

<p>1 Tuesday 14 June 2016 2 (10.30 am) 3 Housekeeping 4 MR TER HAAR: My Lord, I understand that efforts have been 5 made, for which I am very grateful, for a Japanese 6 translator to be identified. That would obviously be 7 very helpful, but I understand the translator may not be 8 able to be here until 2 o'clock. That is the 9 information I have received. 10 MR JUSTICE BLAKE: Let me tell you all the information. 11 I have to say that we discussed amongst ourselves the 12 matter last night and again this morning and we had 13 a distinct sense that there was simply no effective 14 communication going on. 15 So we asked for inquiries to be made about 16 an interpreter, which of course the Tribunal Service can 17 provide through its ordinary interpreter service. 18 The information that was filtering through to me 19 late yesterday evening and again early this morning was 20 that there were interpreters available but they were 21 reluctant to get involved in interpreting very technical 22 language, which I have to say these issues certainly 23 are. So I rather thought that we weren't going to be 24 able to come up with anything. 25 I think the position is that there is still</p> <p style="text-align: center;">Page 1</p>	<p>1 done in writing by putting questions in Japanese back 2 into English -- English, Japanese, Japanese, English. 3 It is less than perfect because we don't have then what 4 the common law tradition likes, the testing of live 5 evidence by informed experts, by informed counsel, but 6 it might be effectively a better means of communication 7 than what we might achieve with the present level of 8 communication. 9 I made no assumptions about the ability of any 10 expert witness to communicate effectively in English. 11 Perhaps I should have applied my mind to that more 12 quickly earlier on, though usually one is informed if 13 there may be communication difficulties and one tries to 14 think about them. 15 MR TER HAAR: Can I deal with a number of those points. 16 First of all, my impression is that 17 Professor Sawada's understanding of English is actually 18 very good. There is a problem, partly that he is very 19 quietly spoken which is in itself part of the problem we 20 had yesterday, but that we can cope with. 21 His written and spoken English is very good for 22 somebody whose first language is Japanese, but is not 23 obviously his first language. 24 I am confident that -- my confidence may be 25 misplaced, but I am confident that by asking questions</p> <p style="text-align: center;">Page 3</p>
<p>1 an ordinary interpreter who is available this afternoon. 2 That's right, isn't it? Yes, who I think probably has 3 already expressed a caveat about their ability to assist 4 with technical issues in interpretation. But it could 5 be said that that assistance is better than nothing. 6 The alternative approach, which I have to say we 7 were beginning to think about, on the basis of a rather 8 gloomy prognostication that a technical interpreter was 9 going to be a bar to an effective interpretation, is 10 that as we've looked again at Professor Sawada's witness 11 statement we find there are quite a lot of problems 12 about understanding what he is trying to tell us in the 13 English text of it, and that's even before we have the 14 problems of Mr Heppinstall trying to ask questions about 15 what is in the English text and translation. 16 So we were wondering whether, if the oral process is 17 sadly not going to be an effective way of exchanging and 18 communication and testing and examination and drilling 19 down to the points that would be likely to assist us, 20 although we know what those issues are going to be, 21 whether we needed to re-translate his witness statement 22 from a Japanese original, through the assistance of a 23 technical interpreter into an English which says 24 precisely what he wants to say to us, and whether then 25 the process of any further questions will have to be</p> <p style="text-align: center;">Page 2</p>	<p>1 in sufficiently simple terms we can actually -- the 2 Tribunal can get useful information at this stage from 3 this witness. 4 MR JUSTICE BLAKE: And that's based upon some communication 5 last night? 6 MR TER HAAR: Probably very limited in my case but also my 7 observation from here of the witness which is slightly 8 different sometimes from the judicial observation. You 9 get a different angle on things. But it is partly as 10 a result of a conversation last night but also 11 I understand that the paper was written by him; it 12 wasn't, as sometimes happens, assisted, and he has -- 13 you may hear about this in a moment -- written 14 a document overnight about Mr Smith's position as 15 a result of the questions he was asked yesterday which 16 shows that he does have a considerable knowledge of 17 English. 18 Now, one of the reasons why it seems to me that we 19 can make substantial progress is that he covers areas 20 which we will again come back to at the end of this week 21 with Professor Thomas and which will also have resonance 22 to Mr Hallard next week. 23 The problem about the course which my Lord suggested 24 of re-translating his report is that finding somebody 25 who is sufficiently expert technically to take that on</p> <p style="text-align: center;">Page 4</p>

<p>1 board and to fit it within the timetable for 2 deliberation by this Tribunal is going to be 3 a challenge, if not impossible. 4 MR JUSTICE BLAKE: That route B, if I can call it that, 5 wouldn't be possible within the three weeks of this oral 6 hearing so if it comes back at all it will come back at 7 some point in July. There we are. 8 MR TER HAAR: If it needs to be, it needs to be. But what 9 I am respectfully suggesting is that -- I have spoken to 10 Mr Heppinstall about this as well -- if we both try to 11 keep our questions simple, the Japanese interpreter 12 would be of assistance, simply as sometimes I think of 13 interpreters as being occasionally a living dictionary 14 so that a witness can turn and get assistance without 15 the time which sometimes is taken to translate the 16 question and translate the answer. I've had many cases 17 where that's been a very effective halfway house. 18 So my proposal, although obviously of course it's 19 very much in the Tribunal's hands, is that we see how we 20 get on with the assistance of a translator at 2 o'clock, 21 understanding that the questions must be asked in such a 22 way that they are not loaded unacceptably technically. 23 I think my impression is that Professor Sawada would be 24 capable of answering, with the assistance of a 25 translator, in a way which will be of assistance to the</p> <p style="text-align: center;">Page 5</p>	<p>1 about his personal experiences. 2 So I don't know whether that's Professor Sawada 3 trying to say "I would like to take it all in slower 4 time." So I can see that having a Japanese translator 5 here is better than nothing and it will certainly 6 assist. But I still would not be confident that 7 Professor Sawada would be giving his best evidence to 8 the Tribunal. 9 MR JUSTICE BLAKE: No. Well, I can understand that. 10 Are we able to proceed this morning with Dr Ash? 11 MR CHARLTON: My Lord, what we were proposing was in terms 12 of housekeeping and legal matters I would deal with it 13 -- 14 MR JUSTICE BLAKE: We haven't got any of those this morning. 15 Are we going to proceed with Dr Ash? 16 MR CHARLTON: Yes, my Lord, we are. 17 MR JUSTICE BLAKE: We could then -- could I ask a general 18 question and if you two can consult with the answer. 19 The consensus at the moment is that we should use this 20 morning's hearing with Dr Ash. 21 MR CHARLTON: Yes, my Lord. 22 MR JUSTICE BLAKE: We will have an ordinary interpreter in 23 Japanese this afternoon. Shall we see what happens this 24 afternoon and then we'll just have to see how far we 25 get? If despite Mr ter Haar's confidence and your</p> <p style="text-align: center;">Page 7</p>
<p>1 Tribunal. 2 MR JUSTICE BLAKE: Can I just pass over Mr Busby for the 3 moment. I know he is your witness but can I see how 4 Mr Heppinstall responds to that and I'll come back to 5 you. 6 MR HEPPINSTALL: My Lord, we have shared for a while the 7 concern about the written expert evidence and sought a 8 direction at the last directions hearing for translation 9 into Japanese then into English. 10 MR JUSTICE BLAKE: Oh right. 11 MR HEPPINSTALL: It was met with an assurance that there 12 wasn't a problem and it was our experts who were just 13 misunderstanding Professor Sawada's paper. So the only 14 question we asked of Professor Sawada when we did expert 15 questions was: please can we have a translation because 16 we don't understand the paper. 17 Now, Professor Sawada has produced a handwritten 18 document this morning which I think purports to answer 19 the questions I was asking yesterday but I am, with the 20 greatest of respect, as lost with this as I am with 21 anything else, and I find it difficult to understand the 22 points being made and to correlate them to the question 23 and, indeed, it ends with "I want to prepare after 24 I come back" -- I think it's from Japan -- "explanations 25 of each side," and then he gives another recollection</p> <p style="text-align: center;">Page 6</p>	<p>1 pessimism we find we're not communicating -- 2 MR HEPPINSTALL: We can but try, my Lord. 3 MR JUSTICE BLAKE: Right. I would love to see the 4 transcript of the exchanges last night but I think the 5 transcript we have finishes at 1 o'clock, doesn't it? 6 I quickly looked at it. 7 MR HEPPINSTALL: I think we have a full -- 8 MR JUSTICE BLAKE: When I say "love to", I would be 9 interested to see how much -- 10 MR HEPPINSTALL: I think we have a full transcript. 11 MR JUSTICE BLAKE: I have two e-mails but they seem to be of 12 the same document. 13 MR HEPPINSTALL: Well, we can rectify that. 14 MR JUSTICE BLAKE: All right. I just don't know how much of 15 this made sense to those who were listening. 16 MR BUSBY: My Lord, it might be helpful to point out that 17 Professor Sawada's paper was written in English by 18 Professor Sawada. 19 MR JUSTICE BLAKE: I'm sure it was in English. 20 MR BUSBY: I have to say there's no Japanese version of it. 21 MR JUSTICE BLAKE: I understand that, but there are problems 22 in understanding the language and it may become more 23 problematic. 24 MR CHARLTON: Sorry, I am popping up -- my Lord, I was going 25 to raise it to your attention at the first opportunity.</p> <p style="text-align: center;">Page 8</p>

<p>1 Yes, unprompted, I believe in response to 2 Mr Heppinstall's question about "What do you think about 3 Mr Smith?" unprompted this morning Dr Sawada has 4 produced a written reply. Whether it goes in or not or 5 whatever, but at the very least, simply in terms of the 6 contact with the witness, he produced it uninvited, 7 Dr Busby photocopied it and gave it to me so I am 8 telling the court that we have had, as it were, this 9 communication or response -- 10 MR JUSTICE BLAKE: I see. I've heard about that. No doubt 11 we can receive that in the course of the morning. 12 MR CHARLTON: In due course. I am grateful, my Lord. 13 Otherwise, as I said, anything to do with witnesses and 14 the scientific cases is Dr Busby. 15 MR JUSTICE BLAKE: Right. We don't want to spend more time 16 talking about talking if we can deploy it by proceeding 17 with the evidence. So is the least worst option as of 18 10.45 this morning that we switch this morning's session 19 to Dr Ash, that we ask for a non-technical interpreter 20 to attend at 2 o'clock this afternoon, that we then will 21 have some quasi-evidence or some non-leading questions 22 from Mr ter Haar and then revert to your 23 cross-examination? 24 I hope someone has been able to explain to 25 Professor Sawada that with respect to his interesting</p> <p style="text-align: center;">Page 9</p>	<p>1 MR JUSTICE BLAKE: Can we ensure that the proposal to get 2 a non-technical interpreter is acted upon for 2 o'clock. 3 Thanks very much. 4 Right. 5 MR BUSBY: My Lord, I call Dr Ash now. 6 MR JUSTICE BLAKE: Thank you. 7 DR JOHN STUART ASH (sworn) 8 MR JUSTICE BLAKE: Good morning. Now are you going to be 9 happier standing or sitting whilst you are giving your 10 evidence? Is that your briefcase there? 11 A. I did bring a copy of my report. 12 MR JUSTICE BLAKE: You can probably put it in the file. 13 It's entirely up to you, whatever makes you more 14 comfortable. Just remember that we have to hear you. 15 All right? 16 A. Thank you. 17 MR JUSTICE BLAKE: Excellent. 18 Now we have your report. I don't know whether the 19 glitches in -- it's in SB1, tab 2.10. That's where we 20 have it but you have it loose. 21 A. Yes. 22 MR JUSTICE BLAKE: Do you want me to deal with this or are 23 you going to deal with the introductions to the court? 24 Examination-in-chief by DR BUSBY 25 MR BUSBY: I only have two questions.</p> <p style="text-align: center;">Page 11</p>
<p>1 work on his slide show that is not what we are 2 interested in. We're interested in the evidence rather 3 than a slide show presentation. 4 MR TER HAAR: Perhaps at the break for the shorthand writers 5 we'll come back to that. 6 MR JUSTICE BLAKE: Again, I sense he thought he was about to 7 press a button and then a slide show. 8 MR TER HAAR: He was hoping he could answer questions by 9 reference to his slides. 10 MR JUSTICE BLAKE: Well, it may be that we can get into 11 graphs, if we get that far. That is relevant. We are 12 just not going to sit here for 20 minutes to go through 13 a sequence of slides. 14 MR TER HAAR: Everybody understands there will not be 15 a PowerPoint presentation but I think there are points 16 at which he has information on those graphs. 17 MR JUSTICE BLAKE: Yes, quite. We have clear -- I mean at 18 least the slide show works because it's a cleaner copy 19 and a bigger copy of the graphs and we have them printed 20 out, and that may have some value if we understand what 21 they are and where the data comes from, et cetera, 22 et cetera. 23 MR TER HAAR: I will take the opportunity with Dr Busby and 24 Mr Charlton to talk to him at the break in order to 25 explain that further.</p> <p style="text-align: center;">Page 10</p>	<p>1 First of all, you have your report in front of you, 2 Dr Ash. Do you stand by what is in your report? 3 A. I have one minor correction, if I may. 4 MR JUSTICE BLAKE: Yes. 5 MR BUSBY: Yes, and that is? 6 A. At paragraph 22, first line, the reference to Gordon, 7 1987, should read "page 49" and not "59". 8 MR JUSTICE BLAKE: Right, thank you. 9 MR BUSBY: Thank you. 10 MR JUSTICE BLAKE: Any other corrections? 11 A. No, sir. 12 MR JUSTICE BLAKE: And that is accurate to the best of your 13 knowledge and belief? 14 A. I believe so, sir. 15 MR JUSTICE BLAKE: Yes. 16 MR BUSBY: That's fine. No further questions. 17 Cross-examination by MR HEPPINSTALL 18 MR HEPPINSTALL: I just want to start by exploring your 19 expertise, both in general terms and then also in terms 20 of the expertise that you bring to bear in these 21 proceedings. 22 So if we just look at paragraph 2 of your report, 23 which is at page 2, you say you are currently 24 an Institute Associate at the Scott Polar Research 25 Institute at the University of Cambridge.</p> <p style="text-align: center;">Page 12</p>

