of the tram and will cause the tram to be restricted in its maximum speed; the tram performance—clearly, if a tram has to stop at a tram stop, we can be sure that, in the vicinity of the tram stop, it will be travelling slowly anyway; and all the pedestrian crossings and other hazards that we need to consider right the way through the design process.

As the design develops, we get more and more certainty about the speeds at which the tram will safely be able to operate throughout the route. When the system is built and commissioned—when we have a real tram on a real tramway and we are able, for the first time, to see what the driver can really see—those speeds will be revisited and validated. The system will then have a test run and trials and be brought into service. Even throughout that period, we will review the factors that can influence the speed along the route.

Malcolm Thomson: Even after a new tram scheme has bedded down, may the tram's speed be increased or decreased?

Jim Harries: Yes, that is very much a live subject. We hope that there is no great need to change a tram's speed once a scheme has been designed but, in Manchester for example, we increased the speed at which the tram could operate over a viaduct after we did some engineering research. Also in Manchester, the

speed at which the tram could safely operate at a particular city-centre road junction was reduced as a result of some unfortunate operational experiences. In Nottingham, the sightlines at a pedestrian crossing were not as we had predicted, so we reduced the tram speed, changed the sightlines and then put the speed back to normal. Those are three different examples of a change in tram speed: a permanent reduction, a permanent increase and a temporary reduction.

It is important to be aware that, if the operator wants to increase the speed of the tram's operation, the safety approval process requires both that he demonstrate that it is safe to do so and that HMRI do not object to such an increase.

Malcolm Thomson: That strays into my next question. What is HMRI's role in initially fixing a speed?

Jim Harries: It is easiest to explain HMRI's involvement in the Nottingham project, as it is not for me to tell the inspectorate how to regulate and approve a tram system.

In Nottingham, the inspector showed a great interest in the processes that we used to design the tram scheme, especially the speeds of operation throughout the system. The inspector was present at various internal desk-top exercises, for which we turned through the drawings and explained our design thinking to him. We also walked through the route with the inspector many times during the construction process. When we reached the point at which the tramway was about to go live, he was involved in and witnessed the test run, on which we went out in the tram for the first time. We slowly increased its speed of operation as we gained comfort with the design, and the inspector witnessed the trial running, when we ran the trams according to the timetable but did not pick up any passengers, and the real operation. He had a very close overview of our internal processes.

Malcolm Thomson: What can be done to acclimatise pedestrians and cyclists to the presence of a new tram? Is there an awareness-raising period? How does that work?

Jim Harries: Again, I will refer to what we did in Nottingham—I am sorry to bore the committee—which is the most recent tram system to be brought on line in this country.

In Nottingham, we had a publicity campaign that involved our staff visiting all the local schools to explain that the tram was coming, what it would mean and how to behave safely in the vicinity of the tram. We had a media campaign consisting of radio and press advertisements, and notices along the tram route and elsewhere to alert people to the fact that the tram system was about to go live. As the routes were energised, we put up along each

route extra signs—in addition to the long-term signage—to draw people's attention to the fact that the system was changing.

When a tramway opens, we do not drive flat out down the tramway on the first occasion but slowly increase the speed of operation until we are confident that the hazards that we addressed during the design period have been adequately mitigated. We then increase the frequency of the tram operation. We do not have a big-bang change but a relatively slow change.

Through such processes, we hope to make users of the Roseburn corridor aware that things are changing and how they will be affected by those changes.

Malcolm Thomson: For an operator, how big an issue is safety?

Jim Harries: Safety is ingrained in the whole organisation's culture. Many senior managers in the tramway business in the United Kingdom come from a railway background, where safety is paramount. That culture is brought into the tram industry, which is regulated in the same way as heavy rail is, as HMRI is involved. The industry is proud of, and cautious about retaining, its safety record.

Malcolm Thomson: Against that background, if a driver were detected exceeding the preset speed limit by, say, 5mph, how would an operator regard that?

Jim Harries: That would certainly be an offence that needed investigating. If the driver had exceeded the speed limit by that margin, that would be a disciplinary offence. However, one would need to understand why he or she did that. A host of factors might mean that full responsibility was not placed at the individual's door. The cause might be a training error, for example. There is no absolute presumption that the driver is at fault. We would want to understand why such an incident took place. If we were satisfied that we did all the right things to train that person and they still failed to comply with the speed restriction, that would ultimately call into question the individual's suitability to be a tram driver, and would end in dismissal.

Malcolm Thomson: Might a tram driver ever be tempted to drive a little faster to make up time on a route after going through a small cloud of fog or some other unfortunate incident that caused delay?

Jim Harries: That would happen only if our training processes had failed, because the speed restrictions on the tram system are mandatory throughout. Trams do not exceed the speed limits in any circumstances. If a driver said that they were driving in excess of the speed limit to make

up time and catch up with the timetable, that would not wash in the industry.

Malcolm Thomson: Similarly, what would be the consequences of any other safety breach by an employee?

Jim Harries: The same overall process would be followed. We would make the situation safe, which might involve standing an individual down from duty. We would investigate fully the root cause of the breach. If necessary, we would take formal action against the individual concerned. What is more important is that we would ensure that we changed our systems so that such incidents were not repeated.

Malcolm Thomson: I am conscious that Mr Harries is not advertised as giving evidence on the relationship between maintenance and operating hours, but as an operator, he may be better placed to deal with that question than Mr Dapr e was. I leave that entirely to the convener. If anyone would like to pursue that question, I am sure that Mr Harries would be happy to answer it.

The Convener: I will be mindful of that if anybody has questions on that subject. I am not inviting people to run amok, but the suggestion is helpful. I take it that Mr Thomson has completed his questioning.

Malcolm Thomson: I have indeed.

The Convener: I call Ms Woolnough to ask questions for groups 34 and 45.

Kristina Woolnough: Mr Harries said that trams were like buses and then that they were like heavy rail. Are they a hybrid creature? They are driven on the line of sight, like a bus.

Jim Harries: Following the path of the rails is a great constraint.

Kristina Woolnough: The regulations and so on are railway-type regulations and HMRI governs them.

Jim Harries: Just because HMRI governs the tram industry, that does not mean that the same sets of rules apply. However, it brings a strong safety culture to the industry.

Kristina Woolnough: Is it fair to say that it will not be buses that travel at 50mph along the Roseburn corridor?

Jim Harries: I think that we agree with you.

15:15

Kristina Woolnough: Both you and your colleague before you mentioned lines of sight. How do you know what a tram driver's line of sight is? People's line of sight may differ and there are factors of light and darkness, weather conditions

and obstructions that cannot be expected. Is the line of sight measured?

Jim Harries: The line of sight is based on a judgment about whether the tram driver would be able to stop before hitting an obstruction. As Dick Dapr e said, in poor visibility, we would slow down the trams so that tram drivers can still stop short of an obstruction. If the obstruction is a penny on the track, the driver may well not see it, but if it is a person on the track, we certainly expect him to see them. There have been many incidents in which tram drivers have slowed down because they have seen something that they are not quite sure of and it either has or has not been a problem.

Kristina Woolnough: With the speeds of about 50mph that we are talking about in the Roseburn corridor, what would be the line of sight? Is there an estimate of how far a driver can see in particular places on the corridor? Has the profile been developed so that you know whether the speeds can be sustained?

Jim Harries: We have not done the detailed design on that, but we know the rough stopping distance of a tram and many of us have walked the alignment. We are satisfied that, for the majority of the route, we can achieve the proposed speeds.

Kristina Woolnough: At one of the community liaison group meetings, you kindly shared with us the stopping distances of trams. Has that information been shared with the committee?

Jim Harries: I provided a table of stopping distances against speed in the two braking modes, which are the normal service brake and the hazard brake. However, I do not think that that has been provided as evidence to the committee.

Kristina Woolnough: I raise the matter because we found it interesting to know about the distances that are involved and the safety issues. Obviously, it is for the committee to request that information, if it wants to do so.

Is there a risk that, with the present proposal for a low kick-rail, the speeds will have to be lower than you expect?

Jim Harries: In places where there is more curvature, that may need to be the case but, for the majority of the route, we will be able to achieve safe operation at 50mph or 80kph. If people looked at the midland metro scheme, where there is a cycleway and footway adjacent to the track with nothing between the two for a significant proportion of the route, that would help to win them round to understanding that our proposals are credible and achievable.

Kristina Woolnough: Is the area that you are describing similar to the Roseburn corridor, which

is contained by either embankment or cutting for about 3km and has 1,000 people movements a day?

