

# **EDINBURGH TRAM (LINE ONE) BILL COMMITTEE**

Wednesday 28 September 2005

Session 2

£5.00

© Parliamentary copyright. Scottish Parliamentary Corporate Body 2005.

Applications for reproduction should be made in writing to the Licensing Division,  
Her Majesty's Stationery Office, St Clements House, 2-16 Colegate, Norwich NR3 1BQ  
Fax 01603 723000, which is administering the copyright on behalf of the Scottish Parliamentary Corporate  
Body.

Produced and published in Scotland on behalf of the Scottish Parliamentary Corporate Body by Astron.

---

# CONTENTS

Wednesday 28 September 2005

Col.

EDINBURGH TRAM (LINE ONE) BILL: CONSIDERATION STAGE.....	973
--	-----

---

## EDINBURGH TRAM (LINE ONE) BILL COMMITTEE 15<sup>th</sup> 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:

Ian Bray

Sandy Cameron

Laura Donald (Counsel for the Promoter)

Mark Sydenham

### THE FOLLOWING GAVE EVIDENCE:

Jill Bennett (Wardie Bay Residents Association)

Jane Dalrymple (Wardie Bay Residents Association)

Dick Dapr  (Steer Davies Gleave)

Robert Drysdale

Professor Brian Evans (Gillespies)

Jim Harries (Transdev Edinburgh Tram Ltd)

David Jamieson (Wardie Bay Residents Association)

Ian Kendall (Transport Initiatives Edinburgh Ltd)

Stuart Turnbull (Jacobs Babbie)

Gary Turner (Mott MacDonald)

### CLERK TO THE COMMITTEE

Jane Sutherland

### LOCATION

Committee Room 1



## Scottish Parliament

### Edinburgh Tram (Line One) Bill Committee

Wednesday 28 September 2005

[THE CONVENER opened the meeting at 13:23]

### Edinburgh Tram (Line One) Bill: Consideration Stage

**The Convener (Jackie Baillie):** Good afternoon, everybody, and welcome to the 15<sup>th</sup> meeting in 2005 of the Edinburgh Tram (Line One) Bill Committee. I was just reflecting that it seems like only yesterday that we last met.

We are now at the consideration stage, which is about the committee considering the detail of the bill. Our job is to consider the arguments of both the promoter and the objectors and, ultimately, to decide between any competing claims. First, I put on the record the committee's thanks to the objectors, the promoter and all the witnesses for their written evidence, which will be invaluable when we hear oral evidence today. I also reiterate that written evidence is of equal value to any oral evidence that we hear.

At today's meeting, the committee will hear evidence in relation to two groups of objectors. We will complete the evidence today. Today's session is a continuation of the oral evidence that we heard on 13 September. At that meeting, the promoter gave the committee a commitment to provide further evidence on the revised run times for the alternative route that group 30 put forward and for the route that is proposed in the bill. That evidence is contained in papers ED1/S2/05/15/5, ED1/S2/05/15/10 and ED1/S2/05/15/11.

I am disappointed that the revised run times that the promoter has provided for group 30's alternative route and the promoter's proposed route were not included in previous written evidence. That protracted the oral evidence taking on 13 September. I appreciate that, as the project progresses, information may well change, but where such evidence is a key theme of the promoter's case, I expect it to be provided before oral evidence taking commences. Although I accept that, in this case, there was a genuine error, I strongly advise the promoter to avoid putting the committee or other groups in that situation again. We now have the evidence and it should be considered, but the committee will be mindful of the circumstances in which it was provided when we consider the objections for group 30.

Following the completion of each group's oral evidence taking, the committee will give the promoter's representative a maximum of five minutes to make any closing comments. The committee will then give a representative of the group five minutes to make any closing remarks that they may have. Those closing statements should not introduce any new issues or evidence.

I ask everyone to ensure that all mobile phones and pagers are switched off.

The first group of promoter witnesses are for group 32. I invite to the table Dick Dapr , Stuart Turnbull, Gary Turner and Ian Kendall. Before we commence oral evidence taking, I remind Stuart Turnbull, Gary Turner and Dick Dapr  that they are under oath. I invite Ian Kendall to take the oath or make a solemn affirmation.

IAN KENDALL *took the oath.*

**The Convener:** Ian Kendall is our first witness. He will address damage to properties during construction. Ms Donald?

**Laura Donald (Counsel for the Promoter):** I have no questions for the witness.

**The Convener:** Are there any questions from committee members?

**Members:** No.

**The Convener:** Ms Donald, I assume that you have no follow-up questions.

**Laura Donald:** No, thank you.

**The Convener:** Mr Kendall, you got off extremely lightly. Thank you for being here. I understand that you have another appointment to go to, so please feel free to leave the committee.

**Ian Kendall (Transport Initiatives Edinburgh Ltd):** Thank you.

**The Convener:** The next two witnesses will address the impact on existing residents' transport use. The first witness is Stuart Turnbull.

**Laura Donald:** Mr Turnbull, this group is concerned with the Lower Granton Road part of the route. Will any of the side streets off Lower Granton Road be closed as a result of the tram construction or operation?

**Stuart Turnbull (Jacobs Babbie):** It is not anticipated that that will be necessary.

**Laura Donald:** If that is necessary, what will be required?

**Stuart Turnbull:** The formal statutory process would be required, involving traffic regulation orders. That would require an appropriate level of public consultation.

**Laura Donald:** Will you explain to the committee how the introduction of the tram will impact on other road users, bearing in mind that, along Lower Granton Road, the proposal is for a segregated stretch of tramway?

**Stuart Turnbull:** In my opinion, the benefit of the segregated section along Lower Granton Road is twofold. First, it will be beneficial to the operation of the tram itself. Secondly, it will minimise interaction with other road users, pedestrians and cyclists, thereby allowing existing users of Lower Granton Road to use the road as they do at present.

**Laura Donald:** Will you explain to the committee how, following the introduction of the tram, motor vehicles will be able to enter or leave a parking space? Will there be any difference?

**Stuart Turnbull:** There will be no difference. Indeed, the proposals involve the formalisation of some parking bays, which will improve conditions for the locals. Perhaps my colleague Mr Turner will expand on that in his evidence.

**Laura Donald:** Thank you.

**The Convener:** I have a question on deliveries. I am conscious that most delivery services operate during business hours. Previously, you indicated that a traffic management order will be brought in to prevent deliveries along Starbank Road. How do you propose to deal with the situation in which someone is expecting a delivery but there is nowhere for the vehicle to stop?

**Stuart Turnbull:** Given the proposed shared running on Starbank Road, the designs to date indicate areas of formalised parking and servicing. As the design progresses, it will have to take cognisance of the specific servicing requirements of individual properties and businesses. I expect the detailed design to include formal provision for servicing.

**Phil Gallie (South of Scotland) (Con):** I accept the validity of your comment about the tramline being separated from traffic on Lower Granton Road but, as we look backwards along the line to Starbank Road, we see something totally different: a road that carries heavy traffic, but where no separation is proposed. That will give rise to all the problems that go along with casual breakdowns, deliveries and parking, both legal and illegal. Why should your comments about Lower Granton Road not be applied to the proposal for Starbank Road, from Trinity Crescent?

13:30

**Stuart Turnbull:** If you recall the evidence that I gave on Starbank Road last week, on pure traffic grounds, my preference would be for the tram to be segregated or to run on the railway corridor,

instead of having shared running. I accept that initial point, but—

**Phil Gallie:** Mr Turnbull, you have said enough. Thanks very much.

**The Convener:** As there are no further questions for Mr Turnbull, I thank him for his evidence.

The next witness will be Gary Turner, on the same issue.

**Laura Donald:** Are the questions to be on the same issue?

**The Convener:** Yes.

**Laura Donald:** I have no questions for Mr Turner on the impact on existing residents' transport use.

**The Convener:** I have double checked—we are on the same issue.

**Laura Donald:** Mr Turner is not on my timetable.

**The Convener:** Ah well, Mr Turner has been missed out completely, which means that nobody has questions for him. I thank him for being here. The next witness is Dick Dapr , who will address whether the tram route should be shared with traffic. Mr Dapr  will be cross-examined by David Jamieson on behalf of group 32.

**Mark Sydenham:** Excuse me, convener, but on my timetable, I have two sets of questions for Gary Turner.

**The Convener:** We will take a short commercial break, while I consider the issue. [*Interruption.*]

As we might miss the issue later, we will deal with it now. Mark Sydenham is right to point out the matter—that just shows that the convener is not infallible, although I try. Therefore, we are back to Ms Donald. We will start with the issues of the limited width available, pedestrian crossings and bus stops.

**Laura Donald:** I have one or two questions on those issues. In their rebuttal, the objectors have indicated that Boswall Road has no entrance steps on Lower Granton Road. Mr Turner, in your statement, did you mean the Wardie steps?

**Gary Turner (Mott MacDonald):** No. The intent was to refer to Boswall Road. It was just a geographical reference to the width of the road, so that it could be placed in space and time.

**Laura Donald:** The objectors have indicated that moving the road away from their houses in Lower Granton Road is part of a long-standing agreement with the council. Will you comment on that?

**Gary Turner:** As part of the development of the tramline, we became aware of the section 75 agreement to realign Lower Granton Road. During development of the tramline, we have endeavoured to take that agreement on board and to realign the road as far away from the properties as is practical.

**Laura Donald:** Will you explain to the committee the proposed layout for Lower Granton Road when the tramline is built?

**Gary Turner:** The current proposal is that the tramline will be segregated on the old railway alignment, which is adjacent to the north sea wall. Adjacent to that will be the carriageway, which will be reduced in width to 6m. Between the carriageway and the properties, the footpath will be widened and formal parking will be provided alongside the road.

**Laura Donald:** So there will be formal parking in addition to the road.

**Gary Turner:** Yes. There will also be provision for servicing.

**Laura Donald:** Have you carried out a road safety audit in respect of the narrowed road?

**Gary Turner:** Yes. Just to go back a step, one of the concerns that residents have is that the improvements to the highway might encourage people to speed on the improved alignment. They expressed their concerns and the introduction of a 6m-wide carriageway was considered in the discussions about how they might be addressed. The tram partner from City of Edinburgh Council said that he would support that, provided that there would be a road safety audit. As part of the works that we were undertaking, a road safety audit was commissioned at the end of June or beginning of July. The comments from that audit have been taken on board and the designers have responded. A 6m-wide carriageway has been accepted in principle.

**Laura Donald:** It was suggested that it would be helpful if a walkway similar to the one proposed for Starbank Road were constructed along Lower Granton Road. Will you comment on that?

**Gary Turner:** There are difficulties at the Lower Granton Road section, because it is part of a site of special scientific interest—there is geological interest there. As part of the proposals for the walkway, we agreed with Scottish Natural Heritage that we would not extend beyond a certain area, so that we would not impact on the SSSI. The site of geological interest goes west from Starbank and into the Wardie bay area. The construction proposals for a walkway at Starbank could not be introduced at Wardie bay.

**The Convener:** Mr Turner will be cross-examined on both his witness statement and the

relevant rebuttal witness statement by Mark Sydenham for group 32.

**Mark Sydenham:** Our concerns regard only the 450m stretch from Granton Square eastwards. I will refer only to that bit, not to the bit beyond it where the road is much wider. Do you agree that within that stretch the space is fairly confined and is not ideal to meet the aspiration of having tram, road, pavement and cycleway?

**Gary Turner:** It is relative. For highway alignment and tram alignment, the width is more than adequate. I respect the desire of the residents to make the space an urban space and a place to be. It is possible to incorporate all those aspirations, but the scope available becomes more restricted.

**Mark Sydenham:** You say that, under your proposal, the walkway and cycleway on the north side of the tramway will be 3m wide.

**Gary Turner:** Yes. That is what the current proposal is.

**Mark Sydenham:** Is that for a segregated cycleway and walkway or a shared use way?

**Gary Turner:** It is for shared use.

**Mark Sydenham:** Does the 3m include any margin strips on either side of the cycleway and walkway?

**Gary Turner:** The shoulder room on the north side could be constrained by the sea wall. The intention is to have it as close to the sea wall as is practicable. On the south side, which is the side that would be adjacent to the tram, there would be open space.

**Mark Sydenham:** What width of shoulder room do you envisage for the north side against the sea wall?

**Gary Turner:** That would be included in the 3m for the walkway and cycleway.

**Mark Sydenham:** It is included in the 3m.

**Gary Turner:** Yes.

**Mark Sydenham:** The Scottish Executive's "Cycling by Design" guidelines say that, where a cycleway is an unsegregated path, there should be a minimum of 3m and at least 75cm of shoulder room where the cycleway is up against a wall. If the 3m includes the shoulder room, surely that is in breach of the guidelines from the Scottish Executive.

**Gary Turner:** We used guidelines produced by City of Edinburgh Council on the design of cycleways, which refers to a minimum desirable width of 4m and an absolute minimum of 2.5m. In its recommendations, it goes for shoulder room of 250mm.

**Mark Sydenham:** That is a lot smaller than the Scottish Executive guidelines.

**Gary Turner:** That is in the guidance from City of Edinburgh Council.

**Mark Sydenham:** It is still smaller.

**Gary Turner:** I confess that I have used the guidance that the promoter supplied.

**Mark Sydenham:** Will a barrier lie between the cyclepath and footpath and the tramline?

**Gary Turner:** I cannot comment on that at the moment. I understood that no barrier would be used, but I appreciate that the issue has been raised at recent community liaison group meetings. Jim Harries will give evidence later, so you could direct your question to him.

**Mark Sydenham:** The Scottish Executive guidelines say that when a barrier is used, the shoulder space should be designed to be wider than if no barrier is used.

**Gary Turner:** That depends on the form that the barrier takes. When a walkway is adjacent to a tramway and it is decided that a barrier can be included, such barriers tend to be knee-high kick rails, which have no impact on shoulder room.

**Mark Sydenham:** If you were designing a cycleway from scratch and you had all the space that is available, would you build a shared-use or a segregated cycleway?

**Gary Turner:** I would want to do much more research into the area and usage before I gave a conclusive answer. That is a little like asking whether to go for a single or dual carriageway when constructing a road. The answer depends totally on the setting.

**Mark Sydenham:** Has any research been done on what usage of the cycleway and footway might be in, say, 10 years' time, when all the developments in Granton have been built?

**Gary Turner:** The movements at present do not suggest a requirement to have something that is over and above 3m.

**Mark Sydenham:** What about in the future, when 10,000 people have moved into the area?

**Gary Turner:** That cycle and pedestrian usage has not been assessed.

**Mark Sydenham:** Given that no footpath exists at present, it is hard to ascertain demand.

**Gary Turner:** That is a fair comment. I cannot disagree.

**Mark Sydenham:** Therefore, do you agree that the cyclepath and footpath is being squeezed into the available space rather than the whole corridor being designed around everybody?

**Gary Turner:** No. If the movements in the area were sufficient to warrant a wider cycleway and walkway, that would be evidenced by the walk-over surveys that we have undertaken. The movements along the corridor are light. From observation of usage, it is difficult to justify anything greater than 3m.

**Mark Sydenham:** However, an assessment of current usage is not really fair because, as you said, no provision is made at the moment, so it is hard to say what usage will be.

**Gary Turner:** Cyclists and pedestrians are still in the area. The walkway and cycleway will improve facilities for them, rather than attract them to the area.

**Mark Sydenham:** Either way, the cyclepath and footpath will be the minimum that is required.

**Gary Turner:** The provision that will be made will meet the standards.

**Mark Sydenham:** But it will be at the minimum end of the standards.

**Gary Turner:** It will meet the minimum standards and reflect current usage in the area.

**Mark Sydenham:** Two pedestrian crossings are proposed for the stretch that we are talking about. Is that right?

**Gary Turner:** I thought that there were more.

**Mark Sydenham:** Unfortunately, I do not have the map with me.

**Gary Turner:** Sorry—you refer just to the section that we are discussing, for which two formal crossings are proposed.

**Mark Sydenham:** Will they be controlled by traffic lights?

**Gary Turner:** The crossings of the highway will be signalised.

**Mark Sydenham:** Will they be signalised all the way across the proposed tramlines, too?

**Gary Turner:** The requirements will depend on the location. When a bus stop or landing island exists, there will be no need to signalise all the way across. If a continual flight with no safety reserve part of the way across is used, signalising all the way across will be considered.

13:45

**Mark Sydenham:** So it could be the case that one or more traffic lights would stop the trams every so often.

**Gary Turner:** Or it could be that the pedestrian signal to cross might be delayed while the tram traverses the junction or crossing.



**Mark Sydenham:** Yet one of the reasons given for why our proposal for shared running cannot be implemented is the problems of traffic lights and their sequences.

**Gary Turner:** First, we have not said that your proposal cannot be implemented. We acknowledge your desire for the tram and road proposals to be integrated and the fact that the promoter has expressed its desire that they should be segregated. Of all the areas about which we have held discussions with you and the community liaison group, Wardie bay is probably the only area on which we have not achieved common ground. However, we have not said that your proposal is impossible.

If we were to go from segregated to combined running, the signalised junctions would be a factor because they would introduce another junction with potential to impact on the tram.

**Mark Sydenham:** There might still be traffic-light control of the trams, which is similar to—

**Gary Turner:** No, the pedestrian junction would be signalised.

**Mark Sydenham:** But that would have an impact on the running of the trams.

**Gary Turner:** The tram would be able to traverse that section and when a pedestrian called to cross, they would be allowed to cross when the tram had passed.

**Mark Sydenham:** So there would never be a situation in which the traffic lights would stop a tram.

**Gary Turner:** That would not be a priority; the priority would be to keep the traffic flowing wherever possible, particularly the tram.

**Mark Sydenham:** How does that differ from having a green wave? There would already be traffic lights at Granton Square. How do the proposals for pedestrian traffic lights differ from our proposal to have traffic lights at the other end, so that the stretch could be integrated?

**Gary Turner:** There is no difference as far as integrated signalling is concerned, but the proposal would introduce another signalised junction.

**Mark Sydenham:** Do you mean our proposal?

**Gary Turner:** If we went from segregated to combined running, it would introduce another signalised junction.

**Mark Sydenham:** Which there might be anyway if there were pedestrianised traffic lights.

**Gary Turner:** The junction would be in addition to the pedestrianised crossing.

**Mark Sydenham:** But the two could not be combined.

**Gary Turner:** Potentially they could.

**Mark Sydenham:** If there were no pedestrian-controlled traffic crossing all the way across, what provision would there be for a refuge in the middle, given that the bus stops on that stretch will have been moved away because the area is deemed too narrow for safety reasons to have bus stops in the middle?

**Gary Turner:** The bus stop locations were rationalised so that we could optimise the width availability and allow maximum distance from the properties—one of the key objectives in realigning the road was to move the highway alignment further away from the existing properties. As a result, safe refuge islands were located so that pedestrians waiting for buses could wait in safety.

The pedestrian crossings were then co-ordinated with those locations in two ways: according to the desired line of crossing that would give access to the bus stops; and to give a safe refuge so that once pedestrians crossed the road, if they wanted to continue to reach the walkway, they could walk by line of sight, bearing in mind that the trams arrive only once every seven and a half minutes.

**Mark Sydenham:** In one direction.

**Gary Turner:** In one direction. Even so, we are talking about trams potentially arriving every three and three quarter minutes. A signalised junction is not necessary because the driver would operate by line of sight, as would the pedestrian.

**Mark Sydenham:** What would happen if the tram speed were up to 50mph? Would that make any difference to the line of sight?

**Gary Turner:** No, because the speed at which the driver was travelling would be appropriate to his line of sight. If his line of sight was insufficient to allow him to get up to a speed of 50mph, he would curb his speed accordingly.

**Mark Sydenham:** Do any of the pedestrian crossings not correspond to a bus stop?

**Gary Turner:** There is one crossing where that is the case, which is towards the west. The following crossing coincides with the bus stop that is by the eastern breakwaters. There is a third crossing, but that is probably outside your area of interest.

**Mark Sydenham:** I presume that, at the crossing that does not coincide with a bus stop, there will have to be a refuge for pedestrians who get halfway across and need to wait to cross for the trams.