<p>1 Could you just outline to the Tribunal, please, what 2 sort of work you are undertaking at that institute?</p> <p>3 A. The Institute Associates form part of the academic 4 community at the University of Cambridge. It is 5 a position that has to be applied for. It is unwaged. 6 It provides the incumbent with the opportunity to 7 conduct their own research, and also to contribute 8 towards, if you like, the broader life of the institute. 9 For example, I have undertaken work in support of 10 temporary exhibitions, I've given lectures, any other 11 matters that may arise. So for example in my case, 12 because of my expertise in risk management, I was 13 responsible for drawing together the field safety guide 14 for the institute that forms now a part of the field 15 guide for the geography department as a whole.</p> <p>16 In respect of the work that I do, much of it has to 17 do with risk management in a broad sense. So some of my 18 academic work has been associated with environmental 19 risk management and one could view these issues as 20 environmental risk management problems. I have also 21 undertaken work on dynamic risk management for the Fire 22 Service and also for the International Rescue Corps.</p> <p>23 I have also lectured to military personnel on the 24 subject of risk management, both in terms of dynamic 25 risk management and also for planning purposes.</p> <p style="text-align: center;">Page 13</p>	<p>1 environmental risk management and in a sense any 2 contaminant would be an issue with which I would deal in 3 a similar fashion, that is to say identifying what the 4 source term was and the nature of the contaminant and 5 its behaviour in the environment, identifying the 6 pathways by which it might reach a subject population 7 and identifying those persons who might be at risk.</p> <p>8 Q. At paragraph 4, page 3, just towards the end of that 9 paragraph you say: 10 "In applying my knowledge of oceanography and 11 environmental risk management to the issue of nuclear 12 weapons I was granted scope to frame my advice as 13 I thought most appropriate ..."</p> <p>14 So is it true to say that what you've brought to 15 bear in terms of expertise is oceanography and 16 environmental risk management?</p> <p>17 A. Certainly those, plus any additional expertise that 18 I have and my expertise I trust is carefully recorded on 19 a CV that I submitted.</p> <p>20 Q. Apart from those two items can you just list for us what 21 the additional expertise is?</p> <p>22 A. Of course I had my military knowledge.</p> <p>23 Q. Sorry?</p> <p>24 A. I had my military knowledge. So inevitably I was given 25 some training in respect to the effects of nuclear</p> <p style="text-align: center;">Page 15</p>
<p>1 And I have other interests within if you like the 2 broader sphere of risk management. For example, I have 3 published in fact this month an article which was peer 4 reviewed on the subject of the consequences of climate 5 change in the Arctic.</p> <p>6 Q. In paragraph 2 you say that whilst you were serving in 7 the Royal Navy you were selected to conduct 8 an investigation for the University of Cambridge Global 9 Security Programme into the radionuclides disposed of in 10 the North Sea by the Soviet Union.</p> <p>11 Apart from that work and apart from this report, 12 have you done any other work touching upon the risks of 13 exposure to ionising radiation?</p> <p>14 A. Yes, my published work. I undertook some work -- these 15 are papers in a peer reviewed journal, and they have to 16 do with the bulk supply of electricity drawn from 17 nuclear power.</p> <p>18 Q. Do they deal with the risks of exposure to humans by 19 ionising radiation?</p> <p>20 A. Risk is a rather more broad issue than the exposure but 21 if you are interested in issues associated with 22 radionuclide contamination, in addition to the work that 23 I undertook for the Navy department on the radionuclide 24 contamination in the Northern Seas I should perhaps 25 explain I also have a professional qualification in</p> <p style="text-align: center;">Page 14</p>	<p>1 weapons and their behaviour.</p> <p>2 Q. Anything else?</p> <p>3 A. Military knowledge does actually have some beneficial 4 application with respect to this particular case because 5 considering the employment for example of the two 6 applicants I have some knowledge of what their daily 7 routines might have been, that is to say what 8 a serviceman does with a working day, and therefore what 9 potential exposures they may be subject to.</p> <p>10 Q. Turning now to paragraph 8, you make it clear in that 11 paragraph that there are recognised annual exposure 12 limits for workers in radiation-related occupations and 13 for members of the public. But you make the point, 14 don't you, that as a counsel of caution one tries to 15 avoid exposure to ionising radiation in any event?</p> <p>16 A. That is so.</p> <p>17 Q. But obviously there are some exercises or roles or 18 occupations, for example your own example of working in 19 a nuclear submarine, where some exposure is unavoidable?</p> <p>20 A. That is the case, yes.</p> <p>21 Q. If we just look at SB17, divider 4, can we ... if you 22 look to your right -- no, to your right -- there's 23 a series of bundles. If you look, it won't be on the 24 first row of those bundles but it should be on maybe the 25 second or third. SB17.</p> <p style="text-align: center;">Page 16</p>

<p>1 A. Yes.</p> <p>2 Q. If you find tab 4. (Pause)</p> <p>3 Now, this is a paper relating to the risks of low</p> <p>4 doses of ionising radiation. We don't need to worry</p> <p>5 about the text of the paper but you'll see in table 1 on</p> <p>6 the right-hand side there are some examples if you like</p> <p>7 of unavoidable daily, for some people at least,</p> <p>8 exposures that we all or a lot of us have to face.</p> <p>9 Is that what you had in mind when you were</p> <p>10 mentioning such exposure limits and public limits at</p> <p>11 paragraph 8 of your report?</p> <p>12 A. Well, there is a mixture of doses in this paper and that</p> <p>13 is rather confusing. I should perhaps explain that the</p> <p>14 tolerable risk doses for workers and members of the</p> <p>15 public arise from a legal judgment, and I understand</p> <p>16 that that was principally informed by the Hinkley C</p> <p>17 Power Plant determination by Michael Barnes QC, in which</p> <p>18 he proposed that if the risk on an annual basis to</p> <p>19 a member of the public exceeded 1 in 100,000, that is to</p> <p>20 say a fatal harm exceeding 10 to the minus 2 per year,</p> <p>21 he would not have been content with the arrangements and</p> <p>22 plans for that project.</p> <p>23 That has been advanced on by those who have to work</p> <p>24 on a daily basis with radiation, and the exposure in</p> <p>25 terms of an annual risk to a worker is somewhat higher,</p> <p style="text-align: center;">Page 17</p>	<p>1 report. I glanced through it.</p> <p>2 MR JUSTICE BLAKE: Your report was April, I think, wasn't</p> <p>3 it?</p> <p>4 A. The final submission was April -- let me just</p> <p>5 double-check the final date -- 11th.</p> <p>6 MR JUSTICE BLAKE: Yes. So you had a PDF version of</p> <p>7 Mr Hallard's report available to you when you compiled</p> <p>8 your report in April but you haven't re-read Hallard's</p> <p>9 report since then?</p> <p>10 A. I haven't it at all, sir. I glanced through it.</p> <p>11 MR JUSTICE BLAKE: Well, we'll see how far we get.</p> <p>12 MR CHARLTON: My Lord, I don't want to proceed under</p> <p>13 a misunderstanding. I am told by Mr Williams that the</p> <p>14 Hallard report was sent after Dr Ash had submitted his</p> <p>15 first draft report, just so that there isn't -- I can</p> <p>16 call evidence -- on the timing point --</p> <p>17 MR JUSTICE BLAKE: We'll have to deal with that as we go</p> <p>18 along. I am just trying to see how far he can be</p> <p>19 expected -- you had some -- well, you had better see how</p> <p>20 far you can go.</p> <p>21 MR HEPPINSTALL: Maybe not very far at all.</p> <p>22 Well, Dr Ash, let me put some exploratory</p> <p>23 propositions to you so we can see how far we can go.</p> <p>24 You have effectively, as I understand your report,</p> <p>25 listed some pathways of exposure, some risk pathways, if</p> <p style="text-align: center;">Page 19</p>
<p>1 it being considered that there is a compensating benefit</p> <p>2 for a person so engaged.</p> <p>3 One of the problems associated with the way that</p> <p>4 this table is set out is it does not fully represent the</p> <p>5 difference between voluntary and involuntary risk and</p> <p>6 how those should be treated. And the point I make in</p> <p>7 paragraph 33 of my report stating that risks are not</p> <p>8 fungible emphasises that.</p> <p>9 Q. Have you had the opportunity to consider Mr Hallard's</p> <p>10 report?</p> <p>11 A. I have read it but I don't have it available to me.</p> <p>12 Q. It's at SB2, tab 2.14.</p> <p>13 The two appeals that we're currently dealing with</p> <p>14 are those of Mr Smith and Mr Battersby. I would just</p> <p>15 like to look at Mr Smith first. You'll find him at</p> <p>16 page 230.</p> <p>17 A. May I just make clear that I'm not at all familiar with</p> <p>18 this document. I have seen it, but I am not familiar</p> <p>19 with it. What was that reference again, please?</p> <p>20 Q. Page 230.</p> <p>21 A. 230.</p> <p>22 MR JUSTICE BLAKE: Can I just enquire when you first had the</p> <p>23 opportunity to read this document?</p> <p>24 A. As I understand, sir, it was passed to me as a PDF and</p> <p>25 I looked at it very briefly during the compilation of my</p> <p style="text-align: center;">Page 18</p>	<p>1 you like, that you think a veteran would have faced on</p> <p>2 Christmas Island. Is that a fair summary?</p> <p>3 A. I think it's fair to say I have done as comprehensive</p> <p>4 an overview of the pathways as applicable to the</p> <p>5 Battersby and Smith cases as I am able to in the time</p> <p>6 available. I must confess, however, that there is</p> <p>7 an issue associated with the amount of time that I had</p> <p>8 available to make a study of this sort and at</p> <p>9 paragraph 33 I give a very solemn warning about the</p> <p>10 paucity of time available to me in that there may be</p> <p>11 a number of issues affecting in the pathways that are</p> <p>12 relevant to this case that I simply did not have the</p> <p>13 opportunity to study in the appropriate depth.</p> <p>14 Q. Mr Hallard has also listed those pathways, the possible</p> <p>15 pathways of exposure and of risk of exposure to ionising</p> <p>16 radiation. Have you looked at the ones that he has</p> <p>17 listed?</p> <p>18 A. I think I've glanced through them briefly but no more</p> <p>19 than that.</p> <p>20 Q. Well, let's look, for example, at Mr Smith, and if we</p> <p>21 are (1) arriving at the limits of your expertise or (2)</p> <p>22 you just haven't read it in detail to answer the</p> <p>23 questions then please say and so take that safest</p> <p>24 course. But if you look at page 230 you see the</p> <p>25 essential facts of Mr Smith's experience on</p> <p style="text-align: center;">Page 20</p>