Jim Harries: There are differences between that section on the midland metro and the Roseburn corridor. One is that the Roseburn corridor is used more intensively than the midland metro footpath. Another is that the proposal is for grass track on the Roseburn corridor, whereas the midland metro scheme is traditional railway track with ballast and rails. That conveys a strong message to people who are on the path that if they walk on to the tramway, they are walking into a different environment. If we use grass track in the Roseburn corridor, that message will not exist, so we will need to do something to delineate the track and to show that people who move from the path on to the tramway are entering a potentially hazardous environment. The low kick-rail, as used in the Croydon scheme, might be the answer.

Kristina Woolnough: It might.

Jim Harries: I am not saying that it is the answer.

Kristina Woolnough: Okay. If, as an operator, you are faced with the prospect of reducing your speed more often than you had anticipated—perhaps more often than you need to keep the tram cost-effective—would your preference be to have a higher segregating barrier to achieve the desired speeds?

Jim Harries: A high barrier can lead to a different set of problems, particularly when it comes to the ability of the tram driver to see what is happening behind it. You can imagine a small child on a low bike being hidden behind such a barrier, whereas you could see that child through a knee-high kick-rail. There are pros and cons with the various options. One of the disadvantages of having a high impenetrable barrier would be that if, as Dick Dapr  suggested, someone got stuck on the tramway for whatever reason—perhaps to fetch a football—it would be more difficult for them to cross such a barrier than if just a low kick-rail were in place. You would need to consider all the implications of the different types of barrier or segregating device that are proposed.

Kristina Woolnough: We have seen in evidence that there might be higher barriers in the tunnels and at other pinch points; elsewhere, a noise barrier might be required in combination with a physical barrier. Do you have an estimate of the proportion of the Roseburn corridor that will have higher barriers and the proportion that will have lower barriers? Do you accept my proposition that it is a bit like the A9, in that you never quite know where you are with it?

Jim Harries: I believe that we will end up with different types of segregating devices in different

areas. To return to the environment in which the midland metro operates, there are all sorts of types of segregation along the footpaths there. In places, there is no fence at all; in one place, there is a chain-link fence; in another place, there is a post-and-wire fence; and in another place, where there is a width constraint, square posts are stuck in the ground. There are also places where the path is physically separated from the tramway, sometimes by hedging or other vegetation, and at some locations the path might be 20m away.

I do not accept that having different segregating devices will lead to confusion among people using the footpath. We need to be careful in the design process to ensure that the message is clear to those who use the path. They need to be shown where the path is, where the tramway is and where the crossing points are.

Kristina Woolnough: Are you aware of the preference among local people not to have an extreme form of segregation, but rather to have a speed restriction?

Jim Harries: I am aware of that preference, yes.

Kristina Woolnough: Could that be factored in?

Jim Harries: We come back to the question of what the scheme is to achieve. Ultimately, a balance must be struck. On the one hand, that means providing an effective public transport system, one of the core requirements of which is short journey times—and, by inference, fast speeds. On the other hand, there are the needs and wishes of the users of the Roseburn corridor. You can work out which side of the fence I am on, as a public transport operator.

Kristina Woolnough: To cut to the chase, as local people, our common sense and local experience of the Roseburn corridor tell us that in no way can we have trams running at 50mph with just a low kick-rail, given 1,000 people movements a day and all the dogs, foxes, badgers, cats, small children and bicycles. Do you respect that as a reasonable concern and a reasonable point of view, based on our experience?

Jim Harries: I understand the concerns, but I do not believe that they will materialise in reality. I suspect that, when we look back in five years' time and the tramway is operating, everybody will be using the Roseburn corridor quite happily, the trams will be running and those concerns will not be an issue.

Kristina Woolnough: Is it not fair to say that both the previous witness and you have agreed that some types of user will no longer use the corridor, and that all users will not use it in quite the same way that they use it now?

Jim Harries: Yes, I believe that many users will be affected, in one way or another, by the

presence of the tram, and that a majority of users might not be able to do exactly what they used to do in the Roseburn corridor. I am thinking in particular of Odell Milne, who, I suspect, is in a tiny minority of people who happen to live within walking distance of the tram route and who happen to have children who go to school without having to cross roads. However, I would counter that by saying that there will be many other people who will be able to use the tram to get their children to school much more easily than they can at present. It is a balance.

Kristina Woolnough: Do you have evidence of that?

Jim Harries: No.

Kristina Woolnough: Is the assertion in your rebuttal—that children will get to school more easily than they can currently—an opinion?

Jim Harries: An informed opinion.

Kristina Woolnough: Presumably, in your informed opinion, you are aware of school catchment boundaries and so on.

Jim Harries: I know that there are a lot of schools in the Roseburn corridor area, as one would expect in a residential area. From my experience of operating tramways elsewhere, I know that many children use them to get to and from school. I do not see why this tram system should be any different.

Kristina Woolnough: Do you accept that the section of the Roseburn corridor that is being used for the tram is part of a safer route to school and, for many children, the tram does not replicate that journey? That section of their safer route to school will no longer be a traffic-free environment.

Jim Harries: Yes.

Kristina Woolnough: You describe the permanent tram speed restrictions and the signage along the route in your witness statement, which I rebutted. How many changes in speed signage are we likely to see along the 3km length of the Roseburn corridor? Presumably, the stops and starts will feature.

Jim Harries: If we assume that the speed along the corridor is notionally 50mph throughout its length, there would be an 80kph sign at the start, and the tram driver must abide by a rule to slow down to a low speed or stop at each tram stop. That is the first set of speed constraints. On top of that, there will be a number of designed-in speed restrictions, which will deal with known sightline and track geometry issues; for example, there would be a sign where the tram goes round a relatively tight corner and the driver cannot see some distance ahead. There may be speed restrictions associated with some of the pedestrian

crossings, although I do not see the need for any at the moment. That might lead to one, two or three signs between tram stops. On top of that, the driver will not be allowed to exceed those speeds in any circumstances and, depending on the prevailing driving conditions, he may have to go slower in order to drive suitably defensively to travel down the route. There will not be a huge proliferation of signs; there will be a handful.

Kristina Woolnough: I am sure that you are aware that we have raised concerns about the use of the Roseburn corridor because of the speed at which the tram can travel along it. Do you therefore understand our concern when we hear that the tram will go slower and faster and that the speed profile is not finalised? Is there a question mark over the speed of the tram on the Roseburn corridor? Given all the tunnels and bridges that have to be negotiated, presumably there will be speed restrictions.

Jim Harries: Not necessarily.

Kristina Woolnough: But possibly.

Jim Harries: No. I am satisfied that the generalities of the design are absolutely sound.

Kristina Woolnough: Will there be any speed restriction where the tram goes through the tunnel, and the walkway is reduced to 2.3m?

Jim Harries: We can put a more secure fence between the cycleway and pathway and the tramway at the bridges, to reduce the risk of a pedestrian or wobbly cyclist straying on to the tramway at those points. That fence will be feathered out on either side of the bridge so that there is not a sudden change. Midland metro is a good example—I suggest that you go and have a look at it. There are lots of bridges and lots of places where those circumstances occur. Many different techniques are used, and trams, pedestrians and cyclists all use the corridor comfortably.

15:30

Kristina Woolnough: Do the trams travel at 50mph in those locations?

Jim Harries: The maximum speed is 70kph there, but there is not much difference between that and 80kph.

Kristina Woolnough: Does the issue of the tram driver's sightline and the higher fence apply in a tunnel?

Jim Harries: Technically, we have no tunnels on this job.

Kristina Woolnough: We have underlines and overlines.

Jim Harries: We have some bridges that are longer than others, as we have on midland metro, where the trams go through with no problem at all.

Kristina Woolnough: My understanding of HMRI's involvement is that you take a proposal to it and say, "This is how we want to do it. Is that okay?" Is that broadly accurate?

Jim Harries: That is broadly it. The responsibility for the design lies with us. The HMRI inspector is the man or woman who is the guardian of public safety and he or she has the ultimate power to say whether or not we operate.

Kristina Woolnough: So will you say to HMRI that the low-level kick-rail is your preferred option for most of the length of the corridor?

Jim Harries: Yes, when we have got a design ready. It may or may not be the low-level kick-rail. I do not want to lead people into believing with certainty that that is what we will end up with, but it is an option that I believe will work.

Kristina Woolnough: Thank you for your honesty about that. The local concern is that we are going to end up with a segregated railway corridor there, with trespass prohibitions on the track so that there will be no longer the open aspect, but a significant segregation barrier. Can you understand that that—to local people who experience the corridor the way it is—is a more realistic prospect from a safety point of view?

Jim Harries: My view is that the low-level kick-rail is probably going to be the best solution. I want the tramway to be as open as it can be anyway, because that looks best.