**Gary Turner:** That is the crossing that we discussed earlier. According to the design of the current alignment, that crossing would be signalised to allow people to cross the highway and the tramway at the same time. However, the design could be reworked so that there was a separation between the tramway and the highway, which would make it possible to have a safe reserve. That would create the opportunity to introduce a bus stop.

**Mark Sydenham:** I think that that is everything.

**The Convener:** Do committee members have questions?

**Helen Eadie (Dunfermline East) (Lab):** The minimum standards for the cycleway have been mentioned. Can Gary Turner advise us whether the cycle track meets only the absolutely minimum standards or whether it is somewhere on the scale of standards for cycle tracks? Is it in the centre of that scale or is it at the optimum level?

**Gary Turner:** I will give you the dimensions, which I hope will help you to make a judgment. The absolute minimum width is 2.5m and the desirable minimum width is 4m. The proposals are for a cycleway that is 3m wide. In other words, it is in the first third on a rising scale.

**Helen Eadie:** Is there a cycle strategy for Edinburgh?

**Gary Turner:** There is.

**Helen Eadie:** Is the proposed cycleway part of the cycle strategy and does it match the standards that are laid down in that strategy?

**Gary Turner:** The figures that I have quoted are based on the City of Edinburgh Council's guidelines for cycleways in Edinburgh. The cycleway alignment is part of the council's desire to improve cycle routes round the city.

**Phil Gallie:** Is it true to say that you have made a good case for separation of the tramline and the roadway?

**Gary Turner:** From the point of view of the promoter and the tram operator, it is desirable to segregate the tramline from the road, rather than to combine them. I believe that, in the section in question, the opportunity exists for the tram alignment to be independent of the highway and for the highway to be realigned so that it meets the residents' requirements about the distance from their properties. The footpath is between 1.5m and 2m wide. The current proposal for the road alignment means that the kerbline will still be about 5.5m to 6m away from residents' properties. That takes on board parking requirements. The overall objectives of segregating the tram and realigning the highway have certainly been

addressed, although residents have some concerns about the urban landscape in the area.

**Phil Gallie:** You said that segregation was "desirable". In previous meetings, we have heard about timings for the circuit. If the road were to be used for vehicles and trams, what effect, if any, would that have on the timing for a full circuit? I do not expect a precise answer in seconds; I just want to know whether it would have an adverse effect.

**Gary Turner:** I am sorry, but I have lost the gist of your question.

**Phil Gallie:** That is my fault. Would there be an adverse effect on the total run time for the circuit if we were to accept—

**Gary Turner:** Are you asking about the impact on run time of combined running?

**Phil Gallie:** Yes.

**Gary Turner:** My belief is that combined running would have an effect. It is inevitable that, where there are other road users, there is the potential for that to have an impact on the tram. The desire is to minimise that as far as is practical.

**Laura Donald:** There is currently no cycleway or pathway on Lower Granton Road, is there?

**Gary Turner:** No.

**Laura Donald:** So the cycle pathway that is to be provided as part of the tram proposal would be a benefit.

**Gary Turner:** Yes. It would be an improvement on the current situation.

**Laura Donald:** Mr Sydenham asked you about the bus stops. Am I correct in understanding that only one bus stop in this area is to be relocated as part of the tramway proposal?

**Gary Turner:** When I wrote my evidence, I looked at the route from Granton Square down to the Trinity junction. There are six bus stops in that section. In the current proposals, as we have shown them, the number is reduced to five. There is one bus stop that would not be in that section; it is in the section that Mr Sydenham is currently looking at. However, as I suggested in the discussions about the location of one of the pedestrian crossings, there is the opportunity to reconfigure the road at that location so that we could introduce a bus stop again and also have a safe refuge within the pedestrian crossing.

**The Convener:** Thank you, Mr Turner. That concludes your evidence on width, pedestrian crossings and bus stops. We are going to keep you there and move on to your evidence on the public right of way to Wardie beach. You will be cross-examined on your rebuttal witness

statement on the issue by Mark Sydenham for group 32. First, Ms Donald has a question.

**Laura Donald:** Mr Turner, how will residents get access to Wardie beach once the tramway is in place?

**Gary Turner:** The promoter has given an undertaking that the current access from the verge on to the beach will not be stopped up. That is the concern of the residents of the Wardie bay area. The new cycleway and walkway will also enable visitors to, and the residents of, the area to gain pedestrian access to that location.

**Mark Sydenham:** I have just one quick question. The current pedestrian crossings that we were just talking about do not really coincide with any natural way of moving from Wardie steps across to the beach.

**Gary Turner:** A pedestrian crossing is proposed just at the bottom of Wardie steps, slightly to the east.

**Mark Sydenham:** Will there be facilities to enable cyclists to cross at the pedestrian crossings to get on to either the cycle path or the beach?

**Gary Turner:** The cycleway is already adjacent to the—

**Mark Sydenham:** But if they were already on the road or coming from the road side?

**Gary Turner:** Because the level of traffic movements on the tramway is so low, I do not think that there is any need to make special provision. Even if the trams were meeting at split intervals, a cyclist would still have four minutes in which to cross the tracks to get to the walkway and cycleway. I do not think that the tram movements justify any—

**Mark Sydenham:** What about crossing the roadway, though?

**Gary Turner:** At the moment, there is a conventional pedestrian crossing. There is no reason why, in the detail of the design, a toucan crossing could not be considered.

**The Convener:** Thank you, Mr Sydenham. Mr Turner, as neither Ms Donald nor committee members have any further questions, I thank you for your evidence this afternoon.

The next witness is Dick Dapr , who will address the issue of the tram route being shared with traffic. Mr Dapr  will be cross-examined by David Jamieson on behalf of group 32.

**Laura Donald:** Group 32 has suggested that smart—or green wave—traffic lights would help to prevent trams from being delayed. Can you comment on that, please?

14:00

**Dick Dapr  (Steer Davies Gleave):** Yes. We are again talking about the proposal that a section of the route around 450m long would be operated as a shared rather than a segregated section. That is technically possible, but creating such a section would go against the general aspiration for the scheme, which is to achieve segregation wherever possible. Segregation minimises journey times, which is important even if the differences are fairly small. All increments to total journey times affect demand and costs. Segregation produces more reliable and much less variable journey times—indeed, they are almost 100 per cent predictable—makes servicing much easier, even where there are parking bays, and makes traffic calming and road narrowing possible.

We would not want shared operation along the whole section of the route for obvious reasons. There would be less of an effect if there were a shorter section of shared operation, but there would still be slight delays because of the signals at each end. The entry to and exit from the shared section would have to be under signal control and it would be impossible to guarantee a green light for every tram, so there would be small delays.

In theory, a green wave could be operated so that, once a tram is on the section, it would have a clear exit, but that is not always possible. For example, it may be impossible to call the green light exactly when it is wanted if a tram is coming in the opposite direction, because account must still be taken of road traffic delays.

In summary, there would be impacts on journey times, but the impacts would be less than they would be if the whole route was shared.

**Laura Donald:** I want to clarify what you have said. Are you suggesting that if a green wave worked in one way for a tram going westwards, it might have an impact on trams that are travelling eastwards?

**Dick Dapr :** In an ideal world, we would time the trams in such a section so that they would not pass in the area and only one tram would approach at a time—we could then almost guarantee a green light and a clear path through. However, we do not live in an ideal world. There are many other impacts and influences on how trams are timed on other sections of the route and there may be reasons why trams must cross in the area. In such situations, one cannot always guarantee that one can let a tram approach a green tram phase in the other direction and give it a green light, too. Compensation must be made for traffic once the first tram has been given priority. Obviously, such delays would not be common, as the tram will come through only every

seven and a half minutes, but delays would be possible.

**Laura Donald:** Thank you.

**David Jamieson (Wardie Bay Residents Association):** You have answered some of my questions, but I want to talk about your witness summary and particularly its response to planning paper 6, which is the main piece of evidence that Transport Initiatives Edinburgh Ltd has used to suggest that combined running would add to times. It has been stated that 40 seconds would be added to journey times. Are you aware that planning paper 6 considers only combined running for the entire length of Lower Granton Road?

**Dick Dapr :** Yes.

**David Jamieson:** It does not consider combined running only on the short length at the western end, which is what we want.

**Dick Dapr :** That was not an option in planning paper 6.

**David Jamieson:** So would you say that planning paper 6 is not accurate or applicable because it represents a scheme in which neither the residents nor TIE are interested?

**Dick Dapr :** To my knowledge, when planning paper 6 was being prepared, the scheme that you mention had not been suggested.

**David Jamieson:** Planning paper 6 says that there would be an additional run time of 40 seconds. Would that time be reduced if there was combined running only at the west end of Lower Granton Road?

**Dick Dapr :** Yes, I believe that it would.

**David Jamieson:** Could the time be cut in half?

**Dick Dapr :** That is difficult to say without going through the calculations. If I were pressed to give an estimate, I would say that the figure would probably be more than halved. However, I would not like to say much more than that.

**David Jamieson:** It would mean an additional run time of only 15 to 20 seconds.

**Dick Dapr :** It could be something of that order.

**David Jamieson:** As I understand it, that additional run time adds significantly to the cost of the tram. It may even mean an additional tram having to run around the track. Will you confirm what that 15-second delay would mean to the project in cost terms?

**Dick Dapr :** I cannot confirm that at this stage because we have to take into account the total run time around the loop. The current estimate is that it is about 40.5 minutes. If that is correct, and if the extra 20 seconds or so could not be clawed back

elsewhere, there is a possibility that that would push us into having an extra tram. These things work on the edge and the operator—I am sure that Mr Harries will have something to say about this—has to operate within specific performance margins. If he is unable to do that, he is in default. The operator has to be satisfied that he can operate within those margins. Every increase in journey time and potential increase in irregularity is liable to put pressure on that. Even if additional vehicles are not required, there is a disbenefit to passengers from the additional journey time.

**David Jamieson:** I understand that. Planning paper 6 does not allow for a green wave. Given that we are reducing the length of the combined running, which brings us down to 20 seconds, what would a green wave bring the delay down to?

**Dick Dapr :** That would probably apply with the green wave. The link that we are talking about, from Lower Granton Road through to Granton Square, is not homogeneous throughout. Even at fairly busy times, it would consist of a fairly free-running section with a set of signals at the end. We have to take into account the variation in speed along that section. The delays do not occur evenly and, by halving the section, we do not necessarily take everything out proportionally. Although a green wave has the potential to reduce the delays, it does not necessarily reduce them all by the same amount.

**David Jamieson:** I am not entirely clear. Planning paper 6 does not allow for a green wave. If we allowed for a green wave, would the time be changed?

**Dick Dapr :** I see—I apologise. That 40 seconds could be reduced.

**David Jamieson:** Ideally, it could be reduced to nothing, because the road would be completely clear over the 400m section.

**Dick Dapr :** The traffic signal delay would still need to be taken into account.

**David Jamieson:** I did not understand something in your previous answer. You said that a tram coming from one direction would affect one coming from the other direction. You will need to explain that. It has always been part of the proposal to have two lines combined on the road. You are not suggesting that there is only one line.

**Dick Dapr :** No. To give a tram priority, the tram has to pass a detector on the approach to the signals. It issues a call to the signals, effectively saying, "Can I have a green light, please?" The circuitry should respond to that and give the tram a green light so that it does not have to stop. That has to be done before the tram would otherwise have to start to brake. The tram needs to be given a green light some time before it gets to the

signals or the driver will have to slow down and there will be a delay while he re-accelerates. If that has just happened, and the tram has gone through, the phasing of the signals is altered. We then have to take account of the other traffic on the road by compensating it to avoid causing it unnecessary delays. If a tram coming in the other direction tries to call the phase for itself, that may not be possible, because we are in the process of compensating the other traffic. There may be a short delay until that call on the signals can be satisfied.

**David Jamieson:** I am not sure that I completely understand that. I will have to think about it.

At the end of your summary, you say that two additional sets of traffic lights will be needed. Are you aware that there will already be a set at Granton Square, where we would anticipate the green wave starting? That whole junction will be completely reconfigured with traffic signals anyway. Work is being carried out on that by Forth Ports.

**Dick Dapr :** My understanding was that the 450m section would start slightly to the east of Granton Square, hence my reference to two sets of signals.

**David Jamieson:** Would it not be sensible to have the section start at Granton Square, thus doing away with one of the sets of signals? Would that be possible?

**Dick Dapr :** It would be an option, but would it not increase the length of the shared running?

**David Jamieson:** We have always assumed that the section would go from Granton Square to just beyond the bend at the Wardie Hotel. No drawing has been presented as evidence of what that would actually mean. I do not think that there is detail of what—

**Dick Dapr :** No, I do not think that that has been developed.

**David Jamieson:** It would mean that only one additional set of traffic signals was required, at the east end of the combined running section. Could those traffic signals be combined with one of the four signalised pedestrian crossings that Gary Turner was discussing earlier?

**Dick Dapr :** Yes, they could be.

**David Jamieson:** So there might not be any additional cost in providing traffic signals.

**Dick Dapr :** The signals are necessarily more complicated for a tram interface.

**David Jamieson:** But we are talking about a fairly negligible cost in the overall—

**Dick Dapr :** I would not say that it is a huge amount, although I am not an expert in the costing of traffic signals.

**David Jamieson:** I know that this is not your field of expertise, but would you say that a combined scheme would be cheaper to install overall, compared with a separate road and tram line? Essentially, you would be building only one road base.

**The Convener:** As you acknowledge, that is not Mr Dapr 's field of speciality. However, if he wants to give an answer, he may do so by all means.

**David Jamieson:** He is a transport expert. Unfortunately, we were not able to—

**The Convener:** I leave it up to Mr Dapr  whether to answer that question. I am sure that you can pose the question to somebody who can.

**Dick Dapr :** We have to take into account things other than the cost of the track itself. In particular, as far as the shared section is concerned, we must take into account the statutory services that are provided under the road. I have no idea what is there at the moment, but such elements must be borne in mind.

**The Convener:** If I am correct, you have acknowledged that planning paper 6 covers a much longer route than the ones that the objectors are concerned with. Would it be terribly difficult to do a quick piece of analysis of what their suggestion would do to run times and cost? If that is a reasonably easy exercise, could you undertake it for the committee?

**Dick Dapr :** I do not think that I can commit the promoter to that. I am not involved in the traffic modelling side of things, but traffic modelling would need to be carried out in order to undertake that.

**The Convener:** I see nodding heads behind you and to my side. I think, Mr Dapr , that you can now say yes on behalf of the promoter.

**Dick Dapr :** On behalf of the promoter, I think that I can say yes.

**Helen Eadie:** I have been choosing a route through the area that we are discussing to drive to and from work over the past few weeks to gain familiarity with the location. I have been trying to get a picture in my mind of how everything will look when the scheme is complete. Could you describe for us how many sets of traffic lights there will be on the road? I get the impression that quite a number of traffic lights will be required. Is that the right picture for me to have in my mind?

**Dick Dapr :** As I understand it, under the promoter's proposals, the only signals that would be required would be for pedestrian and cycle crossings, which would be rather along the lines of

pelican or toucan crossings. That would mean a single set of signals.

**Helen Eadie:** From what you are telling us, traffic signals similar to the ones that currently prioritise buses between the Forth road bridge and the Barnton junction will also be required. In this case, they would be needed to prioritise the trams.

14:15

**Dick Dapr :** Such signals would be required only at the two ends of the section.

**Helen Eadie:** So they would not be required on the route itself.

**Dick Dapr :** My understanding is that, apart from pedestrian crossings, the promoter's proposals would require no signals on Lower Granton Road between Trinity and Granton Square.

**Phil Gallie:** Will you clarify whether you advised the promoter on the full extent of the tram circuit or just on certain sections of it?

**Dick Dapr :** Do you mean in terms of run times?

**Phil Gallie:** I mean in terms of your expertise.

**Dick Dapr :** At the time of the report that was made in accordance with the Scottish transport appraisal guidance, I advised the promoter on the run times around the circuit. Since then, I have been advising on certain sections and certain issues.

**Phil Gallie:** You said earlier that your aim would always be to achieve segregation wherever possible. Does that align with the comments of Mr Turnbull, who is another expert? Are both of you totally at one on that issue?

**Dick Dapr :** I think that, on traffic grounds, Mr Turnbull's preferred route was the segregated route via the railway corridor.

**Phil Gallie:** Mr Turnbull stated clearly that, in areas of heavy traffic and relatively narrow roads, he would always prefer segregation. That seems to align with your comment that you would wish to achieve segregation wherever possible.

**Dick Dapr :** Segregation is an objective that we start out with because we want to reduce the impact of traffic on the tram system.

**Phil Gallie:** In your advice on the full circuit, would the possibility of segregation be one reason why you might have favoured the use of the Roseburn corridor?

**The Convener:** The question is only broadly related.

**Dick Dapr :** Broadly speaking, what Mr Gallie has said would be true.

**Phil Gallie:** I guess that I cannot ask for anything other than a broad answer to a broad question.

**Helen Eadie:** At one point, Mr Dapr , you alluded to the fact that the traffic lights system works in such a way that artificial delays could be caused to other traffic. I know that that is a problem elsewhere in Edinburgh. To what extent is that a problem?

**Dick Dapr :** It is difficult for me to comment without having the data, but Mr Turnbull might be able to say more on the subject. Some slight delays might result from introducing an extra set of signals to give the tram priority. However, the junctions at each end of the section are much more complex because of the traffic that they handle. Whereas trams would come through every seven and a half minutes and join just a single flow of traffic in each direction, the junctions at each end of that part of the network have much more complicated traffic flows, with much greater potential for delays, given the difficulty of accommodating all the competing demands. As the two junctions at each end are more heavily loaded and therefore more complex, the additional delays that would be caused by a simple junction in the middle would probably be fairly small.

**Helen Eadie:** My concern is that we will have 10,000 new people living in the area. Do you acknowledge that that could be a real problem?

**Dick Dapr :** I think so. However, if the junctions at each end can cope, an extra junction in the middle that has less pressure on it could cope as well.

**The Convener:** There are no other questions from committee members. Does Ms Donald have any questions?

**Laura Donald:** Further to Mr Gallie's questions, I want to ask about Mr Dapr 's preference for segregated running, as opposed to shared running. Is the aspiration to have segregated running where possible throughout the route?

**Dick Dapr :** Where possible, yes.

**Laura Donald:** Where competing factors mean that segregated running is not the optimum, is shared running acceptable?

**Dick Dapr :** Yes.

**Laura Donald:** Might shared running be more than acceptable, in that it sometimes works very well?

**Dick Dapr :** It can do, yes.

**Laura Donald:** Does shared running work in other tram systems throughout the country?

**Dick Dapr e:** Indeed, yes.

**The Convener:** Thank you, Ms Donald. Mr Gallie is resisting the temptation to challenge some of those statements—

**Phil Gallie:** He is not resisting at all. On a point of order, convener. Are we able to intervene at any time, or is that ruled out?

**The Convener:** You are not allowed to intervene once Ms Donald has summed up. I am sure that you will find a way of asking somebody else a similar question so that you get several more bites at the cherry, but I will leave you to think about how to do that.

I thank Mr Dapr e for giving evidence this afternoon. We will take a short break to enable Jim Harries and Professor Evans to join Mr Turnbull at the table and to allow those who require it to take a comfort break.

14:20

*Meeting suspended.*

14:23

*On resuming—*

**The Convener:** Before we commence oral evidence taking, I remind Jim Harries and Professor Evans that they are still under oath.

The first two witnesses will address the issue of Lower Granton Road and Granton Square. Mr Turnbull will be cross-examined on his rebuttal witness statement by Ian Bray for group 32.

**Laura Donald:** Mr Turnbull, what speed was assumed in the VisSim modelling that you carried out on this stretch of the route?

**Stuart Turnbull:** Our modelling compared complete segregation and complete shared running along Lower Granton Road. It was assumed that, on the segregated route, the tram would travel at 30mph or 48kph and that, on the shared running option, it would travel at the same speed as the other road users, who are subject to a 30mph speed limit.

