Leonie Cooper AM (Chair): That brings us rather rapidly to our first item on Tube noise. This has been the subject of much correspondence from those afflicted with the problem and we are very fortunate to have a number of people with us this morning who are going to be able to speak to how it has been impacting on them and their neighbourhood and their neighbours. We are also very fortunate to have some guests from Transport for London (TfL) who are, hopefully, going to be able to explain some of the ins and outs of the solutions and how quickly they may or may not be applied.

Just to introduce our guests, we have Richard Collins. You are very welcome. He is from the Barbican Association, which has a working group on Underground issues. We have Ian Kitson, who is a resident in Marylebone. You are very welcome as well. We have Liz Lawson, who is from the Archway Tube Noise Action Group. We have Razana Yoosuf, who is a resident in Mornington Crescent. We also have with us from TfL Helen Woolston [Sustainability Co-ordinator, London Underground] and Duncan Weir [Head of Operational Upgrades & Asset Development, London Underground]. You are all very welcome and we are very grateful for you joining us today to discuss the impacts, which we are going to start with now.

I have probably asked our guests who are affected by Tube noise to start by doing something almost impossible. We have an hour and a half for the whole of this item and we do want to hear from TfL about the solutions, but I would like to start with some initial comments from you on the impact of the noise. Because there are quite a few of you, if you could, constrain your remarks in terms of timing so that we do not hear from each of you for 20 minutes because, obviously, that would then take up probably more than the time that we have.

If I could start with you, Richard, I wonder if you could go into that. You have a working group in the Barbican Association. Could you talk about personal and perhaps wider impacts as well?

Richard Collins (Chair, Barbican Association Working Group on London Underground): I am Richard Collins, as you have accurately introduced me, and I represent here the Barbican Association, which is the recognised residents’ association for the 4,000 or so people who live on the Barbican Estate. The Committee will have received an abundance of evidence showing that Tube noise is of concern across London, but I will talk specifically about my personal experience and that of neighbours on the Barbican Estate.

The Barbican is built over London Underground’s subsurface lines running between Barbican and Moorgate Stations. The tunnel box through which the subsurface lines run is a structural part of the estate and, unfortunately, it is a very efficient machine for transmitting noise and vibration from the trains to people’s homes. This noise nuisance has increased significantly in recent years. The new trains that are running on the subsurface lines run faster. As ridership has increased on TfL’s lines, the trains are heavier and generate more noise. Of course, the track is constantly deteriorating under these pressures. All of this has increased the noise and vibration pollution that Barbican residents are experiencing.

London Underground’s own measurements in some Barbican homes have shown that the noise levels experienced inside homes reach as much as 52dB. This is for a single train. TfL’s measurements, for their own valid operational reasons, discount the levels that are achieved when two trains pass each other and of course that noise nuisance is experienced by people in their homes. Therefore, 52dB probably underestimates the level of noise in some Barbican homes.
This is a particularly significant problem and a measure of it is that the World Health Organisation’s (WHO) Night Noise Guidelines state - and I quote verbatim - “adverse health effects are observed at noise levels exceeding 40dB”. We already have 52dB from TfL’s measurements and that does not take account of the increase when two trains pass each other. The WHO guidelines refer to the noise outside homes and so 52dB inside a home is likely to be considerably in excess when measured outside.

As a consequence of these levels of noise - and again I quote from the WHO - “adverse health effects occur frequently; a sizeable proportion of the population is highly annoyed and sleep-disturbed”. Sleep disturbance is quite pervasive among my neighbours and you will not be surprised to learn that a sizeable proportion of Barbican residents are indeed “highly annoyed”, as the WHO anticipated they would be.

As Assembly Members will probably know, the decibel scale is a logarithmic scale and so an increase of 3dB approximates a doubling of volume. A 10dB increase amounts to a 10-fold increase in nuisance. Again, I refer to the 52dB that have been measured by London Underground inside a Barbican home, which is more than 10 times the 40dB threshold that the WHO identifies as likely to lead to health problems, sleep impairment and so on.

The good news is, of course, that this nuisance can be substantially reduced. New tracks to best-practice specification do reduce these noise and vibration levels substantially. However, what London Underground has characteristically offered to people who have the problem that my neighbours have is track-grinding, which is palliative and is worth having, but reduces noise levels by about 3dB and so does not address this substantial problem. Therefore, for the Barbican, what is needed is new track throughout the tunnel between Barbican and Moorgate Stations. This should be to best practice with Pandrol Vanguard clips, for the experts among us, continuously welded rail and so on.

Also, there is a crossover - or, to laypeople, a set of points - at the western end of the Moorgate Station, which lies directly underneath some Barbican homes. This is a major source of noise pollution. London Underground has known about this for more than 20 years and nothing has been done about it.

I am coming to a close now, Chair. We believe that London Underground lines should have a policy of prioritising track replacement and upgrading where noise pollution exceeds WHO norms. First, this should be done where the nuisance is worst and, if anywhere else in London experiences noise levels exceeding 52dB, they have my profound sympathy and my recognition that they should take priority. This kind of track replacement policy would conform to the Greater London Authority’s (GLA) most recent Noise Strategy statement, which - and again I quote verbatim - mandates TfL to “minimise noise and vibration”, “taking account of resident and other complaints” and bringing infrastructure up to “best modern practice”.

Finally, I would like to thank you, Chair, and the Committee for hearing me on this issue and I would be happy to provide further information if it would be useful.

**Leonie Cooper AM (Chair):** Thank you very much for those introductory remarks, Richard. You have set out very clearly the situation as it impacts on you and on other residents in the Barbican. Can I just clarify? Which are the lines that run underneath the Barbican?

**Richard Collins (Chair, Barbican Association Working Group on London Underground):** The Hammersmith & City, the Circle and the Metropolitan. These are three of what TfL calls the ‘subsurface’ lines, the fourth being the District, which does not run underneath us.
Leonie Cooper AM (Chair): All right. I am now going to move on to the next guest, who is just sitting to your left. You are very welcome. Thank you for joining us. Luce Jacovella is a resident near Euston and I believe, if we are going to have a competition about decibels, she may be able to go higher. I believe you are impacted by two different lines, which are the Northern line and the Victoria line, specifically?

Luce Jacovella (Resident, Euston): Yes.

Leonie Cooper AM (Chair): If you could set that out relatively briefly, there will be plenty of opportunities for all of you to come back. I know that everyone could probably talk for quite a long time on the impacts and also on neighbours, but this is just to make sure that we get a good chance to hear from TfL and to think about some other aspects. If you can talk about impacts and then also talk about any attempts to seek solutions and how that has gone for you?

Luce Jacovella (Resident, Euston): Thank you. Good morning and thank you for giving me this opportunity to speak on behalf of my case and also my neighbours. My name is Luce Jacovella. I live on the ground floor between Euston and King’s Cross above both the Victoria and the Northern lines. I have been living in my property for over nine years without any reason for complaining.

This changed, sadly, on 13 August 2016, just a week before the launching of the Night Tube. I immediately contacted TfL. It took two months for the engineers to come and to measure the noise and another three months just to send the report. In fact, the report was sent to me only after I wrote to Members of the London Assembly out of frustration with the lack of response. The report showed a level of noise way above the legal limit. It indicates 52 dB from the Victoria line.

We are now in March, seven months after the launch of the Night Tube, and the nights are getting even worse. I do some sound level recording and this shows a level of noise reaching 65 dB at rush hour. It is sometimes even impossible to have a conversation with people when I am at home. I am not an engineer, but perhaps speed and traffic might be one of the relevant factors. I hope for improvements in the future and grinding works have been promised.

The noise is affecting my health, my work and my life right now. My health has deteriorated to the point that my general practitioner (GP) has asked me to move out and my property is simply unfit to live in. Basically, I am paying a mortgage and homeless. This would be a challenge for anyone to survive with only 20 hours of sleep per week. I often faint. I fall asleep while talking to people. Hopefully that does not happen now! I suffer from constant headaches. My hearing is damaged and I have developed tinnitus. Moreover, I display the physical aspect and demeanour of a person who has not slept for months, literally. You can imagine the impact on my work. I often have to represent my institution with funding agencies and I have to take decisions that affect other people and I am not in a condition to do my job properly.

Also, out of despair, I contacted possibly anyone and I guess some of you might recognise my name from the many emails I have sent around. The only thing I ask is to be able to sleep and for you to adopt a measure that would restore the level of noise to the legal limit of 35 dB.

I am incredibly disappointed about the fact that TfL throws me and my neighbours into such misery without even a plan to prevent noise before the launching of the Night Tube. There is no urgent response unit. When you approach customer service, they reply with a script like an automated machine. There is no compensation scheme that I have been told of and any response seems to be improvised. My concern is that although grinding works have been promised, what will happen when it is not effective? What will happen when the effect wears off? Shall I start all of this ordeal again?
I have asked my neighbours whether the Tube is affecting them and it is affecting people in different ways. For example, one of my neighbours said that he is affected by the works that are being carried out during Tube closure times. Others are afraid to speak up because of Brexit. They do not want to attract attention to themselves and so they have asked me somehow to represent them.

