



Transport Committee

Oral evidence: Safety at level crossings, HC 680

Monday 21 October 2013

Ordered by the House of Commons to be published on 21 October 2013.

[Watch the meeting](#)

Members present: Louise Ellman (Chair); Mr Adrian Sanders, Graham Stringer, Martin Vickers

Questions 1-79

Witnesses: **Peter G Rayner**, British Rail (retired), **Chris Bazlinton**, **Laurence Hoggart**, **Tina Hughes** and **Richard Wright**, gave evidence.

Q1 Chair: Good afternoon, and welcome to the Transport Select Committee. I am sorry that so few of our members are present at the moment. A number are stuck on a train on the East Coast Main Line. We are hoping they will join us soon. I would like to thank all of you very much for coming to our inquiry this morning.

The Transport Committee decided to have an inquiry on level crossings. The purpose of that is to look at safety issues in relation to level crossings so that we can pursue effective action to try to make those crossings safer so that other people do not have to suffer the tragedies you have experienced. We are very grateful that you are able to come to us in the first session of our inquiry so that we can hear directly from you. I would like to start by asking each of you to give your name for our records. I will then ask you individually to give us a short statement on how you feel about what has happened and about your situation.

Chris Bazlinton: I am Chris Bazlinton.

Tina Hughes: I am Tina Hughes.

Richard Wright: I am Richard Wright.

Laurence Hoggart: I am Laurence Hoggart.

Peter Rayner: I am Peter Rayner.

Q2 Chair: Mr Bazlinton, would you like to start, perhaps by giving us a brief statement?

Chris Bazlinton: On 3 December 2005 my daughter Olivia and her friend Charlotte Thompson set out on a shopping trip to Cambridge by train from Elsenham station. As a result of confusion about the meaning of alarms after a first train had gone through, they went through an unlocked pedestrian gate, unfortunately into the path of a second train. An RAIB inquiry revealed that there had been a similar death in 1989, after which the recommendations were not acted on. One risk assessment before Charlie and Liv's accident was described as substantially flawed, but Network

Rail continued to insist that the crossing was safe if used properly. They tried to blame the girls and generally behaved pretty badly towards us.

After a great deal of pressure they built a bridge and locked the gates. Five years after the accident, at the end of 2010, we discovered that Network Rail had failed to disclose two highly relevant documents. These were, first, a memo, which we have often referred to as the Hudd memo, from a level crossing manager, who in 2001, four years before the accident, had outlined exactly the circumstances faced by Charlie and Olivia and stated that “the risk of disaster is real;” and, secondly, a risk assessment in 2002, three years before the accident, which suggested that the gates ought to be locked. Neither of these had been acted upon. If so, they would have saved Liv’s and Charlie’s lives.

As a result of this new information, the Office of Rail Regulation successfully prosecuted Network Rail, leading to a fine of £1 million in March 2012. Ironically, we parents, as taxpayers and rail users, effectively contributed to that fine, albeit indirectly. I believe Network Rail’s actions over the non-disclosure of documents amount to a conspiracy of silence, or worse.

I mentioned the shabby treatment we received. It was not just us; others did. The press office upbraided a *Times* journalist for intruding on the grief of the families. We had given *The Times* the story, as the press office well knew. That was quite typical, and some of the same people may still be there. I also happen to believe that not much has changed at Network Rail in the way they treat these incidents. If you look at last Friday’s *Times*, you will find that they just deny everything.

I still want to know from the people at the top, who are ultimately responsible, why they withheld those documents, and why I should believe that it will not happen again. This is about accountability, and it is important that we know what happened within Network Rail. They have never held a proper inquiry and told us what really happened.

Q3 Chair: Thank you. Ms Hughes.

Tina Hughes: I am Tina Hughes and I am Olivia Bazlinton’s mother. I will not go over what Chris has just said, but my angle is slightly different. In 2011, when all the documents started to come out, David Higgins, who had just arrived at Network Rail, invited me to become a level crossing user champion, which gives me a unique insight into the workings and culture within Network Rail. At that time, he set up the national level crossing team and facilitated £130 million funding for risk management and level crossing safety improvement projects. For me, I am less interested in what has happened before and more interested in making sure that Network Rail have made the changes David Higgins promised us would be made. I talk unashamedly to Network Rail staff and anybody else who will listen to me about the trauma of Olivia’s death, not just for me and those who loved her but for everybody who was involved: the police, the train staff and the train driver. It is important that they understand the impact of these types of deaths and that it is not just about the percentage points of a risk reduction that they are achieving.

I believe that her death resulted from a failure, not to measure the risks, but actually to have the resources to act upon those things. I believe those processes are now in place. Network Rail have recruited over 100 level crossing managers and they are now starting to deliver what they need to deliver. They have always been very good at reacting when there is a catastrophic failure, but I now see that they are beginning to be proactive and look at where the next accident might happen and start to make some changes to that. That really pleases me.

One thing does concern me. When I talk, I think people on the ground understand, but I think there is a significant problem at senior levels within Network Rail—not Sir David but below that. They do not understand that their people are an important asset. They focus on their track and signals—obviously—but they need to understand that their people are really important. Level crossings pose the highest risk of death on our railways. The last two and a half years have seen significant progress, but it is vital for public safety that this work continues and that it is prioritised and supported by everyone throughout Network Rail.

Q4 Chair: Thank you. Mr Wright.

Richard Wright: I didn't realise that I was going have to make a statement. I thought you were going to ask me questions.

Chair: You don't have to, Mr Wright.

Richard Wright: I can tell you a bit of history. I suppose I represent private crossings. We have a private crossing which no one else can go over, other than people we allow to cross. I have known it for 55 years. I know other people who have known it for longer. They have always said that my accident was one waiting to happen because we did not have any telephones. The crossings either side of us, at either end of the farm, did have telephones. We also had a very poorly designed crossing; it was way out of date. We had a near miss in the '70s. Network Rail, or British Rail as I believe it was then—I am not very good on dates—came out, had a look and said, "Yes, you need telephones." The next thing we knew was that they came out and put up some signs: "How to use the telephone." About a year later, no telephone, so we phoned them up. I tend to do most things on the phone rather than write letters. Two or three days later they came out, took the signs down and put the original ones back, so there were still no telephones.

Then we had another near miss with a horse. Someone from the livery was crossing with a horse. They wrote me a letter about it. I rang them up and said, "Look, we really need telephones; it's time we had phones." So they sent someone out to decide whether or not we really needed telephones. I happened to see a van go through the yard and followed it to the crossing. A gentleman got out, put on his orange fluorescent jacket and picked up a stopwatch. By that time I had caught up with him and I said, "What are you doing?" He said, "I've come to check the crossing to see if you need phones." I said, "Good." He said, "I'm going to have to wait for a train." I said, "Well you're not going to have to wait very long; there should be one along any minute." He stood in the middle of our crossing with his stopwatch in one hand, and his jacket on. When the train driver hooted, he pressed the stopwatch, walked off the track and pressed it again as the train went past. Apparently because we were under the time needed for telephones we did not get them. The annoying thing was that he checked it with a train coming from Oulton Broad, but, if he had done it with a train coming from Beccles, we only see that 20 to 25 seconds from it coming round the corner to our crossing.

Also it was a lovely, bright day. I pointed out to him that we crossed in snowstorms, fog and when a high wind was blowing in one direction down the track, but that did not make any difference, so we did not get our phones until after my accident, which I admit was my fault. I should have gone back to have another look. I got held up when I got back to where my grandson was sitting in the car. I should have gone back to have another look, because trains coming from Beccles, depending on the speed, are on top of us in 20 to 25 seconds. But two or three days later we got a speed restriction put on—20 mph—and three or four months later phones were installed, which obviously we use. If you want to know anything else, just ask.