**Laura Donald:** So in both options the speed was 30mph or 48kph.

**Stuart Turnbull:** Yes, but in the segregated stretch the tram would be able to reach a higher speed.

**Laura Donald:** Would it be able to reach and maintain a higher speed?

**Stuart Turnbull:** Yes.

**Laura Donald:** Whereas on the shared section, the tram might be interrupted by traffic.

**Stuart Turnbull:** Yes.

**Laura Donald:** As far as you are aware, is that consistent with the modelling on other sections of the route?

**Stuart Turnbull:** Yes, as far as I understand it.

**Ian Bray:** In your rebuttal statement, you say that your design was developed in consultation with the community. What element of the community's design have you incorporated into the design?

**Stuart Turnbull:** As Mr Turner said earlier, we have had a number of discussions with the local community as the scheme has developed over the past few years. In fact, planning paper 6 outlines the options that the promoter has considered on this stretch and discussed with the local community during the design process. My point is that we have not designed the scheme in complete isolation; there has been some consultation of the local community.

**Ian Bray:** You have not answered my question. I asked you to tell us which of the community's aspirations you have included in your design.

**Stuart Turnbull:** Mr Turner has already told the committee that, with regard to the promoted route, we are aware of the community's concerns about the distance between the residents and the roadway and the desire to move the roadway further from the properties. Without repeating Mr Turner's evidence on the proposed route, I should point out that that will involve widening footpaths and realigning Lower Granton Road. I understand that that is addressing the community's concerns.

**Ian Bray:** Would those elements have been addressed through the realignment of Lower Granton Road under the section 75 agreement between the City of Edinburgh Council and Forth Ports?

**Stuart Turnbull:** Are you talking about the realignment of the road if the tram had not been proposed?

**Ian Bray:** Yes.

**Stuart Turnbull:** I accept that there is a section 75 agreement to realign Lower Granton Road. In our design, we have sought to meet the promoter's aspirations for the tram and, as far as possible, to incorporate the local community's aspirations with regard to the realignment of Lower Granton Road.

**Ian Bray:** But do you accept that our aspirations with regard to Lower Granton Road would be met no matter whether the tram was constructed?

**Stuart Turnbull:** That is potentially the case, given that there is a section 75 agreement. However, I cannot say any more about that, as we are discussing the tram proposals. The community does not oppose the principle of the tram running along Lower Granton Road. After all, the route will use a reserved railway corridor.

**Ian Bray:** In your evidence, you refer to the tram systems in Dublin and Croydon, which use segregated running. Are you aware that, in those cases, there is a pavement between the tramway and the roadway? Do you agree that such a feature is desirable from a safety point of view?

**Stuart Turnbull:** That is not the case in the examples that I referred to. We have to consider certain aspects of the design. If the detailed design of the system proceeds, the promoter and designer will have to identify appropriate running speeds. Safety will be paramount in all those decisions. We are taking various elements into account, such as the provision of a footpath, adequate crossing facilities and an appropriate line of sight.

14:30

**Ian Bray:** You are saying that in the design as proposed by the promoter, because of the lack of space on Lower Granton Road, there is not enough room for a pavement, which is not necessarily the safest option.

**Stuart Turnbull:** My understanding is that the current design incorporates footpath provision between the tram and the roadway along stretches of Lower Granton Road although I accept that it does not go along the entire length of it.

**Ian Bray:** Okay. That is everything.

**The Convener:** Thank you Mr Bray. Do the committee members have anything to ask?

**Phil Gallie:** Mr Dapr  said that segregated running can sometimes be improved upon and that there is sometimes no problem with going for shared running. The objectors are referring to a very short stretch of Lower Granton Road at a point between their homes and the sea wall where the roadway converges with the grassland and railway track. If, as Mr Dapr  says, shared running is acceptable at times, is there an argument for the tram merging back to the roadway?

**Stuart Turnbull:** As Mr Turner explained, it is technically possible to do that. Mr Dapr  outlined the benefits of shared running versus segregated running in general, but accepted that the scale of those benefits is less over short stretches.

We are conscious that wherever segregated running can be achieved, there are clear benefits for run times and service reliability. Mr Harries

could expand on that from the operator's perspective. There is also the element of interaction with other road users and from there we get into the specifics of how short a shared stretch the promoter would be willing to accept. I think that that is where Mr Gallie is coming from.

**Phil Gallie:** I do not know that I would prefer that, but if the argument is good for one section of the tramline, it should also be good for another. I cannot see why TIE should have it both ways.

**Stuart Turnbull:** If the tram could run completely segregated along the side of Starbank Road, as we are proposing for Lower Granton Road, the promoter would prefer that. The land is available to achieve that level of segregation so that is what we would prefer.

**Phil Gallie:** Thank you.

**Laura Donald:** I would like to deal briefly with the issue of segregated, as against shared, running. You have declared that your preference is for segregated running.

**Stuart Turnbull:** That is correct.

**Laura Donald:** Is it fair to say that we have to take into account the local characteristics of each section of the route when we are deciding how to progress?

**Stuart Turnbull:** Yes, that is a fair comment.

**Laura Donald:** So when comparing Lower Granton Road with Starbank Road, we might be comparing apples with pears. They are not the same thing.

**Stuart Turnbull:** Yes. When comparing sections of the route, we have to decide how to get from A to B and the different options available. That is the appropriate comparison.

**Laura Donald:** Thank you.

Mr Bray asked about the input that you took from the community liaison group. Do you remember the first proposal about the layout of the tramway that was put to the community liaison group?

**Stuart Turnbull:** I was not personally involved with the community liaison group, but in recognition of the community's desire to realign Lower Granton Road, one of the early proposals was to realign the tramway there to the edge of the sea wall in between Lower Granton Road and the residences. That would have met the aspiration of moving the Lower Granton Road section as far away from properties as possible.

**Laura Donald:** And that was seen as beneficial by the residents.

**Stuart Turnbull:** That is my understanding.



**Laura Donald:** And so the design changed.

**Stuart Turnbull:** Yes.

**Laura Donald:** You were asked about the fact that the realignment of Lower Granton Road was likely to happen with a section 75 agreement in place. Do you accept that the agreement, and thus the realignment, would have to be triggered by a particular part of some development?

**Stuart Turnbull:** I understand so, although I do not know the specifics of the development.

**Laura Donald:** But here, in any event, the tram is acting as a catalyst for change to the realignment.

**Stuart Turnbull:** Yes.

**Laura Donald:** Do you understand there to be a set timeline for the realignment if it is left without trams?

**Stuart Turnbull:** I understand that there are no immediate proposals in place.

**Laura Donald:** Thank you.

**The Convener:** There being no further questions for Mr Turnbull, I thank him very much for his evidence.

The next witness is Jim Harries, who will be cross-examined on his witness statement and on his rebuttal witness statement on this issue by Ian Bray for group 32.

**Laura Donald:** Mr Harries, having listened to the evidence, will you give us your opinion on the question of priorities given to trams by traffic lights and the reliability issues that may be thrown up?

**Jim Harries (Transdev Edinburgh Tram Ltd):** When one is operating a tram system, any set of traffic lights can introduce delays, and delays are not what we wish to achieve.

We have heard about green waves and how, in certain circumstances, it is possible to give trams proceed signals as they approach junctions so that they can pass through unimpeded. However, to achieve that, one must also look at the effects on all the other traffic. Integrating the very complex junction at Granton Square as well as introducing a further junction at Lower Granton Road and making them work together in all-singing, all-dancing mode, would, from my experience elsewhere, be very challenging indeed.

Although on occasions one may get a green wave for some directions and some tram movements, I would be surprised if it could be achieved generally. Therefore, I would be nervous as a tram operator going down that route.

**Laura Donald:** The objectors' proposal appears to be a shared section of route from lower Granton

Square eastwards, a distance of about 450m, as was made clear to us by Mr Sydenham. It was referred to as a short section of shared running. Do you agree?

**Jim Harries:** Short and long are always comparative. If tram stops are generally 700m apart, I would find it difficult to say that 450m was a short section.

**Laura Donald:** So we can agree that it is not a short section, but neither is it a long one. I think that Lower Granton Road is about 2km long. Is that right?

**Jim Harries:** I am afraid that I cannot say.

**Laura Donald:** I will have to ask someone else. However, the tram would, as I understand it, have to slow down going into the 450m shared section and out of it. Is that right?

**Jim Harries:** That will depend on the layout of the junctions at either end. Any shared running will have an effect on run time and on the reliability of the system. As I said, I do not believe that we would be able to achieve a free, unimpeded run at all times through the system of junctions.

**Laura Donald:** A previous witness was asked about a pavement between a road and a tramway in other systems. The suggestion was that all other systems appear to have one. Are you able to help us with that?

**Jim Harries:** I do not believe that that is the case, but I am struggling to think of a specific example in which it is not the case. Generally, it is always a good idea to have a pavement, which can act as a pedestrian refuge. If we end up with a design that does not include a pavement, that is one of the hazards that we will need to address and appropriately mitigate in the design process.

**Laura Donald:** I will come on to hazards shortly. We have heard that, in this case, although there is no continuous pavement between the road and the tramway, there are refuges along the length of the section that we are dealing with. Is that the case?

**Jim Harries:** I believe so.

**Laura Donald:** With regard to the segregated running issue, at what speed do you think the tram could run through this section of the route?

**Jim Harries:** The final speeds along the section will depend to a great extent on the design process and the features along the route. My firm belief is that there are sections of the route on which we will be able to travel safely at a speed in excess of 50kph or 30mph. I do not expect that we will be able to travel at 70kph along the whole stretch, for obvious reasons.

**Laura Donald:** As an operator, do you know of other tram schemes that achieve a similar speed in similar areas?

**Jim Harries:** There are quite a lot of similarities between the area that we are discussing and parts of the Midland metro, which runs at 70kph along a corridor that has pedestrian crossings along it. I am quite comfortable that we can achieve that speed on parts of the route. The pedestrian crossings over the Midland metro scheme are, generally, not signalled, because they do not need to be.

**Laura Donald:** Why do they not need to be?

**Jim Harries:** They are signed so that people approaching the junction are aware that they are approaching a tramway. There are pedestrian barriers and chicanes to ensure that people are marshalled as they approach the crossings. The system operates entirely satisfactorily on that basis with—touch wood—no incidents so far.

**Laura Donald:** You mentioned safety. What risk assessments will need to be carried out during the design process and the period of operation?

**Jim Harries:** Tramway projects are complex and have interfaces with all sorts of organisations and people. In that process, many hazards have to be identified, understood, controlled and designed out. The design process that we will be using will be similar to the design process that I am familiar with in relation to the Nottingham tramline.

In Nottingham, we maintained a comprehensive hazard log, held a series of workshops to identify the problems and undertook a formal process of documenting how each of the hazards was dealt with to ensure that the system would be safe at the end of the design process. Those hazards were then passed on to the operator, which continues to monitor the overall safety of the system and react accordingly.

We also have an involvement with an independent authority—Her Majesty's railway inspectorate—that we hope will give us permission to open the system.

**Laura Donald:** Could HMRI stop you opening the project?

14:45

**Jim Harries:** Absolutely, yes. HMRI splits into two parts. One part of the organisation—the part that concerns people here—deals with new projects. A separate part monitors performance and deals with issues once a system has opened. In the process leading up to opening, we will be keeping HMRI informed as the design develops. HMRI will not do any design for us but it may well

ask us, "Have you thought about doing that slightly differently?"

**The Convener:** May I interrupt? We have a sufficiency of evidence on the role of HMRI, so I would like us to get to the point.

**Laura Donald:** That is fine, as long as the committee is happy with that. However, I do not think that the objectors necessarily heard the previous evidence.

**The Convener:** As I understand it, there is information in the witness statements.

**Laura Donald:** I am perfectly happy to move on.

Mr Harries, who will be responsible for the safety of the system once it opens? Will it be the operator?

**Jim Harries:** Within the operator's organisation there will be a nominated individual with that responsibility.

**Laura Donald:** Mr Turner gave us evidence earlier about access to Wardie beach. Are you able to add to what he said, or was the issue covered by your evidence just a short while ago about pedestrian crossings?

**Jim Harries:** I think that it has been covered by what I have said so far.

**Laura Donald:** Will you explain—for committee members and for the objectors—the link between what has been termed the line of sight and the need for barriers to be erected along the tramway?

**Jim Harries:** A tram driver driving his tram must always be able to stop short of an obstruction. Just like a car driver or bus driver, he needs to drive in accordance with the prevailing conditions. If you are driving your car along the road and there is a barrier between the pavement and where you are driving, you are as certain as you can reasonably be that people will not suddenly move from the pavement into the path of your vehicle. If there is no barrier, you have to assess the risk as you drive along. The process when driving a tram is identical. Barriers have an impact on sight lines and speed.

**Laura Donald:** If the speed of the tram were as high as 70kph along this section of Lower Granton Road, would barriers be required along the whole section?

**Jim Harries:** That feature will have to be developed as part of the detailed design process. I am reluctant to comment until that work is complete.

**Laura Donald:** Is the speed part of the design process?

**Jim Harries:** There is clearly a requirement on us to achieve certain run times in order to ensure

that the project as a whole meets its goals. However, safety is clearly much more important than any run-time considerations. Although speed concerns are important to the project, they are overruled by safety concerns.

**Laura Donald:** Will those concerns be monitored after the tram becomes operational?

**Jim Harries:** Once the tram is operational, there will be things that change in Edinburgh, and the design itself, although good, may not be perfect. We will monitor near misses, accidents, incidents and observations. Where appropriate, we will work with all the relevant authorities to improve the safety of the system and, where we can, to improve the run times too.

**Ian Bray:** In your evidence, you said that our proposal for green waves would be an exceptionally complicated design. Why would it be significantly different from the integrated design proposed for Starbank Road?

**Jim Harries:** There are lots of routes in and out of the Granton Square junction, so finding capacity for traffic movements and the tram will be challenging. There will no doubt be challenges finding capacity at various points along the route, but I am particularly concerned about introducing any additional traffic lights or junctions on the tram route because they would add yet another constraint to the achievement of the level of tram priority that we seek.

Perhaps I ought to add that I am not a traffic modeller or a traffic engineer, but I have seen such work done for other systems.

**Ian Bray:** Your evidence is slightly counter to Mr Dapr e's suggestion that the integrated design would add only 20 seconds, or less, to the tram's journey time through Lower Granton Road. That cannot be considered significant.

**Jim Harries:** I do not think I have said anything so far about my perception of the change in run times on the route.

**Ian Bray:** I agree.

**Jim Harries:** I do not think I said anything that is—

**Ian Bray:** May I rephrase the question, then?

**Jim Harries:** Yes.

**Ian Bray:** Is 20 seconds significant?

**Jim Harries:** Absolutely, yes. As the design of the tram system develops, the run time for the whole system will change and we will monitor that carefully. As time goes by, the run times will become more and more refined. We will have more information about the speed profile and the speeds at which we believe we will be able

operate throughout the route. I know from bitter experience that run time is easy to lose and hard to claw back, so any increase in run time is potentially significant to the project. As we sit around the table, 20 seconds does not sound much, but when one is operating a tramway it is significant.

**Ian Bray:** However, you agree that it is half the time that was suggested in PP6.

**Jim Harries:** Over about half the distance.

**Ian Bray:** Okay.

You comment that barriers are not anticipated on the majority of Lower Granton Road but you suggest that they will be required in some areas where there are particular space problems.

**Jim Harries:** Yes. That is a fair comment.

**Ian Bray:** Do you believe that barriers reduce an area's usability as a public place?

**Jim Harries:** They certainly have an impact on how the area is perceived. In an ideal world I would have no barriers, but there is a compromise between providing the maximum benefit to the area in terms of urban space and operating the tramway. We want to achieve the best possible compromise for all concerned.

**Ian Bray:** I think you are saying yes, you will require barriers.

**Jim Harries:** There will need to be barriers in certain places along the route as part of that balancing process.

**Ian Bray:** You agree that they compromise usable open space. Would barriers be required if we had an integrated model?

**Jim Harries:** Not to the same extent, but if we had an integrated model we would need to consider other matters. I return to my hobby horse, which is run times.

**Phil Gallie:** Will you explain the operator's view on the setting of the overall circuit times and the frequency of the trams? How sacrosanct are they? How were they formed in the initial stages of the design?

**Jim Harries:** When TIE appointed us to the project, one of the first things that we did was to review the work that had been done on the system design. Needless to say, we focused on run time. We conducted a series of exercises, which was principally to benchmark the run times that are being predicted for the Edinburgh scheme against other tram schemes that we know and love elsewhere in the world. The results of the benchmarking scheme gave us comfort that the run times that TIE was predicting for the project were sound, solid and reasonable.

On the headways of the trams, we like the concept of trams operating on what we call clock-face departures—for example, three, 10 and 23 minutes past the hour, in a predictable way. Therefore, having a whole number of trams—eight trams per hour operating on the route would mean trams every seven and a half minutes—is a good concept, because people can understand it easily. The traffic forecasts and usage of other tram systems that operate on similar frequencies give us confidence that we are doing the right thing in having headways of that kind for the network.

**Phil Gallie:** You say that people like the timetable to be fairly simple, so you have settled on seven and a half minutes between trams. If I want something simple, I like a nice whole number: eight minutes or 10 minutes would seem more appropriate. Why did you not go for eight minutes or 10 minutes?

**Jim Harries:** A tram every seven and a half minutes means that there are two trams every quarter of an hour, which I think is fairly easy to understand. If there were a tram every eight minutes, people would have to know their eight times table better than I do.

**Phil Gallie:** If there were a tram every 10 minutes, that would be easy to understand. I am saying that I suspect that an extra half minute between the trams would not make a great deal of difference to patronage.

**Jim Harries:** If we look at the work that has been done in the traffic forecasts on how patronage varies with waiting times—in essence, the same thing as headways—we find that there is a significant linkage between patronage and the frequency of tram operation.

**Phil Gallie:** In that case, perhaps there should be a tram every five minutes.

**Jim Harries:** If we were to run a tram every five minutes, we would attract additional new passengers, but we would also have the additional cost of providing the extra trams. As always, the issue is about striking a balance.

**Phil Gallie:** So that factor was carefully worked out immediately after the design stage when you started to consider operational features; you feel that there is no leeway and that you could make no improvement to the timing and frequency of trams as originally set.

**Jim Harries:** I believe that the original thinking was sound and that, as always, there is a price for changing the timetable. My current belief is that we should not change it, but financial and other factors might drive us to change it in the future. The system may be such a success—consider the example of overcrowded trams in Manchester—

that in the future we will need to bolster and add to the service.

**Helen Eadie:** Is the global traffic light system an entirely independent system that is dedicated to the tramline? Will it be part of the integrated system for the whole of Edinburgh?

**Jim Harries:** It will definitely have to be part of Edinburgh's traffic control system, because the vast majority of the vehicles that go through all the junctions are ordinary, rubber-tyred vehicles.

**Helen Eadie:** Is it fair to assume that the introduction of trams on a shared part of the route could impact severely on other traffic in Edinburgh?

**Jim Harries:** There will be an impact on the traffic at that junction. How far the impact moves away from the junction will depend on how heavily trafficked the area is. That is the point at which I start to look to Stuart Turnbull for guidance.

**Helen Eadie:** Should we come back to Stuart Turnbull on the issue?

**The Convener:** We must stick to this witness. We have finished with Mr Turnbull.

**Helen Eadie:** In that case, I would like to ask whether there is overall control. I have not been inside a traffic control management centre in Edinburgh. Is there a team of people who sit there controlling all the traffic in Edinburgh or is the system computerised?

15:00

**Jim Harries:** The concept is that each junction has its own control system and can operate in glorious isolation from the rest of the world, but there can be links from each junction to its neighbouring junctions, to get the green-wave effect that we have been hearing about. There are usually also links between major junctions and an urban traffic control centre, such that if, for example, the fire brigade needs to travel across the city, the junctions can be called to allow the fire brigade to have priority through those junctions to respond to the emergency.

**Helen Eadie:** So any change at Granton would not necessarily impact on the whole city, would it?

**Jim Harries:** No.

**Helen Eadie:** The Granton stretch could be shared independently.

**Jim Harries:** How far that impact spreads would depend on how intense the traffic movements were at that location.

**The Convener:** I have three short questions and I just need yes or no answers. First, do you agree that the shared section that the objectors are

talking about is shorter than that modelled in planning paper 6?

