

<p>1 Thursday, 30 June 2016 2 (10.00 am) 3 Housekeeping 4 MR HEPPINSTALL: I think before I commence, 5 Dr Cecilia Busby, wishes to make a couple of points. 6 MS BUSBY: Just three very small points to clarify something 7 we said yesterday, if that's okay. 8 So firstly, just for the help of the Tribunal, to 9 clarify exactly what we wanted to say about the 10 dosimetry of the Wahab and Rowland paper. 11 Rowland obtained those levels of dose from what 12 would have been the necessary external radiation to 13 cause the kind of chromosome damage they found. 14 So in that sense we are not saying that he got that 15 wrong. We think that that's right; the dosimetry they 16 did in that paper was right. 17 What we were trying to say was that an external dose 18 of 1,400 millisieverts would cause that damage, but we 19 would argue potentially a much smaller internal dose 20 would cause the same damage. 21 So when we were saying that the dose didn't have to 22 be so high, that was the point we were trying to make, 23 that internal emitters, internal uranium that could have 24 been ingested or inhaled by those sailors, we would 25 argue could have caused that level of damage also. So</p> <p style="text-align: center;">Page 1</p>	<p>1 MS BUSBY: Okay, so the only thing we wanted to say is that 2 it might be helpful if you were to do that to look also 3 at a paper at SB7, tab 117, which does give evidence as 4 to the fallout levels across the areas that those papers 5 are concerned with, and that's an adjunct, if you like, 6 to those papers. 7 MR JUSTICE BLAKE: I will record what is proposed. 8 MS BUSBY: Yes, of course. If you look at them or if you 9 don't, that would be helpful. 10 MR HEPPINSTALL: My Lord, I'm very grateful to Ms Cohen and 11 Dr Cecilia Busby who sat down with the UNSCEAR paper and 12 came to that agreement. That avoids us having to apply 13 to adduce back into evidence the massive -- 14 MR JUSTICE BLAKE: I was going to fly off to Kiev tomorrow 15 morning and count the number of children I met over the 16 course of the next two months, but I won't have to do 17 that. 18 MR HEPPINSTALL: Whatever methodology would have been 19 appropriate, my Lord. So we can park that. 20 MR JUSTICE BLAKE: We can park that idea, that's helpful. 21 Just on the question of UNSCEAR, I think that we've 22 been looking at 2006 mainly, have we? 23 MR HEPPINSTALL: 2000 and 2006, yes. 24 MR JUSTICE BLAKE: But there is a 2008? 25 MR HEPPINSTALL: There is, although one of the key documents</p> <p style="text-align: center;">Page 3</p>
<p>1 that's just to clarify that point. 2 The second thing is with regard to the apparent 3 mistake Professor Thomas made over the number of 4 children affected by Chernobyl. We talked to the SSD 5 last night and it's clear that in that UNSCEAR study she 6 referred to, there is both an estimate of the number of 7 people affected, which is 5 million; there is also 8 another study which included a much larger population of 9 100 million people, and in that 100 million people, 10 there were 10 million children. 11 So we are willing to accept that Professor Thomas 12 was perhaps thinking of that wider study when she said 13 10 million children, rather than the smaller affected 14 area that Dr Busby was talking about. 15 MR JUSTICE BLAKE: Right, thank you. So at least she wasn't 16 off the wall when she was referring to 10 million 17 children. 18 MS BUSBY: No, it was a question of cross-purposes, perhaps. 19 MR JUSTICE BLAKE: Thank you. That's helpful clarification. 20 MS BUSBY: The very last point is that your Lordship did 21 suggest that you would be looking at the papers that 22 backed up Professor Schmitz Feuerhake's -- 23 MR JUSTICE BLAKE: I was looking at the eight papers and we 24 are about to hear some submissions upon that. But wait 25 and see.</p> <p style="text-align: center;">Page 2</p>	<p>1 we have been looking at is when UNSCEAR does its 2 periodic review of the epidemiology. Some of the other 3 UNSCEAR reports are on particular topics, like Chernobyl 4 was the one we were talking about last night. There's 5 one on Fukushima. 6 MR JUSTICE BLAKE: So they're incident-specific reports? 7 MR HEPPINSTALL: Some are and some, which is the 2000 one 8 which we probably looked at, is a review of all the 9 epidemiology so far. I think in 2006 they then bring 10 the 2000 one up to date -- 11 MR JUSTICE BLAKE: So the last generic review of 12 epidemiology on the topic of ionising radiation is 2006, 13 is it? 14 MR HEPPINSTALL: Yes, I think that's right. 15 MR TER HAAR: That's what I was taking the court to 16 yesterday. 17 MR JUSTICE BLAKE: I know you were, and we're grateful, but 18 Dr Rayner has pointed out that there are references to 19 2008, and you never know -- when our own duty is to 20 enquire whether there's something lurking in the 21 woodshed, we need to find out what it should be. 22 MR TER HAAR: Sorry, I shouldn't have interrupted. 23 MR HEPPINSTALL: So 2008, that's what we were looking at 24 last night, is the Chernobyl. 25 MR JUSTICE BLAKE: Yes. We have it. The point of raising</p> <p style="text-align: center;">Page 4</p>

<p>1 these matters is to make sure (1) that you're either ad 2 idem that it's not something we need look at, or, if we 3 might need to look at it for some purpose, that we have 4 it. 5 MR HEPPINSTALL: Yes. 6 MR JUSTICE BLAKE: And (3) if we have it and we look at it 7 for some purpose, you are aware that's what we are 8 doing. 9 MR HEPPINSTALL: In fact, I think, the last Tribunal asked 10 for the web links to the UNSCEAR document so they had it 11 electronically. I'm sure we could repeat that email. 12 It was a joint Hogan Lovells/Secretary of State email to 13 the first -- 14 MR JUSTICE BLAKE: There's no reason for more trees to give 15 their valiant lives on it. It's simply because, in our 16 reflections on where we're going, that's been pointed 17 out. 18 MR HEPPINSTALL: The other great compilation of epidemiology 19 is what's called the BEIR VII, which is in the library 20 and there's extracts in the SB. 21 MR JUSTICE BLAKE: Now we have an instrument of navigation 22 through that, we will end up at the North Pole or the 23 South Pole, I don't know. 24 MR HEPPINSTALL: That's because the National Academies of 25 Science in the United States of America have done their</p> <p style="text-align: center;">Page 5</p>	<p>1 MR HEPPINSTALL: Exactly. 2 MR JUSTICE BLAKE: And the appellate process is Upper 3 Tribunal. 4 MR HEPPINSTALL: Upper Tribunal, point of law only. 5 MR JUSTICE BLAKE: Yes. If the answer in respect of any of 6 these appellants is "Yes, entitlement," then back to the 7 Secretary of State. 8 MR HEPPINSTALL: Back to the Secretary of State. 9 MR JUSTICE BLAKE: For assessing degree of -- 10 MR HEPPINSTALL: "Disablement" is the term. 11 MR JUSTICE BLAKE: Disablement. 12 MR HEPPINSTALL: It's in Article 43. It's an objective 13 test. It's a test also used in the Social Security 14 jurisdiction. A percentage disability is arrived at, 15 and then that tells you what sort of compensation you 16 are going to get. It might be a war pension, it might 17 be a gratuity, it might be a widow's pension, it might 18 be funeral expenses. There's a menu of things you get 19 according to the percentage. 20 Then that decision triggers a fresh right of appeal, 21 what's known as an assessment appeal, back to this 22 Tribunal. I say "this Tribunal" -- I mean generically, 23 not necessarily this constitution. 24 MR JUSTICE BLAKE: No. Many things are uncertain, but -- 25 MR HEPPINSTALL: One thing is certain in life.</p> <p style="text-align: center;">Page 7</p>
<p>1 own UNSCEAR. We know the relationship between the UN 2 and the USA is not always a happy one. So they have 3 done their own review for their own purposes which is 4 known as BEIR VII. 5 MR JUSTICE BLAKE: Right, okay. 6 MR HEPPINSTALL: The first matter I was just going to raise, 7 my Lord, is just to recall that these are entitlement 8 appeals, to use the language of the War Pension Armed 9 Forces Chamber jurisdiction. That means that usually 10 war pension cases are a game of two halves. You have 11 the entitlement appeal, where the appellants establish 12 that they are within the jurisdiction or area of 13 Article 41. They then get remitted back to the 14 Secretary of State to make an assessment of the 15 disablement which is expressed as a percentage from the 16 date of claim. The Secretary of State then makes 17 a decision on that question and then a fresh right of 18 appeal arises. 19 So there was a little bit of this that has crept 20 into yesterday. So all this Tribunal does is decide 21 entitlement under Article 41. Then the process carries 22 on, and there is a right to come back to assessment 23 under a separate right of appeal. 24 MR JUSTICE BLAKE: So if no entitlement, end of, subject to 25 appellate process?</p> <p style="text-align: center;">Page 6</p>	<p>1 MR JUSTICE BLAKE: Death, taxes, and it won't be me. Right. 2 Closing submissions by MR HEPPINSTALL 3 MR HEPPINSTALL: Now, I am going to use my closing 4 submissions as a prop, although like Mr ter Haar, I'm 5 not going to read them out to you, nor am I going to go 6 to everything, because you have them and there's no 7 need. 8 In our first page, page 2, the first substantive 9 page, we set out an introduction, some guide to what we 10 have done, and in addition to that now, we have added in 11 appendix D which we can look at in due course. 12 There's also some opening paragraphs on the legal 13 test which I'm going to pass over because I think I'm 14 going to get into the meat of that as we go on. 15 So the first substantive matter I want to cover is 16 paragraph 7 on expert evidence. You see what 17 submissions we make there. 18 Now, I make no apology for the strength of the 19 submission that is being made in respect of some of 20 these experts. In the case of Professor Sir Roy Meadow, 21 whilst a lot of opprobrium was heaped on the Professor's 22 head, a lot of it was also directed to the other players 23 in that forensic game -- counsel for the prosecution, 24 counsel for the defence, the trial judge in the murder 25 trial of Sally Clark.</p> <p style="text-align: center;">Page 8</p>

