

EDINBURGH TRAM (LINE ONE) BILL COMMITTEE

Tuesday 30 November 2004

Session 2

£5.00

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EDINBURGH TRAM (LINE ONE) BILL COMMITTEE

10th Meeting 2004, 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)

*Mr Jamie Stone (Caithness, Sutherland and Easter Ross) (LD)

*attended

THE FOLLOWING GAVE EVIDENCE:

Bill Campbell (Lothian Buses plc)

Barry Cross (City of Edinburgh Council)

Tom Hart (TRANSform Scotland)

David Humphrey (Transdev Edinburgh Tram Ltd)

Ian Kendall (Transport Initiatives Edinburgh)

Karen Raymond (Environmental Resources Management Ltd)

Neil Renilson (Lothian Buses plc)

Alastair Richards (Lothian Buses plc)

CLERK TO THE COMMITTEE

Jane Sutherland

LOCATION

Committee Room 2

Scottish Parliament

Edinburgh Tram (Line One) Bill Committee

Tuesday 30 November 2004

[THE CONVENER *opened the meeting at 10:04*]

Item in Private

The Convener (Jackie Baillie): Good morning and welcome to the 10th meeting of the Edinburgh Tram (Line One) Bill Committee. The first item on the agenda is to seek the committee's agreement to take item 3 in private. Under item 3, we will discuss which witnesses to invite to give oral evidence on the adequacy of the environmental statement. To allow us to have a full discussion, it would be useful to discuss that in private. As has been the committee's practice in the past, we will update the timetable and publish it when we produce the minute of the meeting. Do members agree to take item 3 in private?

Members *indicated agreement.*

Edinburgh Tram (Line One) Bill: Preliminary Stage

10:05

The Convener: Agenda item 2 is oral evidence on the general principles of the bill. Members will have considered the folder of written evidence on the principles from objectors, various organisations and the promoter.

The first topic that we will consider today is the evidence on broad environmental issues. Members may recall that we invited Friends of the Earth Scotland to provide oral evidence. However, because of other commitments, that organisation has been unable to provide witnesses for the meeting. Our first panel includes Mr Tom Hart, who represents TRANSform Scotland. We have also invited witnesses for the promoter to sit at the table. They are Karen Raymond and Steve Mitchell, from Environmental Resources Management Ltd, and Barry Cross, from the City of Edinburgh Council. We had anticipated having Andrew Oldfield from Mott MacDonald with us, but he is unable to attend because of unforeseen circumstances.

I understand that Mr Hart has an opening statement—I invite him to make it.

Tom Hart (TRANSform Scotland): I am grateful for the opportunity to appear before the committee. I have provided a note on my background, which I will not read out.

I want to highlight the strong evidence from throughout the world that justifies city tram networks as part of integrated, sustainable, inclusive and environmentally acceptable policies. Cities with populations as low as 250,000 can justify trams; Edinburgh certainly comes in a higher category than that. Geographically, the evidence of growth in tram or light rail systems comes from continental Europe, where tram systems never disappeared from many cities, from North America, where new systems are being set up, and from an increasing number of United Kingdom and Irish cities. Liverpool and Leeds are now set to follow Newcastle, Manchester, Sheffield, London—which has two systems and plans for two more sections—Birmingham, Nottingham and Dublin in setting up tram systems. The schemes in the latter two cities opened this year.

I will highlight eight principles that are key to achieving optimum results and to combining economic, environmental and social gains. The first is the need for close project control and continental-style procedures for faster delivery of schemes once they are approved in principle after

due consultation. That point was made earlier this year by the National Audit Office. The second is the need to select suitable routes and phasing to ensure that initial routes serve busy corridors and areas of priority development or regeneration. The third principle is the need for high physical integration with other public transport services, including high-quality interchange with rail and bus services and parking provision, as well as good walking access, cycle facilities and provision for the disabled. All forms of public transport now make provision for disabled people, but modern trams are well suited to easy access.

The fourth principle is the importance of multimodal ticketing at prices that are no higher than the cost of car use, and parking and simple systems that are easy to publicise and use. The fifth is the need for co-ordination with restructured bus routes from day 1 of tram operation. The sixth principle is the need for effective measures to minimise tram delays where services run on-street. The seventh is the need to introduce higher charges for cars that use roads at congested times and to use the proceeds mainly for public transport improvement. The final principle is the need for safeguards to mitigate localised adverse environmental impacts, such as the impact of overhead wires, posts and loss of greenery.

The Edinburgh tram route 1 scores highly on the second principle. It will serve existing busy corridors, particularly Leith Walk and Princes Street, and areas where there are priorities for substantial development and regeneration, notably Granton and along the waterfront. One environmental gain is that pressures on the green belt may be reduced as a result of the ability to accommodate more people in the city. We need to take a wider view of the environmental impact when we consider tram schemes.

Tram route 1 also has the potential to score highly on all the other principles. It can offer substantial net economic and environmental gains by contributing to there being fewer road-vehicle miles travelled in the city. That will be done by shifting a greater share of movement to a form of energy and labour-efficient high-quality public transport that creates zero localised atmospheric pollution, helps to cut CO₂ emissions and lowers overall noise levels, all of which would be fully in line with Scottish Executive and UK policies. Journey reliability for all will be increased as a result of decreased congestion, which will aid the city economy, in conjunction with the substantial environmental gains and better social access. I emphasise that joint economic, environmental and social gains can be had from the project. I welcome questions, if members want me to elaborate on the details or the principles.

The Convener: I will kick off by focusing on the points that you made about the potential

environmental benefits. Transport Initiatives Edinburgh Ltd has stated in evidence to the committee that tramline 1 will have a negligible effect on air quality and a minimal impact on greenhouse gas emissions and that it will not reduce overall traffic noise, all of which is contrary to the views that you have expressed. As a strong supporter of trams, how do you justify tramline 1 on environmental grounds?

Tom Hart: If road traffic in the city continues to increase, we will tend to have added noise and greater environmental problems. Buses create more pollution than trams do, certainly at the point of use. The strategy in Edinburgh is to seek not just to stabilise traffic levels in the city, but to reduce them. To achieve that in practice, it is important to have high-quality public transport. The tram will not be the dominant mode of transport in Edinburgh, but it will become increasingly important on key corridors. Given the passenger miles that may be travelled by tram, the tramline is potentially important for the city. An initial route will always suffer from the difficulty that the full benefits will not be achieved until a wider network is built. Projects must be assessed in the context of the move to a network, and of the inclusion from the start of fully integrated ticketing and, preferably, road pricing. Those measures will help to shift the balance towards traffic reduction. In the context of that package, tram route 1 will offer significant environmental gains as well as economic benefits.

The Convener: So the tramline should be seen as part of an overall package, rather than in isolation.

Tom Hart: Yes.

The Convener: We received evidence from Edinburgh Chamber of Commerce that no realistic public transport alternative exists to the tramline 1 proposal. Do you see any alternatives and, if so, what are they?

Tom Hart: There is always the alternative of improving existing bus services, perhaps through faster introduction of vehicles that produce minimal emissions. Progress is being made on that, but the problem with buses is that even if more people want to use the system, particularly at peak times, the number of people who can get on present-day buses is limited, although buses could be made a little larger. Trams offer a higher capacity because they can be coupled together. In a city that has problems with labour costs, the trams could provide an economic benefit.

Phil Gallie (South of Scotland) (Con): In your written submission and your opening comments, you highlighted the importance of integration. You mentioned bicycles, but one principal objection to tramline 1 has come from cycle users. Can you

explain that and say how the tram can improve the lot of bicycle users?

10:15

Tom Hart: I am a bit of a historian. I have a collection of cigarette cards from the 1930s, one of which has on it a warning for cyclists to watch out for tramlines because their wheels could get caught in the lines. If cyclists are educated in how to cycle properly and do not cycle immediately parallel to the tracks, the two methods of transport can coexist perfectly well. In fact, the reduction in other traffic can make things better for cyclists.

One of the best-known cycling countries is Holland, where trams and cyclists have coexisted in the cities for a long time. I would expect some cyclists to continue to want to cycle all the way to work or wherever they go, even if a tram was available. However, the reduction in other traffic would improve their situation by creating better air quality, and if no major road schemes were built there should be more funding available to improve cycle routes and facilities.

Some cyclists may find it convenient to use the tram, and provision can be made to accommodate cycles on trams. If everybody wanted to do that at peak times there would be a difficulty, so a specific policy on that would need to be worked out. However, I envisage that there would at certain stops be cycle parking, some of which would be secure and some of which would be covered by television cameras to ensure security. In the Glasgow area, we have boxes where people can lock up their cycles while they continue their journey by train.

Those are ways in which cycling and trams can coexist and there are ways in which cyclists will be better off if the tram scheme goes ahead.

Phil Gallie: It is the latter part of your answer that I was looking for. Those are interesting comments, which the promoters might take on board.

You have given support for the overall route that is planned for tramline 1; however, you suggest that trams are best suited to high-volume usage. A fair proportion of the tramline could be seen to create some environmental damage and to use up cycle tracks that are not currently shared with other road users, yet offer little public access to the tram. Do you have any further comments to make on the route?

Tom Hart: It is important to safeguard the principal cycle routes that already exist. They may have to be adjusted slightly, which I would support.

On volume on the route, a section of the route will, initially, carry a lesser volume. The detailed

proposals are linked with tramline 2, which would run through to Ocean Terminal down Leith Walk, which is a busy corridor. Those details can be refined in the light of experience. The main point to emphasise is that the scale of developments in Granton, along the waterfront—especially in Leith, with the closure of the dock and the conversion for up to 15,000 to 18,000 houses—will contribute to an increased number of trips. If there are no good-quality alternatives, there will be major car problems, including problems with car parking. The tram circle proposal is meshed in with those priority developments, which I would otherwise expect to lead to traffic growth. The tramline 1 proposals lessen the pressure for alternative developments in greenbelt areas or further out, which would result in longer commuting distances to Edinburgh.

