

OPUS 2

INTERNATIONAL

Horizons Issues - Alan Bates & Others v Post Office Limited

Day 17

June 7, 2019

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1 Friday, 7th June 2019
2 (10.15 am)
3 MR JASON PETER COYNE
4 Cross-examination by MR DE GARR ROBINSON (continued)
5 MR JUSTICE FRASER: Before we start, just formally I'm
6 handing down judgment number 5, which is the reasons for
7 the costs and the other orders of 23rd March. The
8 reference is 2019 EWHC 1373 (QB).
9 My learned clerk is going to give each party one
10 hard copy. There are three other hard copies, one of
11 which is for the press, there are two spare. If anybody
12 wants it emailing, if they put their email address on
13 a piece of paper and in the mid-morning break my clerk
14 will email it and it is going on BAILII later.
15 The other point, which is just a reminder, can the
16 two of you, please, between you, make sure that at the
17 end of the day you remind me to mention to you the PEAKs
18 and KELs hard copy.
19 MR DE GARR ROBINSON: Between us.
20 MR JUSTICE FRASER: There is a good chance during the course
21 of today excitement will overcome me and I will forget.
22 MR DE GARR ROBINSON: Between the three of us hopefully
23 someone will remember.
24 MR JUSTICE FRASER: Right. Mr de Garr Robinson.
25 MR DE GARR ROBINSON: My Lord.

1

1 Mr Coyne, good morning.
2 A. Morning.
3 Q. I believe you have some homework to provide this
4 morning, is that right?
5 A. Yes. There was a number of questions that were asked
6 the other day that I have got the answers to.
7 Q. Yes. I'm not going to ask for oral answers. Have you
8 got pieces of paper indicating particular PEAKs and KELs
9 or whatever it was that you wanted to rely on?
10 A. Yes, I have got some notes here, they are rather rough.
11 I thought I would be reading them out rather than
12 handing --
13 Q. It is really a matter -- of course it is up to his
14 Lordship to decide but I would rather not have evidence
15 read into the record in that way. If you have documents
16 you wish to rely on then by all means produce them
17 but --
18 MR JUSTICE FRASER: Did you bring copies of the documents or
19 references of the documents that you were asked to
20 provide?
21 A. Some of them, my Lord. Some of the other questions were
22 about how many, so I have got a number of how many,
23 rather than a reference to all the documents. So, for
24 example, it was about how many retrospective OCRs and
25 OCPs, so I have a number for that.

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1 MR DE GARR ROBINSON: Actually I specifically don't want
2 evidence being read into the record which isn't
3 supported by document references and which is the
4 basis -- which is the fruit of work that you have done,
5 would this be right, this is all the fruit of work that
6 you have done since your last joint statement with
7 Dr Worden on 4th March, yes?
8 A. Yes.
9 Q. And this is the fruits of clever searches that you did
10 since that time, correct?
11 A. It was a simple search for the word "completed
12 retrospectively", that was the word I searched for.
13 Q. That's not the only item that you are going to address.
14 All of those items are matters that you have discovered
15 looking at the documents since your fourth joint
16 statement, correct?
17 A. Yes.
18 Q. Do you accept that in accordance with your duty as
19 an expert and as a matter of basic fairness to
20 Post Office, you should have provided this material to
21 Dr Worden and indicated the conclusions you were drawing
22 from it before this evidence started?
23 A. Mr Worden -- Dr Worden will have this material. These
24 aren't new documents. They are documents disclosed to
25 both of us at the same time. I haven't made a point in

3

1 my report about these retrospective OCRs. It was as
2 a result of you asking me the question the other day
3 about the process that I simply answered that some of
4 them were completed retrospectively.
5 Q. That is one particular issue. There are other issues
6 which I imagine you knew very well you were going to be
7 asked about when you knew you were going to be giving
8 evidence, correct?
9 A. I'm not sure any of the other answers that I have got
10 here could have been foreseen that I would be asked the
11 question about.
12 MR JUSTICE FRASER: I'm not going to stop you, just so that
13 I can get a summary, all right?
14 Could either of you tell me where on the transcript
15 yesterday there was a summary about what the witness was
16 asked to do last night, because I have just quickly
17 looked for it and I can't --
18 MR DE GARR ROBINSON: My Lord, I don't believe there was
19 a discussion where we listed the specific points. It
20 was just along the way.
21 MR JUSTICE FRASER: All right.
22 Mr Coyne, I'm just going to try and save some of
23 Mr de Garr Robinson's time. Last night you were asked
24 to go off and do a particular series of exercises which
25 you would now, please -- don't give me the answers, but

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1 just tell me what they were as far as you understood
 2 them, and I did make it clear that you had a list .
 3 A. Yes.
 4 MR JUSTICE FRASER: Would you like to give me the things you
 5 went off to do.
 6 A. Yes, it was to report how many OCRs and OCPs were
 7 completed retrospectively . It was to provide the
 8 reference to a PEAK that has been edited where the
 9 branch is less than 32.
 10 MR JUSTICE FRASER: Yes.
 11 A. It is to provide an answer to how many TIP repairs were
 12 conducted.
 13 MR JUSTICE FRASER: Yes.
 14 A. And in how many PEAKs --
 15 MR JUSTICE FRASER: Sorry, have you gone onto another item?
 16 A. Sorry, my Lord, I have.
 17 MR JUSTICE FRASER: So that is the third item I have
 18 identified , answer how many TIP repairs. The fourth
 19 one, please.
 20 A. Fourth item, how many times do we see evidence of
 21 messagestores being rebuilt .
 22 MR JUSTICE FRASER: Right. Therefore at least number 2 on
 23 that list should be a list of references .
 24 A. Yes, my Lord.
 25 MR DE GARR ROBINSON: I have to say, my Lord, my

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1 apprehension was what he was being asked was a list of
 2 references of things.
 3 MR JUSTICE FRASER: I understand that entirely and that's
 4 something that might have to be pursued in a moment, but
 5 at least number 2 on that list should be a list of
 6 references . Have you provided anyone with that list of
 7 references yet?
 8 A. No, but I do have that reference for that one.
 9 MR JUSTICE FRASER: Right. Well at least on that item
 10 Mr de Garr Robinson is entitled to a list of references .
 11 How many are there against that item?
 12 A. I have only extracted one, my Lord, so I only have one.
 13 MR JUSTICE FRASER: Why don't you give us the reference .
 14 A. It is {F/377.1/1}.
 15 MR JUSTICE FRASER: So that is the only reference arising
 16 out of your exercise of last night which has now been
 17 given to Mr de Garr Robinson.
 18 MR DE GARR ROBINSON: And that is a reference for what?
 19 A. That is a reference to a PEAK where it shows an edit
 20 taking place where the branch that it is modified to is
 21 less than 32.
 22 Q. I see. It is the only -- it is a PEAK showing an edit
 23 of messagestore data taking place, full stop. That is
 24 the only PEAK of which you are aware that shows an edit
 25 of the message -- of transaction data in the

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1 messagestore, correct?
 2 A. The question that was asked was -- sorry, the position
 3 that you put to me was that it is always 32 that is the
 4 replacement, and I said that I had seen evidence that
 5 that wasn't the case but I couldn't provide the
 6 reference and that is one of the references of that .
 7 Q. Well, Mr Coyne, as I recall , and it may be my fault and
 8 I'm hesitant in case I might make a mistake, but my
 9 recollection is you were asked for the references you
 10 had showing an editing of transaction data or other
 11 accounting data within the messagestore?
 12 A. Yes.
 13 Q. And would I be right in thinking you are only aware of
 14 one and that's 377.1?
 15 A. No, that's not correct . It is only where the branch
 16 number is modified to be less than 32. The process that
 17 was put to me is that whenever Fujitsu edits a message
 18 they would replace the branch with the number 32, and
 19 I said that that was incorrect and that I had
 20 an example, and that is the example.
 21 MR DE GARR ROBINSON: My Lord, what I'm getting is not what
 22 I'm expecting and I don't believe it would be helpful
 23 for Mr Coyne to read out from the notes he has plainly
 24 obtained statements which actually aren't backed up by
 25 any documents at all , so can't be ascertained or

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1 substantiated in any way. So subject to your Lordship,
 2 I'm going to leave the matter there.
 3 MR JUSTICE FRASER: Well, what I don't want to do today is
 4 I don't want to have a detailed who had said what
 5 yesterday about what he was and wasn't asked to do
 6 because that's just going to use up too much of your
 7 time.
 8 MR DE GARR ROBINSON: We certainly can't do that today.
 9 MR JUSTICE FRASER: Whether we can or not, I'm not prepared
 10 to entertain that today.
 11 MR DE GARR ROBINSON: I'm grateful.
 12 MR JUSTICE FRASER: But so far as any other documentary
 13 references he has, I would like to have them, and I'm
 14 just going to ask you: what other documentary references
 15 do you have?
 16 A. So, my Lord, with regard to --
 17 MR JUSTICE FRASER: No, just tell me the references . What
 18 are the references you have gone away and looked up?
 19 A. Annex A of my second report.
 20 MR JUSTICE FRASER: Okay, well that's -- yes.
 21 A. Specifically it was in the section --
 22 MR JUSTICE FRASER: No, that's fine . It's annex A, I know
 23 where that is , I can go and look at it . Next one.
 24 A. The other two, my Lord, are numbers, a calculation of
 25 numbers, so I don't have the underlying documents.

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1 MR JUSTICE FRASER: As in the number of times you have seen
2 things?
3 A. Yes.
4 MR JUSTICE FRASER: Right.
5 A. If it would assist I can run that report and get the
6 numbers out but I wouldn't be able to do that --
7 MR JUSTICE FRASER: I don't really understand what that
8 means but don't worry about that.
9 So Mr de Garr Robinson, are you saying that Mr Coyne
10 shouldn't tell me and/or you the number of times he has
11 seen these things based on what you asked him yesterday?
12 MR DE GARR ROBINSON: Where we are now, my Lord, I say he
13 should not.
14 MR JUSTICE FRASER: Right.
15 MR DE GARR ROBINSON: Because it would then set all sorts of
16 new hares running. Mr Coyne might have to be recalled.
17 We would be in a pretty pickle, in my submission.
18 MR JUSTICE FRASER: And are you objecting to me hearing what
19 the numbers are on a de bene esse basis?
20 MR DE GARR ROBINSON: Yes.
21 MR JUSTICE FRASER: You are.
22 Mr Green, what do you want to say?
23 MR GREEN: I don't want to take up time, but your Lordship
24 will appreciate I don't think that is a very sensible
25 way. He was asked to do homework. Some of the examples

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1 are easily identifiable on the transcript of what he was
2 asked, like page 94 yesterday about 32 {Day16/94:1}, and
3 he has done what he was asked.
4 MR JUSTICE FRASER: Thank you.
5 Mr de Garr Robinson, on the basis you asked him, and
6 you now have explained your position on his answers, I'm
7 just going to hand the floor back to you, you can
8 continue your cross-examination.
9 MR DE GARR ROBINSON: I'm grateful, my Lord.
10 Now, Mr Coyne, yesterday you may recall that I said
11 I would check something overnight?
12 A. Yes.
13 Q. It relates to the enhancement that was suggested by
14 Ernst & Young during the 2012/2013 audit that the
15 monitoring control to validate the proper management of
16 programme changes in POLSAP and HNG-X be generated
17 directly from the system, do you recall that?
18 A. Yes.
19 Q. You said you thought it was suggested in the 2011
20 Ernst & Young management letter, and I asked you some
21 questions on the assumption that it wasn't, saying that
22 I would check and if that was an unfair assumption
23 I would come back and apologise. Well, there is
24 something about it in the 2011 letter so I'm coming back
25 and apologising to you, Mr Coyne. As a matter of

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1 fairness I should tell you where it is.
2 If we could go to {F/869/25}, please. There is
3 a heading on the left-hand side, you see "Segregation of
4 duties within the manage change process". Do you see
5 that?
6 A. Yes.
7 Q. Then on the second from the right there is a series of
8 recommendations.
9 A. Yes.
10 Q. And they go on. If you go over the page to page
11 {F/869/26}, there's the second bullet:
12 "Implementing a change monitoring control for the
13 in-scope applications whereby system generated list of
14 changes made to production are independently reviewed by
15 POL on a periodic basis to determine that changes have
16 been authorised authorised, tested and approved prior to
17 migration. This will help POL gain assurance that
18 changes implemented by third party service providers
19 have been approved by POL management."
20 Do you see that?
21 A. I do.
22 Q. If we go back to page {F/869/25} we will see "Management
23 Comment" on the far right-hand side:
24 "A Fujitsu project has been established to review
25 all user management areas and is being led by the CISO

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1 of the RMG account."
2 Do you see that?
3 A. Yes.
4 Q. If one then goes over two pages, so this section goes on
5 for more than one page, {F/869/27}, the last comment in
6 the "Management Comment" box is that:
7 "POL is to ensure through a periodic sample and
8 exception review that changes have been authorised,
9 tested and approved prior to deployment."
10 Do you see that?
11 A. Yes.
12 Q. This is an example where an auditor suggests one thing
13 and the client comes back and indicates: I'm not sure
14 I'm going to do that but I will do this other thing
15 instead, which I believe you accepted but let me suggest
16 it again in case I misunderstood, that that sort of
17 thing happens all the time in these kind of situations,
18 yes?
19 A. Yes, it does. There are a number of other things on
20 other pages which it is suggested should be done by way
21 of recommendations. But no, I do accept your position.
22 Q. The recommendation was made and it is only right that
23 I should correct the position with you and give you the
24 opportunity to comment. And as I say, I am sorry
25 I overlooked this yesterday. It is a long document and

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1 I missed that bullet point.
 2 Just to put it in proper context to give you
 3 a proper opportunity to comment, if we could look now at
 4 your second report, please. That is at {D2/4.1/195}.
 5 At paragraph 5.264 you said:
 6 "Regarding the specific recommendations in the 2011
 7 audit it is my opinion that the key recommendations
 8 directly impact on some of the 18 countermeasures
 9 outlined in Dr Worden's report and therefore are
 10 relevant to the question of robustness of Horizon since
 11 they offer an opportunity to improve these
 12 countermeasures which it appears Post Office chose not
 13 to take."
 14 So you are saying there, aren't you, that the four
 15 key recommendations made by Ernst & Young offered
 16 Post Office an opportunity to improve countermeasures
 17 which it did not take, yes?
 18 A. Yes.
 19 Q. The way I read what you are saying is that Post Office
 20 chose not to take any actions to improve in response to
 21 the four key recommendations. Would that be a fair
 22 reading of what you said?
 23 A. Yes.
 24 Q. Now, would you suggest that that claim is justified
 25 because amongst the proposals made there was a proposal

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1 for a system-generated change monitoring process, and
 2 Post Office responded by indicating that it would
 3 enhance its monitoring in a different way?
 4 A. Well, it is saying it wouldn't accept the auditor's
 5 recommendation but would follow an alternative path.
 6 Q. Do you say that justifies the claim that Post Office
 7 chose not to take actions to improve in response to the
 8 four key recommendations made by Ernst & Young? Because
 9 I would suggest to you it doesn't justify that claim,
 10 Mr Coyne, and that the claim is exaggerated.
 11 A. I mean for clarity here, it is correct that I do make
 12 reference to the key recommendations --
 13 Q. It is all you are talking about, isn't it --
 14 A. -- of which there are four, but actually that particular
 15 audit does address a number of other elements. But it
 16 is correct that my report does only reference the four.
 17 Q. Let's move on. Let's talk about the bugs that you have
 18 identified in the bug table in joint statement 2. We
 19 will be referring to this a lot. It is at {D1/2/3}. It
 20 starts at page 3.
 21 Now, as I understand it, your analysis of all the
 22 available evidence has culminated in a table which is
 23 entitled, and we see it here:
 24 "Table of Bugs/Errors/Defects with acknowledged or
 25 disagreed evidence of financial impact."

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1 Would that be a correct summation of what this table
 2 is?
 3 A. Yes. It can't be read completely in isolation of the
 4 report, but it is an attempt to bring together most of
 5 the references from the report into one single table.
 6 Q. Would you accept that it brings together all the
 7 references that you consider important and significant?
 8 A. It may not do. There may be references that still
 9 remain in the report that haven't been distilled into
 10 this joint statement.
 11 Q. Let me ask a slightly different question. This is the
 12 definitive list, isn't it? You are not suggesting that
 13 there are other bugs with evidence of financial
 14 impact -- you are not relying on any other bugs with
 15 evidence of financial impact, it is just the 29 bugs
 16 identified here?
 17 A. These are the ones that I have identified, yes.
 18 Q. Thank you. Obviously in the time available I can't go
 19 through all the bugs and I can't even go through all the
 20 PEAKs and KELs referred to for some of the bugs, but
 21 I can touch on a limited number. That simple fact, that
 22 I can only touch on a limited number, does underline the
 23 importance, doesn't it, of an expert in your position
 24 summarising documents you are relying on accurately and
 25 explaining their significance fairly? I am sure you

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1 would agree.
 2 A. Yes.
 3 Q. Let's first of all talk about some issues that you say
 4 are bugs. Could we go, first of all, please, to bug 15
 5 which is at page {D1/2/13} of the table. Table 13, bug
 6 15, "Phantom Transactions". You will see very helpfully
 7 on the right-hand side of the table there are two F
 8 numbers, there are two documents referred to which are
 9 references for two PEAKs you are relying on for this
 10 proposition, yes?
 11 A. Yes.
 12 Q. Let's look, first of all, at the PEAK which is {F/48/1}
 13 which is PC0052025. Before going to that, while we have
 14 still got the screen, it is worth mentioning that in the
 15 "Identified Year/Year(s) in Effect" column, those two
 16 bugs are referred to, one of them is August 2000 and the
 17 other is April 2001, is that correct?
 18 A. Yes.
 19 Q. So would I be right in thinking that whatever problems
 20 there were in 2000 and 2001 regarding phantom
 21 transactions, the PEAKs indicate that such transactions
 22 have not raised their ugly head for the last 18 years?
 23 A. Yes.
 24 Q. So we are just talking about the early period of
 25 Legacy Horizon, is that right?

16

1 A. With regard to this particular --
 2 Q. Yes. Let's look at {F/48/1}, please.
 3 There may be a problem with the system.
 4 MR JUSTICE FRASER: It takes such a long time because there
 5 are so many documents in the folder, I'm afraid. Where
 6 would you like to go? F?
 7 MR DE GARR ROBINSON: F/48. Perhaps one way of doing it is
 8 if you stay on the bug table itself you can click on the
 9 hyperlink, which is probably what I should have
 10 suggested first of all. Thank you.
 11 Right, let's pick it up first of all at the top of
 12 the page, page 1. It happened on 14th August 2000.
 13 Well, actually --
 14 MR JUSTICE FRASER: I think it is the 9th.
 15 MR DE GARR ROBINSON: I'm so sorry, four lines down,
 16 9 August 2000, 9.22. Do you see that, about four lines
 17 down from the top?
 18 A. Yes.
 19 Q. "PM informs that receipt came out of machine at 2:14pm
 20 and it had 3 transactions on it. Was advised that
 21 transactions are cut off automatically if they are not
 22 finished. P&A, BT payment card £5 and British gas bill
 23 payment is also showing for £5, and there is another chq
 24 for £43."
 25 Then there is an entry for later I think in the same

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1 day:
 2 "System has printed ghost transactions before, but
 3 not this severe."
 4 So we see from the size of the amounts involved in
 5 this call that at least some subpostmasters are
 6 perfectly happy to call in when they have got
 7 difficulties with relatively small amounts of money,
 8 would you agree with that?
 9 A. Yes.
 10 Q. And would it be fair to say you have seen a substantial
 11 number of PEAKs where SPMs have phoned in with problems
 12 about relatively small sums of money?
 13 A. Yes.
 14 Q. Thank you. These are described as ghost transactions,
 15 and presumably that's why you have included this as one
 16 half of the evidence you rely on in support of the
 17 suggestion that Horizon had phantom transactions during
 18 this period, yes?
 19 A. Yes.
 20 Q. If we go to page {F/48/2} to 14.12, so that is three
 21 boxes down. It is David Seddon from the SSC and he
 22 writes:
 23 "Messages in the messagestore confirm that the
 24 'phantom' transactions were due to them being in a
 25 suspended session that was later forcefully committed

18

1 explained this to PM who was happy with explanation but
 2 she says she is sure she never pressed the suspend icon.
 3 Nevertheless she agrees closure for this problem. Can
 4 only assume that she hit the suspend icon by accident."
 5 Do you see that?
 6 A. Yes.
 7 Q. First of all, these were transactions that were actually
 8 typed into the system. They didn't appear out of
 9 nowhere, would you agree with that?
 10 A. Yes.
 11 Q. What happened, though, was that having been typed in,
 12 they weren't committed to the -- the basket wasn't
 13 committed to the messagestore. Instead the screen was
 14 left for a period of time and after a certain lapse of
 15 time the system forcefully committed them to the
 16 messagestore, yes?
 17 A. Without any user interaction.
 18 Q. Well, that's what you say, Mr Coyne, but isn't a fair
 19 reading of what's in that box that the postmaster
 20 accidentally must have touched "suspend" with her hand
 21 or something with the result that the session was
 22 suspended for that period of time?
 23 A. Yes, that's possible, but it isn't that that was the
 24 reference that I was making to without user interaction.
 25 It is the later event, the automatic commit that would

19

1 appear to have been done automatically without a user
 2 being involved.
 3 Q. I see. So what you are suggesting is that if the system
 4 automatically commits an uncommitted basket after
 5 a period of time that's evidence of phantom
 6 transactions, that's evidence of a bug in Horizon that
 7 needs to be corrected, is that what you are suggesting?
 8 A. Well, it is evidence of the system doing something
 9 without the user choosing to do it.
 10 Q. Are you suggesting it is something -- it is evidence of
 11 the system doing something wrong? I think you are,
 12 aren't you?
 13 A. Yes.
 14 Q. Let's look at Mrs Van Den Bogard's witness statement, it
 15 is at {E2/5/1}. To save time, I would ask you simply to
 16 read paragraph 14.2 of her witness statement, please.
 17 I'm so sorry, my note says page 54. Is it page 5? No,
 18 it is paragraph 14.2 which is page 4. {E2/5/4}.
 19 Could you read that paragraph, please,
 20 paragraph 14.2. (Pause)
 21 A. Yes.
 22 Q. So this isn't evidence of Horizon going wrong, is it?
 23 It is evidence of Horizon doing what it has been
 24 designed to do. Yes?
 25 A. It would appear from what's been said here that that was

20

1 the design, but I can completely understand the user's
 2 concern. They hadn't committed the transaction and they
 3 might not have wanted to commit the transaction --
 4 Q. It is a standard security measure in many IT systems,
 5 measures of this kind, isn't it?
 6 A. Yes, it is. It suspension of the user session is
 7 certainly standard. A roll back of any work in progress
 8 would be a standard. I have not seen one in a retail
 9 environment or a banking environment where it will
 10 actually complete a transaction that the user didn't
 11 choose to complete just because they weren't at their
 12 screen.
 13 Q. And the receipt -- the system prints a receipt so that
 14 the postmaster knows what has happened and if there is
 15 a problem the postmaster can then reverse the
 16 transaction, correct?
 17 A. Yes.
 18 Q. That's what the system is designed to do. The system
 19 has to decide whether just to delete the entire session
 20 from the system or to commit it. Either way a design
 21 choice has to be made, and either way what's important
 22 is that the subpostmaster knows what happens, and this
 23 system is designed to give the postmaster that
 24 information by printing out a receipt, correct?
 25 A. Yes.

21

1 Q. Right. And you knew that, didn't you, when you included
 2 this PEAK as a phantom transaction bug in your second
 3 report?
 4 A. No, I don't believe I did. No.
 5 Q. Well, let's have a quick look at that just to see. It
 6 is at {D2/4.1/114}. Do you have the page? Under the
 7 heading "Angela Margaret Van Den Bogard" it says, 4.69:
 8 "Mrs Van Den Bogard has provided a witness statement
 9 commenting on individual cases and various disparate
 10 factual matters, which I do not attempt to comment on in
 11 detail here. I note the following discrete points."
 12 Then under the heading "Phantom Transactions", you
 13 say {D2/4.1/115):
 14 "I have seen evidence of phantom sales recorded in
 15 the disclosed documents. PEAKs PC0065021 216 and
 16 PC0052025 ..."
 17 Which is the one we are just looking at?
 18 A. Yes.
 19 Q. "... (documented in further detail at section 3,
 20 'Phantom Transactions (Horizon Issue 4)' above) refer to
 21 phantom transactions in branches, the former which was
 22 observed by an engineer on site at the branch and the
 23 latter which refers to discrepancy arising from them."
 24 A. Yes.
 25 Q. So you did know what Mrs Van Den Bogard was saying

22

1 because you identified this very PEAK when you were
 2 responding to that very evidence?
 3 A. Yes.
 4 Q. It is completely wrong, isn't it, Mr Coyne?
 5 A. My understanding is now that it would appear that it is
 6 a design feature, that that happens.
 7 Q. If you don't mind my saying so, Mr Coyne, you appear to
 8 be rather evasive. What I have just shown you is that
 9 Mrs Van Den Bogard set out quite clearly in a witness
 10 statement how the system was designed to operate, and it
 11 was designed to operate in a way that committed
 12 transactions that were left on the machine for a certain
 13 amount of time and a receipt was printed so the
 14 postmaster knew what had happened?
 15 A. Yes.
 16 Q. And you responded to that by saying, well, I have got
 17 some evidence of phantom transactions and half of the
 18 evidence, one of the two PEAKs you rely on for that
 19 purpose, is a PEAK which actually demonstrates the truth
 20 of what Mrs Van Den Bogard is actually saying, doesn't
 21 it?
 22 A. Certainly one of the two examples it would appear that
 23 it is operating in line with the design, but I can
 24 certainly understand how a user would perceive that that
 25 would be a phantom transaction because they didn't

23

1 complete it --
 2 Q. Mr Coyne, if we were looking at a table which was a
 3 table of areas where users might get confused, then we
 4 wouldn't be having this conversation.
 5 A. Mm.
 6 Q. We are having this conversation because you have added
 7 this piece of evidence as evidence in support of the
 8 proposition, firstly, that there are bugs in Horizon
 9 and, secondly, that they cause losses, lasting losses to
 10 postmasters. That is right, isn't it?
 11 A. Yes.
 12 Q. And you agree now, do you, that this PEAK is not
 13 evidence either of a bug or of the causing of a lasting
 14 loss to a postmaster?
 15 A. I do agree.
 16 Q. Thank you. So I then come to my final question which is
 17 how is it you came to include this PEAK both in your
 18 report and even in the bug table here on page 13? Did
 19 you not read the PEAK properly?
 20 A. Yes, I did read the PEAK properly, possibly not in full
 21 consideration of the witness statement of Ms Van Den
 22 Bogard.
 23 Q. But you cited the PEAK in response to her witness
 24 statement.
 25 A. I did.