Please take this issue seriously. I am not a technical person but I wish really to see this problem resolved quickly.

**Leonie Cooper AM (Chair):** We are taking this issue seriously, which is why we are devoting some time to discussing it this morning. We will not just discuss it; we will come up with some recommendations from the Committee as to how we think things can be improved.

I am going to move on to Ian, who is now going to talk us through the impact in Marylebone on him and also on his neighbours. Which of the Tube lines is the one nearest to you?

**Ian Kitson (Resident, Marylebone):** It is the Jubilee line.

**Leonie Cooper AM (Chair):** We are getting a good cross-section of lines and also someone affected for 20 years and someone affected since last August. Do give us your --

**Ian Kitson (Resident, Marylebone):** We are not at these decibel levels and so I do feel slightly guilty after hearing that, I have to say. Please hit your gavel if I go on. The points I would like to make are under two headings. I am just going to give you some facts about our case first of all and then the process that we have been through.

We first complained in October 2015 and so this was well before the introduction of the Night Tube. We are affected by the northbound and southbound Jubilee line running from Bond Street to Baker Street. Our house is about 30 metres away from the Tube, based on London Underground’s maps, which actually goes underneath some of our neighbours. Both the northbound and the southbound give us a different degree of problems at different times. We registered a complaint in October 2015.

In February 2016, the *Evening Standard* ran an article about the pending Night Tube and that caused us quite a lot of concern. Because of that article, we copied the article to all of the people in our community and said, “Are you aware of this?” As a result of that, 12 homes came back and said, “No, we were not. We are aghast. If you are doing this, Ian” - which I did not really want to do but I do - “will you please represent us?” I have a list of 12 people in my community. TfL has that list and everybody has that list.

I want to just refer very quickly to that *Evening Standard* article, even if I do not get through everything else. It was in February 2015. There are three or four sentence points that I would like to read out:

“But Labour has warned the planned service — which will operate on the Jubilee, Victoria, Central, Piccadilly and Northern lines — could cause misery for thousands of families who complain about the noise made by the poor condition tracks. It has called for a ‘noise-busters’ team to be set up to repair broken tracks before the launch of the Night Tube and to reduce noise at antisocial hours ... The TfL risk assessment warned that the service would mean an increase in overnight disturbance that could result in a ‘reduction in quality of life of residents through disturbed sleep’ and even ‘threats of suicide’. It identified a four-in-five risk that residents who live close to and above tracks would be disturbed at night by noise and vibration ...
Labour’s transport spokesman in London, Val Shawcross, said, ‘Residents regularly complain about the noise made by poor condition Tube tracks. When the Night Tube starts it will mean even more misery. TfL seems set to accept that thousands of families could see their quality of life reduced to the point some threaten suicide — that’s just not a risk they should ignore’.”

It was a bombshell when that article came out and, as a result, we now have a community that is concerned by the noise, which of course is in a different league with the Night Tube.

We have had three grinding exercises and so we know that London Underground has been trying. The first was in February 2016 and two were later. They affect the noise. I will not go into any more detail, not as much as my good friend here has said, about anything up to 3dB. Quite frankly, the human ear does not really perceive those kinds of differences. I do not know anywhere where grinding has provided a long-term solution. My understanding is that grinding is done anyway - and I can be corrected - just to manage the tracks, whether it is for noise reduction or not.

We have been through periods living in our home and not living in our home just to protect our health. Once the Night Tube was introduced, we took the decision to move out of our home. We wrote to the Managing Director (MD) and told him that. We are not living in our home. We are still hanging on a promise that there will be some permanent solution. There are letters from our Member of Parliament (MP). We have had a lot of support from Valerie Shawcross [Deputy Mayor for Transport] … up to the point of the mayoral elections and we wrote to the MD of London Underground, Mark Wild last month, and he is perfectly aware of our situation.

Very quickly, on the process, I have been through two years of quite intense stress dealing with TfL. Of course, we all support the Night Tube. This is not an issue. It is a done deal that we all support the Night Tube. We are all Londoners and we know what is going on. My experience with the response of TfL over the previous 18 months is that it has been very slow. The one exception I have had since the introduction of the Night Tube has been, actually, from Mark Wild, the MD, in two emails. From October 2016, we have an email from him that says:

“I do not want our transport system to work in a way that impacts negatively on others. Our neighbours should have to suffer noise disturbance from our network and I have given Val [Valerie Shawcross CBE] assurances I take these matters seriously.”

Again, in December 2016, after we told him we had moved out until he solves the problem:

“I am very sorry to hear that you have decided to temporarily move out. No one should have to move out due to the running of our service.”

There are a last four points I would like to make. Independent regulations on TfL have been mentioned before. A lot of people consistently bring up this point and I am utterly in the dark to understand what the bottom line is, but it seems that TfL is not regulated on noise by any particular body. Somebody really needs to get a handle on this. Of course the WHO has very specific guidelines and there are extensive reports, but my understanding is that TfL continues to ignore these. There are considerable European Commission guidelines on health and understand that TfL continues to ignore them. Likewise with Westminster planning or environmental health decibel readings, they ignore those.

You are never going to get complaints from Crossrail. There will not be a Crossrail Department saying, “We have a noise issue”, because it has been dealt with effectively at source and that is what we need with the system now. We have an antiquated system.
My two final points are that the decibel interpretation seems to be very subjective and I would ask you, please, to look at that. I do not want to be prioritised over somebody who has a lower decibel reading than me. My view is quite simply that nobody should have to suffer Night Tube noise, end of story, and that should be the objective.

Our health is being affected by this. I do not understand why the Mayor of London can have such an active policy to protect our health from things like diesel fumes in full knowledge of what is now happening and then impose this kind of detrimental effect on our health with the introduction of the Night Tube.

Leonie Cooper AM (Chair): I am afraid I am going to have to ask Liz and Razana [Yoosuf] to be quite snappy, then, because that was six minutes that we have just had from Ian [Kitson]. I do not want to cut you short but, if you can, just make sure that you are very focused. I am assuming that in Archway this must be the Northern line and then you could go into the description of your situation and your neighbours. Thank you, Liz.

Liz Lawson (Resident, Archway): It would be helpful if you can just give me a quiet indication because it is very hard when you are speaking to know how long you have spoken for once you start. If you can, just raise your hand --

Leonie Cooper AM (Chair): OK, I will.

Liz Lawson (Resident, Archway): The area that I represent is Archway and it is on the Northern line. The line runs directly underneath the A1, Archway Road. The area that we are talking about is between Archway and Highgate. I moved into the area in 1999 and so I have been there for 18 years now. When I first moved into the house, I could not hear any Tube noise upstairs at all. Downstairs there was a very faint rumbling noise, which was actually quite pleasant. It was absolutely not disruptive.

In 2013, I suddenly started to hear a lot more noise. It is a three-storey house and I could hear the noise right up and down. Because we have quite a flourishing community in our area, I started to talk to other people about whether they also could hear noises that they had not been able to hear before. A number of people said they could. Some people said they could not. We have to bear in mind the fact that a lot of people do things with their houses. For example, if you take up the boards on my ground floor, you touch the earth underneath and so, basically, there is a direct route for noise up into my house. Some people have installed new floors, concrete floors and all kinds of things and so some people can hear noise and some cannot.

Anyway, we decided to talk to TfL and London Underground and they sent in engineers in January 2014. That was three years ago. They measured the noise and the noise in one direction was 43dB and in another direction was 30dB. At the time, the engineer said that the rails needed to be reground and should be renewed within three years.

What happened next was quite extraordinary and I want to focus on this for a bit. The engineer’s report came back very quickly in our case and, almost immediately, we got an email message from the Community Relations Manager at that time, early 2014, who said, “This is an urgent problem. The rails need to be reground”. He gave us a date of that spring, which was 2014 still, and he agreed that the rails needed to be regrounded. The time came and absolutely nothing happened. We wrote three times to the Community Relations Manager, saying, “You promised us this. Why did it not happen?” We had no reply. At the end of January 2015, a whole year later, we got a message to say that it would be ground in March 2015. Again, it did not happen.

I will not go laboriously through the saga but this saga went on and on and on. We were given dates; they were not fulfilled. We wrote and there was no answer apart from an acknowledgement saying, “We got your
letter and we will act on it”. The point I want to make is that, in the end, the rail regrinding took place in April 2016. That was nearly two and a half years after we raised the issue.

One of the things you asked us to refer to was what we considered to be TfL’s and London Underground’s treatment of us. What I want to say is that treating the public like that is cavalier and it is disrespectful. I have worked in the public sector for decades. If I make a promise, I fulfil it. If I am not able to stick to that promise, I warn people in advance. The fact that we were promised all of these dates and they did not happen and we were not warned that they would not happen is very disrespectful to the public.