Kristina Woolnough: I move on to group 45, but I have no questions for that group, given that the same rebuttal statement is involved. Thank you.

The Convener: Thank you, Ms Woolnough. Mr Hallam for group 35.

Mark Hallam: In paragraph 5 of your rebuttal statement, you refer to a graph of speed against distance in Dick Dapr 's rebuttal statement.

Jim Harries: Yes.

Mark Hallam: I have not received a copy of that. I wonder whether I could get hold of one, please.

Jim Harries: I presume that it is on the website. Am I allowed to look at Dick Dapr , convener?

The Convener: You can look at him, but he is holding up his hands and shrugging his shoulders. I think that that means, "I don't know."

Mark Hallam: You think that that graph is on the website.

Jim Harries: It should be. I will check.

Mark Hallam: Okay. Thanks very much. I noticed it and realised that I had not got it—that was all. Ms Woolnough will be glad to know that I do not have many more questions.

I have just a couple of questions on the evidence that you have given today. You have suggested siting equipment to record the speed of the tram in the tram itself. How accurate are the measurements of that recording equipment?

Jim Harries: Typically, plus or minus 1 or 2 per cent.

Mark Hallam: Is the speed measured on a discrete basis or is it averaged?

Jim Harries: It is measured digitally and is normally recorded every fraction of a second or at one second intervals at most. It is much more accurate than the tachograph in the average heavy goods vehicle and allows us to reconstruct accidents and incidents with a great degree of certainty.

Mark Hallam: Okay. Thank you. In your rebuttal statement, you give evidence of the tram speeding up and slowing down. I am trying to get an idea of how much of the Roseburn corridor the tram will operate at the maximum speed of 80kph along. Do you have any idea of that, as a percentage?

Jim Harries: That is hard to know. I would say that the tram will operate at that speed on 50 per cent of the route, but I ask you to treat that as a current best guess. It takes time and distance for a tram to accelerate away from a tram stop and to brake into a tram stop.

Mark Hallam: Do you have figures for that? How quickly does a tram reach 80kph? How long does it take for a tram to slow to a stop from 80kph?

Jim Harries: We have typical tram performance data that we have used in the modelling. In terms of the normal service brake from 80kph, we are talking about something like 200m. The sort of length over which trams would not be travelling at full speed would be 200m on the approach to each tram stop and a bit more on leaving the stop.

Mark Hallam: How many tram stops are there in the corridor?

Jim Harries: Three or four.

Mark Hallam: So, the majority of the time, the tram will effectively run at 80kph.

Jim Harries: I think so.

Mark Hallam: Okay. You mentioned that you would slowly increase the speed of the trams from the speed that would be used at the start of the operation. Again, do you have an idea of the percentage of recommended speed that you will start at?

Jim Harries: Yes. The first run will be at no more than walking pace. We want to ensure that everything fits. Having done that, we will have a series of runs when the speed is increased incrementally—typically at a rate of 5, 10, 15, 20, 30, 40, 45 to 50 per cent. That will happen within a shift and not over several days. The majority of people will not see it happen. For example, the first time the average person who uses the Roseburn corridor will see a tram, the tram will be operating at fairly close to its final line speed. They would see it being driven with increased caution, however. We know that people would not be used to the trams in the early days. Of course, we will also have the various warning devices on the tram—the bell and the horn. We can use them to attract people's attention if we are not sure whether they know that the tram is there. There are potential noise issues with those warning devices.

Mark Hallam: I got the impression from what you said earlier that you would use a slow running speed while people were getting used to the idea of the tram. That is not what you are saying now. In effect, the tram will run at full capacity from day one of the timetable.

Jim Harries: Certainly, we will be operating at full timetabled speeds from day one of carrying passengers. We will operate the system to the normal timetable but without people on board over several months leading up to that time. That will give us and everybody else confidence that the tramline is fit to open and that it is reliable. Prior to that, there will be a build-up to the trial running period. In the early days, a lot of time will be spent and a lot of tram movements will be used in driver training. When someone is training to be a driver, they need to approach things cautiously—that is the nature of training.

Mark Hallam: Thank you. Is there less line of sight at night?

Jim Harries: That depends on the effectiveness of the tram's headlight and the prevailing lighting conditions. Generally, there is less risk of people being around in the dark. That is just how people operate. In Nottingham, we operate at the same speed during the day and at night. Speed is dependent on the illumination of the route as a whole. Clearly, the driver cannot see so well in the dark.

Mark Hallam: So it is fair to say that there is less line of sight at night.

Jim Harries: That depends on how good the headlight is. If the driver has a good headlight, he will be able to see. That is one of the features that we are getting designed into the tram.

Mark Hallam: You have likened driving a tram to driving a bus or a car. Surely someone would drive a car more slowly at night.

Jim Harries: I am not sure that I agree with you.

Mark Hallam: They would in a dark country lane, but I will move on. You talk a lot in your rebuttal statement about the factors that influence the speed. As far as I am concerned, they are entirely focused on technical issues. Was any cognisance taken of loss of amenity in deciding on the maximum speed?

Jim Harries: No.

Mark Hallam: So it should be up to others to take those factors into account and take appropriate measures.

Jim Harries: If they feel that that is necessary.

Mark Hallam: Thank you.

The Convener: I call Mrs Milne for group 43.

Mrs Milne: Mr Harries, you talked about speed testing and building up from 5mph or whatever it was. Is it the case that at present you are unable to say conclusively that you will achieve the run times that the promoter put forward in its business case?

Jim Harries: This tram project is no different from any other tram project, in that one has to use one's best knowledge and experience to find one's way through the maze. The final sign-off of speeds will take place on the day the railway inspectorate gives us the letter that allows us to open the system. That is the only point when there is absolute certainty about the run times.

Mrs Milne: By that time, the tramline will be built.

Jim Harries: Yes.

Mrs Milne: So you are asking the committee to approve a business case that you are not fully confident you will be able to deliver.

Jim Harries: We cannot be absolutely confident until we have completed the detailed design, the trial running and the commissioning of the whole system.

Mrs Milne: Are you aware that run time is one of the major justifications for use of the Roseburn corridor?

Jim Harries: Absolutely.

Mrs Milne: The fact that you might not be able to deliver on run times undermines that.

Jim Harries: Not from my perspective, because I am satisfied that we will achieve the run times. That is not just my view; I am speaking on behalf of many other colleagues who have had similar experiences on other tramways in the United Kingdom and elsewhere.

Mrs Milne: But, in the end, the process will be one of trial and error.

Jim Harries: I would not like to use the phrase "trial and error". "Experience and judgment" might be a better way of putting it.

Mrs Milne: Was Transdev brought in after the route was chosen or before?

Jim Harries: After.

Mrs Milne: Do you agree that the need to maintain the safety of pedestrians and cyclists using the walkway/cycleway should be of considerable importance in determining whether it is appropriate to use the Roseburn corridor?

Jim Harries: I have not come prepared to talk about whether it is appropriate to use the Roseburn corridor, but I recognise that it is very important to maintain the safety of the people who use it.

Mrs Milne: Do you agree that statistics on bus safety are irrelevant, because we are not suggesting that we put buses along the Roseburn corridor? We are talking about introducing a tram into a cycleway/walkway. The fact that trams may be safer than buses per se is irrelevant to consideration of a tram within the Roseburn corridor.

Jim Harries: Clearly, what is relevant is how a tram would behave in the Roseburn corridor and how the other users of the corridor would behave. Some useful analogies can be drawn with buses, but not all of them apply.

Mrs Milne: Do you consider that it is acceptable to sacrifice safety to economic considerations?

Jim Harries: The whole of life involves that balance.

Mrs Milne: Do you think that the economic benefit of saving a minute or so on the route around Edinburgh can weigh more heavily than the loss of, or severe injury to, one resident of Edinburgh?

Jim Harries: That is a hard question to answer. I would need to put my engineering hat on and go and do some sums because, sadly, that is ultimately the decision that is made on many safety issues.

Mrs Milne: So you are saying that, yes, the economics are more important than the safety of a resident of Edinburgh.

Jim Harries: No, I am saying that there is a fine balance between the two and that we cannot consider either in isolation.

Mrs Milne: Do you consider that the fact that the tram system's objectives may be partially undermined by a reduced speed is a reason for failing to impose a speed limit, bearing in mind that you say that there is a balance between trying not

to kill people and killing them? Does that not justify having a reduced speed?

The Convener: I suggest that you change the language that you are employing, Mrs Milne.

15:45

Mrs Milne: I am sorry. Do you think that it might be justified partially to undermine the tram system's objective by imposing a speed reduction, if that speed reduction would be in the interests of public safety?