24

1 Q. So you must surely have had it in mind when you were
 2 choosing those two PEAKs to refer to. Would I be right
 3 in thinking -- would an outsider be right in thinking
 4 that you were anxious to find evidence in support of the
 5 hypothesis that Horizon generates phantom transactions
 6 and you saw a very helpful reference at the top of the
 7 first page and you thought, I'll have that, let's put it
 8 in. And you then included it in your second witness
 9 statement and you have included it in your bug table.
 10 Would it be reasonable for an outsider to form that
 11 impression?
 12 A. I would certainly have taken it from my report and put
 13 it into the joint statement table, yes, that would be
 14 the case.
 15 Q. Did you not check the PEAKs -- before you lifted the
 16 PEAKs from your report and put them in the bug table did
 17 you not check them, review them, to make sure that they
 18 really were good evidence of the propositions for which
 19 you were citing them?
 20 A. The process that I followed with Dr Worden is we went
 21 through our respective reports, put the text in where it
 22 was a shared text or separate text, and then in order to
 23 assist the court we put as many relevant references as
 24 possible from our reports into this table. That was the
 25 purpose of that. And it would appear that rather than

25

1 validating each of the references in the report before
 2 putting them in the table I have lifted the references
 3 out of the report and put them in the table.
 4 Q. So you didn't check them?
 5 A. I haven't checked each and every reference -- I checked
 6 the references in the report, before they went in the
 7 report, but I haven't re-checked and opened all the
 8 documents before we put the references in this
 9 "Supporting Evidence" column. This is a shared column,
 10 the "Supporting Evidence" column at the end. You will
 11 see that Dr Worden has put some references in there and
 12 I have put references in there.
 13 Q. Yes, but you are not suggesting that Dr Worden has
 14 suggested the inclusion of F197, are you?
 15 A. No.
 16 Q. Thank you. Let's go to the other PEAK you rely on.
 17 In the bug table at {D1/2/13}, you say:
 18 "Whilst no specific branch account discrepancies are
 19 noted, many events recorded in the PEAK PC0065021
 20 suggesting multiple 'Phantom Transactions' at branch
 21 during the period of 14th April 2001 to 12th November
 22 2001. It is therefore possible (with the unpredictable
 23 nature of Phantom Transactions) that branch accounts
 24 could have been impacted.
 25 "Observations recorded on 19th June 2001 by

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1 Fujitsu's Patrick Carroll, 'I now have pressing evidence
 2 to suggest that unwanted peripheral input is occurring,
 3 the likely source being the ...screen I have observed
 4 system activity corresponding to screen presses
 5 happening with no corresponding [sic] evidence of either
 6 routine system activity or human interference."
 7 So that's what you say about that PEAK in the bug
 8 table?
 9 A. Yes.
 10 Q. Let's have a look at the PEAK. It is at {F/97/1}.
 11 Before I ask you a question about that, I'm reminded,
 12 Mr Coyne, that you already knew that Horizon false
 13 commits transactions which are in a counter for
 14 a substantial period of time. You say that in
 15 paragraph 3.151 of your second report, do you remember
 16 doing that?
 17 A. I would have to go back and refresh myself.
 18 Q. It is at {D2/4.1/56}.
 19 MR JUSTICE FRASER: I think the passage that you have just
 20 been asked about is at the top of {D2/4.1/57}. So 56
 21 and 57.
 22 You say at the top of page 57:
 23 "It appears that Horizon will, after periods of
 24 inactivity ultimately commit transactions a
 25 Subpostmaster has not fully completed themselves."

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1 Actually you say that in relation to, if you look at
 2 3.150, the very PEAK we have been looking at
 3 {D2/4.1/56}. So that makes your inclusion of this PEAK,
 4 as an example of a bug causing a subpostmaster losses,
 5 that makes it even more curious. You did write both
 6 section 3 and section 4 of the report, I am sure?
 7 A. I did, yes.
 8 Q. I would not even suggest to you otherwise, Mr Coyne. So
 9 how is it that you came to such inconsistent results in
 10 two different parts of the same report? Can you
 11 explain?
 12 A. Yes. It is a mistake to include that as a reference as
 13 an example for that phantom transaction.
 14 Q. So let's go back to {F/97/1} and if we pick it up on
 15 page {F/97/4}. It is a very long PEAK. It is a big
 16 yellow box on page 4 and about perhaps a little less
 17 than a third of the way down there is a date 30/4/01,
 18 14.12. Do you see that?
 19 A. Yes, I do.
 20 Q. We have got:
 21 "Information: Romec attended site 23/4/01 carried
 22 out inspection and testing and report no fault found
 23 with the Horizon circuit."
 24 Just for the record, who is Romec?
 25 A. I believe Romec are hardware engineers, or communication

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1 engineers.
 2 MR JUSTICE FRASER: Mr de Garr Robinson, I'm sorry,
 3 I haven't found that part.
 4 MR DE GARR ROBINSON: It is 18 lines down.
 5 MR JUSTICE FRASER: Ah, yes. It is just that there are two
 6 entries at 30/04/01 and the other one is a bit further
 7 down, out of chronological order.
 8 MR DE GARR ROBINSON: It is at 14.12. And if you go down to
 9 just after the bottom third of the same page, there is
 10 01/05/01 at 10.56, do you see that?
 11 A. Yes.
 12 Q. It says:
 13 "Information: Romec are contacting the site to let
 14 them know that they will be attending site 2/5 to fit
 15 suppressors and double sheet flyleads, in order to help
 16 the environmental fault."
 17 A. Yes.
 18 Q. I am sure you will recall that all sorts of
 19 environmental tests were done at this particular site to
 20 see if the environment was responsible, yes?
 21 A. Yes, and certainly the fitting of suppressors and
 22 sheeted flyleads would suggest that that's what they
 23 suspected.
 24 Q. It is fair to say from reading the PEAK as a whole -- we
 25 don't have time to go through it all -- that the

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1 investigations that Fujitsu carried out were very
 2 thorough, weren't they?
 3 A. Yes. I think they ultimately determined they could not
 4 decide what the fault was but the process seemed to be
 5 a reasonable process to go through.
 6 Q. And they sent engineers from Romec. Do you know what
 7 Romec's familiarity with the system is?
 8 A. I would suspect that they know the hardware and the
 9 communication equipment very well. I don't know if they
 10 will know how Horizon as a software product would work.
 11 Q. That is a very fair answer. You saw where I was going
 12 and that is a very fair answer, Mr Coyne. They might
 13 very well know how to set the system up, make sure
 14 everything is connected and see that everything is
 15 logged on properly, but when it comes to the internal
 16 workings of the system itself they may well not be
 17 familiar, yes?
 18 A. Yes.
 19 Q. Thank you. Anyway, they were sent to inspect and test
 20 the circuit and improve the cabling. We have already
 21 gone to the reference I was taking you to.
 22 If we go to page {F/97/5}, which is 2/5/01, at
 23 14.12. "Information". That's about a third of the way
 24 down, my Lord. Does your Lordship see it?
 25 MR JUSTICE FRASER: Yes.

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1 MR DE GARR ROBINSON: 02/05/01, 14.12.
 2 MR JUSTICE FRASER: With "UK052436" next to it?
 3 MR DE GARR ROBINSON: Yes.
 4 "Information: Romec have been to site today and
 5 fitted shielded cabling and suppressors. Romec engineer
 6 advises that he has witnessed further phantom
 7 transactions whilst on site. He will carry out further
 8 tests and advise results."
 9 So there is the Romec engineer seeing phantom
 10 transactions?
 11 A. Yes.
 12 Q. That's the visit that's referred to in the quote that
 13 I have read out from the joint statement, isn't it?
 14 A. Yes.
 15 Q. So the engineer comes in, he logs the system off, he
 16 fits the suppressors and whatever else he needs to do,
 17 then logs on again. And while he was there he saw what
 18 are described as phantom transactions, yes?
 19 A. Yes.
 20 Q. They could equally be described, I suppose, as ghost
 21 transactions, couldn't they?
 22 A. They could be, yes.
 23 Q. The reason why I ask that question is because we have no
 24 idea what he saw and we have no idea whether he
 25 misinterpreted something, do we?

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1 A. We don't, but it would be reasonable to assume that
 2 an engineer whose particular role it is to service
 3 Horizon equipment, whilst he wouldn't know how to
 4 operate Horizon in detail, would have a reasonable
 5 understanding of how it would work.
 6 Q. Maybe, Mr Coyne, another counter hadn't been used for 59
 7 minutes, it had uncompleted transactions on it, and it
 8 automatically completed them and printed a receipt.
 9 That is possible, isn't it?
 10 A. That is possible.
 11 Q. And it is possible that an engineer with his familiarity
 12 of the hardware would not know that feature of the
 13 operating system of Horizon, so he might be surprised by
 14 that, correct?
 15 A. He might be surprised by that. But I think we have got
 16 to read this in context, that the subpostmaster had
 17 already explained that they perceived that there were
 18 problems with what they said was phantom transactions.
 19 So Post Office and/or Fujitsu would have gone through,
 20 I would presume, their support process, would have
 21 looked at various logs and things like that before
 22 dispatching a hardware engineer to site. So if they
 23 suspected that it was just the simple case of a counter
 24 coming to the end of its 59 minutes of suspension and
 25 doing something automatically, I think they would have

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1 dealt with that before dispatching an engineer.
 2 Q. We can agree, Mr Coyne, that the SSC had experience of
 3 these things and they had access to information that we
 4 don't have. We can agree on that. But just focusing on
 5 the Romec engineer visit, would you not accept that it
 6 is quite possible that the engineer saw something which
 7 was an example of Horizon operating as it should and was
 8 not in fact a phantom transaction at all, and he
 9 misinterpreted it because he didn't have the familiarity
 10 with the system that someone at Fujitsu might have?
 11 Would you accept that that was at least possible?
 12 A. I accept that it was possible if you look at that visit
 13 in isolation, yes.
 14 Q. And then what we know is that there are further
 15 investigations for some months and Mr Carroll is
 16 involved from at least 4th May, I think. You see his
 17 reference. If you go down to the bottom of page 5, you
 18 see 04/05/01 at 9.30?
 19 A. Yes.
 20 Q. "information Ki Barnes has called in. I am unsure as to
 21 what to do with this call now. Romec have been to site
 22 and state that they have actually seen the phantom
 23 transactions, so it is not just the PM's word now. They
 24 have fitted suppressors to the kit but the PM is still
 25 having problems. As yet there has been no recurrence to

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1 the phantom transactions but there still may be
 2 problems. Contacted Pat Carroll for guidance."
 3 So it is fair to infer, isn't it, that Pat Carroll
 4 was someone very experienced and more senior in the
 5 organisation?
 6 A. Certainly his name appears on a number of documents that
 7 I have seen.
 8 Q. And it is fair to assume, isn't it, that he is in a good
 9 place, with the information and the experience that he
 10 has, to form a judgment as to what the likely cause of
 11 these problems are, yes?
 12 A. Yes.
 13 Q. Well, the matter goes on for some months and there are
 14 further investigations. If I could pick it up in
 15 November now at page {F/97/9}. If we go to the bottom
 16 of the page, 12/11/01, at 9.48. This is Patrick Carroll
 17 himself:
 18 "Phantom Txns have not been proven in circumstances
 19 which preclude user error in all cases where these have
 20 occurred a user error related cause can be attributed to
 21 the phenomenon."
 22 {F/97/10}:
 23 "I am therefore closing this call as no fault in
 24 product."
 25 Now, given Mr Carroll's experience and the

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1 information he has available to him, and given that as
 2 you have yourself fairly acknowledged this phantom
 3 transaction problem hasn't re-appeared since
 4 November 2001 in any PEAK, would it be fair to suggest
 5 that the best judgment to trust in relation to what was
 6 going on here is Mr Carroll's judgment?
 7 A. Certainly Mr Carroll would have access to all the
 8 information that should allow him to determine the
 9 position. One thing that I do note from that, there is
 10 no reference to looking at the audit logs or the ARQ
 11 data which may well have confirmed what was going on
 12 while the Romec engineer was on site and would almost
 13 certainly document whether the recovery from
 14 a suspension, as we talked about before, actually
 15 happened at that time, and I don't believe that this
 16 document reflects that that investigation was conducted.
 17 Q. Nonetheless, Mr Carroll formed the judgment that he did.
 18 Do you think that adopting a balanced approach when
 19 explaining this PEAK in your expert report at some
 20 length, for example, it would have been helpful to have
 21 included his conclusion at the end of the PEAK as well
 22 as including the earlier passage that you quote in the
 23 joint statement?
 24 A. I don't believe that would be required. The reference
 25 to the PEAK is there. There's lots of detail in that

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1 PEAK that --
 2 Q. But haven't we already agreed several times, Mr Coyne,
 3 that given that so many documents, I mean a mass of
 4 documents -- if you try to weigh all the documents you
 5 refer to in your two reports it would probably come to
 6 something close to my own body weight, and that's saying
 7 something -- it is simply not humanly possible to read
 8 all the documents you refer to in your report or at
 9 least not in a limited amount of time, and in those
 10 circumstances wouldn't it be helpful, given that we are
 11 all relying on your report for a fair summation of the
 12 document, wouldn't it be helpful and fair to have
 13 included the passage at the end of the PEAK which is
 14 less helpful to your analysis as well as the passage in
 15 the middle of the PEAK which is, you consider, helpful
 16 to your analysis. Do you not think that would have been
 17 an appropriate and fair thing to do?
 18 A. I don't. I accept that it would be an enhancement to
 19 the report but I would not know where to stop if we keep
 20 including all aspects of all documents that are
 21 referenced.
 22 Q. I have got one suggestion for you, Mr Coyne. Why not
 23 try and avoid stopping when you have mentioned the bad
 24 points? Why not try and carry on so that you can
 25 mention some points for balance as well? Do you not

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1 think that would be a good idea?
 2 A. Yes.
 3 Q. Because in your report wouldn't it be fair to say that
 4 that tends to be what you have done? In many cases, you
 5 have mentioned the bad things arising from the document
 6 or what you perceive to be a bad thing, a critical thing
 7 in Horizon arising from a document, but you don't
 8 trouble yourself to mention any of the other points that
 9 may be mitigating or maybe positive?
 10 A. No, I don't think that's fair at all. I think you have
 11 been able to point me to this example but I do not think
 12 that's fair at all.
 13 Q. And one other final question. Do you think you are in
 14 a position now, in 2019, looking at this PEAK nearly
 15 18 years ago, to say that Mr Carroll, with the
 16 familiarity he had with the system and with the
 17 information that he had at his fingertips, he must have
 18 been wrong in his attribution of the cause for the
 19 difficulties experienced at this branch?
 20 A. I think with the ARQ data you would be able to determine
 21 what the position was.
 22 Q. That wasn't my question, though, was it? My question
 23 was do you think you now, with the information you have,
 24 are in a position to say that Mr Carroll was wrong?
 25 A. No.

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1 Q. Thank you. I suggest to you none of us are in that
 2 position. It is impossible at this remove in time and
 3 on the information available to us to come to any view
 4 as to whether this was a phantom transaction or not,
 5 would you agree with that?
 6 A. What I can say is that on balance, because it has been
 7 reported by a subpostmaster, and then somebody with
 8 technical knowledge says that they have observed it as
 9 well and that there hasn't been a full examination done
 10 by Pat Carroll of the data, then I believe that it could
 11 well be the case that it is a phantom transaction. But
 12 I do accept the position that we don't know today.
 13 Q. Let's talk about a different bug. Bug 11, Girobank. If
 14 we could go back to the bug table at {D1/2/9}.
 15 There are just too many documents for me to go
 16 through, it would take hours. Perhaps first of all you
 17 could explain what Girobank transactions are, just to
 18 set it up.
 19 A. I'm just going to go back to my report.
 20 Q. You don't remember. It is impossible to know everything
 21 about this system at every single time. By all means go
 22 back to your report, Mr Coyne.
 23 A. Yes, it is about the timing of the various aspects of
 24 the process of a Girobank transaction.
 25 Q. And a Girobank transaction is?

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1 A. It is similar to a retail banking function.
 2 Q. Okay. Would it be fair to say that you are not really
 3 familiar with what Girobank transactions are?
 4 A. I'm just trying to recall the details of it now.
 5 Q. Anyway looking at the bug table, if we look at column 3,
 6 "Identified Year/Year(s) in Effect", the period
 7 identified is May to September 2000?
 8 A. Yes.
 9 Q. So again very early days in Legacy Horizon?
 10 A. Yes.
 11 Q. Would it be fair to say that whatever problems there
 12 were in 2000, they hadn't manifested themselves in any
 13 PEAKs or KELs since then? Would that be fair?
 14 A. That is right, yes. Sorry, there is one over the page
 15 which is dated 2001 {D1/2/10}.
 16 Q. Yes, you are quite right. So it is 2000 and 2001. Now,
 17 there is a KEL in the right-hand column, A Chambers, on
 18 page 10, 4410R?
 19 A. Yes.
 20 Q. Which is the reference to -- we are not going to it --
 21 actually I don't have it, the reference isn't written
 22 down here. Anyway, I won't go to it.
 23 MR JUSTICE FRASER: Sorry, I can't see where that is, I'm
 24 afraid.
 25 MR DE GARR ROBINSON: My Lord, if one goes to page 10, under

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1 the "Supporting Evidence" column on the right-hand side,
 2 just above "Coyne Supplemental Report", there are two
 3 KELs, M Wright --
 4 MR JUSTICE FRASER: Yes, I have got it.
 5 MR DE GARR ROBINSON: -- and A Chambers 4410R.
 6 You talk about that KEL in your report. And if we
 7 could look at your report, please, it is {D2/4.1/50}.
 8 3.126:
 9 "The KEL related to this PEAK you are talking about
 10 is documented as 'AChambers4410R', this KEL does not
 11 appear to have been disclosed ..."
 12 That's why it doesn't have an F number.
 13 "... therefore it has not been possible to ascertain
 14 what advice might have been given ..."
 15 A. Yes.
 16 Q. If you go up in the earlier table at the top of the page
 17 you will see that there is a reference to a PEAK.
 18 A. There's reference to a number of PEAKs.
 19 Q. Sorry, if you look at 3.127 below, I'm a bit confused:
 20 "Further associated PEAKs that reference [that KEL]
 21 are provided in the table below."
 22 I would like to ask you about those. It is the PEAK
 23 on page 51. It is PC0076065 at {F/118/1}. If we could
 24 look at that please. I should, for completeness,
 25 actually read out what you say immediately below that

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1 table. This is in 3.128, we don't need to go back to it
 2 on the transcript -- on the machine:
 3 "The above PEAKs related to Girobank discrepancies
 4 are clear examples of bugs within Horizon that affect
 5 branch accounts by way of a financial discrepancy and
 6 illustrate, by their interlinking natures, the
 7 complexities of the PEAKs/KELs."
 8 So what you are saying there is that the PEAKs
 9 referred to in that table are clear examples of bugs in
 10 Horizon that affect -- that create financial
 11 discrepancies in branch accounts, correct?
 12 A. Yes, I'm referring to the PEAKs within this section, not
 13 just that particular table. If you read up, there is
 14 a table there and there is a table before it.
 15 Q. What I'm seeking to elicit from you, Mr Coyne, and
 16 I think you have confirmed it, is that it is your
 17 contention, your judgment, your expert opinion that
 18 {F/118/1} is a clear example of a bug which has caused
 19 a financial discrepancy in a branch account?
 20 A. The text in my report is:
 21 "Giro deposit cut off ... Branch unknown."
 22 So a number of other ones in the table actually list
 23 the discrepancy. That one doesn't list the discrepancy
 24 next to it.
 25 Q. Let's look specifically at what you say in

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1 paragraph 3.128 then. It is {D2/4.1/51}.
 2 Paragraph 3.128 says:
 3 "The above PEAKs related to Girobank discrepancies
 4 are clear examples of bugs within Horizon that affect
 5 branch accounts ..."
 6 "The above PEAKs", they include all of those PEAKs
 7 in that table, don't they?
 8 A. Yes. If you go back a page you will see --
 9 Q. Mr Coyne, I just want to ask you about F/118 and what
 10 I'm suggesting to you is in your report -- and I didn't
 11 think this would be controversial -- you are claiming
 12 that, amongst others, F/118 is a clear example of a bug
 13 in Horizon causing branch discrepancies. That is what
 14 you say in your report, isn't it?
 15 A. That is one of the PEAKs that's included in the tables
 16 on the preceding pages, yes. The text for that one that
 17 has been provided doesn't necessarily indicate that for
 18 that one there is a discrepancy. Some of the other
 19 items in the table I do clearly say that there is
 20 a discrepancy.
 21 Q. So I had read paragraph 3.128 as making a claim that all
 22 the PEAKs you refer to in this section above, not only
 23 in the table but in the earlier table as well, were
 24 PEAKs that clearly created discrepancies in branch
 25 accounts. Are you now saying that that PEAK didn't?

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1 A. If you read paragraph 3.127 {D2/4.1/50}, what that is
 2 saying there is at the top of the page there is a table
 3 with all the discrepancies that are listed next to the
 4 particular branches. What 3.127 says is that the PEAKs
 5 above reference a KEL called Anne Chambers, so that is
 6 the link, and by searching for "Anne Chambers" you find
 7 the PEAKs below.
 8 Q. Yes.
 9 A. So they are a different set of PEAKs that reference
 10 Anne Chambers, but it is the --
 11 Q. Mr Coyne --
 12 A. Sorry, it is the table at the top of page {D2/4.1/44},
 13 at the head of it, which are the PEAKs with the
 14 discrepancies in.
 15 Q. So when you say "The above PEAKs", you are not actually
 16 referring to the table below 3.127, you are just
 17 referring to the table below table 3.123, are you?
 18 A. Yes, and that is introduced at 3.127.
 19 Q. Mr Coyne, this is amazing. You are clearly -- when you
 20 say in paragraph 3.128 -- I can't believe I'm having
 21 this discussion. When you say in 3.128 {D2/4.1/51}:
 22 "The above PEAKs related to Girobank discrepancies
 23 are clear examples of bugs within Horizon that affect
 24 branch accounts ..."
 25 The bugs in the table below 3.127 include bugs

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1 relating to Girobank?
 2 A. Yes, but you have to read the paragraph before that
 3 table to understand what that table is. It clearly says
 4 {D2/4.1/50} --
 5 Q. All right. All right.
 6 A. "Further associated PEAKs ... are provided in the table
 7 below."
 8 They are PEAKs that are associated by way of KEL to
 9 those Girobank transactions.
 10 Q. I see.
 11 A. The PEAKs that mention the discrepancies are clearly set
 12 out in the other table --
 13 Q. I see, so --
 14 A. -- which essentially is above, it is just over the page.
 15 Q. So you accept then that {F/118/1} isn't a bug which
 16 creates discrepancies in branch accounts?
 17 A. No, it is linked by way of KEL; the Anne Chambers --
 18 Q. Why do you mention it in your report then? What is its
 19 relevance to the subject that you are considering, which
 20 is bugs creating discrepancies in branch accounts?
 21 A. Because the bugs that create the discrepancies in branch
 22 accounts, many of them reference the KEL Anne Chambers.
 23 So they cite that as being the cause of the problem. So
 24 what I have then done is I have searched for other PEAKs
 25 which also reference Anne Chambers and I found these

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1 others in that table, so I'm providing them.
 2 Q. Even though they don't -- they are not bugs that
 3 actually create discrepancies in branch accounts?
 4 A. Yes, but I don't actually say that they do. It is quite
 5 clear what I'm saying in 3.127, and a few moments ago
 6 you were critical for me leaving out things, so here is
 7 an example where I haven't left something out, I have
 8 put it in for context.
 9 Q. We can save some time then. You accept that {F/118/1},
 10 or the PEAK that is referred to there, isn't a bug at
 11 all, don't you?
 12 A. I have described it here as a cut-off issue, branch
 13 unknown. So it likely isn't a --
 14 Q. Do you remember the PEAK? It is to do with -- could you
 15 remind the court what cut-off means?
 16 A. It is the end of a time period, so it is after a certain
 17 point in the evening.
 18 Q. Yes. And what's the significance of that point in the
 19 evening?
 20 A. That the submission has to be conducted before that.
 21 Anything that's conducted after that I think is shown as
 22 being the following day.
 23 Q. Submission to whom?
 24 A. Girobank.
 25 Q. So there is a time in the evening when a report is sent

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1 to Girobank of all the Girobank transactions in one day?
 2 A. Yes.
 3 Q. And that report will contain all the Girobank
 4 transactions that have been undertaken up to that point
 5 in time?
 6 A. Yes.
 7 Q. We can save some time, we can go to the PEAK if you
 8 want, but this PEAK was a PEAK where the postmaster had
 9 done a report which -- in fact he did two reports. He
 10 did one report, and then he did another Girobank
 11 transaction, then he did another report. And when he
 12 looked at the first report he saw that the later
 13 Girobank transaction that he had done wasn't included
 14 and he was confused so he phoned the helpline and the
 15 helpline put him through to the SSC. Because the
 16 helpline, when they reach a point where they don't think
 17 they can help someone, that's what they do, isn't it?
 18 A. Yes.
 19 Q. They will just pass it straight through. They don't
 20 form some Olympian judgment as to whether it is
 21 a software error or not, they work out whether they can
 22 help the caller and, if they can't, they then just pass
 23 it on up the chain. Would you agree with that?
 24 A. I would indeed.
 25 Q. So they passed it on up the chain to the SSC and the SSC

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1 looked, I believe it was Mr Roll, actually. Yes, it was
 2 Richard Roll. And they saw that the postmaster had been
 3 looking at the wrong report, and as a result of looking
 4 at the prior report he had confused himself. So it was
 5 closed as a category 62, no fault in product. That
 6 wasn't a bug at all, was it?
 7 A. No. And as I fairly say here, it is a cut-off issue,
 8 branch unknown. But contained within that PEAK, that
 9 call, someone has put the reference to Anne Chambers
 10 4410R because they considered it would be another
 11 occurrence of the Girobank defect which caused the
 12 discrepancy, so that is why I have referenced it in this
 13 report. But it is in a different table and made very
 14 clear that it is just another PEAK that references that
 15 Anne Chambers, it's not the --
 16 Q. Forgive me, Mr Coyne, but speaking as someone who has
 17 read your report over a number of deathless hours, and
 18 the same could be said about all the reports in this
 19 case, it has to be said, the strong impression that
 20 a reader might get from this report is that these
 21 paragraphs are a catalogue of problems arising in
 22 Horizon and the table that you include underneath 3.127
 23 adds to the impression of a catalogue of problems
 24 arising in Horizon. Would you accept with me, on the
 25 basis of the account I have given of {F/118/1}, and

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1 I appreciate I haven't taken you to it, but would you
 2 accept it from me that F/118 is not any kind of problem,
 3 and to the extent that your report gives that impression
 4 it gives a false impression?
 5 A. Yes, I accept that that is not a record of a defect, but
 6 I believe you were mistaken when you read my report
 7 because this section is quite clearly introduced at
 8 3.127 to say:
 9 "Further associated PEAKs ..."
 10 Are associated with this KEL. And in the right-hand
 11 box of the observations, none of them do they say
 12 "discrepancy", but on the table above, where I have
 13 managed to work out a discrepancy, I have put it in the
 14 box.
 15 Q. Let's go back to the bug table at page 9 where you talk
 16 about Girobank discrepancies {D1/2/9} and let's pick up
 17 the first one you mention in the right-hand column,
 18 which is PC0044232, and that's at {F/25/1}. Let's go to
 19 it.
 20 At the bottom of page 1 -- let's pick it up at the
 21 top. 5 May 2000. It is reported on 4 May:
 22 "System error. Girobank said there was
 23 a discrepancy on the Giro figures."
 24 So it looks as if this was called in by Girobank
 25 itself, yes?