Q5 Chair: Thank you very much, Mr Wright. Mr Hoggart, do you want to speak to us about it?

Laurence Hoggart: I have a brief statement which I will read out. My wife Jean and my seven-year-old grandson Mikey were walking home from a day with our daughter. They were killed on Moor Green crossing on the evening of 22 November 2008. It was dark at that time with no lighting on the crossing. They had to cross the tramline, two railway lines and a disused railway line in the pitch black, and it was a dog leg as well, so we had to—I am sorry.

Peter Rayner: Do you want me to read it for you?

Laurence Hoggart: Yes, please.

Chair: Yes, Mr Rayner.

Peter Rayner: “It was dark and at the time there was no lighting on the crossing. They had to cross a tramline, two railway lines and a disused railway line. It was pitch black. The crossing was a dog leg, so they would have been facing away from the train when it hit them and they would not have seen it coming. The sounding of the horn had been moved further away due to complaints from home owners, so Jean probably did not hear it. This has devastated my life and my family’s life. Jean was the backbone of my family, and it is broken now.

I think that Network Rail have treated me badly. They wrote just one letter of apology. My solicitors discovered that the crossing was seen to be unsafe by Railtrack in 2000 and their advisers said that a bridge should be built. That was eight years before they died. Nothing was done. They did not care; they were only interested in making money. I think this greed is criminal. I sued them for some compensation, and right up until the week before the case was due they stood against me saying that Jean was 10% or 20% to blame. The whole system of damages is horrible, and the small amount I received cannot take the place of my wife, a mother of five, a grandmother, a daughter, a sister and a friend. A child’s life has little monetary value, and yet memories are priceless. This small amount gives them no reason to spend money fixing problems. It gives them no reason to make level crossing safety a priority.

After Jean and Mikey died, Network Rail straightened the dog leg and put lighting there, but this was not enough. I said when they died that a bridge needed to be put there. Further deaths were unnecessary. The work should have been done after one death, not after five. Network Rail did not even write or ring to tell me that a bridge was being built. They did not tell me when the new bridge opening ceremony was. I was not invited to the opening ceremony. If it had not been for the support of my next-door neighbour, who is now my wife, I would be dead. I bought a rope and I intended to kill myself. My whole world was taken away by these people. All our plans and our future are gone and I have had to make a totally new one. Jean will never meet her new grandchildren. All my wonderful memories are now painful. They should not have died a violent, pointless death. It is wrong that they are gone.”

Q6 Chair: Thank you very much for that statement. Would any of you like to say any more about how you felt you were treated by the authorities after your tragedy, whether it is to do with Network Rail, the court authorities, the police or officialdom in general?

Tina Hughes: We were treated very badly at the inquest. We were faced with four or five members of a legal team, barristers and solicitors, and clients, opposite us, but we were not offered any kind of support. At a pre-inquest meeting, the HSE had been previously commissioned to write a report, which explained that Elsenham’s risk assessments were very seriously flawed. Network Rail and their legal teams made it so that any discussion of risk assessment was not allowed at the inquest, which was very frustrating for us. It was not until much later that any of these documents came out. We found that these documents had not been disclosed at our inquest.

Six months after Olivia and Charlie were killed, we met John Armitt, who was then chief executive. During that meeting we talked to him about the fact that we had been campaigning to have the gates locked at Elsenham. He said to us, and I quote him almost verbatim because I can honestly hear him saying the words to me, “We have to consider the cost of safety versus the value of life.” I found that an absolutely inhuman way to speak to me as a bereaved parent.

Q7 Chair: Mr Hoggart, I am very concerned to hear everything you have told us, but particularly about the way Network Rail acted afterwards and the steps they took without involving you in anything. Do you want to say any more about how you felt, or would you like Mr Rayner to say anything to us about that? You do not have to answer this; it is just that we want to understand how you felt about what happened after the tragedy.

Laurence Hoggart: It was just appalling; it was terrible. They were not interested in me and in the loss of my wife and grandson. I got one letter of apology from them, and that was all. They fought me all the way. Every step of the way I had to fight and battle with them, and it is still going on now.

Chair: It's still the same now?

Laurence Hoggart: They are just not interested in anybody; all they are interested in is profit. They do not care about individuals like myself. It's as simple as that. They are a nationalised industry and they just do not care. It is all paid for by the taxpayer, so they are not interested.

Q8 Chair: Thank you. Mr Wright, what were your dealings like with the various authorities?

Richard Wright: I did not have many dealings with them other than on the ground. On the day the ORR came, first thing in the morning Network Rail came through the yard very quickly, and very early for Network Rail, and I wondered what had happened. I could not go down to see them, so on their way back I stopped them and said, "What have you done?" "We've just put speed restrictions up—20 mph speed restrictions." About half an hour later a car came in. Two very well-dressed gentlemen introduced themselves. One was Mr Stanley Hart of ORR. I said, "Your people have just been down to the track." "Our people?" he said. I said, "Network Rail. They've just put a speed restriction on." "Oh, have they?" he said. Somehow news had got through to Network Rail that ORR were on their way down there. That is how I see it anyway.

Thinking about the financial side, over the years they have tried to buy the crossing off me and close it down. The last letter that I had from them, which I have brought along because I cannot remember the date, was on 25 August 2009. That was the last offer I had. They offered me £30,000 to close it. I said to Mr Steve Day, "I've told you before that we can't be without it. A quarter of our farm lies on the other side of the track, and going to the other two is just too much trouble and expense." He said, "What about £40,000?" I said, "No, definitely not; we can't be without it." That is how I see it.

Q9 Mr Sanders: Were you offered an alternative method of contacting the signaller?

Richard Wright: No. We had our mobile phones. We had the Saxmundham telephone box. If we were crossing with a digger or a combine or if it was foggy, we all had the telephone number in our mobiles. The telephone number is on the sign regarding crossing with a wide, heavy or slow-moving load.

Q10 Chair: Mr Bazlinton, in your situation there was a whistleblower involved, was there not, and two critical documents had apparently been withheld by Network Rail from the coroner and other authorities? How important was that whistleblower?

Chris Bazlinton: Everything happened over a couple of years. They built the bridge, the inquest was held and so on. After that there was a period of three years when little happened except that Tina and Reg, Charlie's father, took out a civil case against Network Rail. Network Rail were demanding 20% guilt on behalf of the girls, blaming them for the accident. Eventually, that crumbled, but at that time I was approached by someone representing an employee of the eastern region whose job was under threat. She said that it was all to do with Elsenham. The person asked her what this was about and she said there were documents never seen by the inquest and the official inquiries. He asked me whether I had these documents. I said I had not got them and that I did not think they existed. Over a period of time we found one of them, which led in 2011 to *The Times* publishing an article just at the time David Higgins joined Network Rail. Five weeks later, when the Office of Rail Regulation said they were going to go into Network Rail's office and look through their files, they handed over the second document. They have always claimed that these were somehow just lost and had disappeared. I find it incredible that the two most important

documents in the whole case somehow went missing. I do not believe it. I believe that senior managers at Network Rail knew about those documents. I do not think there is a paper trail; it was a cover-up done by people saying, “We’re just not going to talk about this.”

You talked about the personal aspects and how Network Rail behaved. We had a slightly different thing with the bridge. They did involve us in the design of the bridge, showing us plans and so on, but one senior manager took the families up the track to the point where—I’m sorry—where Olivia’s body was recovered. He befriended us—sorry.

Chair: It’s all right.

Chris Bazlinton: I am almost certain that that manager knew about the documents because he was in the line of responsibility. If he did not, he was a very incompetent manager. He reported to the very top and I believe that he knew, along with all the others up the line. That whistleblower knew about the documents. She said she sent them to head office. Head office deny that they ever received them, yet it has been proved that they were in head office, so she was proved to be right. Somebody is either not telling the truth or did not look through the boxes properly. I do not know how to put it, but any rational person would say there was a cover-up there.