Anyway, finally, Andrew Pollins [Transformation Director, TfL] wrote to us to say that it would happen and it did happen. We have had the measurements taken again recently. They were taken last month and, interestingly, they showed that the southbound trains had increased by 4dB and northbound trains, thankfully, had decreased by 6dB. As you say, grinding is not a panacea.

Our point is that something very important has happened since we have had that grinding and that is that we have the Night Tube. What is acceptable when there is background noise is not acceptable when you have a ground-floor bedroom, as I have, and you cannot sleep because you hear rumbling. The trains come past every 15 minutes and that is in both directions all night on Fridays and Saturdays.

I absolutely concur with my colleagues who have spoken before. This is not tolerable. This is not right. Also, TfL has treated the public very badly in not responding to our complaints. There I will stop.

Leonie Cooper AM (Chair): Thank you very much, Liz. Last but very much not least is Razana. Again, I am going to assume because you are living in Mornington Crescent that this is probably a Northern line issue.

Razana Yoosuf (Resident, Mornington Crescent): It is, yes.

Leonie Cooper AM (Chair): There is a bit of repetition here with Northern line issues, which I will want Duncan [Weir] to comment on, but of course Mornington Crescent, again, is one of these areas where there is a crossover situation with the lines. If you could tell us your situation and also any of your neighbours to illuminate further from everyone else?

Razana Yoosuf (Resident, Mornington Crescent): Thank you for the opportunity. I have lived in Mornington Crescent since December 2013 in a newly renovated house. The whole thing was renovated. I lived completely noise-free.

I did not hear any ground-borne noise or vibration until 31 October 2016 when suddenly I started to feel and experience significant ground-borne noise and vibration, which is a very interesting point because 18 November was when the Night Tube started in that area. I contacted TfL the following day and subsequently an engineer came on 9 November.

I will tell you my own readings. They went up to 53dB on the southbound Bank branch. Interestingly, although Mornington Crescent has only the Charing Cross coming through, the offending branch is more the Bank branch. I had 53dB on the southbound and 44dB on the northbound, both above the acceptable threshold. My vibration levels were 89 on the southbound and 29 on the northbound. My understanding is that the limit should be 20 as the threshold and it is 89.

In my home, in my basement, which is my living area, it is relentless. Every couple of minutes, I hear these trains going up and down. The furniture vibrates, the radiators vibrate and there is vibration in the floors. It is just constant and relentless.
I have spoken to some neighbours. When I contacted TfL on 1 November [2016], they told me that at least four other people had complained. It is quite scattered. The majority are on Mornington Crescent but there is also Arlington Road, Beatty Street, Nelsons Yard and on the other side King’s Terrace. The common thread from all the neighbours I have spoken to is – and some of them have lived there for more than nine years – that either they have heard the noise for the first time or it suddenly increased its levels around that time in November.

In terms of the impact of the noise and vibration, I have just told you about how relentless it is. It has affected my sleep patterns. I have never had a problem sleeping before but I do now. Some of the neighbours have complained about anxiety and it also affecting their sleep patterns and one person is no longer able to rent out his basement room, which he was getting £800 for a month, because of this issue. At a time when London is struggling for housing, you have people being turned away.

As a result of the readings taken by TfL trackside and in some of our homes, they found that the southbound branch is the one that is most offensive and so they are looking at remediating that. They are looking at track softening. It is called track fastening, I believe. They are receiving that at the end of March [2017] and they will start work on the southbound branch. We do not know whether that will work, but we will have to wait and see. That is one of my questions. What happens if it does not work? I know of at least four people whose readings have been taken and the northbound readings are all above 40dB.

We have asked TfL why they are not considering it because the southbound branch has concrete sleepers whereas the northbound branch has timber sleepers. The same technology does not apply and so the track fastenings will not work on the northbound branch. We asked them why they are not even considering it now and they said that they have not started to consider it because they have limited resources and they have to prioritise across London. That does not help us because having read a redacted report from TfL in preparation from the Night Tube – I think it was written about 2014 – all the lines in that area are rated ‘COD’, which is bad. They are only going to get worse. If nothing is going to be done on the northbound branch, we are going to see these decibels increase further. We have been told that they can use grinding but, as we have all heard today, grinding may or may not help. The ultimate thing is that the tracks need to be replaced. They have to be replaced at some time because, whilst I know of at least 15 people who are currently impacted by this, there could be many more I am not aware of and who have not complained.

Just one key point also is that one of the people in the neighbourhood had seen people waiting to go into the Mornington Crescent station because he comes home from work very late every night. He had been seeing people in overalls waiting to go in during engineering hours. His recollection was that it was in the October/November timeframe, which is exactly the time that we all started to experience this issue.

My questions are: southbound, if it fails, what is going to happen? Northbound, you really need to consider it. Why are you not considering it? Why was there this sudden commencement of noise? I have raised this question with TfL a couple of weeks ago and I am still waiting for the answer. We have asked them what they have done and also when the concrete sleepers were recently installed because that was mentioned in one of the reports. I will wrap up there.

Leonie Cooper AM (Chair): Thank you very much, Razana. It is very helpful to have the spread that we have had, but as well as those of you who have been able to join us today to speak to the impact in your local areas, we have also received quite a large amount of correspondence from people in other areas who are also suffering similar problems and issues. What seems to be the situation from our perspective – we have tried to map them – is that there definitely seem to be some hotspots in terms of noise. We have not heard today especially from the group at Kennington, where again a number of the Northern line branches come together,
the Bank branch and the Charing Cross branch, north and south, four platforms. South Wimbledon is also on the Northern line. There are some definite hotspots.

I am sure my colleagues are going to want to get into the detail now with all of you - thank you - but also addressing TfL. I am going to start with Andrew, who I know has been dealing with this on behalf of a number of residents for some time.

**Andrew Dismore AM:** Yes, Luce [Jakovella] and Razana [Yoosuf] are constituents of mine. I have a letter here written by the Mayor of London, Sadiq [Khan], to Assembly Member Florence Eshalomi, who is Chair of the Transport Committee, on 15 August 2016. This is a question for TfL, really. You have heard what these people have had to say. What the Mayor wrote was this. Presumably, this was a letter drafted on his behalf by TfL and signed by him rather than TfL:

> “Anyone disturbed by the Night Tube should contact TfL’s 24/7 customer service team on [and it gives the number]. Everyone is guaranteed a personal response and an effective, speedy investigation. This often involves visits to residents’ homes to get more information and to keep them up to date with the action being taken.”

That is what the Mayor promised the people of London. You have heard here from residents who, I suspect, would think that that is a laughable statement. I can certainly say that from the correspondence I have had from other residents in my constituency, they would think that that is rather laughable as well.

How do you square what you wrote for the Mayor to send out to the Chair of the Transport Committee - and by extension to Londoners - with what you have heard today?

**Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground):** I do apologise on behalf of TfL if you are experiencing issues with noise that are affecting your life.

**Leonie Cooper AM (Chair):** Duncan, I am going to have to ask you to speak up because I know that some of my colleagues are definitely going to say --

**Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground):** Sorry. I thought the microphone would pick me up. I inherited, for want of a better word, noise and vibration as a complete entity before we introduced the Night Tube and so I had a team of engineers and managers who were tasked with looking at the operation and maintenance requirements in order for us to introduce the Night Tube.

**Leonie Cooper AM (Chair):** Sorry. Could you just say when that was? When did you --

**Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground):** When I personally --

**Leonie Cooper AM (Chair):** Yes.

**Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground):** I was involved in the inception of the Night Tube two or three years ago, but I have moved around in the company and I am now head of operational engineering for London Underground. As part of that role, I was asked to look at the noise and vibration issues that were being experienced.
I also managed the business improvement team, who are six signalling specialists in the organisation and I asked them to look at why we were receiving numerous complaints that we were not handling the complaints we were receiving in an efficient manner. I had a review of the way that we dealt with complaints and found out that it was, for want of a better word, disjointed. There were a number of different mechanisms that complaints were received through and we were recording how many complaints we were receiving and how many complaints were being dealt with in the complaints process but not actually dealing with the root causes and ensuring that we looked at them with engineering solutions.

I have simplified the process and everyone is absolutely committed to delivering a much better service through the process that has been adopted --

**Andrew Dismore AM:** When was that?

**Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground):** That was in the late summer of last year [2016].

**Andrew Dismore AM:** How do you explain, then, the complaints that you continue to get that are not being processed very effectively since then? Presumably, the Mayor’s letter of 15 August [2016] was around the time that you put this new system into place, which is presumably what the Mayor has tried to reflect in good faith in his letter to Flo Eshalomi [AM], but it does not seem to have happened, does it, from what you have heard today?

**Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground):** A number of these ones were engineering solutions that, clearly, have to be planned and executed and so --

**Andrew Dismore AM:** No, people are not being told what is going on or are being given dates with nothing happening or are being told that something is going to happen and it does not happen. That is not an engineering solution; that is communication.

**Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground):** I will have to go back to my colleague, but he is in correspondence with a number of the people who are leading the residents’ committees to give them assurance on what our engineering proposals are.