Helen Eadie (Dunfermline East) (Lab): Good morning. I want to ask about the impact that the tramline might have on people who live outwith the route, in other parts of Edinburgh. Many people accept that the tramline might have a positive impact on those who live near the route; however, there is a possibility that some bus services could be reduced or removed altogether. What is your view of the possibility of that negative impact for people in other parts of Edinburgh?

Tom Hart: I return to Phil Gallie's question to make a point that I forgot to mention. There is some concern that access to the Western general hospital from the tram route could be better. The committee may want to consider that point later.

With regard to the overall package, there is scope for a reduction of bus routes once the tram is available. However, that will also offer a chance to improve other bus services because the buses and staff will be available to do that, so other parts of the city could gain. Also, for people coming in from the west, a good facility for interchange is proposed at Haymarket. People who work down towards the waterfront or Granton will be able to get there, but they will also be able to use the tram and to change in order to get to where they want to go in west Edinburgh. The point is to take an integrated approach to improving all public transport and facilities for walking and cycling in order to persuade people to get out of their cars.

Helen Eadie: The Scottish Executive commissioned and published some research that states:

"In no region or city ... delivering better or exemplary practice in transport policy implementation is the local roads-based public transport system deregulated".

Do you agree with that view?

Tom Hart: Yes. The fifth principle about which I spoke earlier concerned the importance of co-ordination with restructured bus routes. There is,

especially where tram schemes will come on line, a strong argument that greater regulation of the bus system is important in selected areas, otherwise the full economic or environmental benefits may not be achieved.

Helen Eadie: That answered the next part of my question. Thank you.

Phil Gallie: In your opening remarks, you made clear your concern for the environment. Do you consider noise to be an environmental pollutant?

Tom Hart: That depends on the kind of noise and its frequency. I live in Ayrshire, where housing has been built right beside railway lines. House prices do not appear to have been too badly affected, although the lines often have heavy freight on them. It is possible to exaggerate the importance of noise, and people may find that their properties increase in value if there are good transport facilities nearby.

Certain measures can be taken to mitigate noise, and those should certainly be taken. However, there is a risk that exaggerated localised complaints about noise can be made by people who have not experienced modern trams. That must be set against the wider benefits of the trams.

Phil Gallie: That is a fair comment. In your written submission, you talk about the ability to

“negotiate sharp curves and steep gradients”.

We took a trip to Nottingham to see the tram system there, where sharp curves produce high levels of noise that are recognised as being of great annoyance—justifiable annoyance—to those who live in the vicinity. What are your comments on that?

Tom Hart: I should make it clear that I am not a technical expert on tram design. I have seen the Sheffield trams, which have to travel along some quite hilly sections. I know that there are technical measures to alleviate noise on sharper curves, but I have not been to Nottingham and cannot comment on the trams there. In Sheffield, I did not find the trams obtrusive. The other trams that I have used were in Nantes, where there are also sharp curves, but I did not find the noise there particularly intrusive.

Phil Gallie: Another point that you made on the environment concerns the benefits of the tram with respect to noxious gas emissions. Do you agree that the peak time for tram use would probably be from about half past 7 until half past 9 in the morning and that the peak time in the afternoon would be from about half past 4 until half past 6?

Tom Hart: I might have agreed with that 15 years ago, but the evidence suggests that there is a more generalised increase in the use of public

transport throughout the day and into the evening as shift patterns and shopping hours change. There is still a bit of a peak at the times that you mentioned, but there is also substantial use at other times of the day.

Phil Gallie: I get the impression that there is a peak at those times, especially in the use of trains from Edinburgh, for example. That said, and recognising the fact that the power source for the trams will have to be the national grid, do you agree that those peak times coincide with peak generation times, and that the power will have to be supplied by fossil-fuel plant? Does that not kill off the gas emissions argument?

Tom Hart: No. Let me make it clear that I am talking about localised pollution. Trams undoubtedly help by producing virtually zero pollution; however, the main source of electricity for the tram will be fossil fuels, and there is still pollution where those fuels are burnt. Nevertheless, if the tram helps to reduce overall traffic levels, there will be a gain from those reductions. There are also ways in which the efficiency of power generation can be improved. In Scotland, we rely to some extent on nuclear power—I suspect that some of the Edinburgh trams will be supplied with electricity from nuclear power at Torness. We are also developing renewable sources.

Helen Eadie: Let us return to the question that I asked a few moments ago about the potential impact of the tramline on bus services. You said that there might be a need for more regulation of the buses. Are you suggesting that we ought in that context to consider quality contracts rather than the quality partnerships on which the Government is placing emphasis at the moment?

Tom Hart: Yes. There could be quality contracts or area contracts. The issue should be resolved as part of the planning process for the trams, rather than be considered once the trams are operating, because we also need fully integrated ticketing.

Helen Eadie: To my knowledge, nowhere in Scotland has yet gone down the route of quality contracts. If that happened in Edinburgh, would that be a first?

Tom Hart: It would. The Scottish Executive is blowing hot and cold on quality contracts. It discussed them with West Lothian Council, which thought that the discussions were discouraging. However, when that was announced, the Executive said, “Do come back to us and discuss them.” There are issues in West Lothian, as there are in Edinburgh, that exist anywhere there are tram proposals. There are regulated buses in London.

Helen Eadie: So, that issue has been picked up by other cities around the country.

Tom Hart: Yes.

Helen Eadie: I am fairly sure that quality contracts exist in England.

Tom Hart: In the National Audit Office's report on light rail it was suggested that better results could have been achieved if there had been more co-ordination of trams with the bus networks. In Sheffield, for example, the network was planned on the basis that there would be regulation of bus and tram services. However, when the trams were introduced there was no such regulation, so buses were competing directly with the trams.

The other difficulty in Sheffield, which the National Audit Office mentioned, is that the longer of the tram routes goes into a rather run-down area fairly far from the city centre where—it was said—the tram would help redevelopment, but that has not happened on the expected scale. I am confident that, in Edinburgh's case, the proposed developments will take place and will be assisted by the tram system.

The Convener: Thank you very much for your evidence, Mr Hart. Does Jamie Stone want to ask a question?

Mr Jamie Stone (Caithness, Sutherland and Easter Ross) (LD): No—not just now.

The Convener: We turn to Barry Cross, who is representing the promoter. I take it that you have no opening statement to make, Mr Cross.

Barry Cross (City of Edinburgh Council): Correct.

The Convener: Excellent. We will move straight to our questions.

Rob Gibson (Highlands and Islands) (SNP): Good morning. Your written evidence states that tramline 1 will have a minimal impact on air quality for the majority of residents, and on greenhouse gas emissions and that it will not reduce overall traffic noise. How can you justify the development of tramline 1 on environmental grounds?

10:30

Barry Cross: The bulk of my response would echo Mr Hart's evidence on the role of the tram in an integrated whole. As my colleagues will point out in a moment, projections indicate that there is a relatively limited direct relationship between trams and environmental factors. The important issue is the role that trams can play as part of the whole integrated package of transport alternatives to the private car, many of which are not specifically the subject of the committee's considerations.

Rob Gibson: So the environmental benefits that you have mentioned relate mostly to reducing congestion.

Barry Cross: Congestion is an issue. Indeed, at a previous meeting, we discussed the fact that, as Tom Hart has pointed out, we have to meet a substantial additional development load. Doing so within the urban area will require a high-quality means of accessing and servicing that load.

Rob Gibson: Given the emergence of new technologies, do trams represent the most environmentally friendly form of public transport? For example, hydrogen fuel cell buses are undergoing commercial trials throughout Europe under the clean urban transport for Europe project.

Barry Cross: Hydrogen cell technology is only one of a number of initiatives that have been introduced in Europe. For example, more and more cities are powering conventional bus systems with novel power plants.

Your question raises two points, the first of which relates to capacity issues, to which Tom Hart referred. Notwithstanding how hard one works with a particular power plant, capacity issues and the relationship between the number of buses on the road and the number of people using them are already covered by tram route 1 at, for example, Princes Street and Leith Walk. It is difficult to see how the provision of further buses will physically accommodate the additional traffic loading that will result from developments along the whole waterfront.

Rob Gibson: I am interested in hearing more about the clean urban transport for Europe project, which you mentioned earlier.

Barry Cross: None of what I have said precludes the fact that the substantial proportion of public transport trips will continue to be made by bus. As a result, one needs to keep abreast of new technologies, because they might have to play a role within the bus fleet.

Rob Gibson: In that case and given your comments that the City of Edinburgh Council is working to reduce bus emissions, are you able to demonstrate to the committee that you have considered those alternatives?

Barry Cross: Yes, but we have done so from the perspective of finding out how we can accommodate the numbers of passengers in Leith and Granton who will take public transport south to the city centre. Although we have improved the principal public transport corridor at Leith Walk and are in the process of improving Princes Street, we have a problem with capacity. Trams will allow us to handle those people in a way that is conducive to dealing with environmental issues and to providing the requisite quality of service that will create a more attractive option than the private car. We must address not only environmental issues, but capacity issues and the functionality of the proposed link.

Rob Gibson: I hear what you are saying about the need to address capacity issues, but are you able to demonstrate that you have considered hydrogen-powered buses as an alternative?

Barry Cross: No, because the capacity issues that I have raised are the governing factor on that corridor.

Rob Gibson: But when the technology becomes available in future, might such buses not come into play?

Barry Cross: Absolutely. Because 80 per cent of transport trips in Edinburgh will continue to be made by bus, it is important that we keep on top of the technologies that you have mentioned. In fact, because of various environmental considerations, we are looking at a proposal for low-pollution buses to serve the Royal Mile and the Parliament building. Our focus on the trunk movement of high volumes of passengers around line 1 does not negate our need to keep on top of new bus technologies. However, I return to the point that, even without any numerical analysis, imagining what the sections of line 1 that run through the Leith area and up Leith Walk to Picardy Place would be like with more buses quickly leads us to the conclusion that the need for that tramline corridor is driven by capacity issues.