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<p>1 Christmas Island: the time he was there, his duties, his 2 recreational activities, wounds, et cetera. You see 3 that in the table?</p> <p>4 A. I'm looking at page 2 --</p> <p>5 Q. 30.</p> <p>6 A. -- 30. Table 50?</p> <p>7 Q. Well, at page 230 there are the words "Mr Smith's work 8 history on Kiritimati", although I prefer to use the 9 term "Christmas Island", "is summarised below". 10 "Main issues", time on Christmas Island, you can see 11 that. 12 "Duties: catering assistant and camp barber. 13 "Work station: not known. 14 "Location during test: N/A. 15 "Tests witnessed: None. 16 No film record from AWE. 17 "Recreational activities: swimming ... fishing. 18 "Wounds: not known." 19 Things he ate, that sort of thing. 20 Do you see that in that table?</p> <p>21 A. I see that.</p> <p>22 Q. Yes. What Mr Hallard has done is to translate, if you 23 like, those activities into the pathways. 24 Now, he has also then gone to a third stage which is 25 to make a dose assessment. To reassure you, I am not</p> <p style="text-align: center;">Page 21</p>	<p>1 Q. You maybe misunderstood. I mean on a more fundamental 2 level, so as the dose of ionising radiation that you are 3 exposed to increases, the risk of biological effects and 4 ill-health increases with it?</p> <p>5 A. Yes.</p> <p>6 Q. Do you agree with that?</p> <p>7 A. Providing you understand that as you extrapolate 8 whichever interpretation of the data you take down 9 towards the origin of the graph there is no reliable 10 information on which to base conclusions. For that 11 reason it is assumed that the line passes through the 12 origin of the graph and therefore there is no safe 13 exposure.</p> <p>14 Q. When we looked at, for example, in that paper the 15 exposure one might get from a trans-Atlantic flight or 16 from a mammogram or a CT scan, obviously what -- and the 17 description of the risk analysis that you gave in 18 respect of Hinkley C, what you are doing is measuring 19 the dose against the risk of some adverse outcome to see 20 whether the activity is reasonably safe. 21 That's the exercise you are performing when you are 22 judging the level of dose from an activity and as to 23 whether people should be exposed to it or not?</p> <p>24 A. It's an attempt to identify the degree of risk. It must 25 be said also, though, that you are failing to</p> <p style="text-align: center;">Page 23</p>
<p>1 going to ask you any questions about that because I know 2 you are not a health physicist, you are not a radiation 3 protection expert, and as I understand it you don't have 4 the expertise to comment on the actual dosimetry? Is 5 that right?</p> <p>6 A. I would prefer not to comment on the technical aspects 7 of the dosimetry. I have to take into account the 8 relative success or paucity of the dosimetry in 9 compiling my report. As far as this particular piece of 10 work is concerned, my impressions are basically first 11 that there are a number of assumptions in this work 12 which I do not make.</p> <p>13 Secondly, I appreciate that this work involves the 14 use of a number of spreadsheets in order to determine 15 what are actually effective doses. But that constitutes 16 little more than an admission of liability. The point 17 being, as I have explained in my report, that there is 18 no such thing as a risk-free exposure to radiation.</p> <p>19 So in carefully detailing all of the potential 20 exposures, what we have here is one interpretation of 21 the many pathways by which Mr Smith may have been 22 exposed.</p> <p>23 Q. Do you agree with the proposition that the risk 24 increases with the dose?</p> <p>25 A. No, because it's incomplete.</p> <p style="text-align: center;">Page 22</p>	<p>1 differentiate between voluntary and involuntary risk. 2 These men were there as a matter of duty, they weren't 3 on holiday.</p> <p>4 Q. Is it not important for this Tribunal to have 5 an understanding of the upper limit, the conservative 6 estimate of dose so that they can have a concomitant 7 understanding of the involuntary risk that the veterans 8 faced?</p> <p>9 A. The question appears to me misleading. I've stated 10 quite clearly in my report that there is no such thing 11 as a risk-free exposure. In the case of radiation 12 workers there is a determination that has been turned 13 into a dose level so that they can undertake their 14 duties, but we are talking here about cause, what is 15 a likely cause. Therefore, talking about dose in this 16 context I suspect is a distraction.</p> <p>17 Q. We agree, don't we, that a zero dose bears zero risk?</p> <p>18 A. Zero exposure, the risk of harm should be zero.</p> <p>19 Q. And then the graph climbs in a linear direction with --</p> <p>20 A. It's more complicated than that I'm afraid.</p> <p>21 Q. Well, let's leave out the word "linear", fine. Then the 22 graph climbs, with dose and risk increasing together. 23 I think you agree with that?</p> <p>24 A. To some extent. Remember that there are areas that we 25 do not understand at both ends of the graph.</p> <p style="text-align: center;">Page 24</p>

6 (Pages 21 to 24)

<p>1 Q. For the Tribunal to make a qualitative assessment of the 2 risk that the veterans face they need evidence as to 3 dose, do they not? 4 A. Exposure, I would say. 5 Q. Or exposure. 6 A. The latter. Exposure. 7 Q. But a qualitative assessment of exposure which you 8 usually express as dose, do you not? 9 A. Well, not necessarily. One may -- how can I explain 10 this? In an environmental risk assessment one may not 11 have accurate information on the toxicity of the 12 contaminant. The reality is there may be 5 million or 13 so chemical compounds known to science of which perhaps 14 7,000 have been subjected to proper testing for 15 carcinogenic effects. If one is asked to examine a site 16 in respect of the potential harms and risks associated 17 with it, there may simply not be the information 18 available on which to make a dose effect judgment. 19 There had been some axioms used in the past. For 20 example, the old Fire Service axiom is a dilution of 21 1,000 to 1. That's an attempt to make safe an area 22 perhaps after a fire. That might not work. For 23 example, if I were attempting to clean up a site 24 formerly used by the Chemical Defence Establishment, 25 which may perhaps have been part of Britain's biological</p> <p style="text-align: center;">Page 25</p>	<p>1 who were in support roles who were kept a significant 2 distance from the exposure? 3 A. I'm afraid that may not be true. 4 Q. Do you accept that the distance from the destination is 5 important? 6 A. In part, but that's not a complete statement of the 7 variety of risks associated with the detonation of 8 a nuclear weapon. 9 Q. In terms of how Mr Hallard has looked at those risks, if 10 we just turn back to page 230, Mr Smith of course was 11 not present at any tests. You understand that? 12 A. That is quite clear from my report. 13 Q. And therefore one is looking at pathways of exposure 14 which are if you like left over from after the tests are 15 complete, the residual exposure? 16 A. Principally. 17 Q. So if you look at page 231, there are, if you like, 18 three different pathways that Mr Hallard has set out. 19 The first pathway is an internal dose from half life 20 material such as plutonium 239 remaining from the 21 earlier assumed deposition. 22 Now, do you think that's a reasonable pathway to 23 assume? 24 A. Are we talking about material that he may have ingested? 25 Q. Well, you'll see that that's the second pathway. The</p> <p style="text-align: center;">Page 27</p>
<p>1 warfare programme in the Second World War, I would 2 exercise extreme caution because anthrax forms spores 3 and if that agent was experimented upon in that 4 location, and there might not be accurate records, it 5 may well be that a very minimum exposure might cause 6 extraordinary harm. 7 Q. Could you just accept from me for a moment the premise 8 that exposures at these tests were necessary, in the 9 same way as you might say that exposure to sailors on 10 a nuclear submarine are judged necessary. In those 11 circumstances you take measures to ensure that people 12 are exposed to the lowest dose -- "as low as reasonably 13 practicable" I think is the phrase commonly used by the 14 health and safety and risk profession. Would you agree 15 with that? 16 A. That would be appropriate practice, yes. 17 Q. And you'd agree that at these tests there were a range 18 of different risks faced by different veterans doing 19 different jobs? 20 A. Are you referring to radiological risk now? 21 Q. Yes. 22 A. Yes, that is so. 23 Q. For example, we know there are veterans who flew in 24 aircraft through the resulting cloud and you'd agree 25 with me that they faced a far greater risk than those</p> <p style="text-align: center;">Page 26</p>	<p>1 second pathway is ingestion dose from residual activity 2 from the earlier tests. 3 The third is external dose from residual activity 4 from the earlier tests. 5 So those are the three just to orientate you. Do 6 you want to take a moment to read page 231? 7 A. Yes, if I may, please. 8 Q. Yes. (Pause) 9 A. I have read also 232. 10 Q. Thank you. Indeed it goes over the page. 11 Now having read that and considering your own 12 evidence, do you think there are any pathways missed out 13 by Mr Hallard? 14 A. I have a concern that there doesn't seem to be a pathway 15 for alpha emitters that might have been -- might have 16 been ingested by some means. 17 Q. Well, we have the internal dose for long half life 18 material, i.e. alpha emitters such as plutonium 239, 19 don't we, and he has identified -- 20 A. That's an inhalation dose and he has made an assumption 21 as to what that dose is. Can I just remind the Tribunal 22 that when I say that there is no such thing as 23 a risk-free exposure, that is the fundamental point of 24 my report, so by making a complex calculation what you 25 are really doing is making an admission that --</p> <p style="text-align: center;">Page 28</p>

7 (Pages 25 to 28)

<p>1 MR JUSTICE BLAKE: I think that might be a legal point 2 rather than a scientific point. We understand the point 3 you make that there is no such thing as a risk-free 4 exposure, and we have a challenging task to perform 5 about causation of something above zero point. But I'm 6 not sure. I'm not sure in the sense you are using the 7 word "admission", that does sound like moving into the 8 legal terrain which I shall probably hear submissions 9 about. But hold that, but it's a recognition that this 10 is an exploration of hypotheses of pathway exposure. 11 A. Yes. 12 MR JUSTICE BLAKE: I think you are being asked about whether 13 a sufficiently imaginative or thorough exploration of 14 the hypotheses as opposed to the admission of exposure 15 has been undertaken in this exercise. 16 MR HEPPINSTALL: So another way of looking at it, Dr Ash, if 17 you look at page 233, and we can ignore the last two 18 columns, the numbers, because I know that you're not 19 expert in the numbers and also there's a further version 20 in any event, but if we look at the first two columns, 21 "component of dose" and "detail", we see "external dose, 22 nil," at the top there and then the rest is 23 an assessment of internal dose. And the first item is: 24 "Inhalation of air activity through resuspension of 25 possible contamination on ground."</p> <p style="text-align: center;">Page 29</p>	<p>1 to the reason why presumably he has chosen 16 becquerels 2 per square metre. So what you want to say is: caution 3 as to why you get to the 16 figure. Is that it? 4 A. Yes, sir. 5 MR JUSTICE BLAKE: Right. 6 MR HEPPINSTALL: As I understand it, Dr Ash, your expertise 7 does not stretch to whether 16 is the right number or 8 not? 9 A. Well, I've not attempted in any way to reconstruct these 10 calculations. 11 MR JUSTICE BLAKE: All right. 12 A. I had to undertake similar calculations for the Northern 13 Seas project, but they were not of this sort. In the 14 work that I was doing on that particular project I was 15 looking principally at the ingestion of potentially 16 contaminated fish products. There was an issue 17 associated with the weapons testing the Russians had 18 conducted around Novaya Zemlya and the effects that 19 potentially might have. But in terms of this material 20 I've not had an opportunity to replicate any of these 21 calculations and I suspect -- 22 MR HEPPINSTALL: Let's just stick to the pathways, which as 23 I understand it from your report you tried to list your 24 pathways? 25 A. I do my best.</p> <p style="text-align: center;">Page 31</p>
<p>1 Then there's an assumed deposition. 2 Now, is that a reasonable assumption of a pathway, 3 a pathway of exposure to which Mr Smith may have been 4 exposed? 5 A. I feel that this page has potential oversights. First, 6 in making the statement in the left-hand column, 7 "Working with sufficiently contaminated objects," that 8 is a subjective judgment which was applied before any 9 calculation was made, it seems to me. 10 There appears to be no information whatsoever -- 11 Q. Sorry, can we just deal with the -- it may be useful to 12 go through them. "Significantly contaminated objects" 13 is further down that page. This is -- if you don't feel 14 comfortable with examining this evidence then just say 15 so, Dr Ash. But the first pathway is: 16 "Inhalation of air activity through resuspension of 17 possible contamination on ground ..." 18 Now should that be included or should it not be 19 included? 20 A. The pathway should but the actual assumption is 21 questionable. 22 MR JUSTICE BLAKE: What assumption is questionable? 23 A. Assume deposition of 16 megabecquerels per square metre, 24 sir. 25 MR JUSTICE BLAKE: This is the calculation page as opposed</p> <p style="text-align: center;">Page 30</p>	<p>1 Q. That's the first, you agree that should be there. Then 2 the second is ingestion of radioactivity from possible 3 contaminated food or drinking water. 4 Is that correctly in or not? 5 A. Potentially, yes. 6 Q. Well, potentially I'm afraid will not assist the 7 Tribunal without further explanation. 8 MR JUSTICE BLAKE: The whole exercise, as I understand it, 9 although I'll be informed as we go over the next few 10 weeks, is precisely looking at potential sources of 11 contamination with ionising radiation, so the whole 12 thing is about potential? 13 A. Yes. 14 MR JUSTICE BLAKE: So the fortunate person who is engaged in 15 this kind of activity, in this case Mr Hallard, has to 16 examine the potential pathways, unless that's 17 a completely flawed issue that there is no potential 18 pathway or that he has missed out some other potential 19 pathway which should be there. I think at this point in 20 the questions that are being to you, you are being asked 21 to just look at the list of the pathways see whether 22 that corresponds with your work on this topic of risk 23 assessment and to see whether there's any pathway which 24 he has put in which you don't think should be there, and 25 I imagine you will be given the opportunity to say</p> <p style="text-align: center;">Page 32</p>