Q11 Chair: From the information we have seen, it seems that, in both your situation and in Mr Hoggart’s situation, Network Rail appeared to know that there was a problem but had not done anything about it.

Chris Bazlinton: Exactly.

Chair: That is a terrible thing.

Laurence Hoggart: They knew about these problems in 2000; they knew all about them and they just did nothing about it. If they had put in place the things they were supposed to put in place, five people would still be here. My wife and grandson would still be here. It is neglect by Network Rail again that has caused these unnecessary accidents.

Peter Rayner: With regard to the Nottingham crossing Mr Hoggart is talking about, I did get involved with that on another case professionally. I drew attention to the fact that it was a flawed arrangement. In my view, the level crossing there was wrong. It is my belief that commercial considerations influenced safety and there was a contrived risk assessment which produced a chicane in the middle. Then they pretended—and it is a pretence—that there are two crossings, one for a tram and one for a train, with a chicane in the middle and they are two things. That was fundamentally flawed. It meant that people had to make two decisions; it made it difficult in the dark. It was an almost impossible crossing. There were no lights and no audible warnings. I carefully explained the situation privately, not publicly, and nothing was done, which is a sadness to me.

The basic flaw, which I suspect is within the industry—people might say that I have been in the industry for a long time and I may not be right—is that a tram travelling at 80 kph in the open country is to all intents and purposes a train. The great mystique in all the reports is that a tram has superior braking; it drives on line of sight and has special braking. None of that special braking applies when you are off the streets of Nottingham. When you are on the streets of Nottingham, it does have special braking; it does go slower and it easily stops. But when it is out at 80 kph, it is a train. You could not use the brake they are talking about in all the reports. If you did, at best all the passengers would be sitting with the driver; the worst thing would be that many people would be injured. There are illusions within it, and I suspect that is because there have been attempts to save money. Certainly, in the Nottingham case we gave the warning before the death of Mr Hoggart’s wife, and, since, there has been another one involving a young girl, which has caused the crossing to be closed.

My concern, and the reason I wrote to the Committee, was that both that and the Moreton-on-Lugg situation—where there was no approach locking on the level crossing, which caused a death—are commercial considerations compromising safety. That is the one thing that has to be tackled. Moreton-on-Lugg was a surprise to any professional railway person. I was surprised there was not any approach locking there, and it is astonishing that there was not.

Q12 Martin Vickers: Could I ask any of the witnesses what sort of support you have had? Did any agency come to your assistance in terms of offering legal advice? I, and I am sure my colleagues, have experienced constituents coming to us when there have been tragedies in the NHS, but these are, frankly, somewhat different and rarer. Did anyone say, “These are the people to go to; this is the help you will need”?

Tina Hughes: We were very well supported by British Transport Police in terms of family liaison, but there was no support for us through the inquest process in terms of legal advice. We were not allowed legal aid, and we could not afford to employ a barrister or solicitor for four days to support us.

Chris Bazlinton: We faced a bank of lawyers. There were three barristers and two solicitors paid for by the train companies and Network Rail. If we had been able to afford £15,000 or £20,000 to be represented by a barrister, they would probably have had another one, and of course that would have been paid for out of the public purse.

I back the comment about British Transport Police. Their welfare officer was brilliant and she really looked after us, but even then Network Rail tried to blame her for a misunderstanding over a meeting that Network Rail tried to hold. They said it was her fault for not telling us. That was completely wrong, because she did not know anything about it at all, and it was Network Rail’s fault all the way through. It was just another case of them seeming to pass the blame on to other people.

Q13 Chair: Does anybody else want to say anything about help that you did or did not get, in relation to Mr Vickers’ question? No.

I would now like to turn to what should happen next, and ask whether any of you have any ideas you would like to put forward about what should be done to make railway crossings safer. Ms Hughes, I know that you are now working for Network Rail as a champion to try to promote rail crossing safety. Are there any things you would like to say about what should be done? Do you feel that in your role you are listened to?

Tina Hughes: I work with them rather than for them. It is a very good position to be in because I can go in and I am not under threat of losing my job, as some people in the organisation feel they are. I believe they have made very significant changes but they are only just scratching the surface of the things they need to do. A massive amount of work needs to be done. They now have level crossing managers and that is one of the things that would probably have resolved all the issues, had these people been in place before. These people own the level crossings—perhaps 70 or 80 of them each. They understand all the issues and the stakeholders involved, so they would have got to know Mr Wright and would know what had gone on before. They work with local people to get crossings closed or follow things through. If a risk assessment is done—which possibly they may do—and there are recommendations, they follow that through and make sure that it happens. I think things are changing, but they have a massive, massive amount of work to do.

Q14 Chair: Does anybody else want to make any comments about what you think should happen next, generally?

Richard Wright: They ought to make sure that all private crossings have telephones. Whether or not they have them now I do not know, but there should be provision to phone up if there is bad weather or you have forgotten your mobile.

Chair: You are saying they should automatically have a telephone?

Richard Wright: They should have telephones.

Chair: Thank you.

Peter Rayner: I recognise what a difficult task Network Rail have. It would be hypocritical of me with my background if I did not. What has to be faced in today's railway, which is a fragmented railway, is that some of the risk assessments and methodology need checking and going over again. There is something called ACRAM [correction: ALCRM]. If you ask me what it means, I would be unable to tell you. It is a form of risk assessment, but it pays much more regard to how many people or cars are crossing. It pays little or no regard to the speed of trains and to the signalling in the vicinity. There is a need for a change in the way these crossings are assessed. At Moreton-on-Lugg, it was a surprise to many professional railwaymen to find that there was no approach locking. I would hate to change the system by bringing in consultants to do different jobs. It is better to give Network Rail the resource to do a proper assessment of their level crossings and do away with some of these gimmicky things like ACRAM [correction: ALCRM], if indeed that is what it is called.

Chair: I thank all of you very much for coming. I realise how difficult it must be to speak about the dreadful tragedies that have happened. Speaking directly to us in this way does help us to understand the enormity of the situation, and hopefully to be able to save lives in the future. Thank you all very much indeed for coming today.

Examination of Witnesses

Witnesses: **Claire Turner**, Principal Consultant, Human Factors, Environmental Resources Management, **Alan Woolnough**, Train Driver, **Mark Magee**, Approved Driving Instructor Registrar and Director of Regulation, Standards and Development, Driving Standards Agency, and **Lesley Young**, Chief Driving Examiner, Driving Standards Agency, gave evidence.

Q15 Chair: Welcome to the Transport Select Committee. Could I have your name and organisation, please?

Lesley Young: I am Lesley Young, chief driving examiner with the Driving Standards Agency.

Mark Magee: I am Mark Magee of the Driving Standards Agency. I am the regulator of driving instructors and the director of regulation, standards and development.

Claire Turner: I am Claire Turner, principal consultant, human factors, for ERM.

Alan Woolnough: I am Alan Woolnough, train driver for First Capital Connect.

Q16 Chair: Mr Woolnough, in your case a drunk/drug-driving motorist swerved round automatic half-barriers into the path of your train. Was that crossing known to be dangerous?

Alan Woolnough: No, not really. It was a crossing not often used.

Q17 Chair: Is it difficult to report things that you think are risky and areas that you think might be dangerous, or near misses? Is it a difficult thing for you to do?

Alan Woolnough: No. I speak for myself as a driver, but all my colleagues would report it straight away.

Q18 Chair: There is a confidential reporting system known as CIRAS. Are you aware of that?

Alan Woolnough: Yes.

Q19 Chair: Does it work properly? Do people feel able to use it?