**Jim Harries:** Yes.

**The Convener:** Do you also agree that we cannot be specific about run times and their impact until the promoter has done the further work that the committee has requested?

**Jim Harries:** Yes.

**The Convener:** Excellent. Finally, I know that you take a whole-systems approach, because what happens in one wee bit impacts on the rest. As the committee has heard, there has been a refinement of run times and a saving on run times elsewhere. Would it be true to say that, although adding on a small amount is significant to you, it might not be so significant if considered globally?

**Jim Harries:** That would also be true.

**The Convener:** Thank you very much.

**Laura Donald:** Would it be fair to say that, to be certain that an increase in run time at the location that we are considering would not have a global effect, we would have to know about any other increases in run time throughout the whole route?

**Jim Harries:** Absolutely, yes.

**The Convener:** Mr Harries, thank you for your evidence.

The final witness for the promoter is Professor Evans, who will address the issue of the design manual. Professor Evans will be cross-examined on his rebuttal witness statement by David Jamieson for group 32. First, Ms Donald has a question.

**Laura Donald:** Professor Evans, I seek a point of clarification. I think that there may be an error in your rebuttal statement that you wish to bring to the attention of the committee and to correct. I think that you indicated that the error was in paragraphs 2.4 and 2.5.

**Professor Brian Evans (Gillespies):** The subheading "Designing Places" should follow paragraph 2.5, not precede it.

**The Convener:** We have noted that.

**David Jamieson:** I was not going to bring up that point anyway.

Professor Evans, were you involved in any consultation about the Mott MacDonald scheme for Lower Granton Road when it was being prepared?

**Professor Evans:** Is that through what is referred to as the community liaison group?

**David Jamieson:** Yes.

**Professor Evans:** I did not personally have any involvement in that group. I believe that a representative from my office was involved in one or two discussions, but we were not involved in the design.

**David Jamieson:** In your statement, you do not make any reference either to our objection or to Lower Granton Road, although in paragraph 6.1 you refer to a walkway on the seaward side of the wall. Why is that? I am referring to your witness statement.

**The Convener:** I remind you, Mr Jamieson, that you should be addressing the rebuttal statement.

**David Jamieson:** Okay. Do we forget that question?

**The Convener:** I think that you got the answer, but we lost you when you went to paragraph 6.1, because the rebuttal statement goes only as far as paragraph 3.1. That is the document that you should be addressing.

**David Jamieson:** I can make the same point about your rebuttal statement, Professor Evans, because in paragraph 2.16 you make another reference to a walkway on the seaward side of the existing sea wall.

**Professor Evans:** The reference is to chapter 8 of the environmental statement, on the evaluation of environmental effects.

**David Jamieson:** I ask only because TIE does not propose to put a walkway on the seaward side of the wall in Lower Granton Road. It proposes to put such a walkway along Starbank Road.

**Professor Evans:** That is correct.

**David Jamieson:** We are not talking about Starbank Road today, however. Our objection is concerned only with Lower Granton Road.

**Professor Evans:** Yes.

**David Jamieson:** I was concerned that you were confused between our objection and what is happening in Starbank Road—but that is not the case.

**Professor Evans:** I hope not.

**David Jamieson:** Good. Have you visited Lower Granton Road?

**Professor Evans:** I have.

**David Jamieson:** Are you aware of the two flanking walls at the entrance to the eastern breakwater? There are two sloping stone walls there, which are listed.

**Professor Evans:** Yes, I am, but I have not been involved in detailed discussions about configuration. I am here today to talk about the design manual.

**David Jamieson:** I am going to come on to the design manual.

**Professor Evans:** Perhaps what I can say is that my philosophy about the approach to design is that it should be about a place and the people who use it. That is where a design process should start. I hope that the detailed design process that would start after the completion of this parliamentary process would begin with that consideration, to resolve issues of how all elements are fitted into the place to which you refer, or any place.

**David Jamieson:** I agree with you to an extent, but our point is that, because of segregated running, it is not possible to achieve the kind of design that you talk about. That is what I wanted to ask you about today. Can I go back to the flanking walls?

**Professor Evans:** I will try to help.

**David Jamieson:** My point refers to page 33 of your design manual in particular, where you say that the setting of listed buildings should be protected. Those flanking walls are listed. A paragraph in the Historic Scotland listing describes them as being part of the earliest piece of wall in the area. Given the recommendations in your design manual, is it appropriate that TIE proposes to demolish those sections of wall? Does that comply with your recommendations?

**Professor Evans:** All design is a process of balance, in which a series of factors must be considered when coming to a view about what is an appropriate design for a place. Plainly, if a structure is listed, that gives it considerable importance, but it does not mean that it cannot be demolished in order to achieve something that is considered appropriate. What it means is that the case for demolition must be strong and that no demonstrable alternatives can be put in place to avoid demolition.

**David Jamieson:** I agree. Are you aware that, if an integrated solution was proposed for Lower Granton Road, those two sections of wall could be left as they are? Would that be an alternative?

**Professor Evans:** By "integrated", you mean shared.

**David Jamieson:** Yes, shared running.

**Professor Evans:** I am aware of that proposal. If it saved space, the preservation of the walls may be the result. However, that would still require to be designed.

**David Jamieson:** Yes, I agree, but you would agree that the shared running proposal is more compliant with the recommendation in your design manual.

**Professor Evans:** Potentially. I am sorry, but I do not want to say precisely, because the design has not yet been done. It is important that we all remember that we are dealing with different levels of information. Some places around tramline 1 have been considered in great detail, but others have not. There is greater consideration where there is concern about certain issues. The design process needs to be gone through to resolve the issues. That is simply a caveat to my answer, which is otherwise in the affirmative.

**David Jamieson:** Do you agree that the decision whether the tramline should be segregated or shared is a design decision? Is it a design decision to decide where the tramline is put on that section of foreshore?

**Professor Evans:** It is not solely a design decision. A designer has to consider the space, but they must be advised by all the other considerations, which include operational matters. Design is an iterative process. A designer will start to consider a place and seek to achieve certain objectives. They will ask colleagues, including, for example, those who wish to operate the system, whether those objectives are possible. The answer may be that those objectives are not possible, so the designer will then ask what is possible. The process continues until the qualities of the place and the other qualities that are being sought have been resolved. That is the process of design.

**David Jamieson:** So you agree that the decision about where to put the tramline in that area of foreshore is a design decision.

**Professor Evans:** Not entirely. It is not only a design decision. The designer may seek to put the tramline somewhere, but it may be moved. The process is one of resolving issues; it is not solely a design decision.

**David Jamieson:** The design manual recommends that

"The tram tracks should adopt a central alignment within the limits of deviation".

TIE proposes to put the tramline to one side of the area, while the residents propose to put the tramline down the middle. Do you agree, therefore, that our proposal is more compliant with that recommendation of your manual?

**Professor Evans:** The design manual does not simply say that tramlines should run down the centre of streets; it is concerned with the fit of the tramline into streets, which relates to the orientation and configuration of the streets. If there are buildings on both sides of a street, perhaps we would look for a central alignment of the tramline.

I stress that I am talking about the design manual of 11 March 2004. We are talking about

whether a proposal is consistent with a proposition that is contained in that version of the manual.

**David Jamieson:** I presume that the proposition is still in the manual, or perhaps you can tell me otherwise.

The design manual states that the tramline should “Minimise property take” and “maximise the available pedestrian space”.

We have made a lot of that point. We feel that TIE’s solution will not leave sufficient space for pedestrians, whereas our solution would give much wider pavements and cycleways. Do you agree that our solution is more compliant with the recommendation to maximise pedestrian space?

**Professor Evans:** First, I do not think that anybody has a solution—they have propositions. I am sorry to be precise about that.

**David Jamieson:** I agree. I should have talked about our proposal.

**Professor Evans:** The proposal to which you refer would create greater opportunity for pedestrian space.

**David Jamieson:** Our objection centres on the lack of a pavement between the roadway and the tramway. We see the street as primarily residential and believe that people should be able to cross it wherever they like. One can imagine trying to cross a busy road with traffic going both ways and then having to negotiate trams that are going in both directions while standing on a kerbstone as a safety island. That is the arrangement proposed for the 400m along at the west end of Lower Granton Road. Do you think that that is good urban design?

15:15

**Professor Evans:** The question primarily concerns risk and safety. If you asked me whether it was good urban design to introduce a footway between a tramway and a road, I would say not necessarily—in fact, I would say normally not. The tram systems that I know and which I have studied work better from an urban design point of view by having the tramway and roadway together and the pedestrian space at either side beside the buildings. That would be the good urban design principle.

**David Jamieson:** It is very helpful of you to say so, as that is what we are proposing. You are suggesting that having the tram and road shared in the middle with good pedestrian space on either side is the best urban design solution.

**Professor Evans:** No. You asked me whether there should be a footway between a road and a tram and whether that was a good urban design

principle. I said that I did not think so. In my experience, from having studied tram systems, I believe that, if there is to be separated running, it is better to have the road and tramway together and the pedestrian space at the outside beside the buildings.

**David Jamieson:** Right, with no footway between the two.

**Professor Evans:** Not in general.

**David Jamieson:** Do you think that it is safe for people crossing to have a footway in-between? It does not strike us as being very safe.

**Professor Evans:** My advice is—

**The Convener:** Please come to a point. We have sufficient evidence from your questions and the written evidence before us to come to conclusions.

**David Jamieson:** Okay. I will move on to the shared walkway and cycleway to the north of the tramway. Are you aware that there is an aspiration in the city to have a boardwalk from Cramond to Portobello? That is being proposed by Terry Farrell and the city is seriously considering it.

**Professor Evans:** I am aware of Terry Farrell’s proposition to link the city in general terms and to create the walk.

**David Jamieson:** What would you say would be the optimum width of that boardwalk, given the thousands of new houses that are going to be built?

**Professor Evans:** It is completely impossible to say. One designs any space in response to a raft of requirements. We would need to understand whether such a boardwalk was to be a pedestrian thoroughfare, for leisure or for recreation. We would need to understand the user requirements and formulate a design response to those requirements. We cannot say, “Let’s have a boardwalk so big.” The design should be in response to people’s needs.

**David Jamieson:** I am just asking your opinion, given your understanding of the area and the numbers of people, such as cyclists, using it.

**Professor Evans:** The proposal is a conceptual proposition to link two places; that is as far as it has got.

**David Jamieson:** We have been told that it is going to be 3m wide.

**The Convener:** It would be much more helpful to you, the witness and the committee if you focused on what you want to know.

**David Jamieson:** I am trying to get the witness’s opinion on whether what is proposed is good urban design. I am nearly there.

**The Convener:** Good.

**David Jamieson:** On barriers, we have been told that, if the tram goes at more than 30mph, there will almost certainly be a requirement to have barriers along the side of the tramway. Imagine a busy coastal walk 3m wide with people walking along right beside the trams. We can all see the need to have a barrier. Do you think that it would be a good idea to have barriers down either side of the tramway in that situation?

**Professor Evans:** I think that barriers should be introduced into the street only where they are necessary for safety.

**David Jamieson:** I think that we all agree that they would be necessary for safety if the trams were going at 50mph.

**Professor Evans:** If that was the case, a barrier should be considered. However, I always approach the proposition from the other side. I say that we should not erect fences to keep people in streets, but that we should create space that is suitable for people to be in. I prefer not to have barriers unless they are required for safety.

**David Jamieson:** You do urban design. I wonder whether you do urban planning with community planning groups. Do you think that a local community group such as ours—which represents 400 households along a quite densely populated street—should be allowed to have any say in how our street is arranged or designed?

**The Convener:** I am not sure that that is in the rebuttal statement. I am aware of the point that you are trying to pursue, as is the committee. However, we want you to come to a point now. There is already ample evidence on the area that you are trying to pursue. Technically, the issue that you are now raising is about consultation, which the committee dealt with at the preliminary stage. Unless you have something specific to put to Professor Evans, I am keen for us to focus on the issue in question.

**David Jamieson:** I am asking him because he is the only urban designer to whom we have access. I am interested in his opinion.

**The Convener:** If the matter is covered in the rebuttal statement, I will allow it. However, I am afraid that I cannot allow fishing expeditions.

**David Jamieson:** Okay.

**The Convener:** On that basis, do you have any final questions for Professor Evans?

**David Jamieson:** No.

**The Convener:** Thank you. Do committee members have any questions?

**Phil Gallie:** Professor Evans, thank you for an excellent practical explanation of the design process. You made the point that changes are always likely for a range of reasons. Is it true that the one immovable object on this particular design is the fact that there must be a tram every seven and a half minutes, or two every 15 minutes?

**Professor Evans:** It could never be my only immovable fact.

**Phil Gallie:** We have heard evidence today that that fact is, effectively, immovable. The seven and a half minutes between trams seems to be sacrosanct. Is that possible?

**Professor Evans:** I cannot comment on the interval; it is for others to say at what interval the trams must run in order to function. It is for me to advise, when I am asked to do so, whether the tram and the system fit into the place that they are being designed for. Plainly, there is a difference between a tram an hour and a tram every five minutes. However, whether a tram comes every five minutes or every seven minutes does not make a great deal of difference to advising on the configuration of the space.

**Phil Gallie:** In your input into the design, the fact that trams are to run every seven and a half minutes would seem to be a constraint. However, that decision would be up to others.

**Professor Evans:** Yes. It would be up to others.

**Helen Eadie:** Some spaces are controversial, and this is one of them. The City of Edinburgh Council's view is that spaces must be developed for people and for commerce. Do you believe that this space, which you have helped to create and shape, is still achieving the goal that has been set by the council of keeping it predominantly for play, recreation and enjoyment? Do you think that the two trams will destroy that?

**Professor Evans:** Not necessarily. The issue is about achieving a balance. We have guidance laid down and we have heard discussion this afternoon about how wide things must be. We must be careful of absolutes and think about design for people. On occasion, something can be narrower than the mandatory width but not necessarily worse for people. The question is all about the resolution and configuration of spaces for people, spaces for trams and what is left for vehicles in a way that makes the place as pleasant, comfortable and safe as it can be.

**The Convener:** Thank you. Ms Donald, do you have any follow-up questions?

**Laura Donald:** I have one question. Professor Evans, as a chartered town planner, are you aware that if anything detrimental were to happen



to a listed structure, Historic Scotland would be consulted and could object?

**Professor Evans:** That is correct.

**The Convener:** Thank you for giving evidence this afternoon.

That concludes oral evidence from the promoter's witnesses for group 32. We now move on to oral evidence from the objectors' witnesses for group 32. I invite Jane Dalrymple, Jill Bennett and David Jamieson to take their places at the table.

Before we commence oral evidence taking, Jane Dalrymple, Jill Bennett and David Jamieson will need to take the oath or make a solemn affirmation.

JANE DALRYMPLE, JILL BENNETT and DAVID JAMIESON *took the oath.*

**The Convener:** The first witness is Jane Dalrymple, who will address the issue of noise.

**Mark Sydenham:** Ms Dalrymple, in your witness statement, you mention the "tunnel effect". Will you explain what it was like and how it was caused?

**Jane Dalrymple (Wardie Bay Residents Association):** It was caused by extremely heavy traffic. When the old railway embankment was there, the noise of the traffic used to vibrate off both walls and give an echo, which in turn created a tunnel effect. We campaigned to have the embankment taken down and we succeeded. Our fear is that, if the sea wall is not lowered, we will go back to the tunnel effect.

**Mark Sydenham:** The sea wall is there at present. If there is no tunnel effect now, why do you think that it would return in the future?

**Jane Dalrymple:** At the moment, the noise seems to disappear over the raised grass area, but if that is lowered we will go back to having a 6ft wall, which will vibrate the traffic noise back off the houses.

15:30

**Mark Sydenham:** How far is the A901 Lower Granton Road from your front door?

**Jane Dalrymple:** Approximately 5ft.

**Mark Sydenham:** Under TIE's proposals, how far will it be?

**Jane Dalrymple:** There will not be much difference, unless we get the proposed parking bays, which are not 100 per cent guaranteed at the moment.

**Mark Sydenham:** You were involved in the campaign 20 years ago to have the road

realigned. Do TIE's proposals, which include a road realignment, go as far as the original commitment that the council made 20 years ago?

**Jane Dalrymple:** No. Not at all.

**Mark Sydenham:** Was a road realignment in TIE's original proposals?

**Jane Dalrymple:** No. TIE did not know about the section 75 agreement or the realignment. We had to point them out.

**Mark Sydenham:** So TIE was unaware of the section 75 agreement.

**Jane Dalrymple:** Completely unaware.

**Mark Sydenham:** Is speeding traffic a problem on the A901?

**Jane Dalrymple:** Yes.

**Mark Sydenham:** What does TIE propose to do to alleviate speed and noise?

**Jane Dalrymple:** We have been told that because the road is an A road TIE cannot introduce speed-reduction measures.

**Mark Sydenham:** So there can be no speed-reduction measures.

**Jane Dalrymple:** None at all.

**Mark Sydenham:** We heard earlier that the road will be narrowed to 6m. What is the usable width of the road at present?

**Jane Dalrymple:** I am sorry, but I do not know.

**Mark Sydenham:** Am I allowed to answer the question if I know the answer to it?

**The Convener:** I should advise you that if you make a statement or answer a question, we can just ignore what you say because you are not under oath. Therefore, perhaps you should not waste your breath.

**Mark Sydenham:** Ms Dalrymple, what assurances, if any, has TIE given you about mitigating noise and speed?

**Jane Dalrymple:** None at all. Everything is ifs and buts; we cannot pin TIE down.

**Mark Sydenham:** We heard earlier that without the tram, the road might not be realigned for a considerable time, and that the tram was a catalyst for road realignment. Why have you had to wait 20 years with still no sign of a road realignment?

**Jane Dalrymple:** Because the council does not have the money. It had to do the embankment removal and the realignment in two phases. It had money for phase 1 but not for phase 2. Through Forth Ports, we managed to secure the section 75 agreement to realign Lower Granton Road.

However, since then TIE has come along with the trams and said that until such time as the trams are in place we will not get a realignment.

**Mark Sydenham:** So the trams have been holding up the realignment, and the road will not be realigned, as you were originally led to believe.

**Jane Dalrymple:** Yes.

**Mark Sydenham:** Thank you. That is all that I have to ask for the moment.

**The Convener:** Do committee members have any questions?

**Phil Gallie:** Could Ms Dalrymple provide the committee with details about the width of the road at a later date?

**Jane Dalrymple:** Yes.

**The Convener:** I should have brought in Miss Donald before I brought in committee members. I apologise—I will get there in the end.

**Laura Donald:** Sorry—I was slightly distracted.

**The Convener:** You and me both.

**Laura Donald:** Ms Dalrymple, you said that the road will not be much more than 5ft away from your door.

**Jane Dalrymple:** It is 5ft at present.

**Laura Donald:** What do you understand the distance will be?

**Jane Dalrymple:** I do not have the figures in front of me, but we have been told that the pavement will be slightly wider.

**Laura Donald:** It will be slightly wider.

**Jane Dalrymple:** Yes, slightly.

**Laura Donald:** It was Mr Turner's evidence that there would be a wider footpath. He talked about parking bays beyond the footpath.

**Jane Dalrymple:** But not in front of my house, unfortunately.

**Laura Donald:** Not in front of your house, but in front of other houses.

**Jane Dalrymple:** Yes.

**Laura Donald:** Mr Sydenham spoke about the council's promise, 20 years ago, to realign the road and about a section 75 agreement finally being in place. When the section 75 agreement was made, do you know when it was envisaged that the road realignment would take place?

**Jane Dalrymple:** No.

**Laura Donald:** So when the section 75 agreement was made, no promises were given.

**Jane Dalrymple:** None at all.

**Laura Donald:** TIE said that it could not help you with speed-reduction or speed-calming measures.

**Jane Dalrymple:** The council told us that, because the road is an A road, it cannot put speed-reduction measures in place.

**Laura Donald:** At present.

**Jane Dalrymple:** Yes.

**Laura Donald:** You raise concerns about the sea wall and about, in particular, the lowering of the area in front of it and the tunnel effect that you fear that would create. Do you appreciate that paragraph 3.9 of Mr Turner's rebuttal statement says:

"concerns about the sea wall height will be considered as part of the public realm project being carried out in parallel to the tram scheme"?