8 (Pages 29 to 32)

<p>1 something about a pathway which you think should be 2 there which he hasn't put in. 3 I think that's the context of this questioning. 4 I've recorded that you point out that the first one is 5 based upon a calculation or an assumption -- we can 6 examine what the assumption is based on elsewhere -- of 7 the square metreage of the becquerel. 8 MR HEPPINSTALL: So now we'll return to the second. So do 9 you agree that as a potential pathway, to use that 10 language, that it should be there or not? 11 A. Yes, certainly. 12 Q. Then the next one: possible contamination in wounds. 13 A. Yes. 14 Q. Working with significantly contaminated objects? 15 A. Yes. 16 Q. Other radioactive isotopes resulting from the tests and 17 inhalation of those? 18 A. That's rather vague. 19 Q. If you see to the right it's in respect of carbon-14 and 20 tritium-3, the two main suspects in that regard? 21 A. What I have included, if you look at my report, is 22 a pathway for Mr Smith's professional duties, that is 23 specifically his duties as a barber, and in that case 24 the concern I have is that he may have worked on 25 an individual who himself was contaminated, barbering</p> <p style="text-align: center;">Page 33</p>	<p>1 sufficiently accommodated by any of the pathways that 2 have been described at 233? 3 A. Well, I've described it differently in my attempt to be 4 as comprehensive as I can, sir. 5 MR JUSTICE BLAKE: Yes. I don't know whether it's 6 an assessment of -- well, possible contamination in 7 wounds but I think that has been dealt with. 8 All right. 9 MR HEPPINSTALL: Shall we just now turn to the more 10 complicated case of Mr Battersby, page 234. 11 He was an airfreight mechanic, not at 12 Christmas Island but at Maralinga. He alleges, you can 13 see there, under "Duties" at 234 that he cleaned up the 14 cloud sampling aircraft. He also had visits to Ground 15 Zero after the tests to work on what was known as the 16 dummy village. You can see that under "Duties". 17 A. I see that, thank you. 18 Q. And you took into account similar facts about his case 19 in writing your own report as I understand it? 20 A. I trust that's clear from my report. 21 Q. And we also see other activities, his work station, 22 recreational activities, wounds, local produce eaten and 23 controlled areas entered and so forth? 24 A. Mm-hm. 25 Q. So a similar sort of list but in a different context to</p> <p style="text-align: center;">Page 35</p>
<p>1 being one of those professions in which diseases are 2 passed on to the individual conducting the activity. 3 MR JUSTICE BLAKE: A barber conducting cutting hair for 4 a member of the service personnel who may themselves -- 5 A. Be contaminated. 6 MR JUSTICE BLAKE: -- have contamination, which pathway 7 would result in contamination of the barber? 8 A. One of two, sir. Either breathing in particles of 9 contaminated hair -- 10 MR JUSTICE BLAKE: Isn't that inhalation? 11 A. Inhalation, yes, sir. Or perhaps if the barber had 12 a wound, an open wound, that might enable a contaminant 13 to enter the bloodstream. 14 MR JUSTICE BLAKE: So inhalation or blood transfer from 15 an injured person or a person with an open wound to the 16 barber by -- 17 A. No, sir, if the barber has a cut as he is cutting hair 18 -- 19 MR JUSTICE BLAKE: Yes, yes. 20 A. -- he is standing close to the individual, and if that 21 person for example had been involved in some duty that 22 resulted in the contamination of their hair, then 23 potentially they could breathe in that material or it 24 might enter if the barber had a cut on their skin. 25 MR JUSTICE BLAKE: Right. That isn't in your view</p> <p style="text-align: center;">Page 34</p>	<p>1 the one we saw for Mr Smith? 2 A. Yes. 3 Q. Now, as I say, it's a difficult case, but if you turn to 4 tab 2.15, page 89? 5 A. I'm sorry, I'm slightly confused. That reference you 6 just showed to me, page 234. 7 Q. Yes. 8 A. Mr Battersby, Battersby's work history at Maralinga, it 9 refers in that table at the top to time on Kiritimati. 10 Q. Yes, I think that should be Maralinga. 11 A. Right. So are we to assume then that he simply cut and 12 pasted all of these graphs -- sorry, all of these tables 13 in his report and he approached his work in that way? 14 Q. Well, Mr Hallard will have to speak to why that is there 15 but I think it's clear if you read the report, he knows 16 he was at Maralinga. If you look at page 235, 17 paragraph 1: 18 "Mr Battersby worked at Maralinga. In contrast to 19 the tests at ..." 20 Now if we are going to use the next word, it's 21 pronounced "Christmas", not "Kiritimati". It's actually 22 the Kiribati rendering of the word "Christmas" and 23 therefore someone who lives on Kiritimati -- so 24 Christmas is the -- 25 MR JUSTICE BLAKE: Actually, it's called "Kiribas" because</p> <p style="text-align: center;">Page 36</p>

<p>1 T-I is pronounced S in the local language as 2 I discovered in a completely unconnected context to do 3 with SPG law rather than radiation. 4 MR HEPPINSTALL: It is in fact Christmas. So 5 Christmas Island is fine, we need not worry. 6 I think he is aware, fully aware -- 7 MR JUSTICE BLAKE: Anyway, you pointed out there's 8 a typographical error in that. 9 MR HEPPINSTALL: Yes. If we turn to paragraph 89 -- 10 A. I'm sorry, where are we? 11 Q. Sorry, page 89. We've moved on to a different tab, 12 tab 2.15. I just want to look at the latest of 13 Mr Hallard's dose assessments. 14 MR JUSTICE BLAKE: 2.15? 15 MR HEPPINSTALL: It's the next tab along. 16 A. 89? 17 MR JUSTICE BLAKE: I think that's been inserted this 18 morning. You handed something up. 19 MR HEPPINSTALL: Very good. 20 MR TER HAAR: We haven't got it this side of the room. 21 MR HEPPINSTALL: All right. (Pause). It's the latest -- 22 well, look, for the purposes of this we can actually use 23 the earlier one. So let's stay in 2.1 for the moment. 24 MR CHARLTON: My Lord, we thought it was probably our fault 25 that we didn't have it in the bundle so apparently it</p> <p style="text-align: center;">Page 37</p>	<p>1 witness box. That would be unduly restrictive. Yes, do 2 that. So we'll say quarter to or until such time as we 3 need to sort out the current position. 4 (11.35 am) 5 (A short break) 6 (11.45 am) 7 MR JUSTICE BLAKE: Right. Have we managed to sort out 8 any -- 9 MR HEPPINSTALL: Well, we are just staying out of 2.15 for 10 the rest of this cross-examination. It's not essential 11 and we will have copies of 2.15 brought over the 12 adjournment. 13 MR JUSTICE BLAKE: And 2.15A is simply the summary? 14 MR HEPPINSTALL: Yes. 15 MR JUSTICE BLAKE: Is that going to be before or after? 16 MR HEPPINSTALL: After, I think. 17 MR JUSTICE BLAKE: Right. 18 MR HEPPINSTALL: But for the moment, in fact, because I just 19 want to revert back to Mr Smith just for one moment, can 20 I just go into 2.17, please. You have to turn the 21 bundle round because of the landscape format of a lot of 22 this, and if you could find page 124 of 151. 23 MR JUSTICE BLAKE: 124? 24 MR HEPPINSTALL: Yes, please, my Lord. 25 Dr Ash, did you have an opportunity to look at</p> <p style="text-align: center;">Page 39</p>
<p>1 isn't, I'm glad to say. So this conversation is going 2 completely over our heads because we don't have the 3 document that is being referred to. As I understand it 4 that's because we haven't been given it. 5 MR JUSTICE BLAKE: You'll need to be provided -- haven't you 6 had copies of 5 May 2016? 7 MR HEPPINSTALL: It has certainly been served. 8 MR JUSTICE BLAKE: Yes. 9 MR CHARLTON: Well, in the bundle that we've been provided 10 with, we do not have 2.15. 11 MR JUSTICE BLAKE: I pointed that out yesterday and that was 12 why I was provided with a copy. But you are all 13 unsighted of this. You had it somewhere else but it 14 hasn't made its way into the bundle? 15 MR TER HAAR: That seems to be the position. 16 MR JUSTICE BLAKE: We need to have a break for our 17 stenographers. Would that be an appropriate moment? 18 MR HEPPINSTALL: Why not, my Lord? 19 MR JUSTICE BLAKE: Thank you. You are in the middle of 20 giving your evidence. We'll have a 10-minute break. We 21 have some other technical issues which are challenging 22 in this case. But you are not meant to speak to anyone 23 about your evidence. You are in purdah. 24 THE WITNESS: I understand, sir. Do I have to remain here? 25 MR JUSTICE BLAKE: No, you don't have to remain in the</p> <p style="text-align: center;">Page 38</p>	<p>1 Mr Hallard's subsequent iterations of his assessment or 2 just his main report? 3 A. No, as I've tried to explain to the Tribunal, I've seen 4 one PDF of what I understand to be his initial report. 5 Q. But you weren't sent any of the other ones, the further 6 ones? 7 A. I don't recall seeing any such document. 8 Q. Well, if you need time to consider, but what I just 9 wanted to show you was at 124 you will see that an 10 inhalation dose for hair cutting was added in this 11 iteration of Mr Hallard's assessment. If you look at 12 paragraph 25 at the bottom, approximately 13 180 microsieverts of inhalation dose was added for hair 14 cutting? 15 A. Mm-hm. 16 Q. And if you turn over the page, page 126, the revision to 17 the dose assessment is made for Mr Smith: 18 "Additional estimate for inhalation dose resulting 19 from haircutting as the Camp barber less than 200 20 microsieverts. 21 "Note: the additional dose is within the margins 22 allowed in the original estimate for uncertainties." 23 So it didn't actually require the change in the dose 24 assessment? 25 MR JUSTICE BLAKE: Just for my reference on these documents,</p> <p style="text-align: center;">Page 40</p>

1 since it's the first time we came across it, can you
 2 remind me when he provided those answers? Dates are not
 3 something which these documents are hot on.
 4 MR HEPPINSTALL: I will just get the date for you. These
 5 were answers to the questions from the
 6 Battersby/Smith --
 7 MR JUSTICE BLAKE: Probably May, is it?
 8 MR HEPPINSTALL: -- appellants. So, yes, I am finding the
 9 index for the date. 29 March 2016.
 10 MR JUSTICE BLAKE: March. Thank you very much.
 11 MR HEPPINSTALL: So I think in respect of Mr Smith that was
 12 the only thing you thought had been missed out. Are you
 13 now satisfied that it has in fact been included, Dr Ash?
 14 **A. Well, there are -- the other factors that occurred to me**
 15 **that I was concerned with, the first was in addition to**
 16 **his professional duties or his occupational exposure as**
 17 **a barber, recreational duties I noticed included, or**
 18 **that he was interested also in swimming. Now I noticed**
 19 **by examining maps of Christmas Island that there was one**
 20 **swimming area for servicemen in the embayment to the**
 21 **west of the island. If there was much coral there --**
 22 **I didn't have the opportunity to check that out, but**
 23 **I understand that there is -- this is, after all,**
 24 **a coral atoll, it's quite possible that any wound**
 25 **sustained during that process might have become**

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1 **contaminated. There may well have been -- I had no**
 2 **opportunity to really study this -- oceanographic**
 3 **processes resulting in the deposition of contaminated**
 4 **material and retention of it within that embayment.**
 5 **I have no information I can add on that. I simply had**
 6 **not the time to look at it.**
 7 **In terms of other recreational or other activities,**
 8 **some consideration has been given in this report to**
 9 **activation products associated with the bomb detonation**
 10 **itself, and I'm talking here about physical objects with**
 11 **radioactive activation following the detonation or**
 12 **resulting from the detonation.**
 13 **I'm not at all sure to what extent they've been**
 14 **given proper consideration.**
 15 **Other issues that I didn't have a chance to look**
 16 **at: bioturbation, the rate at which material is returned**
 17 **to the surface associated with the behaviour of the**
 18 **soils on the island.**
 19 **Any other military duties. I find it difficult to**
 20 **believe that Smith would simply be provided with duties**
 21 **as a barber and then allowed to do what he chose for the**
 22 **rest of his time.**
 23 **There are, therefore, I suspect other pathways but**
 24 **as I have I hope made clear to the Tribunal, I simply**
 25 **did not have an opportunity to study all of them.**

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1 Q. Well, indeed, Dr Ash, and there's a great danger in
 2 speculating. There's a lot of evidence that you have
 3 not seen and it's not fair to put it to you, but in fact
 4 the excess of leisure time for people within the
 5 catering corps or support corps was in fact a feature of
 6 life on Christmas Island. But let's be clear, Dr Ash,
 7 you have not reviewed any of the evidence in detail of
 8 that nature, have you? You've not looked at the many
 9 contemporaneous documents about life on
 10 Christmas Island?
 11 **A. I've looked -- I have of course listed the references**
 12 **that I have used in my report as comprehensively as**
 13 **I can. Now I have in casual reading looked at some**
 14 **other material about the tests, but in the reference**
 15 **section of my report you will see listed the material to**
 16 **which I have referred.**
 17 Q. But we see, don't we, that Mr Hallard is taking into
 18 account swimming in the lagoon and in the sea and wounds
 19 where he's got evidence about wounds. He's taken that
 20 into account, hasn't he, if you look at page 233?
 21 **A. 233?**
 22 Q. Yes. Sorry, we're going back to the dose assessment at
 23 2.14.
 24 **A. 2.14/233?**
 25 Q. Yes. Wounds and swimming are there.