<p>1 If you look at the judgment of Lord Justice Auld -- 2 the reference is paragraph 206 -- he very much mentions 3 that point, that it is for the parties' legal 4 representatives and ultimately the judge to identify 5 before and at trial what evidence, lay or expert, is 6 admissible or not. In the case of expert evidence, that 7 importantly includes the legal representatives of the 8 parties taking responsibility for that question as much 9 as the trial judge does.</p> <p>10 As we have set out in our written closing 11 submissions, we do submit, and I think the Tribunal to 12 some extent has already accepted this submission when it 13 came to decide the question of Mr Dai Williams, it is 14 a threshold question. We can't use the language of 15 "inadmissible" or "admissible" because that's not the 16 way the Tribunal works. But on this key issue of expert 17 evidence, we say it is a threshold issue.</p> <p>18 If there has been breach of the Ikarian Reefer 19 rules, then the Tribunal are at liberty to, and we say 20 should, exclude that evidence from their consideration. 21 It's a theme that has most recently been taken up in the 22 case of Kennedy v Cordia, a Scottish appeal in the 23 Supreme Court about how to treat health and safety 24 expert evidence.</p> <p>25 But as is made clear in paragraph 51, which we have</p> <p style="text-align: center;">Page 9</p>	<p>1 MR HEPPINSTALL: Certainly.</p> <p>2 MR JUSTICE BLAKE: I have read ahead. I have read your 3 submissions now, which I hadn't done yesterday, and 4 I have at least read the authorities that you cite.</p> <p>5 I speak of course at this stage only for myself, but 6 I think you can rest assured that this Tribunal is not 7 going to run with the ball of a hypothesis mentioned in 8 one of the many, many learned papers and pursue, 9 entirely without any forensic process, a scientific 10 hypothesis as to reasonable doubt as to causation 11 mentioned there, which is what is I think being guarded 12 against.</p> <p>13 MR HEPPINSTALL: Yes.</p> <p>14 MR JUSTICE BLAKE: What at present you have heard in 15 response to Dr Busby and Ms Busby's submissions 16 yesterday, I think we are required to do, and we are 17 proposing to do, is to read these identified papers 18 which are said to be supportive of the propositions in 19 the appellants' witnesses' statement, to see whether 20 they are accurately summarised, gisted, contained, and 21 if they are, then that point of attack is not a good 22 one.</p> <p>23 MR HEPPINSTALL: Yes.</p> <p>24 MR JUSTICE BLAKE: That's not the end of the debate.</p> <p>25 MR HEPPINSTALL: No.</p> <p style="text-align: center;">Page 11</p>
<p>1 extracted for you, it is properly a threshold question. 2 It's not a case of saying, "Well, there are doubts about 3 independence and impartiality and compliance with the 4 rules, therefore we are going to give 15 per cent weight 5 to that witness' evidence or 50 per cent weight." It's 6 a question of all or nothing.</p> <p>7 So that is our strong submission and we don't 8 apologise for it, for the reasons given by 9 Lord Justice Auld, because we all have an obligation to 10 ensure the interests of justice are served by proper 11 expert evidence given entirely in accordance with 12 Ikarian Reefer.</p> <p>13 I take Mr ter Haar's point that I have to, if I'm 14 going to be so strong on other people's experts, I have 15 to equally accept that responsibility that 16 Lord Justice Auld places on all of us as legal 17 representatives in respect of my own expert witnesses 18 and I'll address that in due course.</p> <p>19 The next topic that we touch upon is how this 20 Tribunal should use its expertise. I only make that 21 submission and note what Judge Jacobs says in his book 22 and what it says in Dugdale v Kraft, because I can see 23 from the files that you might be placed in that dilemma.</p> <p>24 We have made a --</p> <p>25 MR JUSTICE BLAKE: Okay, pause.</p> <p style="text-align: center;">Page 10</p>	<p>1 MR JUSTICE BLAKE: Indeed, elsewhere in your submissions you 2 have gone precisely to making that point.</p> <p>3 MR HEPPINSTALL: On that point I urge you --</p> <p>4 MR JUSTICE BLAKE: And goose and gander --</p> <p>5 MR HEPPINSTALL: No, this is only where evidence is 6 entirely, to use my Lord's word, unmediated.</p> <p>7 MR JUSTICE BLAKE: Well, quite.</p> <p>8 MR HEPPINSTALL: So not being put, not being commented on 9 this time or even last time. There's just a paper 10 standing on its own.</p> <p>11 MR JUSTICE BLAKE: I appreciate the Tribunal has an 12 inquisitorial as well as a sitting back and watching you 13 gladiators struggle out these matters function as well.</p> <p>14 But we are not going to exercise it in a way --</p> <p>15 MR HEPPINSTALL: I think I made a submission about the 16 Tribunal's inquisitorial function on the last occasion 17 when it was proposing to call Dr Busby for itself, and 18 there's case law on that that says where all parties are 19 represented, where the facts and the arguments are 20 marshalled, the Tribunal's inquisitorial function is 21 minimal; possible, but minimal. I hope we don't need to 22 go into that.</p> <p>23 MR JUSTICE BLAKE: No, I am always alert, but usually one 24 can deploy any lines of enquiry by putting it back into 25 the forensic process.</p> <p style="text-align: center;">Page 12</p>

3 (Pages 9 to 12)

1 MR HEPPINSTALL: Indeed, my Lord, which is what the case law
 2 is saying.
 3 MR JUSTICE BLAKE: And to some extent my instincts would be
 4 to do that, for various reasons.
 5 So I don't think you should be too alarmed that we
 6 are going to go off and decide something.
 7 MR HEPPINSTALL: No alarm on our part, my Lord. But merely
 8 some things left unsaid can cause problems later. So
 9 better to say it --
 10 MR JUSTICE BLAKE: If in the course of our further reading
 11 and deliberations we have issues and problems, we won't
 12 be shy in alerting you to them all. All three of you.
 13 MR HEPPINSTALL: Notes from the jury are welcome.
 14 MR JUSTICE BLAKE: Not that we are hoping to get more bits
 15 of paper, and indeed I'll say something about that
 16 later, but that's the process.
 17 If that's our proposed approach, does that address
 18 10 to 12?
 19 MR HEPPINSTALL: Entirely in accordance with our
 20 submissions, my Lord.
 21 So then we move into the meat of the objection that
 22 is taken to some of the experts whose evidence you have
 23 heard from, and we do do it at least initially under the
 24 umbrella of the European Committee of Radiation Risk.
 25 I'm sure you will have seen their declaration at Lesvos

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1 on 6 May 2009 fundamentally attacking the ICRP risk
 2 coefficients, and you may have looked at the people who
 3 are signatories to that declaration. They include
 4 Professor Mothersill, Professor Sawada, Dr Pflugbeil and
 5 Professor Inge Schmitz Feuerhake, as well as, of course,
 6 Dr Chris Busby.
 7 Many of the people whose names have come up in these
 8 proceedings through the BS appeals are listed as either
 9 supporters, members or adherents of that view, or in
 10 fact were just involved in producing the document that
 11 eventually comes out as the rival to the ICRP document.
 12 So we say there is a campaign, there is a joint
 13 position. It's a joint position that is fervently held.
 14 There is absolutely nothing wrong with that. There's
 15 absolutely nothing wrong with that being part of the
 16 scientific process. People can have opinions. People
 17 can express those positions with whatever strength and
 18 from whatever political or scientific or cultural
 19 background they want to do it from.
 20 The problem is: what does that mean for expert
 21 evidence? Because to have the privilege of giving
 22 expert evidence means that you have to sign up to
 23 a code. You have to make a promise to the Tribunal, and
 24 if you have done things in your career or if you are
 25 currently doing things that gives rise to a conflict of

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1 interest that gives rise to a lack of independence, you
 2 are just not afforded that privilege of being able to
 3 give expert evidence to the Tribunal.
 4 MR JUSTICE BLAKE: Well, yes. The problem is (a) we are
 5 having this discussion now rather than nine months ago,
 6 when the question of which experts should be giving
 7 evidence arose. Contra to the ordinary CPR procedure
 8 where the Master case-manages with a pretty tight rein,
 9 when the question of proposed experts comes and there's
 10 a requirement to declare a conflict of interest, then
 11 one can have a debate about not X, but Y or something of
 12 that sort, but here we are.
 13 I appreciate this is not the totality of the points
 14 you make, but just to take the first point, the signing
 15 up to the Lesvos declaration, let's assume you are
 16 right, that it's a campaign, it's a statement of intent
 17 and it's that very issue, a campaigning issue which is
 18 part of the evidence which they put before us. I think
 19 you need to demonstrate, if you're giving
 20 a CPR35-compliant statement to demonstrate that you have
 21 done that, and therefore you are in a camp, and make
 22 disclosure. Does it by itself mean that the threshold
 23 or admissibility is not met?
 24 MR HEPPINSTALL: No.
 25 MR JUSTICE BLAKE: Because we see the correspondence pages

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1 of The Lancet -- not quite the same as what scientists
 2 get up to in Lesvos, but can evoke strong responses, and
 3 a joint letter, which is not a learned paper, but
 4 saying: "I think X's piece of research is flawed and
 5 wrong. I passionately believe this. I believe it's my
 6 duty as a scientist to raise doubt."
 7 MR HEPPINSTALL: Yes.
 8 MR JUSTICE BLAKE: So it's not -- it creates a difficulty,
 9 and it gives a basis that if there was a question of
 10 choice one might want to avoid a scientist who both
 11 wants to be entirely objective, pursuant to their duty
 12 to the court, but is already committed on a personal
 13 basis of persuasion on an issue that's involved.
 14 MR HEPPINSTALL: Well, just signing the declaration is not
 15 enough. I rely on the totality of the submission.
 16 MR JUSTICE BLAKE: I appreciate that.
 17 MR HEPPINSTALL: So passion and enthusiasm for a particular
 18 view does not preclude you from giving expert evidence.
 19 If it did, there's at least one of the experts I led
 20 evidence from who might be guilty of that sin.
 21 So that is not enough. There's three things I just
 22 want to pick up on.
 23 The first is anxious consideration was given to
 24 whether or not we needed to have some sort of
 25 preliminary examination of this issue. The problem with