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1 A. Yes.
 2 Q. Go down three lines:
 3 "Girobank have been in touch to say that there is
 4 software problem as the figures are not correct. Daily
 5 figures when totalled are more than the cash account
 6 giro figures."
 7 A. Yes.
 8 Q. Then an example is given:
 9 "These are for the Giro payments only.
 10 "The PM has checked all dockets and all reversals
 11 that may have been done and cannot find anything
 12 therefore he would like this investigated ..."
 13 Do you see that?
 14 A. Yes.
 15 Q. Let's go down to the bottom of the page at 5 May at
 16 15.02. Mark Wright says:
 17 "This difference (£505.72) between the Cash Account
 18 and the Daily reports is explained by
 19 KEL:MWright531P.htm. There was a giro for this amount
 20 that was entered on the 13th Apr then reversed AFTER
 21 cutoff then re-entered again and reversed again."
 22 Which is a very strange series of events.
 23 "The daily report would have shown the original
 24 £505.72 but the daily reports never show reversals."
 25 Do you see that?

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1 A. Yes.
 2 Q. That explains why Girobank phoned in. That is not
 3 a fault with the system, is it, that is how it is
 4 designed to operate, would you accept that?
 5 A. I'm not sure, because it does say below that:
 6 "It would be nice to close the call as known error,
 7 however while investigate the messagestore I have
 8 identified another problem ..."
 9 This does appear to indicate that there is a system
 10 problem.
 11 Q. Okay. Let's go on with it:
 12 "It would be nice to close the call as known error,
 13 however while investigate the messagestore I have
 14 identified another problem ... there is a Giro Deposit
 15 for £81 (1-17240) that is being calculated in TWO
 16 consecutive cutoffs (18th AND 19th April). I have
 17 attached the full message store as evidence, however the
 18 error happens in message 3-8932 where the tidemark SEQ
 19 number (117240) which in this case relates to counter 1
 20 is GREATER than the Mark calculated for counter 1 in the
 21 same message."
 22 I don't pretend to understand that but you can see
 23 he has seen a symptom.
 24 {F/25/2):
 25 "It would appear that the report calculation uses

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1 this SEQ number along with the PreviousMark numbers to
 2 generate the total. As this number was larger than the
 3 current mark, it would also be included in the following
 4 days report."
 5 So that is what he explains as happening.
 6 Now, can we agree that the problem here was a fault
 7 in the report that went through to Girobank?
 8 A. Well, it was a problem that occurred in Horizon that
 9 resulted in information being sent to Girobank that was
 10 incorrect. We can certainly agree on that.
 11 Q. Can we agree that the fault was in the report that went
 12 to Girobank, it wasn't a fault that manifested itself in
 13 the branch accounts. It manifested itself in the
 14 figures that Girobank saw, not in the figures the
 15 postmaster saw, because the postmaster says on page 1:
 16 "The PM has checked all dockets and all reversals
 17 ... and cannot find anything ..."
 18 He doesn't see anything wrong. Do you see that?
 19 A. Yes.
 20 Q. So would you accept that on a fair reading of this PEAK,
 21 this is a problem that relates to the transmission of
 22 information through to Girobank, it is not a bug that
 23 directly causes a discrepancy in branch accounts?
 24 A. Yes, but any discrepancy can well have an impact on
 25 branch accounts and that's why it is important that

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1 these are highlighted.
 2 Q. Well, I fully agree that it is important that these
 3 issues are fixed, Mr Coyne, but there are two points,
 4 aren't there? First of all, this is being presented as
 5 a bug that creates a discrepancy in branch accounts and
 6 I think we have agreed that it doesn't. Yes?
 7 A. But the support guys here say there is a discrepancy.
 8 Q. It is a discrepancy in the report. It is a discrepancy
 9 between the report sent to Girobank and the true figures
 10 in the branch accounts.
 11 A. So then that is a discrepancy.
 12 Q. Yes. So that is the first point. It is not a bug which
 13 has actually caused a discrepancy in branch accounts, is
 14 it?
 15 A. I struggle to understand why that wouldn't be the case.
 16 Q. Before you said, Mr Coyne, a problem with the report
 17 going to Girobank is still a problem because then there
 18 is a reconciliation error and that could result in a TC
 19 being created.
 20 A. Yes.
 21 Q. But if there is a problem I would like to suggest to you
 22 that the evidence of this PEAK indicates that that's
 23 what the problem would be, yes?
 24 A. Yes. If this fault hadn't been reported by somebody,
 25 this would have likely resulted in a TC.

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1 Q. You see, that's where I come to the second point,
2 Mr Coyne. It was reported, the problem was spotted.
3 A. Yes.
4 Q. There was a reconciliation problem and it went straight
5 to the SSC, and the SSC worked out what the cause of the
6 problem was. Do you accept that what this PEAK shows is
7 not a threat to the robustness of Horizon, actually it
8 shows the operation, the good and effective operation of
9 countermeasures to possible threats to Horizon, do you
10 see?
11 A. I do, but it is a little obvious that what we are
12 looking at is PEAKs, so we will only see the times that
13 somebody calls in and it is recorded. We won't have
14 records if somebody hasn't reported it.
15 Q. You are not suggesting, are you, that where there is
16 a reconciliation exception between a financial
17 institution and Horizon, that that doesn't result in
18 an investigation. Surely you do accept that?
19 A. It should result in an investigation.
20 Q. Fujitsu has elaborate processes designed to identify
21 reconciliation exceptions, doesn't it?
22 A. I don't know whether it would be Fujitsu or Post Office
23 or who will do that element of it, but they will be
24 Post Office's clients.
25 Q. My suggestion to you, Mr Coyne, is that what this report

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1 is evidence of is the robustness of Horizon, it is not
2 evidence that undermines that robustness, would you
3 accept that?
4 A. This is evidence of a defect being identified and
5 because it was picked up there wasn't -- or if
6 Post Office handled the next stage of it, then there
7 needn't be an impact on branch accounts. So there is
8 a discrepancy that's here, but it is the next stage, but
9 we don't have evidence of what that next stage would be.
10 Q. What we do have in this PEAK is evidence of the problem
11 being raised and being properly diagnosed and resolved.
12 Surely you accept that in this particular case?
13 A. Yes. It actually says someone is going to send
14 a request to the EPOS development team, so that's the
15 point of sale development -- so new code is going to be
16 created and that will hopefully fix the problem for the
17 future.
18 Q. But also the underlying discrepancy in the report sent
19 to Girobank, that's also supported. That is the
20 starting point of the entire inquiry. This is
21 an example of the robustness countermeasure, RDS and
22 MID, operating as it should, would you agree with that?
23 A. What do those two stand for, sorry?
24 Q. Redundant data storage and manual inspection of data.
25 A. What does redundant data storage --

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1 Q. It means where you have -- I thought you'd agreed that
2 this was a standard form of countermeasure in IT
3 strategies --
4 A. No, sorry, with regard to this PEAK I'm just trying to
5 understand why redundant data storage --
6 Q. It means where you have the same information stored in
7 different parts of the system and in different systems
8 and then processes which involve the comparison of that
9 data to see if there's any discrepancy requiring
10 investigation, yes?
11 A. This actually required Girobank to pick up on the
12 problem.
13 Q. Yes. I don't know whether it required it, but the fact
14 it there was a problem and it was picked up because
15 people look at the figures that they get.
16 Do you not -- are you not willing to accept that
17 this is an example of the fact that if lots of different
18 versions of information are propagated through a system,
19 and lots of people are looking at that information, that
20 actually increases the likelihood of any problems in any
21 data being identified and resolved successfully? Do you
22 not accept that this is an example of that happening
23 quite well?
24 A. Yes, but this is an example of Horizon doing it. This
25 is Girobank that have picked up on this. So the

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1 information has flown through Horizon, not been picked
2 up, gone to Girobank, and Girobank have picked up on the
3 problem. So, yes, their systems must be quite good to
4 pick that up, but Horizon effectively should have
5 stopped this before the figure went to them, surely.
6 Q. Let's move on to another bug. In your table --
7 MR JUSTICE FRASER: Just before you do, can I have the trial
8 references for two KELs, please?
9 MR DE GARR ROBINSON: My Lord, the two KELs, they are so old
10 they don't exist anymore, I believe.
11 MR JUSTICE FRASER: They don't exist anymore. Right.
12 MR DE GARR ROBINSON: This is from 1999/2000.
13 MR JUSTICE FRASER: Which is why there is no reference in
14 there. Right.
15 MR DE GARR ROBINSON: Yes. I wonder whether this would be
16 a convenient moment. I'm looking very shamefacedly at
17 the transcript writers.
18 MR JUSTICE FRASER: Yes, I think it probably is. We will
19 have 10 minutes. And not wishing to come across as
20 excessively pedantic, but that means coming back at 48
21 minutes past.
22 MR DE GARR ROBINSON: I would be happy to have those extra
23 two minutes.
24 MR JUSTICE FRASER: That's why I said 48 rather than 50.
25 So we will come back at 48 minutes past. A

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1 10-minute break. Thank you very much.
 2 (11.39 am)
 3 (A short break)
 4 (11.48 am)
 5 MR DE GARR ROBINSON: Mr Coyne, we were on the bug table and
 6 we were talking about item 11 on that table which is
 7 Girobank discrepancies.
 8 A. Yes.
 9 Q. And by Girobank discrepancies, you mean discrepancies
 10 within branch accounts, yes?
 11 A. Yes.
 12 Q. Another one of the bugs that you identify over the page
 13 {D1/2/10} is PC0052575, which is at {F/49.1/1}. Could
 14 we have a quick look at {F/49.1/1}, please. This is
 15 a call in on 16 August 2000. This is a call by the
 16 postmaster about three or four lines down -- I should
 17 say 14 August, I'm sorry:
 18 "14/08/00, 16.20:
 19 "Pm has error on giro deposit report. Counter Daily
 20 report does not match office daily report."
 21 So it is right, isn't it, that the reports he is
 22 talking about, these reports are a little bit like
 23 snapshots of the position at the time the report is
 24 taken. Some of them are sent -- maybe all of them are
 25 sent elsewhere, certainly some of them are. And the

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1 postmaster has a problem with the reports because they
 2 aren't consistent with each other, do you see that?
 3 A. Does not match the daily report yes.
 4 Q. Correct me if I'm wrong, but that doesn't mean the
 5 underlying accounts are wrong, it just means that the
 6 reports that have been printed out are wrong, correct?
 7 A. Yes, just reading down. So it tells us there is
 8 a software error and that operator error has been ruled
 9 out. But it may well be the case that it is only the
 10 information that appears on the report is wrong, so it
 11 is misrepresenting what the position is.
 12 Q. If we pick it up at the bottom of that box, 16/08 at
 13 8.51:
 14 "Repeat call: PM has phoned to say his Giro deposits
 15 had a discrepancy between his counter daily and his
 16 office daily reports for yesterday."
 17 Then there are the figures.
 18 MR JUSTICE FRASER: I'm afraid I can't see where you are
 19 reading.
 20 MR DE GARR ROBINSON: My Lord, it is in the big box on page
 21 1, about three-quarters of the way down, 16/08 at 8.51:
 22 "PM has phoned to say his Giro deposits had
 23 a discrepancy between his counter daily and his office
 24 daily reports ..."
 25 Then it sets out the figures.

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1 "PM has produced another transaction log for the
 2 errant amount ... only appears once however shows twice
 3 on office daily printed at 11.08."
 4 So the problem is with the report, not the
 5 transaction log, yes?
 6 A. Yes, it would appear so.
 7 Q. If we go over the page to {F/49.1/3}, the fourth box
 8 down, 31st August at 11.31. This is Alex Kaiser:
 9 "I have looked at this call and found the problem.
 10 It is caused by the window of opportunity that arises
 11 between the points at which a user prints and then cuts
 12 off a Counter Daily\Giro Deposits report on a counter."
 13 So there is a reference to cutting off that we
 14 discussed before.
 15 A. Yes.
 16 Q. "If they are using a shared SU and between the two
 17 points in time another Giro Txn is performed on another
 18 counter, it will NOT be included on that report but it
 19 will be included on the summary record written to the
 20 Messagestore at the point of cut off.
 21 "When the subsequent office daily/Giro deposits
 22 summary report is produced it uses the summary record as
 23 its source and that is why a record that was missed off
 24 the counter report appears on the office one.
 25 "This problem has already been fixed at CI4 by ..."

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1 Then a number of PinICLs are referred to.
 2 What is being described in this PEAK is a problem
 3 that had already been fixed but it is a problem in the
 4 software which generates daily reports, it is not
 5 a problem in the software which generates branch
 6 accounts, would you agree?
 7 A. Yes.
 8 Q. Therefore to the extent that there is a bug at all,
 9 which it appears there is, the bug for which this PEAK
 10 is evidence is not a bug which creates discrepancies in
 11 branch accounts, is it?
 12 A. No, it is a bug that creates discrepancies in branch
 13 reports.
 14 Q. And my final question on this PEAK: what this shows is
 15 that where there are such discrepancies, there will be
 16 an investigation and the true position will be
 17 ascertained, would you agree with that?
 18 A. Where something is logged and we have a PEAK for it,
 19 then that PEAK does typically suggest that it is
 20 investigated correctly.
 21 Q. What I would like to suggest, Mr Coyne, is that where
 22 there are these different pieces of information in the
 23 system being produced and being sent and so on, and
 24 being compared by all sorts of people, including the
 25 postmaster himself or herself, that is a system, the

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1 operation of such an arrangement is in itself
 2 a robustness countermeasure. Would you agree with that?
 3 A. That they have a support process that attempts to
 4 determine the problem? Yes, that's a --
 5 Q. Well, that there are processes which lead to these
 6 problems being exposed and it is the exposition, it is
 7 the exposing of these problems, which lead to
 8 investigations that can assist in increasing the overall
 9 robustness of Horizon?
 10 A. Yes.
 11 Q. What this PEAK shows is not that there was a bug in
 12 Horizon which created a discrepancy in branch accounts.
 13 What it shows is that the Horizon system and all the
 14 support operations surrounding it and supporting it
 15 operated well in identifying if there were any
 16 discrepancies and checking to see if there were any
 17 problems created by those discrepancies, would you agree
 18 with that?
 19 A. I do agree with that. I mean on this example I have
 20 noted in my report that the discrepancy amount was
 21 unclear, and I have also noted that it doesn't appear
 22 that the branch actually appears in this so we don't
 23 know what branch is relates to.
 24 Q. If we could just focus on my particular question. My
 25 question is this really: you cite this PEAK in your

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1 report as evidence of a bug creating discrepancies in
 2 branch accounts, and you then list it triumphantly in
 3 your list of Girobank discrepancy-creating bugs in joint
 4 statement 2, but the discussion we have just had of this
 5 PEAK and the one that preceded it has resulted in your
 6 accepting first of all that it didn't create any
 7 discrepancies in branch accounts, yes?
 8 A. It created a discrepancy which could impact branch
 9 accounts.
 10 Q. It didn't create a discrepancy in someone's branch
 11 accounts, did it?
 12 A. Correct, yes.
 13 Q. What you say is it raised a possibility that some third
 14 party, like Post Office, might generate a TC for some
 15 reason and then the subpostmaster, having received that
 16 TC, might then accept it rather than saying "I don't
 17 know what you are talking about"?
 18 A. Yes.
 19 Q. What you are suggesting is that this countermeasure,
 20 which obviously involves human beings, it is designed to
 21 do that, sometimes, and I would suggest very rarely,
 22 isn't perfect. But nobody is suggesting, Mr Coyne, that
 23 countermeasures are perfect. The really important
 24 question is whether in the overwhelming majority of
 25 times the countermeasure has the effect of increasing

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1 robustness rather than detracting from it. And what
 2 I would suggest to you, Mr Coyne, is that both of the
 3 PEAKs that we have been looking at this morning are
 4 really quite good examples of how these countermeasures
 5 increase rather than detract from the robustness of
 6 Horizon. And that's my question to you, do you agree?
 7 A. I agree from looking at the PEAKs, by the nature of them
 8 being calls, what we see is the investigatory process
 9 when a call is made. So they are a good example.
 10 Q. And I think your -- I mustn't put words into your mouth,
 11 but from evidence you have given on previous days, would
 12 it be fair to say that you think the support process,
 13 the investigation process undertaken by Fujitsu is on
 14 the whole a good one?
 15 A. It is on the whole a good one. There are a number of
 16 weaknesses in the process and for clarity we do need to
 17 be clear on what they are, and one is illustrated here,
 18 that there isn't a branch code in here.
 19 Q. Mr Coyne, could I suggest that if a PEAK were produced
 20 for the purposes of allowing the robustness of Horizon
 21 to be determined by a judge 20 years or 19 years after
 22 the event, then you are absolutely right, this is
 23 a terrible document because it doesn't identify the
 24 branch, it doesn't enable a litigant to demand
 25 disclosure of all the branch records and all the TCs

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1 issued, you are absolutely right. But it is not the
 2 purpose of a PEAK to do that. You regard it as
 3 a limitation of the PEAK. The PEAK is a work process
 4 document which simply records the work being done by the
 5 SSC in relation to a particular call in. It doesn't
 6 need to have that information in order to be
 7 an effective work document, would you agree?
 8 A. I do agree. It has another problem in that this PEAK is
 9 very dependent on the KEL that describes what the flaw
 10 was and the KEL hasn't been disclosed either. So we
 11 don't really know what the determination was.
 12 Q. Forgive me, Mr Coyne, I'm simply asking you to accept
 13 what I would suggest are the obvious implications of the
 14 document that you have got in front of you, and when
 15 faced with a question of that sort you take refuge in
 16 saying "Well, I haven't seen this and I haven't seen
 17 that".
 18 But you are not grappling with the essential point,
 19 are you? Looking at the information contained in these
 20 PEAKs, with all the limitations that that information
 21 has because of the nature of the PEAK and the purpose
 22 for which it was created, looking at the information in
 23 those PEAKs actually it gives you a good basis for
 24 concluding, first of all, that these PEAKs do not relate
 25 to a bug that created any discrepancies in Horizon,

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1 would you agree?
 2 A. That this PEAK did not, I would agree.
 3 Q. And the previous one as well, would you agree?
 4 A. The previous one you took me to, yes. Because it was
 5 picked up, that shouldn't lead to one either.
 6 Q. So first of all we are agreed that both of these PEAKs
 7 are not related to a bug which caused a branch
 8 discrepancy. Secondly we are agreed, aren't we, that
 9 these PEAKs are not evidence that a process was set in
 10 train which led to a TC being issued to the relevant
 11 branch which then foisted a false shortfall on the
 12 branch. Neither of these PEAKs are evidence of that,
 13 are they?
 14 A. No. These are evidence of a part of the process. We
 15 don't know what happened to correct these discrepancies.
 16 Q. So you accept that in both of these cases the relevant
 17 PEAK didn't lead -- the problem identified and dealt
 18 with in each of those PEAKs did not actually lead to
 19 Post Office issuing a transaction correction -- or in
 20 this period it would have been an error notice -- that
 21 would have subjected the relevant subpostmaster to
 22 a risk of loss?
 23 A. No, these documents alone do not show that.
 24 Q. Indeed it would be inconsistent with these documents
 25 because it is quite clear that Fujitsu in these

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1 documents have identified the problem, clarified that it
 2 is nothing that requires any change to any accounts.
 3 There is a problem with the report mechanism, that it is
 4 not ideal in certain very unusual states of
 5 circumstances, yes?
 6 A. It is a little bit more than that. It might be very
 7 misleading for the subpostmaster.
 8 Q. What I would like to suggest to you, Mr Coyne, is none
 9 of that comes out from your report. The clear
 10 impression given by your report is that these two PEAKs
 11 are one of many examples in which there are bugs in
 12 Horizon creating discrepancies in branch accounts, and
 13 my suggestion to you, Mr Coyne, is that these PEAKs are
 14 evidence of the opposite.
 15 A. Bugs, errors and defects is the way that the question
 16 was asked and we --
 17 Q. We are talking about Horizon Issue 1. You don't need me
 18 to go back to Horizon Issue 1, do you?
 19 A. I think that says bugs, errors and defects, doesn't it?
 20 Q. "Bugs, errors and defects to cause apparent or alleged
 21 discrepancies or shortfalls relating to subpostmaster's
 22 branch accounts or transactions."
 23 A. Yes.
 24 Q. And neither of these PEAKs are an example of either of
 25 these things, are they?

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1 A. On their own, no.
 2 Q. Thank you.
 3 A. They are an indication of a discrepancy being
 4 identified.
 5 Q. And yet they are listed in your bug list which you
 6 agreed with me at the beginning of this
 7 cross-examination today was a list of bugs which caused
 8 discrepancies in branch accounts. Could you explain why
 9 you have included those two PEAKs in this list?
 10 A. You need to read it -- as I have said before, for full
 11 context you need to go back to the report. There is
 12 another table in the report that says the discrepancy
 13 amount or whether there was no discrepancy noted, at
 14 page 43.
 15 Q. Page 43 of the report?
 16 A. Page 43 on the face of the report.
 17 MR JUSTICE FRASER: That's page 49 in the bundle. The
 18 bundle reference is 49. I think that's where you were
 19 actually, Mr de Garr Robinson.
 20 MR DE GARR ROBINSON: Yes.
 21 MR JUSTICE FRASER: Do you mean the table at
 22 paragraph 3.123?
 23 A. Yes.
 24 MR JUSTICE FRASER: That's the table you are being asked
 25 about, I think. {D2/4.1/49} Or it is an entry within

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1 that table that Mr de Garr Robinson has been asking you
 2 about.
 3 A. I believe, my Lord, he was asking the same within the
 4 reference from the joint statement.
 5 MR DE GARR ROBINSON: Actually, it is very helpful that you
 6 have gone back to that table, Mr Coyne, I would have
 7 overlooked it otherwise. If we could go to page
 8 {D2/4.1/51} and look at paragraph 3.128. I'm sorry to
 9 do this in such inordinate detail. 3.128, this is
 10 a paragraph I took you to before.
 11 A. Yes.
 12 Q. "The above PEAKs related to Girobank discrepancies are
 13 clear examples of bugs within Horizon that affect branch
 14 accounts by way of a financial discrepancy ..."
 15 So you are saying there that the relevant bugs
 16 created a financial discrepancy, yes?
 17 A. Yes.
 18 Q. And I took you first of all to the bug that was
 19 immediately above that paragraph.
 20 A. Yes.
 21 Q. {F/118/1}. And you told me: I didn't put that forward,
 22 you misread paragraph 3.128, I didn't put that forward
 23 as a bug creating discrepancies.
 24 A. Yes.
 25 Q. But you then said that it is not that table I should be

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1 concerned about, it is the previous table.
 2 A. Yes.
 3 Q. Above 3.124, yes?
 4 A. Yes.
 5 Q. If we go back to page {D2/4.1/49} where that table
 6 begins, you will see that the fourth item on that table,
 7 which on your own evidence is a list of bugs that create
 8 discrepancies in branch accounts, is {F/49.1/1},
 9 PC0052575?
 10 A. Yes, with the observation:
 11 "Discrepancy amount unclear. Branch unclear."
 12 Q. Mr Coyne, let's assume that that particular PEAK had
 13 identified the branch and had identified a discrepancy
 14 of £50 or something, just so that I can close off that
 15 escape route when I ask you the next question I'm about
 16 to ask you. So let's pretend. It is the case, isn't
 17 it, that that PEAK is not evidence of a bug which
 18 created discrepancies in branch accounts? You have just
 19 agreed that with me.
 20 A. It created a financial discrepancy within the Horizon
 21 system which could then ultimately have an impact on
 22 branch accounts.
 23 Q. I will move on. Let's take another example that's
 24 contained in your bug table. Going back to the bug
 25 table at {D1/2/10}.

1 MR JUSTICE FRASER: You want to be in the joint statement
 2 now?
 3 MR DE GARR ROBINSON: Yes. And if you can click on {F/52/1}
 4 on the side of the page that will give us the relevant
 5 PEAK, which is PC0052704.
 6 So just to set the scene. It is your expert
 7 opinion, is it, that this PEAK is another PEAK that is
 8 a clear example of a bug which created discrepancies in
 9 branch accounts, is that your opinion?
 10 A. Sorry, I'm just catching up here. Where are we? Number
 11 12, "Counter Replacement ..."
 12 Q. We are looking at one of the bugs that you refer to in
 13 bug 11, Girobank discrepancies.
 14 A. Right, sorry.
 15 Q. And the particular bug we are looking at is the bug that
 16 you say is evidenced by {F/52/1}, and this is F/52.
 17 A. Right. Okay, yes.
 18 Q. Just for the record, would you confirm that you have
 19 included this PEAK in your report, that you lifted it
 20 from your report and you put it in the joint statement
 21 because it is a PEAK which you say is evidence of a bug
 22 creating discrepancies in branch accounts?
 23 A. A bug, error or defect, yes.
 24 Q. Right. If we could just go over to page {F/52/2} of the
 25 PEAK, the last yellow box. Date 23rd August 2000, 9.30.