**Jane Dalrymple:** We are aware of that comment, but we have nothing concrete. It has not been said that the wall will definitely be lowered.

**Laura Donald:** Do you understand that your concerns will be taken into account?

**Jane Dalrymple:** Yes.

**The Convener:** The committee will not have a second bite of the cherry, so it is back to Mr Sydenham for any follow-up questions.

**Mark Sydenham:** Have any guarantees been given that the sea wall will be lowered?

**Jane Dalrymple:** No 100 per cent guarantee has been given; the issue is only in discussion.

**Mark Sydenham:** So the future design briefs may have a 6-foot-high sea wall.

**Jane Dalrymple:** Yes.

**The Convener:** I thank Ms Dalrymple for giving evidence.

The next witness is Jill Bennett, who will address loss of amenity. Does Mr Bray have questions?

**Ian Bray:** I have no questions.

**The Convener:** That was quick. Ms Donald?

**Laura Donald:** I beg your pardon—I have totally lost the plot.

**The Convener:** I have got the order right this time.

**Laura Donald:** I have no questions.

**The Convener:** Do committee members have questions?

**Rob Gibson (Highlands and Islands) (SNP):** The possibility of people crossing the road at the section that we have talked about has been discussed quite a lot. I presume that the objectors

would view any restriction on crossing the road as a loss of amenity.

**Jill Bennett (Wardie Bay Residents Association):** Yes. We have undertaken much work to try to obtain grants to improve disabled access to the beach, to do work on paths and to involve Wardie Primary School and Granton Primary School. Most beach users are people with no gardens who come from the Wardieburn and Granton areas. The problem is that placing barriers on the road that allow people—especially kids—to cross the road only at some sections will make access difficult.

**Rob Gibson:** You probably agree that the road is busy.

**Jill Bennett:** That is why we have tried to obtain pedestrian crossings. We are 82<sup>nd</sup> on the list in Edinburgh. We need to have three separate accidents in which people are maimed or die, and we have no volunteers yet.

**Rob Gibson:** Volunteers for what? You need not answer that.

We do not want to encourage people to jaywalk. Does the design include a sufficient number of crossings to allow people to cross that section?

**Jill Bennett:** Crossings have been proposed where there is space with the four lanes—two for the road and two for the tram. The problem is that where space is available for crossings is not necessarily where people wish to cross. I foresee problems. However high the barrier, kids will climb or vault over it. We have tried to encourage the placing of pedestrian crossings in logical places where the walkway flows. That is normal health and safety practice; the traffic guy we spoke to said that.

The problem is that where the traffic flow logically comes down Wardie Steps is not necessarily where the widest sections of road that would allow a traffic island are. Where people normally cross is not necessarily where a bus stop could be fitted; bits of pavement for people to stand on are needed, which causes problems with the space.

**Rob Gibson:** You agree that the matter is for negotiation and could be agreed between the promoter and residents in the future.

**Jill Bennett:** We would try to find proper crossing areas.

**Rob Gibson:** That is possible to achieve.

**Jill Bennett:** Yes.

**Helen Eadie:** What is the one single key message that you want the committee to take on board?

**Jill Bennett:** For the benefit of the community—that includes tram users—and residents, it would make more sense to allow more space. If the tram ran on the road, that would allow the achievement of everyone's aspirations for pedestrian crossings, access to the beach and people using the trams. Bus stops could be placed alongside tram stops, which would make a big difference.

**The Convener:** Members have no more questions. Does Mr Bray have follow-up questions?

**Ian Bray:** In the original TIE proposal, was it proposed to use a grassy area for tram running, and was that considered to be an area of usable open space?

**Jill Bennett:** Yes. I cannot remember the name of the director who used to come to our meetings—I think that it was Andrew someone—but he painted a very pleasant picture of being able to walk across the tramlines. At that time, he said that the trams were going to be every six minutes, but they are now every seven and a half minutes. We actually sat and counted six minutes to demonstrate the length of time during which we would not have to be concerned about being able to cross the tram track. He also said that there would be no restrictions and that the area would be made grassy to encourage its use as part of the urban landscape.

One of our number who went to Lyon on the trip with council representatives said that the system there was brilliant, because people could just hop off the tram and walk across the track. However, things have changed slightly: the trams are likely to be up to 20mph faster and small or large barriers will be in place, with certain places where people will be able to cross the road. Our image of a pleasant green valley has slightly changed.

**The Convener:** There being no further questions for Ms Bennett, I thank her for giving evidence.

The final witness for group 32 will be David Jamieson, who will also address the issue of loss of amenity.

**Ian Bray:** Mr Jamieson, do you think that the design proposed by the promoter is principally a transport corridor rather than a usable area of urban open space?

**David Jamieson:** That is exactly the situation and, to an extent, TIE is not deficient in thinking that. Its remit is to build tramlines and to make the trams run; it is not primarily concerned with the space or the residents who live around the tramlines. TIE's primary objective is to keep the tram running as quickly as possible and it views Lower Granton Road as a quick means of getting along the waterfront.

All that we have heard about today—and in all the previous sessions—is engineering. The project is being viewed very much as an engineering project to get a tram up and running within whatever timescale. If compromises are to be made, they have to be made in relation to the pedestrian space or by residents and cyclists, but they must not be made in relation to the tram or the roadway. That is our main contention.

**Laura Donald:** On your final point, are you referring to the area along Lower Granton Road?

**David Jamieson:** Yes.

**Laura Donald:** You are not referring to other areas in the city.

**David Jamieson:** I am not so familiar with other areas.

**Laura Donald:** When you questioned Professor Evans, you talked about the design manual. Did you respond to the consultation on the design manual?

**David Jamieson:** No.

**Laura Donald:** Why?

**David Jamieson:** The community group was not sent a copy of the design manual; we had to download it ourselves from the internet, and we did not have time to—

**Laura Donald:** But you have a copy of it.

**David Jamieson:** We have seen a copy of it.

**Laura Donald:** Do you accept that under the current proposal, the road will be realigned and moved further away from the residences along Lower Granton Road?

**David Jamieson:** Yes, but the degree of realignment is very small compared with what we were all led to believe. In some places, such as outside Jane Dalrymple's house, the realignment is minuscule.

**Laura Donald:** It is a realignment of the track away from the residences.

**David Jamieson:** Yes; technically it is a realignment.

**Laura Donald:** Will the rebuilding of the tramway along Lower Granton Road mean a rebuilding of the road and the footpaths?

**David Jamieson:** Yes, as I understand it.

**Laura Donald:** Will it mean a re-provision of footpaths and the roadway?

**David Jamieson:** Yes, although I should explain that £1.2 million is in place for the realignment of the road, and that work could have gone ahead now if the tram was not happening.

**Laura Donald:** I was not asking about the realignment; I was asking about the provision of footpaths and roadway. New ones would be provided as part of the tramline.

**David Jamieson:** As I understand it.

**Laura Donald:** Your written evidence discussed small strips of space on either side of the tramway and road. The strip of space on the house side, or south side, of the road will be wider than is currently available. Is that right?

**David Jamieson:** As I understand it, it will be.

**Laura Donald:** The space on the north side beside the sea wall is going to be designed as a shared cycle and pathway.

**David Jamieson:** It is not going to be any wider because at the moment—and for the past 15 years—the grass and the pavement are used as amenity space.

**Laura Donald:** I asked whether the space is to be designed as a cycle and pathway.

**David Jamieson:** Technically, it is.

**Laura Donald:** Do you accept that the design for the tramline is evolving and that it will continue to evolve?

**David Jamieson:** Yes.

**Laura Donald:** Do you accept that it is necessary for the design to evolve in discussions with community groups?

**David Jamieson:** Yes. I hope that we continue to be consulted, but that we do not continue to be ignored, as we have been in the past two years.

**Laura Donald:** That is fine, Mr Jamieson. I have no further questions.

15:45

**Helen Eadie:** Mr Jamieson, have you heard anything today that has persuaded you that you have been heard in the past few years?

**David Jamieson:** I cannot think of anything that has been included in the proposed design that we have said that we would like. TIE says that the present proposal is for a narrower road than was originally proposed, but I emphasise that, at present, the road is 7m wide, including the parking bays. If we subtract those bays, the road is, technically, only 5m wide. TIE's proposal is to make the road up to 6m wide, which is therefore wider than it is at present.

**Ian Bray:** Although the community did not comment on the design manual, do you agree with the aspirations that are expressed in it?

**David Jamieson:** It has some good aspirations and it is an excellent document. The only

drawback is that it says “where possible” at the end of many points. That means that, for example, when a listed structure is in the way, it is easy for TIE to demolish it and still comply with the design manual.

**Ian Bray:** Is it your aspiration to see the methodology that is expressed in the design manual implemented on Lower Granton Road?

**David Jamieson:** Yes.

**The Convener:** As there are no further questions for Mr Jamieson, I thank him for his evidence.

Ms Donald now has up to five minutes to make any closing remarks that she may have about the evidence that relates to group 32.

**Laura Donald:** It is to the credit of group 32 that it has embraced the concept of the tramline and that the objection stems purely from a desire to maximise walking space while minimising the space that is available for motor traffic and trams. The committee should remember that those desires can be addressed in the area, which is, of course, a designated transport corridor in the development plan.

It is now clear that the objectors' proposal is for shared running along a 450m section of Lower Granton Road, from Granton Square to the east. The committee has heard evidence from Mr Turnbull and Mr Harries, in today's meeting and in the meeting on 13 September, on the disadvantages of shared running. The option does not allow the tram to maximise—I use the word advisedly—its potential, in terms of run time and reliability. Where shared running can be avoided, that is—I am sorry, I have lost the word.

**Phil Gallie:** Desirable.

**Laura Donald:** Yes. Thank you.

The objectors suggested the use of a green wave system and smart traffic lights, which appears reasonable at first sight, but as Mr Dapré and Mr Harries—who have experience of the matter—said, those measures would not necessarily work as desired and, in addition, may complicate matters unnecessarily. I cannot properly address the potential increase in run time, but I simply mention that Mr Dapré's guess of 20 seconds was just that—a guess in the hot seat. Mr Harries commented on the impact that such an increase in run time would have on the whole route.

TIE's proposal for the area will allow a wider pavement, a roadway, a tramway and a cycle and pathway—it will allow all those uses along Lower Granton Road. I invite the committee to adopt the proposal in the bill and to reject the objection.

**The Convener:** David Jamieson now has up to five minutes to make any closing remarks that he may have on behalf of group 32.

**David Jamieson:** We thank the committee for giving us the opportunity to present our objection and for considering it in such detail. We have been quite surprised at the level of concern and interest that members have demonstrated in the questions that they have asked. There is going to be a considerable amount of interest in our street about what happens in this committee.

There are 400 households in the street. Our daily lives will be affected by the decisions that will be made here today. People are extremely interested in the outcome of the process. We have a website, issue newsletters and involve a broad cross-section of the population. Some people have lived in the area all their lives and remember the harbour in its heyday, and some have been campaigning for 18 years to have the road moved away. Two years ago, we finally heard that the money had been secured for that purpose. Forth Ports has agreed to give £1 million, and about £200,000 is coming from other sources. The road could have been moved by now if it were not for the proposed tramway. Earlier, it was suggested that the tram was a catalyst for change with regard to the road. To a certain extent, it is, and I welcome the tram on that basis. However, it should be stressed that the tram scheme is holding up the road realignment and is preventing the road from being moved a sufficient distance away. In some cases, it will be moved only a few metres away. We feel strongly that that is not enough.

We also feel that the compromises that are being made in the design of the tram scheme are almost all detrimental to residents and pedestrians; no such compromise is being made in relation to the tramway or the road. We feel that that is inappropriate in this day and age. The tram should be trying to improve the pedestrian space.

Professor Evans said that there should be no givens and that, therefore, there should be no fixed distances. However, we have fixed distances for roads and for the tramway. It seems possible to discard the other fixed distances that are recommended by the Scottish Executive. That is unfair.

We are not campaigning entirely out of our own personal interest. This section of seafront is enjoyed by a wide community of people across north Edinburgh. A lot of people from Pilton go there to walk their dogs and to fish. In the summer, the grass embankment is full of people walking and cycling along it. That number will only increase when the flats that are being built in Granton harbour and the western harbour are

finished. We should be thinking of the recreational use that the area could be put to.

As a community group, we feel that we should be allowed to influence the way in which our street is being designed. We do not see why that should be an unreasonable request. We have had two years of community liaison group meetings and TIE has listened carefully to what we have said—it cannot be faulted in that regard—but the implementation of our views is not being allowed, which we feel is unreasonable. We urge the committee to recommend that we be listened to in this instance.

**The Convener:** If you are anticipating a decision today, let me let you down gently. We will reflect carefully on the evidence that we have heard today and on the written evidence that is before us. We still have to go through stage 2 of the consideration stage and the final stage, which will take place sometime next year.

We will now deal with evidence from the objectors' witnesses for group 30. As Mr Drysdale does not have someone to question him on his evidence, he can make a brief opening statement and address any issues that arise from the promoter's rebuttal of his statement or from the witnesses' rebuttal of the promoter's witnesses. Ms Donald can then cross-examine him before he makes a closing statement. I draw members' attention to papers ED1/S2/05/15/5, ED1/S2/05/15/10 and ED1/S2/05/15/11, which provide further evidence on run times.

Before we commence oral evidence taking, I invite Mr Drysdale to take the oath or make a solemn affirmation.

ROBERT DRYSDALE *took the oath.*

**The Convener:** I understand that the other witnesses—Alyson Cameron, Sarah Spence, Michael Clarke and Peter Gossip—are unable to attend the meeting. Mr Drysdale, are you content to rest on the statement from Alyson Cameron?

**Robert Drysdale:** Yes, I am.

**The Convener:** Does the promoter have any questions about that?

**Laura Donald:** No.

**The Convener:** Mr Drysdale, are you content to rest on Sarah Spence's evidence?

**Robert Drysdale:** Yes.

**The Convener:** Do you have any questions, Ms Donald?

**Laura Donald:** I simply have an observation to make. Sarah Spence has not rebutted Mr Mitchell's witness statements and accordingly

appears to have accepted what was said in them about noise and vibration.

**The Convener:** We have noted that.

Mr Drysdale, are you content to rest on Michael Clarke's statement?

**Robert Drysdale:** Yes.

**The Convener:** Do you want to say anything about that, Ms Donald?

**Laura Donald:** No.

**The Convener:** Finally, are you content to rest on Peter Gossip's statement, Mr Drysdale?

**Robert Drysdale:** I understand that we are leaving it as it is.

**The Convener:** Do you have anything to say, Ms Donald?

**Laura Donald:** I have a brief comment to make. We heard Karen Raymond talking about wildlife, and SNH has withdrawn its objection. That is simply an observation for the committee.

**The Convener:** Thank you. We have noted that, too.

Robert Drysdale is the only witness for the group. He will address the issue of the Trinity railway corridor alternative route. I invite him to make an opening statement.

**Robert Drysdale:** Thank you. I have printed copies of my statement, which may help members. I have already supplied a copy to the clerk.

**Laura Donald:** May I have a copy?

**Robert Drysdale:** Of course.

**The Convener:** The committee is ready to listen to you.

16:00

**Robert Drysdale:** With bated breath. I have sought simply to focus on the areas of disagreement and matters arising from evidence two weeks ago.

First, I would like to clear up the situation with the statutory development plan, which contains the council's transport strategy and forms the policy backbone on which the case for the tram rests. The structure plan position is quite clear: policy TRAN1 requires all former railway lines to be safeguarded for future transport use, including rail use. That policy applies to the whole of our alternative route and is a strategic policy requirement, which was approved by Scottish ministers last year.

The local plan, which predates the structure plan, shows the east-west section of the route as a light rail route and the north-south section as a

cycleway, but the local plan must follow the structure plan, so the next review of the local plan will have to incorporate the structure plan requirement for the north-south section to be protected for possible rail use. The urban wildlife designation in the local plan has to be subordinate to structure plan requirements. Our route is not a new transport corridor; it is a protected transport corridor, reserved for future rapid transit or rail use.

Our proposed route is cheaper—probably much cheaper—than the promoter's route. It will be much easier to build, with minimal disruption to existing traffic and, according to projections, it will carry virtually the same number of passengers. The three important areas of issue between us and the promoter, about which there was much evidence from the promoter two weeks ago, are run times and reliability, the north-south section and western harbour.

On run times and reliability, the promoter has painted a picture of the system running on a knife-edge of reliability, with even a small delay in run times leading to a need for extra trams to run the service. The promoter has also stressed that segregated running is more reliable than street running. If we add together those two strands of evidence, we reach the inescapable conclusion that our segregated route must be the preferred option.

The promoter has countered that by suggesting that the railway route will be slower than the Starbank route. Mr Oldfield gave us new figures two weeks ago of 5.19 minutes from Ocean Terminal to Granton Square via the Starbank route—the promoter's route—and 6.28 minutes via our route. Mr Oldfield's figures assume that the average speed on the Starbank route will be 35kph, which is far faster than normal street running sections and nearly 50 per cent faster than in the published appraisal. He claims that the average speed on the railway route would be slower than on the Starbank route at 34kph.

The suggestion that the railway route will have a slower average speed than the Starbank route is simply not plausible, particularly given that Mr Oldfield also told us that the maximum speed on the railway route would be 70kph and the maximum speed on the Starbank route would be only 48kph. If the maximum speed on the railway route is 46 per cent faster, the average speed will be faster, not slower.

From all the evidence, there can be no doubt that the railway route will be faster end to end than the Starbank route. It is 40 per cent longer, but it will be at least 46 per cent faster. It will also be more reliable, even with a single-track section. Single-track sections much longer than that work perfectly well on other systems. There will be no

hazards along our route to hinder the tram, whereas on the Starbank route there are many side roads from which traffic will be free to emerge uncontrolled by any traffic lights. Furthermore, there are proposals for parking bays all along Starbank Road, which will be essential for residents but will be a major and constant hazard for the tram, with cars pulling out of or reversing into spaces right next to the tram track. It is not surprising, therefore, that Mr Turnbull preferred the railway route on traffic grounds.

It was suggested two weeks ago that the railway route suffered from pinch points, which would delay the tram, but the only significant pinch point is the curve at five ways junction where the tram will have to slow down, whereas the Starbank route is, in effect, one long pinch point from start to finish.

I can deal briefly with the second issue, which is the north-south section and the cycleway. In Nottingham, the operator chose to have a single-track segregated section of route in preference to double-track street running and that system works well. If it is thought that there is basic incompatibility between the tram and the cycleway, unlike on the Roseburn corridor, or if it is decided that double track here is essential, I as a local cyclist can say that the loss of this section of cycleway would not be major. The tunnel is an inhospitable environment for cycling, particularly given the potential hazard of unseen broken glass. It is used lightly compared with the Roseburn corridor and the east-west section and there are perfectly suitable and quiet parallel side streets with gradients that, bearing in mind where we are, are no worse than in other parts of the city.

The only other issue is western harbour, which is a development of expensive luxury apartments that will be in reach only of those on high incomes. There will be 1.3 car spaces per apartment. The marketing brochures stress that the development is only 15 minutes by car from the city centre. One brochure mentions the tram in passing, but contains no detail about it. It will be a new car-borne community. The developer is not contributing to the cost of the tram and the tram will not penetrate the development.

In evidence two weeks ago, the promoter accepted that the average journey time into the city centre for western harbour residents could be 28 minutes, allowing for walking time and the tram journey. For some, it would be considerably longer than that. The number 11 bus takes only 16 minutes to reach St Andrew Square from the proposed western harbour tram stop. A bus that followed the same route as the number 11 but for which the route was extended to the northern tip of the western harbour development could deliver its residents into town within 20 minutes. That would

be a virtually door-to-door service, which would serve western harbour far more effectively than the tram ever will.

I agree with Mr Cross that transport policy should seek to serve areas of high car ownership as well as areas of low car ownership, but the tram will not serve western harbour properly, whereas our route would serve the heart of a community in which many households do not have cars.

For all those reasons, I ask the committee to conclude that the objectors' proposed route between Lower Granton Road and Ocean Terminal should be preferred.

**Laura Donald:** Mr Drysdale, I have quite a number of questions for you. I apologise in advance. I will canter through them as I did last time.