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<p>1 that is that we would have ended up with lots of live 2 evidence on a preliminary issue à la Mr Justice Charles 3 and Dr Busby, and therefore instructions were given not 4 to go down that line and to leave it for the substantive 5 hearing, rightly or wrongly.</p> <p>6 The second point is that you can have your own 7 personal passionate position, but when you set that out 8 for the Tribunal, you also have to say: "And by the way, 9 in the pages of the Lancet or wherever, there's quite 10 a lot of people saying that I'm wrong, and also there's 11 lots of published papers going the other way." So it's 12 the range of opinion requirement and Ikarian Reefer that 13 can often come to the aid of the expert who is 14 a particular camp.</p> <p>15 MR JUSTICE BLAKE: At which point Dr Busby pops up and says: 16 "Where is the discussion of my experts' papers in your 17 team's matters?"</p> <p>18 MR HEPPINSTALL: I think that arises through 19 a misunderstanding, which I did three times try to 20 clarify in the interlocutory hearings before this final 21 hearing, about what it was that Hallard, Thomas and 22 Haylock were going to do.</p> <p>23 There's already been a round of epidemiology against 24 epidemiology, nuclear physics against nuclear physics, 25 radiobiology against radiobiology. There are other</p> <p style="text-align: center;">Page 17</p>	<p>1 MR HEPPINSTALL: Yes.</p> <p>2 MR JUSTICE BLAKE: And although I haven't yet had the 3 privilege of reminding myself where she stood after 4 cross-examination, and that's on my to-do list, the 5 impression I presently have, rightly or wrongly, is that 6 the criticisms you make today of her evidence were being 7 put to her before.</p> <p>8 MR HEPPINSTALL: They're copied -- I make no bones about it 9 -- it's copy and paste out of schedule, what's now 10 appendix D.</p> <p>11 MR JUSTICE BLAKE: So you have now shifted from saying 12 "interesting but not right" to "doesn't get over the 13 threshold of --</p> <p>14 MR HEPPINSTALL: I'm guilty of one thing that I can confess 15 to the Tribunal and Mr ter Haar, which is in the copying 16 and paste exercise from our submissions before the first 17 First Tier Tribunal and this Tribunal, and as you will 18 see, it is a copy and paste job, I'll admit, we hadn't 19 linked Professor Mothersill to ECRR because Dr Busby --</p> <p>20 MR JUSTICE BLAKE: Wasn't in the frame.</p> <p>21 MR HEPPINSTALL: And neither was ECRR. To be frank, it had 22 not dawned on me until several weeks before these 23 proceedings.</p> <p>24 Insofar as he makes that allegation about that one 25 paragraph, he is right.</p> <p style="text-align: center;">Page 19</p>
<p>1 foils, proper foils for Professor Parker, 2 Professor Mothersill and Professor Regan -- evidence 3 which was called by Battersby/Smith, as well as by the 4 other appellants, separately represented at that time -- 5 and that debate coalesced into the product, into the 6 first First Tier Tribunal decision which was then set 7 aside. But in a way what we were clearly saying to 8 Mr Hallard and what was set out in those submissions 9 that I made in writing to you, my Lord, in the 10 interlocutory proceedings is that that bundle of 11 possibilities raised by all experts -- so from 12 Mr Hallard, it's Regan, Johnston, Stretch, Nicholson -- 13 was going to go into his thinking.</p> <p>14 As you will see from his report, he often relies on 15 Nicholson, not Stretch, Regan, not Johnston. So he puts 16 all these possibilities into the melting pot.</p> <p>17 The idea wasn't that Hallard, Thomas and Haylock 18 were going to react as foils to Parker, Mothersill, 19 Schmitz Feuerhake.</p> <p>20 MR JUSTICE BLAKE: Mothersill, we can perhaps put a bracket 21 round her for the time being.</p> <p>22 MR HEPPINSTALL: Yes, let's.</p> <p>23 MR JUSTICE BLAKE: She was called.</p> <p>24 MR HEPPINSTALL: Yes.</p> <p>25 MR JUSTICE BLAKE: She was cross-examined.</p> <p style="text-align: center;">Page 18</p>	<p>1 MR JUSTICE BLAKE: But you went hammer and tongs -- for 2 shorthand, I'm proposing to use as a surrogate for 3 "reliable evidence" the words "plausible evidence", just 4 for this conversation. I'll explain why once we are -- 5 in writing. It's not to take a new test or depart from 6 anything that Mr Justice Charles does, but it just gives 7 me a better flavour than "reliable", which itself is now 8 a term of art which --</p> <p>9 MR HEPPINSTALL: But might have also other pejorative --</p> <p>10 MR JUSTICE BLAKE: Quite. If I just -- in order to tease 11 this, if I use the word "plausible", what I'm intending 12 to mean is reliable as given to us from the learning 13 which we will apply in this case.</p> <p>14 You were saying that aspects of Mothersill's 15 evidence were not plausible for reasons that you have 16 explored and I'm aware of.</p> <p>17 To that you now add, and in addition to the inherent 18 implausibility of some important parts of what you were 19 telling the previous Tribunal and inferentially telling 20 us because her reports and her oral evidence is part of 21 the material that we will take into account, you say and 22 now she's also part of the campaign.</p> <p>23 MR HEPPINSTALL: Yes.</p> <p>24 MR JUSTICE BLAKE: And that's that.</p> <p>25 But I have said we have put a bracket around her.</p> <p style="text-align: center;">Page 20</p>

1 MR HEPPINSTALL: Fine.
 2 MR JUSTICE BLAKE: Because we also have these three new
 3 witnesses that we didn't have before that were there,
 4 but obviously I think produced their reports in October,
 5 when Mr Hallard was already probably deeply under way
 6 with his report that I directed should be obtained in
 7 June 2015.
 8 MR HEPPINSTALL: I think that's right.
 9 MR JUSTICE BLAKE: Right. Okay.
 10 MR HEPPINSTALL: I did in re-examination just make sure that
 11 my understanding was correct that Dr Haylock and
 12 Mr Hallard had looked at ECRR and I've got the
 13 references for where I did that. But you may have
 14 already seen it. I think Dr Haylock's answer was:
 15 "I don't know what to do with it. There isn't anything
 16 in there that I could use to do a rival calculation,"
 17 and Mr Hallard was just not satisfied that he could
 18 start making up a new doctrine or system from ICRP.
 19 MR JUSTICE BLAKE: If someone is doing a calculation based
 20 upon the conventional wisdom of the profession of which
 21 that person is a member, to say, "And by the way, do you
 22 think you should toss out all the principles of the
 23 conventional wisdom?" all you can say is "no". But
 24 there we are.
 25 MR HEPPINSTALL: So in essence, our three expert witnesses

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1 are sort of discharged from their obligation about
 2 putting in material that goes the other way, because as
 3 was transparent to all appellants and the Tribunal, that
 4 was not their job. They were not going to redo the
 5 forensic battle between Parker and Kaldor, between
 6 Mothersill, Brenner and Lindahl. That was done, and
 7 we'd all agreed that we weren't going to reinvent that
 8 wheel.
 9 So that is why you don't find that sort of evidence
 10 in their reports, because that was never the intention.
 11 They were all sent everything, the full pack, just
 12 because they can't give evidence in a vacuum. They need
 13 to know what's going on.
 14 So that's the position, and indeed whilst we are on
 15 the forensic process, it's worth remembering, when
 16 Dr Busby said there was ping and no pong, there were
 17 a large number of questions put together by the
 18 Secretary of State and sent to the three experts,
 19 Schmitz Feuerhake, Howard and Hooper, which were in the
 20 bundle. The reason for doing that, actually, if you
 21 look, you may see that they are not all my bright ideas
 22 because it's mostly scientist to scientist. But it was
 23 trying to say: "There's a lot of evidence that goes the
 24 other way. You say X in your expert report. Have you
 25 considered Y?"

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1 I won't go to it. I'll just lead you to read the
 2 response, which I think factors into what we can tell
 3 about the attitude of these experts and the way in which
 4 they give their expert evidence.
 5 So that's my point on how the forensic process and
 6 the way it came about means that especially Mr Hallard
 7 and Dr Haylock were doing a very limited, narrow
 8 mechanistic process about which there wasn't anything
 9 else going the other way.
 10 I was starting my submissions on the different
 11 experts. Professor Mothersill we have just discussed.
 12 You will see that we do link her to ECRR, but quite
 13 apart from that, I have copied and pasted the objections
 14 taken.
 15 To be honest, whilst I did cross-examine her at
 16 least for a bit, I did stop once we'd got to the answer
 17 that appears at paragraph 19 because it seemed to me
 18 that that's all that the Secretary of State required and
 19 that was almost agreed with the appellants and the
 20 Tribunal.
 21 It was actually the medical member of the Tribunal,
 22 Dr Anscombe, who then took up the baton with
 23 Professor Mothersill. Indeed, you will see from the
 24 transcript that the next day a complaint was made that
 25 he had been a little too strong. But as he says in his

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1 response --
 2 MR JUSTICE BLAKE: In questions to her?
 3 MR HEPPINSTALL: Yes. But as he says, as you will read when
 4 you look at that transcript, and we have given you the
 5 references, when he responds to that complaint, of
 6 course he is apologetic, but the phrase he uses, "I want
 7 to be strong on the issues, on the expert, not strong on
 8 the person," and I repeat that. This is not ad hominem
 9 in a personal way. We are just being strong on the
 10 issues and strong on the evidence for the reasons given
 11 by Lord Justice Auld.
 12 So it's Dr Anscombe who picks up that where
 13 Professor Mothersill keeps saying "low dose effect",
 14 when he had started to read the papers that she had put
 15 in -- and I think he was doing that using his own PubMed
 16 account, although we rectified that, because as you can
 17 see, Hogan Lovells under a direction from the Tribunal
 18 then put in all the abstracts or papers that she relied
 19 upon. But when all that was analysed, you could see
 20 this her idea of low dose, which had been unexpressed,
 21 was not anybody else's idea of low dose, and that these
 22 in fact were high dose effects and they were high dose
 23 effects in vitro, they were high dose effects in
 24 animals, they were high dose effects on bits of the
 25 body, bone marrow, brain and so forth.