We have to go and evaluate what the complaint is to quantify it because, as you have already heard, there is a spread of decibels that people are impacted by. We have to go out and quantify what the issue is and then we try to identify which of the lines is actually causing the issue. We have a number of different mechanisms to do that like visual inspections and automatic train monitoring systems on some lines and so we try to identify what the cause is. Then, depending on what that cause is and also the track formation, we will look to come up with an engineering solution. Some of them --

**Andrew Dismore AM:** Jennette [Arnold OBE AM] is going to come on to some of the engineering stuff later on. I am more concerned about how you deal with the people here rather than the engineering solutions, which Jennette will ask you about shortly.

See, what I am concerned about is people being, frankly, messed about and their complaints being brushed under the carpet. Perhaps if they had thicker carpet, it might help a bit! Let me give you a couple of questions along those lines, OK?

Andrew Dismore AM: We have heard from the residents today that they lived perfectly happily for some time and then suddenly, bang, there was a trigger. We have absolutely specific dates for when things changed. Something must have happened to change what was a perfectly habitable home into a nightmare. Something must have happened on that date or the day before or two or three days before. If you are investigating complaints promptly, why can that specific thing not be identified and dealt with?

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): We have identified the cause. In each of these cases --

Andrew Dismore AM: The problem is that it is taking you several months in some cases, certainly weeks in many, to get around to doing that inspection. If you acted promptly on what the complaint was, you might be able to identify either from your maintenance records or from something else what the cause was.

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): From the point of when we receive a complaint - and I also manage the noise and vibration team, which has the monitoring equipment - they will contact the resident within a working week to try to find a mutually acceptable time that they can then go and carry out --

Andrew Dismore AM: I do not think that the people around here think that and, certainly from the other complaints I have had, people do not think that, either. That may be what you think is happening, but on the ground it does not seem to me.

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): With respect, most of these are quite longstanding complaints. I can only talk about the process that I have now brought in. I absolutely assure anybody who complains to us about noise that they will get the response that I believe is reasonable, which is that within one working week we will sort out with them a mutually acceptable time that we can come and quantify the issue. We have some complaints, for example, where there are a number of different lines in proximity to the property and we have to identify which of those lines is the actual cause of the noise they are experiencing.

Andrew Dismore AM: Yes, I accept that, but you have not answered my specific question. When you get a particular complaint of something suddenly happening on a particular date, why are you not trying to identify what happened on that date? That might short-circuit everybody’s problems by trying to identify what is going on. Razana [Yoosuf] gave you a specific date. Luce [J covella] gave you a specific date. The other people probably did the same.

Razana Yoosuf (Resident, Mornington Crescent): Can I speak? Is that OK?

Andrew Dismore AM: Yes, Razana.

Leonie Cooper AM (Chair): Yes, do come in.

Razana Yoosuf (Resident, Mornington Crescent): I did ask the question as to why it started on that date and we raised this question. We said, “Have you carried out any structural or non-structural changes during this period?” It was very specific, as you have just mentioned. They said no, but then recently somebody in the neighbourhood had seen these people during that period. It just seems like too much of a coincidence because people all experienced at that point in time. They have said it was around November. For me, it was 31 October. It is very specific.
Leonie Cooper AM (Chair): Is there an explanation that could lead us to some sort of issue that could have arisen in that way, Duncan? Also, can I just ask you? When you are doing the monitoring, are you doing the monitoring across all time periods and not just monitoring at the point of the Night Tube running or anything like that? Is it for a whole period of time?

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): When we go to someone’s property and set up our test equipment --

Jennette Arnold OBE AM: It is so variable.

Leonie Cooper AM (Chair): Hang on. Just a second. Let us get the answer.

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): -- we will then look to measure what the actual noise is. Then we will work out from there exactly where the trains are in proximity to the property and look at the timescales so that we can try to identify what the specific issue was on that line that caused the noise and monitoring equipment to record that level. It might be a joint and so we would then have to bring up an engineering solution. Do we replace that joint? Can we weld it?

The main cause, usually, of a sudden jump, as we have now found out, is a change from wooden to concrete sleepers. That has had an impact in some areas. The one that I specifically think of is in the Wanstead area and we are looking to put resilient track fastenings in that area to address that. Unfortunately, we can only do that on flat-bottomed rail, which I have here. These are the resilient track fastenings, which are --

Andrew Dismore AM: We will come to the engineering stuff later on. I am still focusing on complaint handling. I do not want to be diverted into the detail of engineering because Jennette [Arnold OBE AM] is going to probe you on that shortly. Let us get back to complaint handling. You have mentioned the sleepers and I might want to ask you some questions about that after Jennette has talked about that.

I come back to the point that you have a specific date and, if you might quickly, you might be able to identify it and deal with it more quickly.

Can I go on, then, to this business about the noise limits to which you work? We have the WHO limits --

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): We do not work to a specific work limit.

Andrew Dismore AM: Why not?

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): We treat each complaint individually and we will look for an engineering solution to address that complaint. We do not set a limit on noise.

Andrew Dismore AM: What threshold do you work to?


Andrew Dismore AM: If somebody came in and said, “Come up and look at my flat. I have a 20dB problem with Tube noise, which is barely audible”. What about that?
Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): We would look to see if we can identify if there is a specific issue on that portion of line that is causing the noise to impact on the individual. Clearly, there is a certain amount of noise that is going to be attributed to a moving metal-on-metal interface, but we look at each complaint individually and treat it on its own merits.

Andrew Dismore AM: I have to say that that is being a bit disingenuous because, from all the stuff I have seen and all the complaints I have seen, 50dB seems to be a working limit that you are using. It may not be an official, sanctioned, proposed number, but it seems to be what you are --

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): That is not the case. I can absolutely assure you. I manage the noise and vibration steering group --

Andrew Dismore AM: All the stuff I have here -- and there are plenty of complaints here. Luce [Jacovella] has had that. Her flat was recorded at 52dB and she was told that the limit was 50dB and that you were not going to do anything else about it.

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): When I took this over as a body of work, clearly, I had to make sure that we started looking at the points of need first. We put a heat map together - you will have to excuse me but I have a number of pieces of paper here - and we started to consolidate the complaints in an area. We looked at the amount of complaints, the volume of complaints and the decibel levels experienced and we have carried out major engineering interventions in those areas to try to address them.

Unfortunately, Dr Jacovella - for which I do apologise to you - has slipped through the net on that one, so to speak. We have made a commitment to grind next week and we will then look at what impact that has --

Luce Jacovella (Resident, Euston): May I say something?

Leonie Cooper AM (Chair): Luce would like to come in, just to comment.

Luce Jacovella (Resident, Euston): I have written to TfL every single week for months. How can I have been slipping through the net? I guess most of them --

Andrew Dismore AM: You have emailed me a lot as your constituency Assembly Member and that has all been passed on to TfL.

Luce Jacovella (Resident, Euston): Yes. I have written to anyone who has even the remotest say on the matter. Clearly, the level of noise is at an intolerable level.

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): Yes, it is unacceptably high. I agree with you.

Luce Jacovella (Resident, Euston): How can my case have slipped through the net? Sorry. It is just --

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): My focus was about consolidating into areas because it is not a limit on funding; it is a limit on the physical resources that I had available to me and the timescale I have had to start getting the maximum amount of impact --

Andrew Dismore AM: You do not have the resources you need to deal with people’s problems?
Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): No, I do have -- we have to run an operational railway and so I have a limited amount of engineering hours available to me. It is not a financial constraint that I am under; it is about how much work I can realistically plan and execute in the time available.

Leonie Cooper AM (Chair): Your constraint is more about the fact that if you were going to, let us say, fix the whole of the Northern line, it would be slightly inconvenient for all of the people who use it if you had to shut it for two weeks to undertake all of the work.


Leonie Cooper AM (Chair): It is more to do with the small size of the windows when different parts of the --

Jennette Arnold OBE AM: Do it at night.

Leonie Cooper AM (Chair): -- Underground system can be taken out. Is that what you are saying? Presumably, you have to compete with other activities that might wish to be --

Jennette Arnold OBE AM: It does not have to be closed.

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): Yes, we have a set amount of access available to us. We have other works that are being undertaken and so we have to almost leap from place to place in doing that.

Andrew Dismore AM: Hang on a minute. You have so many engineering teams, yes? I have been down on the Northern line with them overnight and I have seen how much work they can get done both in terms of relaying track and also in terms of fixing broken rails, points and so forth.

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): We do have a supply chain that I can call on as well.

Andrew Dismore AM: You have a supply chain constraint; you have a number of --

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): No, I do not have a constraint with the supply chain. I have unlimited resources in the supply chain. My limiting factor is gaining access to the track. Also, for example, the resilient track fastenings have been a really good solution for some of them --

Andrew Dismore AM: We will come on to the engineering solutions later on, OK? You keep --

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): -- but there is a lead time for us actually procuring those.