1 This is Martin Harvey at the SSC:
 2 "All these problems occurred while a relief PM was
 3 in place.
 4 "Giro.
 5 "A cut-off was performed between the original
 6 transactions and reversal."
 7 Then there is reference to a KEL.
 8 "A P&A report was produced and then two further
 9 transactions were input before cutoff. The first report
 10 was then mistakenly used to infer that these
 11 transactions had not been performed and so they were
 12 re-input."
 13 Do you see?
 14 A. Yes.
 15 Q. "I could find nothing wrong and when I asked the PM to
 16 re-check his figures neither could he ...
 17 "The PM is happy and has agreed call closure."
 18 On what basis do you say this PEAK evidences a bug
 19 in Horizon that has created a branch account
 20 discrepancy, Mr Coyne?
 21 A. So as a result of the bug, error or defect with the
 22 report that we see on the earlier PEAK, this has led the
 23 subpostmaster to re-enter transactions. It says towards
 24 the end here:
 25 "The first report was then mistakenly used to infer

1 these transactions had not been performed ..."
 2 So they were re-input. That's because the report
 3 was misrepresenting the true position because of the
 4 defect.
 5 Q. Then the postmaster looks at the end of the day at his
 6 transaction log and he sees that he has got two copies
 7 of the same transaction in his transaction log and he
 8 sees that if there is a discrepancy in his accounts, it
 9 will be in exactly the sum of the repeated transaction
 10 that he has entered a second time in his transaction
 11 log.
 12 The bug itself didn't cause any discrepancy at all,
 13 did it?
 14 A. No, the bug itself led to the report misrepresenting
 15 what the current position was. That's the bug that we
 16 saw before. As a result of that bug, this subpostmaster
 17 has used the information on the face of that report and
 18 entered some transactions that then impacted his branch
 19 accounts.
 20 Q. So just to be clear, you are relying on the passage
 21 that's under the heading "P&A", yes?
 22 A. Yes, which includes the KEL M Wright 531, which appears
 23 to be the common denominator between each of those
 24 Girobank discrepancies.
 25 Q. That KEL is a Girobank discrepancy. We are in P&A now.

1 What does P&A stand for?
 2 A. I don't know.
 3 Q. It says:
 4 "A P&A report was produced and then two further
 5 transactions were input before cutoff. The first report
 6 was then mistakenly used to infer that these
 7 transactions had not been performed and so they were
 8 re-input."
 9 Mr Coyne, it is not that the system produced a false
 10 report which then induced the postmaster to make
 11 an error. It is that the postmaster looked at a report
 12 that had been done before the two transactions had been
 13 entered. Do you see?
 14 A. Well, on the information given here, Martin Harvey
 15 linked it to the KEL where the Girobank fault was.
 16 Q. Mr Coyne, just look at the words that are written down
 17 in front of me:
 18 "A P&A report was produced and then ..."
 19 Do you see the word "then"?
 20 A. Yes.
 21 Q. "... two further transactions were input before cutoff.
 22 The first report ..."
 23 So the report that was done before the two
 24 transactions were entered into, yes?
 25 A. Yes.

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1 Q. "... was then mistakenly used to infer that these
 2 transactions had not been performed and so they were
 3 re-input."
 4 So what happened was the postmaster -- who it has to
 5 be remembered was a relief postmaster and may not have
 6 been as experienced as he or she might have been, which
 7 is no doubt why that was written down -- had printed
 8 a report that correctly represented the position as at
 9 the time the report was printed, had then entered into
 10 two transactions, had then looked at the report that he
 11 printed, and foolishly he then thought that shows that
 12 I haven't entered the two transactions I have just
 13 entered so I will enter them again. Do you see?
 14 A. I do see but --
 15 Q. That, I would suggest, is not the result of a bug in
 16 Horizon.
 17 A. So if that was right, why would Martin Harvey, when he
 18 wrote that at 9.30 on 23rd August, choose to reference
 19 the KEL for that particular defect? It would make no
 20 sense if he didn't consider that that was part of his
 21 consideration.
 22 Q. Well, I suggest to you, Mr Coyne, that it is plain from
 23 the actual language that he has used, the very language
 24 that you are relying upon, that there was some human
 25 error in this case and the human error was in using the

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1 wrong report, a report that reported on the state of
 2 affairs before the two transactions had actually been
 3 done, and the mistake was that the postmaster thought
 4 that it ought to include those two transactions,
 5 wrongly, and so added them again. And I'm suggesting to
 6 you that that's what Mr Harvey is saying in that middle
 7 paragraph.
 8 A. I don't accept that because Martin Harvey would, in
 9 considering what the issue was, I can't imagine that he
 10 would have referenced the M Wright and the D Rowe KEL if
 11 he didn't believe they were relevant to the situation
 12 that had occurred. That is contra to what the purpose
 13 of these documents are for. They are to lead the next
 14 person that finds the problem, to link these together.
 15 It would be crazy to include a reference to that if it
 16 wasn't relevant to this problem.
 17 Q. Would you excuse me a moment, Mr Coyne. (Pause)
 18 Let's move on to bug 20 now, recovery failures .
 19 MR JUSTICE FRASER: Just before you do, can you tell me what
 20 P&A stands for?
 21 MR DE GARR ROBINSON: My Lord, I can't.
 22 MR JUSTICE FRASER: All right, it doesn't matter.
 23 MR DE GARR ROBINSON: I was hoping Mr Coyne could.
 24 MR JUSTICE FRASER: Do you know what P&A stands for?
 25 A. I don't, my Lord.

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1 MR JUSTICE FRASER: All right.
 2 MR DE GARR ROBINSON: Bug 20, recovery -- it is called
 3 recovery failures . Let's start at your second report,
 4 Mr Coyne, please {D2/4.1/66}. You say in paragraph
 5 3.194:
 6 "PC0197643 created 14 April 2010 refers to branch
 7 166948 in which a £240.00 transaction failed in
 8 recovery. Whilst a table exists in the database to
 9 potentially capture failed recovery transactions, these
 10 then have to be manually reconciled. The PEAK states:
 11 "'Looking at the PostOfficeCounterLog, the receipt
 12 printed ok for this after authorisation was received,
 13 the receipt that printed for the cash withdrawal [sic]
 14 states 'Authorised', so it's possible that the clerk
 15 handed over the monney [sic]."
 16 Then you say at 3.195:
 17 "As this was passed to Post Office, it is unclear
 18 what their final resolution was. It is not documented
 19 if Fujitsu removed the transaction and if they did, how
 20 they did it."
 21 {D2/4.1/67}.
 22 This is a PEAK that you also refer to in the bug
 23 table and which we will come to in a moment. Could we
 24 look at that PEAK, please. It is {F/613/1}. So the
 25 PEAK starts on 13th April 2010, which I think must be

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1 during the initial Horizon Online roll out. You agree?
 2 A. Yes.
 3 Q. If you could look at the top right-hand side of the
 4 PEAK, the call logger, you see it is "MSU-IndtMgt". Do
 5 you know what that stands for?
 6 A. Management support unit ...
 7 Q. The other letters you don't know?
 8 A. I don't. Well, management will be the end one but
 9 I don't know what --
 10 Q. Yes. And what does the MSU do?
 11 A. I'm not sure I have seen that set out anywhere.
 12 Q. It receives -- you have seen a great number of PEAKs
 13 that are created as a result of the MSU, yes?
 14 A. Yes.
 15 Q. It monitors things --
 16 A. Right.
 17 Q. -- doesn't it, in the system?
 18 A. Yes.
 19 Q. It monitors all sorts of exceptions?
 20 A. Right.
 21 Q. And when it spots exceptions it passes them through to
 22 the SSC.
 23 A. Right.
 24 Q. That is consistent with your understanding of PEAKs,
 25 isn't it?

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1 A. That sounds reasonable, yes.
 2 Q. And amongst the things that the MSU monitors is recovery
 3 failures, isn't it?
 4 A. Mm.
 5 Q. So all recovery failures of the sort we are discussing
 6 here are in the first instance reported to the MSU, yes?
 7 A. Yes.
 8 Q. Then the MSU will, having identified the problem, pass
 9 it on to the SSC to look into it, correct?
 10 A. Yes. I don't know when this is triggered because there
 11 are -- I have seen PEAKs where it is the subpostmaster
 12 that is attempting recovery and they report that the
 13 counter just keeps re-booting, so perhaps it's --
 14 Q. But sometimes -- and perhaps we can agree on this.
 15 I have thought about that as well and my surmise is that
 16 sometimes the SPM gets the report in first and other
 17 times the MSU does, it is just a timing issue.
 18 A. Yes.
 19 Q. And if the SPM has phoned in first then that is the PEAK
 20 and there doesn't need to be a separate PEAK because the
 21 MSU puts in a call as well, would you say that's fair?
 22 A. Sounds reasonable.
 23 Q. Then it says on the top box "13th April", so we are
 24 really -- Horizon Online is brand new and there are very
 25 few users at this stage:

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1 "Details entered are:
 2 "Summary: Branch ..."
 3 There is the branch FAD code.
 4 "... NB102 Section 5 CAPO - state 4."
 5 That's one of the reports, isn't it, that identifies
 6 when there is a failure, a recovery failure?
 7 A. Yes.
 8 Q. If we go down to 10.06 there is a reference added,
 9 a KEL, that is "dsed2640M". Do you see that?
 10 A. Yes, I do.
 11 Q. If we could have a quick look at that, if we look at
 12 {F/586/1}, please. We will come back to this PEAK,
 13 though.
 14 Have I given you the wrong reference?
 15 MR JUSTICE FRASER: No, that was the reference to the PEAK.
 16 Or did you mean the trial bundle reference?
 17 MR DE GARR ROBINSON: My note, and Homer does nod, I don't
 18 think I'm even Homer for these purposes. My note tells
 19 me that the dsed KEL is at {F/586/1} and if I'm wrong
 20 then I need to move on quickly.
 21 MR JUSTICE FRASER: Don't worry about rushing, it will only
 22 take a moment to find it.
 23 MR DE GARR ROBINSON: It may be 587 {F/587/1}.
 24 So this is the KEL that's referred to. It says:
 25 "Transaction in state 4 on the NB102 Section 5

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1 banking reconciliation report - failed recovery."
 2 Then if we go down to "Symptoms:
 3 "There is a transaction in state 4 on the NB102
 4 Section 5 banking reconciliation report as the
 5 transaction failed to be recovered during recovery."
 6 Of course recoverable transactions will always
 7 involve a bank, won't they, they will always involve
 8 a financial institution, because if it weren't
 9 a three-way transaction involving three parties it
 10 wouldn't be recoverable, it would be cancellable,
 11 wouldn't it?
 12 A. Yes.
 13 Q. So this report will always pick up failed recoveries.
 14 It says under the heading "Problem":
 15 "The transaction in question failed to be settled
 16 due to problems with printing so there was no C1
 17 confirmation. The printing problem was caused by the
 18 failure to print an earlier report/receipt that seemed
 19 to have stuck and caused every print attempt thereafter
 20 to fail. When the user logged off and logged back on
 21 again, the recovery process attempted to recover the
 22 banking transaction but because this in itself requires
 23 a receipt to be produced this failed as well."
 24 Do you see that?
 25 A. Yes.

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1 Q. Then it says:
 2 "The print problem should be evident by 0607 errors
 3 being displayed to the PM and the same error being
 4 recorded in the PostOfficeCounter.log at the time.
 5 There will also be Warnings logged to this log with the
 6 words "Received second print request, before completing
 7 first print request."
 8 So would it be right to infer from what that KEL
 9 says that this problem, as well as going through to the
 10 MSU and being pushed through to the SSC in the normal
 11 way, the problem would also be evident to the postmaster
 12 who was undertaking the transaction at the branch, would
 13 you agree with that?
 14 A. Yes. It is said there will be a 0607 error displayed.
 15 So if the screen is working as a result of whatever this
 16 failure is, then they would probably see that. The
 17 other two things there, PostOfficeCounter.log and
 18 warnings in the log, they won't be visible to the
 19 subpostmaster.
 20 Q. So one way or another, both the postmaster and Fujitsu
 21 independently will know that there's a problem when this
 22 arises, yes?
 23 A. Yes, and at this stage the counter probably hasn't yet
 24 booted back up yet. It is in a failed state obviously.
 25 MR JUSTICE FRASER: Mr de Garr Robinson, can I just make one

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1 observation and it is not to distract you at all. The
 2 number of the PEAK on that KEL is not the number that
 3 you were looking at before.
 4 MR DE GARR ROBINSON: The number of the PEAK on that KEL?
 5 MR JUSTICE FRASER: That's 193463, and the one we were
 6 looking at was 197643.
 7 MR DE GARR ROBINSON: My Lord, yes. The reason why we were
 8 looking at that KEL is because it is referred to in the
 9 PEAK.
 10 MR JUSTICE FRASER: I do understand that, but I just wanted
 11 to make sure that you didn't think it was exactly the
 12 same PEAK. I know the way PEAKs and KELs work so it
 13 wouldn't necessarily be the case.
 14 MR DE GARR ROBINSON: Let me ask a question of Mr Coyne.
 15 The fact that the KEL is referred to in the PEAK
 16 back at {F/613/1}, if we could look at that, please,
 17 that's indicative of the fact that the SSC person who
 18 has received this call has looked at the symptoms and
 19 thought, hang on a second, this displays the symptoms in
 20 this particular KEL. Sometimes they might be wrong,
 21 sometimes it might be an early diagnosis and they may
 22 have a more developed view later. But in general if you
 23 see a KEL referred to in a PEAK it means the person at
 24 that point in time thinks this is a repetition of the
 25 symptoms described in the relevant KEL, would that be

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1 correct?
 2 A. Yes, that is right. And then to balance that when you
 3 look at the KEL, sometimes you do see the back reference
 4 to the PEAKs that use that, other times you will just
 5 see in that scenario just a reference that doesn't refer
 6 back but it might be the first instance of that --
 7 Q. Yes, that's very helpful. So where the KEL refers to
 8 a PEAK, sometimes there might only be one PEAK and it
 9 will be probably the first PEAK that resulted in the
 10 production of the KEL, but other times the KEL could
 11 refer to lots of PEAKs, indeed hundreds of PEAKs. It
 12 depends.
 13 A. Yes. There are a number of KELs that on their own will
 14 refer to many hundreds, and that goes back to the
 15 statement that I made before about the number of likely
 16 PEAKs that could be linked to KELs. You can very
 17 quickly get to very large numbers.
 18 Q. Yes. If we look at this PEAK again at the bottom of the
 19 page, 13th April 2010, at 11.37 it says -- Andy Keil,
 20 who is now dealing with it says:
 21 "Request and authorisation were successful, but no
 22 confirmation or reversal:
 23 "This transaction is in the all branches recovery
 24 table, as per the KEL - 'There's a Recovery Table button
 25 on Smile which shows transactions (for all branches)

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1 where recovery has failed. If your transaction is in
 2 here, it will need manual reconciliation."
 3 So stopping there. Just to confirm, the way that
 4 Horizon has always worked is that while you are in the
 5 course of typing in a transaction into the counter all
 6 sorts of information is going up the wires into the data
 7 centre which may be the messagestore, in Legacy Horizon
 8 it could be the messagestore at the gateway counter at
 9 the branch, and that would then be replicated in due
 10 course to the correspondence server. And in
 11 Horizon Online it goes straight through to the BRDB, one
 12 of the central data servers, doesn't it?
 13 A. Yes.
 14 Q. On numerous occasions during the course of the
 15 transaction numerous tables -- it is easier if we just
 16 talk about Horizon Online -- in the BRDB are populated
 17 with data relating to the transaction being typed in?
 18 A. Yes.
 19 Q. That is a good thing because it means that if there is
 20 a problem with a transaction, if the transaction goes
 21 wrong before the basket is committed, then there will be
 22 actually several copies of data relating to that
 23 transaction to be found in various tables in the BRDB,
 24 would that be right?
 25 A. There might not be several copies of it but there will

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1 be a stake in the ground somewhere saying you have
 2 commenced a transaction.
 3 Q. So at least if you look for it nothing gets lost, would
 4 that be right?
 5 I don't want to commit you to an extreme
 6 articulation. I understand why you're hesitating.
 7 A. It is a fact that information will have to go from the
 8 counter to the BRDB so theoretically things can get lost
 9 along the way but that's quite unlikely.
 10 Q. Would I be right in thinking that you are not aware of
 11 any PEAK relating to a situation where data relating to
 12 a recoverable transaction has never actually got through
 13 to the relevant tables in the first place?
 14 A. No. There is a number of references to communication
 15 errors have led to situations arising and that often is
 16 seen in recovery, that they determine that the recovery
 17 is required because a communication fault --
 18 Q. But invariably those -- perhaps universally, actually,
 19 those communication problems will be towards the end of
 20 the transaction because that's the point at which the
 21 bank becomes engaged, that is the point at which there
 22 is a risk of the transaction becoming recoverable. At
 23 the relatively early stages where the initial elements
 24 of the transaction are being typed in, if that
 25 information doesn't get through, the system will just

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1 stop, won't it?
 2 A. Yes, that's fair. There is a time by which you are past
 3 the point of no return, if you will, without having to
 4 sort something out.
 5 Q. But my suggestion to you and I'm not trying to fence
 6 with you, Mr Coyne, and I'm not trying to be clever, or
 7 at least no more than usual, but where you have
 8 a recovery scenario, there will always be data relating
 9 to the transaction to be recovered. If there isn't data
 10 in the relevant tables in the BRDB about that
 11 transaction, then you are not in a recovery situation at
 12 all?
 13 A. That is right.
 14 Q. You haven't got far enough in?
 15 A. Yes.
 16 Q. Thank you, that's very helpful. So the way that it
 17 works then is -- what we are talking about is recovery
 18 failures. There will be data in the -- I'm talking
 19 about the BRDB just for simplicity, I appreciate this
 20 is -- actually this is Horizon Online.
 21 A. Yes.
 22 Q. In the BRDB there will be tables containing the data
 23 that relates to the relevant transaction?
 24 A. Yes.
 25 Q. And ideally the system will tell the SPM to try and

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1 recover the transaction but sometimes if there is
 2 a problem with the printer, because the system depends
 3 upon the printer printing out receipts and so on, there
 4 could be a problem which means that although the SPM
 5 knows there's something wrong and he or she has to
 6 address it, there will be a problem that means he can't
 7 on his own, yes?
 8 A. Yes. Because recoveries happen because something has
 9 gone wrong in branch, could be power, could be
 10 communications, could be a whole range of things,
 11 something has gone wrong and therefore the recovery
 12 process needs to start, it is quite possible that
 13 whatever went wrong in the first place is still going
 14 wrong when the recovery attempts and that's why
 15 sometimes the recovery won't be successful because it is
 16 a power problem, you still might have a power problem,
 17 a communication problem, it still might be there.
 18 Q. Yes. So would I be right in thinking it is inherent in
 19 the system in that the fact that any system of this sort
 20 is going to have recovery situations, you can never
 21 guarantee that you won't have recovery failures. The
 22 failure that causes the recoverable transaction in the
 23 first place could be of a nature which is going to
 24 involve a failure of the recovery as well, for example?
 25 A. By design there always would have to be a recovery

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1 process because the risk that there's going to be
 2 a power problem is always going to trigger somewhere on
 3 an estate of this size. If that part of it is designed
 4 well, then the vast majority of all recoveries should be
 5 completely automated.
 6 Q. Yes.
 7 A. There shouldn't be many of the situations --
 8 Q. Well, we can agree that the vast majority of recovery
 9 situations should work well?
 10 A. Yes.
 11 Q. Bearing in mind the vast number of transactions
 12 undertaken at Horizon --
 13 A. Indeed.
 14 Q. -- and a tiny proportion of situations where that
 15 doesn't happen could actually be a quite a large number
 16 over a period of 20 years?
 17 A. Certainly could be.
 18 Q. So would you accept with me that the fact that there
 19 have been a significant number of recovery failures over
 20 20 years, that of itself isn't indicative of a problem
 21 in the recovery process?
 22 A. Of course it has to be accepted that it is a problem
 23 because it shouldn't really happen. Typical recovery
 24 should work on an automatic basis. The manual
 25 intervention that's required when recovery fails, that

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1 shouldn't happen but does happen. It is because it
 2 doesn't know what situation it is and there hasn't been
 3 a recovery scenario created for that and therefore it
 4 requires manual intervention.
 5 Q. I didn't ask the question properly, and it is my fault
 6 not yours. What I meant to ask was it is inevitable
 7 with any system, however well designed, that there will
 8 be a small proportion of cases where the automatic
 9 recovery processes don't work. That's just inevitable,
 10 isn't it?
 11 A. Yes.
 12 Q. Thank you. That's very fair. And that's what happened
 13 here, this is one of those cases?
 14 A. Yes.
 15 Q. You will see that, as I think from the passage we have
 16 already read:
 17 "There's a Recovery Table button on Smiley which
 18 shows transactions (for all branches) where recovery has
 19 failed. If your transaction is in here, it will need
 20 manual reconciliation."
 21 We have agreed that data relating to recoverable
 22 transactions will always be somewhere within BRDB,
 23 I think?
 24 A. Mm.
 25 Q. We have agreed that there will always be cases, a small

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1 proportion of cases, where the recovery process that one
 2 would like to operate automatically for one reason or
 3 another doesn't, and in that small proportion of cases
 4 some form of manual assistance is required, isn't it?
 5 A. Yes.
 6 Q. And the system for example isn't designed -- the
 7 recovery system isn't required to require the counter to
 8 keep trying to log on and log on perpetually, it is
 9 designed to log on only twice?
 10 A. Yes.
 11 Q. That is a design feature, because if it is perpetual you
 12 can't use the machine?
 13 A. Yes.
 14 Q. That is very helpful. So the fact that you have
 15 recovery failures is not of itself a threat to
 16 robustness unless the proportion of the recovery
 17 failures you have is too high?
 18 A. Yes.
 19 Q. Here the system that's operated by Horizon is that where
 20 you have a recovery failure it is always reported both
 21 to Fujitsu and, by error warnings, also to the
 22 subpostmaster, yes?
 23 A. Yes.
 24 Q. So both Fujitsu and the postmaster, where there is
 25 a failed recovery, know there is a problem and they know

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1 they need to deal with it by communicating with each
 2 other, do you agree with that?
 3 A. Yes.
 4 Q. And that's the way that the Horizon system is
 5 constructed, correct?
 6 A. Yes.
 7 Q. One other aspect of the recovery process that's very
 8 important is to know when money changes hands?
 9 A. Yes.
 10 Q. And let me just expand on why that's important. You
 11 have a transaction, ex hypothesi it is a transaction
 12 involving a financial institution making or receiving
 13 a payment, and let's say it is a bank deposit. The
 14 customer hands in £100 at the branch, the branch presses
 15 the buttons so that the customer's bank account goes up
 16 by £100, and the problem that arises with recoverable
 17 transactions is that the bank may have been told to
 18 increase the balance by £100 before the transaction has
 19 actually been committed to the accounts of the branch.
 20 A. Yes.
 21 Q. And in that scenario, the postmaster may have seen
 22 a symbol on his screen saying "Accept the money,
 23 authorised to accept money", yes?
 24 A. Yes.
 25 Q. Or he may not have done. But whether he has or not, you

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1 don't know whether actually money has passed hands, do
 2 you? If you are at Fujitsu you are not going to know
 3 whether money has passed hands and you are going to want
 4 to check, because it might be that the postmaster sees
 5 the transaction stopping and says to the customer "I'm
 6 terribly sorry, I have a problem with the system, I'm
 7 closing it down. You had better keep your money and
 8 come back a bit later". That's always possible, yes?
 9 A. I was in agreement with you until you said if the
 10 message on screen says "Accept the money", because that
 11 should be the very last thing that happens after the
 12 process has been completed. That shouldn't be
 13 an intermediate phase before completion.
 14 Q. So what you are saying is the message "Accept recovery"
 15 never comes up before the transaction is committed to
 16 the database?
 17 A. You said "Accept money", did you? You said "Accept
 18 money"?
 19 Q. Yes.
 20 A. Well, that message -- it would be unsafe if that message
 21 was to appear before the transaction has been
 22 properly --
 23 Q. Right, but -- very good. But sometimes human beings do
 24 accept money a bit early, don't they?
 25 A. Yes.

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1 Q. So it is prudent, isn't it, in the scenario where there
 2 is a transaction, to check with the SPM as to whether
 3 money has been received or not, do you agree?
 4 A. Yes.
 5 Q. There is a danger, if you don't do that, that the SPM
 6 could end up being foisted with a false shortfall, isn't
 7 there? For example, the SPM might say to the customer,
 8 "There is a problem with my system. Ordinarily I would
 9 be taking money from you but you had better come back
 10 later with your money, I'm terribly sorry", and doesn't
 11 take the money, but then finds that his accounts have
 12 been multi-ed(sic) to the tune of £100. The account
 13 thinks he has received the money and there then appears
 14 to be a shortfall. Do you see that?
 15 A. Yes.
 16 Q. So in that kind of scenario it is always prudent, isn't
 17 it, for there to be a conversation with the postmaster
 18 to work out, to ascertain what the postmaster actually
 19 did on the ground, would you agree?
 20 A. Yes, I mean I think if that conversation can go on at
 21 the time that the transaction is taking place, then
 22 I can see how that would work. If it is going to happen
 23 the following day or something like that then there's
 24 very little value.
 25 Q. Why would that be, Mr Coyne? There is a recoverable

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1 transaction, something has gone wrong, the recovery for
 2 one reason or another hasn't operated automatically.
 3 The way that Horizon is set up is that the system is
 4 then made aware of the problem so that there can be
 5 a communication, co-operation between Fujitsu on the one
 6 hand, Post Office on the one hand, and the postmaster on
 7 the other, to work out what happened to make sure that
 8 the branch accounts properly reflect what happened in
 9 the real world.
 10 A. Yes.
 11 Q. What would be better than having such a co-operative
 12 arrangement?
 13 A. Just in practical terms I don't know how that would work
 14 in a large Post Office if it isn't taking place at the
 15 time that the transaction is going on.
 16 Q. As I think we have established, the postmaster -- as
 17 soon as the problem arises the postmaster knows about
 18 it. I think you have already agreed that. So
 19 a postmaster can be expected to keep some kind of note
 20 that I have had a problem or remember that he has had
 21 a problem, yes?
 22 A. If it was the postmaster that was at the counter at the
 23 time, yes.
 24 Q. Or the clerk whom the postmaster employs to do that job.
 25 One way or another, when something goes wrong you would

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1 expect the person at the branch doing the transaction to
 2 remember -- to know that something has gone wrong and to
 3 remember it because it could be important for accounting
 4 purposes later. Postmasters and clerks aren't goldfish,
 5 are they, they do have a memory of these things?
 6 A. That is fair.
 7 Q. They will know the significance of the point and they
 8 will know they ought to remember because it may come up
 9 later, yes?
 10 A. Yes, I think it is going beyond my technical expertise
 11 about what happens physically within the Post Office,
 12 but I can accept the premise that you are putting to me.
 13 Q. If we go back to the PEAK. We are at the bottom of
 14 page 1, middle paragraph of the box at 11.37 {F/613/1}:
 15 "Looking at the PostOfficeCounterLog, the receipt
 16 printed ok for this after authorisation was received,
 17 the receipt that printed for the cash withdrawal states
 18 'Authorised' ..."
 19 So it looks as if the postmaster was authorised.
 20 " ... so it's possible that the clerk handed over
 21 the monney. There is a timeout issue after the receipt
 22 printed."
 23 And timeout issues, we discussed that before, didn't
 24 we, that the system is designed only to try on two
 25 occasions and then it stops because otherwise it makes

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1 the machine hard to use, yes?
 2 A. Yes, so the receipt was printed and then something else
 3 happened. The timeout issue, I'm not sure what --
 4 Q. So if we go down to the next box, 13th April at 11.37:
 5 "The call record has been transferred to the team
 6 ..."
 7 MSU again. This time would you agree it is going
 8 back to the MSU so the MSU can contact Post Office and
 9 say "You need to speak to the postmaster to check what
 10 happened and, if necessary, you may need to do a TC",
 11 would you agree with that?
 12 A. Yes, I haven't seen that document.
 13 Q. If we go over the page {F/613/2}, the yellow box at the
 14 top of the page, 13th April at 15.07. Joanne Ball, who
 15 I assume is at MSU, says:
 16 "Thanks Andy."
 17 Andy being Andy Keil at the SSC.
 18 "Final BIMS issued to POL."
 19 Can you explain what a BIMS is?
 20 A. Business incident management? I don't know what the S
 21 is.
 22 Q. Yes. So what do you think that BIMS would be saying?
 23 A. It will possibly be describing the scenario that
 24 occurred and suggesting what actions --
 25 Q. Post Office should take?