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<p>1 MR JUSTICE BLAKE: We have tended for convenience to use the 2 dividing line at about 100 millisieverts. I appreciate 3 that's somewhat arbitrary, but it just enables me to 4 keep my eye on the ball. 5 MR HEPPINSTALL: Yes. 6 MR JUSTICE BLAKE: And the references you provided at 7 paragraph 22 are all significantly above that, save -- 8 no, 23 is 1 sievert, I see, not 1 millisievert. 9 MR HEPPINSTALL: No, 1 sievert. 10 MR JUSTICE BLAKE: Obviously -- I don't think anyone is 11 suggesting that 250 millisieverts and above in this 12 hearing would be a low dose. 13 MR HEPPINSTALL: Just picking up on something my Lord said 14 yesterday, it is right, and we will look at this when we 15 talk about radiogenicity, on one level everything is 16 radiogenic. If you can blast an organ with sufficient 17 radiation, mutations will occur and the body will 18 collapse. 19 There's a paper relied on in respect of diabetes, 20 the de Vathaire paper -- huge, huge therapeutic doses to 21 the tail of the pancreas. That will give you diabetes. 22 That does not mean that type 2 diabetes is radiogenic in 23 the sense that one is talking about in this Tribunal. 24 That was the problem here. Professor Mothersill had 25 not made clear what she was talking about in terms of</p> <p style="text-align: center;">Page 25</p>	<p>1 or may not have had a bystander effect or created a 2 genomal instability, or a chromosome aberration or even 3 a translocation. There's no war pension available for 4 a translocation or a cellular effect, and that is why -- 5 MR JUSTICE BLAKE: I appreciate where you are going to go. 6 You are going to say that Wahab and Rowland found 7 cellular effects, not medical -- 8 MR HEPPINSTALL: I think you can be more generous, perhaps, 9 to Wahab and Rowland, they probably went a bit further 10 than that, but when you come to Mothershill the reason 11 why I stopped my cross-examination at paragraph 19 is 12 because she was eventually frank that her no doubt 13 important research is so limited to the minutiae and the 14 micro level that she can't tell you anything about 15 a reasonable doubt of a disease in a particular person. 16 She says it increases the probability of the kind of 17 diseases we're talking about. But that leads you -- if 18 you were to say that a reasonable doubt was raised on 19 the basis that some radiation at Christmas Island might 20 have turned on an effect in one cell that might have led 21 to a pancreatic cancer, that is exactly the sort of 22 unrealistic doubt, the reliance on worthless evidence 23 that we would strongly urge you against, because 24 frankly, if that's all the appellants have got to prove, 25 if the 0.1 per cent risk is enough, frankly, there's not</p> <p style="text-align: center;">Page 27</p>
<p>1 low dose. She was also confusing epidemiology and just 2 in vitro experiments. 3 To be honest, I can't take any credit for this 4 because it was Dr Anscombe who did the work and led that 5 particular charge, albeit that it was transparently done 6 and properly done because he called for the papers and 7 got them. 8 So that is the essence of the complaint. You also 9 know that we say that -- and this is where we get into 10 the heart of the debate, that saying that ionising 11 radiation might turn on an effect in one cell or in 12 a number of cells doesn't tell you anything about what's 13 actually going to happen in terms of the disablements 14 that are claimed by these appellants. 15 I think we have to keep remembering two things. 16 One, this case is not a generic enquiry into the effects 17 of ionising radiation. There are appellants with 18 specific conditions that the Tribunal must address and 19 that can't be addressed generically because they are all 20 different and they have very different relationships 21 with ionising radiation. 22 The second point is that what the appellants have to 23 prove is a reasonable doubt of causation of their 24 disease or illness. Not that the ionising radiation 25 turned a cell on, or not that the ionising radiation may</p> <p style="text-align: center;">Page 26</p>	<p>1 much point and there won't be much point in the 2 Secretary of State turning up to war pension appeals in 3 the future. 4 It's a submission I come on to develop, but there's 5 a threshold. It's a causal threshold. It's a real 6 threshold. It cannot be crossed, we say, by these 7 pointing to these micro effects of radiation, because 8 the appellants have to prove causation of pancreatic 9 cancer, CLL, bacterial infections. 10 MR JUSTICE BLAKE: I have already given you a word, just to 11 make it easier for the debate, for "reliable" -- 12 "plausible". If we translate the appellants' obligation 13 from raising reasonable doubt to reasonable possibility, 14 again without seeking to change the test, that's what 15 they are doing, isn't it? 16 MR HEPPINSTALL: Well, and -- 17 MR JUSTICE BLAKE: That's all they had to do. 18 MR HEPPINSTALL: I find it quite interesting that 19 Mr ter Haar said we had learned nothing from 20 Mr Justice Charles. What Mr Justice Charles is clearly 21 saying is that possibilities will not do. The 22 possibilities have to be -- 23 MR JUSTICE BLAKE: Be reasonably possible. 24 MR HEPPINSTALL: What you have to do is look at all the 25 possibilities which were raised, and then it's that</p> <p style="text-align: center;">Page 28</p>

<p>1 evaluative stage. 2 MR JUSTICE BLAKE: Sure. But if at the end of the process 3 you say there is a possibility, that may not be enough. 4 But if you say that possibility is reasonable, then you 5 must have reasonable doubt. 6 MR HEPPINSTALL: Not the single possibility. What I'm quite 7 interested in is how, when one looks at the appellants' 8 case, all the appellants' possibilities go into the pot, 9 but apparently none of the countervailing possibilities 10 are allowed in the pot. But we will come to that in due 11 course. 12 MR JUSTICE BLAKE: All right. 13 MR HEPPINSTALL: So, my Lord, you see there what we say 14 about Professor Mothersill. 15 I think that Professor Brenner is also relied upon. 16 Just to be clear, and you will see what I have said in 17 my last set of submissions, we are not saying that these 18 things don't exist that Professor Mothersill and 19 Professor Brenner say exist -- bystander effects -- we 20 are just saying they are not much help in this Tribunal. 21 So we know that Professor Brenner and a large number 22 of other people provide scientific support for these 23 effects, and they may well be there. But they just have 24 very limited significance to the proceedings in this 25 case.</p> <p style="text-align: center;">Page 29</p>	<p>1 paragraphs. 2 She is the chair of ECRR, the current chair, and it 3 is clear that she has an oppositional view to the other 4 international scientific opinion, and she also has an 5 inability to consider that response to ECRR, which is 6 a strong response, and to take into account the fact 7 that ECRR might be wrong. 8 That lack of ability, that lack of insight, means 9 she does not have the balance, the independence, that 10 enables her to have the privilege of giving expert 11 evidence to this Tribunal. 12 Perhaps the high point, and I think this is for 13 a lot of these experts, including Hooper and Howard, is 14 this reliance on the Busby and de Messieres paper and 15 the Rabbitt Roff paper. 16 Busby and de Messieres is a textbook example on how 17 not to do epidemiology. The flaws in that paper are 18 breathtaking and extraordinary. 19 The self-selection of controls in the way in which 20 it's set out in that paper are just extraordinary, and 21 to go on to make the claims that have been made, both in 22 this Tribunal and outside of this Tribunal, about the 23 significance and the meaning of that work, which is that 24 children's congenital malformations were caused by their 25 father's or grandfather's experience on Christmas</p> <p style="text-align: center;">Page 31</p>
<p>1 You will also know that Professor Brenner wrote or 2 is a co-author of that paper in the bundle, "Low Dose 3 Radiation, What Do We Really Know?" One of the curves 4 in that paper is based on bystander effects and genomic 5 instabilities, the Mothersill theory. Of course 6 Brenner, as one of the co-authors of that paper, comes 7 down and says on balance it's still the LNT line and not 8 the other curves that count. 9 So Brenner who says that these things exist, and we 10 agree, still, when he's writing that paper, comes back 11 to the LNT model as the best show in town. 12 So Professor Brenner's support for those effects is 13 somewhat tempered by him saying: notwithstanding, we are 14 still on the straight line. 15 MR JUSTICE BLAKE: He is a competent, reliable expert. 16 MR HEPPINSTALL: Yes, absolutely. 17 MR JUSTICE BLAKE: And his scientific opinions are 18 plausible. 19 MR HEPPINSTALL: Absolutely, yes, without a shadow of 20 a doubt. 21 So moving on from Professor Mothersill, we then get 22 Professor Schmitz Feuerhake, Professor Howard and 23 Professor Hooper. 24 I cross-examined Professor Schmitz Feuerhake in 25 front of you. We have recapitulated the points in the</p> <p style="text-align: center;">Page 30</p>	<p>1 Island, is just scandalous. 2 The strength with which the evidence was put in the 3 expert reports was just not supported at all by that 4 paper, nor by the Rabbitt Roff paper when you've seen 5 Dr Haylock's strong criticism of it. 6 Beyond that with Professor Schmitz Feuerhake is 7 SB6/89, the key documents. I do strongly invite you to 8 read those eight papers. I took Professor Thomas at 9 a canter through them, and you will see that we have 10 given the citation in paragraph 28, T5/102-114 in 11 re-examination. 12 The real fundamental problem is that the conclusion 13 in that paper is that there's a risk of 1 per 10 14 millisieverts of cumulative dose of congenital 15 malformation. 16 The one thing you will not find in those eight 17 papers is dose. The way that that was done, and if you 18 burrow deep enough into the alphabetical footnotes you 19 will find it, is to take some data from those papers, to 20 take some data from somewhere else, and to make this 21 look like a coherent whole in table 1, and then to come 22 to this conclusion. 23 It is simply bad science. 24 It is a guess, at most, at the doses that the people 25 in those papers suffered. But none of that guesswork,</p> <p style="text-align: center;">Page 32</p>

<p>1 none of that poor science, is expressed in the paper. 2 The paper's language is far too strong, as was the 3 language used in the expert reports. 4 Also, when you look at those papers, you will see 5 that the authors are far more hesitant about what they 6 found than the way in which it's presented in that 7 paper. Those hesitations, those responsible 8 reservations -- we need to do more work, it might be 9 a lack of folic acid in these populations that are 10 explaining this effect, it might be alcoholism in the 11 Ukraine which is explaining the effect, some of the 12 papers just say "I don't know what is causing this 13 effect, it might be radiation, it might not be" -- all 14 of those reservations did not find their way into that 15 paper, and they did not find their way into the 16 Professor's expert evidence. 17 It really is a classic example of the problem with 18 the ECCR approach. It's the reason why CERRIE, NRPB, 19 the French public body which is equivalent to the NRPB, 20 have made the criticisms they have made. I tried in 21 cross-examination to say, "Look, the criticism is 22 not: this is a bad hypothesis. This is a bad idea. We 23 think you're all mad and we are not going to look at 24 it." The criticism is: "Interesting idea, interesting 25 hypothesis, but supported at the moment by your bad</p> <p style="text-align: center;">Page 33</p>	<p>1 comes in the 1990s. The whole point of CERRIE, when you 2 read it, is to try and examine these niggling fears and 3 doubts about low level radiation. 4 There's another group in Oxford that you might have 5 picked up from the papers which I understand are still 6 on that topic in the terms of CT scans and other medical 7 low doses. They are still working that out. I think 8 Professor Thomas has given you an exclusive preview of 9 one of their graphs in her report. You know the graph 10 where she takes that low dose range and expands it out, 11 so you can see what the epidemiology looks like sub 100 12 millisieverts. I think that's from that group's work. 13 That group's work is as yet unpublished and I think 14 it's going to take a long time. But there's still 15 debate about low dose carrying on from CERRIE, not least 16 because there are lots of low dose exposures out there, 17 transatlantic flights, CT scans and so forth. 18 So no one is belittling the work done to raise the 19 issue. No one is criticising it. If you have that 20 long-held view and you are relying on bad science to 21 support your campaign, and you're not prepared to show 22 any insight into the criticism, and also to point out 23 the evidence that goes the other way, then you're 24 thoroughly in breach of Ikarian Reefer and your evidence 25 falls to be excluded. That is the submission in</p> <p style="text-align: center;">Page 35</p>
<p>1 science." 2 So we encourage proper science to look into it. We 3 encourage people to research. That is the conclusion of 4 CERRIE ultimately. There are unknowns out there; 5 Government, others should fund research into it. 6 MR JUSTICE BLAKE: I think we were told yesterday that 7 Professor Schmitz Feuerhake has been raising the 8 standard since about the mid-1970s. 9 MR HEPPINSTALL: If you recall when I went to that now old 10 paper in the RERF handbook, when you are actually 11 expecting to find Sawada at the end of the reference 12 when it says there's been a massive public outcry about 13 our dosimetry system, actually it's Professor Inge 14 Schmitz Feuerhake, and I think it's from memory 1968 or 15 something like that. So the longevity of her objection, 16 passion and campaign is without doubt. 17 MR JUSTICE BLAKE: So she's a long-term stayer on the 18 course. 19 MR HEPPINSTALL: But in a way -- 20 MR JUSTICE BLAKE: A campaign medal, no doubt, for that, but 21 what you're telling us is that that's when she's raised 22 the flag. You've got the RERF looking at it. You've 23 got the CERRIE report, et cetera, et cetera. That's 24 been looked at for the last 40 or 50 years. 25 MR HEPPINSTALL: Indeed, although I think the intensity</p> <p style="text-align: center;">Page 34</p>	<p>1 a nutshell. 2 We have set out for each expert the bits of the 3 transcript and the bits of their evidence that we rely 4 upon. 5 Professor Howard and Professor Hooper are in 6 a slightly different position, because I'm afraid that 7 one gets the impression that they do have longstanding 8 links and friendships with Dr Busby, and that they came 9 along with their reports and their evidence just to 10 provide support. 11 You do see repeated references to the same points 12 and evidence in all the reports as if there is a case 13 laid out by Battersby/Smith, and you have to keep 14 repeating it as they are experts. So there is 15 repetition of reliance on that Busby/de Messieres paper. 16 There's repetition of the genotoxicity of uranium and 17 its chemical affinity to DNA and that keeps being 18 repeated as the mantra because that's what they are 19 there to do. 20 Professor Howard did not mention his relationship or 21 friendship with Dr Busby. He did not mention that 22 Dr Busby had obtained his temporary professorial 23 position and title through Professor Howard at the 24 University of Ulster. I have given you the reference of 25 EXP v Charles Baker, a recent --</p> <p style="text-align: center;">Page 36</p>