Your objection letter appears to be just from you. Is that correct?

**Robert Drysdale:** Yes.

**Laura Donald:** I have two letters. The first is dated 26 March 2004 and the second is dated 30 August 2004. Is that about right?

**Robert Drysdale:** I have it here. Did you say 26 March?

**Laura Donald:** Yes.

**Robert Drysdale:** That is right.

**Laura Donald:** Your second letter was in August.

**Robert Drysdale:** I do not recall writing a second letter. I thought that there was only one letter of objection.

**Laura Donald:** Okay. We will move on, then.

In your objection letter you comment on the likelihood of the traffic being forced off Lower Granton Road and Trinity Crescent on to the road junction outside your house. Is that your concern?

**Robert Drysdale:** That is one of my concerns. As is clear from my objection, I favour the railway route because of any number of factors, including ones that would directly affect me.

**Laura Donald:** You go on to say that any traffic that is displaced during construction will remain so displaced beyond construction and into operation. That is one of your worries. You say:

“the amenity of my neighbourhood and my home”

and

“the value of my home”

will be affected.

**Robert Drysdale:** I said that some of the traffic would probably be permanently displaced, yes.

**Laura Donald:** You also said:

“the amenity of my neighbourhood and my home”

and

“the value of my home”

will be affected. Is that right?

**Robert Drysdale:** Yes. You are reading from the statement.

**Laura Donald:** Obviously, you are a local resident. Is there evidence of rat-running in the area at present?

**Robert Drysdale:** Yes.

**Laura Donald:** Does that affect your street?

**Robert Drysdale:** Yes, but it is largely light vehicles as opposed to heavier vehicles.

**Laura Donald:** Yes. I understand that, but nevertheless rat-running occurs in your street. What causes it? Do you know?

**The Convener:** Could I just remind you that, although Mr Drysdale is indeed a witness, some of the evidence that you are seeking to elicit from him relates to his original objections and not to rebuttal statements. I am curious to know where you are going with this.

**Laura Donald:** This is a general cover-all in relation to the statement that Mr Drysdale put in.

**The Convener:** Okay.

**Laura Donald:** His statement is quite extensive in its terms. Looking through the statement—

**The Convener:** Okay. I just needed to clarify where you are going with this.

**Laura Donald:** I am sorry. I should have referenced my questions to the statement. I have not done that in most places, but I do so occasionally.

**Robert Drysdale:** I would appreciate some clarification. I understood that, as a member of group 30, I had been allocated a particular issue to deal with for the group.

**Laura Donald:** That issue is the alternative route.

**Robert Drysdale:** Yes.

**Laura Donald:** I have to try to establish in evidence why you do not want street running and why you prefer the alternative route. We will go into that in questioning.

As a matter of interest, can you tell me what causes the rat-running at present?

**Robert Drysdale:** It is caused by lots of people wanting to get to work quickly.

**Laura Donald:** Okay.



It is clear that you have given a great deal of thought to the alternative route, which we will discuss. How widely have you consulted on the route?

**Robert Drysdale:** The community council floated the matter at its meetings and it was the subject of a consultation paper that the local councillor issued in February 2003. As a result of his consultation process, he supported the alternative route. My understanding is that the community has been consulted in those ways.

**Laura Donald:** But you do not know the extent of the consultation.

**Robert Drysdale:** I have not personally been responsible for any of that.

**Laura Donald:** No. Naturally, you relied on the local councillor.

**Robert Drysdale:** He picked up the calls, yes. I was in communication with him about it.

**Laura Donald:** Do you know whether the views of those who live in the properties that back on to your proposed route have been taken into account?

**Robert Drysdale:** No. They live alongside a designated transport route of which I presume that they are aware.

**Laura Donald:** On page 22 of your evidence, you state:

"The distance between the tramway and nearby houses will be considerable".

What about the old railway cottage? I think that its address is 45 York Road.

**Robert Drysdale:** It is the former Trinity station building.

**Laura Donald:** Yes, it is. I think that it is split into four properties.

**Robert Drysdale:** I do not know whether it is subdivided.

**Laura Donald:** I had it checked, and it is subdivided. Have you considered what those owner-occupiers would think about your proposed alternative route?

**Robert Drysdale:** Not directly, no.

**Laura Donald:** Are you aware of how close the tramline would require to pass to that cottage?

**Robert Drysdale:** It would not need to pass as close as the old railway did.

**Laura Donald:** If I were to tell you that the distance between the edge of the tramline and the cottage would be 4.6m, would that surprise you?

**Robert Drysdale:** Yes, because there is no proposal for a tramline there. Our proposal is for a

tramline there, but there is no design for a tramline there. Any measurements would be purely hypothetical and not part of the promoter's bill or proposals.

**Laura Donald:** Absolutely. However, you will appreciate that, as that is your proposal, we have had to check various aspects in the run-up to your giving evidence.

**Robert Drysdale:** The first indication that I had of the promoter bothering to design it was a plan that was posted to me this week, dated 21 September, which shows a designed route. I had not seen anything from anybody prior to that, but I had undertaken my own assessment of where the tramline might run.

There is a very wide platform on the west side of Trinity station, which would not be needed because there would not be a station there. The alignment of the tram could, therefore, be moved considerably further away from the house than the old railway line used to run.

**Laura Donald:** So, you would knock down the platform.

**Robert Drysdale:** Well, the platform is not needed.

**Laura Donald:** I am just saying that you would knock down the platform.

**Robert Drysdale:** I am talking about the west platform, not the platform on which the station house sits.

**Laura Donald:** I appreciate that. You are talking about the platform that is opposite the cottages.

**Robert Drysdale:** Yes.

**Laura Donald:** Do you accept that that area—the area on the cycle path outside the railway cottages—is currently quite quiet, with little ambient noise?

**Robert Drysdale:** Yes.

**Laura Donald:** Let us move on. Mr Bain gave evidence about Craighall garage.

**Robert Drysdale:** I remember that, yes.

**Laura Donald:** Have you considered that property and how much of its land would have to be given up?

**Robert Drysdale:** In discussion with one of the witnesses, two weeks ago, mention was made of 2.5m of the compound that is used for storing cars.

**Laura Donald:** I think that the witness said that that was over a length of 65m.

**Robert Drysdale:** Yes, something like that. That would not render the compound unusable. The

point was also made that the Craighall garage compound is leased from the council to the garage. The council has not sold the land because it is a designated transport route and the council might need it. In fact, the council retrieved part of the land for the construction of the cycleway five or six years ago. Previously, it was not possible to get through there at all, as the compound covered the whole width of the railway. The council took back half of the compound to get the cycleway through.

**Laura Donald:** The council reclaimed the land and put in the cycle path, yes. However, the business would still be affected if the tramway went through that way.

**Robert Drysdale:** Yes. However, as I said, the use of that route for rail or light rapid transit has been in not just the present structure plan, but the previous structure plan.

**Laura Donald:** I accept that and my clients accept that. Have the occupiers of Craighall garage expressed a view on your proposal?

**Robert Drysdale:** Not to my knowledge.

**Laura Donald:** Still on that general area, are you aware that the old station building that is situated in Craighall Road, adjacent to Craighall garage and sitting above the cycle path, is a listed building?

**Robert Drysdale:** Yes. It is grade C listed.

**Laura Donald:** And the bridge on which it sits is also listed.

**Robert Drysdale:** Yes. It was recently renovated.

**Laura Donald:** I think that it has been listed since the mid-1990s.

**Robert Drysdale:** Yes. I know the owner and I think that he asked for it to be listed because he thought the building, or at least the station, was worthy of that. I am sorry, but I should say the lessee of the building, because the council owns it.

16:15

**Laura Donald:** Are you also aware that Trinity tunnel and the Lennox Row bridge are both listed structures?

**Robert Drysdale:** I know about the Trinity tunnel and that sounds right about the bridge under Lennox Row.

**Laura Donald:** You appreciate that Historic Scotland would require to be consulted if any alterations to those three structures were required.

**Robert Drysdale:** Yes, but there would be no need for any alterations to the Lennox Row bridge; nor would I suggest any for the Trinity tunnel.

**Laura Donald:** But you will appreciate that we heard evidence from engineer witnesses and you are, I think, a town planner.

**Robert Drysdale:** Yes, and any comments that were made by Historic Scotland would obviously be made in the context of the route being a protected transport route.

**Laura Donald:** I think you accepted that Trinity tunnel would need to be surveyed to establish whether any work was required on it. It has not been so surveyed yet.

**Robert Drysdale:** That is right.

**Laura Donald:** Have you walked or cycled through the tunnel recently? I think you said that you cycled.

**Robert Drysdale:** No, I do not generally cycle through the tunnel and I would not walk through it alone. I went through it when I measured it, which was probably about eight weeks ago, after I presented my witness statement.

**Laura Donald:** You said in that statement that the lights were not working when you were there.

**Robert Drysdale:** Yes, that was interesting. The lights had been out for about nine months, but they were miraculously mended three days before we gave evidence.

**Laura Donald:** Was it only three days?

**Robert Drysdale:** Somebody told me that they had just been mended. However, that was hearsay evidence.

**Laura Donald:** I was there prior to that and the lights were working, bar one.

**Robert Drysdale:** You will notice—

**The Convener:** The level of detail about when you were there and the lights is probably losing the committee—trust me.

**Robert Drysdale:** The tunnel was unlit for a lengthy period.

**Laura Donald:** Other properties to consider, apart from those that back on to the route, are the houses above the tunnel, to which you refer in your statement to indicate that the tunnel is structurally sound. Have the people in those properties been approached? Do they know about your proposal?

**Robert Drysdale:** My proposal is not a public one; it is in the form of an objection to a bill. It is an alternative proposal, which would have to be promoted.

**Laura Donald:** It would have to be promoted and consulted on.

**Robert Drysdale:** Yes.

**Laura Donald:** That is fine.

**The Convener:** May I just interject? It is, indeed, for objectors to promote alternative routes, but it is not for them to defend them. We would not expect Mr Drysdale to have the level of technical expertise that is available to the promoter. If the committee decides to explore an alternative route, there will be a full consultation stage. I hope that that is helpful.

**Laura Donald:** I take the point.

I think that you said in your opening statement, Mr Drysdale, that the whole of your proposed route is a reserved transport corridor. Is that correct?

**Robert Drysdale:** Yes.

**Laura Donald:** That includes the north-south section.

**Robert Drysdale:** Yes, by virtue of the structure plan.

**Laura Donald:** What about Starbank Road?

**Robert Drysdale:** That is now similarly promoted. There is no difference between the two routes in development plan terms.

**Laura Donald:** Did the structure plan predate the tram proposal? Is that not correct? I cannot remember the date, but did not the tram proposal post-date the structure plan?

**Robert Drysdale:** There have been two tram proposals. The old structure plan had the tram running along the east-west route; the new structure plan has the tram running along the sea front. However, all the rail routes are protected.

**Laura Donald:** Your proposed route is a designated urban wildlife site, which you commented on in your opening statement.

**Robert Drysdale:** Yes, because that aspect must be subordinate to the strategic policy that comes from the structure plan.

**Laura Donald:** Why?

**Robert Drysdale:** The local plan would have been based on the previous structure plan, which did not protect that route, so it would presumably feel able to designate it an urban wildlife site without constraining a transport policy; the new policy in the new structure plan, on the other hand, designates the route as a rail route. The repercussions of that are obvious in the sense that it would not necessarily be possible to retain the same level of urban wildlife corridor designation.

**Laura Donald:** Could that be why Starbank Road was also designated as a transport corridor?

**Robert Drysdale:** The Starbank Road corridor was introduced, in amendment of the local plan,

as a designated transport route because of the tram proposals and it was incorporated into the structure plan for the same reason, as I understand it.

**Laura Donald:** You indicated in your opening statement and to Mr Oldfield that the railway route would not form a new transport corridor.

**Robert Drysdale:** Yes.

**Laura Donald:** Currently, no traffic other than pedestrian or bicycle uses that transport corridor.

**Robert Drysdale:** As things stand, that is right. Exactly the same situation applies as with the Roseburn corridor, which, although it is a cycleway and footpath, is a designated transport route for rail or rapid transit use.

**Laura Donald:** To return to the convener's point, consultation and justification would be required by the City of Edinburgh Council and the committee.

**Robert Drysdale:** I asked about that at a very early stage. Should an alternative route to the promoter's route be accepted by the committee, what would the procedure be? It was made clear to me at the time that there would have to be further public consultation. I would support that.

**Laura Donald:** Group 47, who were here previously but who are not here today—I think that they have completed their case—promote a different route from the route that you are promoting. In fact, they have said that they would object to your route. Could you comment on that?

**Robert Drysdale:** That group's route goes up Granton Road and then goes along the whole of the east-west stretch.

**Laura Donald:** It is the whole of the east-west route and Granton Road, yes.

**Robert Drysdale:** To me, that means more street running, which we are trying to avoid on this stretch. That route is also considerably longer. It is slower, both because it comprises more street running and because it is longer.

**Laura Donald:** Given the workable alternative—the promoter's route—do you feel that there is sufficient justification for destroying the urban wildlife site? Rather, do you feel that there would be an impact on it?

**Robert Drysdale:** I do not think that the site would be destroyed.

**Laura Donald:** I took that back.

**Robert Drysdale:** The east-west corridor is very wide. There is room for the cycleway, the tramway and a significant amount of natural vegetation to co-exist along that stretch. The north-south stretch, on the other hand, is contained by stone

walls and there is relatively little space for wildlife to exist. There is a built structure there.

**Laura Donald:** We have heard Ms Raymond speak on that. You have said that the east-west line is very wide. Could you clarify what your evidence is in relation to the width of your route?

**Robert Drysdale:** I communicated with the clerk about that afterwards. I had thrown into the pot some references to 100m to 200m when cross-examining Mr Oldfield. That should have been 100ft to 200ft. We had some problems with metric and imperial measurements previously. In fact, I had been working off the old Ordnance Survey sheet, which used imperial measurements. I offer my apologies for that; as a witness, I am happy to correct the evidence. That part of the route is between 30m and 60m in width, although there are a few bits where it is wider. Around the five ways junction, depending on how the measurement is taken, the route is probably 100m wide at certain angles. The ruling width, however, is 30m to 60m.

**Laura Donald:** I just wanted to clarify that point while I remembered.

Mr Buckman addressed the question of car ownership levels at the western harbour development. Are you in a position to disagree with his evidence?

**Robert Drysdale:** No—we had a lengthy discussion about his evidence. I think that there were two strands to it. First, it could not be guaranteed that everybody at western harbour would have a car, which I accept. Secondly, there are areas of low car ownership in the Newhaven village area, close to the Newhaven tram stop. I am also happy to accept that.

Mr Buckman tried to suggest that there was a very high level of car ownership in the area around our proposed tram stop. I think that I managed to get him to agree with me that there is, in fact, a very wide range of car ownership levels in the catchment of our stop, ranging from 30 per cent to around 85 per cent. From the map it can be seen that there is a mixture of villas, tenements, terraced housing and semi-detached houses—a whole mix of house types.

**Laura Donald:** Around your stop?

**Robert Drysdale:** Yes.

**The Convener:** I am sorry to interrupt, Ms Donald. It is our intention to suspend the meeting between now and half past 4 to enable members to depart, go to the chamber and then return here shortly after 5 o'clock. I do not want to interrupt the flow of questioning, however.

**Laura Donald:** I am perfectly happy to stop now if that suits.

**The Convener:** Would that be okay?

**Laura Donald:** Yes—I understand.

**The Convener:** Rather than interrupt somebody mid-flow, I would prefer to suspend proceedings at this point.

**Robert Drysdale:** How long are we likely to be after we reconvene?

**The Convener:** I understand that Ms Donald has quite a few questions. I am sure that they will be brief.

**Laura Donald:** I am galloping through them.

**The Convener:** I am also sure that your responses will be cogent, Mr Drysdale. We will, in any case, conclude at around 6 o'clock. I intend for committee members to get their skates on and return to the committee room after they have voted in the chamber.

**Robert Drysdale:** I would certainly not want our evidence to be skated over. That is fine, convener.

16:25

*Meeting suspended.*

17:10

*On resuming—*

**The Convener:** I resume the meeting slightly later than I intended, but not much. I thank both the promoter and the objector for their indulgence in allowing us to go and vote on matters of great importance. Ms Donald will now resume questioning Mr Drysdale.

**Laura Donald:** Mr Drysdale, there are a few paragraphs about western harbour in your opening statement. You state:

“The marketing brochures stress that the development is only 15 minutes by car from the city centre. One brochure mentions the tram in passing but contains no details”.

Have you had an opportunity to view the marketing compact disc?

**Robert Drysdale:** It depends for which company because there are various—three different brochures are circulating.

**Laura Donald:** You know more than I do.

**Robert Drysdale:** I have a Bryant CD with me that I watched a while ago.

**Laura Donald:** Do you know whether any of the CDs refer to the tram as an important plus for the development?

**Robert Drysdale:** I do not.

**Laura Donald:** You also stated:

“The developers are not contributing to the cost of the tram and the tram will not penetrate into the development.”

The developers are not contributing to the cost of the tram, but do you appreciate that Forth Ports is giving up land for the tram?

**Robert Drysdale:** Yes.

**Laura Donald:** That is very fair, thank you. You discuss the average journey time into the city centre for western harbour residents being 28 minutes, which came from previous evidence. You also indicate that

“The number 11 bus takes only 16 minutes from the proposed Western Harbour tram stop to reach St Andrews Square.”

I think that you suggested to Mr Buckman a few weeks ago that in fact the journey took considerably longer to get into the city centre than the timetabled 15 minutes.

**Robert Drysdale:** He was talking about routes from Granton Road, which take longer.

**Laura Donald:** They take longer then.

**Robert Drysdale:** The routes that Mr Buckman spoke about were those that come up Granton Road, turn left onto Ferry Road, right at Goldenacre and up through Canonmills. They usually take at least 20 minutes. The congestion on the final approach up the hill into town on Dundas Street/Hanover Street is sometimes very heavy, so it can often take longer than that. The number 11 goes through Pilrig and along Leith Walk; it benefits from the greenways so it is a faster service.

**Laura Donald:** Do you accept that although we are discussing the 28-minute journey time from western harbour into the city centre, the tram is not just about the city centre and that it would follow a circular route?

**Robert Drysdale:** Yes. That was Mr Buckman’s average estimate for a trip to the city centre.

**Laura Donald:** The tram has the benefit of penetrating other areas in the centre from Haymarket right through to the east end.

**Robert Drysdale:** Indeed.

**Laura Donald:** You proposed a park and ride in your evidence. How big do you envisage that would be? I had regard to your pictures and it did not look very big, although I appreciate that that was—

**Robert Drysdale:** Not being an engineer, I was not able to design the park and ride in detail. Given that it would be in a cutting, it could be decked—it could be two storeys—and it could even be decked over the tram so there could be a

substantial car park there. I showed an open, surface-level car park next to the tram stop, which might show something like 30 or 40 car spaces, but probably no more. One could extend it up and across to create more spaces.

**Laura Donald:** Who do you envisage would use that park and ride?

**Robert Drysdale:** I was interested to hear from Mr Cross’s evidence that he felt that it would be so popular that it would not be able to cope. I was very pleased to hear that. I do not think that it would be particularly attractive to anyone who lived north-west or north-east of the location because they will have their own tram stops. I think that it would be attractive only to people from the western harbour because that would allow them to do a short hop by car and then leave their car at the tram stop.

17:15

**Laura Donald:** Mr Cross suggested that the park and ride might be overused, but that depends on its size. If it had three storeys, as you have indicated today, it might not be overused.

**Robert Drysdale:** It just struck me that it was encouraging that Mr Cross thought that the park and ride would be very popular.

**Laura Donald:** Why would western harbour residents use a park and ride?

**Robert Drysdale:** I suppose that they would do so largely if they wanted to use the tram to get to a destination other than the city centre—a point to which you have just alluded. By that, I mean that it will be difficult for the tram to compete on a trip to the city centre, given how short the distance is between the western harbour and the city centre.