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1 A. Post Office should take, yes.
 2 Q. In this case it will be: you need to check with the
 3 branch whether money changed hands, and if it didn't you
 4 might need to issue a TC, if it did then you won't, yes?
 5 A. Yes.
 6 Q. Could I suggest to you, Mr Coyne, that is the system
 7 working as it should. This PEAK isn't a demonstration
 8 of a failure in the Horizon system or in its
 9 countermeasures. It is actually good evidence of the
 10 countermeasures working so as to avoid the risk of any
 11 loss to a subpostmaster. Would you agree with that?
 12 A. As the position stands at the end of this PEAK, there is
 13 a discrepancy within branch accounts which Post Office
 14 may well go on to fix as a result of that BIMS but it is
 15 incorrect at this point in time, or it might be
 16 incorrect at this point in time.
 17 Q. What interests me, Mr Coyne, is that you are quite happy
 18 to describe this PEAK as an example of recovery failures
 19 creating discrepancies in branch accounts. We don't
 20 know whether it did or not actually. But you stop. At
 21 a earlier stage in your cross-examination I think you
 22 accepted that it is important for the expert to consider
 23 not just what the immediate impacts of a bug are but
 24 also what impacts the countermeasures that the system
 25 has would be. It is important therefore to focus on the

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1 ultimate result, not on some transient situation that
 2 may exist for a limited amount of time. I think you
 3 agreed with that before but perhaps I will invite you to
 4 agree with it again.
 5 A. I do agree with that but we have to work off the
 6 technical evidence available, and there isn't technical
 7 evidence available to show that this discrepancy was
 8 resolved.
 9 Q. Here's what interests me, Mr Coyne. What you are saying
 10 is -- let me do it this way. I would suggest to you
 11 that on any fair and reasonable reading what this PEAK
 12 demonstrates is, first of all, that Fujitsu spotted that
 13 there was a failed recovery situation?
 14 A. Yes.
 15 Q. Very reliably. One can reliably assume that's going to
 16 happen, yes?
 17 A. Yes.
 18 Q. Looked into the underlying circumstances at the branch
 19 at the time of the recovery. Again one can reliably
 20 assume that's going to happen?
 21 A. Yes.
 22 Q. Then formed the view it was necessary to work out what
 23 had happened on the ground in order to know whether any
 24 discrepancy had been created or not, yes?
 25 A. Yes.

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1 Q. Then sent through a BIMS to Post Office to tell
 2 Post Office to reach out to the postmaster and ask what
 3 actually happened on the ground?
 4 A. Yes.
 5 Q. And I further suggest to you, Mr Coyne, that the reason
 6 why Fujitsu sent that BIMS and the reason why
 7 Post Office received that BIMS, they don't receive these
 8 documents in order to put them in a pile in some
 9 warehouse and never look at them, they receive them so
 10 that they can be acted upon?
 11 A. Yes.
 12 Q. And on any fair reading of the evidence, it would be
 13 extraordinary in this case to assume that having
 14 received that BIMS, Post Office would not have reached
 15 out to the postmaster, ascertain what had happened and
 16 sent a TC or not depending on the postmaster's answer.
 17 A. Yes, but this is quite clear, when you read the heading
 18 "Recovery Failures", that it is seeking to address
 19 Horizon Issue 4: to what extent has there been the
 20 potential for errors in the data recorded in Horizon?
 21 Q. Mr Coyne, can I remind you we are talking about a PEAK
 22 which is in your bug table. It is in your evidence of
 23 bugs which have caused discrepancies. This table
 24 consists exclusively of what you say are bugs for which
 25 there is good evidence that discrepancies were caused to

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1 branch accounts, am I wrong?
 2 A. There is a table in my report -- this is a joint
 3 statement, remember. There is a table in my second
 4 report. If you look on the face of it, page 12
 5 {D2/4.1/18}, and it is quite clear here that this is
 6 under Horizon Issue 4 rather than Horizon Issue 1. And
 7 Horizon Issue 4 is a different issue talking about the
 8 potential.
 9 Q. Have you finished your answer?
 10 A. Yes.
 11 Q. Mr Coyne, your answer is absolutely astonishing. First
 12 of all, let's look at the table. It is "Recovery
 13 Failures" which is three rows from the bottom. You say
 14 it is relevant to Issue 4. Look at the next column.
 15 The next column says "Evidence of Branch Impact."
 16 A. Yes.
 17 Q. You are there saying that the recovery failures that you
 18 have identified are recovery failures for which there is
 19 evidence they had an impact on branch accounts?
 20 A. They do have an impact on branch accounts until it is
 21 dealt with by Post Office. There is very little doubt
 22 about that.
 23 Q. Secondly, I got this reference not from your table or
 24 from any paragraph of your report, I got this PEAK
 25 reference from the bug list in JS2, and you agreed with

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1 me I think at the beginning of this morning's evidence
 2 that that represents a list of bugs that you think had
 3 branch impact, had an effect on branch accounts. So
 4 I go to the PEAK and I expect to see a bug in there
 5 which has a demonstrated impact on branch accounts.
 6 But we go to this PEAK and what do I see? First of
 7 all, I don't see any bug at all. I see a failure in
 8 recovery which you yourself accepted was inevitable.
 9 Even in the best, most perfect system there are always
 10 going to be recovery failures.
 11 Secondly, I see no evidence of a discrepancy being
 12 created as a result of any bug in branch accounts. What
 13 I see is a system which is designed to avoid any
 14 discrepancy being created in branch accounts?
 15 A. Your questioning there was all about bugs. The actual
 16 Horizon Issue is framed as bugs, errors and defects. It
 17 is quite clear both in my report and in the table within
 18 the joint statement that recovery issues has been
 19 identified as Horizon Issue 4.
 20 Q. If we could go to paragraph 1.15 of the joint statement,
 21 so that's {D1/2/29}, please.
 22 A. The second joint statement?
 23 Q. Second joint statement:
 24 "The number of distinct bugs, for which the experts
 25 have seen strong evidence of the bug causing a lasting

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1 discrepancy in branch accounts, is between 12 and 29."
 2 So your expert opinion is that all 29 of the bugs on
 3 the bug table contain strong evidence of a financial
 4 discrepancy being caused in postmaster's accounts, yes?
 5 A. Sorry, let me --
 6 MR JUSTICE FRASER: I think you have given an incorrect
 7 reference to the joint statement or I can't find where
 8 you are reading from.
 9 MR DE GARR ROBINSON: I'm sorry. Paragraph 1.15 on page 29
 10 of the bug table. Well, it's not the bug table, it's
 11 JS2.
 12 MR JUSTICE FRASER: The joint statement, second joint
 13 statement?
 14 MR DE GARR ROBINSON: Second joint statement, yes.
 15 A. The agreed part of it? Yes.
 16 MR DE GARR ROBINSON: So what you are saying there is your
 17 expert opinion, your considered opinion, is that all 29
 18 of those bugs contain strong evidence of the bug causing
 19 a lasting discrepancy in branch accounts, yes?
 20 A. The statement there is an agreed statement between us.
 21 Q. Yes.
 22 A. That the number is between 12 and 29.
 23 Q. And your view is that it is 29, correct?
 24 A. My view will be whatever the number is in the table --
 25 Q. Yes, it is 29.

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1 A. -- in my report.
 2 Q. Yes. 29 bugs are in the bug table in the second joint
 3 statement, yes? And you confirmed when you started
 4 giving evidence about the bug table this morning that
 5 these 29 bugs represented the culmination of the work
 6 that you have done, they represented bugs that you
 7 considered had caused discrepancies in branch accounts.
 8 You are not withdrawing that evidence now, are you,
 9 Mr Coyne?
 10 A. I'm not. Are you referring to the bug table in my
 11 report?
 12 Q. I'm referring to the bug table in the second joint
 13 statement from which I have been working all morning,
 14 yes.
 15 A. Right, okay. Well, the bug table in my second report
 16 has a column that says "Evidence of Branch Account" and
 17 it has an indicator in there saying yes or no.
 18 Q. I'm looking at paragraph 1.15 which is agreed by you.
 19 A. Yes.
 20 Q. As I understand it, it is an assertion by you that all
 21 29 of the bugs in the bug table caused lasting
 22 discrepancies, that there's strong evidence that they
 23 caused lasting discrepancies. Do you see that?
 24 A. Yes.
 25 Q. And by "lasting", the antithesis of a lasting

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1 discrepancy is a transient discrepancy, correct?
 2 A. Sorry, just put that question again, please.
 3 Q. There are two kinds of discrepancy that can be caused.
 4 There are transient discrepancies and there are lasting
 5 ones.
 6 A. Right.
 7 Q. And the difference between transient discrepancies and
 8 lasting discrepancies is transient discrepancies get
 9 handled by countermeasures. So there is no ultimate
 10 effect, there is no lasting effect. There may be some
 11 short period of time where there is a potential
 12 shortfall, but in the long run the countermeasures
 13 existing in the Horizon system will ensure that the
 14 discrepancy is resolved. Yes?
 15 A. They should ensure if they are all working in position
 16 correctly, yes.
 17 Q. And that's what's meant by the word "lasting" in
 18 paragraph 1.15, yes?
 19 A. Yes.
 20 Q. So what you are saying is for each of the 29 bugs there
 21 is strong evidence that the bugs concerned not only
 22 caused discrepancies but they caused discrepancies which
 23 were lasting, which weren't handled by countermeasures.
 24 You see? That's your expert opinion, isn't it?
 25 A. Yes.

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1 Q. And yet we go to this -- and you cite lots and lots of
 2 PEAKS, I can't go through them all. But we go to this
 3 PEAK and what I suggest to you, Mr Coyne, is first of
 4 all there's not evidence of a bug, but more importantly
 5 for present purposes the evidence constituted by this
 6 PEAK demonstrates that if there were any discrepancy
 7 caused, it would have been picked up in the process, the
 8 BIMS process, that we have been discussing. Do you not
 9 agree?

10 A. It certainly should pick it up and that will correct the
 11 discrepancy, and therefore it shouldn't be lasting if
 12 that whole process works in the way that you suggest.
 13 But that was offered up as Horizon Issue 4, and Horizon
 14 Issue 4 asked for the potential and that is the area of
 15 potential.

16 Q. Mr Coyne, I don't want to be discourteous to you, but
 17 I suggest to you that you are evading my question. My
 18 question is, please forget Horizon Issue 4.

19 A. Right.

20 Q. We are talking about bugs creating discrepancies in
 21 branch accounts.

22 A. Yes.

23 Q. I have closed off that escape route for you, if I may
 24 say so. Okay?

25 A. Right.

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1 Q. And the purpose of the bug table is to identify
 2 precisely those bugs that had a lasting effect on branch
 3 accounts after taking countermeasures into account, yes?

4 A. Why are you suggesting that the purpose of this bug
 5 table is what you are suggesting it is?

6 MR JUSTICE FRASER: All right, I'm actually going to
 7 shortcircuit it this way because it is just past
 8 1 o'clock. There is a joint statement that says you and
 9 Dr Worden agree between 12 and 29.

10 A. Yes.

11 MR JUSTICE FRASER: Do you know what your number is between
 12 12 and 29?

13 A. There is evidence --

14 MR JUSTICE FRASER: No, no. Do you know what your number
 15 is?

16 A. 13.

17 MR JUSTICE FRASER: Right. If you want to pursue this
 18 anymore, Mr de Garr Robinson, do it at 2 o'clock.
 19 Thank you all very much. 2 o'clock.

20 (1.03 pm)

21 (The short adjournment)

22 (2.00 pm)

23 MR DE GARR ROBINSON: Mr Coyne, good afternoon.

24 A. Good afternoon. Sorry, Mr de Garr Robinson, before we
 25 start could I please correct the number I provided just

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1 before lunch.

2 In tallying up the numbers in the column in my
 3 report I missed that the last one is actually a heading
 4 that includes a number of bugs, errors and defects, so
 5 the actual number is 21. They are in the report, they
 6 are just grouped together for the purposes of the table.

7 Q. 21. So which ones -- if we are looking at the bug
 8 table -- did you mistakenly leave out? Which headings
 9 are we talking about?

10 A. The very last one on the table in any report.

11 Q. Network banking bug?

12 MR JUSTICE FRASER: I do not think you are in the same
 13 please.

14 Can you just give us a paragraph number?

15 A. Just above paragraph 3.22 of the second report.

16 MR DE GARR ROBINSON: So this is {D2/4.1/18}.

17 A. Yes. The last one on there that talks about bugs,
 18 errors and defects introduced previously by fixes?

19 Q. Yes.

20 A. That is actually a group heading, and in the report
 21 there's seven bugs, errors and defects included in that
 22 heading.

23 MR JUSTICE FRASER: So the number is 21.

24 A. The number is 21.

25 MR JUSTICE FRASER: All right.

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1 MR DE GARR ROBINSON: Just before we get to the number,
 2 I would like to just understand where we now stand.

3 We all understand, I think, we discussed it several
 4 times during the course of the last few days, the
 5 significance of the distinction between transient bugs
 6 on the one hand and lasting bugs on the other?

7 A. Yes.

8 Q. The distinction is transient bugs are bugs that will be
 9 caught by countermeasures, lasting bugs are the ones
 10 that the countermeasures may miss, yes?

11 A. Yes.

12 Q. So where you say you have identified 21 bugs that are
 13 lasting, you are also saying that the other bugs, such
 14 other bugs as have been identified at any tables or any
 15 lists, those bugs actually in your judgment are bugs
 16 that would not have got past countermeasures, yes?

17 A. That would not have got past?

18 Q. Yes, that would have been caught by countermeasures.
 19 That's why they are not lasting.

20 MR JUSTICE FRASER: I'm afraid I don't understand that
 21 question.

22 MR DE GARR ROBINSON: A large number of bugs are set out in
 23 the bug table in JS2.

24 A. Yes.

25 Q. When I say the bug table, I'm talking about the table

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1 which I thought represented the issues between the
 2 experts on bugs.
 3 MR JUSTICE FRASER: Yes, the one in the joint statement.
 4 MR DE GARR ROBINSON: The one in the joint statement. There
 5 are 29 bugs in that joint statement.
 6 A. Yes, bugs, errors and defects.
 7 Q. I'm not seeking to achieve an advantage by just saying
 8 bugs, I'm simply using the term as a form of shorthand,
 9 Mr Coyne. I understand what you mean when you seek to
 10 make yourself clear. That's entirely reasonable.
 11 That table identifies 29 bugs. You now say 21 bugs
 12 are lasting. And just to be clear, what you are
 13 actually saying is that 8 of the 29 bugs were not
 14 lasting, they are bugs that in your judgment would not
 15 have got past the countermeasures that exist in Horizon,
 16 yes?
 17 A. Not quite. They are bugs which have the potential, so
 18 they could well be caught at a later point in time.
 19 They go to one of the later Horizon Issues.
 20 Q. I'm focusing exclusively, and I would be very grateful
 21 if you would focus exclusively, on bugs having an impact
 22 on branch accounts, okay? I'm not going to be asking
 23 you questions about Issue 4 or other issues. I'm
 24 focusing today exclusively on Issue 1, okay? Just to be
 25 clear.

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1 A. Right.
 2 Q. What I'm suggesting -- what I'm seeking to ascertain
 3 from you, Mr Coyne, is that by saying your expert
 4 judgment is that there are 21 bugs which are lasting, it
 5 follows that eight of the bugs on the bug table in JS2,
 6 eight of those bugs in your view are not lasting,
 7 correct?
 8 A. Yes.
 9 Q. So in your expert view, you do not suggest that those
 10 eight bugs got past countermeasures, would have got past
 11 the Horizon countermeasures?
 12 A. Yes, that's true.
 13 Q. Thank you. That's very kind.
 14 MR JUSTICE FRASER: A different way of putting the same
 15 point is the passage that I asked you about, which is at
 16 1.15 on JS2 on page 29, which said:
 17 "The number of distinct bugs, for which the experts
 18 have seen strong evidence of the bug causing a lasting
 19 discrepancy in branch accounts, is between 12 and 29."
 20 29 is now 21?
 21 A. Yes, my Lord {D1/2/29}.
 22 MR JUSTICE FRASER: Right.
 23 MR DE GARR ROBINSON: That you are now asserting 21 rather
 24 than 29 takes me by surprise, Mr Coyne. If I could ask
 25 you to look at the transcript for this morning.

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1 A. Yes.
 2 Q. Page 15, if we pick it up at line 11 {Day17/15:11}.
 3 "Question: Let me ask a slightly different
 4 question."
 5 And I'm talking now about the bug list in JS2.
 6 "Question: This is the definitive list, isn't it?
 7 You are not suggesting that there are other bugs with
 8 evidence of financial impact -- you are not relying on
 9 any other bugs with evidence of financial impact, it is
 10 just the 29 bugs identified here?"
 11 "Answer: These are the ones that I have identified,
 12 yes."
 13 A. Yes.
 14 Q. I didn't ask you any further questions and moved on
 15 because I had understood you consistently throughout
 16 this case actually since before Christmas -- or
 17 certainly since your second report -- as asserting --
 18 well, actually since JS2 -- that the 29 bugs in JS2 were
 19 bugs with lasting financial effect.
 20 I form that understanding on the basis of the
 21 heading to the table. If we could look at the bug
 22 table, it is {D1/2/3}. So there's the heading. It is
 23 page 3:
 24 "Table of Bugs/Errors/Defects with acknowledged or
 25 disagreed evidence of financial impact."

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1 What I had understood, Mr Coyne, was that this set
 2 out the bugs that you thought had -- and I'm going to
 3 introduce the word "lasting, it is not in the heading --
 4 that you thought had lasting financial impact and those
 5 bugs which Dr Worden thought had lasting financial
 6 impact. My apprehension had been that you said 29 bugs
 7 had lasting financial impact and Dr Worden said only 12
 8 did.
 9 A. Yes.
 10 Q. If we move forward in the table to page {D1/2/27}, there
 11 are various agreements recorded here in relation to
 12 Horizon Issue 1, which of course is to do with
 13 shortfalls.
 14 A. Yes.
 15 Q. If we look at paragraph 1.2, look at "Statement", this
 16 is an agreed statement:
 17 "Referring to the table of bugs above, the experts
 18 agree that the bugs in rows 1, 2, 3, 10, 13, 14, 18, 23,
 19 24, 25, 27 and 28 may have had financial impact on
 20 branch accounts. Other rows, the impact is not agreed
 21 between the experts."
 22 A. Yes.
 23 Q. That's 12 bugs. And I had understood the position, in
 24 fact everyone on this side of the court had understood
 25 the position, that Dr Worden accepted that those 12 bugs

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1 had that financial impact, or there was evidence that
 2 those bugs might have had lasting financial impact, and
 3 the disagreement between you was that you said another
 4 17 did to get you up to 29. Do you see?
 5 A. Right.
 6 Q. Then if we move forward in the table to page {D1/2/29},
 7 please, in the joint statement, and we look at
 8 paragraph 1.15, another agreement:
 9 "The number of distinct bugs, for which the experts
 10 have seen strong evidence of the bug causing a lasting
 11 discrepancy in branch accounts, is between 12 and 29."
 12 I thought -- and I'm telling you this so that you
 13 can explain what my mistake was and how I made it --
 14 that that 12 was the 12 referred to in paragraph 1.2 and
 15 the 29 was the other 17 in the table that you were
 16 asserting. So my understanding of joint statement 2 was
 17 that you were asserting there were 29 bugs with lasting
 18 financial impact and Dr Worden -- or with evidence of
 19 lasting financial impact -- and Dr Worden was asserting
 20 that there were 12 bugs for which there was evidence of
 21 lasting financial impact. Was I wrong?
 22 A. Well, yes, you were wrong. That was a statement that we
 23 agreed to put in because we couldn't get agreement on
 24 how many there actually were, so we ended up putting
 25 a range in for the purposes of --

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1 Q. Here's what I don't understand. I presumed that you
 2 agreed with the 12 bugs that Dr Worden had identified
 3 because they are set out in paragraph 1.2.
 4 A. Yes.
 5 Q. So the point was that you were asserting an extra --
 6 some extra bugs to bring us to a higher total, yes?
 7 A. Yes.
 8 Q. And in paragraph 1.15, forgive me, it appears that that
 9 higher total is given, namely 29?
 10 A. Yes.
 11 Q. Are you suggesting that you have only ever suggested 21
 12 and no one was suggesting anything above 21?
 13 A. No. There are 29 bugs, errors and defects in the list
 14 and in the table starting at number 1, but some of those
 15 go to other Horizon Issues apart from Horizon Issue 1,
 16 and they do say that clearly in the heading.
 17 Q. The reason why I'm confused by your answer is that it
 18 seems to me -- and tell me why I'm wrong -- that in
 19 paragraph 1.15 it is being suggested that someone is
 20 saying there are 29 bugs which have lasting financial
 21 impact.
 22 If what you are now saying has always been your
 23 position, then nobody was ever saying that there were 29
 24 bugs with lasting financial impact. So my question
 25 becomes: how is it you were saying in 1.15 that there

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1 were another seven bugs with lasting financial impact
 2 when no one was saying so?
 3 A. I'm not actually sure who suggested the first draft of
 4 that statement.
 5 Q. It doesn't matter though, does it?
 6 A. No, it doesn't matter, but because it was correct it's
 7 gone in as agreed.
 8 Q. How could it possibly be correct in a world in which
 9 Dr Worden was suggesting there was evidence for 12 bugs
 10 with lasting financial effect, and you were saying no,
 11 there's an extra nine to bring it up to 21, how could it
 12 possibly be correct that there might be 22, 23, 24, 25,
 13 26, 27, 28, 29? Where do the other eight bugs come
 14 from? How is it possible that there could be an extra
 15 eight bugs with lasting financial effect where you have
 16 just told me that neither you nor Dr Worden thought that
 17 there was?
 18 A. Because some of the Horizon Issue 4 bugs, errors and
 19 defects that are reported in here and are reported in
 20 the joint statement could have a lasting impact on
 21 branch accounts but we don't necessarily have evidence
 22 of that.
 23 Q. Mr Coyne, I would like to suggest that that is not any
 24 sensible or fair reading of what's set out in
 25 paragraph 1.15 and that on any sensible reading

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1 Dr Worden was alleging 12 and you were alleging 29.
 2 A. Mm.
 3 Q. And you refute that, do you?
 4 A. No, at the time we were working from that table of 29
 5 bugs, errors and defects. There were 29 in play that
 6 were being discussed.
 7 Q. I have to say your answers are making things more, not
 8 less, clear. I don't know what you mean by "being in
 9 play". You either -- it is a binary situation. It is
 10 almost a set of philosophical statements.
 11 A human being either believes that there's evidence
 12 that a bug has a lasting financial impact or he does
 13 not. In a world in which Dr Worden believes that there
 14 are 12 and you believe that there are 21, and there is
 15 no one else in the room who has a belief because you are
 16 the only two people who are producing the statement, it
 17 makes no sense for anyone to mention an additional
 18 number to bring you up to 29. You should have said: it
 19 is between 12 and 21.
 20 A. No, but what you have said there precisely illustrates
 21 my point. You said there is either evidence of, and the
 22 challenge is with a number of these there is evidence of
 23 there being a defect but there isn't necessarily
 24 evidence of financial impact from that defect.
 25 Q. Mr Coyne, everybody on this side of the court, and

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1 I mean everybody on this side of the court, believed
 2 that your view was that the evidence showed that there
 3 were 29 bugs with lasting financial impact. You are now
 4 saying that we made a mistake, are you?
 5 A. Yes.
 6 Q. Could I ask you to explain where you made it clear what
 7 you were actually saying?
 8 A. Well, as set out in my second report, there is a table
 9 there that quite clearly says whether there is evidence
 10 of branch impact or not. And there is also a list of
 11 which Horizon Issue it specifically relates to. The
 12 only addition to that is when you come to the very last
 13 column, there's other bugs, errors and defects that are
 14 re-introduced and they are only covered in the joint
 15 statements.
 16 Q. Would you give me a moment, I'm so sorry. Because
 17 I wasn't prepared for the discussion we are now having
 18 I'm afraid I'm going to stumble rather.
 19 (Pause)
 20 So what you are suggesting is that there are I don't
 21 know how many ... In your table 1, how many bugs have
 22 you counted from your table 1 that you now say have
 23 evidence of lasting financial impact?
 24 A. How many from your table? Right, okay. So 14 from the
 25 table.

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1 Q. 14. Then an extra seven that come from the last item?
 2 A. The last item, yes. They are covered in the report at
 3 3.211.
 4 Q. So it is the last item on the report. There appears to
 5 be an item corresponding to that item in the bug table.
 6 A. There is, yes.
 7 Q. It is in {D1/2/21}. It is bug 22. So have I made
 8 another error, Mr Coyne? Have I wrongly assumed that
 9 item 22 corresponded with the last item in your table 1
 10 in your joint report? Are you now saying, no, no, that
 11 last item in the joint report actually accounts for
 12 a whole host of other bugs?
 13 A. Yes, let me just turn to that in my report.
 14 Q. I must admit I have been focusing on your bug table
 15 because this represents the last statement, as
 16 I understood it, of the issues between the parties or
 17 between the parties' experts.
 18 A. It does.
 19 Q. I'm not trying to stop you going to your report, please
 20 go ahead, Mr Coyne.
 21 A. Yes. Yes, they are covered in the 22 ... sorry.
 22 (Pause)
 23 So covered at 3.211 in the report.
 24 Q. Yes.
 25 A. You see the PEAKs that are ...