Mr Stone: I apologise to the committee for being late yet again. Indeed, the way my excuses are developing makes me feel like Reggie Perrin. This time, because some guests were on the roof of the Parliament building, security decided to stop and search my car.

The Convener: Did they find anything?

Mr Stone: They found a bag of potatoes in the boot, but that was about it.

I want to nail an issue that Phil Gallie has raised on several occasions. We all hope that hydrogen power will be introduced at some point. However, can you tell us anything about the ratio of greenhouse gas emissions from conventionally powered buses to those that might be created by fossil-fuel power stations at peak time? I am thinking in particular of the ratio of carbon monoxide to carbon dioxide and other corrosive wastes that are associated with conventional motor exhaust gases.

Barry Cross: I cannot tell you anything about that, but I trust that my colleague might.

Karen Raymond (Environmental Resources Management Ltd): First, we must separate out emissions that are of concern because they contribute to the potential for climate change—the so-called greenhouse gases, of which carbon dioxide is the primary culprit as a result of the combustion of fossil fuels—from emissions that are of greater concern because they impact on

local air quality and the health and amenity of people who are affected by them. Such emissions include carbon monoxide, nitrogen oxide and particles that are released from fossil-fuel combustion.

Comparing trams and buses is a complex matter because we need to take into account issues such as loading factors, which Mr Cross has mentioned. For example, we need to ask about the number of people we could get on to a bus as opposed to a tram and the number of trams or buses that would serve a particular route. Depending on the nature of the routes that we wish to serve, different modes of public transport will be more or less efficient as far as carbon dioxide emissions and local air pollution emissions are concerned. Heavy rail is usually the most effective public transport option for moving large numbers of people long distances and buses are the most efficient means of moving large numbers of people short distances within a fine-grained urban context. However, if we are talking about moving people relatively longer distances within an urban area, trams start to edge out in front as far as net emissions are concerned. That takes into account the difference between emissions from buses on the road network and emissions from generating electricity to power a tram.

A direct comparison between buses and trams shows that trams emit local air pollutants and carbon dioxide at the power generation station, while buses emit broadly similar amounts of air pollution in the city streets. However, that assumes that buses are able capably to serve the same numbers of people and types of routes. When we compare buses and trams on the types of routes on which they are better suited, trams tend to come out better than buses on longer routes.

We should also take into account the fact that, comparatively, the levels of carbon dioxide emissions from buses and trams are pretty similar. However, local air pollution emissions from tram operations occur at power stations, which tend to be situated outside urban areas. As a result, they are rapidly dispersed and have much less impact on human health and amenity than the roadside emissions from buses that run around the streets.

Mr Stone: I suppose that I am asking whether the ratio of carbon dioxide to carbon monoxide emitted by the power source for trams is the same as that created by burning diesel in buses.

Karen Raymond: The ratio of carbon dioxide to carbon monoxide emitted by power stations will be different from that emitted by a bus engine. Power stations are much more efficient at burning fuel and better-burned fuel generates more carbon dioxide. In combustion terms, bus engines tend to be less efficient than power stations and generate

more carbon monoxide, although that oxidises fairly rapidly in the air to carbon dioxide. Ultimately, the net effect on global climate change from those carbon dioxide emissions is about the same.

Helen Eadie: The media across the country have expressed concern about the growth of infrastructure and the plethora of signage to support all the different modes of transport. Indeed, some extreme examples have recently been broadcast on news reports. Given that Edinburgh city centre is a United Nations Educational, Scientific and Cultural Organisation world heritage site, how can you assure me and the public that tram-related infrastructure will not damage the townscape value of this unique urban environment?

Barry Cross: Karen Raymond will talk about environmental impact and then I will mention some of the council's concerns, which are similar to the ones that you have raised.

Karen Raymond: I agree entirely that adding signage for the tram to existing signage—such as that along Princes Street—in an unco-ordinated and unintegrated way would have a definite adverse impact. Barry Cross will say more about this later, but we hope that the whole integrated transport initiative in Edinburgh and other initiatives that the council is considering offer the opportunity to streamline the process in the city. Indeed, careful design of the tram infrastructure provides a chance for such streamlining and for poles along the streets to be co-ordinated and used for common signage. It is intended that the tram's design guide will clearly set out the promoter's aspirations for that process. Barry, is that a fair representation of the council's position?

10:45

Barry Cross: Yes. In some European or English cities that have tram installations, the overhead wires and equipment have a marginal impact, but the impact can be significant in cities that have systems with older overhead equipment. One of the purposes of the design manual is to ensure that the overhead and associated equipment—stops, poles and all the other paraphernalia—are designed in the best possible way to minimise the impact and in some instances to have a positive impact.

As we consider afresh the environmental impacts, particularly of public transport stops, there is the potential for addressing the way in which bus stops have tended to develop over the years, with accretions of litter bins, information and other stuff. The design manual represents an attempt to take a long, hard look at that tendency and to develop an asset rather than a disbenefit for the city.

No doubt you have read the responses on the public consultation and the prior approval process, which indicate that in relation to such detailed considerations the planning authority, with particular agencies such as those with responsibility for listed buildings, intends to exercise controls to deliver the best possible layout. However, the fact that a number of European cities have the most horrendous skylines should act as a warning to us during the design process—your point is well heard.

Helen Eadie: Is there an overarching body in the United Kingdom that monitors that aspect of city centre development, which is clearly an issue of growing concern throughout the country? It would be reassuring for members of the public and the Parliament to know that a body was considering best practice in that regard and could enforce standards.

Barry Cross: I do not think that anyone would suggest that there is not a range of bodies in Edinburgh—whether or not they operate throughout the UK—that have a particular interest in the built environment, particularly in the context of the special features of the world heritage site. There are a number of examples in the UK that we do not want to emulate. Those examples signal to us that significant risks are associated with not getting the procurement process right.

We are confident that we have access to a number of agencies that have particular expertise, in Edinburgh and through the process that we have set out. I have mentioned Historic Scotland. There is also an agency that has responsibility for the superintendence of the world heritage site and, of course, I do not ignore our own planning authority.

As far as I am aware, there is no UK or European approval process or body tasked with approving the visual impact of overhead. However, we think that we have got to grips with the issue. The involvement of the agencies that I mentioned in the development of the design manual and the robust process that the planning authority has put in place will enable us to get to grips with the issue, so that we have the best-designed overhead and ancillary equipment in the UK, which will be on a par with the best in Europe.

Helen Eadie: You said that there are many agencies and experts, with which I agree, because we have met a lot of people who are enthusiastic about that aspect of work in Edinburgh. What powers would Historic Scotland have to act if it were unhappy about the way in which some of the roll-out was developing? It is one thing to have expertise around, but the issue is how agencies such as Historic Scotland can exert power and direction.

Barry Cross: The issue, which we set out in our response, is how we deal with the prior approval process. The process will have three strands. One will be what the stops look like and the second will relate to the overhead. Thirdly, in central Edinburgh, we will have to deal not just with the planning authority, but with the process relating to listed buildings. The process is there. If you are asking whether as a generality Historic Scotland will have control over what the overhead looks like, the answer has to be no. That is the general answer, but it is not the answer if we work through the process relating to fixings associated with listed buildings.

Phil Gallie: You claim in your submission that you are investigating opportunities for reducing energy demands. I would expect no less and I am quite sure that you are approaching that with enthusiasm. You also state that you are considering

"options for procuring electricity from a renewable energy supplier."

What is the state of play on that? What progress are you making and what will the likely outcome be?

Barry Cross: We do not know what the outcome will be. On securing access to power, during the contract process we are committed to asking about access to, and the price of energy derived from, renewable sources. The issue is complex, not least in relation to the environmental impacts associated with renewable energy. That is an entirely different set of issues, but we should not be blind to or ignore the fact that renewable energy itself carries environmental costs. We intend to ask the questions. The decisions will be based on what we get back through the contract process, but we are a long way from that point in the process.

Phil Gallie: That statement could induce quite a bit of public support. People appreciate the fact that you are looking to improve the environment by seeking a renewable energy source. However, is it not a totally fictitious claim, given the fact that virtually all the energy suppliers have an element of renewable generation in their supply and whatever you take will come from the national grid? I have already made the point that at peak times you will almost certainly be burning fossil fuel to keep the trams running. Is your statement not just intended to give the public comfort rather than being a practical objective?

Barry Cross: I have been honest in saying that we do not necessarily know what the outcome will be. It is incumbent on us to ask where the energy is generated. In relation to peak loadings, Tom Hart made it clear that, although historically there was a peak in the morning between 7 and 9, that

is less true now. The peak for one of the new tramlines in Dublin is mid-morning, because of shopping loadings. It is also important to recognise that the fact that energy is being used at peak does not necessarily mean that it is generated in coal-fired power stations. It may be produced from stored power, through pump storage. The issue is complex. At the moment, we are signalling only that through the contract process we will explore opportunities for securing electricity in as clean and environmentally friendly a way as possible. However, I do not know where that will lead. I agree that at the moment that is not much more than hope.

Phil Gallie: Thank you for a frank response.

In his submission, Mr Hart talked about reconfiguration of road space freed up by the introduction of trams. Is that work on-going in the overall project? Mr Hart also referred to the continental system of project control. Are you aware of that? Do you intend to use it to speed up the contract?