Andrew Dismore AM: No, I am more concerned about how complaints are dealt with. I have said that several times now. Jennette [Arnold OBE AM] will probe the engineering solutions. She has done a lot of work on that. What I am concerned about is getting to the bottom of the story about why these people’s complaints are not being dealt with. Part of it seems to me that there has to be capacity constraints on you. You have said that it is the hours that you can have a closure and the electricity turned off and I understand
that, but if you had twice as many teams working on replacing broken points or a cracked rail or putting in whatever it happens to be, you could do twice as many bits of rail, could you not?

**Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground):** That is a simplistic view of it. We have other activities we have to undertake on the railway. For example, grinding has been one of our solutions. We have two grinders available to us but we do tend to, for efficient use of the grinder and also because we have complaints on a number of the lines, go end-to-end on the lines. We cannot just hopscotch around with a grinder. That is not a realistic use of our resource.

**Andrew Dismore AM:** Fine. That is a resource constraint.

**Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground):** Yes.

**Andrew Dismore AM:** Can I go back, though, to the question I put to you, which was about --

**Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground):** Even if I bought 50 grinders, it still would not address the individualised problems. We have to go from end to end. If we start on the Northern line, it is much more efficient to start from the top and go through --

**Andrew Dismore AM:** We have already decided - or you have tried to divert me along these lines - that grinding is not the solution to all of these things and there are all sorts of other things that could be done as well, which presumably do not require going up and down the Northern line.

**Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground):** There are different issues in different areas and we have to deal with them on their individual merits.

**Andrew Dismore AM:** Correct and so, if you had more teams, you could do more of the other bits and pieces that do not require grinding. We will come back to the technical stuff later on.

Coming back to my point about the noise limits, you have no benchmark to work to, from what you were telling me, no objective figure so that you can say to people, “Objectively, this is --

**Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground):** I have not put a constraint on my team as to what we will and will not address. We address all complaints individually.

**Andrew Dismore AM:** No, but do you not think it would inspire more public confidence if you had a benchmark – for example, the WHO figure – to which to work?

**Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground):** On the WHO figure would be, for example, on the Northern line extension, it is about the infrastructure we are going to install to ensure that it will not exceed certain noise parameters. We have up to 150-year-old assets and they have not been designed to mitigate noise. We have to then look to retrospectively engineer solutions that will deal with people’s individual complaints.

**Andrew Dismore AM:** All right. What you are saying is that the WHO figures you are not going to adopt because you have no prospect of meeting them?

**Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground):** If I adopted the WHO figures, I could probably exclude a certain number of people’s complaints, but that is not
actually addressing the issue. If people are feeling that they are being impacted by the Underground, then I am going to see if I can solve their problem.

**Andrew Dismore AM:** If you adopted the WHO figures, these people here would not be complaining at all, if you were meeting them.

**Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground):** There would be at least one person sitting at this table for whom we probably would not look for a solution because they are not impacted by the WHO guidelines.

**Leonie Cooper AM (Chair):** With the WHO figures, my understanding is that there were controls over levels of noise in terms of the increasing impact and likelihood of permanency of damage to the human ear. Is the 40dB mark one of the ones where you are more likely to find that people are disturbed? Sorry to cut in, Andrew, but would it not be useful in terms of saying, “These are going to be our absolutely top priority” - you have said you have been heat-mapping - and to start with those first?

**Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground):** We started with those over 40dB. They were our priority. There were areas where we started clustering them. I have my heat map here. I have just seen it. We had a look at these areas. It is probably very difficult to see and I can distribute it. We clustered them and started dealing with those areas because, clearly, that had the greatest impact. That was to do with the decibel levels and the amount of real impact.

**Leonie Cooper AM (Chair):** It would be helpful if perhaps you can provide to the Committee to have a look at.

**Andrew Dismore AM:** I still come back to my basic question. Why can you not have a benchmark, an objective noise figure in decibels, above which nobody should be expected to put up with?

**Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground):** We did discuss that and I raised it. Because I am an engineer, it was the first thing that I raised. What is the cut-off point that we will or will not address people’s concerns? The view within the company at the time was that that was not appropriate. We were having an impact on these individuals and, if we could find a solution to mitigate that, then we would. It might be, for example, a joint that was knocking and might just need tightening, but it was having an impact on them. Even if it was 35dB, it was having an impact.

**Andrew Dismore AM:** Fine. If you have a benchmark above which nobody should have to tolerate, at least that lets people know. You may do better than your benchmark. Obviously, with a target, if people can exceed their target, everybody is even happier. You have people across London who are dissatisfied. They do not know what to expect from TfL other than, from what I can see, pretty rubbish service. Frankly, if you had a number to which you were working, people would feel a lot more satisfied--

**Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground):** With the greatest of respect, Mr Dismore, I do not think that anyone on this side of the table would be remotely satisfied if I turned around to them and said, “I am really sorry but you are at only 39.5dB and so we are not going to do anything”.

**Razana Yoosuf (Resident, Mornington Crescent):** No, but there will be other people--

**Richard Collins (Chair, Barbican Association Working Group on London Underground):** That would be a massive improvement for many people.
**Razana Yoosuf (Resident, Mornington Crescent):** An improvement, yes.

**Andrew Dismore AM:** Yes, and that is not what I put to you. I said that if you have a benchmark, you have something to work to and you can always do better than that. It is about letting people know what a reasonable expectation is. Of course you can do better by doing something small, fixing a joint or something. Of course you would do that, but that is the problem. What about dealing with local authority noise teams? Do you deal with those?


**Andrew Dismore AM:** All right. I have one of the complaints here, which came from [a resident of] Marylebone and says that Westminster Council’s environmental health team took up complaints on residents’ behalf because they could get nowhere with TfL. She understands that TfL is yet to respond to Westminster Council’s environmental health team about the complaints.

**Leonie Cooper AM (Chair):** Helen, are you able to add something to that?

**Helen Woolston (Sustainability Co-ordinator, London Underground):** Yes, we do deal with environmental health officers and other colleagues in the different councils. I will just say that all noise legislation is local because of the sensitivity and people hear noise differently according to their circumstances. That is how it is dealt with. There is legislation for this in the local statutory nuisance guidelines.

**Andrew Dismore AM:** When somebody tells me that Westminster Council’s environmental health team made a complaint on behalf of a number of residents from Marylebone and has not had a reply, she is wrong, is she?

**Helen Woolston (Sustainability Co-ordinator, London Underground):** No, I did not say that at all. We deal with a lot of councils. If there is a particular case there, then I am happy to take it away and look into why it has been a problem, certainly..

**Leonie Cooper AM (Chair):** Richard wanted to add to that.

**Richard Collins (Chair, Barbican Association Working Group on London Underground):** Can I intervene on this point? We in the Barbican had a meeting with TfL that was organised by the City of London environmental health team. I have asked TfL five times for minutes of that meeting and have not received them. This just goes to underscore how really terrible your organisation is at doing the basics.

**Helen Woolston (Sustainability Co-ordinator, London Underground):** I can speak to a colleague about --

**Leonie Cooper AM (Chair):** There does seem to be a bit of an issue here about the level of response. Would you agree? Certainly at some points when Andrew [Dismore AM] was putting points to you, Duncan, I could see every single person sitting here nodding. They had obviously experienced some of those delays in coming back to customers who are experiencing difficulties. Would you accept that there are still improvements that are required in terms of the response to customers when they are experiencing these difficulties?

**Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground):** Clearly, we are not meeting people’s expectations if they are complaining and so I will discuss that with my colleagues. I have on occasion had that raised with me as an issue and, when I do speak to my colleagues in
the communications team, they assure me that there is a two-way dialogue going on. Sometimes there is a lag between when we correspond with them and when the proposed solution is going to be undertaken and then we have to go back and re-evaluate the impact of that engineering work. However, there needs to be better communication. That is clear.

**Andrew Dismore AM:** For two and a half years, Liz [Lawson] was saying, the work was getting put back and put back and put back and she was not being told why. They also have similar problems in East Finchley, where people are being messed about --

**Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground):** As I stated at the beginning, when I took over this process, I did find that it was quite localised for some of the solutions. Now we have a much more centralised approach to this --

**Andrew Dismore AM:** Yes, that is still ongoing in East Finchley. The last area I want to explore with you before Jennette [Arnold OBE AM] comes in on the engineering stuff is this. Take Luce [Jacovella], for example. Her home is uninhabitable. What is she supposed to do? Razana [Yoosuf] is in a not-dissimilar position. What are they supposed to do?

**Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground):** Sorry. I do not understand what your question is.

**Andrew Dismore AM:** Luce has a problem. You can see just from looking at her that she is clearly emotionally distressed by what has been happening. Razana has a problem with very significant noise levels. Luce’s problem is that her flat is effectively uninhabitable and Razana has similar problems, too. What are they supposed to do?

**Leonie Cooper AM (Chair):** And Ian [Kitson] has moved out.

**Andrew Dismore AM:** Ian has moved out, yes.

**Luce Jacovella (Resident, Euston):** I have moved out, too. In fact, I have not been sleeping in my property for weeks. I occasionally do if I do not find a bed because I cannot afford rent and a mortgage at the same time. I cannot rent out my own property because nobody is willing to move there. I sometimes do babysitting or housesitting and I sleep occasionally on sofas while carrying out a fulltime job. Yes, I am stressed to the point of collapsing. Thank you for your question. What am I supposed to do?