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1 Q. There are two PEAKs in that section, {F/53/1} and
 2 {F/55/1}. I'm not sure how that could account for
 3 another seven bugs.
 4 A. But then if you go on from 22 you have got 23, bureau de
 5 change.
 6 Q. You are saying that is an aspect of bugs, errors and
 7 defects introduced by previously applied PEAK fixes, are
 8 you? Because it is plainly not right, Mr Coyne. What
 9 are you saying?
 10 A. Sorry, I'm drawing a blank now what the cross reference
 11 is for these ... Sorry, I would need to search for that
 12 PEAK reference under the Coyne impact column against 23,
 13 bureau de change, just to see where that features.
 14 Q. The interesting thing is if you look at table 1 in your
 15 second report {D2/4.1/18}, there is an item for bureau
 16 discrepancies. That's different from bureau de change,
 17 is it?
 18 A. I think bureau discrepancies is already covered further
 19 up in this joint statement.
 20 Q. I see. So are you saying that bureau de change were --
 21 they were within your category of bugs, errors and
 22 defects introduced by previously applied fixes? Is that
 23 what you are saying?
 24 A. Yes.
 25 Q. And are you saying that for the others: wrong branch,

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1 customer change? I don't want to put words into your
 2 mouth.
 3 A. Yes, because the original bureau de change is at 14 --
 4 sorry, bureau discrepancies which corresponds --
 5 Q. Sorry, it was a red herring I introduced. I was trying
 6 to help and I do not think I did.
 7 Let me move away from that subject. Perhaps we
 8 could have a think about that, maybe we will have
 9 a break in a few minutes and think about it, but before
 10 we do that, subject to his Lordship of course, I would
 11 like to go back to the first issue I was seeking to
 12 explore with you, which is how wrong we were about what
 13 your expert opinion was, and you told me that on this
 14 side of the court we were wrong to think that your
 15 expert opinion was that there were 29 bugs with lasting
 16 financial impact.
 17 Could you tell me where in any document you have
 18 indicated that your view is in fact not 29 but 21?
 19 Where will I get that from?
 20 A. Throughout the report I have set out next to every
 21 single defect whether it is relating to the test of
 22 Horizon Issue 1 or a later Horizon Issue, and I have
 23 also set out whether I believe there was impact on
 24 branch accounts all the way through report number 2.
 25 Q. Let's not talk about report number 2 because the

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1 statement -- the most up to date statement of the
 2 position, I think you agreed with me at the beginning of
 3 today, the culmination of all your work, including work
 4 you did after your second report, is the bug table in
 5 joint statement 2?
 6 A. Yes, but when you put that to me I said that that can't
 7 be read in isolation, it must be read with the second
 8 report.
 9 Q. Indeed you did. And that was entirely fair because with
 10 particular PEAKs you might need to go back to your
 11 report to see what you said about those PEAKs. But
 12 nonetheless, the bug table had 29 bugs in it which you
 13 said had financial impact. I had thought you were
 14 saying all 29 had lasting financial impact for the
 15 reasons I have already explained because of what was in
 16 paragraph 1.15 of the joint statement.
 17 My question is: where in your joint statement do you
 18 say my view as to lasting financial impact is 21? And
 19 if you say it nowhere, why do you say it nowhere?
 20 A. Can I take you to one illustration of that? If you look
 21 at number 21.
 22 Q. In the bug table?
 23 A. In the bug table. {D1/2/20} So that is transaction
 24 correction issues, and I say there in brackets "(Horizon
 25 Issue 4 & 15)".

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1 Then what my statement says there is:
 2 "Transaction correction bugs/errors and defects do
 3 not cause discrepancies with branch accounts but do:
 4 "(a) Reduce the Subpostmaster's ability to resolve
 5 any discrepancies ..."
 6 Etc. So I make it clear in there that there's not
 7 an impact on branch accounts but it does relate to
 8 Horizon Issue 4.
 9 Q. So you say you make it clear it is not 29. So we have
 10 got down to 28. Where do you make it clear that another
 11 seven should also be excluded from the list?
 12 A. Number 17 {D1/2/16} has Horizon Issue 4.
 13 Q. And where do you say that doesn't have lasting financial
 14 impact?
 15 A. If you read the text it doesn't suggest that it does.
 16 Q. Here's what I find really interesting, Mr Coyne. I'm
 17 looking at your table 1 -- you know you keep wanting me
 18 to go back to look at your second report. If I look at
 19 table 1 of your second report it has an entry for branch
 20 customer discrepancies {D2/4.1/18}, and in the "Evidence
 21 of Branch Impact" column it has the word "Yes". So did
 22 you make a mistake, should you have written "No" there?
 23 Or are you putting a construction on bug 17 in the table
 24 that it doesn't bear?
 25 A. If you read Dr Worden's opinion on that, recovery

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1 messages needed to be dealt with to correct the
 2 discrepancy at the branch. So there was an impact on
 3 branch accounts but it was corrected.
 4 Q. Let's move on. So far we have taken out two of these
 5 items on the list. Where are the others coming from?
 6 Which others should we be taking out?
 7 A. So 19, Post & Go, that's a Horizon Issue 4.
 8 Q. Yes.
 9 A. So on the table I have said that there is evidence of
 10 branch impact on there.
 11 Q. Sorry, which table? What am I looking at?
 12 A. Forgive me. In my second report, on the table, you will
 13 see that Post & Go is listed as a Horizon Issue 4.
 14 Q. Yes, and it is also listed as having evidence of branch
 15 impact --
 16 A. I will take you to that in one second, yes. In the
 17 joint statement table that explains that that's Horizon
 18 Issue 4.
 19 Q. Right.
 20 A. And there is evidence of branch impact. The problem
 21 impacted at least one branch account for 43 days and it
 22 appeared repeatedly on the daily report to the
 23 Post Office from Fujitsu.
 24 Q. Rather than -- I'm not taking you to task or criticising
 25 you for this, and I understand entirely why you are

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1 explaining your reasoning, but in the first instance
 2 could you simply tell me the bugs that you think should
 3 be taken out from the list I thought I was facing and
 4 then we can perhaps talk about them after you have done
 5 that?
 6 A. You want the bugs to take out?
 7 Q. Yes.
 8 MR JUSTICE FRASER: At the moment I have been noting it. We
 9 have got 17, 21 and 19.
 10 A. So phantom transactions, which is number 15 {D1/2/13},
 11 that is a Horizon Issue 4.
 12 Q. Yes. Does it say Horizon Issue 4 somewhere and I have
 13 missed it?
 14 MR JUSTICE FRASER: I think table 1.
 15 MR DE GARR ROBINSON: I see. Yes.
 16 MR JUSTICE FRASER: But you are right, it is not in the
 17 column in the joint statement. Right, so that is
 18 another one.
 19 A. Yes. And branch account impact was noted on that.
 20 Number 16 {D1/2/13}, reconciliation, is Horizon
 21 Issue 4.
 22 Q. You actually say -- in the bug table you say Issues 1, 4
 23 and 5. So I should delete Issue 1, should I?
 24 {D1/2/14}. I will do that.
 25 A. Sorry, in the bug table?

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1 MR JUSTICE FRASER: I don't want to be too pedantic,
 2 Mr de Garr Robinson, but do remember it is a joint
 3 statement. So far as Mr Coyne is concerned --
 4 MR DE GARR ROBINSON: From your perspective --
 5 MR JUSTICE FRASER: -- can number 1 come out in the column
 6 against item 16?
 7 MR DE GARR ROBINSON: Entirely fair, my Lord. Although
 8 Dr Worden has never asserted that this is Issue 1
 9 but ...
 10 MR JUSTICE FRASER: As I said, I don't want to be too
 11 pedantic, but at the moment it is a joint statement. It
 12 might lead to a permanent and agreed deletion but for
 13 the moment.
 14 MR DE GARR ROBINSON: I hadn't thought of that.
 15 A. Yes, I have noted reconciliation issues as Horizon
 16 Issue 4.
 17 MR JUSTICE FRASER: Okay. I will tell you what my number
 18 is: it's 17, 21, 19, 15 and 16.
 19 MR DE GARR ROBINSON: So there's another two to go. Is that
 20 right? No, it's another four to go.
 21 MR JUSTICE FRASER: Mr Coyne, number?
 22 A. So Post & Go is number 4 -- sorry, is Horizon Issue 4.
 23 That can come out.
 24 MR JUSTICE FRASER: Can you give me the item number?
 25 A. Number 19.

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1 MR JUSTICE FRASER: You have given us that already.
 2 A. Recovery failures, number 20 --
 3 MR DE GARR ROBINSON: Right.
 4 A. -- is a Horizon Issue 4. {D1/2/19} Transaction
 5 correction issues is a Horizon Issue 4.
 6 MR JUSTICE FRASER: Item number, please?
 7 A. Sorry, 21.
 8 MR DE GARR ROBINSON: I'm reminded that you indicated that
 9 you got to 21 by treating one of these bugs as actually
 10 counting as seven, is that right? The bugs, errors and
 11 defects introduced by previously applied fixes, was that
 12 right? Or did I misunderstand what you said?
 13 A. There should be seven within that heading.
 14 Q. Right. So does that mean we have to take a lot more
 15 from the index of the bug table to get to the right
 16 number?
 17 MR JUSTICE FRASER: Mr de Garr Robinson, have you been
 18 taking a note of the item numbers in the joint
 19 statement?
 20 MR DE GARR ROBINSON: I have been drawing circles around
 21 them, my Lord.
 22 MR JUSTICE FRASER: I'm just going to tell you what my
 23 numbers are in case I'm wrong, and I'm putting these in
 24 numerical order: 15, 16, 17, 19, 20 and 21. Does that
 25 match your numbers?

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1 MR DE GARR ROBINSON: Mine are 15, 16, 17, 19, 20, and 21.
 2 My Lord, yes. So we are down to 24 bugs. There's
 3 another three to go, is that right?
 4 MR JUSTICE FRASER: I think 29 minus six, yes, 23.
 5 MR DE GARR ROBINSON: Or possibly more if bug 22 is actually
 6 seven.
 7 MR JUSTICE FRASER: If we could for my purposes concentrate
 8 on the 29 subtracting these, because the 29 are
 9 individually set out.
 10 So, Mr Coyne, we started with 29 and you have taken
 11 six out. Mr de Garr Robinson would like to know what
 12 the others are. Are you in a position to tell us?
 13 A. I will certainly try, my Lord.
 14 (Pause)
 15 Just from that tally, my Lord, I have only got six
 16 to take out of the list in here.
 17 MR JUSTICE FRASER: Okay.
 18 Over to you, Mr de Garr Robinson.
 19 MR DE GARR ROBINSON: So we are at 23, are we, not 21?
 20 A. Just going from the joint statement, from what I have
 21 just done, yes.
 22 Q. So how is it you arrived at 21 --
 23 A. I have gone from the bottom up rather than the top down,
 24 so --
 25 Q. I presume you thought of little else during the luncheon

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1 adjournment, which is why when you came back in you were
 2 very quick to explain -- to correct the answer that you
 3 had given his Lordship just before we broke.
 4 A. Yes.
 5 Q. So how is it that the position that you are adopting now
 6 is inconsistent with the position that you were adopting
 7 at 2.01 pm? Can you explain that?
 8 A. What I did over the lunch is I have gone from my table
 9 at page 12 of the joint statement and then added in
 10 seven under the last one, that's how I have got the
 11 number.
 12 Q. When you say seven under the last one, I hesitate to
 13 change the subject, but the bugs, errors and defects
 14 introduced by previously applied PEAKs, which is the
 15 last item on table 1 of your second report, that whole
 16 section of your report only refers to two PEAKs. So how
 17 is it that that section has somehow generated an extra
 18 seven bugs? Could you explain that perhaps?
 19 I'm so sorry, it is four PEAKs.
 20 MR JUSTICE FRASER: I'm not sure -- you might just want to
 21 re-consider that, Mr de Garr Robinson.
 22 MR DE GARR ROBINSON: You are quite right. It is 1, 2, 3,
 23 4 -- yes, it is four PEAKs. Between 3.211 and 3.219
 24 four PEAKs are footnoted.
 25 Would your Lordship let me confer?

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1 MR JUSTICE FRASER: By all means. (Pause)
 2 A. Sorry, what's just struck me about the ones at the tail
 3 end, it could well be the case that these are inclusions
 4 from Dr Worden.
 5 MR DE GARR ROBINSON: Oh, I see. So it isn't the case that
 6 these bugs introduced by fixes do explain another
 7 seven --
 8 A. Or Dr Worden wanted them included into this joint
 9 statement.
 10 Q. Let's just go back for a second and work out how many of
 11 these bugs you say there is evidence to justify the
 12 suggestion that there might have been a lasting
 13 financial impact. You think there's such evidence with
 14 the receipts and payments mismatch, number 1, yes?
 15 A. Let me start again.
 16 Q. Let's go from the front.
 17 MR JUSTICE FRASER: Are we in the joint statement?
 18 MR DE GARR ROBINSON: In the joint statement, yes. So you
 19 think there is evidence for number 1?
 20 A. Yes.
 21 Q. You think there is evidence for Callendar Square?
 22 A. Yes.
 23 Q. This is evidence of a lasting impact, yes?
 24 A. Yes.
 25 Q. You think there is evidence for suspense account bug,

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1 number 3?
 2 A. Yes.
 3 Q. Do you think there is evidence for lasting financial
 4 impact for Dalmellington?
 5 A. There was certainly evidence that not all branches were
 6 resolved.
 7 Q. So you include that as --
 8 A. Yes.
 9 Q. You think there's evidence of lasting financial impact.
 10 Okay. What about remming in bug, number 5? Is there
 11 evidence of lasting financial impact for that?
 12 A. Yes.
 13 Q. Remming out bug, 6/1?
 14 A. Yes.
 15 Q. Remming out bug, 6/2?
 16 A. Yes.
 17 Q. 7, local suspense issue?
 18 A. Yes.
 19 Q. 8, recovery issues?
 20 A. Yes.
 21 Q. 9, evidence of lasting financial impact for reversals?
 22 A. Yes.
 23 Q. 10, evidence of lasting financial impact data tree build
 24 failure discrepancies?
 25 A. Yes.

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1 Q. 11, evidence of lasting impact Girobank discrepancies,
 2 that we discussed this morning?
 3 A. Yes.
 4 Q. 12, counter replacement issues, evidence of lasting
 5 impact?
 6 A. Sorry, you using the word "lasting impact" now. I don't
 7 know whether Post Office went on to make any later
 8 corrections to sort out these discrepancies.
 9 Q. I have sought to establish a degree with you on a number
 10 of occasions now the difference between transient impact
 11 that you think would have been caught by countermeasures
 12 and lasting impact that would not have been caught by
 13 countermeasures. That's what I'm getting at, Mr Coyne.
 14 Because I think you agreed with me on at least one
 15 occasion previously that it is the lasting impact bugs
 16 that really have a material impact on robustness, or are
 17 capable of having an impact on robustness. So that's
 18 what I mean by lasting.
 19 So counter replacement issues, you say there is
 20 evidence of lasting impact?
 21 A. Yes.
 22 Q. 13, do you say there's evidence of lasting impact with
 23 withdrawn stock discrepancies?
 24 A. Yes.
 25 Q. 14, do you say there is evidence of lasting impact with

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1 bureau discrepancies?
 2 A. Yes, I believe so.
 3 Q. Okay. 15, I will let you look at your report.
 4 A. Sorry. (Pause)
 5 Yes.
 6 Q. Okay?
 7 A. Yes.
 8 Q. 15 is out.
 9 A. Yes.
 10 Q. 16 is out. 17 is out.
 11 A. Yes.
 12 Q. 18, do you say there's evidence of lasting impact with
 13 18, concurrent logins?
 14 A. Yes.
 15 Q. I'm interested that you should say that, Mr Coyne,
 16 because if we could go back to your second report at
 17 {D2/4.1/18}.
 18 A. Yes.
 19 Q. Look at the table and look at concurrent logins, for
 20 "Evidence of Branch Impact" you say "No" there. Did you
 21 change your mind?
 22 A. After discussion with Dr Worden, yes.
 23 Q. Okay. Then 19 is out. 20 is out. 21 is out.
 24 What about 22? I infer from what you have already
 25 said that you say there is evidence of lasting impact

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1 for 22, yes?
 2 A. Yes.
 3 Q. And 23, evidence of lasting impact, do you say?
 4 A. Yes.
 5 Q. 24, wrong branch customer change displayed?
 6 A. Yes.
 7 Q. When you say "Yes", you mean evidence of lasting impact,
 8 I should make that clear.
 9 A. Yes.
 10 Q. Then 25, Lyca top up, do you say evidence of lasting
 11 impact for that?
 12 A. Yes.
 13 Q. At 26 do you say evidence of lasting impact on branch
 14 accounts for the TPSC250 report?
 15 A. Yes.
 16 Q. And 27, TPS, do you say there's evidence of lasting
 17 impact on branch accounts for TPS?
 18 A. Yes.
 19 Q. 28, Drop and Go, do you say there is evidence for
 20 lasting impact for Drop and Go? {D1/2/25}
 21 A. Yes.
 22 Q. And 29, network banking bug, do you say there's evidence
 23 of lasting impact for 29?
 24 A. Sorry, I'm just checking the text on that. I have
 25 actually got that down as the potential for bank account

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1 discrepancies.
 2 Q. So is your view that there isn't evidence of lasting
 3 financial impact?
 4 A. Yes.
 5 Q. So that should come out, should it?
 6 A. That should come out and that should be --
 7 Q. That's network banking?
 8 A. Yes.
 9 Q. Very good. Thank you. So we have got from 29 I think
 10 down to 22. Is that your final number?
 11 A. Sorry, I'm still just reading the network banking one.
 12 MR JUSTICE FRASER: While you just read that, are you
 13 counting 6 as one or two, just out of interest, because
 14 you went through it --
 15 MR DE GARR ROBINSON: I'm counting it as one.
 16 MR JUSTICE FRASER: Okay. Counting it as one.
 17 MR DE GARR ROBINSON: I'm using the same numbering system
 18 as --
 19 MR JUSTICE FRASER: But it is just split between 6(a) and
 20 6(b) --
 21 MR DE GARR ROBINSON: I hadn't factored that in, my Lord.
 22 A. Certainly with regard to network banking it is causing
 23 potential for branch impact, but I haven't got evidence
 24 of discrepancies.
 25 Q. So it comes out?

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1 A. Well -- no, it will be a Horizon Issue 4.
 2 Q. Given that today all I'm talking about is Horizon
 3 Issue 1, it is all I have got time to talk about and
 4 I have barely got time to talk about that, and that's
 5 not a criticism, by the way, it is just how things are
 6 these days, we are down from 29 bugs to 22 bugs. Are
 7 you now sure that that's the right number?
 8 A. Yes.
 9 Q. And I would like to ask you why is it you thought there
 10 were 21 bugs at 2 o'clock, whereas you thought -- was it
 11 14 bugs at 1 o'clock? 13 bugs at 1 o'clock.
 12 A. Because I was just counting down the table at number 1
 13 in my report. In the pressure of the situation I just
 14 tallied that column down, I didn't have enough time to
 15 consider it fully.
 16 Q. To go back to a question I asked you earlier, where do
 17 you make this clear in the joint statement?
 18 A. In the heading next to the -- in the bug, error or
 19 defect.
 20 Q. And you are saying that the heading to the bug table,
 21 which is "Table of Bugs/Errors/Defects with acknowledged
 22 or disagreed evidence of financial impact", you say that
 23 heading is sufficient to enable the reader to understand
 24 that of the 29 bugs referred to, in fact we only need to
 25 be concerned with 22 of them, yes?

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1 A. Sorry, I'm talking about in the joint statement.
 2 Q. Yes.
 3 A. Yes.
 4 Q. How is the reader supposed to divine from the heading
 5 that Dr Worden was saying evidence for 12 bugs and you
 6 were saying evidence for 22?
 7 Dr Worden indicates his position in the body of the
 8 joint statement but, as I said, in paragraph 1.15 and in
 9 the bug table itself you appear to be indicating your
 10 position that it was 29, and I would suggest to you,
 11 Mr Coyne, that in that respect the joint statement was
 12 seriously misleading. Why was that?
 13 A. We didn't believe it was misleading when we put the
 14 document together. I mean, it is always a negotiated
 15 position to get the joint statements.
 16 Q. As I say, Mr Coyne, everyone on this side of the court
 17 is taken completely by surprise by the suggestion that
 18 it is 22, not 29. Indeed I venture to suggest that the
 19 claimants' own counsel are taken by surprise that it is
 20 22, not 29. Now why is that?
 21 A. I don't really see why that would be the case when, if
 22 you read the text in the report, it explains what
 23 particular Horizon Issue I'm attempting to deal with.
 24 I know today you have chosen to go through Horizon
 25 Issue 1, but in the report it attempts to deal with all

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1 issues -- all technical issues that were put to me.
 2 Q. Section 1 of the joint statement relates to Horizon
 3 Issue 1, doesn't it?
 4 A. Section 1 of the joint statement? (Pause)
 5 Q. If you look at the joint statement there is the
 6 introductory text, then there's the bug table.
 7 Immediately after the bug table, which is at page --
 8 there is a global agreement section, and then
 9 immediately after that at page 27 there are a series of
 10 propositions relating to Horizon Issue 1. {D1/2/27}
 11 A. Yes.
 12 Q. So section 1 of the joint statement talks about Horizon
 13 Issue 1.
 14 A. Yes.
 15 Q. As I suggested to you, the natural interpretation of
 16 what you say there in Horizon Issue 1, and in particular
 17 paragraph 1.15 on page {D1/2/29}, is that Dr Worden was
 18 saying 12 and you were saying 29 and I would venture to
 19 suggest that everybody on both sides of the court
 20 thought that was the position. How could that possibly
 21 be the case? How can your own counsel, Mr Coyne, have
 22 made that mistake?
 23 MR JUSTICE FRASER: On the basis it is a joint statement,
 24 Mr de Garr Robinson, I think you have to be quite
 25 careful about how you put the question.

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1 MR DE GARR ROBINSON: Could I ask you to go to bundle
 2 {A/1/1}, please. This is the claimants' written
 3 openings.
 4 A. Yes.
 5 Q. Could we go to page {A/1/7}, paragraph 9. It is said:
 6 "The fact that further significant bugs have come to
 7 light, in the way that they have, from the enquiries
 8 that the experts have been able to undertake, is
 9 significant ..."
 10 If we skip down to (4), you will see it says:
 11 "There are a number of further bugs identified so
 12 far, which Post Office had neither admitted nor
 13 volunteered: between 12 (Dr Worden) and 29 (Mr Coyne)
 14 bugs with ..."
 15 And there's a quote:
 16 "... 'strong evidence of the bug causing a lasting
 17 discrepancy in branch accounts'"
 18 That's why I asked that question. How is it your
 19 own counsel thought you were saying there were 29 bugs
 20 with lasting effect if that wasn't the case?
 21 A. It was a statement that was put in there to try and
 22 frame that the number that we would probably ultimately
 23 arrive at would be somewhere between those two
 24 parameters.
 25 Q. I presume, Mr Coyne, that you reviewed the claimants'

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1 opening submissions either before or after they were
 2 filed with the court, would that be right?
 3 A. I'm not sure I did.
 4 Q. Are you suggesting that you didn't read the claimants'
 5 submissions before you came to give evidence today?
 6 A. These are quite historic documents, are they?
 7 Q. These were the submissions that the claimants filed with
 8 the court at the beginning of the trial. It is the
 9 opening submissions. I know you have considerable
 10 expertise in giving expert evidence. The opening
 11 statements of both parties were put into the judge so he
 12 would have an understanding of the issues and where the
 13 parties saw themselves standing. And I'm asking you
 14 whether either before they were submitted, which would
 15 be common, or afterwards you looked at the claimants'
 16 opening submissions.
 17 A. I don't believe I have, no.
 18 Q. So what we have is ships sailing in opposite directions
 19 in the night. You in your own mind thinking I have got
 20 22 bugs. Counsel for the claimants thinking it is 29.
 21 And no one ever discovering the truth until the judge
 22 asked you a question at about 12.59 pm today.
 23 A. My answer is I can't recall reading the openings.
 24 Q. Some people might think that you have adjusted your
 25 position in line with a position that you think it might

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1 be easier to defend in cross-examination this afternoon.
 2 What would you say to that suggestion?
 3 A. That's not true.
 4 MR DE GARR ROBINSON: My Lord, I wonder whether it would be
 5 a convenient moment to break so that I could look at the
 6 list and decide --
 7 MR JUSTICE FRASER: What you are going to do.
 8 MR DE GARR ROBINSON: -- what I'm going to do in the next 45
 9 minutes allotted to me.
 10 MR JUSTICE FRASER: By all means. 3.10 pm.
 11 MR DE GARR ROBINSON: Thank you.
 12 MR JUSTICE FRASER: Thank you very much.
 13 (3.03 pm)
 14 (A short break)
 15 (3.10 pm)
 16 MR DE GARR ROBINSON: Mr Coyne, I have got 35 minutes,
 17 I have promised my learned friend that I will finish at
 18 3.45, so I will start with some bugs and we will see how
 19 far I get in that time.
 20 The first one I want to take you to is obviously
 21 a bug where you say there's evidence of lasting
 22 financial impact and I will go to Dalmellington first of
 23 all.
 24 Could we first of all go to {F/1389/1}, please.
 25 This is the PEAK that relates to Dalmellington and we

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1 can see there is a call in on 13th October 2015. If we
 2 go to the second box on the first page, just underneath
 3 the "Incident Management" text, it says:
 4 "Transfer note: Please can PEAK investigate this
 5 discrepancy issue. NBSC has confirmed that following
 6 discussions and checks with the user that this is not
 7 a user error issue, but an issue within the system
 8 requiring Fujitsu investigation."
 9 Do you see that?
 10 A. Yes.
 11 Q. So that's when the penny dropped that it was not a user
 12 error, it was a system problem?
 13 A. Yes.
 14 Q. If we move on to page {F/1389/5} of the PEAK. At the
 15 bottom of the page Anne Chambers, who we have seen a lot
 16 of, she says at 15 October at 15.56:
 17 "We have found that if there is a logout before a
 18 user has fully logged on, then subsequently a pouch is
 19 remmed in manually (most likely at an outreach branch),
 20 then after the rem in slip has been printed, the same
 21 screen is redisplayed and the user is likely to press
 22 Enter again and duplicate the remittance, possibly
 23 several times. A different screen should be displayed
 24 which would prevent this happening."
 25 So something I put to you I think either Wednesday

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1 or Thursday, and I think you may have not felt able to
 2 agree with it, the nature of the Dalmellington bug is it
 3 was a bug, if you want to call it a bug, which caused
 4 a screen to come up after a rem in had been made, and
 5 users thought that meant they had to press enter again
 6 and so it caused them to make a human error?
 7 A. Yes.
 8 Q. So from the perspective of the outside world, it was
 9 a bug which didn't itself cause a problem with branch
 10 accounts, but it had an effect under which it could
 11 cause subpostmasters to make a mistake which then would
 12 have an impact on branch accounts, yes?
 13 A. Well, they would be following the instructions that they
 14 are given on screen.
 15 Q. So what I'm suggesting to you, Mr Coyne, is that it
 16 mimicked exactly what would happen if a human error was
 17 made.
 18 A. Yes.
 19 Q. If someone remmed in the same thing to an outreach
 20 branch twice by mistake it would look exactly like that?
 21 A. Yes.
 22 Q. So from an outsider's perspective you would not be able
 23 to tell the difference between someone remming in twice
 24 by accident, because they are incompetent, and someone
 25 remming in twice because they had been given a screen

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1 which has made them do it. From an outsider's
 2 perspective, like Fujitsu, it would seem exactly like
 3 a human error, wouldn't it?
 4 A. It would until you looked at the very detailed logs,
 5 because when they did do that they discovered what the
 6 problem was.
 7 Q. If we go back to the text:
 8 "A rem in slip is printed each time, showing the
 9 same details but different session numbers, and a
 10 transaction log search confirms the repeated rems."
 11 So what Anne Chambers is saying there is if you are
 12 the postmaster doing it, you get more than one receipt,
 13 you get more than one session number, you get pieces of
 14 paper and indeed logs which makes it clear that you have
 15 remmed in things more than once. You would see it
 16 fairly quickly, wouldn't you?
 17 A. There's certainly something printed, yes.
 18 Q. Then Ms Chambers says:
 19 "This is not an area that has changed for several
 20 years so it likely to have happened before but we have
 21 no record of it having been reported to us. I can only
 22 check back two months; I've found 4 other instances
 23 (outreach branches 214869, 106444, 110444, 207828) and
 24 all but the last removed the discrepancy by completing a
 25 rem out for the excess, which corrected the system cash

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1 holding branch 224843 may be able to do the same but
 2 NBSC should advise on this.
 3 "We are continuing to investigate the problem ..."
 4 A. Yes.
 5 Q. So it would be right, wouldn't it, that often it would
 6 be obvious to the postmaster that he or she has remmed
 7 in the same thing more than once, and where it is
 8 obvious to the postmaster he or she will be able to rem
 9 the amount out to correct for the error. In other words
 10 it is possible, and indeed would often have happened,
 11 that postmasters would have been able first of all to
 12 identify the problem and, secondly, to exercise self
 13 help to fix it, yes?
 14 A. Certainly a number of them did do that, yes, and that's
 15 reported later.
 16 Q. And the simple fact is that where the Dalmellington bug
 17 caused double rems in, the fact that the same thing had
 18 been remmed in twice would always be visible in the logs
 19 and receipts and other information available to the
 20 postmaster, yes?
 21 A. Yes, if you was to review the detail then typically that
 22 information will be in there, yes.
 23 Q. And if you ran a trial balance for example or a report
 24 on the outreach branch, you would immediately see that
 25 there was a discrepancy and you would immediately see

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1 the amount of the discrepancy is the amount of the
 2 double rem in, yes?
 3 A. No, I do not think it is as simple as that because
 4 typically with trial balances you might have a small
 5 discrepancy one way or the other anyway, so seeing
 6 an extra round £100 would often not be the case.
 7 Q. Why do you say that, Mr Coyne? That seems to me to be
 8 conjecture. Do you have any basis for saying that?
 9 A. Well, a lot of subpostmasters that you see do have small
 10 discrepancies one way or the other.
 11 Q. But when you rem in amounts you wouldn't usually rem in
 12 £3.96, you would be remming in a round sum. That is how
 13 it tends to work.
 14 A. That's exactly my point. If you have already a small
 15 discrepancy of £3.96 on there and then you rem in £100,
 16 what you suggested before is that you would see £100
 17 that was out -- or you wouldn't see £100 that was out,
 18 you --
 19 Q. What I'd suggest to you, Mr Coyne, is you would see the
 20 outreach branch is £97 out and you would try and
 21 understand why that should be and you would see that the
 22 branch has received twice as much as you expected it to
 23 receive. It would not be one of the more difficult
 24 problems to see in the logs and given that also you are
 25 given several receipts, would it?