Alan Woolnough: I have never used it, but I know of it and I think all my colleagues know of it. We are quite able to go to either the signaller or a driver manager to report and they would take notice of it.

Q20 Chair: The Health and Safety Executive say that people working shifts may not get enough sleep and this could affect how they can operate. Is there anything you would like to say on that? Shift work is part of the work you do—the nature of it—isn't it?

Alan Woolnough: It is just part of the job. You have to go to bed early, don't you? You do get enough sleep—I do anyway.

Q21 Chair: After the incident that you experienced, is there anything you would draw from that? Is there anything you would like to be changed, or do you think it was a dreadful thing that happened on that occasion?

Alan Woolnough: I do not really think you could stop what happened. It was just one of those things—the wrong place and the wrong time.

Q22 Chair: Ms Turner, why do people take risks? Do you think in any of these situations, people are taking risks that theoretically they should not be taking, but human factors mean that they do?

Claire Turner: There are different reasons why people take risks, and it is worth differentiating the types of risk people take. The first group is to do with user error: unintended errors, misjudgments, miscalculations, misunderstandings of warning systems, and intended misuse, which is where people understand the warning system perfectly well but deliberately decide to cross when the system is active. Several reasons have emerged from the research we have done, which has included interviewing and observing users at hundreds of level crossings around the country. We have also recently used eye-tracking devices to ascertain exactly where people are looking when they are crossing.

As for the reasons why users make errors, distraction is a big one. Headphones and mobile devices are prevalent. It is very distracting to use mobile devices and headphones when you are walking over a crossing. Other distractions are talking to other people as you are crossing; dogs; children; and encumbrances like pushchairs and bicycles. All those things can distract the user and detract from their situational awareness when they are at a level crossing.

Misinterpreting warning systems is another big one. For example, users we have questioned do not necessarily understand that it is a legal requirement to stop at a red light at a miniature warning light

crossing. That is perfectly understandable when you consider that they are accustomed to crossing a road when a red man is showing, and taking the decision to cross into their own hands.

Miscalculation is another one. From the research we have done, we see that users fail to judge accurately how long it is going to take them to cross. That combines with a failure to understand how long it is going to take for a train to arrive at the crossing; so you have an overestimation of the time the train will take and an underestimation of the time the user will take to cross. Those combined can lead to people nipping across when they think they have enough time, and they have not.

Poor understanding of the risk is another big issue that leads to errors. Users do not understand where they are at risk. Nobody has told the user about a position of safety. It is a railway concept. Nobody is taught that they need to be 2 metres away from the tracks in order to remain safe; yet users will get as close to the tracks as they feel they need to, to look left and right for trains at a passive crossing, in order to feel safe.

There is misperception that a train can stop more quickly than it actually can. People are often surprised that it takes a train quite a long time to come to a stop, even at low speeds. Some people are quite oblivious to the risk, to the extent that they do not check for trains at all. I mentioned that we had done some eye-tracker research. A small but significant minority of users—5%—who had the eye tracker did not look in either direction. Another small minority—16%—looked for trains in only one direction.

The reasons for intentional misuse are quite different—things like time pressure and annoyance at waiting times. If the barrier is down for quite a long time, the user might become quite annoyed and they might be encouraged to violate. If it is a half-barrier it is very easy to zig-zag around it, for example if you are in a vehicle. Something as simple as mood—if you are stressed, tired or angry—can encourage you to misuse a crossing and make you more inclined to violate. Thrill-seeking and peer pressure among younger users—things like playing chicken—also fall into the category of intended misuse.

Q23 Chair: In relation to perceptions or misconceptions of speed and distance, is age a factor? Do people get it more wrong when they get older?

Claire Turner: Yes. It is absolutely a factor. Human beings generally are particularly poor at being able to judge speed and distance. We rely on object expansion on the retina—changes in the size of the object on the retina—to be able to judge how quickly something is approaching us. That is called looming. Quite recently research has been done in a road context, which shows that faster-travelling objects loom less than slower-travelling objects. That has the quite worrying potential consequence—remember this is in a road context—that faster-moving vehicles may not be perceived to be approaching.

More worrying still is that they extended the research to children, and found that children are particularly poor at judging looming, to the extent that they could not perceive vehicles travelling in excess of 20 mph. You can see how that might be relevant at a level crossing that is close to a school, for example. If you have a lot of schoolchildren who are crossing regularly, they might be more inclined to cross in front of faster trains than slower ones. That is relevant research.

Visual ability also diminishes with age. We lose between 1° and 3° of our visual field for every decade of life, which equates to about a 20% to 30% loss of visual field by the time we get to 70 to 80 years of age. It is absolutely normal that we lose our peripheral vision. Our ability to discriminate fine detail—visual acuity—diminishes as well; our colour perception diminishes and our contrast sensitivity diminishes. You can see how it might be quite difficult for elderly users to judge speed and distance accurately. All that is even more difficult in dark conditions.

Q24 Mr Sanders: This is all fascinating stuff. I wonder how well any of it has been fed through to the people who design crossings. Why do we not have a traffic light system as well as a barrier? Why do we have a different light system? Has any work been done on signal noise? Is there a particular noise that works better than others?

Claire Turner: Some research has looked at whether the change in alarm tone is an effective indicator to users of another train coming. It is not. It is particularly poorly understood, which is why the introduction of verbal warnings is perceived to be more successful. Hopefully, that will improve safety at crossings where commonly you have two trains approaching simultaneously.

There is recent research looking at the introduction of train noise in a satnav context. Network Rail have been doing some work with Garmin on introducing train noises to alert road users to the presence of level crossings on their routes. I do not know what the results of that are going to be, but in general, auditory alarms are more alerting than visual ones, particularly if you have a group of people trying to use a crossing at the same time. People tend to operate as a herd; they will follow whatever the person in front of them is doing, and there are some crossings where this is a particular problem. There is awareness that this is a particular problem, and loud auditory alarms have been introduced to try to combat the problem of people just following others mindlessly on to the track without checking for trains.

Q25 Mr Sanders: In terms of design, is there also the possibility of having what they have at Downing Street—a barrier that comes up and stops cars at wheel level? It is probably quite an expensive piece of kit, but early on it would certainly stop anybody wanting to take that out.

Claire Turner: I imagine so. Research shows that the risk reduces the more protection you have available at the crossing. From passive crossings, where you have no protection measures for users, through to miniature warning light crossings and automatic crossings, right up to manually controlled crossings, the risk diminishes as you increase the level of protection. Any engineering measure that physically prevents a user from accessing the track when a train is coming is the gold standard.

Q26 Chair: Mr Woolnough, you had a very traumatic experience. Did you get any help after that incident happened?

Alan Woolnough: I had counselling. My company looked after me very well. They made sure I was safe to drive over the route after the incident. I would say it was first-class.

Q27 Chair: You felt you could get back to work; you felt able to do it?

Alan Woolnough: Yes, I did.

Q28 Martin Vickers: Mr Woolnough, you mentioned a system whereby you can report to your line manager and so on incidents, or any potential dangers that you see. Do you also get feedback as to why that information is discarded, or that it is useful and so and so is being done to correct it?

Alan Woolnough: We put in a report and get confirmation that it has been received and has gone to the safety people.

Q29 Martin Vickers: But you do not get anything to say they considered your idea and it was discarded because of particular reasons?

Alan Woolnough: No.

Q30 Martin Vickers: Ms Turner, I presume that modern technology would allow warning signs to show that a train is not just approaching but is getting closer to the crossing. Is there any evidence to show that that would have a cautionary effect on either drivers or pedestrians?