Barry Cross: The council is totally committed to maximising the benefits of trams and freeing up road space. Even in the best UK systems, we do not see that in anything like the way that we see it in a number of French systems. In France, the introduction of trams has been used as a catalyst for enhancement of the whole public realm, not just the thin strip along which the trams run. As Scottish Enterprise Edinburgh and Lothian indicated when it gave evidence to the committee, we are working on a package in St Andrew Square to build on what trams do and the opportunities that they create; we aim to use parallel funding streams to improve the totality of the environment. I understood Tom Hart to be signalling that the benefits of trams can be maximised by creating a much more attractive total environment, rather than just tram stops sited on streets that will be much the same as they are at the moment. Trams can also deliver substantial benefits for pedestrians, cyclists and other users.

The second part of the question has escaped me.

Phil Gallie: You have dealt with the issue with which I was principally concerned. The second part of the question related to Mr Hart's suggestion that we could improve project management by using systems that are used on the continent. Have you considered that issue?

Barry Cross: Yes. The fourth panel will include a representative of Transdev Edinburgh Tram Ltd, our tram operator. You may have the opportunity to ask him specific questions about procurement, project management and delivery.

The Convener: Although we plan to discuss integration, I am sure that we can accommodate

that. That concludes the evidence on broad environmental issues. I thank the panel for giving evidence to the committee this morning.

The next topic for oral evidence is integration with other transport services and associated issues. I invite panel 3 to come forward and I welcome Neil Renilson, Bill Campbell and Alastair Richards from Lothian Buses plc. I gather that Mr Renilson wants to make an opening statement.

11:00

Neil Renilson (Lothian Buses plc): Thank you for inviting us to give evidence today. I do not propose to speak to the paper that we have submitted, but we are happy to answer questions on it. I will, however, take a couple of minutes to explain who we are.

Lothian Buses runs the red buses in Edinburgh. We operate slightly more than 600 buses and employ around 2,000 staff. We are the primary provider of bus services in Edinburgh and the near Lothians, and we have a turnover of around £70 million a year. We carry slightly in excess of 100 million passengers each year. We have increased the number of passengers that we carry every year since 1998, from 82 million to more than 100 million passengers last year. We have grown the market consistently by about 4 per cent each year for the past six years. Our shareholders are the City of Edinburgh Council and the three other Lothian councils, and we are the only publicly owned bus company in Scotland. We are also by far the largest publicly owned bus company in Britain. Lothian Buses was the only Scottish bus company not to be privatised back in the 1986 to 1991 period.

On my left is the operations director, Bill Campbell, and on my right is our planning consultant, Alastair Richards. All three of us have spent our entire working lives in the public transport industry. I have some modest experience of working with light rail in Tyneside, with the metro system there, and with Stagecoach, which runs the Sheffield tram system. Alastair Richards worked for the docklands light railway for 17 years, from its conception right through to its operation. He also worked for the Copenhagen metro, where he was involved from the start to the operation of the system. We will do our best to answer your questions.

The Convener: Thank you very much, Mr Renilson.

Helen Eadie: Some of us wish that we had Lothian Buses over in Fife. The company is reputed to run a very good bus service in Edinburgh, and we are jealous of that.

Transport Initiatives Edinburgh has stated in evidence:

“Bus services are unable to match trams in terms of the capacity they can provide, their image tends to be poorer than for modern trams and they are not as environmentally friendly in terms of emissions.”

Would you like to comment on that statement?

Neil Renilson: There are three aspects to TIE's statement. I will deal first with the issue of capacity. A double-deck bus of the type that we operate has a capacity of 90 seated passengers, with a few standing at peak time. Fundamentally, the capacity of a double-deck city bus is 100 people. The capacity of a tram depends on its size, but my understanding is that the trams that are proposed for Edinburgh would have a capacity of 250. Therefore, as a broad rule of thumb, every fully loaded tram at the peak period will carry the same number of passengers as two and a half fully loaded double-deck buses.

The second point concerns image. There is no doubt that modern trams have a slightly flashier and sexier image than buses. Buses are very much that with which we are all familiar—every city and town has buses and everybody knows what a bus is. We see a tram only when we go somewhere else—for example, if we have taken advantage of the cheap flights and have gone to Brussels for the weekend—so trams have a natural association with something that is a little bit exotic and different. Even without that perception, there is no doubt that, in a modern tram system such as that in Nottingham or in Brussels, the tram's ambience and presence is different from, and more attractive than, that of a bus, particularly for non-users. Even if a bus is a nice one, it is still a bus.

The point about environmental issues has been covered in depth. Ultimately, although the chemical make-up of the pollution from trams might be slightly different to that from buses, it is effectively the same. Trams will simply shift pollution from the streets of Edinburgh 10 miles down the coast to Cockenzie power station or over the river to Longannet power station. The fundamental point is that fossil fuels will be burned to generate electricity for the trams.

There are European directives on emissions from buses and the provisions on emission levels are ratched up each year. Emissions from buses that are built and delivered today are radically different from those of 20 years ago. More than half of Lothian Buses' fleet is less than six years old and all the buses have Euro 2 or Euro 3 standard engines. Does that answer your points?

Helen Eadie: That is fine. Will the proposed route, number and location of stops along tramline 1 provide suitable opportunities for simple tram-bus passenger interchange?

Neil Renilson: It is probably important to go through the logistics of the routing first. Bill Campbell might like to talk you through that subject.

Bill Campbell (Lothian Buses plc): The route for tramline 1 has two different characteristics. First, there is a strong demand-based corridor on Leith Walk that would meet the requirement for a demonstrably strong passenger-demand flow, which was Tom Hart's earlier point. Secondly, the argument for the west part of the route is much more development based. However, a fundamental point is that a tram route cannot readily be altered once it has been built. That highlights the crucial importance of ensuring that the tram route is built in the right place. It would be extremely difficult to change it after the event.

Neil Renilson: Trams are the most expensive form of urban transport system to build and operate, so they are appropriate only for moving large flows of passengers—that should be the backbone of any transport system. Tramlines should be built on the most heavily used routes, where demand is or will be high. Tram routes are, as Bill Campbell said, extremely inflexible and once they are built they can be rerouted only with huge difficulty and at great expense. Therefore, great care and caution must be exercised to ensure that they are put in the correct location to start with, because they cannot be shifted after they have been built. We must be 100 per cent sure, or as close to that as is humanly possible, of having consistently high passenger levels before we consider building a tramway.

Helen Eadie asked specifically about passenger interchange. I think that I am correct in saying that at no point does the proposed route for tramline 1 get more than 2 miles from Princes Street, as the crow flies, because it forms a loop to the north of the city. The opportunities for passenger interchange, or for feeding in passengers—I think that that is where Helen Eadie was coming from—on line 1 would be somewhat less than they would be for line 2. The northern extremity of line 1's loop runs along the seashore. Clearly, no passengers would come from the north of the line because that area is water.

There are no obvious opportunities for interchange from car or park and ride. That is simply because there is no clear location adjacent to line 1 where there is the necessary amount of land on which to build a large park-and-ride car park, as the line goes down Leith Walk and through already developed areas. That is not the case with line 2, although we are not here to talk about line 2 today. I see very restricted potential for park-and-ride facilities for line 1, if any at all. The proposals do not provide for any.

Because we are dealing with a restricted geographical area of around 2 miles between

Princes Street and the coast to the north, the opportunities for interchange with buses are limited. Somebody making a long journey will have less of a disincentive when faced with a requirement to change from bus to tram than somebody making a short journey. Because of the very short nature of line 1 and its distance from the city centre, it will be unattractive for people going on a 2-mile journey to be required to travel the first mile on a bus, get off and then travel the other mile on a tram. Does that answer your question?

Helen Eadie: Yes, but you have missed the bit about the number of stops. I also ask you to comment further on another matter. Despite all the residential development in the part of the north of Edinburgh concerned, could there still be some potential for park-and-ride facilities? The committee visited the area, and there is scope to use land at some of the new factory, commercial or office locations at the waterfront for park-and-ride facilities.

Neil Renilson: You are quite right, in that there is a possibility of using land at Leith docks or at the Granton gas-works site for developing park and ride. However, park and ride requires people to get to the car park by car to start with, and there are no main arterial roads flowing into Leith or Granton. A park and ride there would be a very short-distance facility, with people taking their car from Silverknowes along to Granton to park and then getting on a tram. It would not be like the longer-distance park and rides, such as that at Ferrytoll in Fife, which people can access from the whole of Fife. They then have a fairly lengthy journey by public transport from that site into the city.

Helen Eadie: Do you not envisage a possible interchange requirement for people coming from the north, including Fife and Perth and Kinross, at the Craighleith interchange, for those who want to go to the Scottish Executive building or to commercial developments in Leith?

Neil Renilson: That is indeed possible. The issue in areas such as Blackhall and Craighleith is where the land could be found, in what is a fully developed residential area, on which to build a large car-based park-and-ride facility. That would certainly be possible at Leith docks or Granton, but somebody coming by car from Fife will not go through all the various suburban streets to get to Granton just to park and then go back on their tracks by tram. As you suggest, the obvious location for such a facility would be on the road coming in from the Forth road bridge, near the old Craighleith station. However, there is not a large, undeveloped area of land there. If there had been, I am sure that it would have been included in the proposals to start with.

Rob Gibson: In your written evidence, you state:

“to deliver a truly integrated system, tram and bus must not be incentivised to compete against each other.”

Can you expand on that comment and outline how such a situation could be avoided?

11:15

Neil Renilson: Under the tram systems that have failed elsewhere in Britain, such as that in Sheffield or the midland metro service, the bus and the tram have not been under common ownership, and they have competed—quite understandably. One has been pitted against the other.

As I said in my opening statement, because we are owned, in effect, by the City of Edinburgh Council and because the tram will be operated to the specification of the City of Edinburgh Council, we have in Edinburgh the virtually unique opportunity—it is certainly unique in Scotland—to deliver an integrated system without the competing incentives that occur in cities in which bus and tram are not under common ownership, common control or common influence. That said, if that is to be achieved, it is essential that tram and bus pull in the same direction. It is intended that that end position will be achieved through the establishment of Transport Edinburgh Ltd, which is a company that is owned by the council.