Jim Harries: If it is necessary to introduce a speed restriction to maintain safety, that is what we will do. If that undermines the economics of the scheme, the scheme will have to live with that.

Mrs Milne: Do you agree that that will not be known until you have built the tramline?

Jim Harries: Ultimately, yes. However, we have plenty of knowledge and experience to give us confidence that our current designs will be achieved.

Mrs Milne: I turn to the part of your rebuttal statement that deals with risk assessment, in which you mention the possible effects of a collision between a tram and a cyclist. If there is a need for a risk assessment, do you not think that sight of that document prior to this date would have been helpful for the objectors and, perhaps, for the committee?

Jim Harries: The risk assessment process has only just started. I will attend another hazard identification meeting tomorrow. The risk assessment is in the early stages of development, so there is nothing to see yet.

Mrs Milne: Do you agree that it would have been helpful to the process of making an informed decision about the project to have seen the risk assessment first?

Jim Harries: Seeing the risk assessment would be helpful if we had the final detailed design at this stage. We must progress such matters in stages and I am satisfied that we are doing that appropriately. We do not want to spend huge amounts of public money producing a detailed design that has not received approval.

Mrs Milne: But you are about to spend huge amounts of public money on building a tramline that might not meet its timetable.

Jim Harries: I am confident that it will.

Mrs Milne: In the final part of the risk assessment section of your rebuttal, you say that the risk assessment "will validate the design". Do you mean that what the risk assessment will say has already been determined? Would it have been better for you to say that the risk assessment will inform the design?

Jim Harries: That would have been better, although the two go hand in hand. The development of the risk assessment process will influence the design and the design will influence the risks.

Mrs Milne: In your section on crossings, you mention the possibility of signals. I do not think that Mr Dapr  mentioned signals. Will there be signals at some of the crossings?

Jim Harries: On the midland metro, there are no signalised junctions at which pedestrians cross the tramway and the trams operate at up to 70kph. Although I believe that we will not need to signalise such junctions on the Roseburn corridor, there may be reasons why we have to do that.

Mrs Milne: I turn to the treatment in your rebuttal of Mrs Hawkins's statement on the nursery school. Do you agree that Mrs Hawkins, as a nursery teacher of many years' experience, is better qualified than you are to determine whether she will be able to supervise children safely in the corridor?

Jim Harries: Absolutely—and I believe that I said so.

Mrs Milne: Do you agree that if she has indicated that such supervision will not be feasible, it will not be?

Jim Harries: I do not know how much knowledge of tram operations she has.

Mrs Milne: I turn to the possibility of allowing three-year-olds to roam unsupervised in the corridor, to which Mr Thomson referred. We never suggested that three-year-olds would roam unsupervised. However, do you agree that considerably more supervision of three-year-olds will be required when the tram is in operation than is required at the moment?

Jim Harries: I agree that more—but not considerably more—supervision will be required. I have seen some of the antics of certain people who cycle down the Roseburn corridor and I know that a significant risk of collision between cyclists and pedestrians already exists.

Mrs Milne: Do you not think that, as well as the risk of collision, we should take into account the effect of such collision? Do you agree that if a cyclist bumps into a three-year-old, they might both be injured, but that if a tram bumps into a three-year-old, the child might be killed?

Jim Harries: That is highly likely.

Mrs Milne: So it is not just the chance of—

Jim Harries: Of course it is not.

Mrs Milne: I turn to the information that you give about running on rails, a business with which we

all have considerable difficulty. If a tram is running on rails, is it any easier to stop than a train that is running on rails?

Jim Harries: A tram is easier to stop because it has something called hazard brakes, which are track brakes. They are electromagnets that sit underneath the tram. When activated, they grab hold of the rail, allowing the tram to slow down much more quickly than a heavy rail train would be able to.

Mrs Milne: Are they affected by rain or the wet?

Jim Harries: No. Rubber tyres are affected much more by the presence of rain and snow than track brakes on trams.

Mrs Milne: You compare trams that run on roads with buses that run on roads, but is it not the case that buses in Edinburgh run on roads at 30mph, not 50mph?

Jim Harries: That is generally true.

Mrs Milne: So to say that one can compare a bus driver stopping with a tram driver stopping is fair enough in so far as the analogy relates to trams that run on the roads. However, it is not quite the same when we get on to the Roseburn corridor.

Jim Harries: The analogy that I am trying to draw is with the driver's decision on how fast he can go and the point at which he needs to apply the brakes to avoid an incident.

Mrs Milne: Why do we have speed limits for buses?

Jim Harries: On the highway?

Mrs Milne: Yes.

Jim Harries: For the same reason as we have speed limits for car drivers and all other users—safety.

Mrs Milne: Do similar considerations not apply to trams?

Jim Harries: Similar considerations apply to trams.

Mrs Milne: If a tram is travelling at 50mph along the Roseburn corridor and one is relying on the tram driver to judge stopping distances, is it not even more important than on roads, on which there is a 30mph speed limit, that there is a realistic speed limit that takes into account that a tram driver has to make judgments that a bus driver does not?

Jim Harries: A tram driver has to make judgments. First, the faster he goes, the longer his stopping distance; secondly, a collision is likely to be more severe. Speed is an important factor in the safety of the operation. As I say, it is important

to segregate the pathway from the tramway. If we get that design right, the tram driver will be able to drive with confidence alongside the cycleway when it is being used. If, however, some children are having a fight, I expect and require a tram driver to take action.

Mrs Milne: I do not know whether you have seen the advertisement on television that tells us that driving at 40mph is likely to kill a child, whereas driving at 30mph is likely not to. It is to promote—

Jim Harries: I am not sure that it is 40mph.

Mrs Milne: Between 30mph and 40mph, whatever it is. If one starts at a lower speed, surely one has a shorter stopping distance and the chances of killing somebody are lower—they have to be.

Jim Harries: They are, yes.

Mrs Milne: You state that trams are safe. However, even if they are safe, is it not essential that they are introduced into a new environment in a way that ensures the safety of users and others? That must be considered as part of the whole scheme.

Jim Harries: Absolutely.

Mrs Milne: You say that it would be a disciplinary offence—depending on the circumstances—for a tram driver to exceed a speed limit.

Jim Harries: It might be more than that.

Mrs Milne: Given that you are saying that that might be the fault of the trainers of the driver, do you agree that a penalty should be imposed on the operator of the tram if a driver exceeds the speed limit? It would be the operator's responsibility if it had failed to train its drivers properly.

Jim Harries: Yes. The legal framework already exists under the Railways (Safety Critical Work) Regulations 1994. Those are enforced by HMRI on such operators.

Mrs Milne: Please tell me whether this is the case: if anybody drives above the speed limit on a tram route, you would be responsible, as that would be a criminal offence under those regulations.

Jim Harries: I am not sure whether it is a criminal act; my knowledge of the law is limited. However, the regulations require various things of the tram operator, one of which is to train staff who are involved in safety-critical work—a tram driver is certainly in that category. The operator must select suitable staff in the first place; he must also train them and monitor and keep records of their competence. If there is a serious flaw in the training of a tram driver, the regulations are likely to be rigorously enforced by HMRI.

Mrs Milne: As I genuinely do not know, can you assure me that those provisions will not be disapplied by the bill?

Jim Harries: No. However, I am sure that somebody can.

Mrs Milne: I genuinely do not know.

Jim Harries: I would be astonished if they were.

Mrs Milne: That is all.

The Convener: Do members have questions?

Phil Gallie: There has been some talk about driver training, which I thought was very relevant. Can you just say where the trainers will come from and who they will be within the company?

Jim Harries: The likelihood is that we will bring together a pool of experienced tram drivers and/or instructors from other systems. Transdev is in the fortunate position of operating the Nottingham tram system, which is, obviously, a prime target for us in terms of importing knowledge and expertise. The generation of the training programmes, the assessment regimes, the passing out, the examination of the staff and so on would be based on the proven arrangements that are in existence in Nottingham and would be suitably developed for the environment in Edinburgh.

Phil Gallie: You said that the drivers would not be allowed to make up time by using excessive speeds. Given the importance of the seven and a half minutes between trams going in one direction, if trams are delayed en route—perhaps through no fault of the tram operator—how do you get back on schedule?

Jim Harries: The basic assumption is that the trams will take a predictable time to move from stop to stop around the system. Built into that time will be a degree of make-up time, which means that, normally, a driver will not be driving as fast as he could be while still complying with all the speed and safety requirements. He has a little comfort zone. However, if he finds himself running late, he will be able to drive the tram a little harder while still retaining the necessary safety and complying with all the speed restrictions throughout the route. The amount of recovery time that we have built into the timetable is around three or four minutes around the whole circuit.