Claire Turner: It is a very difficult question and one that would need to be tested in the field. Countdown markers, to which I think you are referring, have been particularly successful around road crossings in London; they have been introduced quite widely. An indication is given to the user of how many seconds they have available before the lights change to green for traffic. Use of that on the railway is difficult because people sometimes might consider it a challenge to get across and beat the clock. As I said previously, people are particularly bad at estimating how quickly they can get across. Even if you provided them with an indication that they had three seconds, some people might think that was fine and they could get across in three seconds and be completely wrong. The honest answer is that I am not sure.

Q31 Chair: Ms Turner, I want to turn to motorists. What sort of bad behaviour do motorists display at level crossings?

Claire Turner: The risks associated with motorists are things like blocking back—following other cars on to the crossing without having a clear exit route, which is very similar to moving into a yellow box junction on a road without having a clear exit route; zig-zagging around barriers at automatic half-barrier crossings; and failing to close gates at user-worked crossings. Motorists have to get out of their vehicles and cross on foot to open both gates before returning to their vehicle and driving across. I suppose there is a disincentive to get out of the vehicle once again to close both gates, involving crossing on foot again. That also creates a hazard for subsequent users, because if you approach a crossing and the gate is open, you may have the misperception that it is safe for you to cross.

Q32 Chair: Are there too many signs, or misleading signs?

Claire Turner: There are an awful lot of signs, and in my experience they can be quite cluttered. We know from research that we and others have done that signs are not particularly well understood by users. For example, there is particularly poor recognition of the advance warning of an automatic crossing, which is the five-bar gate sign. You tend to find at crossings that a lot of signs are put up reactively to specific problems. What might have started as a clean design with safety-critical information being quite conspicuous suddenly becomes cluttered with cyclist dismount signs, put dogs on lead signs, anti-trespass signs and parking notices, if you are close to a station. All of these compete for the user's attention and are within a user's field of view on approach to a crossing.

Q33 Chair: Maybe the Driving Standards Agency can help us. The Highway Code shows a wide range of signs for level crossings. Can you do anything about that? Should they be simplified? Should people be made more aware of what they mean?

Mark Magee: I can certainly express a view. Signing is a responsibility of the Department for Transport. We are an agency of that Department but we do not have ultimate say on what goes out on the road. Generally, the Highway Code has two or three particular red triangle signs, which are warning signs, around level crossings. The sign that is used will be related to what detection there is on the railside. If there is something that detects that a train is coming, you normally have flashing lights and a barrier. If not, obviously you have a different sign.

Although we are not part of it—the DfT, who I think are giving separate evidence, will be able to say a bit more about it—the Rail Safety and Standards Board are doing research at the moment into signage, road marking and signals. One potential option they are looking at is a universal sign for level crossings.

Q34 Chair: Do you influence that, or do you just respond to what is said by the DfT?

Mark Magee: We are not directly involved. Our job is the driving test, raising awareness and road user education. On signing, there is a particular section in the DFT that takes ultimate responsibility. There is also a separate review of the traffic signs regulations and general directions going on at the moment, in which the DFT are involved. They are trying to bring together the two pieces of work.

Q35 Chair: Who is responsible for ensuring that pedestrians know what to do at level crossings?

Mark Magee: That would probably be primarily through the Highway Code. The Highway Code is for all road users. It is not just for motorists; that is often overlooked, unfortunately. We do a lot of work in the background through social media around the Highway Code. We do not publish just the Highway Code; we do a lot of tweets, e-mails and use Facebook.

Q36 Chair: Is that something you can deal with?

Mark Magee: We do that.

Lesley Young: A huge amount of work is done on social media. We have apps for the Highway Code. The current rate is 8,000 downloads a month. We also have tweeting. We have about 25,000 followers on our tweeting account. Typically, those are spread to 20 or 30 people beyond that. While most of the people on our favoured list are motorists, they will have friends and family that they share this information with. It has been hugely successful in spreading messages. For instance, this is tyre awareness month, so a lot of our messages will relate to things that are key areas of risk at the time. We are putting out a lot of information and links regarding tyre safety. In the past we have done something in relation to crossings. It is an interesting point. We have access to that and can change the message almost on a daily basis, and, although our business is primarily drivers, with the coverage we get it should reach pedestrians as well.

Q37 Chair: Do you know how people are affected by your messages, or do you just guess? Do you have any way of assessing it?

Lesley Young: We have recognition of our e-mail links; 25% of those are opened, which apparently is quite a high ratio compared with most. We also know how many people are on our accounts with Facebook and Twitter. We have 25,000 followers on Twitter and 17,000 people on Facebook. Most companies who invest a significant amount of money would want to match the coverage that we are managing to achieve.

Q38 Chair: You have told us that you deliver about 1.6 million driving theory tests a year. How likely is it that a candidate will have to answer a question about level crossings?

Lesley Young: I cannot say the exact likelihood because they come in various categories and subjects. Mandatorily we have to cover 14 different subject matters. Signs for a rail crossing or other types of signs would be grouped together, so we do not have a particular section that says "Railway signs" to know exactly how often they would appear in the process. I can tell you that the pass rate for questions relating to railways is around 80%, and higher than that in some cases. It is as high as 94% in relation to what to do if you break down on a level crossing.

Q39 Chair: When you say "railways," do you mean level crossings, or is it much broader?

Lesley Young: Level crossings. Ninety-four per cent answer correctly in relation to what to do if they break down on a crossing; it is a slightly lower pass rate for questions related to crossings without barriers.

Q40 Chair: You said there is evidence that people who perform well in the hazard perception test have fewer accidents. Has that been followed up recently? Is there any more you can say about that?

Lesley Young: No. The original research done on the hazard perception test proved that you could accelerate people's ability in hazard awareness from that of a learner to a more experienced driver, if they had gone through the appropriate training. The purpose of the hazard perception test was to encourage training in that environment. We have done no further research on that. We are currently updating it. The fact that we are updating it gives us an opportunity to expand the content of the hazard perception test. Our original approach was to film events. Clearly, high-risk areas were not ones we could replicate in film, so we have moved into computer-generated images. That gives us the opportunity to go into a lot more areas than we did in the past, and that will be part of our second phase. A longer-term aim within the whole theory on hazard perception is to develop it far more, as current technologies allow us, and perhaps integrate the theory with the hazard perception rather than into separate areas. Hazard perception asks candidates to identify hazards, but it does not ask what they are going to do about them.

Q41 Chair: It does not include level crossings?

Lesley Young: It does not currently, because hazard perception is about developing hazards rather than static ones. We need to be a bit clever-minded about how we might incorporate this in a storyboard in the next phase. For example, we do not have traffic lights because they know what to do at traffic lights, and the answer is pretty obvious to them in the theory environment. The hazard perception is based on anticipating something happening as a result of certain behaviours by other road users, as opposed to a static hazard.

Q42 Chair: How often would the route of the driving test include a level crossing?

Lesley Young: It is not significant. About 6% of our current driving test routes have a level crossing in one form or another. To go back to Claire's earlier point, on the driving test people do not have the distractions she talked about and they tend to obey the rules. Largely, it is not a question of them not knowing what to do; it is that people choose not to—something they do not do on a driving test. Currently, we have 30 minutes to cover as many high-risk hazards as we can in a driving environment, so we focus very much on interaction with other road users, and turning right at busy junctions and intersections. The level crossing opportunity is fairly limited.

Q43 Chair: Are you involved with driver rehabilitation courses?

Mark Magee: Not a great deal, no. They are schemes run by ACPO—NDORS—and the police deliver the courses.

Q44 Chair: Ms Turner, following your comments what would you say is the safest level crossing system?