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1 **A. Well, taking account of seems to consist of the remark**
 2 **"as appropriate" which I'm not entirely sure --**
 3 Q. Well, if you look at page 230, you can see that he
 4 didn't have any evidence of wounds for this particular
 5 appellant.
 6 You saw the appellants provide testimony of their
 7 wounds and cuts. This appellant didn't, so that's why
 8 there's no allowance. That evidence-based approach is
 9 a reasonable approach, is it not, Dr Ash?
 10 **A. It's not the one that I would have used.**
 11 Q. Well, you'd assess the dose not in accordance with the
 12 evidence?
 13 **A. On the contrary. I would -- in making an assessment of**
 14 **the potential exposure pathways, I would make the**
 15 **assumption that there may have been activities which**
 16 **were not entirely detailed.**
 17 **Let me give you a very simple example of that. If**
 18 **we're dealing with land contamination, there is an issue**
 19 **associated with the return of material to the surface,**
 20 **so, for example, if you are dealing with a contaminated**
 21 **site one would be very -- it is possible, of course, to**
 22 **reuse contaminated sites. There could be membranes and**
 23 **then topsoil could be added to them, but one would be**
 24 **very unhappy with the possibility of using it as**
 25 **domestic accommodation, in particular if there were**

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<p>1 gardens and if in particular children were to play in 2 those gardens. One would not try and be entirely 3 detailed in an assessment of what the potential 4 contamination was but one would try and be as 5 comprehensive as possible in eliminating pathways. 6 I trust that's clear. 7 Q. Well, let's just test that. So can I ask you to turn to 8 page 193. This is Mr Butler's assessment. Mr Butler, 9 unlike Mr Smith, reports a cut on rocks, 20 days after 10 the explosion. We see that under "possible 11 contamination in wounds" and a dose of less than 20 12 microsieverts is allowed for that. 13 He also went to Ground Zero after the balloon 14 detonations, Grapple Z1 and 4, and therefore it's 15 assumed he worked with significantly contaminated 16 objects, and therefore a dose allowance of less than 20 17 microsieverts. 18 So isn't it reasonable for those for which there is 19 evidence that they might have come into contact with 20 activation products, for example a piece of machinery 21 that was at Ground Zero might have been activated, or 22 had dry cuts, that an allowance is made and for those 23 where they didn't visit Ground Zero and they don't 24 report cuts no allowance is made? 25 A. Well, I appreciate that you are speaking as a lawyer but</p> <p style="text-align: center;">Page 45</p>	<p>1 expert witness clearly was asked to consider the 2 pathways. Mr Hallard clearly is the obvious expert who 3 has examined those pathways. I find it inexplicable 4 that Dr Ash has not seen Mr Hallard's report and 5 considered them in detail. But I'm afraid that is not 6 my responsibility. 7 MR CHARLTON: My Lord -- 8 MR JUSTICE BLAKE: Hang on, let's not have argument about it 9 but there we are. 10 MR HEPPINSTALL: So in those circumstances it would be 11 unfair to continue, frankly, with Dr Ash. 12 MR CHARLTON: May I reply in due course, my Lord? 13 MR JUSTICE BLAKE: Do you want to ask any questions? 14 Re-examination by DR BUSBY 15 MR BUSBY: If I could take you to this tab here -- what's 16 that one called? 2.14, the one that we've been all 17 looking at, Mr Hallard's report. 18 MR JUSTICE BLAKE: Well, I rather think that given the 19 answer we've just heard this may not be the most 20 fruitful investigation. 21 MR BUSBY: But I still would like to go to -- because there 22 are some questions that arise from Mr Heppinstall's 23 cross-examination here. So we are looking at page 193 24 of 285. That's the table relating to Mr Smith. 25 MR JUSTICE BLAKE: We are back on that.</p> <p style="text-align: center;">Page 47</p>
<p>1 I am trying to speak as a scientist and in attempting to 2 provide a comprehensive treatment of the potential 3 contamination pathways I've done my best to describe 4 them in my report. Those assumptions I have made, 5 I trust I have clearly stated. 6 Q. Indeed, Dr Ash, but you are being critical of 7 Mr Hallard's report because you are saying that -- 8 A. Well, I'm not really in a position to be critical 9 because I haven't read it. 10 Q. Well -- 11 A. You've given me isolated pieces of information. I've 12 tried to help the Tribunal insofar as I can with 13 detailed points identifying where I would have done 14 things differently, but that is all I have done. 15 Q. Dr Ash, let's try and cut through it. Are you or are 16 you not in a position to say whether Mr Hallard has 17 included all the relevant pathways, has included 18 irrelevant pathways or has missed pathways out? 19 A. I would not wish to make that judgment on the basis of 20 the information I've seen to date. 21 MR HEPPINSTALL: Well, my Lord, in those circumstances 22 I don't think I can take my lines of cross-examination 23 much further. 24 MR JUSTICE BLAKE: Okay. 25 MR HEPPINSTALL: It's an unsatisfactory situation where this</p> <p style="text-align: center;">Page 46</p>	<p>1 A. I'm on that one, sir. 2 MR JUSTICE BLAKE: Right. 3 MR BUSBY: No, sorry, you changed the page. The Mr Smith 4 one. 5 MR JUSTICE BLAKE: 230? 6 MR BUSBY: Yes, 230. Yes, thank you. 7 Now, if we look at this table on this page, I wanted 8 to ask you if you saw anything relating to hair cutting. 9 MR JUSTICE BLAKE: I think we've been through that. 10 MR BUSBY: I think the point is, my Lord, that there are 11 other aspects -- yes, we've been through that, but in 12 fact if you look at the table over the page, which is on 13 page 233. 14 MR JUSTICE BLAKE: 233. 15 MR BUSBY: Both that and the table that I am just asking 16 Dr Ash to look at, I just want to be certain that there 17 wasn't some mistake made here, that in fact there's 18 nothing here in Mr Hallard's report about hair cutting. 19 MR JUSTICE BLAKE: I think we've been through that topic. 20 We had that topic. That observation has been made and 21 I think then he was taken to his supplementary answers 22 where he factored it in. I'm not quite sure what the 23 purpose -- 24 MR BUSBY: I was going to go to another point here, where it 25 says further down on this table on page 233 it says:</p> <p style="text-align: center;">Page 48</p>

<p>1 "Working with significantly contaminated objects." 2 If we go across the page there it says: 3 "Not applicable." 4 So if you just look at that page now and see where 5 it says: 6 "Working ..." 7 MR JUSTICE BLAKE: You are on 233, are you? 8 A. I am on 233, sir. 9 MR JUSTICE BLAKE: Thank you. 10 MR BUSBY: So where we have "Working with significantly 11 contaminated objects," it says "Not applicable". 12 I just wanted to ask you, Dr Ash, if you thought 13 that might be a missing pathway for somebody who was 14 sited on an island where there had been rather a lot of 15 nuclear tests, that perhaps there might in your opinion, 16 in your expert opinion as a risk analyst that there 17 might be circumstances in which Mr Smith might have -- 18 I don't know -- sat down on something that had been part 19 of a nuclear test that was radioactive -- 20 MR JUSTICE BLAKE: Hang on, Mr Busby. This is 21 re-examination about questions where cross-examination 22 was abandoned when this witness indicated that although 23 he has had a copy he hasn't intimately analysed this 24 report and its other references which makes it very 25 difficult for him to give any evidence which is worthy</p> <p style="text-align: center;">Page 49</p>	<p>1 his evidence in his report related to the actual 2 photographs of the nuclear tests, and he has said in his 3 report or he has covered in his report or, sorry, you 4 have covered in your report the possible entrainment of 5 material from the ground in the nuclear tests at 6 Christmas Island. I just wanted to ask you if you 7 thought that there was a significant amount of 8 entrainment of material -- from the photographs this is 9 now, rather than from the reports. 10 MR JUSTICE BLAKE: The photographs are attached to the 11 report. 12 MR BUSBY: If we look, for example, at some of the 13 photographs of the nuclear tests at Christmas Island. 14 MR JUSTICE BLAKE: Can you just take me, please, before you 15 ask a question, to the passage in the report which deals 16 with this? I'm not going to have at this stage -- 17 I hope you have the rules of the game, Mr Busby -- we 18 are not going to have primary, new information emerging 19 in re-examination. 20 MR BUSBY: Right. 21 Yes, my Lord. I'm not very good at this, I'm 22 afraid. 23 MR JUSTICE BLAKE: No doubt my knowledge of radiation and 24 your knowledge of court proceedings are both going to 25 improve over the next three weeks but I have tried to</p> <p style="text-align: center;">Page 51</p>
<p>1 of an expert on comment upon the hypotheses that 2 Mr Hallard did or did not take into account. If that's 3 the position then I don't think we're going to get much 4 more assistance by re-examination on the same topic. 5 MR BUSBY: Very good, my Lord, then I have no further 6 questions. 7 MR JUSTICE BLAKE: I think we've got to stick to what this 8 witness does know about which he has told us about in 9 his report, it seems to me. 10 MR BUSBY: Well, I have a few questions -- 11 MR JUSTICE BLAKE: Well, if there are any questions of the 12 answers which he has given on his report, yes, you can 13 deal with that topic, but it just seems to me that in 14 the light of listening to what's been happening this 15 morning there's no point in trying to squeeze more juice 16 out of a stone which is just not going to yield it. 17 MR BUSBY: There are just two areas I would just like to 18 briefly ask him some questions about. 19 MR JUSTICE BLAKE: Right. 20 MR BUSBY: But they were not questions raised as a result of 21 cross-examination. 22 MR JUSTICE BLAKE: Well, then, strictly speaking you 23 shouldn't be asking them but let's find out then what 24 they are. 25 MR BUSBY: Yes, well, the first one has to do -- a lot of</p> <p style="text-align: center;">Page 50</p>	<p>1 give you some steers and that's trying to be helpful. 2 MR BUSBY: Yes. For that I'm most grateful, my Lord. 3 MR JUSTICE BLAKE: I'm sure there are other sources of 4 assistance available to you. 5 MR BUSBY: I don't think I'm allowed to give you any steers 6 on radiation though. 7 MR JUSTICE BLAKE: Well, that's -- not during these 8 proceedings. I'm getting quite a lot of them by 9 background means. 10 MR BUSBY: Well, if we go to page 5 of your report, Dr Ash. 11 MR JUSTICE BLAKE: Page 5. It's para 10, isn't it? 12 MR BUSBY: It is, that's right. 13 MR JUSTICE BLAKE: I thought it might be, that's what I had 14 it open. 15 MR BUSBY: Well, there are a number of Christmas Island 16 images labelled CGX1 to CGX3, and then the Y ones, CGY1 17 and so on. Okay? 18 So my question is really that, in your opinion, from 19 these photographs -- 20 MR JUSTICE BLAKE: Well -- 21 MR BUSBY: -- well, let's go to -- hang on, where are we? 22 Yes. 23 MR JUSTICE BLAKE: The question is -- what I am trying to 24 work out is whether, in paragraph 10 or 11 or somewhere 25 else, an opinion on entrainment has already been</p> <p style="text-align: center;">Page 52</p>