**Andrew Dismore AM:** Yes. What are they supposed to do?

**Tony Arbour AM(?):** It is a rhetorical question.

**Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground):** I have heard some whispering that it is a rhetorical question. It is --

**Andrew Dismore AM:** It is not a rhetorical question, actually. It is a genuine question. You have people who live in basement flats or on the ground floor. You have heard also from Razana [Yoosuf], somebody who has lost significant amounts of money because she cannot let her basement or ground-floor flat. What are they supposed to do?

**Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground):** I have come here today to discuss the solutions that we are trying to put into place. Clearly, there is an issue with the
timescales for putting those solutions forward. I am here more, I suppose, to reassure you that we are taking all complaints seriously and we are making appropriate interventions where we can.

**Andrew Dismore AM:** What are they supposed to do? Are they supposed to move out while that work is done? If you are renting a flat and it is uninhabitable because there is damp in it and the landlord has to do major works, you are moved out, often by the council, and rehoused temporarily. What are they supposed to do?

**Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground):** That is an individual decision.

**Andrew Dismore AM:** It is not an individual decision, is it? If you look at Luce [Jacovella] —

**Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground):** You have already stated about the 40dB parameter. We would then have to take a view on what that would look like for different thresholds. I am not in a position to determine what the solutions are for people. All I can do is take their complaints on board and deal with them in an appropriate way to attempt to resolve them.

**Andrew Dismore AM:** Normally, when there are environmental health concerns about somebody’s property, they have legal rights to take action against the landlord or the person causing the problem. Are you some sort of special case?

**Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground):** I am not a lawyer and so I would not be able to make any comment on that.

**Luce Jacovella (Resident, Euston):** Can I say something? TfL customer service has expressly told me that they do not have any compensation scheme and so it would not be possible to claim compensation for damages. That is what I have been told.

**Andrew Dismore AM:** Razana?

**Razana Yoosuf (Resident, Mornington Crescent):** Can I say something in terms of my response from TfL? I have had a pretty good response compared to other people here in that I complained on 1 November [2016], but I kept ringing. I had to ring every week. On 9 November the engineer came around to my place but, since then, it had been constantly every week to find out what is going on. The customer service people have been very good but the engineers were just not coming back. Finally, in January [2017], they told me that they have to order this stuff. They knew that they had to do all of this work all along, but then the ordering of the stuff took another few months. In January they made the decision and it is coming at the end of March. Five months we have waited just for these fastenings to come through, which they knew they had to do anyway.

In terms of the thresholds, I am horrified that you are not working to an acceptable threshold limit. Everybody does. We all work to guidelines. If you do not have something as basic as a threshold, how can you prioritise? This is why we went back, even on the northbound track, saying, “Many of us have readings above 40. What are you doing about it?”

Frankly, I think that TfL is hoping that we will go away after the southbound remediation and that is why they are just playing for time. It is a completely different technology. You cannot use the track fastenings. You have to use grinding. Apparently you have ventilation issues. You have to do something because we cannot continue like this.
Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): I can assure you that we are not playing a time game here and hoping that people are going to go away. I can absolutely and categorically assure you that that is not the case.

Razana Yoosuf (Resident, Mornington Crescent): Why do you not start thinking about it, then? It is a different problem. Southbound and northbound are two different problems and two different technologies. You should at least be thinking about it.

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): For the southbound we have planned, I believe, an intervention in April [2017] for resilient track fastenings --

Razana Yoosuf (Resident, Mornington Crescent): That is right.

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): -- which should deal with your immediate --

Razana Yoosuf (Resident, Mornington Crescent): That is the southbound.

Andrew Dismore AM: The point is that it took you months to find out what the problem was --

Razana Yoosuf (Resident, Mornington Crescent): Absolutely.

Andrew Dismore AM: -- and then more months to get around to ordering the parts.

Razana Yoosuf (Resident, Mornington Crescent): No, they knew what the problem was, but they took two months to decide. Well, they had made the decision but in terms of actually going to do it. Then they took another two months or more to get them from China.

Andrew Dismore AM: Yes. I still come back to the question I was putting to you, Duncan. If you had to live in Luce’s [Jacovella] flat - and you can see the state she has ended up in because of all this noise that she is experiencing - what would you do?

Leonie Cooper AM (Chair): Andrew, it is extremely unfortunate that we do not have someone in addition to Duncan, whose role is the Head of Operational Upgrades. I am not sure that that you are in a position to be able to answer that question.

Certainly, if I look at the comparator with Crossrail 1, there were some very large holes in the ground, lots of pile-driving going on, lots of cement and lots of huge pieces of equipment. I spoke to the teams at Bond Street, for example, and it is very close to a lot of people’s houses there. One of the options that was offered by Crossrail 1 to the local residents was, “Would you like to move out during the duration of the works?” I do not think that in your position as Head of Operational Upgrades you are going to be able to answer Andrew as to whether or not people should be offered the opportunity to move out until the works are complete - and it is extremely unfortunate that we do not have someone from TfL who can say that - or whether people should be compensated or whether they should have weekend respite, which has also been offered by Crossrail 1. People have gone off to hotels at Crossrail’s expense for weekends. I do not feel that you are really in a position to answer that. I am going to, unfortunately, have to draw that to a close --

Andrew Dismore AM: OK. Can I just say, Chair --
**Leonie Cooper AM (Chair):** We need to move on to Jennette because, otherwise, we are going to run out of time, Andrew. I have given you a lot of time now.

**Andrew Dismore AM:** Yes. Let me just say this, Chair. High Speed 2 (HS2) is coming to Euston and Mornington Crescent. One of the big issues around HS2 is precisely what you are talking about there: what arrangements will be put in place to mitigate the impact on residents. All I can say is --

**Leonie Cooper AM (Chair):** That is outside the competence of this meeting, which is on Tube noise. Andrew, you have had half an hour. I am moving on to Jennette now. We have only 20 minutes left on this item and I would like to now move on to Jennette, who is going to talk about maintenance and engineering, which is probably more in your backyard area, Duncan, in terms of operational upgrades. We may go back into the impact on residents and then we will want to talk about communication a bit more as well.

**Jennette Arnold OBE AM:** Chair, can I say a couple of things? Firstly, the time that we are allowed here will give us only the opportunity to start the exploration and that has to be said to residents here and who are tuning in and who are part of this absolutely massive epidemic. It is like an epidemic, is it not, really, across London? The scale of noise nuisance is absolutely widespread and we have heard this morning that it is damaging the health and wellbeing of Londoners.

One of the things that I am just going to go and ask Duncan about is, really, how long TfL has known about this. From the people I have worked with now for over 10 years building the case, it is clear to me that TfL should have known about this and should have taken this into consideration.

I also want to start, Duncan, by welcoming your apology to Londoners for the distress, discourtesy and disrespect that they have experienced over the years and continue to experience.

I want to ask you, firstly, about your structure. You say you took over the noise and vibration issues last year, but you still have a structure where you have operational directors for a group of lines. I say this because I met in November [2016] with Peter McNaught [Operations Director, TfL] and his team and they cover Bakerloo, Central and Victoria. Another meeting was with another operational director and so on.

Is your system set up to create competition between these different groups in terms of who can get access to resources to deal with their concerns?

**Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground):** Each of these service directors have their own resources available to them for maintenance and operations and so they are, essentially, three separate directorates. The rationale behind me taking over the noise and vibration is that I am a centralised function and I provide engineering to each of the service directors for the Jubilee, Northern and Piccadilly lines, the Bakerloo, Central and Victoria lines and then the subsurface lines.

**Jennette Arnold OBE AM:** Let me get this right. The resource for engineering is centralised directly by you --

**Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground):** It is.

**Jennette Arnold OBE AM:** -- but the three regional directors have to put in a bid to get access to that resource?

**Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground):** No. I ensure that I have the resources to support them on day-to-day activities, for the reliability and also for
engineering solutions on a wider footing. The track, for example, is an asset that goes across all of the directorates and I have a track engineering team that focuses on the track as a complete entity.

Jennette Arnold OBE AM: Let me then tease this out. We know that there is a trial going on to reduce a particular nuisance. I am just moving away from the noise nuisance and the Night Train-related nuisance for a moment because what we have to recognise is that there is Overground noise nuisance, there is above-ground noise nuisance and there is a whole range of noise nuisance. The Night Tube seems to compound all of these other noises.

Tell us. Why did you decide that the Central line at Woodford would get a trial? Was it because of a particular issue or are you trialling that so that it can be used as a remedy for similar noise in other areas? What would be the resource implications for that? Do you already have that in the budget?

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): When we received the complaint from the residents at Woodford, we had a look at the track formation and we could not find any immediate engineering problem. The track formation was in good condition. There was no corrugation of the track. The fixtures and fittings were complete. There was no apparent cause. It was just the noise, essentially, that is generated by the Central line trains going over the track.