Claire Turner: The more protection you have at a level crossing the safer it is. If you can have a full barrier crossing with skirts that is conspicuous to users on approach so they cannot access the crossing easily, they would have to be quite wilfully misusing the crossing to get over the full barrier. If you have rumble strips on the approach, you are introducing a new level of warning on approach to the crossing as well, so you have auditory and tactile feedback for approaching users. You need to consider user populations when implementing these sorts of mitigation measures at level crossings. You have to understand who you are targeting, because different measures will be effective for different user populations.

Q45 Chair: Mr Woolnough, from your experience is there anything that you want to recommend to make changes generally, or do you see it as something that just happened in your case?

Alan Woolnough: People should obey the warning signs that are there. I think crossings are safe; it is the people who use them who are not safe. How do you change people's perceptions of what is safe and what is not? If they want to take the risk they will take it, won't they?

Chair: We thank all of you very much.

Examination of Witnesses

Witnesses: Deputy Chief Constable Paul Crowther and Superintendent Philip Trendall QPM, Territorial Policing, British Transport Police, Right Hon Lord Justice Lloyd Jones, Chairman, Law Commission, Richard Percival, Team Manager, Law Commission, and Sarah Young, Lawyer, Law Commission, gave evidence.

Q46 Chair: Good afternoon, and welcome to the Transport Select Committee. Could we please have your names and positions for our records?

Philip Trendall: I am Philip Trendall, superintendent at British Transport Police force headquarters.

Paul Crowther: I am Paul Crowther, deputy chief constable of British Transport Police.

Lord Justice Lloyd Jones: I am David Lloyd Jones, chairman of the Law Commission of England and Wales. I am accompanied by Richard Percival, who is leader of the public law team, and Sarah Young, the lawyer who has conducted this project in its most recent phases.

Q47 Chair: In your written submission you said it can be difficult to know where a level crossing is when responding to an incident. Could you tell us a bit more about that?

Paul Crowther: A range of numbers is provided by Network Rail and others about exactly how many level crossings there are. They range from the railroad interface to the private crossings we have heard about. Sometimes it can be difficult to know in the more obscure locations precisely where they are. That can present challenges for us when we are responding to a particular incident, to understand the access points and make a speedy response. We are working with Network Rail to try to identify those better, geo-code them and feed them into our command and control system so we have a better idea of where they are.

Q48 Chair: Does this happen very often?

Philip Trendall: No, not often, but we are very mindful that each event is an individual one that may require a very speedy response. It is part of our making sure we understand the locations as well as we can given the large numbers, but we are concerned that we would be delayed in responding if we were not doing the work we are doing now to try to ascertain exactly where the crossings are and what the best access is.

Q49 Mr Sanders: Where does your jurisdiction start and end in relation to level crossings?

Paul Crowther: British Transport Police have a statutory responsibility for the policing of the railways. In respect of level crossing incidents, that spans preventative activity, which I would call problem solving in education, enforcement and working with Network Rail and others to look at engineering solutions to design out the problem. When there is a tragic incident of the type we have heard about today, we have a response responsibility, where we have a duty to investigate the circumstances; report to the coroner and provide support to that investigative process; support the family, which is very important and a big part of our response to such incidents; and, where appropriate, to prosecute offences. We work very closely with other statutory agencies such as the ORR, which has both a regulatory and enforcement function in terms of the Health and Safety at Work, etc Act, and the Rail Accident Investigation Branch to ensure that safety lessons are learned early and can be spread throughout the industry.

We look at our enforcement activity from two aspects. One is clearly bringing people to justice who need to be put before the courts for particular offences. They can range from road traffic offences of failing to comply with traffic lights at level crossings, through to some rather obscure and somewhat antiquated specific railway offences that still exist, right the way through to more serious offences, if they are present in the actual incident.

We try to use our enforcement activity as a means of educating drivers in particular. I draw a distinction between road interface crossings and the more rural private locations we heard about today. When we are talking about driver behaviour at road-rail interfaces, our emphasis is on changing it. With the support of Network Rail, we have deployed a number of mobile camera vehicles, which we use at hot-spot locations, where we prosecute people for a range of offences. In that process we offer them the facility of driver retraining courses as an alternative to prosecution. We have developed a specific training programme designed around level crossing scenarios, so it is slightly different from those you would encounter if you were being prosecuted for a speed offence.

We have encouraged Network Rail to learn from the experience of road safety camera partnerships designed around speed and road deaths. There is a wealth of evidence that the presence of cameras changes driver behaviour. There is a difference between mobile camera effectiveness and fixed camera effectiveness. There was a recent report this year that looked at the success of those different types of activity.

Q50 Mr Sanders: What is the difference?

Paul Crowther: It is quite substantial. I wrote down some figures. Where cameras are deployed at locations where there are speed offences linked to road deaths, there is on average a 31% reduction in offending; where fixed cameras are used, there is a 70% reduction; where there are mobile cameras, there is an 18% reduction. When you put in place a mobile camera, which is highly visible—it is a fully marked-up police vehicle—it is probably surprising that anybody goes through a red light when that vehicle is there, but they do. Where you have a fixed camera, it moves from the potential to be detected to the certainty of being detected. We think fixed cameras are a way of changing driver behaviour in the long run.

Q51 Mr Sanders: What is your relationship like with Network Rail? We heard from the bereaved families that there were some issues around information. Have you come across any difficulties at all in your relationship with Network Rail?

Paul Crowther: On a day-to-day basis we are working with Network Rail right across the country from a preventative and an enforcement point of view. For example, they funded the 30 vehicles we have, and we work very closely with them to try to bring our policing expertise to bear on their thoughts about how they can solve this and other problems. On a day-to-day basis, we have an excellent working relationship with Network Rail.

We fully understand, and sometimes find ourselves in the middle of, some of the relationship issues you have heard from the families. We appoint family liaison officers who perform a very difficult role

in trying to support families through a very traumatic experience and help them as best we can with the process when it comes to the coroner's court. To answer your question, overall we have a very good working relationship, but clearly there are some tensions when it comes to dealing with families.

Q52 Graham Stringer: You talked about rehabilitation courses. Have you done randomised trials to see how effective they are?

Philip Trendall: Our dataset is still relatively small since it was introduced. We monitor very closely reoffending rates. So far only one person has reoffended at a level crossing after attending one of those courses. That is quite pleasing.

Q53 Graham Stringer: Out of how many?

Philip Trendall: So far this year, just over 1,600 have been referred since 1 April, and, last year, it was just over 1,200—in calendar years. I will correct that. These are all in calendar years. It is 1,600 in 2013 to date, and 1,200 last year. We have seen only one offender come back again since attending one of those courses.

Q54 Graham Stringer: Those are courses just directed at people who are not following the rules at level crossings?

Philip Trendall: Correct. Yes.

Q55 Graham Stringer: Those figures are huge, aren't they?

Philip Trendall: In terms of the numbers of people who use level crossings each day, they are not particularly large. As to the actual numbers of detections each year, so far, since 1 April of this year, we have detected 1,800 people for red light offences at level crossings, with a proportionate number of people being detected for the more serious offences of careless and dangerous driving at crossings.

Q56 Graham Stringer: Can you tell the Committee what the course consists of?

Philip Trendall: The course consists of a description and reinforcement of the law and regulations and guidance around level crossings, including signage. There is also a substantial element describing the potential catastrophic consequences of failing to comply. These courses are looking entirely at public road violations, not the user-worked and smaller crossings that also tragically offer a potential for serious events.

Q57 Graham Stringer: How do you choose between sending somebody on a course, cautioning them, giving them a fixed penalty or prosecuting them? How do you make that choice?

Philip Trendall: It is based primarily on two aspects: first, the seriousness of the behaviour detected. At the upper end of the scale, Mr Crowther referred, for example, to offences of obstructing the railway, or, under the Offences Against the Person Act, endangering safety, if it is dangerous driving. Behaviour such as zig-zagging around a crossing is likely to be at the higher end—the dangerous driving end; whereas simple—if I can say “simple”—non-compliance with red flashing lamps is likely to be a contravention of the Road Traffic Acts. The other element is that if a person has previous convictions that are relevant it would not be seen as appropriate either to divert them to a course or to issue a fixed penalty notice.