Phil Gallie: I understood that to be the case. I recognise that my next question is hypothetical, but it is also a genuine one. If, for instance, there had been an accident somewhere around the route and the driver lost 10 minutes, meaning that there would be no way in which he could make that time back up, what would be the operating procedure?

Jim Harries: If we had a delay of 10 minutes and we had a service interval of seven and a half

minutes, the sensible thing to do would probably be to step back the tram, which is what we call it when the driver targets a time that is seven and a half minutes later than the time when he should have been at the station. The tram will sort of fall back into the path of the following tram and then, one hopes, catch up those two and a half minutes throughout the rest of its route, which means that we would have had only one gap in the timetable.

Phil Gallie: I suspected that the answer would be something like that.

The Convener: Mr Thomson, have you any follow-up questions?

Malcolm Thomson: No.

The Convener: I thank Mr Harries for giving evidence and declare a short comfort break.

15:58

Meeting suspended.

16:04

On resuming—

The Convener: The next witness is Angus Walker, who will address the issue of ECHR in relation to groups 33, 34, 36 and 43.

Mr Walker, can I establish that you are adopting all the written statements in Mr Bijlani's name?

Angus Walker (Bircham Dyson Bell): I am. Obviously, my name is not Rahul Bijlani, but that is the only bit I would change.

The Convener: I will try to avoid calling you that, Mr Walker.

I have agreed that group 43 may cross-examine Mr Walker first. I note that Mr Bijlani's group 43 rebuttal statement on the ECHR contains a couple of sentences on the issue of title conditions. For those who were not present at the start of today's meeting, I point out that the committee agreed to defer oral evidence from Mr Bijlani on title conditions until 29 November, so oral evidence from Mr Walker will address only the rebuttal witness statements on the ECHR.

Mr Thomson?

Malcolm Thomson: I have no questions for Mr Walker, madam.

The Convener: Thank you. Mrs Milne?

Mrs Milne: Mr Walker, I hope you will not mind if I sometimes say, "your witness statement", even though it is not yours.

Angus Walker: No. That will make things a lot easier.

Mrs Milne: In paragraph 2.1 of your witness statement you refer to the European convention

on human rights. Do you agree that the ECHR has been given a special status and additional significance in relation to the Scottish Parliament in that a law that is made by the Scottish Parliament is not law in so far as it is incompatible with human rights?

Angus Walker: That is correct. It is outside the legislative competence of the Scottish Parliament to enact something that is contrary to human rights.

Mrs Milne: Do you agree that responsibility for determining whether a bill is compatible with human rights lies with the Parliament? Do you agree that it is for the promoter and its advisers to seek to persuade the Parliament that the bill is compatible with human rights and that it is then for the Parliament to decide whether it is persuaded by the arguments?

Angus Walker: In general, yes. Of course, even the Parliament could get it wrong and someone might take it to court before royal assent.

Mrs Milne: Nevertheless, it is the Parliament's decision and not yours.

Angus Walker: Yes.

Mrs Milne: Do you agree that the Presiding Officer has not declared that the bill is compatible with convention rights but has merely stated his belief that it is compatible?

Angus Walker: I think that they amount to much the same thing.

Mrs Milne: Do you agree that the Presiding Officer's belief has no determinative effect and that it is for the Scottish Parliament to determine whether the bill is compatible with the ECHR?

Angus Walker: Yes, indeed.

Mrs Milne: In paragraph 5.2 you refer to

"the wide margin of appreciation afforded to states."

Do you agree that the concept of margin of appreciation was developed by the European Court of Human Rights to deal with claims under the ECHR and that the concept allows the court to determine, if it sees fit, that a state action is within that margin of appreciation?

Angus Walker: I think so, yes.

Mrs Milne: Do you agree that the Scottish Parliament should not rely on the margin of appreciation at this stage and that, before the Parliament passes the bill, it must be satisfied that human rights will not be breached?

Angus Walker: I do not quite agree with that. The Parliament should recognise that there is a margin of appreciation. If it did not take that into account, it would be relying on later litigation, which would be unnecessary.

Mrs Milne: The margin of appreciation is a device to prevent the court from interfering with Government action when such interference is unnecessary. It is not intended as a get-out clause for Parliaments to use in advance.

Angus Walker: It is not a get-out clause, no.

Mrs Milne: The margin of appreciation would come into play at a later stage if it was claimed that there had been a breach. At that time, the courts would consider the Parliament's actions and decide whether they were reasonable.

Angus Walker: Yes.

Mrs Milne: In paragraph 3.2 you use the word "heavily" in referring to the qualification of the first protocol. Do you agree that "heavily" is an emotive word? The first protocol is not heavily qualified. It is qualified only by the provision that interference can be justified in certain specific and limited circumstances.

Angus Walker: I do not think that "heavily" is an emotive word. It describes the degree of qualification.

Mrs Milne: Do you agree that there are no qualifications except those that are specifically specified in the first protocol?

Angus Walker: Indeed.

Mrs Milne: In paragraph 3.4, you state:

"A number of provisions of the Edinburgh Tram (Line One) Bill ... raise issues of compatibility."

Do you agree that section 1, which contains the power to construct the scheduled works, and section 49, which authorises the operation of the tram, also raise issues of compatibility?

Angus Walker: Yes, but they have been addressed in the indirect effects of the bill. The construction of the works and the operation of the tram will have indirect environmental effects that may infringe the—

Mrs Milne: But the effects are not indirect. If the Parliament authorises the promoter to construct the tramway and run trams, it will be giving the promoter the power to create a tramway, which, in turn, will have a noise impact. That is not, in itself, an indirect effect. The authorisation of the powers is a direct effect.

Angus Walker: That is a fairly semantic point. You said, "which, in turn". I suggest that that makes it an indirect effect. However, whether the effect is direct or indirect is not very important.

Mrs Milne: Do you agree that, if there is an interference with human rights, the burden of justifying the interference lies with the interferer?

Angus Walker: Yes.

Mrs Milne: So it is for the public authority to prove that the interference is both necessary and in the public interest.

Angus Walker: Yes.

Mrs Milne: In reference to article 8 of the convention, paragraph 3.3 states:

"Interference ... can be justified if it is in accordance with the law and is necessary in a democratic society in the interests of, among other things, the economic well-being of the country."

Do you agree that, in this case, the only possible justification on which the promoter can rely is that the interference is in the economic interests of the country, as none of the other grounds for interference is relevant?

Angus Walker: Yes.

Mrs Milne: On the first of those requirements, do you agree that, in order to show that the interference is necessary, it is incumbent on the promoter to show that it has thoroughly considered at least one alternative?

Angus Walker: Sorry, can you repeat the question?

Mrs Milne: On the requirement that the promoter must first show that the interference is necessary, do you agree that, in order to show that the interference is necessary, it is incumbent on the promoter to show that it has thoroughly considered at least one alternative?

Angus Walker: No. That does not logically follow.

Mrs Milne: How can you prove that something is necessary if you have not tried anything else?

Angus Walker: If you can prove that a course of action is the only one available, that means that no other course of action is available.

Mrs Milne: In order to prove that a course of action is the only one available, do you not need to have investigated whether any other course of action is available?

Angus Walker: To cut a long story short, I am sure—in fact, I know—that the promoter has considered other courses of action.

Mrs Milne: Do you agree that, given that the promoter has not provided any evidence that it considered an alternative route for the tramline between the Holiday Inn hotel at Craighleith and Roseburn, it follows that the promoter has not shown that the interference is necessary?

Angus Walker: If I may take the argument a step back, I suggest that the provision of a tram system is a necessary part of the strategy for addressing or promoting the economic well-being of Edinburgh in particular and of Scotland in general.

Mrs Milne: That is to provide an economic justification for the tramline; I am referring to the necessity for the proposed route. The tramline could run on a completely different route and still serve the economic interests of Edinburgh.

Angus Walker: It has been shown that the proposed route is the most suitable one.

Mrs Milne: If the promoter has provided no evidence to show that an alternative route for that part of the route was considered, is it not the case that the promoter has not shown that the interference is necessary?

Angus Walker: If a promoter has not considered a particular alternative route, I do not see that that means that the promoter has not shown that its chosen route is necessary.

Mrs Milne: To show that the route that has been decided on is necessary, would it not be necessary for the promoter to show that there was no other way of getting there?

Angus Walker: There is a balance. Obviously, there are other ways of getting there.

Mrs Milne: Would it not be necessary, in order to determine that the proposed route is a necessary route, to show that other routes had been considered thoroughly and were found to be unsuitable?