1 MR JUSTICE BLAKE: I have read paragraphs 55 to 57.
 2 MR HEPPINSTALL: I'm grateful, my Lord. You see that's a
 3 recent example of --
 4 MR JUSTICE BLAKE: In the end the judge didn't exclude the
 5 evidence.
 6 MR HEPPINSTALL: With respect to the judge, I think he may
 7 not have had the benefit of what the Supreme Court said
 8 later in Garadi(?), but there we go.
 9 MR JUSTICE BLAKE: He cites the relevant passage in Phipps,
 10 I seem to remember.
 11 MR HEPPINSTALL: Yes, he does. But we say it is a threshold
 12 question.
 13 The question of affinity with DNA of uranium is you
 14 have to be careful what you are talking about. Uranium
 15 in other forms, other than that that may or may not have
 16 fallen out of, say, Grapple Y, may when combined with
 17 other elements have an affinity with DNA. That's what
 18 the paper that's cited is all about. It's about
 19 a staining process. So if you want to stain nucleic
 20 acid -- one such type of nucleic acid is DNA, that's
 21 what the N and the A stand for -- then you can use
 22 uranyl acetate to do it. What led us on an enquiry
 23 about that is that if you are going to say that uranium
 24 in its various different forms that fell out of this
 25 weapon, then somehow went through a process that got

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1 into the bloodstream that then bound to DNA, we would be
 2 very interested to see where the research papers were on
 3 that, because so far as Professor Thomas and the
 4 Secretary of State are concerned, uranium has a chemical
 5 toxicity, but there's no evidence for any great
 6 genotoxicity from its radiation effects, so this was of
 7 great interest.
 8 The only paper cited is Huxley, and that's about how
 9 to stain DNA using uranyl acetate. It's got absolutely
 10 nothing to do with this case. To stand in the witness
 11 box and say there's a problem here because uranium binds
 12 to DNA, and either cite nothing, like Schmitz Feuerhake
 13 does, or to cite a paper which is all about a scientific
 14 process of staining nucleic acid is extraordinary.
 15 In fact, when you lead through the possibilities
 16 that would have to happen, as I attempted to do in
 17 cross-examination, that it's just possible that the
 18 uranium happens across -- it has to get into the body,
 19 it has to find the right acid or compound within the
 20 body, and then maybe that will allow it to bind to
 21 DNA -- the possibilities take you into the cannot raise
 22 a realistic reasonable doubt territory.
 23 But to say it with such certainty, and I do say that
 24 these are people saying this in public, and they are
 25 staying to an audience of veterans who are concerned

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1 about their health, to say it with such certainty is
 2 deeply irresponsible.
 3 Professor Hooper is a well-known --
 4 MR JUSTICE BLAKE: Before we move on from Howard and
 5 uranium, we have in the course of the hearing and the
 6 submissions all the material that there exists that's
 7 relevant to the proposition of uranium as a giver of
 8 radiogenic illnesses?
 9 MR HEPPINSTALL: Yes.
 10 MR JUSTICE BLAKE: Because, as I understand it, we have
 11 obviously natural uranium, uranium that goes into
 12 a weapon or other sorts of things, and then, you know,
 13 elsewhere. From voices distantly off, there's depleted
 14 uranium and other matters of that sort.
 15 MR HEPPINSTALL: A whole new set of war pension appeals.
 16 MR JUSTICE BLAKE: Quite. Not for us, not today.
 17 MR HEPPINSTALL: No.
 18 MR JUSTICE BLAKE: But uranium has the capacity that over
 19 a huge, 24 million or whatever it is half life --
 20 MR HEPPINSTALL: Yes, 4,000 --
 21 MR JUSTICE BLAKE: Therefore its comparative stability
 22 compared with others is one of the reasons why it's
 23 regarded as a toxic, rather than a radioactive --
 24 MR HEPPINSTALL: The chemical toxicity will kill you long
 25 before the radiation.

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1 MR JUSTICE BLAKE: I have the point.
 2 MR HEPPINSTALL: Professor Regan and Mr Johnston agreed, and
 3 I have given you the citation, that what we were
 4 worrying about here was either prompt radiation,
 5 gamma -- very dangerous, it gets through the skin, if
 6 you get in contact with it, it will kill you -- or
 7 plutonium, because plutonium is long-lasting and very
 8 active. That's why those two gentlemen alighted on the
 9 two major risks to the veterans. It's only ever been
 10 Dr Busby who has brought uranium into the debate.
 11 Professor Hooper, I think well-known as at least an
 12 advocate before this jurisdiction, has a distinguished
 13 career representing those Gulf War veterans who say that
 14 they were exposed to a cocktail of agents, but including
 15 depleted uranium. I'm afraid that one could only gain
 16 the impression there from his evidence that he was here
 17 to help, but here to help the cause, here to help in the
 18 same way that Dr Busby would have been here to help had
 19 he been allowed to give evidence on behalf of the
 20 appellants, and the same reasons that Mr Justice Charles
 21 gives in respect of Dr Busby, we say, apply equally to
 22 Professor Hooper.
 23 When he did try to get into the topic of the
 24 veterans, I'm afraid that one could see that he was
 25 convinced by what he had read way outside of his area of

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<p>1 expertise meant that the veterans had been exposed and 2 suffered illnesses and you can see the quotation that we 3 have given at paragraph 41 and no doubt you will read 4 the reference in due course. He was literally making it 5 up on the spot, but trying, I'm sure, with the best of 6 intentions, to be helpful to the Battersby/Smith case. 7 Professor Sawada. Professor Sawada is a more 8 difficult expert for me to assess. You will see that we 9 express our sympathy both for his personal experiences 10 and those of his family, and also for the position that 11 he was put in in this Tribunal. 12 I had given his papers and expert report to my 13 experts and I had got back blank. That's why there's no 14 questions of him in that question and answer exercise. 15 In fact the only question asked is: please can we have 16 a Japanese into English translation of the paper so 17 that, frankly, our experts can understand it? 18 MR JUSTICE BLAKE: Yes. That was asked between December 19 and -- when did you -- 20 MR HEPPINSTALL: I raised it in the question. When we asked 21 questions of the BS appellants, the only point put -- 22 MR JUSTICE BLAKE: That was in the early part of this year, 23 was it? 24 MR HEPPINSTALL: Yes, exactly. Then I think at the last 25 CMC, one of the directions I sought was such a</p> <p style="text-align: center;">Page 41</p>	<p>1 He said to the Tribunal that he wanted the England 2 Government to study the atomic soldier effects. 3 He has used the RERF data to show that there is, he 4 says, epilation and diarrhoea in places where there 5 wasn't gamma dosimetry. Although if you pause for 6 a moment and just think about what Dr Busby said to you 7 about that, there is an interesting problem, because 8 I think we all agree that gamma, immediate prompt 9 radiation, has deterministic effects. Horrible 10 deterministic effects. 11 As I understand it, these deterministic effects to 12 high gamma were found in areas where the Americans say 13 there was no high gamma. But then it's said to be those 14 effects are a cause of an alpha emitter, which just 15 doesn't work. We know that alpha emitters get into the 16 body; they release, as my Lord said, over a long period 17 of time radiation, and frankly there is an expert report 18 from Dr Braidwood on alpha radiogenicity in SB13. If 19 you are unfortunate enough to have an alpha molecule 20 lodge in a radio-sensitive organ, then you have 21 a serious problem. 22 But I don't understand how epilation and diarrhoea, 23 prompt effects which are correlated to the gamma dose, 24 then become the effect of nanoparticles falling with 25 alpha emitters from black rain. There is a disjunct</p> <p style="text-align: center;">Page 43</p>
<p>1 translation. 2 MR JUSTICE BLAKE: I think we found there were some 3 directions that Judge Wikeley was giving, and I think 4 one of those may have been a response to a request for 5 a translation. I think he may have -- I'm just not 6 sure, but I just don't recall myself sitting on this 7 issue and rejecting a submission. But maybe I did. 8 MR HEPPINSTALL: I won't unearth the -- 9 MR JUSTICE BLAKE: Yes. 10 MR HEPPINSTALL: We were aware that there was going to be 11 a problem. We raised the problem. It is a matter of 12 regret -- 13 MR JUSTICE BLAKE: It transpires you were right, and 14 I wanted to see whether the Tribunal failed to -- 15 MR HEPPINSTALL: The Tribunal had a lot to think about, as 16 we did, on other matters. I am afraid the 17 responsibility has to rest with those who called his 18 evidence, because it was immediately apparent, when he 19 began to give his evidence, that there was a problem. 20 I can't believe that is the first time that that has 21 been obvious when you have interacted with him in 22 organising him to give his evidence. 23 I say no more about it. 24 He obviously is, for obvious reasons, very 25 interested in the Hiroshima and Nagasaki detonations.</p> <p style="text-align: center;">Page 42</p>	<p>1 there. 2 But in any event, setting that to one side, it is 3 just a mathematical exercise. In the end he just looked 4 at the data and had done some maths. 5 What RERF had tried to do in response to Schmitz 6 Feuerhake raising the issue and others is go away and 7 try and do their best to look at soil samples, see what 8 caesium was in there to try and address this concern. 9 In the end, the doses they found through their work, 10 comparing internal dose rates over a number of years, 11 was that, yes, internal radionuclide alpha emitters had 12 been taken up, but they were not causing a significant 13 issue. Therefore, RERF continues to discount the effect 14 of internal radiation on its dosimetry model. 15 Dr Busby is quite right and Dr Sawada is quite right 16 that it is an external radiation model, and that's what 17 the LSS is there -- that is what they are doing. 18 But I am still in the dark as to where we go from 19 that to what he said in his report when he said that 20 this somehow translated into something to do with 21 Christmas Island and Maralinga. I understand that he's 22 saying: don't necessarily trust the LSS and that 23 straight line. But I just don't understand where we go 24 beyond that. When he said in his paper that this means 25 that these veterans suffered ill health and exposure,</p> <p style="text-align: center;">Page 44</p>