There are some flaws in the work that has been done thus far, in that the tram has been set up in such a fashion that there is conflicting incentivisation for tram to compete with bus. However, steps are in hand to deal with that issue through Transport Edinburgh so that we proceed on the basis that bus and tram work together, pull in the same direction and deliver the best of both systems.

Rob Gibson: We are talking about line 1. You said that there could be competition between bus and tram. At what point would that competition arise?

Neil Renilson: There are two areas in which it could arise. As I have mentioned, one of those areas is in the process of being dealt with. The other relates to competition from a third-party bus operator. Although we are the primary operator—we provide more than 90 per cent of the bus services in the city of Edinburgh—other operators such as FirstGroup and Stagecoach, as well as various smaller operators, run services in the city. There is no reason why they could not run services in competition with the tram, just as there is no reason why they could not run services in competition with those of Lothian Buses at the moment. It seems as unlikely that a third party would wish to come in and compete against the

tram as it is that they would wish to come in and compete against Lothian Buses at the moment. The number of people who move along corridors such as Leith Walk is substantial. Those routes are open to competition and, although there is no competition at the moment, there is no guarantee that there will not be any in the future.

Rob Gibson: From your experience of public transport provision, will you elaborate on whether the patronage figures for line 1 trams are realistic?

Neil Renilson: I should say that Lothian Buses was not involved in the preparation of any of the documentation that is associated with the tram scheme. The revised bus networks that are detailed in the Scottish transport appraisal guidance appraisals and the documentation were produced by TIE alone; there was no consultation with, or input from, us. We first became aware of them when we obtained copies of the STAG appraisals, after they had been submitted. I am not qualified to comment in detail on how those numbers were arrived at, what methodology was used or how valid the figures are, but Alastair Richards might have something to say on that.

Alastair Richards (Lothian Buses plc): We have examined the figures for line 1. We have access to certain passenger data on the bus network. On the heavily trafficked areas of line 1, we think that there is a good patronage base for the tram, especially given its interconnection with heavy rail at Waverley and Haymarket and its future connection with line 2 to Edinburgh Park.

However, there are some weak areas of line 1, as we have indicated in our written submission. My experience in London docklands and in Copenhagen, where light rail has been used to stimulate development, suggests that it can take up to six years before such operations pay their way and before development mines become economically viable. There is a strong argument that using light rail is an expensive form of stimulating development, but we feel that areas of line 1 offer good value for money and that the project forms a good volume-carrying system that could be effectively integrated with the current bus network.

Neil Renilson: I have had a look through some of the figures—as we all have—and think that in certain cases they appear plausible. However, in other areas, they are very much a case of putting one's finger in the air, because they are totally dependent on other things such as the redevelopment of the Granton site. There are projected passenger carryings from the stops on the Granton site; however, no one would travel from there today because the gas-works have been demolished and it looks like a bomb site.

We should preface everything that we say today by pointing out that we can comment only as

transport operators. We are not skilled at projecting future development. If the development happens within the expected timescale, the passenger projections might well be realised. On the other hand, the development might happen sooner, later or whenever. In any case, we believe that the passenger projections are speculative because they are based on future developments.

Rob Gibson: With your obvious bias towards bus transport, you will know the volume of passengers that would flow from what might amount to 15,000 houses.

Neil Renilson: Yes.

Rob Gibson: So if that part of the plan is delivered, those numbers will feed into whatever transport system is set up. As a result, it does not matter whether the projections are speculative. If the plans go through in an integrated way, we can expect the volume of passengers who will need public transport to be greater than the number of passengers you would be able to accommodate on buses.

Neil Renilson: Yes. However, I should point out that that depends on the type of housing that is built and the propensity of people who live in those houses to use public transport. I trust that, when you used the word "bias", you meant to say "experience". I make it absolutely clear that Lothian Buses is completely committed to the concept of a tram system in Edinburgh and wants it to add to the city's public transport network. The whole project represents a giant leap of faith by the City of Edinburgh Council to deliver a world-class tram system for the city. However, if you are going to walk on water, you have to take a step of faith and get out of the boat to begin with. If that does not happen, things will simply carry on as before. Transport Edinburgh's task is to integrate the tram project and bus services to deliver that step-change in people's perception of public transport.

Rob Gibson: If we take your analogy a little further, there must be an awful lot of people in Europe walking on water, because it appears that the combination of bus and tram services is normal in European cities. Indeed, it is far more normal than it is exceptional.

Neil Renilson: As you have rightly pointed out, the approach is far more common in Europe. However, European cities' public transport systems work under an entirely different funding mechanism and structure than those in British cities.

Rob Gibson: No doubt we will address that matter later.

The Convener: I am sure that the committee and the Parliament would want me to point out

that we are not legislating on the basis of giant leaps of faith but that we will examine all the evidence.

I want to press Neil Renilson on the question of patronage, because he said that the patronage figures were good on certain areas of the route. Are they stacking up to the same estimates that TIE made for the areas that are not yet under development? Are Lothian Buses' patronage figures the same as TIE's figures?

Neil Renilson: I am not trying to be evasive, but TIE's figures are projected for 2011 on the basis of certain things having happened, and I can say only what the figures are now, if you follow where I am coming from. The projections are development dependent. In the case of the one part of line 1 for which there is no major development dependency—Leith Walk to Princes Street—the figures appear plausible from what we have seen of them, but the rest of the figures take a punt on the development occurring in the fashion and the timescale that are currently envisaged. We cannot validate demand from places that, at the moment, are brownfield sites.

The Convener: One would assume that you do not provide bus services after the fact, but that you do some forward planning because you need to commission the buses and have the staff available. Do you consider the likely level of demand?

Neil Renilson: That question raises two issues. The first is that introducing a new bus service and introducing a new tram service have entirely different timescales. We are, in 2004, considering a tram scheme that will be operational by, at best, 2009 or 2010, so we are looking at a six-year time horizon. The ordering and building of buses, their delivery and the recruitment and training of staff to provide additional bus services run to an entirely different timescale. If a bus operator is prepared to take dealer stock off the shelf, they can buy new buses in a week, in the same way as anybody can go into a showroom and get a car. If operators want buses to be built to their specifications, as we do, the longest that they will have to wait is nine months. As for staff, we are not short staffed at the moment; we are fully staffed. However, if we require additional staff, we are looking at a maximum recruitment and training period of six weeks. Nine months and six years are the relevant timescales, so a bus operator can afford to be much closer to the event before they decide to provide a service than a tram operator can.

The second point is that, with a new development, it is vital that the public transport goes in on day one—when the first people arrive and the first house or office is occupied—not at the end, when a large number of people have already found alternative transport arrangements.

The Convener: Based on what you have said, you plan only nine months in advance—rather than earlier—and attempt to forecast what the market will do. Is that correct?

Neil Renilson: That is not what I am saying. We keep an eye on development opportunities as they arise, but we do not have to commit and spend money until nine months beforehand.

Bill Campbell: I echo the point that the timeframe for bus service planning is much shorter than that for trams and we can react much more quickly. To a large extent, infrastructure issues do not arise for us, but if they do, they are much more straightforward.

Phil Gallie: Doubts are expressed in Lothian Buses' submission that

"there is little prospect that line 1 will achieve a substantial volume shift from car to tram."

Neil Renilson already explained that to some degree. Given that we are talking about a circular route that is 2 miles across, there is limited scope for such a shift, but that is one of the claims that is made to justify going ahead with the tramline 1 scheme. Will you expand on your comments a little?

Neil Renilson: On the limited scope for a move from cars to trams?

Phil Gallie: Yes. The comment made in your submission is that

"there is little prospect that line 1 will achieve a substantial volume shift from car to tram."

Neil Renilson: If we take line 1 in isolation and consider the amount of on-street car parking that is available in the city centre, we see that very few, if any, of those who live on Leith Walk or the streets off Leith Walk drive a mile or a mile and a half to Princes Street, park their cars there all day, get back into them and drive back. The available on-street public parking in the city centre is either short-term parking that is restricted to a couple of hours, or all-day parking, but people simply do not make that journey and pay £8 to park their car all day. There is little car commuting from, say, Leith Walk up into the city centre.

11:30

Alastair Richards: Earlier, I mentioned patronage estimates, which we have considered. As Neil Renilson said, we do not see the patronage coming from car users, but from current bus users. To make the shift, people would have to find trams more convenient and on an equal and fair footing with the buses. We do not envisage that a large proportion of people on route 1 will come from private cars.

Phil Gallie: The fact that the tramline appears to have been planned based on passenger figures in

which you were not involved was referred to. Would the information that you have just provided us with have been of benefit to TIE at an earlier date? In future, should there be closer liaison between Lothian Buses plc and TIE on future projections for the tramline scheme?

Alastair Richards: Yes and yes.

Neil Renilson: Absolutely. The answer is yes and yes. We are where we are. Closer liaison would be of benefit in moving forward, and it will occur through the creation of Transport Edinburgh Ltd, which will bring together Lothian Buses, TIE, the City of Edinburgh Council and the tram-operating contractor, Transdev, so that we all work together to exchange information and come up with the best integrated bus and tram network that we can collectively achieve.

Phil Gallie: That partly answers the next question that I was going to ask, on the impact on bus services in the north Edinburgh inner circle. How do you see your customers being served by existing services with the provision of the tramline around the perimeter?

Neil Renilson: If there is no tram within walking distance, the bus service will not fundamentally change. That is the easy bit—we can tick the easy box. For the vast majority of bus services, there will be little change, as the trams will by no means serve the whole city. Where buses and trams run in parallel, in effect there will be a scaling down of bus services as people transfer to trams. To give a simple example, bus services will never be eliminated on Leith Walk. The tram will stop a couple of times on Leith Walk, but there are bus stops every 200yd. People will not have to walk a quarter of a mile to a tram stop rather than 100yd to a bus stop. There will still be bus services on those corridors, but their frequency will be reduced because a large number of passengers will have transferred to trams.