Q58 Chair: You have difficulties with powers to request drivers to identify themselves?

Paul Crowther: Yes. It is a rather technical issue. Under various statutes there are sections which provide powers to chief officers of police. This is a very technical answer. These various Acts,

when they refer to chief officers of police, draw their definition of a chief officer of police from the Police Act 1996. That Act was designed around geographic police forces. We discovered relatively recently that there was a very technical point about our issuing a notice to the owner of a vehicle to declare who the driver is. We sought a temporary work-around through colleagues in police forces throughout the country, and we are able to issue the notices on behalf of the local police force as a temporary measure. We have taken this up with both the Department for Transport and the Home Office, and there are measures in place to deal with it on a more permanent footing.

Q59 Chair: Sir David, the Law Commission has been conducting a review, which you have now completed, on legislation relating to level crossings. Can you tell us something about the background—why it was thought necessary—and what your major findings are?

Lord Justice Lloyd Jones: We published our report on level crossings last month. We were asked by the Department for Transport and the Office of Rail Regulation to take on the project. The Office of Rail Regulation carried out a consultation in which its stakeholders, including Network Rail and the highway authorities, had strongly supported a review of the legislation on level crossings, because the law was outdated, unclear, inaccessible and difficult to understand. There was consensus that a review could result in proposals which would bring greater efficiency through simplification and a clarification of roles and responsibilities, and they asked the Law Commission to take that on. We have experience of law reform projects in areas of great complexity like this.

Our terms of reference were to review the law relating to level crossings and make recommendations, with a view to providing a modern regulatory framework for level crossings, and to simplify and modernise the law. Our terms of reference included no reference to safety, the principal concern of this Committee. We consider that a good regulatory system will facilitate safety improvements. However, we do not make any particular claims that our proposals directly of themselves would improve safety; we consider that they will provide a better regulatory structure.

The project took longer than we had expected. There were several reasons for that. The Department for Transport and the Office of Rail Regulation appreciated from the start the complexity and difficulty of the subject. That was why they asked us to take it on. The scale was huge, as is apparent from the size of the report; it is over 300 pages in length and it includes over 100 recommendations. We also produced a draft Bill and draft regulations. It involved many different areas of law, not just the law of highways and the law of railways but land law, planning law, compulsory purchase, health and safety and the criminal law. We were concerned not only with the law of England and Wales but the law of Scotland, because this was a joint project with the Law Commission for Scotland. That involved close collaboration between the two. It also involved close co-operation with a wide range of stakeholders.

As far as our findings are concerned, they fall into three broad areas. One is regulation, safety and convenience; the second is closure of level crossings; and the third relates to rights of way. On regulation, we found that the legislation was complex and antiquated; it included thousands of private Acts of Parliament relating to railways going back to the very early days of the railways in the 19th century authorising the building of each individual line; public general Acts relating to the railways; general health and safety legislation; and the Level Crossings Act 1983. We came to the view that it was not always easy to know which law was still in force and which law took precedence. In addition, we found that the current procedures for changing protective arrangements at level crossings under level crossing orders were cumbersome and tended to lead to arrangements remaining in place even when they were not the most appropriate arrangements for that particular crossing.

As a result, we have proposed a new regulatory regime that would bring level crossings entirely within the scope of the Health and Safety at Work, etc Act 1974, which already applies to the railways and to workplaces in general. We propose four levels of regulation. The Office of Rail Regulation will be responsible for enforcing each level. First, there would be general duties under part I of the Health and Safety at Work, etc Act, including a duty on employers to ensure, as far as reasonably practicable, that persons not in their employment are not exposed to risks to their health or safety. Secondly, there

will be regulations made under the 1974 Act. Thirdly, level crossing plans will be agreed sets of arrangements for particular crossings. They will be optional but, when they are agreed, they will be enforceable by the ORR, and we have drafted regulations for the making of such plans under the Health and Safety at Work, etc Act. Finally, there is room for directions by the Secretary of State in the case of England, or by Welsh Ministers or Scottish Ministers in respect of safety and convenience at crossings. We expect those powers to be used only as a last resort or in exceptional circumstances. We have also recommended a statutory duty on railway operators and traffic authorities to co-operate in relation to level crossings. We have recommended a statutory duty to consider the convenience of all users of level crossings, and we have made an attempt at clarifying the delineation of enforcement responsibilities between the ORR and the HSE.

In addition, we have made very detailed proposals for new procedures relating to the closure of level crossings. We recommend a new streamlined system which would exist in parallel to some of the existing ones, which are not directed specifically at level crossings. The one we propose would include a single procedure, which would deal with closure; extinguishing existing rights of way; planning permission for replacement bridges or underpasses; compulsory purchase of land in connection with that; the creation of new rights of way; provision for carrying out the works; and the apportionment of the cost. Our proposal is that decisions would be made by the Secretary of State, or Welsh or Scottish Ministers, who would be required to consider all relevant issues, including the impact on the local community, safety and convenience.

Finally, we have made recommendations in respect of the very technical area of rights of way. Here, the law of Scotland is entirely different from that in force in England and Wales. We have recommended reforms which we think would clarify the law. That is a very brief statement of some very complex issues.

Q60 Chair: Thank you for telling us that. We have heard some very harrowing accounts this afternoon of tragedies—people losing their lives on level crossings. When things go wrong do railway operators have a general duty of candour to tell coroners what has happened and what has gone wrong, and produce documentation? We heard of a very tragic case where critical documents were withheld.

Richard Percival: There are some existing reporting obligations. There are general reporting obligations under health and safety law that apply to everybody. There are also some railway-specific ones; you mentioned the CIRAS reporting system, for instance. There is also a duty on railway bodies to report to RAIB any accidents or incidents, but those are the bodies themselves. There are duties on employees to report issues to employers, but I do not think anyone would say those added up to what most people mean by a duty of candour. The duty of candour was not an area of law that we saw as being within our remit, so we have not made any recommendations in that respect.

Q61 Chair: But you say there is a general duty on railway staff to report safety issues?

Richard Percival: Yes. There is a general duty on staff under Health and Safety at Work, etc Act regulations, so it applies across the board to any industry or service. There is a specific railway duty on railway bodies like train operating companies and so on to report incidents to RAIB, which is a distinctive railway regulation. Once an incident has occurred—we are probably not the key people to talk about this—RAIB itself has very extensive powers to require information and to require people to tell it things, all backed up by essentially criminal sanctions.

Q62 Chair: You say that it is to be made easier to close level crossings when it is in the public interest. How would you define public interest in that context?

Sarah Young: We are proposing a system that would require the decision maker, which would be the Secretary of State or Scottish or Welsh Ministers, to take into account all relevant factors. There would be quite a complicated and wide-ranging assessment of the public interest in maintaining the crossing as against the public interest in closing it. In our draft Bill we have directed the decision

maker towards certain factors to take into account, which would include the safety and convenience of the public; efficiency of the transport network; the cost of maintaining the crossing; and the need for the crossing and its significance to the community. All those would be taken into account in deciding what was in the public interest, in addition to any other relevant factor in that case.

Q63 Chair: Is the setting of a maximum pedestrian diversion a relevant factor?

Sarah Young: There is not a maximum in the sense of a number of metres, but there would be a reasonableness test. It is a public decision-making process, and weighed in the balance of what was in the public interest would be how far any diversion was and the impact of that, as against the other factors that were relevant to deciding whether closure was appropriate, or whether, if closure required the diversion of a path, that outweighed the other factors, but it may be that in an application there would be more than one option available. It might be the diversion of a path or a range of other options.