<p>1 I do not understand it. It's not explained. It was 2 never explained and I just don't understand what other 3 reliable evidence, plausible evidence, which actually 4 can feed into the possibilities that goes into the final 5 analysis you can gain from that evidence. 6 So those are the ECRR experts. 7 The non-ECRR, if I can put it that way, according to 8 our classification, although I know that others will 9 differ. 10 Dr Ash is easy to deal with because in the end he, 11 I think, was put in a very impossible position at a late 12 stage in the process. He had been looked to look at 13 things that other people had spent years looking at. 14 He'd done his best. He had looked at risk factors. 15 I agree with him, it's a risky thing to explode nuclear 16 and atomic weapons in the open air. There are massive 17 environmental and health risks. I completely agree. 18 The Secretary of State has always acknowledged that what 19 was done in 1957/1958 over Christmas Island carried 20 risks with it. But there were lots of scientists on 21 that island who were there to manage and deal with those 22 risks, and we can come on to that topic later. 23 When it came to actually looking at the evidence in 24 the case, when he was shown a photograph, which he 25 thought showed entrainment, he couldn't tell you whether</p> <p style="text-align: center;">Page 45</p>	<p>1 best filters out of radiation in the world. 2 MR JUSTICE BLAKE: Slow down, Mr Heppinstall. Don't jump 3 five gates ahead yet. Let's just take the first hurdle 4 to see if there's anything of any relevance that we have 5 got, and I would tend to agree that an attempt to 6 describe what is going on from a photograph which one is 7 not quite sure what it is is not going to be very 8 helpful. So I don't think you need to press that point. 9 Is there any data about the tide that is at least 10 something which is a hint of a corner of a brick, which 11 might go into a block, which might lead to 12 a hypothesis -- 13 MR HEPPINSTALL: I don't know whether Dr Ash was thinking of 14 it, but there is some information in the US Dominic 15 report about the tide and the general sea states around 16 Christmas Island because they were worried about it. 17 Mr Johnston put in his expert references the Navy's 18 hydrographic map of Christmas Island, so you can see 19 about tides and that sort of thing because he was 20 interested. But I don't think Dr Ash had considered any 21 of that. 22 MR JUSTICE BLAKE: I'm sure not, for the reasons you have 23 given. But I was just trying to say -- 24 MR HEPPINSTALL: No, there is a little bit of data, not that 25 it has featured ever very much in the case.</p> <p style="text-align: center;">Page 47</p>
<p>1 it was an air burst or a balloon burst, and that tells 2 us that he has no reliable evidence to offer the 3 Tribunal, or plausible, whichever way -- 4 MR JUSTICE BLAKE: In the closing submissions I think the BS 5 appellants referred to his comment about currents 6 flowing east to west, and to seek to tie that up with 7 Mr Johnston's plan as to where the high altitude part of 8 the cloud blew at some point in this complicated 9 process. 10 MR HEPPINSTALL: Well, I'm afraid all I can say about that 11 is that is just the sort of exercise that invalidated 12 Dr Busby from giving evidence. Mr Johnston, over 13 hundreds of words, kept having to come back and say: 14 "Thank you, Dr Busby, but in reality, no." This cloud 15 going one way, tide going the other, wind going this 16 way, it's just not appropriate for Dr Ash or Dr Busby to 17 get involved with their levels of expertise, and when 18 they do, disaster strikes. 19 MR JUSTICE BLAKE: Yes. They may have one or two pieces of 20 information. The tides may be at 1 knot flowing east to 21 west. But I just don't know whether we touch solid 22 ground anywhere -- 23 MR HEPPINSTALL: But the real problem with all of that is 24 Professor Regan tells us that the best place to dump 25 radiation is in the sea, because the sea is one of the</p> <p style="text-align: center;">Page 46</p>	<p>1 MR JUSTICE BLAKE: But the influence of tides on deposition 2 of material has been a topic considered in the previous 3 hearing or in the reports which were referred to in the 4 previous hearing. 5 MR HEPPINSTALL: No. I don't think so, my Lord. The debate 6 ended with Professor Regan saying that the sea would 7 deal with anything that fell into it. 8 MR JUSTICE BLAKE: Somewhere on your shopping list, because 9 it's not in your written submission, but it wouldn't be, 10 because these were drafted before you heard the oral 11 submissions, we are going to deal with sea-to-land 12 transfer. 13 MR HEPPINSTALL: I deal with sea-to-land transfer in my 14 table of response, and I refer to Professor Regan. 15 MR JUSTICE BLAKE: Which is where? 16 MR HEPPINSTALL: Let's see if I can find sea-to-land 17 transfer. 18 MR JUSTICE BLAKE: Which appendix? 19 MR HEPPINSTALL: It's not an appendix. There's a table that 20 follows paragraph 31. Actually my Lord is right. 21 Actually, sea-to-land transfer I have responded to in 22 the Battersby and Smith individual submissions in 23 appendix B. So my Lord is right. 24 MR JUSTICE BLAKE: Yes. 25 MR HEPPINSTALL: It's on my list anyway.</p> <p style="text-align: center;">Page 48</p>

1 MR JUSTICE BLAKE: So you'll deal with it when you get
2 there?
3 MR HEPPINSTALL: Yes.
4 MR JUSTICE BLAKE: Sorry, I was just trying to abstract
5 a little bit of data and put it into the debate.
6 MR HEPPINSTALL: Absolutely. It's 11.15.
7 MR JUSTICE BLAKE: Where are you going now?
8 MR HEPPINSTALL: I was going to do Professor Parker next.
9 Well, I wasn't going to do Professor Parker because it's
10 all withdrawn.
11 MR JUSTICE BLAKE: I think we reached a consensus upon that.
12 Do we want to break now or in ten minutes?
13 Just before we rise then, we're up to 62.
14 MR HEPPINSTALL: 62, my Lord.
15 MR JUSTICE BLAKE: 62 isn't going to take us long.
16 Right. Thank you.
17 (11.13 am)
18 (A short break)
19 (11.26 am)
20 MR HEPPINSTALL: My Lord, just before the adjournment we
21 were drawing a line through my submissions on
22 Professor Parker, and indeed there is, I think, a line
23 to be drawn through 63 to 66 because these challenges
24 which were made before are not being made again, as
25 I understand it, although I would just pause to say that

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1 you can see from my anticipatory and now worthless
2 submissions that when we're talking about parties being
3 in the dark about each other's positions, there was
4 a mutuality of darkness, just to try and answer the
5 complaint made by Mr ter Haar, because whilst the
6 probabilities and certainties statement of case is very
7 useful and enlightening, it is just a list of
8 assertions, and then they are said to be possibilities
9 or certainties.
10 One of the submissions I do want to make is that you
11 can't raise a reasonable doubt by just illogically
12 piling up into a heap a lot of possibilities and
13 certainties and then saying to the Tribunal: "Don't you
14 feel a bit --
15 MR JUSTICE BLAKE: A bit dodgy.
16 MR HEPPINSTALL: -- in your gut or wherever that there's
17 a reasonable doubt, members of the jury? That will do."
18 Because you are not members of the jury. You, as
19 Mr Justice Charles was at pains to point out, have to
20 write the answer, the reasons why a reasonable doubt is
21 raised, and that requires a logical, coherent approach
22 to the pile of possibilities. They need to be put
23 together in order. They need to be added up and
24 evaluated, and then you decide whether there's
25 a reasonable doubt.

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1 I don't make any criticism of that document, but the
2 way in which you take those possibilities and
3 certainties and add them up together has only actually
4 become clear to me on reading the openings and through
5 cross-examination, particularly through the now heavy
6 reliance on Rowland.
7 So there are anticipatory submissions which we can
8 put a line through, because they have not appeared,
9 although they appeared before the first First Tier
10 Tribunal.
11 So that takes us, I think, to Mr Hallard, and my 69,
12 where I mention Professor Thomas, Dr Haylock and
13 Mr Hallard.
14 I have already mentioned the forensic context of
15 their evidence through the interlocutory hearings.
16 I have already mentioned that Kaldor and Braidwood were
17 taking on Parker and Mothersill and Regan was taking on
18 Johnston and the foils were already there. So that's
19 not a proper criticism.
20 When we come to Mr Hallard, I agree -- a lot of the
21 appellants' submissions are saying that we put him in
22 a difficult position and I agree with that. He was in
23 a difficult position. He had a difficult job to do.
24 But we think it's an essential job, because we've all
25 been chasing dose for a long time in these proceedings.