The bus network will be redesigned and the frequency of buses will be reduced where the tram route parallels the bus route or the bus route parallels the tram route. Buses will not be eliminated. We must ensure that no group of passengers suffers as a result of the redesign. The objective is that everybody should gain. We cannot have people for whom the tram is not a suitable alternative being inconvenienced, so there will be a residual level of bus services.

Phil Gallie: It is clear from your written evidence that you have major doubts about the wisdom of the tramline connecting Haymarket, Ravelston, Granton and Leith. Is it fair to conclude that you regard the bill's proposal of a loop route as fundamentally flawed? Your submission picks up on the idea that a combination of tramlines 1 and 2 that ran from the airport all the way round to Leith

and Granton might be preferable to the two proposed tramlines.

Neil Renilson: I would not say that the proposal is fundamentally flawed. The submission was prefaced with the statement that we comment solely from a transport operator's point of view. Our submission says that some sections of the line do not stack up with demand in today's transport situation. We are not qualified to comment on environmental, social or planning issues.

The Edinburgh tram scheme has many objectives, of which providing transport is but one. Another is to encourage the redevelopment of former industrial sites such as the gas-works at the docks and the development of greenfield sites, such as the biomedical park at Edinburgh royal infirmary—I know that that relates to line 3. Social inclusion objectives aim to enhance transport provision to some of the city's more deprived areas. Prestige is also involved—a tram link to the airport affects municipal status.

The general objectives include making transport and Edinburgh more attractive and encouraging economic development. All the objectives are perfectly laudable and valid. What we have said is that some parts of the tram scheme must be justified by reasons other than existing transport demand. As you said, our submission says that if a tramline were built that went from Ocean Terminal up Leith Walk and along Princes Street to Haymarket, then followed line 2 out to the airport, and if the Newbridge to Ingliston section and the Roseburn-Ravelston Dykes-Granton-Leith section were not built, that would create a single cross-city route, which could be justified today on transport terms alone. I have said that the other sections must be justified by perfectly valid but non-transport reasons, such as development.

Mr Stone: I have two questions, the first of which is about making what you do now and in the future continue to work. I accept the altruistic ideals that you express in relation to why tramline 1 should come into being for wider reasons than to provide transport, but if Lothian Buses vacates or semi-vacates a route to make room for trams, a private operator—perhaps one that does not provide the quality service that I am sure you provide—might try to swoop in behind you and offer cut-price competition against you and trams. Should your masters—the City of Edinburgh Council—consider introducing a bus quality contract to prevent that from happening, because if it happened, it could damage your viability and that of a tramway system?

Bill Campbell: The key point is whether the risk of having a new entrant to the market would be greater after the tram's introduction than it would be now. Our assessment is that there is no reason

to believe that a gap in the market would be created that would entice in another operator. That depends on how carefully the integrated network is designed, but I see no reason to expect a gap to be left that would entice another operator more than they would be enticed at the moment.

Mr Stone: So you do not think that that should be underpinned by an agreement on the quality of delivery or the standards that the city has adopted.

Bill Campbell: I do not believe that there will be a greater need for that than exists at the moment, by virtue of the fact that trams will form part of an integrated network.

Mr Stone: We have spoken about the integrated transport network. The promoter says that the fact that the "heads of terms" agreements between Lothian Buses and the tram operator have been signed is a milestone. Notwithstanding your supportive tone, we get the impression from your evidence that you cast doubt on the progress that has been made. What are the obstacles to making progress towards having an integrated transport network? The tone of your submission was slightly hesitant. I want to get to the nuts and bolts if we can.

Neil Renilson: Thus far progress on integration has been limited. That in itself is not a fatal flaw; it simply means that we have to start making progress now. Within the past two or three months, through Transport Edinburgh Ltd, the framework has been put in place to ensure that that happens. Achieving an integrated transport network has not happened thus far, but there is acceptance that it must be achieved and a framework has been put in place to deliver the integration of bus services with tram services and of tickets and products and so on.

Mr Stone: Amen to that laudable aim. Nevertheless, we are human beings, and it is easy to predict the future by considering what has happened in the past—but perhaps that is a fallacy. Although we can put things right in the future, why has progress not been great so far? What has been the hold-up?

Neil Renilson: The key point is that the trams will not start running for another six years. Because of the lead time that we talked about to sort out the routing, things have to be done in a certain order. There is no point trying to decide the precise structure of the bus network that will complement the tram network or to work out ticket prices six years in advance. That needs to happen, but until we know the exact nature of the tram scheme that we are trying to integrate the bus scheme into, we should not go too far down that road, because we might have to change things radically if they do not come out as they are intended.

One of the big issues is the congestion charging referendum in February. Line 3 is wholly dependent on revenues from the congestion charge. Assuming that congestion charging goes ahead, we will know that we are looking at a tram network that includes line 3. If we get the wrong answer—sorry; if we get a no answer to the congestion charging referendum, there will be no money for line 3. Therefore, unless something falls out of the sky or an alternative source of funding is found, we will be looking at two lines. It does not make sense to plan the bus network until certain other parts of the jigsaw fall into place. The network has not been progressed thus far, but there are fundamental reasons for that. We need to start making progress on it now. The key date is probably 1 March next year, when we will have an idea whether we are looking at a two or three-line network.

The Convener: The committee is considering the bill, but it is also interested in the practicalities of what will happen. I understand the tension and that you do not want to be planning now for something that is six years in the future, but you will understand the committee's desire for certain principles to be established among the transport operators that will lead to a truly integrated system. For example, I take it that pricing is not excluded from the on-going dialogue and that we will see the fruits of that dialogue.

11:45

Neil Renilson: It is certainly not excluded. For an integrated system to be integrated, we need to have inter-available ticketing, so that someone can go out and buy their ticket or season ticket and it will work on the buses and the trams. There is no fundamental disagreement in principle on such issues, although the detail has not been fleshed out.

The Convener: That will do for now.

I have a general transport question, because you are here as transport specialists. I realise that you do not operate Waverley station, but given that it is probably one of the busiest stations in Scotland, is it a problem that there is no proposed linkage with tramline 1? Do you think that there should be an interchange at Waverley? If you were operating the trams, what would you do?

Neil Renilson: Whether I operate the trams or not, I cannot change the fundamental fact that Waverley station is in a hole in the ground. That is its geography; it is 120ft below street level. The question is how much can be done to remove that basic geographical problem. For how long has it been blindingly obvious that there should be escalators and lifts up Waverley steps? That is part of a separate project that is going on in the

background to carry out a major upgrading of Waverley station, and that will improve access between the street and the station, but as you quite rightly point out, the tram route is through St Andrew Square and along to the Scott monument, so it does not get as close as it could if the tram were routed via Leith Street and the east end of Princes Street. As I mentioned, we were not involved in the basic design of the routes; you would have to ask Barry Cross or TIE why they chose the route that they did. However, I accept your point that the route is not as close to Waverley station as it could be.

The Convener: Gentlemen, thank you for your evidence this morning; it has been most interesting.

We will take a comfort break.

11:47

Meeting suspended.

11:54

On resuming—

The Convener: I welcome back Barry Cross from the City of Edinburgh Council and I welcome David Humphrey from Transdev Edinburgh Tram Ltd, and Ian Kendall, from Transport Initiatives Edinburgh. I will kick off the questioning. Gentlemen, you will have heard some of the evidence that we took earlier. Do you regard your figures on patronage as a "giant leap of faith"?

Barry Cross: Definitely not, but perhaps Ian Kendall will explain in more detail why we have such a degree of confidence.

Ian Kendall (Transport Initiatives Edinburgh): I will take 30 seconds to introduce myself and tell you about my background. I had the fortune to be the sole executive director of the Tramtrack Croydon Ltd concession in south London from 1996 until March 2003, so I took the project from the tendering and negotiation stage to financial close, through the construction phase and into operation. Before I came to this country I was in Melbourne—we have not heard much today about the tram systems in Melbourne and elsewhere in Australia, but it is interesting that Transdev operates Melbourne's significant and historic tram network. Before I joined the Croydon project, Transdev was one of several participants in a project development group, which included the construction contractor and tram manufacturer. It is perhaps not too surprising that in a regulated environment—and in any event—the National Audit Office recognises that the Croydon system is the best example in the country of an integrated service. Those of us who know the system can tell you that it is not perfect, but perhaps nothing ever can be perfect.

The development of a revenue and patronage forecast is a significant and difficult undertaking. Adequate forecasts must be based on the best available information, some of which is commercially confidential. When the forecast that we are considering was made, the detailed bus origin and destination survey information that is in the hands of Lothian Buses, which is competitive and confidential information, was not available. Nor was there access to information that is available only to other operators. Nonetheless, firms were engaged to try to estimate the revenue forecast and came up with the best available forecast. A forecast must be based on empirical evidence and the situation that will prevail. With Transdev we are considering service options and the way in which the tram system can be operated to best effect and we are seeking ways in which the overall revenue performance of the tram system, as a part of the wider transportation network, can be improved. That is not to say that there is material concern about the revenue forecast. However, in England and elsewhere, largely as a result of the tendering methodology that was adopted, tram systems have underperformed in terms of outturn against forecast. Every effort is being made in the current project to learn and apply the lessons from other systems and Transdev is a fundamental part of that.

The Convener: So the forecasts are not a “giant leap of faith”.

Barry Cross: It is probably worth mentioning the new development issues to which Neil Renilson referred. The model and figures are based only on the proportion of the development that is committed and do not include, for example, the hoped-for development in the broader Leith docks development framework.

The Convener: Can you give me an idea of percentages? What proportion of the totality is already committed and what is hoped for?