Angus Walker: It is not necessary to consider every other possible route from A to B.

Mrs Milne: Do you not consider that it is necessary for the promoter to consider at least one other route?

Angus Walker: No, I do not think so.

Mrs Milne: With regard to the second requirement under article 8 of the convention, do you agree that, in order to be satisfied that the interference is necessary, the Parliament must be satisfied—or at least have a reasonable belief—that the economic case stacks up?

Angus Walker: Yes.

Mrs Milne: Therefore, do you agree that, if the Parliament does not have a reasonable belief that the economic case stacks up, the interference cannot be justified?

Angus Walker: That would certainly make it less easy to justify the interference.

Mrs Milne: In paragraph 3.2, you state that if interference takes place and is compensated,

“there will not normally be a disproportionate interference with property rights.”

Angus Walker: That is right.

Mrs Milne: Do you agree, however, that compensation is a secondary issue that might

make up for the deprivation to an extent but compensation comes into play only if the deprivation can be justified in the first place?

For example, do you agree that the council could not compulsorily acquire all of Edinburgh just because it wanted new houses? Even if it provided compensation, that would not make it okay.

Angus Walker: Yes. The council could not do that.

Mrs Milne: So the authority must be satisfied that the interference is justified before it moves on to consider the possibilities of compensation.

Angus Walker: The availability of compensation is a factor in justifying the acquisition.

16:15

Mrs Milne: Is it not a secondary factor only, once it has been decided whether the action is necessary and in the economic interests of the country? Those issues must be proved first, to justify interference with article 8 rights. Therefore, the compensation is a secondary issue. It is only once the interference has been justified and found to be necessary and in the economic interests of the country that compensation issues are considered.

Angus Walker: No, the availability of compensation is part of the justification. It would be more difficult to justify measures if no compensation were available.

Mrs Milne: Okay. In that case, do you agree that the compensation that is provided by the Land Compensation (Scotland) Act 1973, in so far as it relates to parties from whom land is not taken, is not comprehensive and that some interference may not result in compensation?

Angus Walker: I agree that there is a different way of assessing compensation when land has not been acquired, but a procedure exists and the tram bill will follow the general law.

Mrs Milne: You may not be aware that the district valuer gave evidence about compensation a couple of weeks ago in which it was made clear that certain aspects of the interference will not result in compensation. Do you agree that, where compensation is not provided for, there is a greater obligation on the Parliament to be satisfied that the interference is justified?

Angus Walker: You are contradicting your argument of a minute ago. You said that compensation was not an element of the justification, but you now say that it is.

Mrs Milne: I consider it to be secondary, but I understand that the courts have considered the

issue and decided that, where there is compensation, it is acceptable to interfere.

Angus Walker: So you disagree with the courts.

Mrs Milne: No; I am saying that that is what the courts do. So if that is what the courts do, we are moving to compensation.

Angus Walker: Okay. I am sorry, but will you reiterate your question?

Mrs Milne: Do you agree that, where compensation is not provided for, there is a greater obligation on the Parliament to be satisfied that the interference is justified?

Angus Walker: Yes.

Mrs Milne: At paragraph 5.2 you assert that the operation of the tramline is likely to "result in comparatively small noise impacts".

Are you aware that two separate noise experts whom objectors have called to give evidence to the committee have suggested that the noise impact for residents along the Roseburn corridor will be significant; that the promoter's environmental statement indicates that the impact will be significant for many properties along the route; that the promoter's witnesses have admitted that that is the case; and that the objectors' noise experts have said that, in their view, the noise impact has been underestimated?

Angus Walker: That was a lot of questions. I am aware of one noise expert's evidence that is included at appendix 13 of the Wester Coates Terrace action group objection, which is number 185.

Mrs Milne: That was our expert, but there is another one.

Angus Walker: I am not aware of any others. I am here to answer issues that relate to that objection.

Mrs Milne: The main question is whether you are aware that, if all that evidence is to be believed, there will be a significant noise impact.

Angus Walker: I am afraid that I have not followed the proceedings closely enough to know what has been conceded and what has not. However, the facts that the noise has been assessed in the environmental statement, that mitigation has been proposed and that additional mitigation will be forthcoming if the noise turns out to be louder than the promoter thinks it will be are sufficient to allay such fears.

Mrs Milne: It has been made clear that sleep disturbance, for which there will be no compensation, is a possibility and that it will not and cannot be mitigated. Therefore, your statement that the tramline

"will result in comparatively small noise impacts"

is not correct.

Angus Walker: I am not a noise expert, but I imagine that it is for the committee to decide in the balance whether noise issues have been addressed satisfactorily in the environmental statement and subsequent statements.

Mrs Milne: Do you agree as a matter of principle that the greater the impact, the greater the need to justify the interference?

Angus Walker: In general, yes.

Mrs Milne: Do you agree that, in the Hatton case, night flights at Heathrow were of national strategic importance because Heathrow is a national transport hub?

Angus Walker: That was certainly one of the considerations that overturned the original decision.

Mrs Milne: Do you agree, therefore, that, in the Hatton case, the public interest weighed more heavily against the private interest than is the case with the tramline, which is not of national strategic importance?

Angus Walker: If one counts Scotland as a nation, the tramline may be of national strategic importance.

Mrs Milne: Do you agree that that might be pushing it a bit?

Angus Walker: I certainly agree that the tramline is of lesser importance than night flights at Heathrow.

Mrs Milne: Do you agree that the night flights had to fly over someone's home and that that could not be avoided at Heathrow because no alternative route was available that would have minimised the impact or resulted in no impact?

Angus Walker: If that was the judgment, I agree with it.

Mrs Milne: Are you aware that using an on-road route for the tram scheme could avoid the interference here?

Angus Walker: There is an alternative route that I presume would take the tram off the Roseburn corridor, so that it would not affect people there, but that route would have other effects.

Mrs Milne: Yes, but the route would be on road and would therefore have no noise impact. The promoter has said that the noise impact in a road situation would be negligible, because buses, lorries and cars use the roads already. Do you agree, therefore, that using an on-road route for the scheme could avoid interference?

Angus Walker: If that impact alone were considered, taking the route off the corridor and putting it on the road would have a lesser impact.

Mrs Milne: Do you agree that where the impact could easily be avoided by routing trams along the roads—

Angus Walker: I do not agree with the word “easily”.

Mrs Milne: Do you agree that where the impact could be avoided by routing trams along the roads and when the promoter has said that trams could reach Haymarket by another route if the Roseburn corridor were not used, private interests will weigh more heavily against the public interest than was the case in Hatton?

Angus Walker: I do not think that I got the gist of that. Will you ask the question in different language or more slowly?

Mrs Milne: In Hatton, planes had to fly over somebody’s house, so somebody was affected. If the tram here were routed along the roads, it would have no noise impact on the houses along the roads or on Roseburn. Therefore, the tram could be routed in such a way that the noise impact was avoided. In such circumstances, do you agree that the private interests weigh more heavily against public interests than was the case in Hatton?

Angus Walker: You seem to take the noise aspect in isolation. The choice of alternative routes is affected by many factors.

Mrs Milne: We are talking about human rights impacts.

Angus Walker: One factor is cost. If many other people must spend more on the tram, that affects their property—their income.

Mrs Milne: We are talking about justifying the interference, which must be shown to be necessary and in the country’s economic interests. We are not talking about interference with other properties. The interference must be justified on the grounds that I described alone.

Angus Walker: Once it is established that having a tram is a necessary part of the economic strategy of south-east Scotland or Edinburgh, then we talk about alternatives for the tram. The alternatives will have different impacts, of which noise is one, which must be weighed up. Each impact will have effects on people’s human rights, whether they are financial or environmental.

Mrs Milne: Do you agree that in order to justify the interference that we are discussing, it must be shown to be necessary to the country’s economic interests? We have been there and you said yes.

Angus Walker: Yes.

Mrs Milne: Do you agree that if that impact can be avoided in a way that avoids a human rights impact in relation to other properties, the private

interests of the people who are affected and whose rights are interfered with must weigh more heavily against the public interest than in Hatton, when the situation was that flights could go nowhere except over the houses of the people involved?

Angus Walker: The alternative would be not to have the flights.

Mrs Milne: We agreed that Heathrow was of national strategic importance.

Angus Walker: We did.

Mrs Milne: Therefore, we had to fly.

Angus Walker: We could have flown at different times.

The Convener: We kind of get the point that Mrs Milne makes.

Mrs Milne: Thank you.

Angus Walker: Good.

Mrs Milne: Do you agree that when an alternative route could be used that would result in little or no breach and would make sense, proportionality must be weighed more heavily against the promoter?