<p>1 expressed. If it hasn't then this is not the moment to 2 introduce a new piece of evidence; if it has, just 3 remind me where it is and then we'll see what -- 4 MR HEPPINSTALL: Maybe I can try and assist Dr Busby. 5 Entrainment has been one of those conspiracy theories 6 between the veterans and the Secretary of State for many 7 years. Mr Hallard has taken into account the 8 entrainment in respect of the Maralinga tests with which 9 we are concerned because there was entrainment, it's 10 clear, it's there, there are near ground explosions. 11 And the two balloon shots at Grapple Z, they are not 12 high air burst shots and the evidence is all there in 13 Mr Hallard's report. 14 MR JUSTICE BLAKE: So -- 15 MR HEPPINSTALL: Entrainment for Grapple Y appears to remain 16 controversial, but I don't detect that Dr Ash has 17 addressed that topic, which is why there's no 18 cross-examination because what I am trying to say is I 19 think we are at ad idem on that issue. 20 MR JUSTICE BLAKE: Sorry, Dr Ash, you are hearing a debate 21 before a question is being put. But I am trying to sort 22 of organise the material. That's what I seem to have 23 read. If we take -- Dr Busby -- take page 5, 10 and 11, 24 he is simply noting he has been given some photographs 25 about Grapple; that's of Christmas Island. 12 to 14</p> <p style="text-align: center;">Page 53</p>	<p>1 Then you go on down there. 2 So it does seem as if he was -- he did make -- 3 I must say -- 4 MR JUSTICE BLAKE: Okay, pause there. In 26 are you giving 5 expert evidence about the mechanisms of the nuclear 6 reaction at Christmas Island from the photographs? Are 7 you doing that, or not? 8 A. Yes, sir. 9 MR JUSTICE BLAKE: Is that within your area of expertise? 10 A. Well, I have, I trust, sufficient expertise to be able 11 to make those comments, yes. 12 MR JUSTICE BLAKE: On what? 13 A. The behaviour of materials associated with nuclear 14 explosions. 15 MR JUSTICE BLAKE: From a photograph? 16 A. This is Grapple X, X1 and X2. Right, I have those 17 images in front of me. 18 MR JUSTICE BLAKE: I am asking about your expertise to 19 comment upon entrainment at Christmas Island on the 20 basis of the photographs that you've been provided with. 21 A. Yes, sir. 22 MR JUSTICE BLAKE: A big ask, it seems to me. But you think 23 you can do it? 24 A. Well, I identified features indicating physical 25 processes that I think are relevant to this inquiry, and</p> <p style="text-align: center;">Page 55</p>
<p>1 does deal with Maralinga, and that's a different nature 2 of a low height test where entrainment is an issue and 3 has been taken into consideration. 4 Now, are you asking about Christmas or Maralinga? 5 MR BUSBY: I simply want to ask him about entrainment and so 6 forth -- 7 MR JUSTICE BLAKE: Christmas or Maralinga? 8 MR BUSBY: -- he does actually say in paragraph 24 -- 9 MR JUSTICE BLAKE: 24, right, let's move on. 10 MR BUSBY: Yes. Well, first of all, in paragraph 24 he 11 talks about "visual evidence at annex A indicating 12 a series of nuclear explosions over land which fireballs 13 in contact with or close to the ground". 14 Now, if we go forward to 26 where he talks about the 15 imagery from Christmas Island tests, he says, or you 16 say, Dr Ash, that it evidences a number of elements 17 relevant to the case of Mr Smith. And the first two in 18 time sequence. Then you go on to talk about subtle 19 effects and the rectangle and the sequence in CGY1 and 20 so on. 21 Then you say: 22 "The presence of a rapidly elevating column of air 23 beneath the fireball attests to the power of the 24 explosion to draw marine aerosol and vaporised seawater 25 towards and into the nuclear reaction."</p> <p style="text-align: center;">Page 54</p>	<p>1 they are features that I have taken into account using 2 both my military knowledge and also my expertise in 3 environmental risk management. That is what I can offer 4 to the Tribunal. 5 MR JUSTICE BLAKE: Well, have you -- and you have spelt them 6 out at 26; is that it? 7 A. What I've -- yes, if you look at 26. 8 MR JUSTICE BLAKE: Yes. 9 A. If you can look at image CGX2. 10 MR JUSTICE BLAKE: Page? 11 A. On page 7 of my annex. 12 MR JUSTICE BLAKE: Yes. 13 A. So the initial fireball developed, as we've seen on 14 page 6, that's CGX1, and we can see vapour clouds 15 associated with that as it begins its ascent. A feature 16 that we see, and that I have tried to outline for the 17 Tribunal with a red box -- 18 MR JUSTICE BLAKE: Yes, I am just looking at a note. Yes. 19 A. -- if you can see that conical feature, it is subtle but 20 it is there. I discounted the fact that it might be 21 a photographic effect by looking at some of the other 22 images. That is a vapour cloud sometimes referred to as 23 Wilson clouds and it indicates the very rapid up-draft 24 associated with the ascension of the fireball. What 25 that would indicate is that there are very strong winds</p> <p style="text-align: center;">Page 56</p>

<p>1 there. The air mass surrounding the blast has been 2 drawn inwards and upwards into the base of the fireball, 3 which is why you see that effect. 4 Such effects may also be visible in other 5 circumstances. But, essentially, what's happening there 6 is that the rarefaction of air in the upward-moving air 7 column is generating a vapour cloud. 8 So it's evidence that there is a vertical column of 9 air following the fireball upwards through the 10 atmosphere and therefore drawing material with it. 11 MR BUSBY: Could I -- I'm not really -- no, I wondered, 12 I just wanted to be certain that I understood what you 13 are saying here because it's sort of complicated, and if 14 I could try and reduce it down to some point that 15 I understand it. When these bombs -- and there were 16 a lot of them -- go bang, they move up rapidly through 17 the atmosphere and they suck in stuff from the ground 18 level, which in this case included water from the sea. 19 Is that what you are saying here? 20 A. And also, in some cases, or at least one case, material 21 from the ground, it would appear, judging by image CGZ3, 22 which actually illustrates the Wilson cloud very well. 23 But also one can see -- 24 MR JUSTICE BLAKE: Hang on, which one do you want to look 25 at?</p> <p style="text-align: center;">Page 57</p>	<p>1 A. You have to understand that the ascending column of air 2 beneath a nuclear fireball is intense. Speeds of 3 300 miles an hour are reported in the references. So, 4 inevitably, with those strength of winds, there is going 5 to be displacement of surface material. 6 Q. I see. Good. 7 So generally what this all points to is -- well, you 8 can tell us -- but I mean, just to simplify this, it 9 means you do think that there is entrainment of material 10 from the ground and from the sea? 11 A. That would be my interpretation of these images, 12 certainly. 13 MR BUSBY: Yes, thank you. That's all I have to ask about 14 that. 15 I think that's all. I don't have any further 16 questions, my Lord. 17 MR JUSTICE BLAKE: Since you introduced a new topic, do you 18 want to touch upon it? 19 Further cross-examination by MR HEPPINSTALL 20 MR HEPPINSTALL: Well, Dr Ash, there were four Grapple Z 21 tests, weren't there? 22 A. I'm not familiar sufficiently with the whole programme 23 to tell you in detail. 24 Q. Well, it's rather crucial, Dr Ash, because two of them 25 are balloon tests and two of them are high air burst</p> <p style="text-align: center;">Page 59</p>
<p>1 A. CGZ3 on page 13, sir. 2 MR JUSTICE BLAKE: Yes, I see. I have one at page 8, but 3 page 13. 4 A. If you look at the lower one. 5 MR JUSTICE BLAKE: Yes. 6 A. So that's the second in the time sequence. What you can 7 see is there again is that conical Wilson cloud at the 8 base of the mushroom cloud stem, and you can see beneath 9 it an effect on the land mass, that is the south eastern 10 tip of the atoll. 11 MR JUSTICE BLAKE: Yes. 12 MR BUSBY: Yes. So, once again, if I can sort of simplify 13 that for my simple mind -- 14 MR JUSTICE BLAKE: Ask a question rather than make 15 a statement, I suspect, might be a good idea. 16 MR BUSBY: If we look at this CGZ3 -- 17 A. Mm-hm. 18 Q. -- right at the bottom of that, what you call -- is it 19 the Wilson cloud? 20 A. It's a vapour cloud. The term has changed over time. 21 Q. Okay. But there appears to be what were a lot of dust 22 or sort of dusty material? 23 A. You can see material there in the process of elevation, 24 yes. 25 Q. It jumps off the ground in some way. Yes.</p> <p style="text-align: center;">Page 58</p>	<p>1 tests. The balloon tests are at 450 metres; the high 2 air burst tests are 2,800 metres. Do you know which one 3 we're looking at at CGZ3? 4 A. No. 5 MR HEPPINSTALL: No further questions. 6 MR JUSTICE BLAKE: Right. Thank you very much. That 7 completes your evidence. You can go. 8 (The witness withdrew) 9 MR JUSTICE BLAKE: Now, I just need to have a word with the 10 clerk. (Pause) We move from photographs of 11 Christmas Island 1958 to the location of 12 Japanese-speaking interpreters in London in June 2017. 13 The -- 2016, thank you very much -- it shows you what 14 chronology does to you when you are having such fun! 15 I am just trying to absorb this information and then 16 presenting it to you all in a logical format. 17 The information is that the company that supplies 18 the Tribunal with interpreters have been unable to make 19 contact with the one that they thought might be here 20 this afternoon, but they are still trying to make 21 contact. They can definitely supply a Japanese 22 interpreter (non-technical) tomorrow. But tomorrow, of 23 course, we have set aside for our German expert. 24 I thought we'd better not disturb that. 25 MR HEPPINSTALL: No, my Lord. I did hear people talking</p> <p style="text-align: center;">Page 60</p>

<p>1 about a German translator, but I don't know whether it's 2 necessary or not. Not my witness. 3 MR JUSTICE BLAKE: Well, simply, once bitten twice shy. 4 I just don't know whether a German interpreter might be 5 of benefit to your German witness just in case, because 6 we are trying to ease communication and to spot 7 problems, although clearly there are some which I failed 8 to spot. 9 MR BUSBY: Anything which makes it easier for the Tribunal 10 to understand what the evidence is has to be a positive 11 move. 12 MR JUSTICE BLAKE: Well, I think simply last night, when I 13 was reflecting upon the experience of yesterday 14 afternoon, I thought it might be necessary. But, 15 obviously, I've never met this person and I do not know 16 just what her abilities are. We know there are a great 17 many colleagues, certainly in Europe, whose English 18 shames most of us. 19 MR BUSBY: Professor Schmitz Feuerhake does understand 20 English and she does speak English, and probably her 21 speaking of English is better than Professor Sawada's. 22 But I am sure there might become moments when she would 23 have to wait a little while before translating her 24 response. 25 MR JUSTICE BLAKE: Simply out of an abundance of caution we</p> <p style="text-align: center;">Page 61</p>	<p>1 I think it's maybe best left as you suggest, my Lord, 2 and, you know, wait and see. 3 MR JUSTICE BLAKE: My provisional assessment, which is why 4 I wanted to get the timetable, was that the day allowed 5 for Professor Scmitz Feuerhake seemed to be quite 6 important. She was providing data from which 7 Professor Sawada, in a section of his report, comments. 8 But, rather than have it indirect in Japanese, let's 9 have it correct from the author of the paper. So 10 I thought we ought to give sufficient time for what she 11 has to tell us to be explored in the usual way. I would 12 be reluctant to change that, but it inevitably means 13 that we may be losing the opportunity for communication 14 with Professor Sawada. 15 MR BUSBY: Well, your fallback position with regard to 16 Professor Sawada was that, if there was some doubt about 17 what he was saying and if the translations were not good 18 enough or whatever, I mean you would get something which 19 would be better by nothing by putting him on this 20 afternoon without a translator, it seems to me, and then 21 go back to the fallback position where questions were 22 asked of him in writing on matters that were perhaps 23 obscure. 24 MR JUSTICE BLAKE: Yes. 25 MR BUSBY: My Lord, we could go to Professor Schmitz</p> <p style="text-align: center;">Page 63</p>
<p>1 thought it might be helpful. 2 MR BUSBY: Absolutely, my Lord. 3 MR JUSTICE BLAKE: If you tell me that this is over-caution 4 -- although nothing is risk-free, as we are told 5 elsewhere -- we could do it, but, if not, I think we've 6 asked for and we are going to be supplied with a Capita 7 German-speaking interpreter for tomorrow. 8 If we've now reached a point where we've completed 9 Dr Ash, do we just wait and see what happens at two 10 o'clock and see whether we can make any progress with 11 Professor Sawada? Or has anyone else got any more 12 creative ideas than that? 13 MR BUSBY: Both of our experts go back on Thursday, my Lord. 14 MR JUSTICE BLAKE: Yes. 15 MR BUSBY: So we are going to have to somehow find some way 16 of fitting them in. 17 MR JUSTICE BLAKE: Well, quite. 18 MR BUSBY: We could maybe switch Professor Schmitz Feuerhake 19 for this afternoon, but then you don't have a German 20 interpreter for this afternoon. 21 MR JUSTICE BLAKE: True. I am not able to foresee all 22 switches. 23 MR BUSBY: One possibility is we could look at -- we could 24 see, if you thought that Professor Schmitz Feuerhake's 25 English was better than Professor Sawada's English, but</p> <p style="text-align: center;">Page 62</p>	<p>1 Feuerhake this afternoon, if you felt that was -- and 2 then put her on and then Professor Sawada tomorrow 3 morning, or her this afternoon and tomorrow morning with 4 the interpreter -- 5 MR JUSTICE BLAKE: It's 12.25 now. If we are not going to 6 do anything for the next half an hour, shall we come 7 back at two o'clock, can I ask you all to think about the 8 least worst option, possibly -- and if we can get 9 improvements from that, hurrah -- to see how we can best 10 make use of our time. If you want to start with her 11 this afternoon, if that's possible, then I guess we will 12 do that and then we may just interpose him tomorrow 13 morning. 14 MR HEPPINSTALL: Can I just check -- 15 MR JUSTICE BLAKE: We have a day and a half to get through 16 these two. 17 MR BUSBY: Perhaps we can get a German interpreter for this 18 afternoon, my Lord? 19 MR HEPPINSTALL: The German translator -- there is one 20 coming tomorrow, as I understand it, from what my Lord 21 said. Well, insofar as we know anything. Your clerk is 22 nodding. 23 MR CHARLTON: Sometimes Germans are available at quite short 24 notice. What I suggest, my Lord, is that we try for 25 a German this afternoon --</p> <p style="text-align: center;">Page 64</p>