**Laura Donald:** Of course. I think that that was Mr Buckman’s evidence.

**Robert Drysdale:** Yes.

**Laura Donald:** Do you know where Edinburgh’s park-and-ride sites are or where such sites are planned?

**Robert Drysdale:** Big park and rides have recently been established on the periphery of the city to cope with out-of-town people who drive into Edinburgh.

**Laura Donald:** According to Mr Cross’s evidence, that reflects the City of Edinburgh Council’s policy.

**Robert Drysdale:** Yes. The council has sought to put large park-and-ride car parks at interceptor locations around the periphery of the city—at Burdiehouse, Hermiston Gate, Ingliston and Newcraighall—because those are points at which traffic enters the city. That situation does not apply

to my proposed park and ride because the only traffic entering from the north would be western harbour traffic.

**Laura Donald:** Is it your understanding that your proposed park and ride would require particular infrastructure, such as closed-circuit television or lighting?

**Robert Drysdale:** Yes—it would certainly require lighting and, ideally, it would have CCTV as well. The park and ride is an add-on; it is not part of the core proposal.

**Laura Donald:** I appreciate that. What is your view of Mr Turnbull's evidence about how the park and ride would affect the workings of the streets surrounding it?

**Robert Drysdale:** If Mr Cross was right and the park and ride became overcrowded and not enough people could get into it, there could be spillover on to surrounding streets.

**Laura Donald:** Congestion would be a consequence of that.

**Robert Drysdale:** Yes, although most of the streets are pretty much parked up during the day anyway.

**Laura Donald:** Are you referring to the streets in the Craighall Road area?

**Robert Drysdale:** I am talking about Newhaven Road and the surrounding side streets; there is not really any parking available in Stanley Road. There is not a lot of room because of the high density of population in the area.

**Laura Donald:** I will now move on from the park and ride. You have said that you are a cyclist. As I understand the position—I am sure that you will correct me if I am wrong—you have put forward two proposals that relate to your alternative route. The north-south leg could have a single tramline with an adjacent cycleway or it could be dual track, which would mean putting the cycle lane on to the street.

**Robert Drysdale:** There would be a signed cycle route along the suburban streets to the west. I did not see a need—

**Laura Donald:** I meant no disrespect.

**Robert Drysdale:** In other words, I did not necessarily envisage the provision of a separate, tarmacked route for cyclists; I imagined the provision of a signed route.

**Laura Donald:** A signed route that was on street. Which streets did you have in mind when you came up with that idea?

**Robert Drysdale:** I thought that the route would go up Trinity Road, along East Trinity Road and

Clark Road and then back on to the cycleway where it crosses Clark Road.

**Laura Donald:** In his evidence, Mr Bain said that the gradient on Trinity Road was 1:8.4; I have forgotten the percentage term that he used.

**Robert Drysdale:** I think that he was talking about the initial stretch immediately up from the lights.

**Laura Donald:** Yes. Part of Trinity Road has a gradient of 1:8.4.

**Robert Drysdale:** Yes, but that is not a problem.

**Laura Donald:** We will come on to that. Are you aware of any other area in Edinburgh where the cycle network is as steep?

**Robert Drysdale:** The path from Warriston Crescent on to the Warriston cycleway—which is just off our map—is probably appreciably steeper. It is so steep that the path zigzags up the slope.

**Laura Donald:** Is that part of the national cycle network?

**Robert Drysdale:** I do not know, but it is certainly part of the local cycle network.

**Laura Donald:** If I were to tell you—no, I will take that back.

Is that the only steep area that you can think of?

**Robert Drysdale:** Offhand, that is the only one that I can think of in the vicinity. I make the general point that Edinburgh is full of steep hills. Anyone who sets off to cycle from Trinity Crescent to the city centre has a big climb.

**Laura Donald:** Absolutely, but not all those routes are a national cycle route or a dedicated cycleway, as in this case.

**Robert Drysdale:** In this case, the dedicated cycleway exists on a route that is reserved for rail.

**Laura Donald:** The route is reserved for transport.

**Robert Drysdale:** For future transport including rail.

**Laura Donald:** As we heard last week, walking and cycling constitute transport.

**Robert Drysdale:** I understand that cyclists will have the option of taking their bikes on the tram.

**Laura Donald:** Mr Bain said in evidence that the streets surrounding Trinity Road are too narrow to accommodate a dedicated cycleway. I think that you have accepted that this afternoon.

**Robert Drysdale:** No. I have not proposed a dedicated cycle route because I see no need to separate cyclists from other traffic on routes that

are so lightly trafficked. Actually, most of those roads are quite wide.

**Laura Donald:** Is any section of Trinity Road or Clark Road paved with setts or cobbles?

**Robert Drysdale:** Only at the very bottom.

**Laura Donald:** At the steep part?

**Robert Drysdale:** Yes.

**Laura Donald:** Do you agree that setts and cobbles can be slippery in wet weather?

**Robert Drysdale:** They can be, yes.

**Laura Donald:** I am not wholly familiar with Trinity Road, but I think that I have walked up it. The road has cars parked on both sides. Is that correct?

**Robert Drysdale:** That is commonly the case, yes.

**Laura Donald:** That is because the houses on Trinity Road commonly do not have driveways.

**Robert Drysdale:** That is right.

**Laura Donald:** What about the safety of cyclists who go up or down that hill?

**Robert Drysdale:** I cycle up and down the hill frequently. I have had no problems so far.

**Laura Donald:** What about children?

**Robert Drysdale:** In my experience, the cycleways tend to be used by children only if they are accompanied by an adult.

**Laura Donald:** What about if children who were accompanied by an adult cycled up a hill like that?

**Robert Drysdale:** As I said, the grading is not prohibitive. I accept that the parked cars can make it awkward.

**Laura Donald:** Will the on-street alternative that is suggested as part of your proposal be comparable to the cycleway that people currently enjoy on the north-south section?

**Robert Drysdale:** In purely physical terms—

**Laura Donald:** That is all that I am asking about.

**Robert Drysdale:** You have asked whether it is comparable. The north-south cycle route has other disadvantages, which I have mentioned in my evidence.

**Laura Donald:** Yes, you have. However, I am discussing the physical disadvantages and I am thinking about people such as children—and, frankly, such as myself—who might not be able to get up a hill like that.

**Robert Drysdale:** Frankly, people with children would probably walk up that short section and then resume cycling on the road.

**Laura Donald:** Are you aware of the efforts to which cycling bodies have gone to get cycle routes throughout Edinburgh off roadways?

**Robert Drysdale:** As a cyclist, I am aware of those efforts. I take a keen interest in the development of cycle networks.

**Laura Donald:** You will appreciate that cycling bodies have gone to great lengths and have fought tooth and nail to get cycleways off the roads.

**Robert Drysdale:** There is a good network of cycleways. It should also be pointed out that when the railways closed they were left derelict for some considerable time. Lothian Regional Council then bought all the railways specifically with the intention of retaining them for future rail or rapid transit use. In the meantime, some were converted to cycleways. It was never intended that, once the cycleways were built, they would be sacrosanct and that converting them to other uses that might provide much greater city-wide benefits could never be contemplated.

**Laura Donald:** Absolutely not. I have just two further points on this issue—

**The Convener:** I think that we now have a sufficiency of evidence on cycleways and their usage.

**Laura Donald:** I will make just one more point.

**The Convener:** Make it small.

**Laura Donald:** Does Mr Drysdale appreciate that, as the press reported last week, bodies such as the police are making efforts to cut cycling accidents?

**Robert Drysdale:** Yes.

**Laura Donald:** Moving on to a different section, I want to discuss run times. I will not go into the details of timings, as the committee has enough information on that to last it for a long time. Mr Drysdale, do you accept that the tram has to slow down for a number of different and varying factors?

**Robert Drysdale:** Throughout its route, yes.

**Laura Donald:** Do you accept that those factors include such things as bends?

**Robert Drysdale:** I have said that it would slow down at our bend, yes.

**Laura Donald:** We shall come on to that. Junctions?

**Robert Drysdale:** Well, the aim is to have priority traffic light controls, but it would not go at full speed through those junctions.

**Laura Donald:** Stops?

**Robert Drysdale:** Inevitably.

**Laura Donald:** The incidence of single into dual trackway?

**Robert Drysdale:** It depends on the alignment and on the location. If the running speed of the tram is 30mph, you can design single to double-track routes that will take 30mph movements.

**Laura Donald:** Are you quite sure of that?

**Robert Drysdale:** Yes.

**Laura Donald:** And you are not an engineer?

**Robert Drysdale:** No.

**Laura Donald:** Why are you quite sure of that? That does not accord with the evidence that our witnesses have given.

**Robert Drysdale:** I have heard no evidence to the contrary.

**Laura Donald:** Okay. Gradient?

**Robert Drysdale:** Yes.

**Laura Donald:** And cant or curvature?

**Robert Drysdale:** Yes.

**Laura Donald:** The more of those factors that are spaced out along the route, the less opportunity we will have to accelerate between them, causing the tram to travel at lower speeds than would perhaps be optimum on a specific route.

**Robert Drysdale:** We are still talking generally, I take it.

**Laura Donald:** Absolutely. I am talking generally. Looking at your proposed alternative, we have all of the above, do we not? We have bends, particularly at five ways junction.

**Robert Drysdale:** Yes. That bend is where it moves from the north-south to the east-west route.

**Laura Donald:** I am sure that you will agree that it is quite a sharp bend. It has a very tight radius of not much more than the minimum radius allowed.

**Robert Drysdale:** It is similar to the radius that the Croydon tram has where it leaves Sandilands stop and drops down on to the Woodside former railway branch.

**Laura Donald:** Yes. That is a very important distinction, Mr Drysdale. I am glad that you mentioned that. You said that it goes into that bend as it leaves the station.

**Robert Drysdale:** Yes.

**Laura Donald:** Here, of course, we do not have a station particularly close.

**Robert Drysdale:** No. As you have said, we have the combination of the bend and then, potentially, the single-track section starting at the same point.

**Laura Donald:** Okay. Thank you. We have the narrowing into single track on the north-south section. There is another slight bend at the end of your route, just beyond Lennox Row.

**Robert Drysdale:** As it comes down to Lower Granton Road it curves.

**Laura Donald:** It curves, but it is still a curve. Perhaps the cant there would need to be looked at. Then we have the realignment into the junction as it goes into Lower Granton Road. I am just looking at your route just now, Mr Drysdale. I will come on to Starbank Road. We have the junction with Trinity Crescent.

**Robert Drysdale:** The tram is slowing down for the Lower Granton Road stop anyway, so the fact that there is a junction immediately preceding the stop, for which it also has to slow down, does not seem to me to make a great deal of difference. In fact, I would have thought that the speed at which it would cross the junction would be the same as the speed at which it would be slowing down to stop at the stop, if you follow me.

**Laura Donald:** That is fine. We shall come on to that. In fact, you have a gradient on your route as well, I think.

**Robert Drysdale:** Yes. I would not have said that it is any different from the gradient that the promoter's route would have at the other end, at Lindsay Road.

**Laura Donald:** But it is a gradient.

On Starbank Road, conversely, is it fair to say that we have fewer of those factors over a straighter section of the road?

**Robert Drysdale:** Well, it weaves along.

**Laura Donald:** But there are fewer bends of note. There is certainly no 90° angle there.

**Robert Drysdale:** No.

**Laura Donald:** And the stop for Starbank Road is at the east end, not in the middle of the route, which is where your proposed stop is.

**Robert Drysdale:** I do not follow you.

**Laura Donald:** The stop for the Starbank Road route—

**Robert Drysdale:** The Newhaven Road stop, as the promoter calls it, although it is not on Newhaven Road?



**Laura Donald:** Yes. That is to the east end.

**Robert Drysdale:** Yes, I suppose it is two thirds or three quarters of the way along.

**Laura Donald:** So the tram has an opportunity to travel along Starbank Road with no significant element that will require it to decelerate until it gets along to Trinity Crescent junction.

**Robert Drysdale:** No. I reject that absolutely.

**Laura Donald:** Quite apart from pedestrian crossings.

**Robert Drysdale:** There is a major junction at Craighall Road, which we have heard will be traffic-light controlled. We have also heard that the green time cannot necessarily be timed to meet the tram exactly, depending on what other traffic is doing, and we have something like six uncontrolled road junctions, on which the tram may encounter other traffic. That is the context in which we look at the route.

**Laura Donald:** And all those elements have been taken into account in the modelling.

**Robert Drysdale:** Apparently. However, as I have already said, I cannot see how we can achieve an average speed along the Starbank Road stretch that would be higher than that on the railway route.

17:30

**Laura Donald:** The Trinity Crescent junction could be a common delay for both routes, depending on the traffic lights.

**Robert Drysdale:** Yes. In any event, it is just before stopping at or starting—

**Laura Donald:** Absolutely. The tram would have to slow down there in any event. However, the different factors that cause the tram to slow down vary between the promoter's proposed route and your proposal.

**Robert Drysdale:** Yes. Our route is unencumbered, except at Trinity Crescent and at five ways junction, whereas the promoter's route runs into hazards all the way along.

**Laura Donald:** Your route is encumbered by the stop, which is halfway along the east-west straight section.

**Robert Drysdale:** Both routes have one stop on that section.

**Laura Donald:** But our stop is towards the end of it.

**Robert Drysdale:** Yes, but the stretch between Lindsay Road and our stop is straight and fast. In any case, I do not think that it will make much difference—perhaps half a minute.

**Laura Donald:** We still have to bear it in mind that you are not an engineer or a traffic planner.

**Robert Drysdale:** Yes, yes. However, I should point out that Mr Oldfield said that we had done a very good job of designing this route for the promoter. We have never claimed to be engineers and there is no need to repeat the point.

**Laura Donald:** You said that you had heard no evidence to indicate that the tram would have to slow down as it went on to the single-track section of the railway.

**Robert Drysdale:** Yes. There needs to be a more gradual transition between the single and double track. For example, in the Nottingham tram system, the joins between the single and double track are at platforms, and the line has to split very sharply. However, on this line, that transition can take place more gradually.

**Laura Donald:** But, at the previous evidence session, Mr Oldfield pointed out that the tram has to slow down to get on and off the single-track section because of the curved alignment that enables the tram to do so.

**Robert Drysdale:** There is nothing between us on that point, because the two points at which the tram will go from single to double track—the Trinity Crescent junction and five ways bend—act as constraints. The tram will have to go slower at those points. I have to say that it does not actually matter.

**Laura Donald:** That is helpful. Do you see the single-track section going from Trinity Crescent junction to five ways?

**Robert Drysdale:** I can work only on the basis of the plan that the promoter provided this week, which I presume is the suggested option.

**Laura Donald:** There are two options on that plan.

**Robert Drysdale:** I can see only one.

**Laura Donald:** If you open the plan up, Mr Drysdale—

**Robert Drysdale:** No. If we are talking about single to double track, the plan contains only one single track section, which it says is 600m long.

**Laura Donald:** If you open the plan slightly further, you will see that the left hand fold of the map shows the length of single track operation and then gives figures for the double track. The plan shows both options, for illustrative purposes.

**Robert Drysdale:** I am sorry—I thought that you were saying that there were two different lengths of single track. The plan that I have seen has only one length of single track, which it says is 600m.

**Laura Donald:** I was wondering whether that was your proposal.

**Robert Drysdale:** No. I suggested that the length of single track could be shorter than that. However, the promoter's plan appears plausible.

**Laura Donald:** Finally, you questioned the promoter's witnesses on the comparison of the speed on various routes, including different sections of tramline 1 and tramlines in other parts of the country. I think that you mentioned Croydon in that respect.

**Robert Drysdale:** Yes, I referred to tables that were lodged with my statement.

**Laura Donald:** Do you accept that in comparing average speeds on different tramlines in different parts of the country we need to be able to take into account the different characteristics of those stretches? We are not comparing four or five straight tramline sections in different geographical areas but tramways that work in different conditions.

**Robert Drysdale:** I produced comparisons with the two other sections of single track tramway of which I am aware, which are in Croydon and Nottingham.

**Laura Donald:** Did you take into account the position of stops and bends on those tracks?

**Robert Drysdale:** Yes, they are clearly detailed in my table.

**Laura Donald:** What about junctions?

**Robert Drysdale:** Do you mean junctions with other roads or junctions with other branches of the tram?

**Laura Donald:** Both.

**Robert Drysdale:** I can refer to the tables and can describe to you the circumstances of each, if that helps.

On page 1 of my document 8, the Croydon list is effectively from each station to each station as is the Nottingham stretch.

**Laura Donald:** That is in tables 1 and 2.

**Robert Drysdale:** Yes.

**Laura Donald:** But that does not take into account any physical features that may be encountered between the two stations—all of which you have agreed could impact on speed. We have discussed that those features are bends, the incidence of single into dual track—and vice versa—gradient, and cant. Will those features not impact on speed?

**Robert Drysdale:** Yes.

**Laura Donald:** So it is difficult to compare average speeds of different sections of track unless you consider all those features.

**Robert Drysdale:** That is why I produced a range that included different operating conditions. The Croydon tram has a very steep gradient where it leaves Lloyd Park and goes up to Coombe Lane and Gravel Hill. There is an exceptionally steep gradient—it is even steeper when it goes over Gravel Hill and drops down the other side. There are interesting comparables there.

**Laura Donald:** We heard evidence from Mr Oldfield at the previous meeting that the times and average speeds have been taken from timetabled times, which he indicated were rounded up to the nearest minute.

**Robert Drysdale:** The end-to-end time is accurate. The timetable does not feature half minutes so one must make a judgment about the time that it takes between each station, but the seven minute end-to-end time from Sandilands to Gravel Hill in table 1 is straight from the timetable. That is not rounded up or down—that is fact.

**The Convener:** The comparisons may be interesting, but we have got the point now.

**Laura Donald:** If the committee has formed its own view, I will move on, very briefly, to Starbank Road.

Do you accept that by running trams along Starbank Road there is the potential to take 3,000 passengers along the route every hour? I am not suggesting that we will, but that is the potential if we run 16 trams that carry more than 200 people each.

**Robert Drysdale:** I have not done the maths, but I will take that from you if you say that that is the maths.

**Laura Donald:** Thank you. I have worked it out. It is a bigger number but I thought that I would say a round 3,000. That should mean that some people no longer use their cars along that section of the route.

**Robert Drysdale:** It depends where people can join the tram. The only difference between our routes in respect of where they can join the tram is the location of our Newhaven Road stop. Someone who gets on the tram at Lower Granton Road and travels to Ocean Terminal makes the same journey regardless of whether the tram goes along the front or along our route.

**Laura Donald:** I am sorry. You misunderstand me. I am not criticising your route. I am saying that the tram would take people out of their cars.

**Robert Drysdale:** I do not see why that is unique to the Starbank route as opposed to our route.

**Laura Donald:** It is not. I am asking a question.

**Robert Drysdale:** Sorry, but you started the conversation by saying that we should talk about the Starbank route.

**Laura Donald:** Do you accept that by running trams along Starbank Road there is a potential to take 3,000 passengers or more along that route every hour? I will come on to your route.

**Robert Drysdale:** As a matter of fact—yes.

**Laura Donald:** Obviously, that would also apply to your route.

**Robert Drysdale:** Yes.

**Laura Donald:** That should mean that some people no longer use their cars.

**Robert Drysdale:** Yes.

**Laura Donald:** Do you accept that by improving the layout of Trinity Crescent junction there is likely to be improved traffic flow in that area?

**Robert Drysdale:** That could go the other way; it might persuade people who used to leave their car at home to use it because it is now easier to drive along that route.

**Laura Donald:** It might do that, but do you accept that it improves traffic flow?

**Robert Drysdale:** Yes, I think that that is the purpose of the realignment.

**Laura Donald:** Might that reduce rat-running in side areas?

**Robert Drysdale:** The network of traffic flows in the area is too complex to know whether that would be the case. You would have to model it; but it is possible.

**Laura Donald:** You suggested to Mr Oldfield that the tram would have difficulty reaching 22mph on Starbank Road. I assume that you have driven along Starbank Road.

**Robert Drysdale:** Yes.

**Laura Donald:** Did you have difficulty reaching that speed?

**Robert Drysdale:** We might have been talking about averages as opposed to maxima.

**Laura Donald:** Okay. Do you have difficulty reaching an average of 22mph—from end to end—along that road?

**Robert Drysdale:** Yes, I do at the moment because of the traffic lights and because there are other points at which you have to stop, such as Craighall Road roundabout.