Barry Cross: Everything that is committed is in the model. The new proposals on which we are working with Forth Ports plc for the redevelopment of the whole of the dock estate to the seafront, which would involve an additional population of about 50,000—depending on the figures that we use—are not in the model, because they are not committed or guaranteed. They are no more than a hope from a developer.

12:00

The Convener: That is helpful. Under the provisions of the Transport Act 1985, with which I am sure you are familiar, commercial bus operators could run services in direct competition with tramline 1. Would such a situation be likely to arise and could you do anything to prevent it?

Barry Cross: One of my functions is responsibility for the City of Edinburgh Council's supported service, the plusbus network, so I have been an observer of the bus-based public transport system for many years. It is clear that, compared with the situation in most other cities, there is significant stability in the Edinburgh bus network, even when there is a degree of competition that the local press might call a bus war. In the past we have been conscious that a measure of competition is desirable and we have observed an aversion from major players from elsewhere in the UK to bid in tendering processes. I can only conjecture the reasons for that, but there seems to be an aversion to a head-on, competitive fight with Lothian Buses. That is not a recent phenomenon but has been the stable position for quite some time, which is due in no small measure to the efficient way in which Lothian Buses meets its commercial objectives and probably to the support that Lothian Buses receives from citizens. It is daunting for potential competitors to know that the citizens of Edinburgh are on the side of Lothian Buses.

There are no guarantees on competition. We cannot guarantee that another player will not appear on the scene tomorrow. However, in Edinburgh we did not experience the advent of a multitude of operators using old buses that many other cities experienced and we have no reason to doubt that stability will be maintained in the future. Notwithstanding that, the council has stated on the record that if integration on the model that we are adopting does not come to fruition, it is willing to consider using its powers to secure quality contracts. We are not willing to leave the matter to chance; we hold those powers in reserve.

The Convener: We heard evidence about Transport Edinburgh Ltd. Given that relationships are all-important, will you explain why the company was set up, what problems—if any—there have been with progress and how those problems are being resolved?

Barry Cross: Neil Renilson flagged up potential issues in a number of his answers to members' questions. Whether or not his comments reflected bias, the fact that he made them illustrates that without Transport Edinburgh Ltd, there would be potential for divergence on some matters. For example, the city is proud of Lothian Buses, but the first and foremost responsibility of the board of Lothian Buses is to the company and the same could be said of potential tram operators. Therefore, it is important to encourage a structural process through which companies look beyond their existing commitments and objectives to consider the relationship between the business of which they are a part and the greater business, which has the objective of an integrated transport network. The umbrella organisation, Transport

Edinburgh Ltd, enables us to have a single transport entity with the objective of delivering the integrated whole, without the natural tensions between the organisations, which might at present be construed as having focused agendas.

The Convener: So there are no problems with progress, other than sorting out relationships.

Barry Cross: It is a bit hackneyed to say that we have no problems, just opportunities—we have problems, in so far as they are steps on the way to securing the integrated whole. It was self-evident this morning that Lothian Buses is as committed to the integrated whole as the other parties are.

Helen Eadie: One issue on which you have tried to persuade us is that the sheer convenience of intermodal transport is a way in which to persuade the public to make greater use of public transport. Given that the most recent figures on the main railway station of Scotland's capital city, Waverley, show that 12.5 million passengers per year use the station, why does line 1 not go near that station?

Barry Cross: It sounds trite, but Neil Renilson's summing up of the geographical issues puts the matter in a nutshell. Anybody who has ever climbed Waverley steps will know about the problems there without my having to illustrate them. That is why we have put so much effort into the proposed Haymarket station interchange. For many trips, including the bulk of those taken on ScotRail services, that station will offer the best interchange opportunities.

Neil Renilson hinted at the parallel project that is being developed by the City of Edinburgh Council, the Scottish Executive, the Strategic Rail Authority, Network Rail and the train operating companies on the phase 1 enhancement of Waverley station, which will include escalators up the line of Waverley steps and lifts to get over the height differences, as well as additional platforms and other measures. The answer is twofold. The current proposals for Waverley include making the interchange there the best possible, but the premier interchange for lines 1 and 2 will be at Haymarket.

David Humphrey (Transdev Edinburgh Tram Ltd): I was asked to give a biographical sketch, so the committee will get my story as well. My background is as a bus operator: I have 30 years' experience of running buses, culminating in a job similar to Neil Renilson's but down in London, where I ran a bus company. For the past five years, I have been doing development work with the Transdev group in Nottingham, where I held a similar position to that of Ian Kendall. I saw the tramway there progress from contract negotiations, through the development and construction stages, and into operation. Of course,

Transdev is an experienced public transport operator worldwide, with lots of buses, trams and even ferries.

Now that the framework is in the process of being formulated, one strand of developing work with Lothian Buses is the identification of where interchange potential lies on lines 1 and 2 and the development with TIE of the best design for interchanges. We do not want a whopping great design where nobody is going to use it but, where there is going to be interchange, we need to examine what can be done with stop locations within the physical constraints. We need to consider whether a particular stop needs to move 20m this way or that, what happens on the highway roundabout and where we put the bus stops, some of which will have to move anyway. That detailed work is just about to commence.

Phil Gallie: Mr Humphrey, did you suggest that Chinese walls prevented you from obtaining passenger figures from Lothian Buses? Did you say that, or did I misinterpret what you said?

The Convener: I think that that was Ian Kendall.

Ian Kendall: I did say that. The information to which I alluded on passenger numbers on buses on routes operated by Lothian Buses is confidential to Lothian Buses, so it was not available to us at the time.

The concept of Transport Edinburgh Ltd is to get the best available relevant information into focus for TIE, Transdev, the council and Lothian Buses in order to determine the optimum reorganisation of bus routes and the optimum service pattern for line 1 and other lines, and then to undertake detailed and continuing analysis of the revenue of the entire system—in short, to improve the basis of the development and the revenue analysis. That is not uncommon. It is how it is done all over the world, which is as you would expect.

The structural problem that was associated with getting the best available information has been taken away and we have moved forward. In contrast, that structural impediment did not exist when we were working in London in a regulated environment and that information was available to us when we were doing our revenue analysis for the Croydon system. Frankly, I am quite excited by the whole TEL concept and by the opportunity to work more closely with Lothian Buses which is, after all, one of the best bus companies in the country, if not the best.

Phil Gallie: That statement is welcomed by us all.

Previously, we discussed park and ride with Barry Cross, and we have received confirmation of his earlier remarks on the lack of park-and-ride facilities for line 1. Given what we have heard

today from Lothian Buses and previous questions that I asked about having a loop for line 1, if the objective to reduce the number of cars in and around the centre of Edinburgh is to be achieved, would it not be better to consider amalgamating lines 1 and 2 now, with a view to getting the best of all worlds?

David Humphrey: We have started a work stream to consider putting together lines 1 and 2. We are quite encouraged by the possibility of, in effect, extending line 2 right the way down Leith Walk and perhaps as far as Ocean Terminal. That would give a cracking good frequency of service from Ocean Terminal all the way through to Haymarket. At the moment, we are on the cusp of that being a practical proposition. Technical work will need to be done to ensure that the run times of the system will be able to support that pattern of service. We hope that we can get there, because that would definitely be worth doing. The network effect studies that have already been done with TIE came to a very similar conclusion, albeit that the detail was different.

12:15

Phil Gallie: From a personal point of view, I welcome that comment. There seems to be a lot of sense in the proposal.

Would that continue along the line? Many of the objections to the scheme come from the Roseburn corridor area. Will the necessity of having a link in that area be considered?

David Humphrey: No. As has already been mentioned in evidence, that link and the link alongside the river are two development links to the tramway. They are perfectly justifiable as development links.

An answer to one of your earlier questions reminded me about the docklands light railway. When it was first built, it was criticised for being a white elephant, because no one used it. The criticism that is made about it today is just the opposite—people cannot get on it, because it is so busy. That illustrates how a fixed transport link can be a catalyst: it can generate high-activity economic development simply by getting lots of people to and from businesses. That is not possible with lower-density transport links.

Ian Kendall: I will draw a parallel between the Roseburn corridor and a situation that arose in Croydon. In Croydon, a socially disadvantaged area was connected with a potential job generator. That was facilitated by the development of a two-leg system. One leg went from New Addington to Croydon and the other went from Croydon to Wimbledon. The fact that the information that we had to do our initial revenue analysis was limited meant that we predicted that the Wimbledon leg

would have a very low passenger uptake. That was simply because the existing bus services were not efficient and did not connect the two places—two bus journeys were necessary. By virtue of travel-time advantage and job growth on the Wimbledon leg, we now have a system that is outperforming the forecasts on that leg. The ability to move the people of New Addington towards the jobs has had a significant impact on a socially disadvantaged area.

Frankly, I feel that a broadly if not specifically similar situation will arise from the opportunity that is created for the area down towards Granton—Pilton, for example—by the job growth and development in the Gogar area. That should not be lost sight of. Admittedly, that opportunity is generated purely if one considers a system-wide effect—in other words, if one examines line 1 and line 2 in combination rather than line 1 by itself.

Phil Gallie: Thanks very much. In light of previous evidence, that is something that we can consider.

Helen Eadie: In its submission on line 1, Lothian Buses stated:

“the opportunities to generate tram usage through feeder bus services will be very limited.”

What are your views on that? What impact might that have on the usage of line 1?

David Humphrey: Another encouraging little part of the overall equation is that we have agreed with Lothian Buses a methodology for the route planning of bus services. To answer your question a bit more widely, the changed pattern of bus services will be driven by that methodology, which is constructed simply out of what will result in the best overall journey times. If travelling by bus to an interchange stop, incurring the waiting time for the next tram, then getting the faster journey time to the destination is better for people, that is the presumption that will prevail. To the extent that it is not better, the bus services will not change.