<p>1 MR JUSTICE BLAKE: I think Capita will be looking at their 2 contract providers if we are doing this in an hour and 3 a half. Because I was trying to proceed in an orderly 4 fashion. Look, can we -- I'm not sure that -- with this 5 present state of uncertainty can in invite all three 6 teams to reflect on the problem? The problem is: a day 7 and a half left this afternoon and tomorrow to get 8 through two witnesses, one in Japanese, one who has 9 German as their natural language. We have not ruled out 10 the possibility that we might get an ordinary Japanese 11 interpreter at some point this afternoon, but I can't 12 deliberate at the moment on the present information and, 13 indeed, it looks pessimistic. I know I can get 14 a Japanese interpreter, apparently tomorrow morning, and 15 I know we have a German interpreter for tomorrow 16 morning. 17 If you think about it for the next 15/20 minutes, 18 and if you come up with an agreed solution or option 19 I'll see what I can do. 20 MR HEPPINSTALL: Very well, my Lord, two o'clock. 21 MR JUSTICE BLAKE: Right. I'll see you at two o'clock. 22 MR HEPPINSTALL: Two o'clock, my Lord. 23 (12.25 pm) 24 (Discussion off the record) 25 (12.30 pm)</p> <p style="text-align: center;">Page 65</p>	<p>1 DR BUSBY: Well, I would have thought -- well, just 2 a suggestion, my Lord, but that we just pursue the 3 original intention which was before your suggestion, 4 which was to continue with Professor Sawada and for 5 Mr ter Haar to ask him simple questions and for us to 6 pursue the issues in that way. 7 I don't really see any alternative, unless 8 Professor Schmitz Feuerhake suddenly miraculously 9 reappears. 10 MR JUSTICE BLAKE: Well, I suppose I'm willing to try 11 anything, but I'm not really willing to participate in 12 a process where there's no communication, effective 13 communication, and that's just not going to do anyone 14 any good. 15 MR HEPPINSTALL: I agree, my Lord. Speaking for the 16 Secretary of State I draw a line at attempting to 17 cross-examine Professor Sawada without a translator. I 18 think we are in not in the interests of justice 19 territory. 20 MR JUSTICE BLAKE: Yes. Mr ter Haar, any thoughts from your 21 side of the triangle. 22 MR TER HAAR: Many thoughts but the question is: what 23 constructive thoughts are there? 24 MR JUSTICE BLAKE: I would have thought to discuss -- 25 MR TER HAAR: The answer is this: can I ask whether the</p> <p style="text-align: center;">Page 67</p>
<p>1 (The short adjournment) 2 (2.00 pm) 3 MR JUSTICE BLAKE: Good afternoon. So I understand that we 4 are going to move on to Professor Schmitz Feuerhake's 5 evidence now; is that right? 6 DR BUSBY: My Lord, I'm afraid Professor Schmitz Feuerhake 7 has disappeared. Well, she wasn't aware that she might 8 be asked to come so -- 9 MR JUSTICE BLAKE: Was she in court this morning? 10 DR BUSBY: I think she left before the discussion about 11 whether she should be on this afternoon. I know, I'm 12 sorry, my Lord, but that's how it is. We have been 13 trying to track her down and we've left messages and 14 carrier pigeons and whatnot. 15 MR JUSTICE BLAKE: There's not much point having 16 a discussion about hearing her evidence this afternoon 17 if -- 18 DR BUSBY: I am sorry, my Lord. I didn't see she wasn't 19 there. I just assumed she was there and when I went to 20 talk to her she wasn't there. 21 MR JUSTICE BLAKE: Mr Busby, this is your case. I am really 22 trying to think outside the box to facilitate 23 communication, but it hasn't been spectacularly 24 successful so far. 25 Now, what are we going to do?</p> <p style="text-align: center;">Page 66</p>	<p>1 Tribunal would be willing to sit -- there was 2 an indication from the clerk -- early tomorrow and if 3 necessary late tomorrow so that then we just draw a line 4 under today, and make up such time as we can? 5 MR JUSTICE BLAKE: Well, let's define those terms. 6 MR TER HAAR: The suggestion which came from the clerk was 7 possibly starting at 9.30 and possibly finishing -- 8 MR JUSTICE BLAKE: I gather he has booked of his own 9 volition -- a man of great initiative -- a Japanese 10 interpreter for 9.30 tomorrow. 11 MR TER HAAR: Which is why that time came into my mind. 12 MR JUSTICE BLAKE: And late tomorrow? 13 MR TER HAAR: Well -- 14 MR JUSTICE BLAKE: Do we have flights to accommodate or 15 something of that sort? 16 DR BUSBY: No, my Lord, they are flying back the following 17 day. 18 MR JUSTICE BLAKE: On the Thursday? 19 DR BUSBY: Yes. 20 MR JUSTICE BLAKE: Yes, right. 21 MR TER HAAR: If we could sit until 5. The problem in my 22 experience with shorthand writers is if you stretch the 23 day too long you place a -- 24 MR JUSTICE BLAKE: No, I'm not sure that beyond five o'clock 25 is --</p> <p style="text-align: center;">Page 68</p>

<p>1 MR TER HAAR: I was thinking even to five o'clock places 2 pressure. 3 MR JUSTICE BLAKE: We'll have a break in the afternoon. 4 MR TER HAAR: We were going to do that anyway. 5 MR JUSTICE BLAKE: Quite. 6 MR TER HAAR: I hear what the Secretary of State says. It's 7 a perfectly reasonable position. I hope -- 8 MR JUSTICE BLAKE: I did find the transcript, of course, 9 thank you, of yesterday's proceedings and if one were to 10 cut and paste it into a judgment I don't think anyone 11 would think this has been a very effective means of 12 communication. 13 MR TER HAAR: No -- 14 MR JUSTICE BLAKE: I hear what you say. I am not suggesting 15 that that's -- 16 MR TER HAAR: I have spent a lot of my practice in 17 international arbitrations where this sort of -- 18 certainly the skills of the shorthand writers often 19 means actually you can find out what people are saying, 20 but I agree, it doesn't cut and paste well. I think 21 when one looks at the transcript yesterday, what 22 Professor Sawada was saying comes over very clearly 23 because of the skills of the shorthand writer, more 24 clearly perhaps than when one was listening to it. But 25 that's another matter.</p> <p style="text-align: center;">Page 69</p>	<p>1 giving proper -- we don't want any other health-related 2 issues to emerge from this hearing for our 3 stenographers. 4 MR TER HAAR: And it would be on the basis, I suggest, that 5 all parties, myself, Dr Busby, Mr Heppinstall, have to 6 finish whatever questions they have within the 24 hours, 7 so within a day. 8 MR JUSTICE BLAKE: Mr Busby, are we getting the idea, 9 although it is probably a slow process, that what we are 10 trying to do by presentation of your witnesses is to let 11 their reports stand as their evidence, subject to any 12 need always to update because they were written 13 in October and it's now June, so that's why those 14 directions were there, but if there is something that 15 you want out of them which is not in their report, in 16 a sense it's too late because the whole purpose of 17 advance disclosure and preparation of cases is that both 18 sides know what each team's witnesses are saying, and 19 that's why clarification was the issue and that just 20 means: "When you said at paragraph 86 this, did you mean 21 that?" 22 If it's clear then it stands. 23 I hope you are getting the idea, and when you 24 re-examine you are principally dealing with issues which 25 have arisen in the cross-examination. Obviously the</p> <p style="text-align: center;">Page 71</p>
<p>1 MR JUSTICE BLAKE: I am frustrated by the concept that we 2 have an afternoon where we are doing nothing. 3 MR TER HAAR: I don't think there is any other witness who 4 is available. 5 DR BUSBY: We don't have any other witnesses. Those are our 6 witnesses that are here. Professor Howard and 7 Professor Hooper will be coming to give evidence on the 8 Thursday. 9 MR JUSTICE BLAKE: Yes, right. Well, unless you are going 10 to have a crack at getting some evidence-in-chief out of 11 Professor Sawada -- not of course I would recommend, but 12 if you have communicated with him and you think you can 13 do better than you did yesterday. But I tend to agree 14 with Mr Heppinstall that it's not a case for 15 cross-examination and I would much rather defer. 16 MR TER HAAR: Certainly as far the questions I was going to 17 ask, as the Tribunal indicated, whilst strictly 18 cross-examination would not be leading questions. I am 19 happy to try, I am happy to leave it in the hands -- 20 I have to say I'm quite neutral. I think so long as we 21 operate a time limit that we will get through both 22 witnesses tomorrow which means everyone must cut their 23 cloth accordingly -- 24 MR JUSTICE BLAKE: Right, we'll start at 9.30. We will 25 finish probably at 4.30 but certainly no later than 5,</p> <p style="text-align: center;">Page 70</p>	<p>1 court must always have some flexibility. If there's 2 something important that you should have asked about and 3 failed and you just realised it you can always try your 4 luck, but what we don't want to do is go around 5 in inextricable circles and start again at the end of 6 the re-examination. Do you follow? 7 DR BUSBY: I follow. I understand that, my Lord. There's 8 one point with regard to Professor Schmitz Feuerhake 9 that I can raise now and that is that your Lordship made 10 quite clear that a paper that she wrote with me but 11 after her original report was written in October 2015, 12 and that was a paper that you recall was submitted as 13 part of the reading list, which you ruled out because it 14 had my name on it. Now, you did say at the time, 15 I recall, that she could rely upon other evidence which 16 did not have my name on it. 17 Now, the thing is that that report is really, as 18 I pointed out, quite an important one with regard to the 19 issue of the congenital malformations in the children of 20 the veterans which we advance as evidence that they had 21 been exposed to radiation. 22 Now, that report that is now ruled out because it 23 has my name on it in fact was a report that was a review 24 of quite a few studies of people who were exposed to 25 these same radionuclides before and after Chernobyl.</p> <p style="text-align: center;">Page 72</p>