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1 A. I don't believe it would be as simple as that. I do
 2 agree it is possible to spot it, but reconciliation in
 3 my experience typically isn't as simple as you suggest
 4 there.
 5 Q. Where there are these remming in and remming out
 6 problems they produce receipts and payment mismatches,
 7 don't they?
 8 A. Yes.
 9 Q. And I think we have already agreed that receipts and
 10 payments mismatches are automatically reported through
 11 to Fujitsu, aren't they?
 12 A. Well, it would come up at the monthly -- or it's likely
 13 to come up at the monthly balancing. I don't know
 14 whether it would come up with the receipts and payments
 15 mismatch because it's --
 16 Q. I don't have time to go into the technicalities.
 17 A. Sorry.
 18 Q. And I'm not criticising you for trying to answer
 19 carefully and accurately, I'm really not, but bearing in
 20 mind the time it is sufficient for my purposes if you
 21 will agree with me, as I think you will, that whether on
 22 the day or by the end of the relevant transaction period
 23 there will be an automatic report that is remitted to
 24 Fujitsu, is that right?
 25 A. If not Fujitsu, that will be available in branch.

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1 Q. Not just in branch but also it would automatically go to
 2 Fujitsu, wouldn't it?
 3 A. That is the bit that I'm unsure about, whether in this
 4 scenario it would go automatically to Fujitsu.
 5 Q. Let's look at what happened. If we can go to
 6 {F/1415/1}, please. This is a presentation that was
 7 made by Fujitsu to Post Office after Anne Chambers had
 8 realised that this bug existed.
 9 A. Yes.
 10 Q. It is dated 10th December 2015. Now, so far as we are
 11 aware, the Dalmellington bug affected outreach branches,
 12 didn't it?
 13 A. Yes.
 14 Q. And the SSC reviewed logs to identify where similar
 15 scenarios could have occurred, yes?
 16 A. Yes.
 17 Q. And they did this by identifying duplicate remittances
 18 of unique pouch bar codes, correct?
 19 A. Yes.
 20 Q. The reason they did that was because a branch can't use
 21 the same barcode twice in the same rem in session but it
 22 is possible to use the same barcode in separate
 23 sessions, correct?
 24 A. Right, yes.
 25 Q. And they did this by gathering all the BLE files?

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1 A. Yes.
 2 Q. And the BLE files are the branch data files, data
 3 transfer files sent daily from Horizon to POLSAP?
 4 A. To POLSAP, yes.
 5 Q. Thank you. They checked the BLE files looking for
 6 symptoms of the issue?
 7 A. Yes.
 8 Q. And we can see at page {F/1415/3} that the SSC have
 9 identified 112 occurrences, do you see that?
 10 A. Yes.
 11 Q. So an audit found 112 occurrences over the past five
 12 years, and it would be five years over which this
 13 problem would have operated, correct?
 14 A. Yes.
 15 Q. Then if we move on to the third bullet point, it says:
 16 "108 items were corrected at the time either by:
 17 "Transaction correction by Post Office."
 18 Or by the:
 19 "SPS reversal completed at the time."
 20 A. Yes.
 21 Q. Would you agree with me that what that shows is that
 22 even before the Dalmellington bug was discovered to be
 23 a bug, so even at a time when it was thought it was
 24 inexplicable to human error, in the overwhelming
 25 majority of cases -- in fact in all of the cases that

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1 had been looked at at that time, because they had only
 2 looked at 108, yes? There were four items still to be
 3 confirmed. Do you see that?
 4 A. Yes.
 5 Q. So with all of the occasions that they had looked at one
 6 of two things had happened. Either the SPM had
 7 exercised self help and just fixed it himself or herself
 8 because it was quite easy to do that?
 9 A. Yes.
 10 Q. Or Post Office had issued a transaction correction
 11 because the information about the mismatch would have
 12 got through to the Post Office or perhaps a postmaster
 13 might have phoned in. One way or another, the
 14 information would have got through to Post Office and it
 15 is Post Office's practice to fix errors of that sort by
 16 sending an appropriate transaction correction, yes?
 17 A. Yes.
 18 Q. So would you agree with me that putting those four
 19 branches that hadn't been looked at to one side, and
 20 I want to be absolutely clear about this, I know you
 21 don't want to and we will talk about them, but laying
 22 those to one side, the first 108 branches that they
 23 looked at, the countermeasures in operation in and
 24 around Horizon had caught them all and fixed their
 25 consequences, correct?

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1 A. Yes.
 2 Q. So subject to the four branches that hadn't been looked
 3 at, the countermeasures had 100% success rate, would you
 4 agree?
 5 A. Yes.
 6 Q. So would you agree with me that it is fair to say that
 7 this analysis shows that the relevant countermeasures in
 8 operation here worked very well, yes?
 9 A. We wouldn't know how well they worked without trying to
 10 understand the amount of time between the fault
 11 occurring and its resolution.
 12 Q. Are you suggesting that there is any reason to think
 13 that when an SPM exercises self help, he or she would
 14 only have done it after a considerable time?
 15 A. No, I'm saying we don't know. The evidence isn't there
 16 either way.
 17 Q. So why are you even raising that with me? What's the
 18 relevance of the point you are making?
 19 A. Because you ask me: does it show that the
 20 countermeasures worked well or not?
 21 Q. And you are hypothesising that there might have been
 22 a delay between the problem occurring and the problem
 23 being made good, is that what you are saying?
 24 A. There may have been, and that would help me answer
 25 whether the countermeasures worked well or not.

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1 Q. Do you have any reason to think that there would have
 2 been a delay in this kind of case? Let's take it in
 3 stages. First of all, an SPM exercising self help. Do
 4 you have any reason to think that an SPM would have
 5 delayed in doing that, or do you think it is more likely
 6 that the SPM would have spotted the error quite quickly
 7 and fixed it straightaway when it was fresh in his mind?
 8 A. They would certainly endeavour to fix it as quick as
 9 they had spotted what the issue was.
 10 Q. Do you think there's any reasonable likelihood of the
 11 issue not being fixed within the trading period in which
 12 the error actually arose?
 13 A. It would really depend on how good the SPM is at working
 14 out what has gone wrong from the information that he has
 15 got in front of him.
 16 Q. I suggest to you, Mr Coyne, that it is plain as
 17 a pikestaff -- that's a phrase that lawyers are far too
 18 fond of and I have just used it and I'm really cross --
 19 but it is obvious, isn't it, that the last -- in the
 20 real world if a postmaster hasn't actually spotted the
 21 problem before he balances, before he rolls over, when
 22 he rolls over that's the point at which it is going to
 23 come out and that's the point at which he is going to
 24 exercise self help, wouldn't you accept that?
 25 A. Yes, but at that point in time it could be some time

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1 after the event and there could be quite a lot of data
 2 to consider where the problem is.
 3 Q. Well, here's the interesting thing. We actually have
 4 evidence. We know what happened and we know that the
 5 SPMs were all made good. I think you are suggesting
 6 that delay may cause a state of affairs which ends up
 7 with the SPM not getting the right resolution, but we
 8 know that in relation to the Dalmellington bug that that
 9 isn't what happened. We know that the SPMs were made
 10 good.
 11 So could I suggest to you that you are seeking to
 12 identify problems that are far more theoretical than
 13 real and that in the real world we know that SPMs were
 14 made good?
 15 A. Yes, I accept they are made good. I only introduced
 16 delay when you put to me that the countermeasures worked
 17 well. That was the point in time that I questioned
 18 about the amount of time.
 19 Q. Let me put it a different way. They worked in a way
 20 that ensured that the financial impact of the problem
 21 wasn't lasting.
 22 A. I mean the financial impact was resolved but we don't
 23 know when, I don't know whether it was seven days or 14
 24 days or what it was.
 25 Q. Do you accept that of the 108 items that had been

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1 identified -- or, rather, that had been investigated at
 2 that stage, the evidence shows that the losses caused by
 3 Dalmellington in none of those cases were those losses
 4 lasting, do you accept that?
 5 A. Outwith the four that we're not aware of at this stage.
 6 Q. Do I have to make that clear again? Haven't I made it
 7 clear already that I'm not going to come to those until
 8 we have finished with the 108?
 9 A. Okay.
 10 Q. And of the 108 that were looked at, do you accept that
 11 in 100% of those cases the countermeasures prevented any
 12 lasting loss from being suffered?
 13 A. Yes.
 14 Q. Thank you. Now let's look at the four that were still
 15 to be confirmed. We know that Mrs Van Den Bogard asked
 16 her team to examine what would happen with those
 17 branches, or at least -- in fact we should explain what
 18 the branches were. If I could pick it up -- I'm so
 19 sorry, Mr Coyne. (Pause)
 20 There is a page which identifies them and I'm now
 21 struggling to find it. Could you give me a moment?
 22 MR JUSTICE FRASER: Are you looking in the Fujitsu
 23 presentation?
 24 MR DE GARR ROBINSON: Yes. It is the page which indicates
 25 that the amounts of the four -- I'm terribly sorry not

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1 to have that page at my fingertips.
 2 MR JUSTICE FRASER: Don't worry.
 3 MR DE GARR ROBINSON: I'm so sorry, my Lord. It is one of
 4 those occasions where you know that something is in the
 5 document ... Here we are, it is page {F/1415/8}. I do
 6 apologise to everyone concerned.
 7 "Detailed Preliminary Findings", do you see that?
 8 A. Yes.
 9 Q. 2011, six incidents. 2012, nine. 2013, seven.
 10 By the way, stopping here, you've seen the
 11 methodology that was adopted to identify the branches
 12 that were affected by this issue?
 13 A. Yes.
 14 Q. You don't have any objections to or concerns about that
 15 methodology, do you?
 16 A. No.
 17 Q. Thank you. It would have been relatively easy for
 18 Fujitsu to identify all the affected branches in the
 19 last five years, would you agree?
 20 A. Once they discovered it was an issue, that they worked
 21 out what the profile of the issue was and, as you
 22 explained, they then looked back to the historic files,
 23 yes.
 24 Q. Thank you. Then 2013, seven incidents:
 25 "4 transaction correction completed by POL.

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1 "1 corresponding remittance transaction completed by
 2 PMs.
 3 "2 unknown outcomes FAD 157242 - value £25,000 ..."
 4 That's quite a lot.
 5 "... and FAD 209311 - value £2,500."
 6 Then if we go forward to page {F/1415/9}, 2014, nine
 7 incidents. And the third item under 2014:
 8 "1 unknown outcome FAD 214420 - value £0.01.
 9 I now need to find -- oh, and if we go back to page
 10 {F/1415/8} -- I'm really not covering myself in glory
 11 here -- 2012, nine incidents. The third item:
 12 "1 unknown outcome FAD 120004 - value £1.00."
 13 So we have four branches that hadn't been
 14 investigated at that stage. One had a thumping loss --
 15 or value, I should say, because it wasn't a loss as we
 16 both know, of £25,000. Another one which had a value of
 17 £2,500, and then a third one with a value of £1 and
 18 a fourth one with a value of 1 penny. And steps were
 19 taken to find out about the two big branches, yes?
 20 A. Yes.
 21 Q. If we can go forward to {F/1427.1/1}, please. This was
 22 a subsequent report which was produced as a result of
 23 a request by Mrs Van Den Bogard. We can take it very
 24 quickly. There is a slow way of taking it but
 25 I suspect -- are you familiar with this document now?

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1 A. Is there a title page for it or does it start with this?
 2 MR GREEN: For context, it was disclosed on 4th March this
 3 year.
 4 MR DE GARR ROBINSON: That's very helpful of my learned
 5 friend. It really is useful to know that.
 6 This is a report that was produced by Fujitsu for
 7 Post Office.
 8 A. Right.
 9 Q. And I take it you have read this document. I apprehend
 10 from a discussion we had the other day that you have
 11 read this document?
 12 A. I'm not sure. Has it got a title page? Is that where
 13 it starts?
 14 Q. That's where this document starts, yes.
 15 A. Right, okay.
 16 Q. So "Outreach Branch Issue - Report on Findings":
 17 "Summary:
 18 "As part of the investigation into the issue known
 19 as the branch outreach issue' an audit of the BLE files
 20 was undertaken by Fujitsu. The detailed preliminary
 21 findings were then shared with Post Office. Fujitsu
 22 reported that there were 112 occurrences of Duplicate
 23 Pouch IDs over the past five years where branches could
 24 have been impacted.
 25 "Fujitsu have clarified that their investigations

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1 into duplicate pouches were intended to find instances
 2 when a system issue had resulted in duplication.”
 3 The third bullet point reads:
 4 “They have further clarified that the search of the
 5 BLE files entailed looking for any duplicate pouch for
 6 the same day/branch/amount. This is the only reason
 7 that branch 209311 and branch 157242 have been looked at
 8 in detail. There is no indication of any system issue,
 9 or any impact on the branch accounts in these two
 10 branches.”
 11 Do you see that?
 12 A. Right.
 13 Q. So whatever happened in those two branches there was no
 14 net impact, there was no discrepancy caused in the
 15 branch. Do you see that?
 16 A. Right, because it was made good.
 17 Q. Well, no. If we go forward:
 18 “Fujitsu have confirmed that this is not an outreach
 19 issue and this correlates with Post Office findings that
 20 neither of these branches operates outreach services.
 21 Fundamentally, in respect of branch 209311 and branch
 22 157242 the remittance transactions were completed on
 23 different counters [while] in the case of the outreach
 24 branch issue, duplicate transactions take place on the
 25 same counter.”

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1 Do you see that?
 2 A. Yes.
 3 Q. Then if we go over the page to page {F/1427.1/2}.
 4 A. Sorry, can I read the last bullet point on page 1,
 5 please? {F/1427.1/1}
 6 Q. Sorry. Of course, please do.
 7 (Pause)
 8 A. Right, I see.
 9 Q. So what happened with these two branches is that they
 10 showed the same symptoms because the same pouch number
 11 was remmed in but it wasn't because the machine caused
 12 you to rem the same pouch twice, it was because one
 13 machine remmed it in properly using the barcode and then
 14 for some reason a human being operating on a different
 15 counter remmed it in manually. He or she wouldn't have
 16 been able to do it by using the barcode because the
 17 system would have prevented it, but it is possible if
 18 you type in the numbers manually to do it twice, and it
 19 appears, remarkably, that in both of those branches that
 20 mistake was made.
 21 A. Right.
 22 Q. Do you see? If we go over the page to page
 23 {F/1427.1/2}, second bullet point down:
 24 “Post Office concludes the issues at the branches
 25 have arisen as a result of remittances pouches received

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1 at the branch entered manually which had the same
 2 barcode id. Thus creating duplicate entries which
 3 Fujitsu highlighted as part of the BLE files checks.
 4 However, in these instances from the available evidence
 5 Post Office concludes that the correct amount of pouches
 6 were delivered, accepted and entered on Horizon. This
 7 is supported by the fact that there has been no negative
 8 impact in the branch accounts and no record of an issue
 9 raised by the branches with post Office.
 10 Do you see that?
 11 A. Right.
 12 Q. If one goes over -- there are then conclusions
 13 articulated in each case. So with the first case, if we
 14 go to page {F/1427.1/10}, under the heading
 15 “Conclusion”, the first bullet point:
 16 “All transactions were undertaken on 1 March 2013
 17 and within an hour between the first and final entry. It
 18 is assumed, based on the sequence of events that the
 19 branch understood an error was made and took action to
 20 rectify by recording a remittance surplus and
 21 subsequently redeeming the surplus, leaving the branch
 22 in balance.”
 23 Do you see that?
 24 A. Yes.
 25 Q. Then if one moves forward to page {F/1427.1/12}, again

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1 under the heading “Conclusion”:
 2 “Post Office can conclude that although there has
 3 been a duplicate pouch id recorded this is not related
 4 to the known 'outreach issue' but as a result of a
 5 manual entry of a remittance in. Fundamentally, the
 6 transactions were undertaken on separate tills and the
 7 branch does not offer outreach services.
 8 “Based on the available evidence and absence of any
 9 shortages impacting on the branch accounts, Post Office
 10 concludes that the branch did receive two pouches
 11 containing £25,000.00 with the same barcode together
 12 with three further pouches on 18 February 2013.”
 13 Then there is a reference to a £49,500 figure which
 14 was also -- the branch accounts also show.
 15 So you will see that in relation to the two extra
 16 branches that appeared to have significant values, it
 17 wasn't -- neither of them was actually an instance of
 18 the Dalmellington bug, do you see that?
 19 A. Yes.
 20 Q. Do you accept that?
 21 A. This is what the investigation tells, so yes.
 22 Q. And you have no reason to think that the investigation
 23 was wrong, do you?
 24 A. No.
 25 Q. So that leaves the two branches, one branch which

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1 suffered £1 loss -- I'm saying loss, that's quite the
2 wrong word. One branch where there was a £1 value and
3 one branch where there was a penny value. Now Mr Coyne
4 it is quite right to say, and you are entitled to say,
5 that there has been no investigation about those two
6 branches and those two amounts of money, but bearing in
7 mind the evidence that you have seen, in particular
8 bearing in mind that when they looked at 108 branches
9 they found that all of them, whether by way of self help
10 or by way of a TC, had been made good. What do you
11 think the chances are that those two branches were not
12 made good?

13 A. Very small.

14 MR DE GARR ROBINSON: Thank you. My Lord, I see it is
15 3.40 pm. If I started another subject I would not be
16 able to finish it.

17 MR JUSTICE FRASER: I do not think anyone will hold the 4
18 minutes against you. So that is the end of your
19 cross-examination?

20 MR DE GARR ROBINSON: My Lord, that concludes my
21 cross-examination.

22 MR JUSTICE FRASER: Thank you very much.

23 Right, Mr Green.

24 Re-examination by MR GREEN

25 MR GREEN: Now, Mr Coyne, can we please look first at

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1 paragraph 3.128 of your second report which is
2 {D2/4.1/51}.

3 A. Yes.

4 Q. And you will remember, if we go back to the previous
5 page {D2/4.1/50}.

6 A. Yes.

7 Q. This was a section of your report that you were asked
8 about quite a lot?

9 A. Yes.

10 Q. And if we go forward again {D2/4.1/51}, you were asked
11 about paragraph 3.128 several times.

12 A. Yes.

13 Q. You were only taken to the first half of that paragraph.

14 A. Yes.

15 Q. In the last clause of that paragraph you say:

16 " ... and illustrate, by their interlinking natures,
17 the complexities of the PEAKs/KELs."

18 What did you mean by that?

19 A. In that they share a reference to a particular KEL, so
20 often you will see a different number of PEAKs referring
21 to one KEL and that would suggest that there has been
22 a number of occurrences of the same defect.

23 Q. Thank you very much. You were also asked in
24 cross-examination about the Ernst & Young reports.

25 A. Yes.

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1 Q. Can we just bring up the transcript from Day 16 at
2 page 173, first of all. If you look at line 20, you
3 were being asked about monitoring basically user
4 privileges, do you remember? {Day16/173:20}

5 A. Yes.

6 Q. You were being criticised for saying nothing had been
7 done about user privileges?

8 A. Yes.

9 Q. It was just an interesting answer at the bottom of the
10 page there. You say at line 23:

11 "Answer: Well, nothing got done or got improved
12 over it and we can see that from the PEAK where Fujitsu
13 are trying to address --"

14 A. Yes.

15 Q. Can we just take this in stages. First of all, can we
16 go to the Ernst & Young report itself, please, which is
17 at {F/869/1}. That is the management letter for the
18 year ended 27th March 2011. If we go forward to page
19 {F/869/2}, please, that's the letter itself.

20 A. Yes.

21 Q. Explaining the work, if you look at the second
22 paragraph, second line:

23 "This work is not primarily directed towards the
24 discovery of weaknesses"

25 A. Yes.

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1 Q. Then on the third page {F/869/3} we can see the part you
2 referred to in the bottom half of that page?

3 A. Yes.

4 Q. Could we now go forward, please, to the reference to --
5 you were taken to pages {F/869/25} and {F/869/27} of it.
6 Can we have a look, please, at page {F/869/30}.

7 A. Yes.

8 Q. Now, you will see there the heading "HNG-X".

9 A. Yes.

10 Q. That's Horizon?

11 A. Horizon Online, yes.

12 Q. It is common ground. Did you look at this part?

13 A. Yes, I did. So the auditors seek to take a sample of
14 a number of changes that have been made to the system,
15 so they looked at ten changes to the counter and five
16 manual changes, and what they report here, that of those
17 changes there is no record of those changes being
18 retained -- there's no records available.

19 Q. Right. I won't go further in relation to the control
20 environment for changes because you have received
21 a partial apology for that this morning.

22 A. Yes.

23 Q. But if we can look at permission controls on page
24 {F/869/33}. Again under "HNG-X", which is Horizon?

25 A. Yes.

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1 Q. "There are inappropriate system privileges assigned to
2 the APPSUP role and SYSTEM_MANAGER role at the Oracle
3 database level ...
4 "There is inappropriate privileged access at the
5 oracle database level ... System privileges assigned to
6 the APPSUP role and OPS\$TPS account are inappropriate
7 ..."
8 And so forth .
9 A. Yes.
10 Q. That actually continues on, doesn't it?
11 A. Yes, it is telling us that the auditor found that there
12 was a number of very powerful roles that were available
13 that would provide you access to the Horizon database
14 for both reading and writing to the database and it was
15 inappropriate.
16 Q. We see that all the way through to page {F/869/36}?
17 A. Yes.
18 Q. And then if we look at page {F/869/39}. Just below
19 "HNGX" again:
20 "The "Change of Access to Live "Network form for the
21 modified user selected for our Walkthrough was not
22 authorised by a line manager ..."
23 A. Yes.
24 Q. So that is a slightly different point. Then at
25 {F/869/40} over the page, top bullet point:

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1 "Three instances of additional access being granted
2 to a user without supporting evidence.
3 "Inappropriate access to the pathways active
4 directory [and so forth]."
5 So there is a variety of points which --
6 A. It is generally very poor control of user privileges ,
7 potentially incorrect privileges being applied to
8 certain groups of users.
9 Q. Okay. Now to be fair , go back to page {F/869/33} very
10 kindly. There is a "Management Comment" that they will
11 review adequacy and regularity of controls?
12 A. Yes.
13 Q. On the face of it , all might be absolutely fine . You
14 referred in your evidence in the transcript , the part
15 I just took you to, to a PEAK?
16 A. Yes.
17 Q. But you weren't taken to any PEAK.
18 A. That is right .
19 Q. Can we look at {F/768/1} please. This is the PEAK
20 that's come up before in the proceedings, off piste and
21 so forth .
22 A. Yes.
23 Q. Can we take it through, was this the PEAK you were
24 referring to?
25 A. Yes, I believe it was. Can we just look at page 2 of

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1 that? I mean what is -- I mean the heading on there is
2 that the SSC users have more access than is required to
3 the database resources and this is contrary to
4 a security policy .
5 Q. And that had been updated in May 2015?
6 A. Yes.
7 Q. And there are several places, we can see here if you
8 look in the yellow box at the bottom. (Pause).
9 Item 4:
10 "Scope: No actual impact/incidents of problems
11 relating to this issue have been experienced yet (and
12 not expected)."
13 That's what they recorded themselves?
14 A. That is right, yes.
15 Q. My learned friend asked me to read that out. While we
16 are there. 2:
17 "Cost. There is currently no cost though to this
18 issue ."
19 A. That is correct .
20 Q. "Perceived Impact: The customer is not aware of this
21 problem or change."
22 So Post Office didn't seem to be aware, on the face
23 of that, while we are reading out those headings, that
24 they weren't aware of all this going on?
25 A. No, that is right .