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1 In the dark ages of the Nuclear Test Veteran War
2 Pensions proceedings, the Secretary of State would send
3 the serviceman's name and number to AWE, and back would
4 come back to the answer, "badge" or "no badge" and if
5 "badge" 0.2 millisieverts or 0.5 millisieverts, and the
6 Secretary of State's departmental representative in
7 front of the Tribunal would say: "There we are. Low
8 dose, no dose, no war pension."
9 Now, in the last set of FTT proceedings, there was
10 a lot of pressure put by me on the Hogan Lovells
11 appellants to come up with a dose. And they chose not
12 to, and we can see what then happened next.
13 It seemed to me that given that Mr Justice Charles
14 was saying that no longer could the Secretary of State
15 just rely on that dosimetry, whether it existed or not,
16 so if there's no badge, we say "no dose" and if there is
17 a badge, we say "0.2" or "0.5", or whatever, we had to
18 do better than that, because it's no longer just the
19 real evidence that translates into the answer. We have
20 to look at all the possibilities.
21 So that's why we extended the hand of joint
22 instruction to the appellants, to say, "Look, we want
23 Mr Hallard to do an independent review of all the
24 evidence, including the evidence raised by you, as well
25 as by our prior experts, and let's do a joint assessment

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1 of the highest possible dose raised on the
 2 possibilities".
 3 Now, it is a matter of regret that we couldn't do it
 4 on a joint basis, but I understand the reasons why. So
 5 it was done a single instruction basis, and I'm afraid
 6 that did mean that Mr Hallard had to take into account
 7 the work of others, an enormous amount of work done by
 8 others. Not just others who were experts in the
 9 Tribunal previously, but also the work of other experts
 10 who have also entered this field.
 11 In fact, we said to him there's already been an
 12 attempt at this for the Australian test veterans,
 13 Carter, so we told him, if he wanted to draw on Carter,
 14 and the methodology and the expertise in Carter -- this
 15 is the dosimetry report, not the epidemiological
 16 report -- then as long as he was satisfied as an expert
 17 that he was drawing on the proper work of other
 18 credible, proper experts, and as is entirely normal in
 19 a court case, a Tribunal case, he relied on the work of
 20 others.
 21 There is nothing wrong with that. He can't be
 22 criticised for doing that.
 23 MR JUSTICE BLAKE: As long as you make it plain what you're
 24 relying upon.
 25 MR HEPPINSTALL: Which in fact he does. In fact, he might

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1 make it a bit too plain in his report. He's always
 2 telling you the source.
 3 The other thing he always does is say: "I can't go
 4 there. I can't do X exercise or Y exercise because I'm
 5 what used to be called a health physicist and is now
 6 called a radio protection adviser, an RPA, and I am
 7 afraid I can't go there".
 8 There's a particular example on environmental
 9 contamination where before he embarks on that bit of his
 10 report he makes it crystal clear that he's only going to
 11 go so far as he can, which is reading learned papers and
 12 trying to get a conclusion, but he can't go very far.
 13 It's very odd that he's criticised for not going to
 14 carbon-14 when he just said he tried to find data and he
 15 couldn't. He found a little bit of data about tritium,
 16 and gave us a little bit of information about tritium.
 17 We can look at that.
 18 But that is the absolute textbook example of how to
 19 adhere to Ikarian Reefer.
 20 My learned friend, I think, Mr ter Haar,
 21 particularly draws attention to the Shackleton analysis.
 22 When we looked at Mr Johnston's report yesterday,
 23 when we were looking at that figure 2, you will find
 24 there's a section in there all about the Shackleton.
 25 Mr Hallard had not dreamt up the Shackleton and its

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1 exercise and its table before. He is relying on the
 2 work of others, very carefully and very sensibly, and he
 3 is refusing to go where the Secretary of State would
 4 like him to go. We wanted a complete report. We wanted
 5 carbon-14, tritium, the lot. But he's refusing to do it
 6 because he's honest and he says he can't.
 7 He's to receive the commendation for that, not the
 8 condemnation. So he hasn't strayed out of his
 9 expertise. He's done the opposite.
 10 We agree that he's had a very, very difficult task.
 11 He's had to read the nuclear physics of Regan and
 12 Johnston, like we all have to, and work it out using his
 13 different expertise. He's not an academic, although
 14 recently he's embarked on a career in academia, setting
 15 up a university course as you see in his CV. But that's
 16 not his background. He's a practical health physicist.
 17 Actually his central conclusion is a very sensible
 18 conclusion made by a health physicist. Because
 19 actually, when he started to weigh up the rival
 20 conclusions on rainout, hot particles and so forth --
 21 sorry, he didn't consider hot particles as we made clear
 22 in the cross-reference document, but rainout and the
 23 rival allegations made over the years that were then
 24 disputed by Regan and Johnston, he doesn't actually
 25 resolve those issues, first of all because we told him

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1 that he wasn't the Tribunal and he had no business
 2 resolving them, should they still be issues, but also
 3 because his central assumption is that there would have
 4 been the regulatory limit of contamination over the
 5 entire Island for every test.
 6 So he actually approaches it using what he knows
 7 best, which is that the people in 1957/1958 doing his
 8 job, he says, would have noticed, because of the
 9 sensitivity of their instruments, that the regulatory
 10 limit would have been breached, and he has that section
 11 in his report where he says --
 12 MR JUSTICE BLAKE: The regulatory limit is grays per square
 13 metre?
 14 MR HEPPINSTALL: Yes. He says it's 430 millicuries per --
 15 MR JUSTICE BLAKE: Millicuries?
 16 MR HEPPINSTALL: Yes. That was the pre-metric becquerel.
 17 So what he's doing is pure health physics. He does
 18 not decide to work out based on the rival contentions.
 19 He just says, "I'm satisfied that the instruments they
 20 had on that Island would have spotted this", and he
 21 doesn't mean spotted in the sense of they must have
 22 pointed it at 430, it would have registered.
 23 We will look at it now. What he's saying is
 24 background rate. So the background calibration of the
 25 probe would have spotted it, ie when they turned it on

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<p>1 anywhere on the Island. That's what he is saying and we 2 will have a look. I think we need to be clear and 3 careful about it. 4 So SB2. He's at 2.14. 5 MR JUSTICE BLAKE: I am just reminded that the regulatory 6 limit was in microcuries, not millicuries. 7 MR HEPPINSTALL: Sorry. We are all guilty. 8 MR JUSTICE BLAKE: Yes. Which page do you want us to go to? 9 MR HEPPINSTALL: So if we go to 48. 10 MR JUSTICE BLAKE: Page 48 of 285? 11 MR HEPPINSTALL: Sorry, page 50. Page 50 is where he starts 12 to describe -- 13 MR JUSTICE BLAKE: "Personal contamination monitoring 14 detectors"? 15 MR HEPPINSTALL: Exactly. Remember, the workhorse is the 16 1320. 17 MR JUSTICE BLAKE: Yes. 18 MR HEPPINSTALL: He is saying, for example, if you look at 19 (b) that he's worked out what the increase in background 20 levels would have been. He's calculated those in 21 annex 9, and he's estimated the background at H plus 22 1.58 plus 2. Then he sets out in this table how, if 23 there had been an increase in background rate 24 commensurate with the contamination that he is assuming, 25 then the background rate on these sensors, especially</p> <p style="text-align: center;">Page 57</p>	<p>1 to exclude the background because you're never going to 2 find anything otherwise. 3 MR JUSTICE BLAKE: The background is now, in 1957/58, 4 12 years of atmospheric nuclear testing. 5 MR HEPPINSTALL: 12 years, and at the same time, if you look 6 at the chronology at the back of Clare, the Americans 7 and some other nations are detonating elsewhere. 8 So actually there's cause for concern on Christmas 9 Island because there are detonations elsewhere which are 10 sending their readings awry. That's why they have to 11 sort out their background rate. 12 What he's saying is if Grapple Y was on Monday and 13 I turned it on Tuesday, or even if I turned it on the 14 day before for the residual radiation of another test, 15 you'd be alarmed if there was 430 microcuries per metre 16 square everywhere on the Island because your background 17 would be enough to have you running back to main camp 18 with some news. 19 His evidence is as a health physicist. He gains his 20 assumption that his upper limits is this number because 21 it's the regulatory limits and the limit that he thinks 22 would have got people excited on the Island who were 23 using these instruments. 24 MR JUSTICE BLAKE: But the regulatory limit is the maximum 25 permissible exposure per square metre, or is it the</p> <p style="text-align: center;">Page 59</p>
<p>1 the 1320, would have been off the scale. That's why you 2 get the conclusion at 51: 3 "The results above are approximate values to 4 indicate the background count rate in any of these 5 instruments in use on the day of either Grapple Y, Z, 1 6 or 4. However, they indicate that any of these 7 instruments would have shown a large rise in background 8 count rate which would have been immediately obvious to 9 the surveyors or scientists using them. Where these 10 were in use for the personnel monitoring, the effect on 11 the instrument would also have been obvious to those 12 being monitored. It is concluded that failure to detect 13 widespread deposition of fission product fallout is 14 highly unlikely." 15 MR JUSTICE BLAKE: Just let's see if I've got this. 16 "Background rate" means, what, the natural radiation on 17 the Island from the corals, whatever it was, or 18 sunlight? 19 MR HEPPINSTALL: Actually, Christmas Island at this time, 20 the background rate is coming from other countries' 21 explosions because there's not much background on 22 Christmas Island, pace Dr Busby. 23 MR JUSTICE BLAKE: There's certainly not much background in 24 coral. Question whether you get other things from -- 25 MR HEPPINSTALL: So when you turn your probe on, you've got</p> <p style="text-align: center;">Page 58</p>	<p>1 regulatory background limit? 2 MR HEPPINSTALL: No, no, it's the limit that the AWE 3 scientists set for personnel protection on the Island at 4 the time. 5 MR JUSTICE BLAKE: So what you're doing is you are detecting 6 your background and he pointed out that that includes 7 the effect of other people's explosions. 8 MR HEPPINSTALL: Yes. 9 MR JUSTICE BLAKE: You are testing for that and then you are 10 making an assessment as to whether the regulatory limit 11 is met, ie the addition of anything else that's going on 12 mustn't go above the regulatory limit. 13 MR HEPPINSTALL: I don't know what was in the mind of the 14 health physicist on the day and I can't give evidence 15 about it. But they're probably looking at any increase, 16 not just up to the regulatory rate. 17 MR JUSTICE BLAKE: But they are doing that because they have 18 a regulatory cut-off threshold. 19 MR HEPPINSTALL: We assume. We assume. We know the 20 regulations were promulgated. I've got no evidence 21 that -- 22 MR JUSTICE BLAKE: That they were being applied. 23 MR HEPPINSTALL: Well, I've got the evidence I've got. But 24 to explain, if you turn over the page to page 52, you 25 see his conclusion at (h) and then over on to page 53(d)</p> <p style="text-align: center;">Page 60</p>