Q64 Chair: So nothing is simple; there are lots of factors. You intend to bring in the legislation under the umbrella of the Health and Safety at Work, etc Act. Would that apply to people who are affected by accidents but not working?

Richard Percival: The duty holders under the Act are employers, and it relates to their “conduct of the undertaking,” so it would apply to railway companies and so on, as long as they are employers. Are you thinking of non-business users or farmers?

Q65 Chair: I am thinking of people who could be affected: people at risk and people who are involved but not actually employed.

Richard Percival: Yes, absolutely. The key provision in the Health and Safety at Work, etc Act is section 3, which provides a duty on employers to protect the health and safety of the public at large, i.e. people who are not their employees, and to reduce risk to as low as is reasonably practicable in the conduct of their undertaking. You get gaps where somebody potentially is not an employer, for instance. As an example, we are aware that certain heritage railways do not employ anyone. If you do not employ anyone, you do not owe duties under the Health and Safety at Work, etc Act, so we have made recommendations to try to deal with that.

Q66 Chair: So that point would be addressed?

Richard Percival: Yes, exactly. We are proposing that specific regulations be made under a power in the 1974 Act.

Q67 Chair: We also heard earlier this afternoon very strongly held views, from people who had suffered terrible tragedy through accidents on level crossings, that safety had not been paramount and there was a financial consideration by Network Rail in deciding whether to install safety devices or make changes at level crossings. You are saying that under the Act there should be a duty to reduce risk “so far as is reasonably practicable.” Is there an economic equation that you would introduce to assess what is practicable?

Richard Percival: That is the base test from the Health and Safety at Work, etc Act. In the leading case on that, which is in fact on the predecessor, but is still the leading statement of the law, the judge said: “‘Reasonably practicable’ is a narrower term than ‘physically possible’ and seems to me to imply that a computation must be made by the owner in which the quantum of risk is placed on one scale and the sacrifice involved in the measures necessary for averting the risk (whether in money, time or trouble) is placed in the other, and that, if it be shown that there is a gross disproportion between them—the risk being insignificant in relation to the sacrifice—the

defendants discharge the onus on them.” In other words, it is a balance but it is a balance heavily weighted in favour of safety.

Some people have criticised our proposals precisely on the basis that the Health and Safety at Work, etc Act test overemphasises safety. I think Professor Evans in his response to our consultation paper made exactly this point. Our view is that the Health and Safety at Work, etc Act actually does apply, and should apply, but applies only in a rather complicated and difficult way at the moment, to level crossings, and we are trying to clarify the way in which it applies.

Q68 Chair: What cost-benefit ratio has your impact assessment assumed?

Sarah Young: We have not set out a straightforward numerical cost-benefit ratio. We have set out in our impact assessment the areas of cost and the likely benefits, so we could not come up with a straightforward figure on that, which is why there is not a simple figure for the cost-benefit ratio, but we have given a total net benefit figure over a very long period; it is 60 years, because the life of level crossing equipment is very long. The net present value is just over £1.4 billion.

Q69 Chair: What range of costs have you assumed for the closure of public crossings?

Sarah Young: The Rail Safety and Standards Board have done quite a lot of work on an assessment tool which looks at the costs of closing a level crossing versus the benefit. We have relied on their model, having looked at the detail that goes into it. Quite a long list of elements feed into it, but the key driving force is road user delay. At the moment the key cost—the loss to the economy—at level crossings is road user delay, so if you close a level crossing the key benefit is losing that road user delay.

Q70 Chair: Do you propose that existing rights of way should be maintained, for example by building footbridges? Is that in your assessment?

Sarah Young: If an application were made under our procedure to close a level crossing, the impact on the network of rights of way would be an important element to weigh in the balance. We are not proposing that rights of way overall should be reduced. It may be that a level crossing, or access across the railway, needs to be maintained at that place, so a bridge is put in place instead of the crossing, but there will be cases where the benefits of closing the crossing outweigh the need for that right of way and so it would be closed.

Q71 Chair: Where you might have to purchase land and build footbridges, is that included in the costings?

Sarah Young: Yes, absolutely. Compensation is included in the costings if a private landowner’s right of way is taken away.

Q72 Chair: Your impact assessment claims that the legal changes will result in a net economic benefit of £1.4 billion. How do you get to that figure? In general— we cannot go into all the detail.

Sarah Young: First, it is over a very long period.

Chair: How long is that?

Sarah Young: It is a 60-year period, because the life of a level crossing is long. That is a combination of improvements to the efficiency of the system overall; a small likelihood of a reduction of accidents—so a small safety improvement; and a reduction in the cost of closing private level crossings, which at the moment have to be bought out by Network Rail. I think one of the witnesses talked about being offered £40,000 for his level crossing. The current average cost is

£50,000 per crossing, but Network Rail say it is likely to go up, to above £800,000, as it gets harder and harder to close those crossings, whereas our proposals are likely to reduce that cost; and there is a reduction in road user delay for public vehicular level crossings that are closed.

Q73 Chair: But if a driver had to go to another crossing further away, would that not result in more time?

Sarah Young: Yes.

Richard Percival: It would, but that goes on the negative side, at the same value per minute, as it were.

Q74 Graham Stringer: What is the percentage of the time saving in the overall benefits?

Sarah Young: We do not know. We do not have a universal figure for that, but the model produced by RSSB puts into their calculations the improvement at that particular crossing and weighs it against the costs of replacing it.

Q75 Graham Stringer: You do not have it as a percentage of the £1.4 billion?

Sarah Young: No.

Q76 Graham Stringer: Could you give us a ballpark figure for that? Roughly, is it half, 75%, 80%?

Richard Percival: You are asking us to go out on a terrible limb. If we do, thinking through the level crossing figures I have seen, I think it would be well over half.

Q77 Chair: How do these proposals compare with other countries? We are told that Western Australia has a simpler system. Is that right?

Sarah Young: We did look at other countries in the early stages of the project. The one which seemed most useful was the Australian interface agreement system. It is not that their overall regulatory system is simpler but that they have a fairly straightforward scheme for managing risk at level crossings and agreeing that between the various parties. Our proposal for level crossing plans is not wholly dissimilar, but ours is voluntary and the Australian scheme is compulsory.

Q78 Martin Vickers: To go back to private crossings, you spoke about the £40,000 that was mentioned earlier. Could there be some form of arbitration? Is it simply that Network Rail make an offer and they keep going up and up, or is there a mediator somewhere?

Sarah Young: At the moment there is pretty much no way for the railway operator to force a closure, so the owner of the right of way, the beneficiary of the easement, has the power in their hands. You might find a reasonable price at one end, but as you go further and further along the line the price goes up because the owner of the level crossing has no particular reason to close.

Q79 Martin Vickers: Are you considering a proposal for some form of mediation or arbitration, call it what you will?

Richard Percival: The orders that we propose would allow for compulsory acquisition with compensation, but the compensation would be fixed according to the general law of compulsory purchase, which will be at a reasonable and fair level but not at what one might think was an inflated level.

Sarah Young: It would not prevent the parties from coming to an agreement. Under the shadow of the possibility of compulsory closure you might decide that you want to agree to closure at a lower rate.

Lord Justice Lloyd Jones: The application would be made by the railway operator or highways authority, and the single set of proceedings, which would be streamlined, would address questions of compensation and of the extinguishing of rights in respect of the crossing, and also would be able to make provision for what was to be put in its place. If there was to be an underpass, bridge or something like that, there would be provision for the acquisition of rights, compulsory purchase, planning and also the creation of new rights of way. All that could be dealt with in one set of proceedings.

Chair: Thank you all very much for answering our questions.