Clearly, it was causing disturbance to the people and that was why they had complained. That was why I asked my engineering team to source or innovate a solution. They went out to the marketplace to see what else we could do above the usual interventions that we have. They found something called Quietrail, which is a spray-on solution onto the web of the rail, is below the crown here. We believe that that will stop some of the airborne noise through damping.

Jennette Arnold OBE AM: Is that common in other places that have --

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): No, we are going to be the first people to trial that. We are leading the way on that as a solution.

Jennette Arnold OBE AM: Is that particular noise nuisance to be found elsewhere within the TfL domain?

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): We believe that there are other sites where we might be able to use that as an engineering solution if it does give us the reduction in noise that we are expecting.

Jennette Arnold OBE AM: What sort of decibel noise is that?

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): The manufacturer is stating 6dB to 7dB and we believe --

Jennette Arnold OBE AM: Sixty?


Jennette Arnold OBE AM: It goes back to the point. We are trying to say now that if there was some benchmark and we went to the WHO, that sort of noise nuisance would be way down the list, would it not, because the WHO has about 35dB to 38dB?
Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): For that particular site – and I am afraid I am not going to start shuffling [papers] around – I believe it is about 50dB because of the proximity of the property to the running track.

Jennette Arnold OBE AM: They were experiencing 50dB?


Jennette Arnold OBE AM: That is one of the reasons why you are trying this --

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): This is airborne noise. There are two types of noise we experience. One is ground-borne, which is pulsing through the ground, and the other is airborne. This solution is more for ground-borne noise. Quietrail, we believe, should stop the airborne noise of the train passing.

Jennette Arnold OBE AM: We are discussing these things because these things are shared. There is a very lively and quite popular network and people are now knowing about the rubberised track called Delkor. How effective will this be and is it site-specific with the use of something like that?

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): That is a much longer-term solution and I would not be able to give you an answer at this point in time. I could come back to you on that specific point.

Jennette Arnold OBE AM: Going from what Andrew [Dismore AM] has said, we know or we believe that the complaint system and the response, from what we have heard this morning and from what I know from many years of dealing with TfL, is variable and in some instance haphazard. It is almost like luck of the draw. Razana, you are talking about having engineers and people at your house weekly.

Razana Yoosuf (Resident, Mornington Crescent): No, I rang them weekly. They did come to my house, too.

Jennette Arnold OBE AM: Yes. Would there be a standard? Are you looking to develop some sort of standard in terms of an engineering response to this epidemic of noise nuisance related to the Underground and in some instances Overground systems that TfL is responsible for?

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): We have an agreed end-to-end process in the organisation. I manage the resources for a significant proportion of that process but there are other interfaces that we have. We have the customer centre. We have internal service level agreements between us of what is an appropriate timeline for response. What I was looking for was a fair and consistent approach to noise and vibration complaints, and that is why I had a simplified process brought into use that everyone had to adopt. I then hold a monthly steering group where we look through any specific issues that we have. I hold a weekly review with my principal track engineer to go through each of the individual complaints, just to make sure we are getting good traction on them.

Jennette Arnold OBE AM: Are you in a position to provide us, after this meeting, with some sort of schedule that will show where you expect to be? I know that we have some indications – something is happening on the Northern line, Kentish Town, this month, at Camden Town next month and stuff like that – but our sheet is totally incomplete because you do not have the work that is going on, as I know, at the moment at Highbury and Angel, and Seven Sisters. If Joanne McCartney [AM] were here, she would be talking
about work that is expected at Tottenham. There is Elephant and Castle. It seems to me that every borough in London is, at the moment, affected. Residents in every borough in London are affected. Is that the schedule?

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): I have my spreadsheet of three or more complaints made because I did not want to bring any more paper, but I do have individual plans for every single complaint that we have and then I monitor those against a dashboard.

For the Night Tube, we have no outstanding complaints of more than 90 days that I do not have a planned intervention for. I have broken it down into less-than-90-day complaints, 90-to-180-day complaints and complaints over 180 days.

Jennette Arnold OBE AM: And the category?

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): And what we have is a planned intervention for every single complaint that we have received greater than 90 days. The reason I did it from 0 to 90 days - I could do it nought to 45 days - is that we are beholden to people giving us access to their property so that we can carry out an evaluation, then go out and look at our various onsite inspections, our recording vehicles and so on, to establish the root cause of the problem and then come up with a plan of when we are going to undertake the work.

Leonie Cooper AM (Chair): Jennette, can I just bring in Liz, who wanted to come in at that point as well?

Liz Lawson (Resident, Archway): Just a quick question. I am very interested to hear that after you have taken measurements and diagnosed a problem, excess noise, that you then look at the cause of it, because your engineers came into our area in January 2014 but although we have been told, “No, we cannot renew your track” as the engineers then promised, you have never given us any kind of reason for why we are hearing the noise. Have other people had the cause told to them?

Jennette Arnold OBE AM: I do not have a clue.

Liz Lawson (Resident, Archway): We would like to know what the cause is so that we can identify and relate to exactly the kinds of solutions, Jennette, that we hear in our groups and in our e-mails. People are talking about rubber rails and so on. We would like to know what the cause of the problem of the noise in our area is. You may know but we do not. Can we know, please, as part of your plan?

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): As I am suggesting here, I have a full engineering report for each complaint that I receive. We have the traces and so on and it does have a conclusion and a recommendation for intervention. If you are suggesting that as part of this process we provide those reports, I am quite happy to do that.

Liz Lawson (Resident, Archway): We know what the reading is but it is the cause of that reading that would be very interesting and useful.

Razana Yoosuf (Resident, Mornington Crescent): Also the suddenness. Why did it start on a particular day? Nobody has told us why.

Leonie Cooper AM (Chair): We talked a bit about that before. Jennette, I just interrupted you so that we could bring in Liz.

Jennette Arnold OBE AM: No, that is a valuable question become in some areas that I have been working on, Liz, they do not have any idea what is causing it. They do not have a clue. That is why in some areas they
have to keep going back and that is why we hear about the grinder going back three times. Ian, was it you who had the grinder?

**Ian Kitson (Resident, Marylebone):** Three times, we have had it.

**Jennette Arnold OBE AM:** That is reducing it at a decibel. The point here is that if TfL needs to be more open and more responsive, able to say publicly, “We have a problem here in some instances. We absolutely do not understand but we are going to keep our focus on it”. Duncan, can you tell me how many times this issue has been to Board level? Do you know? Do you know if TfL’s Board has ever discussed this growing disturbance experienced by Londoners?

**Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground):** When I was asked to take over the Noise and Vibration Steering Group I met with Mark Wild [Managing Director, London Underground] weekly until the last Night Tube service was run, and now I update Mark on a weekly basis. Once Mark had confidence that I was fully in control of the issue and that I was going to drive the appropriate solutions, he took his hand off me, so to speak. I had to meet him every single week and go through the numbers with him until he was assured that we were getting to grips with the problem.

**Leonie Cooper AM (Chair):** There does still appear to be a gap, though, in what you are saying, Duncan, which sounds as though internally, within TfL, you have a plan for many individual cases that Andrew [Dismore AM] and Jennette have been eloquently raising, along with our other guests. There seems to be a gap in the information that is coming back to people on what the identified cause is that underlies it. I am seeing a lot of nods now from the guests. It is you informing people what the cause is and then also the timescale for coming back to implement the solutions.

**Jennette Arnold OBE AM:** That is a good summary, Chair. Can I just go back to Duncan? He talked about the visits and the process they use, as we have heard. Saying you have a plan to implement and implementing it in TfL’s world can mean nought to two years. That is the experience. What I want to understand is that you are saying there are no funding problems and you are saying that you have engineers. You are basically saying that since you have taken over you have a handle on it, but you still have outstanding work around implementation that looks as if it is going to be years rather than weeks and months.

**Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground):** I brought the reports here for the people I believed were going to discuss their individual issues. For resourcing in the Archway, the noise was and is below 40dB. We have ground it and we ground it in spring of 2016. There has been a 1dB rise since that grinding. It was above 40dB, it was ground and it then dropped down to 36dB from 43dB.

**Liz Lawson ( Resident, Archway):** Southbound has gone up.

**Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground):** It has now risen unfortunately to 37dB, and that is on the north-bound. For the south-bound it was 33dB. After grinding it remained at 33dB and has now risen to 34dB. It has risen by 1dB in the year but that does not mean that we are not going to do anything. We are now looking at a possibility of re-railing that site because there is a corrugation issue, which is basically ripples on the track. That comes back to the question of whether we have a cut-off point of 40dB. The answer is no. It is still an issue to the residents of Archway and we are going to see if we can carry out further works. Now, we have ground and it has taken it below 40dB but we have still received a complaint. We are going to see if we can re-rail it.