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1 Q. We can take it reasonably shortly, if we may. In the
2 yellow box at the bottom, effectively what I hope --
3 this appears to be common ground on the face of the
4 document, let me try and summarise it. There was
5 an issue of user creation scripts provided by
6 development which offered the option to create each user
7 type. We can see that at (1) in the yellow box?
8 A. Yes.
9 Q. Effectively there had been some things created for SSC
10 users but SSC users still wanted to have APPSUP access?
11 A. Yes.
12 Q. And that was the conflict they are trying to resolve?
13 A. APPSUP appears to be a group and that group provides
14 a significant amount of privileges and the SSC users are
15 in that group.
16 Q. When we look over the page at page {F/768/2} we have the
17 bit with Anne Chambers halfway down. She is talking
18 about two different sorts of scripts and says:
19 "When we go off piste we use APPSUP, can we have
20 both?"
21 MR JUSTICE FRASER: Where are you reading?
22 MR GREEN: Halfway down the page, my Lord, in the yellow
23 box.
24 MR JUSTICE FRASER: Yes.
25 MR GREEN: The point about APPSUP is made in various places

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1 but it is an extremely powerful tool, isn't it?
 2 A. Yes, it could be described as a super user privilege .
 3 Q. If we go to page {F/768/3} please. There is quite a lot
 4 of arguing about what the nature and purpose of the PEAK
 5 is and so forth.
 6 We can see at the third yellow one down,
 7 16th August 2011, 10.08.07:
 8 "The optional role 'APPSUP' is extremely powerful.
 9 The original BRDB design was that 3rd line support
 10 should be given the 'SSC' role ~... and only given the
 11 optional role 'APPSUP' temporarily (by Security Ops
 12 authorisation) if required to make emergency amendments
 13 in BRDB Live. Since then Host-Dev have delivered a
 14 series of auditable amendment tools for known SSC data
 15 amendment operations in Live, and these are assigned by
 16 role to individual SSC user accounts. As such SSC should
 17 not require the APPSUP role in BRDB, unless there is an
 18 unforeseen update required to Live. [etc]."
 19 A. Yes.
 20 Q. Then there is a difference of view from Mr Simpkins
 21 below. If we go down to the bottom we can see there is
 22 quite a lot of detail there and again it is reiterated
 23 that it is extremely powerful in the bottom yellow box:
 24 "Should only be used under extreme circumstances
 25 assist and under MSC supervision... As such the Branch

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1 Database design was that ..."
 2 That is all repeated then. Then if we come down to
 3 just under the repeat, do you see about eight lines up
 4 from the bottom:
 5 "It is a security breach if any user write access is
 6 not audited on branch database."
 7 A. That is right .
 8 Q. Then it says:
 9 "... hence the emergency MSC for any APPSUP role
 10 activity = must have session logs attached under the
 11 MSC."
 12 A. Yes, that's the blanket MSC that allows access to
 13 Fujitsu to conduct emergencies pre-approved.
 14 Q. In the event, can we just go to the end, almost the end
 15 on page {F/768/7}. Do you remember that the new people
 16 had not been given APPSUP?
 17 A. Yes.
 18 Q. But the old APPSUP privileges --
 19 A. Weren't taken away, yes.
 20 Q. Is that what you had in mind when you referred to the
 21 PEAK in your cross-examination?
 22 A. That was absolutely the PEAK, yes.
 23 Q. While we are on MSCs, you mentioned in your evidence
 24 that MSCs presented a bit of a challenge?
 25 A. Yes.

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1 Q. When you got them. And you I think referred to that in
 2 your witness statement as well?
 3 A. Yes.
 4 Q. Could we bring up please {F/1844/1} the MSC complete
 5 data spreadsheet. You have explained in your witness
 6 statement it is one of three separate Excel
 7 spreadsheets?
 8 A. That is right .
 9 Q. Which you have to use together?
 10 A. Yes. So it would appear that the MSC database was
 11 a singular database with all the data in it but the way
 12 that it has been provided to us, it would appear that it
 13 has been split into three different Excel spreadsheets
 14 but there's no easy way to try and interrogate across
 15 the three spreadsheets. They aren't all the same
 16 length, so you can't put them together.
 17 One has lots of columns going across and the other
 18 one has literally hundreds of thousands of columns going
 19 down. So it is practically impossible to use for the
 20 purposes of analysis .
 21 Q. Let's just have a look. That's the sort of document --
 22 one of the three documents you have to cross refer to
 23 each other?
 24 A. This is the header document and from there you have to
 25 go to read the detail about it, yes.

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1 Q. Could we go please to row 15024.
 2 A. Yes.
 3 Q. Let's go down to the bottom, just look there.
 4 "MSC emergency master change to cover any essential
 5 SSC adhoc works."
 6 A. Yes. This is the pre-approved MSC. So that if anything
 7 comes up as an emergency, you don't have to effectively
 8 go through the MSC approval process again. It is
 9 pre-approved.
 10 Q. Could we now please look at {F/1834.14/1} please. While
 11 that's coming, did you find these easy to work with?
 12 A. No, they are terrible to work with. I am sure they
 13 could have been provided to us in a database that we
 14 could interrogate rather than being exported to
 15 essentially text files or Excel.
 16 Q. Were they small Excel files or quite big ones?
 17 A. No, they are huge. I don't know precisely what the
 18 numbers are but in megabytes terms they are quite high
 19 and they are hundreds of thousands of lines .
 20 Q. If we look at the document we are now seeing, this is
 21 one of the MSCs produced by Womble's for the trial .
 22 This was actually uploaded on Friday.
 23 A. Yes.
 24 Q. Were you given any -- on 31st May -- MSCs in this form
 25 before the trial started?

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1 A. No, it might well be the case that some of this text
2 that appears on here might have been found within the
3 Excel spreadsheets. Certainly not in this format, no.
4 Q. That's helpful, thank you. Sorry, one more reference if
5 we can. Can we look quickly at {C5/16/1}. This is
6 an email from you, on 20 July 2018 to Freeths and
7 Womble's, copying in Dr Worden.
8 "Information requests following the first day
9 looking at PEAKs/Tfs?"
10 A. Yes.
11 Q. You say:
12 "During the first day spent at Fujitsu looking at
13 the TfS and PEAK systems, both Dr Warden and I noted
14 information that would be helpful in the drafting of our
15 respective reports."
16 A. Yes.
17 Q. "Whilst the request for some items of information on the
18 below list may be supported by Dr Worden, I have been
19 unsuccessful in gaining agreement ..."
20 Then you mention PEAKs and various other things?
21 A. Yes.
22 Q. And at the bottom MSCs, OCRs and OCPs?
23 A. Yes.
24 Q. Why did you think those might be useful to see at that
25 period?

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1 A. Because I thought that they may indicate what changes
2 had been made to branch accounts or the databases.
3 Q. Now, yesterday, on Day 16, you were cross-examined
4 about -- let's have a look please, Day 16 in the
5 transcript, page 22.
6 We will look at line 18 {Day16/22:18}, if we may.
7 It is the bit about the claimant FAD codes. It says:
8 "Question: And both you and Dr Worden are aware of
9 the FAD codes that relate to a very helpful sample in
10 the context of this case, aren't you, which is the FAD
11 codes of the claimants in these proceedings, yes?"
12 Then you say:
13 "Answer: Yes. In one of my early requests for
14 information the response that I was given is that
15 I shouldn't be requesting any information that makes any
16 attempt to identify particular claimant
17 characteristics."
18 Then you are met with:
19 "Question: Mr Coyne, I really don't think you
20 should be suggesting that Post Office were telling you
21 not to look at that group as a group. We could have
22 a discussion about it if you want, but could I caution
23 you against making that claim because that wouldn't be
24 an entirely accurate way of characterising what
25 happened, would it?"

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1 You say:
2 "Answer: Can we go to the RFI and have a look?"
3 And you are met with:
4 "Question: Let's to do it after a break, shall we?"
5 A. Yes.
6 Q. You weren't shown the RFI.
7 A. No.
8 Q. Can we look please at {C5/21/5}. Thank you very much.
9 If we look at paragraph 1.3 there.
10 A. Yes.
11 Q. You will see you are asking about a document where
12 there's documentation which might detail any specific
13 branches that were affected.
14 A. Yes.
15 Q. That refers to {F/238/1}. And there is a sort of
16 standard answer at the top about the technical documents
17 and: Mr Coyne, Post Office is in no better position to
18 search the documents.
19 A. Yes.
20 Q. And then underneath that, at the bottom four lines:
21 "It also appears to be an attempt to obtain
22 documents containing information that could potentially
23 be tied to individual cases. That is not the purpose of
24 the Horizon trial."
25 MR JUSTICE FRASER: You have gone onto the next page.

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1 MR GREEN: Yes, sorry, if you could go on to the next page
2 {C5/21/6}. Was that what you had in mind?
3 A. That's exactly -- and I think that's repeated in another
4 part of the RFI as well.
5 Q. Let's look at 1.5 on the next page {C5/21/7} please.
6 This was the Golden Gate replication issue?
7 A. Yes.
8 Q. In relation to dix Oracle being aborted and resulting
9 in a number of branches reporting, over the page, cash
10 declaration ... Go over the page very kindly. {C5/21/8}.
11 Stock reporting discrepancies.
12 A. Yes.
13 Q. "Were any transaction corrections sent to the 247
14 affected branches as a result of the discrepancies and
15 which branches were affected by the incident?"
16 A. Yes, this was an attempt for me to go from the
17 information that I see within the PEAK, talking about
18 discrepancies, to see whether they were made good by
19 Post Office.
20 Q. Whether or not they were made good in the end. It is
21 the bottom paragraph on that second page:
22 "It also appears to be an attempt to obtain
23 documents containing information that could potentially
24 be tied to individual cases. That is not the purpose of
25 the Horizon issues trial."

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1 A. Again in the end column that's repeated as well.
 2 Q. Yes. Remains of that view, right-hand side. Then if we
 3 can go forward, I'm sorry to be taking this at some
 4 pace, Mr Coyne.
 5 A. It is all right.
 6 Q. {C5/22/1} if we can. On page {C5/22/2} of that
 7 document, which is the response to the email, if we look
 8 in (vi) you are asking for:
 9 "PEAK and/or TfS records for any claimant who has a
 10 record including any audit data for the period (at least
 11 a month) ... Post Office objects to this request.
 12 Mr Coyne is seeking documents relevant to specific
 13 claimants but the Horizon Issues trial will not be
 14 considering the circumstances of individual claimants.
 15 Post Office's solicitors requested an explanation for
 16 this in a letter ... but no response has been received."
 17 Yes?
 18 A. Yes.
 19 Q. Then they say this information hasn't been pooled or
 20 collated and it would be necessary to carry out a review
 21 which they say is disproportionate.
 22 A. Yes.
 23 Q. Do you feel that you should be cautioned from saying
 24 what you said yesterday?
 25 A. Not at all. No. I mean that data would have been very

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1 pertinent to the instruction that we had been given.
 2 Q. Can we move forward to something you were asked to do
 3 and let's look at {F/78.1/1}, please. You were asked to
 4 do some homework specifically and to identify some
 5 PEAKs?
 6 A. Yes.
 7 Q. You identified PEAKs at 78.1, 123.21, 198.2, 271, 338,
 8 345.1, 414.1 and 1115.1 all in bundle F?
 9 A. Yes.
 10 Q. I'm not going to take you to all of them.
 11 A. Right.
 12 Q. Can we just choose one or perhaps two. Let's look at
 13 {F/338/1}, please. That is PEAK number PC0133933 and
 14 you can see this is around March 2006.
 15 A. Yes.
 16 Q. On page 2 of that PEAK {F/338/2}, you can see there are
 17 two reasonably large yellow boxes?
 18 A. Yes.
 19 Q. One halfway down, one three-quarters of the way down?
 20 A. Yes.
 21 Q. And you can see what the PEAK problem was referring to?
 22 A. Yes.
 23 Q. Yes? And then at the bottom of that box:
 24 "I believe this PEAK should therefore be transferred
 25 to Escher-Dev, so this PEAK is being routed to QFP for

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1 their consideration."
 2 Escher were developers for Riposte?
 3 A. That is right.
 4 Q. If you look at the bottom yellow box, 6th April 2006,
 5 14.07:
 6 "This may be a 'well known problem' but this does
 7 not mean it is worth chucking over the fence to Escher!
 8 We need to give them a reasonably high probability
 9 scenario in which the problem arises. If it is only
 10 a tiny percentage or fraction of daily transactions then
 11 they can hardly be expected to investigate it with no
 12 further evidence. Gareth Jenkins confirms that this
 13 logic has been applied all along."
 14 Then if we now go please to {F/414.1/1}. If we
 15 could look please at page {F/414.1/9}. Do you see there
 16 in the bottom -- middle yellow box --
 17 A. Yes.
 18 Q. -- it talks about:
 19 "A possible alternative to the one suggested above
 20 by Mark Scardifield (replacing the Notify timer with an
 21 independent one) would be to tidy up (one-line code
 22 change) NBFramework so that it does not loop when it
 23 times out a component. Then we could be justified in
 24 reducing the configured timeout period for
 25 NBRequestReply from the present ten minutes to say one

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1 minute.
 2 "However this timeout is still rather 'brutal' and
 3 does not provide for any recovery actions such as
 4 resetting the PIN pad or suggesting that the Clerk tells
 5 the customer to retrieve their ICC card. This clumsiness
 6 may be acceptable for a rare occurrence; it can easily
 7 be worked around and the PIN pad can be reset by
 8 subsequent actions.
 9 "However it is not clear whether the transaction
 10 recovery is really adequate in this circumstance. This
 11 could be investigated ..."
 12 Then at the bottom:
 13 "BTW it is not understood in EPOSS Dev why this
 14 whole problem appears only with Banking transactions.
 15 Surely the whole Riposte and comms path is
 16 identical ..."
 17 Do you see that?
 18 A. Yes.
 19 Q. If we go over the page {F/414.1/10}, we can see at the
 20 top of the page, do you see if you come four lines down:
 21 "For 145617 I accept that we are unlikely to get
 22 a fix from Escher, and even if we got one, we are
 23 unlikely to implement it."
 24 A. Yes.
 25 Q. Do you see that?

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1 A. Yes.
 2 Q. Now, this also makes a reference to cost benefit in this
 3 PEAK as well. Now, these were the PEAKs that you found?
 4 A. Yes.
 5 Q. Did they undermine what you felt about the relevance of
 6 cost benefit approach?
 7 A. No.
 8 Q. You were also asked questions about the Riposte message
 9 searching?
 10 A. Yes.
 11 Q. And you mentioned that you had come across Riposte
 12 import which had been helpful to search for?
 13 A. That is right.
 14 Q. Can we look at {H/253/1}, please. This is a letter of
 15 20 March, so this is during the trial.
 16 A. Yes. Is this the letter which points out the suggested
 17 things to search for?
 18 Q. It is. And you see there -- this is the bit where
 19 a SSC -- an unnamed SSC technician has done some
 20 searches as well and Riposte import is mentioned there.
 21 A. Yes.
 22 Q. Can you remember whether you had identified Riposte
 23 import before or because of this letter or after?
 24 A. I think we had only started to use it as a result of
 25 these messages here.

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1 Q. Thank you.
 2 MR JUSTICE FRASER: "These messages", you mean --
 3 A. Sorry --
 4 MR JUSTICE FRASER: The letter?
 5 A. -- the strings, yes, the letter, and knowing that these
 6 are suitable things to search for on our system.
 7 MR JUSTICE FRASER: As a result of the letter?
 8 A. Yes, my Lord.
 9 MR GREEN: You were also asked about the difference of
 10 an hour between the two sets of ARQ data and other data.
 11 A. Yes.
 12 Q. Can you remember when you realised or learnt of that
 13 difference?
 14 A. I believe that I have only really surmised that the
 15 reason for the difference is just a time zone
 16 difference. I do not think I have ever been told that's
 17 what it is.
 18 Q. Can we look at Day 16 of the transcript, please,
 19 page 12, line 7 {Day16/12:7}. It was put to you that
 20 MSCs had been disclosed on the Friday before Christmas,
 21 21 December?
 22 A. Yes.
 23 Q. And OCPs and OCRs on 24th January?
 24 A. Yes.
 25 Q. If we look at {H/263/1} now, this is a letter of

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1 18th April 2019. There was an extra 2,500 OCRs
 2 disclosed on 18th April.
 3 A. Yes.
 4 Q. Mr Coyne, can I ask you whether you have been busy since
 5 the time that the Horizon trial should have ended, had
 6 it gone to plan and not been derailed?
 7 A. Yes, yes, I have got a number of other projects.
 8 Q. Have you had a give oral evidence in any other cases?
 9 A. Yes, I have had to give oral evidence in a case at
 10 Manchester and I have a number of other non-contentious
 11 projects where I'm helping companies go live with big
 12 systems.
 13 Q. How have you found the timing of your receipt of
 14 documents for the purposes of preparing your reports?
 15 A. It has been very problematic.
 16 Q. How does it compare to other cases you have been in?
 17 A. I don't think there has been another case where I have
 18 experienced this level of -- the disclosure being
 19 provided in dribs and drabs, especially after making
 20 a specific request back in June of last year because it
 21 was quite clear then the types of documents that would
 22 be required.
 23 Q. And finally, you were asked what proportion of OCRs had
 24 been granted -- permissions had been granted
 25 retrospectively?

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1 A. Yes.
 2 Q. Do you have that number?
 3 A. I do. I searched last night. There's just over 21,000
 4 OCRs and OCPs and there is 1,450 that are described as
 5 being created retrospectively, that's about 7%.
 6 MR GREEN: Thank you very much.
 7 My Lord, I have no further questions.
 8 MR JUSTICE FRASER: I don't have any -- let me just check.
 9 I do not think I have any, but let me just check.
 10 No, thank you very much, Mr Coyne. You can leave
 11 the witness box because we have a few matters to deal
 12 with, although I do not think very many, or certainly
 13 not very many from me.
 14 Discussion
 15 MR JUSTICE FRASER: The next day of evidence is Tuesday
 16 morning. You are calling Dr Worden, is that right?
 17 MR DE GARR ROBINSON: My Lord, yes.
 18 MR JUSTICE FRASER: So it is Tuesday, Thursday, Friday of
 19 next week?
 20 MR DE GARR ROBINSON: My Lord, yes.
 21 MR JUSTICE FRASER: Mr de Garr Robinson, yesterday you
 22 identified or referred to Ernst & Young audits for
 23 different years going on from 2011 onwards.
 24 MR DE GARR ROBINSON: Yes.
 25 MR JUSTICE FRASER: Can you just let me have a list of

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1 references?
 2 MR DE GARR ROBINSON: The trial bundle references?
 3 MR JUSTICE FRASER: Yes, please.
 4 MR DE GARR ROBINSON: My Lord, yes.
 5 MR JUSTICE FRASER: You were also going to just send me on
 6 Monday I think some information, just a summary --
 7 MR DE GARR ROBINSON: A very short note summarising the
 8 redaction position, yes.
 9 MR JUSTICE FRASER: The redaction exercise.
 10 Then the only other thing I have --
 11 MR DE GARR ROBINSON: My Lord, can I just ask, when you say
 12 the Ernst & Young audits, do you mean the service audits
 13 for Fujitsu or do you mean --
 14 MR JUSTICE FRASER: Well, yesterday you put to the witness,
 15 and I can find my note in a moment, I think you said "We
 16 have them for each year 2011, 2012", and you went
 17 through a list of years.
 18 MR DE GARR ROBINSON: Those were the service audits,
 19 my Lord. I will give you the references for those.
 20 MR JUSTICE FRASER: If you can just give me the references.
 21 Then the only other point is the PEAKs and KELs hard
 22 copy file. I remember at the beginning of the evidence
 23 of fact I said could I have one, and I was anxious not
 24 to impose too much of a burden on anyone and I said
 25 I didn't need a detailed index. The indices that came

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1 through were somewhat idiosyncratic, I think that's
 2 because they were not necessarily done by the same
 3 person which is really not a problem, but it makes the
 4 file really quite difficult to follow. I think it was
 5 broken down by per day, per sitting day.
 6 I deliberately haven't marked it because I have been
 7 using the electronic ones. I have got an index for --
 8 well, I have got a document which says it is an index
 9 for week 1 and a document that says it is an index for
 10 week 2. Week 2 does refer to numbered tabs, but the
 11 tabs that are in the file aren't numbered in accordance
 12 with the tabs in the index. For example, one would
 13 start at tab 97 and I can't find tab 97 for the life of
 14 me. I think it is just re-ordering the way the index
 15 and/or the tabs are numbered. I'm not asking for the
 16 actual contents to be re-ordered.
 17 Did it come from the claimants or did it come from
 18 the Post Office?
 19 MR DE GARR ROBINSON: I believe it is a combined process.
 20 MR JUSTICE FRASER: I'm in no way on any sort of a witch
 21 hunt.
 22 MR DE GARR ROBINSON: Everyone is looking around furtively
 23 at the other side.
 24 MR JUSTICE FRASER: It is just to try and get that file in
 25 a usable form. That usefully is the evidence of fact

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1 file. There is as yet no expert evidence PEAK file but
 2 I would like to make it clear that I would like one at
 3 some point.
 4 MR DE GARR ROBINSON: My Lord, could I ask how you would
 5 like that file organised. Are you content that it
 6 should remain in day by day form?
 7 MR JUSTICE FRASER: Yes.
 8 MR DE GARR ROBINSON: It is simply a matter of getting the
 9 right index?
 10 MR JUSTICE FRASER: For example, you put one of the more
 11 important PEAKs to Mr Coyne, which had already been
 12 dealt with. It was impossible for me to find where that
 13 was in the end. I know it is in here somewhere.
 14 MR DE GARR ROBINSON: I see.
 15 MR JUSTICE FRASER: But, for example, if one looks at the
 16 index for week 1, which I will just hand you and then
 17 you will see what I mean. (Handed) You will see that
 18 really is just a total of everything that's in the file
 19 without necessarily telling you where it is or being in
 20 any immediately discernible order.
 21 MR DE GARR ROBINSON: Could I ask, are there markers? Are
 22 there dividers between each PEAK?
 23 MR JUSTICE FRASER: Well, there are, but they don't seem
 24 necessarily to follow.
 25 MR DE GARR ROBINSON: I'm wondering whether your Lordship

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1 would like a paginated bundle -- I don't want to make
 2 work for anyone -- and an index --
 3 MR JUSTICE FRASER: Paginated would be glorious.
 4 MR DE GARR ROBINSON: Yes.
 5 MR JUSTICE FRASER: So what it really amounts to,
 6 Mr de Garr Robinson, without spending too long, is this
 7 file in either a different order or a more usable form.
 8 I'm happy for it to stay in the current order, which is
 9 per day, if I could, for example, think well that was
 10 put on Day 3, and actually find where Day 3 is in here
 11 and look at it. And a similar wholly separate file for
 12 the PEAKs that are going to be put to the experts.
 13 MR DE GARR ROBINSON: But ordered in the same way, day by
 14 day.
 15 MR JUSTICE FRASER: Either in the same way or in their own
 16 separate way, I don't much mind.
 17 MR DE GARR ROBINSON: If it is not day by day it is
 18 difficult to think how else one would actually do it.
 19 MR JUSTICE FRASER: I prefer day by day because it makes it
 20 easier.
 21 MR DE GARR ROBINSON: My Lord, does that mean you are happy
 22 for the file to contain duplications?
 23 MR JUSTICE FRASER: Yes.
 24 MR DE GARR ROBINSON: My Lord, I don't have instructions to
 25 do this, but could I volunteer entirely without

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1	instructions to take that file , paginate it , and get	1	10.30.
2	a proper index for your Lordship?	2	(4.28 pm)
3	MR JUSTICE FRASER: By all means. You will see I have	3	(The court adjourned until 10.30 am on Tuesday,
4	flagged the week 2 index in here, which is in	4	11 June 2019)
5	a different form to the one I have just given you, which	5	
6	is week 1. This is the one that says tab 97.	6	
7	MR DE GARR ROBINSON: Which doesn't exist.	7	
8	MR JUSTICE FRASER: No. Unless there is a strange non-base	8	
9	10 numbering system which I haven't come across. Would	9	
10	you like this back?	10	
11	MR DE GARR ROBINSON: If your Lordship is happy --	11	
12	MR JUSTICE FRASER: It is deliberately not marked. There is	12	
13	some writing on the index for week 2 but that actually	13	
14	isn't my writing.	14	
15	MR DE GARR ROBINSON: Very good.	15	
16	MR JUSTICE FRASER: It was there when the file came.	16	
17	MR DE GARR ROBINSON: My Lord, we can do that and we can	17	
18	produce it by Tuesday. We can produce it by the time we	18	
19	start on Tuesday next week.	19	
20	MR JUSTICE FRASER: That would be very helpful. Then after	20	
21	next week, if the same thing can be done for the	21	
22	experts, please.	22	
23	MR DE GARR ROBINSON: Yes.	23	
24	MR JUSTICE FRASER: I think we have achieved consensus.	24	
25	MR DE GARR ROBINSON: The only thing on my list was to	25	

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1 remind your Lordship about the PEAK files but we've done
2 that.

3 MR JUSTICE FRASER: PEAKs and KELs, but that is it , that's
4 because I remembered.
5 Anything else?

6 MR GREEN: My Lord, no.

7 MR JUSTICE FRASER: One final point, and it is really not
8 a big point, I got an email from Opus about transcripts
9 to be moved from one work space of Horizon across to
10 another. I don't recall asking for that to be done.
11 I don't mind it being done. I think it flowed from the
12 point I made about Day 13 and where was it.
13 I know what day we are on here, this shows 17
14 sitting days. If between you, you could just agree
15 which days we have in fact sat and what their numbers
16 are in terms of the sequential number of the hearing
17 that would be useful.

18 MR DE GARR ROBINSON: It's probably easier for me because
19 I have only been here when we have actually been doing
20 Horizon business so I will discuss that with my learned
21 friend.

22 MR JUSTICE FRASER: Again, it is just to be consistent,
23 that's all.

24 MR DE GARR ROBINSON: We can do that on Monday morning.

25 MR JUSTICE FRASER: Thank you all very much. Tuesday at

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