Angus Walker: I still think that you take the issue out of context, because more than one factor affects the choice of route.

Mrs Milne: We are talking about human rights impacts only. Human rights interference can be justified only on the grounds that have been mentioned. It cannot be justified by the fact that a route is quicker, for example.

Angus Walker: That is part of the balance. If a route is quicker, that affects the well-being of all the people who will take less time to go from A to B.

Mrs Milne: It must also be shown that interference is necessary.

Angus Walker: Yes. I think that I have demonstrated that.

Mrs Milne: You have agreed with my statement. The interference is not necessary if the same point can be reached by an alternative route.

Angus Walker: In general, it must be necessary to show the necessity of a tramline. However, you cannot easily compare one slight variation with another with regard to human rights impacts. I do not think that the choice of route is fundamentally a human rights issue.

Mrs Milne: If you are not considering any other route, how do you prove that this particular route is necessary?

Angus Walker: If it is an inevitable consequence—

Mrs Milne: But if you say that it is inevitable, you are already saying that it is necessary. You have to prove that the route is necessary. How are you going to prove that it is necessary if you have not considered any other routes?

Angus Walker: You prove the need for the tram by setting out the economic case. The future economic well-being of Edinburgh in particular and Scotland in general needs infrastructure to support it. Moreover, if new development is to be allowed, congestion levels must be kept down. You then consider the best way of achieving that infrastructure. In this case, this particular mode of transport and route were chosen.

Mrs Milne: I agree with you up to your comment about choosing this particular route. Surely, in order to satisfy the requirement of necessity, you need to show that that route is the only possibility and that other routes are less suitable.

Angus Walker: Yes.

Mrs Milne: But if you have not shown that other routes are less suitable, you have not satisfied the requirement of necessity.

Angus Walker: I do not think that you necessarily have to consider other routes as part of the human rights argument.

Mrs Milne: If the trams could be routed along the roads and avoid any interference with human rights, should such a route not have more weight in your consideration of routes?

Angus Walker: In that element of the route choice, yes. However, that is only one element.

Mrs Milne: Do you agree that the fact that human rights impacts—in other words, noise impacts—on other routes were not considered is evidence that you have not shown that the chosen route is necessary and therefore have not demonstrated that the interference was the minimum necessary to allow the scheme to proceed?

Angus Walker: I think that a step has been missed out here. Article 8(2) says:

“There shall be no interference by a public authority with the exercise of”

the right to privacy

“except such as is in accordance with the law and is necessary”.

However, the fundamental point is that, with the environmental assessment and mitigation package, there will be no interference.

Mrs Milne: But your own witnesses have indicated that there will be sleep disturbance. Do

you not think that that constitutes interference and that, therefore, the rights are engaged?

Angus Walker: I am not aware of what the promoter's witnesses have said. However, if the impact were severe, that would constitute interference. I am not sure what severity they claimed would occur.

Mrs Milne: Do you agree that if, having assessed the evidence on noise, the committee decides that the noise impact is such that there will be sleep disturbance, the human right is engaged and the promoter must show that what it is doing is necessary and in the country's economic interests?

Angus Walker: Yes.

Mrs Milne: So do you agree that if the Parliament cannot be satisfied that the interference is necessary—in other words, that no other route can deliver the objective—and the business case and other evidence at the very least result in its having a reasonable belief that the scheme is in the country's economic interests, there cannot be a justification for interference with article 8 rights?

16:30

The Convener: Before Mr Walker comes in, I suggest that you have laboured the point to the extent that we could probably ask the questions for you. We will allow Mr Walker the opportunity to answer the question, but we understand what you are driving at.

Angus Walker: I do not think that I will say anything in my reply that is particularly different from what I have said previously. You now ask me to assume that there will be interference, which I do not accept. However, if there is interference, there needs to be justification for it under the European convention on human rights. The justification includes a test of whether it is necessary to do what is being done. We cannot choose alternative routes purely on human rights grounds.

Mrs Milne: We had better not go over the issue again, because we are obviously not going to agree.

You say that the promoter is satisfied that the benefits of the tramline to Edinburgh as a whole sufficiently outweigh individual interests.

Angus Walker: Yes.

Mrs Milne: Do you agree that it is for Parliament rather than the promoter to decide whether the bill and the tramlines that it would authorise would infringe human rights?

Angus Walker: It is certainly for Parliament to decide whether to authorise the bill.

Mrs Milne: So it is Parliament that must be satisfied that the benefits of the tramline and the whole scheme outweigh individual interests.

Angus Walker: Yes—if Parliament is of the opinion that there is interference with human rights.

Mrs Milne: That is all. Thank you.

The Convener: I do not know whether Mrs Milne has left you much to ask, Mr Scrimgeour, but go for it.

Graham Scrimgeour: I will try hard to ensure that I do not repeat anything, but some of my points may be similar because they relate to the same statement. I am not a lawyer, so I hope not to go into so much detail.

In my rebuttal, I mention paragraph 3.2 of one of the promoter's witness statements, which refers to public interest. Do you agree that it is important to confirm a wider public interest in making an assessment of proportionality?

Angus Walker: Yes.

Graham Scrimgeour: We have noted in the past that a principal driver for the scheme is the property that is to be developed in Granton. Do you agree that in the context of a city that has a population of 400,000 people, provision of a transport system that could be said to be targeted to provide benefit primarily to a much smaller group of about 7,000 people—the capacity of the tramline in a two-hour peak period—may not necessarily be in the wider public interest. The tramline will be for the benefit of a much smaller group.

Angus Walker: The purpose of line 1 is not to serve only the people of Granton: it is to serve everyone around the route.

Graham Scrimgeour: That point may be in dispute.

Angus Walker: Okay. The promoter's case is that the tram is intended to serve anyone who wishes to use it. The tramline has been designed to pass a large number of properties on routes that people will use; Granton is one of the areas that it will serve.

Graham Scrimgeour: Do you agree that in order to use the argument about proportionality it will be necessary to demonstrate that the tramline will be of benefit to the wider public rather than to one small area?

Angus Walker: Yes, but that is an intrinsic part of the economic case. The tram's patronage will demonstrate that it will be used widely rather than only by the residents of Granton.

Graham Scrimgeour: I will move on to the next question.

Paragraph 3.3 of one of the promoter's witness statements refers to economic well-being and privacy. There is an on-going debate about the cost of the tramline. I will not go into the detail, but the tram is likely in the future to require operational subsidies to run for the potential benefit—the matter is subject to debate—of only a small group. Do you agree that it is important to demonstrate that the tramline is for the economic well-being of the country in order to apply proportionality? Do you agree that if there is doubt about the tramline's economic contribution to the country the proportionality that is used to justify the impact on other rights is in doubt?

Angus Walker: The committee and Parliament must in turn satisfy themselves that it is worth having the tram, which is the economic case that is being made.

Graham Scrimgeour: We are heading towards the same conclusion, which is that we agree that it is for Parliament and the committee to determine whether there will be wider public benefit and a clear economic benefit. My understanding is that the financial case has not yet been completed and that it may therefore be not yet possible to do that.

Angus Walker: The committee will have to make a decision based on the evidence that it has received. I presume that, if it is satisfied with the case as far as it has been developed, the committee will, having taken all other relevant matters into consideration, approve the bill.

Graham Scrimgeour: I understand from the statement that you are presenting that both the wider public interest and the economic benefit are important in the context of the European convention on human rights.

Angus Walker: Yes.

Graham Scrimgeour: Those were all my questions. Thank you.

The Convener: Thank you very much, Mr Scrimgeour. I know that committee members have questions. They may cover areas that have already been covered but we will, for the sake of form, ask them anyway.

Helen Eadie: We understand from earlier evidence that we received from Archie Rintoul that the Land Compensation (Scotland) Act 1973 will compensate for reductions in property values that are associated with the operation but not the construction of the tramline. Is that your understanding?

Angus Walker: I presume that you are talking about a situation in which land is not being acquired from the landowner.

Helen Eadie: Yes.

Angus Walker: Because construction will be a short-term activity, it follows that the overall value of the land will not suffer too much. It is therefore likely that operation will have a greater impact on land values than will construction. I am not sure whether construction will have no impact, but it will certainly be less.

Helen Eadie: How can that be reconciled with article 1 of protocol 1 of the ECHR, which deals with the right to property?

Angus Walker: Article 1 of protocol 1 of the ECHR is about the right to peaceful enjoyment of one's property; it is engaged when land is compulsorily acquired. We, however, are talking about a situation in which no land is being acquired, and there is not quite the same engagement of the protocol for properties from which no land is being acquired. The bill follows the general law for compensation, both for land that is being acquired and land that is not being acquired. As a public authority, the promoter should not spend money above and beyond the general law on compensation, but should simply follow the general law in general—if that is not too many "generals".