**Leonie Cooper AM (Chair):** I am just going to bring in Luce and then Liz [Lawson] again.
Luce Jacovella (Resident, Euston): I hope to say one thing. Decibels were measured during the day and already the response was over 52dB. My experience is that during rush hour it is much higher. As I mentioned, it reached 60dB or sometimes even 65dB with trains passing through every one and a half minutes. I wonder whether slowing down trains could be an initial solution, just to ease the noise a bit at 6.00am.

Leonie Cooper AM (Chair): Duncan, do you want to just respond to those points?

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): I have just gone ahead. We have grinding planned for next week and we will come back as soon as you allow us access to your property to then look to see what the impact of that grinding was because clearly --

Luce Jacovella (Resident, Euston): --my property is empty.

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): Before I came here I brushed up a bit more on the individual issues and 52dB is completely unacceptable in your house. We are going to grind, we will look to see what impact that has and we will look to do further engineering works if required to take it down to an acceptable level. I started off the meeting and I do apologise it has taken as long as it has to deal with your issue. We have looked at it at the point of need, we have consolidated it and looked at the ones that were at the highest level and taken it down, but - although you have said that you have spoken on other people’s behalf - it was an individual complaint, which has unfortunately taken far too long to deal with.

Leonie Cooper AM (Chair): I am going to bring in Liz and then I am going to bring in Richard [Collins], and then I am going to come back to Jennette [Arnold AM]. Then I am afraid we are going to have to start to wrap this item up. Liz, let us bring you back in.

Liz Lawson (Resident, Archway): I just wanted to say that it is nice that you have reassured the Committee that you are still planning to re-rail the area that I am in, but the e-mail I received yesterday did not say that at all. It said that you had come back and done the measurements, which by the way have decreased by six but the south-bound has increased by four since regrinding. The end of the letter said:

“In view of the current readings, our engineers do not think that this is currently a situation that is appropriate for regrinding. We will take another measurement in three months.”

You are wrong to say that we have been comfortable with the fact that it is going to be re-railed. No, that is not what you said.

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): We are looking to see whether it does require re-railing. That is what I said.

Leonie Cooper AM (Chair): We will just bring in Richard.

Richard Collins (Chair, Barbican Association Working Group on London Underground): Duncan, you said that 62dB is unacceptable and that is great to hear. You said that you would bring it to an acceptable level. What is an acceptable level?

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): That comes down to the threshold question, does it not? We --
Richard Collins (Chair, Barbican Association Working Group on London Underground): You said you are going to bring it to an acceptable level. What is that level?

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): That is a subjective question. What I can assure you --

Richard Collins (Chair, Barbican Association Working Group on London Underground): You said it, Duncan.

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): No, you are absolutely right. What I am going to look at is every single engineering solution available to bring it down. There are some sites --

Richard Collins (Chair, Barbican Association Working Group on London Underground): Looking is very different to implementing.

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): Woodford is an example of a site where the noise from a Central line train passing a property on a good-quality track was 50dB. There are certain areas. We are now looking to put in Quietrail as an innovative solution to draw that down to a level that we can reasonably go to. We look at it on a case-by-case basis and we will keep on looking for engineering solutions to draw it down until you have no reason to complain.

Richard Collins (Chair, Barbican Association Working Group on London Underground): Basically, what is acceptable is what TfL decides. It is nothing to do with the experience of residents.

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): No, it is driven by your experience. It is not driven by a measure that we have put in place. That is why we have not put a 40dB threshold. We will continue to work with people to find solutions.

Andrew Dismore AM: -- what I see is, “The law is what I say it is”.

Leonie Cooper AM (Chair): You have your heat map of where the complaints are situated together, where you are getting a lot of complaints coming in.


Leonie Cooper AM (Chair): Then there will be individual complaints as well, presumably from individuals in certain areas. I assume that there must be some level of noise beyond which you start to get more complaints. If people are experiencing 40dB, your heat map will be hotter. Is that noticeable? Do you get complaints from people where it is only 5dB?

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): You tend to get complaints from people at 35dB and above. That is just an ‘off the top of my head’ suggestion but I could quantify that and come back with the quantification.

Leonie Cooper AM (Chair): Given that you are receiving the complaints, there must be a rough figure.

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): Yes. We are cognisant of the WHO threshold. Decibels are a measure of power and so 3dB is a doubling or halving of the power depending on whether it is a positive or minus. The doubling of the volume is at 10dB. When you
are looking at 50dB and above, that is twice the volume that people would see as a reasonable threshold. Hence why we started focusing on the areas that were experiencing more than 50dB and so on, and then we try to draw it down. My expectation was that over time we would deal with enough of the issues raised and a volume of track that we would not receive as many complaints as we started developing solutions.

Leonie Cooper AM (Chair): I am not sure that answers Richard’s question.

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): “We will keep on going”, I guess is the answer.

Leonie Cooper AM (Chair): It would seem that there is an informal threshold beyond which lots more people will start to complain.

Jennette Arnold OBE AM: Just to add to that, over time, with the numerous public meetings I have held, it starts with two people who reach a point where they need somebody to speak to, somebody to take over the complaint for them because they have lost it with TfL. Then, when you speak to the neighbours and people in the locality, you get huge numbers of people. Then the experience I have had - I am sure you have had it, Andrew [Dismore AM], and Joanne [McCartney AM] - is that when you look to correlate the people in the room who have complained, spoken to customer service, it never matches TfL’s data. That is another thing that we have to look at. It is almost like your multiple calls are only registered once. There may be something in the system that does not trigger the enormity of the distress that individuals are caused.

Duncan Weir (Head of Operational Upgrades & Asset Development, London Underground): There are two recording mechanisms. The first thing is that the customer call centre does record the number of complaints regardless of how many times the people complain. If you complained every single day, it would go up by another one complaint. From a perspective of my engineering interventions it is the same complaint because it the same property. That is where the two numbers come from. I can assure you that every complaint that is made to TfL is logged.

Jennette Arnold OBE AM: Duncan, what I would ask through the Chair[Leonie Cooper AM] is that we be provided with your schedule with the number of complaints, with the mitigation and the expected time of intervention, and that we can then post it on line and make sure everybody has that. Then I would ask you by the end of day that whatever information you have that you wanted to share based on individual cases, because you have only been able to really speak to Luce [Jacovella] and Liz [Lawson], you get that out post haste today. You might have information you brought with you pertaining to other people that you are not able to share.

Leonie Cooper AM (Chair): That would be helpful for us.

Jennette Arnold OBE AM: It is quite clear that there is an ongoing problem and that in order to gain confidence from Londoners and from us as politicians doing this casework, we must have some sort of standard. I think it was Richard [Collins] who said this but it seems to me we are the point where we must have a call for some sort of regulator or something. We are going to hear later on about aircraft noise and helicopter noise. London is driving people out of it because of the level of noise nuisance. Chair, that is what I would ask through you that we be provided with, and to understand that this does not stop here today.

Leonie Cooper AM (Chair): That would be extremely helpful, if we are able to be provided with that. From today’s session, I am taking that there is still an issue with the way in which in which TfL is responding both to Assembly Members who are picking up these issues and, much more importantly and much more particularly, to the individuals who are reporting and experiencing these problems that are affecting people’s health, not
just their lives. As you go through the process, particularly in relation to London Underground, of identifying what the problems are after you have received the initial complaints and looking in detail at the level of decibels, that we need to see a real improvement in terms of the customer contact.

For those of us here who have worked in or dealt with local authorities, housing associations and so on, keeping people updated during the course of a complaint that may have a complex solution is unbelievably important. I do not want to speak on everybody’s behalf but because I am wrapping up this session, in one sense I do need to do that. It is keeping people informed as the problem is fully identified, as the solution is identified and as the timing of the solution being implemented is identified. It is absolutely critical to keep people updated throughout the whole of that process. I do feel that we have heard - and we have also had a number of letters from people who are not here bearing witness to this today - that this does seem to still be an issue for TfL. That is one thing from today that we would want to see an improvement on.

You have your 90 day complaints, you have your 90 to 180 days and you have things broken down into response periods. That would be really helpful for us to be able to, when we are dealing with people, say, “Yes, you have been logged here and this is what is happening”.

Around the speed of the solution, we have heard from a number of people. Richard [Collins] has been raising these issues for up to 20 years. That was probably the longest. I can see slightly sympathetic looks from some of the other guests looking towards Richard at this point. The speed of the solution is also important. That might be something we want to look at, whether or not additional resources need to be looked at, whether that is extra grinders or extra staff who are able to undertake these processes.

I am going to, however, draw this part of today’s session to a close. Can I thank all of our guests who have come along, talked about their own experience and also spoken about other people’s experience? I would also like to particularly thank Duncan [Weir], who has taken the brunt of a lot of our questions very directly about what London Underground and TfL are doing on these issues. I do not think it is going to stop here. We are going to be coming back to this and asking questions about, “When did the TfL Board last look at this in detail? Are the solutions ones that can broaden out from specific pilots more quickly to other areas?” Thank you all very much for coming.

We are going to take a very small break so that we can adjust the guest badging. I am just going to break the meeting now. Thank you all very much.