<p>1 So that shows a significant amount of evidence that 2 small amounts of radiation are capable of causing these 3 effects. Now -- 4 MR JUSTICE BLAKE: Just pause. The purpose I am trying to 5 do to manage this case is to ensure that whatever we 6 receive, when we go into the evaluation mode, isn't 7 directly or indirectly your opinions on the topic in 8 order to honour the directions which were made and it 9 seems that that's -- that's why the ruling. 10 Quite clearly as a matter of practicality -- I don't 11 know -- if any learned paper in fact is based upon 12 independent research, independent of you and your 13 evaluation of it, then it's something which can be 14 talked about and we'll have to assess retrospectively 15 which side of the line that falls on. But if it's -- 16 let's just look at Professor Schmitz Feuerhake's 17 references. 18 At page 11 of this report -- 19 DR BUSBY: You have the report. For others it's SB6 -- 20 MR JUSTICE BLAKE: I am doing something else. I invite you 21 to turn up, since we have nothing else to do this 22 afternoon, as I understand it, SB1, 2.1, page 11. From 23 page 11 through to 15 we have all the informants, 24 including three papers of her own to which she makes 25 reference in her opinion. But I think ten of them are</p> <p style="text-align: center;">Page 73</p>	<p>1 MR JUSTICE BLAKE: Pflugbeil, yes. 2 DR BUSBY: Well, my Lord, what I was asking was that since 3 she cannot refer to this because it has my name on it, 4 I was rather suggesting or hoping that we might submit 5 the key papers which her conclusions in this paper were 6 dependent upon. So there are a number -- just as 7 your Lordship pointed out, there were a number of 8 references in her original submission in her original 9 expert reports, there are also a number of references at 10 the back of this -- well quite a few, in fact -- 84 11 references in the back of this. 12 MR JUSTICE BLAKE: Well, look, I've given a ruling about the 13 interpretation of Mr Justice Charles' direction. 14 Clearly it's possible to explore with the witness the 15 issue of how much she relied upon you in reaching these 16 conclusions and how much she reached these conclusions 17 by her own research or the research of others. I am 18 going to allow that topic to be explored. 19 DR BUSBY: That's very reassuring, my Lord, yes. 20 MR JUSTICE BLAKE: I mean, you can tell me or us something. 21 What is the Environmental -- this was published where? 22 DR BUSBY: It's the journal of the Korean Society of 23 Environmental Health and Toxicology which is quite 24 a well-known organisation. 25 MR JUSTICE BLAKE: Do we know who the editors -- was this</p> <p style="text-align: center;">Page 75</p>
<p>1 either authored or co-authored by you. 2 DR BUSBY: Yes, my Lord, I think that's the problem. What 3 I was going to say -- I probably waffled on too long 4 here and I should have got to the point -- was that 5 later on she wrote a paper in a journal, Environmental 6 Health and Toxicology, which is the one we're talking 7 about now. Now that depended on quite a few papers 8 relating to the effects of Chernobyl on genetic damage. 9 MR JUSTICE BLAKE: That's at 2.6, is it? 10 DR BUSBY: I'm told it is SB6, tab 89, my Lord. 11 It was the one which was written later on after this 12 report. 13 Sorry, it's cited in reply to her questions to the 14 SSD, and it was submitted at that point and also it was 15 submitted as part of the reading list. 16 So it's that paper. 17 Anyway -- 18 MR JUSTICE BLAKE: Tab -- 19 DR BUSBY: Tab 89. Yes. 20 MR JUSTICE BLAKE: I have that. 21 DR BUSBY: It's entitled "Genetic Radiation Risks - a 22 Neglected Topic in the Low Dose Debate". 23 MR JUSTICE BLAKE: Right. So there were three authors: her, 24 you and -- 25 DR BUSBY: Pflugbeil.</p> <p style="text-align: center;">Page 74</p>	<p>1 peer reviewed? 2 DR BUSBY: It was peer reviewed by three peer reviews and it 3 took about three months from its original submission. 4 MR JUSTICE BLAKE: Do we know who the peer reviewers were? 5 DR BUSBY: We are not allowed to know who the peer reviewers 6 were, my Lord, but I can tell you having dealt with it 7 that they were really quite stringent and quite a lot of 8 changes had to be made before it went through. I might 9 be able to find their names if I wrote to the editor. 10 MR JUSTICE BLAKE: We are probably not going to get it by 11 tomorrow morning. 12 DR BUSBY: It's not impossible. I can e-mail her and see if 13 she can let us know. I am not sure if knowing who they 14 were will take us any further, my Lord. 15 MR JUSTICE BLAKE: I don't know. 16 DR BUSBY: Well, I'll make an effort. I'll e-mail the 17 editor, who I know, and see if she'll let us know who 18 the reviewers were. I could say that EHT, I mean one of 19 the -- I don't know if I'm allowed to say this, but one 20 of the signs of whether you have a Mickey Mouse journal 21 or a proper one is whether it's referred to by the 22 National Institute of Health in the pub med system, the 23 public medicine system, and this is a pub med journal, 24 so that puts it up at the high level of journals. It's 25 not just something that goes on the Internet and</p> <p style="text-align: center;">Page 76</p>

<p>1 people --</p> <p>2 MR JUSTICE BLAKE: Well, you are the correspondent, I see,</p> <p>3 for the article.</p> <p>4 DR BUSBY: I am the corresponding author, merely because</p> <p>5 I speak English, my Lord.</p> <p>6 MR JUSTICE BLAKE: The position is -- I mean you'll get the</p> <p>7 reasons for the decision, but I took it as a preliminary</p> <p>8 issue simply so you can consider the presentation of the</p> <p>9 case at the beginning rather than at the end.</p> <p>10 DR BUSBY: Yes, thank you, my Lord.</p> <p>11 MR JUSTICE BLAKE: Sometimes in these joint articles it's</p> <p>12 possible to explore how far the primary conclusions</p> <p>13 depend upon your opinions and your scientific</p> <p>14 assessments or on those of others. Now that's obviously</p> <p>15 a topic which anyone investigating may need to explore</p> <p>16 and may have to explore.</p> <p>17 DR BUSBY: I think my question was if we may provide</p> <p>18 a number of these references as copies at this late</p> <p>19 stage to the Tribunal of papers upon which --</p> <p>20 MR JUSTICE BLAKE: I thought all the academic papers were</p> <p>21 in. I mean --</p> <p>22 DR BUSBY: They are --</p> <p>23 MR JUSTICE BLAKE: It is a question of Mr Heppinstall is</p> <p>24 probably not going to have much chance to read them all</p> <p>25 between now and tomorrow morning, is he?</p> <p style="text-align: center;">Page 77</p>	<p>1 MR JUSTICE BLAKE: Yes.</p> <p>2 DR BUSBY: We will e-mail them.</p> <p>3 MR JUSTICE BLAKE: Okay.</p> <p>4 MR HEPPINSTALL: Now, could I ask you to check your tabs</p> <p>5 1.1A and 2.23 just to see if there's something there?</p> <p>6 MR JUSTICE BLAKE: I have a 1.1A which is cross-reference --</p> <p>7 MR HEPPINSTALL: Good. And 2.23 should be Dr Haylock's</p> <p>8 supplementary report dealing with the Rabbitt Roff data.</p> <p>9 MR JUSTICE BLAKE: 2.2?</p> <p>10 MR HEPPINSTALL: 23.</p> <p>11 MR JUSTICE BLAKE: My 2.2 is just --</p> <p>12 MR HEPPINSTALL: 2.23, my Lord.</p> <p>13 MR JUSTICE BLAKE: Oh, 23.</p> <p>14 MR HEPPINSTALL: 23.</p> <p>15 MR JUSTICE BLAKE: Right, yes.</p> <p>16 MR HEPPINSTALL: Sorry.</p> <p>17 MR JUSTICE BLAKE: That will be the next tab.</p> <p>18 MR HEPPINSTALL: Yes. Sorry, my Lord.</p> <p>19 DR BUSBY: We don't have that in our bundle, my Lord.</p> <p>20 MR JUSTICE BLAKE: 2.23.</p> <p>21 No, I have a blank at 2.23 and a blank 2.24.</p> <p>22 MR HEPPINSTALL: We'll get 2.23 rectified.</p> <p>23 MR JUSTICE BLAKE: These were e-mailed over to us.</p> <p>24 MR HEPPINSTALL: Yes, these were the pack of DIY matters.</p> <p>25 MR JUSTICE BLAKE: No. Well, I mean --</p> <p style="text-align: center;">Page 79</p>
<p>1 DR BUSBY: I don't think that would be necessary. It is</p> <p>2 just in case anybody --</p> <p>3 MR JUSTICE BLAKE: It might be if he wants to take a point.</p> <p>4 DR BUSBY: My point is that these academic papers say: hey,</p> <p>5 look, after Chernobyl too many people got congenital</p> <p>6 malformations.</p> <p>7 MR JUSTICE BLAKE: I think if you think there are some</p> <p>8 important academic papers referred to in that article</p> <p>9 I'm not stopping you. The precise use that can be made</p> <p>10 of them we'll have to see bearing in mind I am trying to</p> <p>11 devise a procedure which is fair to all the</p> <p>12 participants, but it's --</p> <p>13 DR BUSBY: I think that's all I wanted to hear, my Lord. We</p> <p>14 are quite content with that approach. I think that's</p> <p>15 all I need to say about it. Thank you.</p> <p>16 MR JUSTICE BLAKE: Right. Is there anything else in terms</p> <p>17 of housekeeping that we can do this afternoon?</p> <p>18 MR HEPPINSTALL: First of all, if there are going to be</p> <p>19 articles produced could they be e-mailed over to</p> <p>20 Government Legal Services as soon as possible?</p> <p>21 MR JUSTICE BLAKE: You simply can't make forensic points</p> <p>22 about them if there's been no chance for someone else to</p> <p>23 absorb them.</p> <p>24 DR BUSBY: Absolutely, my Lord, and indeed we are going to</p> <p>25 print up various copies of them and bring them in.</p> <p style="text-align: center;">Page 78</p>	<p>1 MR HEPPINSTALL: Did you indicate you had 2.2?</p> <p>2 MS MCCORD: I have it.</p> <p>3 MR JUSTICE BLAKE: I am not doubting that there may have</p> <p>4 been an e-mail, but I'm afraid the ... (Handed)</p> <p>5 It looks like my colleagues have been doing what</p> <p>6 they were asked to do.</p> <p>7 MR HEPPINSTALL: I see. We're very grateful to them,</p> <p>8 my Lord.</p> <p>9 MR CHARLTON: We do not have one.</p> <p>10 MR HEPPINSTALL: We can provide one.</p> <p>11 MR CHARLTON: I would be grateful. (Handed)</p> <p>12 MR HEPPINSTALL: To be clear, it was all served on time. In</p> <p>13 fact we served in accordance with your directions.</p> <p>14 MR JUSTICE BLAKE: Quite. Have I just been given two copies</p> <p>15 of the same thing? I think I've been given --</p> <p>16 MR HEPPINSTALL: Perhaps that's Hogan Lovells'. (Handed)</p> <p>17 MR JUSTICE BLAKE: Now, was there something from</p> <p>18 Professor Sawada that someone wanted to show us? We</p> <p>19 have a rather ... no?</p> <p>20 MR HEPPINSTALL: I'll leave it to others to decide whether</p> <p>21 to show it to you, my Lord.</p> <p>22 MR JUSTICE BLAKE: If we think we can do better with</p> <p>23 an interpreter, let's do better; but if there's</p> <p>24 something he wanted to show us.</p> <p>25 MR CHARLTON: I just want to inform the court --</p> <p style="text-align: center;">Page 80</p>

1 MR JUSTICE BLAKE: We were informed that he has written
2 something overnight.
3 DR BUSBY: We have it here, my Lord.
4 MR JUSTICE BLAKE: Yes, it is up to you. Do you want to
5 show it to us?
6 MR CHARLTON: My first point, my Lord, is does the court
7 want to see it in any event? If not, we don't think we
8 need trouble you with it because we suspect the matter
9 will be dealt with tomorrow.
10 MR JUSTICE BLAKE: I'm content to leave it there, in which
11 case the answer is no, but of course it can't then pop
12 up again like a -- something else, and you've seen what
13 it says. I just wanted to raise it.
14 MR CHARLTON: My Lord, I'm sorry about the consulting. He
15 has taken the trouble to write it out, there's nothing
16 to hide here. We do think, my Lord, perhaps I don't
17 know where it would go in the bundle --
18 MR JUSTICE BLAKE: You have changed your mind?
19 MR CHARLTON: Yes, my Lord, following brief consultation.
20 It can't hurt and in any event there's no mystery as to
21 what it is. I think it is helpful, my Lord. It
22 deals -- I'll hand it up.
23 MR JUSTICE BLAKE: You make a decision. Once you've made
24 a decision in your team, execute the decision, and if
25 it's disclosed we'll receive it.

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1 MR CHARLTON: I am trying to execute it, my Lord. (Handed)
2 MR JUSTICE BLAKE: Has there been a right of appeal
3 exercised against your decision and is it final? Right.
4 I'll put this behind tab 2.6. (Pause). Right.
5 So we've just about reached anything useful we can
6 do. We have a missing Professor. We have a constrained
7 timetable. What else can go wrong? We'll probably find
8 out tomorrow, won't we? Is there anything else we can
9 deal with today?
10 No. Right. Well, there we are. This is just an
11 updated index, is it, that's landed on my desk? I will
12 check that. It looks as if we'll meet again tomorrow at
13 9.30.
14 MR HEPPINSTALL: Yes, my Lord.
15 MR JUSTICE BLAKE: If we could try to gather up our stray
16 clocks, so 9.30 means 9.30 instead of 9.45, that will
17 probably be a great help and I look forward to seeing
18 you then.
19 (2.28 pm)
20 (The court adjourned until
21 Wednesday, 15 June 2016 at 9.30 am)
22
23 Housekeeping1
24
25 DR JOHN STUART ASH (sworn)11
Examination-in-chief by DR BUSBY11
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