You have already heard Neil Renilson say that there is likely to be a reduction in bus services. I would emphasise that that needs to be done carefully so that we do not leave tail-ends of bus routes with very much reduced services. One option that Transdev commonly delivers in France is that the radial services are redeployed so that, as the bus services fan out into suburban areas, all the little tail-ends get a very much increased frequency of service and feed the tramway. As Neil Renilson has described, the extent to which that is practical on line 1 is limited, but it is such thought processes and methodology that will be brought to bear in the work that we will be doing with Lothian Buses in the coming years.

Ian Kendall: I would like to add two points. First, TIE ran a competitive tender process, which

included demonstrating potential service integration solutions and feeder bus solutions. Four operators made bids. One of those was Transdev; through a process, we selected Transdev, and the rest will be history. However, one of those operators—which we have not heard much about today—is FirstGroup, which runs a different bus network and different bus services. FirstGroup would be happy to be involved in considering the potential for feeder bus services in areas associated with those parts of the network to which it runs, and where it makes sense. I believe that that will also apply to other operators from time to time. If travelling by bus and then tram is economically sensible, and if there is a travel-time advantage to the customer, it will be seen as advantageous over a bus-only solution, and market forces will dictate that it will happen, so long as we have integrated ticketing.

I can again draw on the example of the New Addington disadvantaged area in London, where feeder buses were established and where a combined bus and tram ticket is available on the bus. Bus customers can travel on to jobs by virtue of the tram system in Wimbledon. That is a good-news story, which shows joined-up thinking. We do not have to be totally Lothian Buses-centric in our discussion, because there is a whole network of buses to work with, and there are operators beyond Lothian Buses that will have to have a relationship with us as well.

David Humphrey: To add to that, the heads of terms that were referred to earlier were generated by Transdev in the bidding process, and we reached agreement with FirstGroup and Lothian Buses. At the moment, both bus operators are signed up to an in-principles document, which encompasses the principles that I outlined earlier.

Rob Gibson: Will line 1 be part of an integrated ticketing system along the lines of the London travelcard? Will it be part of the national concessionary fares scheme for the elderly and disabled?

David Humphrey: Yes and yes.

Rob Gibson: If so, can we expect this to happen in a fashion that is easy to apply? Have you planned for it?

David Humphrey: Yes. The heads of terms encompass methodology and principles for through-ticketing. The discussions have already started. Another work stream that we need to conclude with the operators fairly soon concerns the functionality of through-ticketing—whether payment will be made by smart card, how it will work and so on. We will need to develop a ticket-machine specification for the tramway, at least in functional terms. We need to know how it will work, how people will access it and how it will

interface with the other operators. All the technical stuff to do with how the system will work must be sorted out within the next few months.

Rob Gibson: With concessionary schemes, ticketing could be integrated for other forms of transport, such as the bus system, before the tramline is in place.

David Humphrey: Yes.

Rob Gibson: That experience will help you.

David Humphrey: Indeed. One multimodal ticket is available throughout the Edinburgh area. Local authorities make available concessionary schemes to enable people to travel on buses. Those schemes will also be available on the trams.

Rob Gibson: What other transport policies will you consider implementing to ensure that road space that is freed up by people transferring to trams is not taken up by other car users?

Barry Cross: A number of witnesses have mentioned that trams are but one part of a broad mix of measures. This morning, it has been asked how we will ensure that any capacity that is created is not used by people moving to the car from other modes of transport, and how we will ensure that more trips are not created. The most fundamental measure that would prevent that is congestion charging. We are working towards an Edinburgh referendum on that proposal in February.

A range of other physical measures will be undertaken in parallel with the tram proposal in the detailed work streams that will define and deliver the traffic regulation measures for trams. Such measures include giving more space to pedestrians, which is a technique that we have used for many years. Another technique is to give to cyclists some of the road space that will be released, which has been the main driver of growth in the mode share for cycling. A reassessment of the road space that is available to trams, buses and other modes of transport will also be required. Based on many years' experience, we are confident that we will be able to balance road space to ensure that there is no growth in car trips.

I am reminded that there are two ways of looking at the issue. Last night a rather angry gentleman nabbed me and accused us of deliberately creating congestion by taking road space for private cars out of use. A balanced approach is required. However, the member is right to say that there is a range of mechanisms for ensuring that the benefits of trams are not dissipated by more people using cars.

Rob Gibson: How do you respond to the suggestion by Lothian Buses that any road space that is freed up could be converted to bus lanes?

Barry Cross: I have referred to the need to reassess the allocation of road space to trams, buses and other modes of transport. We have not worked for 15 or 20 years to deliver priority to buses—and with Lothian Buses over the past four or five years to grow the bus market—in order to see that achievement dissipated. It is important that the 80 per cent of the population that continues to use buses is not disadvantaged by the introduction of trams. Part of the council's objective is to ensure that the totality of the public transport network—not just the trams—benefits from the proposal.

Mr Stone: I would like you to comment on two points. I refer you to what has been said in written evidence and orally today by your colleagues from Lothian Buses. We heard earlier that the Leith-Granton-Roseburn section of line 1 is weak and difficult to justify on transport grounds alone. I would like your comments on that.

Secondly, given the fixed route of the tram, Lothian Buses said that it might be difficult to replace the bus services with the trams because the bus routes go beyond the tram routes—they extend further into the hinterland. What are your comments on that? Those matters are important in our minds because they are about the viability of the tram.

12:30

Barry Cross: As regards the Roseburn link, I cannot do better than to refer to Neil Renilson's words. The first thing that you missed out of your summary—it is important that we do not miss it out—is that Neil Renilson was clear in the expression of his position today; he gave his view as a bus operator. He also spoke about the development sites in north Edinburgh. I remind members that those are not development sites that have no committed future. When we were up there, we saw the new completed and occupied head office of Centrica plc. We saw the Telford College building under construction and the commercial development that is under construction between those two sites. Further along the waterfront link, we also saw two housing developments that are under construction. I think that Neil Renilson was making the point that the evidence that he has before him as a bus operator is based on the people he picks up from bus stops and who travel on his buses.

However, we have confidence in the importance of the Roseburn link because we have looked beyond what happens now to future development. One must consider issues that were flagged up by, for example, the north Edinburgh area renewal project representative a week or two ago, and the development along the whole of the waterfront all the way from west Granton to Leith. That is the

patronage that our analysis shows will make the difference to Neil Renilson's existing base and which makes us confident that the proposed network is fully justified along all its legs in terms of the design year and the implementation year. We are talking about different considerations.

The fixed-route issue is the same as for any fixed-link mode. It applies big style to heavy rail links and less so to trams. The more flexible one is, the less this applies, but investing in fixed links necessarily introduces rigidity that will make it less easy to adapt or to manipulate the system in the future.

It is most important to look at the opposite side of the coin. The great benefit of fixed links is that we will be able to move lots of people speedily on heavily used corridors. The answer for the city as a whole lies in having some fixed-link high-capacity corridors and some bus-based solutions to link to them. It is not a case of either/or; it is about using the best tool in the right place at the right time.

David Humphrey: Another important element is that land use and transportation are iterative. Fixed links are inflexible, but they act as a much bigger magnet for development, economic activity and so on than non-fixed links do. In Nottingham, a big selling point for houses is that they are near the tram. In London, being near the number 3 bus is not a selling point, but being near the tube is. In Nottingham, a very down-at-heel suburban shopping centre, which was just about dead on its feet before the tram, suddenly sprang to life and the centre of gravity of the little suburban town at the end of the route shifted markedly as soon as the tram came into operation. Therefore, although a fixed link is inflexible, it generates a lot of activity and changes the style of land use around it. Before the metropolitan line, north-west London was fields—Wembley stadium was built in the middle of nowhere, but it is now in a congested area as a result of the fixed links.

Mr Stone: I did not require you to say what you have just said, but it rather begs a question. One either believes that the markets are infinitely expandable or not expandable. In your consultant reports, there must be a point at which one will simply not sell or develop more houses, or develop more office space. Does what you are saying fall within that? That is the danger. Are we talking about reality, or possibly a leap of faith or walking on water?

Barry Cross: I return to a point that I made earlier. The projections include generated traffic from committed development, not from hoped-for twinkles in eyes, which might be construed as walking on water. The patronage that we forecast from the model that leads us to believe that there is justification for tramline 1 is based on a structure

plan and local plan allocations and is built mainly on the translation of the two starts that are currently under way.

The Convener: I have a small question to clarify matters for my confused mind. David Humphrey said that you are currently exploring the possibility of running a straight line between Ocean Terminal and the airport. Is that not quite line 1 and line 2, but a hybrid? Would there still be a loop?

David Humphrey: I am sorry for the confusion. Consider line 1 as it stands and leave it alone, and consider line 2 as it stands and extend it eastwards to overlay the existing service on line 1. That is the sort of pattern that we are considering—there would be a much-increased service over the busiest section of the route.

The Convener: Many people might welcome that, but I need to clarify whether an amendment would be required not necessarily to the Edinburgh Tram (Line One) Bill, but to another bill.

David Humphrey: No.

Barry Cross: I think that David Humphrey inadvertently caused confusion by referring to lines rather than services. The lines that we propose are the lines that are in the bills, but we are considering the best service pattern to superimpose on those lines.

Ian Kendall: I want to add something so that things are totally clear. David Humphrey has been challenged by TIE to determine a better service pattern and solution than the current solution, in order to maximise the opportunity of putting in the fixed infrastructure. That is entirely consistent with getting in a world-class operator and looking for opportunities. He is talking about a fairly important and significant opportunity whereby we could take twice as many buses off Leith Walk, which would obviously be good news.

The Convener: Some people might indeed construe it in that way.

As there are no further questions, I thank all the witnesses who have given oral evidence today. We now move into private session to consider our approach to oral evidence on the adequacy of the environmental statement.

12:39

Meeting continued in private until 12:50.

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