Helen Eadie: Will the promoter consider lodging an amendment to enable people who need to sell their property before or during construction to be compensated for any reduction in the value of their property?

Angus Walker: I am sure that the promoter would be happy to look into that, but I cannot anticipate its conclusion.

Rob Gibson: Do you accept that residents in the Roseburn corridor will be particularly affected by noise nuisance from the tram, which raises issues under article 8 of the ECHR?

Angus Walker: The environmental statement—in particular, the assessment of noise—shows that, with the proposed mitigation, although there will be impacts on the residents, they will not be sufficient to constitute an infringement under the ECHR.

Phil Gallie: You suggest that the committee has a decision to make on this and that we are bound by law to ensure that our decision complies with the ECHR.

Angus Walker: Indeed.

Phil Gallie: You suggest that, in ensuring compliance with the ECHR, the only justification for the tramline is the economic well-being of the country. Can you give examples of the economic well-being of the country being used to justify interference with article 8 rights?

Angus Walker: I refer you to the case of *Hatton v United Kingdom*, which concerned night flights at

Heathrow airport, and which is a well-known example of night flights being allowed at Heathrow in consideration of economics despite interference under article 8 of ECHR.

Phil Gallie: Has article 8 ever been used to justify a tram scheme?

Angus Walker: I do not know. However, the promoter says that on this tram project there will be no interference under article 8.

Phil Gallie: The promoter is saying that the tram will be to the overall economic benefit of the country.

Angus Walker: If there is no interference under article 8, one need not show that the scheme is necessary for the economic well-being of the country, although the promoter believes that it will be.

Phil Gallie: Okay. That is something for the committee to consider.

I draw to your attention the fact that only this week, or perhaps last week, the Secretary of State for Transport rejected the Leeds tram scheme on the basis of economic viability. Does that concern you?

The Convener: You may answer, but you are not our economic expert, as Mr Gallie well knows. He has put his question, however, so you may answer.

Angus Walker: I am sure that the promoter will look at the reasons why the Leeds scheme was turned down to see whether any lessons can be learned for the Edinburgh scheme.

Phil Gallie: Finally on ECHR matters, Mrs Milne pressed you on alternatives to the Roseburn route. You used the term "slight variation" in relation to the Roseburn route, but it is a key element of tramline 1. Might the promoter have cause to regret that it did not thoroughly check out alternative routes to Roseburn, given that alternative routes have been identified?

Angus Walker: I hope, given the environmental assessment that was carried out, that that is not the case, because that is the very purpose of such an assessment.

The Convener: That is a matter for the committee, Mr Gallie, as you well know.

Mr Walker, you have not escaped quite yet—I have a couple of questions for you. Why does the promoter think that the bill strikes a fair balance between the economic well-being of the country and the ECHR article 8 rights of individuals who live along the tramline?

Angus Walker: I return to the provenance of the tram scheme to support growth in Edinburgh and

therefore the well-being of the country. That is balanced against interference that is believed to be below the threshold that would infringe human rights along the Roseburn railway corridor and is therefore in the promoter's favour.

The Convener: I understand the high-level arguments; I asked specifically about what is in the bill that you feel balances article 8 rights of individuals with the contention that the scheme will bring economic well-being to the country.

Angus Walker: The bill does not address that question, but the environmental statement provides the safeguards that create such a balance.

The Convener: Okay. Should the bill make particular provision to ensure that a fair balance is struck for Roseburn corridor residents?

Angus Walker: It is up to the committee to decide the extent to which the promoter should adhere to the mitigation that it proposes in relation to noise. The promoter has offered to amend the bill with a provision to that effect, if necessary.

The Convener: I take you back to a response that you gave to Helen Eadie about the promoter perhaps considering an amendment to enable people who need to sell their property during the construction period to be compensated. I understand that the reduction in property values has been held to represent partial deprivation. Therefore, I would be grateful if the promoter would also address that point when it gets back to us about the potential amendment.

Angus Walker: Point taken.

The Convener: Are there any other questions from committee members?

16:45

Phil Gallie: I think that I might have put badly the question relating to article 8, which might have given rise to a misinterpretation.

The fact is that article 8 must be complied with in terms of the right to respect for private and family life. To comply with that, there must be

"no interference by a public authority with the exercise of this right except such as is in accordance with the law and is necessary in a democratic society in the interests of national security, public safety or the economic well-being of the country, for the prevention of disorder or crime, for the protection of health or morals, or for the protection of the rights and freedoms of others."

What I was trying to say was that the only way in which we can claim that the ECHR has been complied with is by demonstrating that this project is for the economic well-being of the country.

Angus Walker: That would be the case only if it were established that there was interference with the right to private and family life.

Phil Gallie: Okay, that is fine. Thanks for letting me clarify that, convener.

The Convener: That is okay—I am always flexible with you, deputy convener.

Are there any other questions from committee members? No.

I am sure that Mr Thomson has some questions but, before I bring him on, I would like to deal with compensation, which was raised at the meeting on 25 October and again today. I think that it would be fair to say that, although we acknowledge the guide to compensation that has been provided to objectors and the committee by the promoter, the committee would like to see more information on compensation. As members will be aware, the compensation arrangements are a key part of our consideration of objections, particularly in relation to the ECHR. I therefore ask the promoter to provide a note detailing the compensation that might be claimed by people whose property rights will be affected by the bill. By that, we mean not only people whose property is to be acquired or used under the bill, but those whose property value might reduce as a result of construction or operation of the tram, which is a point that I made earlier.

We understand that the bill largely applies existing compensation legislation. The promoter's note should indicate what parts of the bill will apply what statutory compensation regimes, and it should describe for us how the various regimes will work in practice, dealing with questions relating to who is entitled to claim, how compensation will be calculated, how it will be paid, how disputes will be settled and so on.

Finally, we have heard evidence that the Land Compensation (Scotland) Act 1973 will apply to some people who are affected by the tramline. It would be helpful for the promoter to clarify why, therefore, the bill makes no reference to the 1973 act.

It would be helpful to have all of that information by Friday 18 November 2005.

Mr Thomson, do you have any follow-up questions?

Malcolm Thomson: Mr Walker, we have heard quite a lot about the *Hatton v United Kingdom* case this afternoon. You have already mentioned that the appellate court that finally dealt with it overturned the previous decision. Does that suggest that two different courts took two different views on what happened?

Angus Walker: I am not sure whether the views were on fact or law, but the answer is yes.

Malcolm Thomson: That relates to my next point. Is there a difference between the situation

that we are in and the situation that the courts in *Hatton v United Kingdom* were considering, in that there had already been intensification of night flights several years before the court started to consider the situation, so the court was able to consider factual evidence about the increase and knew, from the complainers, precisely who had had their sleep disturbed and who had not?

Angus Walker: Yes.

Malcolm Thomson: Was that because the events had already occurred?

Angus Walker: Yes.

Malcolm Thomson: So people were not as reliant on noise experts as this committee is.

Angus Walker: That is correct.

Malcolm Thomson: Am I right in thinking that, in your involvement in the tram project, you have not considered in any detail the Scottish transport appraisal guidance or any of the detailed early work or analysis of route selection?

Angus Walker: That is correct.

Malcolm Thomson: I know that your primary position is that there will be no infringement under article 1 of protocol 1, or under article 8, of the ECHR and that you have drawn attention to the fallback position on article 8 in relation to the economic well-being of the nation. Mr Scrimgeour drew attention to the fairly small—he said—number of people in Granton who would benefit from tramline 1. Am I right that the theory behind the case that the tram is necessary is along the line that, if someone in Craighleith, for example, is persuaded not to drive their car to the west end to go to work but to go by tram instead, that is one less car on the roads network and one more car space that is available for new development somewhere that is served by tramline 1?

Angus Walker: Yes.

Malcolm Thomson: Is that—as well as the areas of new development that will be served directly—part of the economic well-being argument?

Angus Walker: Yes, there is a wider argument that is not only concerned with the developments that will be directly served.

Malcolm Thomson: Therefore, anyone who uses tramline 1 would potentially be benefiting the economic well-being of the city, if not the nation.

Angus Walker: That is correct, in the terms that you have described.

Malcolm Thomson: I have no further questions.

The Convener: There being no further questions for Mr Walker, I thank him for giving evidence.

That concludes this item on our agenda. Under item 2, we will discuss in private the oral evidence that we have heard today.

16:52

Meeting continued in private until 17:10.

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