**Laura Donald:** That is interesting.

Are you aware of concerns about traffic speed in that general area? We have heard the objectors of Lower Granton Road raise it as a concern.

**Robert Drysdale:** A heavy lorry doing only 30mph along that road would be going too fast.

**Laura Donald:** So there are concerns about traffic speed?

**Robert Drysdale:** Yes.

**Laura Donald:** And that is on Starbank Road?

**Robert Drysdale:** Yes, if you are driving along Starbank Road and you meet a lorry going at 30mph in the opposite direction, it is not a pleasant experience.

**Laura Donald:** You talk about the problems of lorries going at 30mph but, until you get to the junction at Trinity Crescent, the road is fairly free flowing.

**Robert Drysdale:** I would not have described it as free flowing. Perhaps it is a bit more free flowing once it gets onto Lindsay Road because that is a four-lane road.

**Laura Donald:** It is not congested, though.

**Robert Drysdale:** Well, it is heavily congested because of the traffic lights and, occasionally, there is a build-up at Craighall Road junction and the western harbour access roundabout junction, where the promoter's tram stop will go.

**Laura Donald:** But the traffic is not commonly brought to a halt.

**Robert Drysdale:** No. There are no major tailbacks.

**Laura Donald:** On the question of single-track operation, do you accept that there are differences between what is proposed by the promoter and the system that Mr Harries talked about earlier? I am thinking of the fact that, in Nottingham, the single-track stretches are preceded by layovers and stops.

**Robert Drysdale:** There are lengths of single-track sections between stops, but the stops themselves have double tracks to allow trams to pass each other.

**Laura Donald:** Do you accept that there are differences between the Nottingham tramway and the promoter's proposal?

**Robert Drysdale:** Yes, there are all sorts of differences. Nottingham is a different city.

**The Convener:** Committee members may now ask questions.

**Helen Eadie:** We have heard that your councillor and the community council agreed with

the concerns that you have expressed. What actions did they take in that regard? What is the name of your councillor? Do you know whether he raised the matter at the council level?

**Robert Drysdale:** I have to admit that I am not involved in the community council. Ms Cameron is, but she was unable to attend today. She would have been able to give you more details about how the matter was dealt with in the community council. I became aware of the fact that the community council was supporting the alternative routes at about the same time as I was supporting it and things came together in that sense. To my knowledge, the community council has not leafleted houses or anything. I expect that the issue has been discussed in meetings rather than being dealt with in any other way.

Councillor Allan Jackson represents Trinity. He issues a newsletter to every house in his ward. In February 2003, his newsletter raised the issue of the alternative routes and made the point that, while the promoter was proposing the seafront route, the other option would be precisely the route that we are proposing. He invited comments on the matter but I do not know how many he got or what they were. However, I know that, when the options were discussed in the council, he supported the railway route.

**Helen Eadie:** Can you say a little more about the Starbank Road issue, which was raised by Laura Donald? Could you amplify your points about the congestion that it suffers at certain times of day? Is it true that, because of double parking, buses sometimes cannot get through the area?

**Robert Drysdale:** If two heavy lorries or a bus and a lorry meet, there can be major delays, depending on how people are parked. That is a particular problem on Trinity Crescent and the first bit of Starbank Road. Once you get beyond Starbank park, which is beside the Starbank Inn, the road is a little bit wider until it reaches the Craighall Road roundabout, which is the next source of some congestion because of people coming down the hill and turning right.

The next hindrance is at what I describe as the Next Generation roundabout, which is by Peacock Inn. The traffic lights at Trinity Crescent create the impression of congestion at most times of the day, because of the tailbacks. When that set of traffic lights is not removed but changed for the tram, the notion is that the traffic will flow more freely. I am sure that the situation will be better for traffic that passes through the junction. However, the conflict of large vehicles passing each other, cars parking and cars pulling out makes that stretch of road tricky.

17:45

**Rob Gibson:** I return to the opposition of the community council and other people in the area. You said that you were not aware of any consultation of local residents by the community council before it decided at a meeting to propose the alternative route and oppose the promoter's route. Are you sure that you received no consultation documentation from it?

**Robert Drysdale:** I did not receive anything, because I do not live in Newhaven community council's area.

**Rob Gibson:** That is simple; I understand that. I am just concerned because, if the community council was doing its job, I imagine that many of the people in the community would have heard about the consultation. Perhaps we will hear from somebody else about that.

**Robert Drysdale:** I am sorry that Ms Cameron, who is the council's secretary, is not here to answer that question.

**Rob Gibson:** We heard from Ms Donald that many residents and businesses are located along the side of your proposed alternative route. None of them appears to have been consulted about the alternative route, either.

**Robert Drysdale:** All people will have had the opportunity to contribute to the debate on the development plan. As I said, the entire route is a reserved transport corridor, as is the Roseburn corridor. I have made it clear from the start that I understand that if the committee were minded to suggest that our route should be preferred, the route would have to be the subject of the process that we are following now. At that point, objectors could make their feelings known. However, the plan that TIE has produced this week to show the properties that would be affected suggests that the Starbank route would affect more properties within 30m than would the railway route.

**Phil Gallie:** You will recall that we were previously given figures for route times. We now have different figures. Are you sure that your calculations show that trams on your route would go slower than those on the Starbank route? You have quoted 34kph against 35kph.

**Robert Drysdale:** Mr Oldfield told us that the Starbank route would be five minutes and 19 seconds from Ocean Terminal to Granton Square, which is 3.025km. That works out at an average speed of 35kph. He said that the railway route would take six minutes and 28 seconds for 3.605km. That works out at 34kph. His figures show that our route would on average be slower.

**Phil Gallie:** It has been pointed out to you that your route has one extremely bad bend, but otherwise you have a free-flowing route that is

undisturbed by the traffic to which Helen Eadie referred. Are you happy with the figures that have been passed to you?

**Robert Drysdale:** No. That is why I have said that the figures are implausible. If that is the result, the modelling must have an error. Five ways junction excepted, the railway route includes a long straight stretch up to Newhaven tram stop and east of Newhaven tram stop. I have travelled on the Croydon and Nottingham trams, so I know that the acceleration of the trams is rapid. They can get up to line speed quickly, and the straighter and faster the section of track is the faster the speed they can reach, so I do not follow those times at all.

**Phil Gallie:** Okay, but given that TIE made an error in the first instance and went back and reviewed its calculations, would it not be surprising if it had come up with flawed figures again?

**Robert Drysdale:** I could not comment on that. I do not understand the modelling technique or how TIE reached those figures.

**The Convener:** If the committee is minded to do so, we can always request further information on the modelling, just to assure ourselves on that point.

**Phil Gallie:** That would be welcome.

I return to the suggestions for a twin-line route and a single-line route. Can you confirm that the only difference between them, as far as the need for a single-track route is concerned, is so that a cycle track could be combined with it?

**Robert Drysdale:** Yes.

**Phil Gallie:** You have already discussed the issues surrounding the alternate cycle route. What would be your preference, given the point that has been made about that alternate cycle route, with respect to going for the single-line or the twin-line approach?

**Robert Drysdale:** It is good to be able to retain railway routes for cycleways where possible. If we compare the area that we are talking about and the level of usage—the flow of cycle movement is very low—with the benefit of a twin-track tram, I would favour the twin-track tram. However, having done the calculations, I still think that, operationally, they can run a seven-and-a-half-minute headway service in both directions without that single track causing any appreciable problems.

**Phil Gallie:** We heard Ms Raymond speak last week about comparisons between Roseburn and the route that we are considering now. Her comment was that the wildlife cycle corridor that we are talking about now is nowhere near as well used as the Roseburn corridor. Is it surprising that

a defence seems to be being put up against the use of the route that we are looking at now, compared with the desire and commitment to use the Roseburn route?

**Robert Drysdale:** It is surprising, because the Roseburn route is busy. The east-west route is busy at times; for example, at school times and weekends. The north-south route, as I said, is not busy and is nothing like as important.

**Phil Gallie:** Comment was made about a bridge on your route that perhaps needs some work done on it to accommodate your envisaged tramlines. How does that compare with the bridges on the Roseburn line?

**Robert Drysdale:** It was suggested that the Roseburn bridges were wider, and that is the case in two or three instances, but the bridge under Telford Road on the Roseburn corridor is the same width as the bridges at Craighall Road and Newhaven Road. There is no difference at all. Each span is the same width, although the bridges at Craighall Road and Newhaven Road have a double span and the width is actually double that of the Roseburn corridor, so I did not really follow what was said about that. There is a problem in the Roseburn corridor in getting the tramway and the cycleway through the bridges, but we do not have that problem in the area that we are considering now because there is a much wider area.

**Phil Gallie:** Little has been said about construction, but looking at the Shore Road route and at your route, it seems that the amount of disruption to Edinburgh citizens and businesses during construction would be significant. Have you considered that?

**Robert Drysdale:** That is why a lot of the objectors are objecting. One of the planks of our evidence is that the route could be virtually permanently blocked at certain times when the construction work is proceeding. There would, at the very least, have to be single-line working, which means traffic lights and traffic flowing in one direction and then in the other, as happens at Trinity bridge at the moment. It is hard to envisage an easy ride on the construction along that front.

**Phil Gallie:** Do you also envisage that, if we were indeed to go via your route, many of the objections that have been raised by residents who live along the Starbank route would dissipate?

**Robert Drysdale:** I suppose that people who object to the whole principle of the project will not withdraw their objections.

**Phil Gallie:** But many people who object to noise and vibration would withdraw their objections.

**Robert Drysdale:** Clearly, if the proposed route were accepted, the objections of the people who do not want the tram to run past their front doors would appear to be no longer relevant.

**Phil Gallie:** The convener is pressuring me to finish my questioning. Thank you very much.

**The Convener:** Mr Drysdale, you now have the opportunity to make some brief closing remarks.

**Robert Drysdale:** I will be brief. I do not think that there is any need to pick up on anything that has been said.

As an alternative to the promoter's Starbank Road route, we have highlighted a route that uses the former railway. It would be cheaper to build, it would cause far less disruption and it would be operationally preferable by removing potential conflict with traffic. The route would comply with the promoter's aspiration of having as much segregated running for the tram as possible and it would achieve similar and perhaps higher patronage levels. That route would also offer faster and more reliable journey times and would serve an area with a large secondary school where a significant proportion of households do not have a car. The western harbour development could also be served efficiently, effectively and directly by bus. The railway route is available now; it is owned by the council and is reserved in the development plan for that purpose. The case for our route is far stronger than that for the Starbank Road route.

**The Convener:** Mr Drysdale, thank you for giving evidence today.

I give Ms Donald up to five minutes to make her closing remarks on this group of objectors. I will then give Mr Sandy Cameron, whom I welcome to the meeting, five minutes to make any remarks that he cares to make.

**Laura Donald:** Group 30's objection relates to the very existence of the promoter's proposed route. In his evidence, Mr Drysdale supports an alternative route. The witnesses for the promoter clearly agreed that the choice between the lines was marginal; indeed, some, such as Mr Turnbull, said that they prefer Mr Drysdale's proposed route. However, I should point out that Mr Turnbull said that he prefers the route only on traffic grounds.

The promoter contends that the route that is proposed in the bill, which runs along Starbank Road, is the best one. I will now deal with the objectors' concerns as set out in their objection and witness statements.

Although patronage along the proposed route will be greater, Les Buckman acknowledged that, by 2026, patronage levels on the promoter's route and Mr Drysdale's route will be comparable. The

promoter's route would serve existing and new developments better than would Mr Drysdale's route; indeed, serving the new development was one of the council's policy objectives.

Mr Drysdale's route is longer. Moreover, although it will have the same impact as the alignment in the bill, it is also likely to affect more people whose houses and businesses back on to the line, and which are perhaps not within the 30m to which Mr Drysdale referred. Indeed, some properties sit on top of his proposed alignment. I should note that although Mr Drysdale said in his evidence that his proposal will affect fewer premises within 30m than the Starbank Road route, we are still dealing with nine objections.

Progressing the promoter's route will have benefits for local residents. For example, as we have discussed already, it will act as a catalyst for road and junction realignment. Moreover, it will introduce formal parking provision, which will be important in reducing the congestion that Mrs Eadie correctly highlighted earlier. Realigning the junction will also enable congestion to be reduced.

We have heard a lot about run time. As Mr Oldfield and Mr Turnbull pointed out, the model shows that the tram will be faster along Starbank Road, and will reach speeds of 22mph without significant delay. Although the objectors have cast some doubt on the run-time analysis, their comparisons with the Croydon tram are based on timetable figures that, as Mr Oldfield has pointed out, are rounded up to the next minute and could therefore be overestimated by as much as 59 seconds. The committee has also had the benefit of seeing the run-time analysis, which forms part of the papers for today's meeting.

The promoter's proposed alignment will use a transport corridor that was reserved in the local plan for the area, which was, of course, subject to public consultation. I entirely accept that Mr Drysdale's route would also use a reserved transport corridor, but unlike the corridor in Starbank Road, that route is also used as a cycle path and footpath and is designated as an urban wildlife site. As Karen Raymond pointed out, there would have to be good reason for disturbing that site, but we have heard no such reason for doing so. We have a viable alternative. There is no technical justification for that, and the promoter considers its route to be better. That may not be the case in other areas, where it is felt appropriate to disturb wildlife sites.

18:00

Mr Drysdale's route would almost certainly require a section of single running, because it is unlikely to be acceptable to the council to relocate the cycleway on-street. I refer to Barry Cross's

evidence at a previous meeting. Even if the proposal proved acceptable to the council, in the particular circumstances of this section of the route—unlike other sections—its narrowness and steepness and the fact that the streets where there would be the proposed diversion are cobbled would likely be unacceptable to cyclists and could render the route unsuitable for use by children.

Reliability is important. Evidence has been given on the importance of run time. Mr Turnbull and Mr Cross outlined the type of traffic management measures that would be open to the promoter to ensure that the tram could move freely along this stretch of the route.

We have considerable interest in the park-and-ride proposal, although it does not accord with the City of Edinburgh Council's policy to have park-and-ride schemes around the edges of the city.

We have heard plenty of evidence about run-time creep and its impact. That evidence is contained in some of the responses to the committee.

Starbank Road is not particularly congested. Mr Drysdale gave some evidence on that today, although he thought that it was more congested than I suggested. However, the promoter's proposal to formalise parking on the road alongside the tramway would reduce the difficulties that currently exist on Starbank Road.

**Sandy Cameron:** I apologise sincerely on behalf of Alyson Cameron for her absence. She could not miss the first of a series of language classes that she is teaching at the university. I thank members for the time that they have devoted to hearing our case.

The committee has heard a huge amount of highly detailed evidence. The parts to which I listened reminded me a little of Ed Morrow's line about the Vietnam war—anyone who is not confused does not really understand the situation. I want to concentrate on some simple points that have emerged from the evidence.

The promoter has used sophisticated planning tools, as is entirely appropriate. However, we know our area and get a bit worried when the promoter's assessment does not quite reflect the area that we know. At the heart of our concern is Starbank Road—a road that is heavily congested at all times of the day at the traffic lights. We accept that, all else being equal, the proposed straightening of the road will reduce congestion. However, all else will not be equal. We have heard about the 3,000 housing units that are being developed at the western harbour. The amendment to the local plan means that there will be another 18,000 units at the harbour. All those developments will be to the east of the traffic lights.

It is difficult to overemphasise the scale of the developments. There will be a total of 20,000 housing units east of the traffic lights. Those are part of a development of 35,000 housing units along the waterfront, which is the biggest development in Edinburgh since the building of the new town. Some people have said that it is the same as building a new town like Livingston. In terms of house building, that is true, but in terms of job creation it is not. Job growth in Edinburgh is at the Gyle and on the rest of the western side of the city. The promoter claims that residents of the new developments, both at the harbour and at the western harbour, which are far from the route, will happily walk a kilometre or more to catch a tram and that they will then change at Haymarket to get on another tram to travel to their work at the Gyle. We disagree.

Owners of the apartments would use convenient public transport—they will not walk for 10 minutes or more in driving rain in the middle of winter and they will not walk past their cars to catch a tram. Despite what the promoter says, the current route does not serve the new developments. It does not go into them, and we believe that it will not attract many passengers from them. It is not convenient public transport.

The simple fact is that, in our view, the residents of the new developments will seek to travel west to their work by car. Starbank Road is the only road along which they can go, because Ferry Road is already congested. We believe that that will create huge congestion at the traffic lights in Starbank Road. The promoter's proposed solution is to run the tram along Starbank Road, but will that really help? Perhaps a few cars will be moved off the road as people choose the tram, but problems will arise. We have heard about the problems of joint running—trams will slow up the traffic by taking priority at the lights; traffic will slow up the trams as lorries deliver beer to local pubs, dust carts collect the rubbish, residents park and cars turn right. Frankly, it is a recipe for considerable chaos. The simple fact is that Starbank Road is the wrong route.

One of the great mysteries is why, in making its proposals, the promoter has given the railway corridor such minimal consideration until very recently. We know that it would work, because trains ran along it for years. A tramline along that route would be cheaper to build and would attract more passengers. It would result in a reliable service—there would be no beer delivery lorries to contend with—it would fit the promoter's timetable for running trams and it could help to reduce the number of cars on the road.

Mr Oldfield said that our route would have a much more significant environmental impact, but anyone who listened to Karen Raymond's

evidence will know that it would create no significant environmental problems. The committee should remember that we are talking about our area—our walkway, our cycle path and our wildlife area. We would not harm it. If the railway corridor were used, all those amenities would be preserved. The simple facts are that the Starbank Road route will create huge difficulties and that the railway corridor is the sensible and logical route. Quite simply, it is the best route.

**The Convener:** That concludes oral evidence taking for group 30 and for today. I thank everyone who has appeared before the committee. We now move to item 2, which is discussion in private of the oral evidence that we have heard today. Members will recall that we agreed to meet in private at the end of each oral evidence-taking session to enable us to consider the evidence, which will greatly assist us in drafting our report at the end of phase 1 of the consideration stage.

18:07

*Meeting continued in private until 18:22.*



Members who would like a printed copy of the *Official Report* to be forwarded to them should give notice at the Document Supply Centre.

No proofs of the *Official Report* can be supplied. Members who want to suggest corrections for the archive edition should mark them clearly in the daily edition, and send it to the Official Report, Scottish Parliament, Edinburgh EH99 1SP. Suggested corrections in any other form cannot be accepted.

The deadline for corrections to this edition is:

**Monday 10 October 2005**

PRICES AND SUBSCRIPTION RATES

OFFICIAL REPORT daily editions

*Single copies: £5.00*

*Meetings of the Parliament annual subscriptions: £350.00*

The archive edition of the *Official Report* of meetings of the Parliament, written answers and public meetings of committees will be published on CD-ROM.

WRITTEN ANSWERS TO PARLIAMENTARY QUESTIONS weekly compilation

*Single copies: £3.75*

*Annual subscriptions: £150.00*

Standing orders will be accepted at Document Supply.

Published in Edinburgh by Astron and available from:

**Blackwell's Bookshop**  
53 South Bridge  
Edinburgh EH1 1YS  
0131 622 8222

**Blackwell's Bookshops:**  
243-244 High Holborn  
London WC1 7DZ  
Tel 020 7831 9501

All trade orders for Scottish Parliament documents should be placed through Blackwell's Edinburgh

**Blackwell's Scottish Parliament Documentation**  
Helpline may be able to assist with additional information on publications of or about the Scottish Parliament, their availability and cost:

**Telephone orders and inquiries**  
0131 622 8283 or  
0131 622 8258

**Fax orders**  
0131 557 8149

**E-mail orders**  
business.edinburgh@blackwell.co.uk

**Subscriptions & Standing Orders**  
business.edinburgh@blackwell.co.uk

**RNID Typetalk calls welcome on**  
18001 0131 348 5412  
Textphone 0845 270 0152

sp.info@scottish.parliament.uk

All documents are available on the Scottish Parliament website at:

www.scottish.parliament.uk

**Accredited Agents**  
(see Yellow Pages)

and through good booksellers

Printed in Scotland by Astron