<p>1 explains to you what he is doing. Then you get 2 his summary at (g) which all ends in (v) on 56. 3 So he's saying he's recited the debate. He then 4 avoids the debate and says, "I can't be certain about 5 anything. There might have been lots of rainout, no 6 rainout. Who knows? I have seen Stretch. She says 7 it's possible, probable, I don't know. Hallard can't 8 say". He says, "I'll go with what I feel is an upper 9 limit, which is the regulatory upper limit for the 10 Island, which could easily have been spotted by my 11 equivalents 50 years ago". That's how he gets to his 12 central conclusion of the 430. 13 That's the work of a health physicist, not the work 14 of a man outside of his expertise. 15 What he does is bolts on to that 430 and its 16 equivalent in millisieverts all the different pathways 17 that he's carefully looked at according to the facts of 18 each appellant. So you could then see there's a table 19 for each appellant. If they've got a wound, they get 20 a dose. If they went to the forward area, like 21 Mr Butler, they get a dose. 22 He has assumed things to be true, if you like, which 23 the Secretary of State has vehemently denied and 24 rejected over the years. For example, the late 25 Mr Battersby, on the Secretary of State balance of</p> <p style="text-align: center;">Page 61</p>	<p>1 did drop dummy metal bombs. 2 MR JUSTICE BLAKE: But those are not explosions which -- 3 MR HEPPINSTALL: No, absolutely not. I don't know whether 4 that's where the confusion comes. He rejects that. He 5 doesn't throw in a different test for Mr Hughes. 6 He also didn't cover seabirds. I think, to be fair 7 to Mr Hallard, that's because he just forgot that 8 someone was saying there were dead seabirds found on the 9 Island and that they were somehow conveyers of 10 radiation. I think that was just an omission. We have 11 dealt with it in the cross-referencing document. 12 That's what he's done. He's done it as a health 13 physicist. I can understand why someone might say he is 14 outside his expertise, because what is he doing 15 discussing nuclear physics? What is he doing discussing 16 aerosols? But if you look at what he's doing on 17 aerosols, he's bowing to the expertise of Dr Nicholson. 18 He's bowing to the expertise of Dr Regan. 19 MR JUSTICE BLAKE: So he's taken as a given some of these 20 possibilities found elsewhere in the previous 21 proceedings? 22 MR HEPPINSTALL: Yes, including radiological rainout, which 23 is another one that we had hand to hand combat below on, 24 but now no such thing because it's in. 25 So there are some criticisms made of him of things</p> <p style="text-align: center;">Page 63</p>
<p>1 probabilities, definitely not a member of the active 2 handling flight. Definitely didn't go near radioactive 3 aircraft. 4 Mr Hallard, his highest -- he's given you two 5 actually because he asks you to choose between whether 6 he washed down the six least contaminated planes or the 7 six more contaminated planes. In fact I think I can 8 relieve you of that burden because we are happy to 9 assume it's the six highest because that's what the test 10 requires. 11 If we talk about fighting the old war and fighting 12 the new war, that's very much showing that the Secretary 13 of State has absolutely learned its lesson, as set out 14 by Mr Justice Charles, because before Judge Stubbs and 15 his colleagues I was saying Mr Battersby didn't go near 16 any active handling aircraft. Now I'm saying please 17 assume in the new world that it was the six most 18 contaminated. 19 That's what Mr Hallard has done for all the 20 appellants. I think there are two things where he drew 21 the line. One is Mr Hughes' test that no one else has 22 any record of whatsoever. It would have been quite 23 a thing for there to have been an additional test. 24 There were, to be fair to Mr Hughes, several dummy 25 runs. So the Valiants didn't just have one go, but they</p> <p style="text-align: center;">Page 62</p>	<p>1 that he hasn't looked at. Hotspots is one of them. You 2 can see that we have dealt with that at paragraph 21 of 3 the cross-referencing document. 4 MR JUSTICE BLAKE: Okay. Where do you deal with hotspots? 5 MR HEPPINSTALL: I deal with hotspots in SB1, tab 1.1, and 6 hopefully in the myriad of updates that we have been 7 faced with. 8 MR JUSTICE BLAKE: I need to get all this down. 9 MR HEPPINSTALL: Fine. 10 MR JUSTICE BLAKE: It's getting a little loaded up here. 11 MR HEPPINSTALL: I think the idea was that the 12 cross-referencing document went at the back of 1.1 13 because it refers back to the Hogan Lovells' P&C. I'm 14 hoping that 21 -- 15 MR JUSTICE BLAKE: Hang on a moment. 16 MR HEPPINSTALL: It's 32, if you've found it. 17 MR JUSTICE BLAKE: 1.1A, yes. 18 MR HEPPINSTALL: No, just 1.1. I think the agreement we 19 reached was that we'd put the cross-referencing document 20 in the same tab as that which it's cross-referencing to. 21 So it should be at the back of your -- so if you go to 22 1.1A and then turn back. 23 MR JUSTICE BLAKE: Yes, I'm doing that. Then I have lost 24 it. 25 MR HEPPINSTALL: I think your colleagues have it, I hope.</p> <p style="text-align: center;">Page 64</p>

<p>1 MR JUSTICE BLAKE: Yes. Well, I must have failed to --</p> <p>2 MR HEPPINSTALL: It's the cross-referencing document that</p> <p>3 looks like this.</p> <p>4 DR RAYNER: 1.1A.</p> <p>5 MR HEPPINSTALL: Oh, it is 1.1A. Sorry.</p> <p>6 MR JUSTICE BLAKE: "Cross-reference of Hogan Lovells</p> <p>7 appellants' statement of case through the report of</p> <p>8 Mr Hallard."</p> <p>9 MR HEPPINSTALL: Yes.</p> <p>10 MR JUSTICE BLAKE: That's what I had.</p> <p>11 MR HEPPINSTALL: So if you go to 32.</p> <p>12 MR JUSTICE BLAKE: 32 is proposition 32?</p> <p>13 MR HEPPINSTALL: Yes.</p> <p>14 MR JUSTICE BLAKE: Yes.</p> <p>15 MR HEPPINSTALL: You have our response on hot particles.</p> <p>16 MR JUSTICE BLAKE: "Hot particles are ..."</p> <p>17 Well, I'll read it. (Pause)</p> <p>18 I'm sorry, I'm having difficulty absorbing all this</p> <p>19 information.</p> <p>20 A hot particle is different from a hotspot; yes?</p> <p>21 MR HEPPINSTALL: A hot particle could cause a hotspot, but</p> <p>22 other things could cause a hotspot as well.</p> <p>23 MR JUSTICE BLAKE: So a hot particle, if we focus upon this,</p> <p>24 is a particular size of particle which is highly</p> <p>25 radioactive --</p> <p style="text-align: center;">Page 65</p>	<p>1 and, unlucky you, you happened to walk across the one</p> <p>2 bit where a particular hot piece of radioactive particle</p> <p>3 was found. You are going to get an external skin dose.</p> <p>4 MR HEPPINSTALL: Yes.</p> <p>5 MR JUSTICE BLAKE: The dose from the particle of the size</p> <p>6 that was within the consensus range isn't going to do</p> <p>7 the business.</p> <p>8 MR HEPPINSTALL: No.</p> <p>9 MR JUSTICE BLAKE: Right. It will also decay very rapidly</p> <p>10 after 24 hours. What about then ingestion?</p> <p>11 MR HEPPINSTALL: Ingestion -- if you look on the next page,</p> <p>12 ICRP 103:</p> <p>13 "In the case of deposition of hot particles in the</p> <p>14 lung or other tissues, the Commission continues to</p> <p>15 consider that the associated hazard of malignant disease</p> <p>16 induction is similar to or lower than that from</p> <p>17 homogeneous distribution of equal activity in the</p> <p>18 lungs."</p> <p>19 It's interesting that that, I think, in fact is the</p> <p>20 ICRP model that is under such attack. In other words,</p> <p>21 one particle in the lung does the same damage as if it</p> <p>22 had been spread all over the body. That's why ICRP</p> <p>23 concentrates on external dose and not internal dose.</p> <p>24 That's why they don't worry about the LSS only being</p> <p>25 external.</p> <p style="text-align: center;">Page 67</p>
<p>1 MR HEPPINSTALL: Yes.</p> <p>2 MR JUSTICE BLAKE: -- which may have become ingested or</p> <p>3 inhaled. That's the mechanism of transfer.</p> <p>4 MR HEPPINSTALL: Possibly, or just encountered.</p> <p>5 MR JUSTICE BLAKE: Encountered. So external or internal?</p> <p>6 MR HEPPINSTALL: Yes.</p> <p>7 MR JUSTICE BLAKE: There is no evidence of the appellant</p> <p>8 encountering a hot particle, which the appellants say</p> <p>9 means that's because you either couldn't or weren't</p> <p>10 monitoring all over the Island for such an eventuality.</p> <p>11 It doesn't mean to say they didn't encounter a hot</p> <p>12 particle.</p> <p>13 MR HEPPINSTALL: Agreed.</p> <p>14 MR JUSTICE BLAKE: So we then go on to the size of</p> <p>15 a putative particle arising from Grapple 1.</p> <p>16 MR HEPPINSTALL: Yes, which is a homework task set by the</p> <p>17 last Tribunal.</p> <p>18 MR JUSTICE BLAKE: Right. So we've got a range of views or</p> <p>19 a consensus on the size of the hypothetical particle</p> <p>20 that might be hot.</p> <p>21 MR HEPPINSTALL: Yes.</p> <p>22 MR JUSTICE BLAKE: Then the next section deals with skin</p> <p>23 dose. Is that external exposure?</p> <p>24 MR HEPPINSTALL: Yes. So if you encountered such a thing --</p> <p>25 MR JUSTICE BLAKE: So you went for a walk down the Island</p> <p style="text-align: center;">Page 66</p>	<p>1 Then you get:</p> <p>2 "The principal concern would be tissue exposure from</p> <p>3 localised exposure to the skin, the colon or the</p> <p>4 respiratory tract. A dose of around 2 gray would be the</p> <p>5 threshold for any tissue reaction to the skin."</p> <p>6 So if somebody had encountered such a --</p> <p>7 MR JUSTICE BLAKE: Hypothetical hot pot.</p> <p>8 MR HEPPINSTALL: Yes. Then you would know about it because</p> <p>9 the skin is the main place where -- it's going to come</p> <p>10 into contact with the skin if you're going to ingest it.</p> <p>11 MR JUSTICE BLAKE: Because before you ingest it, it's going</p> <p>12 to be external.</p> <p>13 MR HEPPINSTALL: So you would be in pain before it started</p> <p>14 its malicious internal process.</p> <p>15 MR JUSTICE BLAKE: Whether it's inhalation or ingestion.</p> <p>16 MR HEPPINSTALL: So I can't rule out that they were there.</p> <p>17 I can't rule out that someone encountered them. They</p> <p>18 may not be anybody you have ever heard evidence from,</p> <p>19 but that's the position.</p> <p>20 MR JUSTICE BLAKE: So Hallard's non-dealing with hot</p> <p>21 particles, you say that he's dealt with it in</p> <p>22 a different way by looking at: if it had been there, it</p> <p>23 would have been observed.</p> <p>24 MR HEPPINSTALL: I think I need to be frank about this</p> <p>25 passage.</p> <p style="text-align: center;">Page 68</p>

<p>1 MR JUSTICE BLAKE: I'm trying to press you.</p> <p>2 MR HEPPINSTALL: This is backfilling by the Secretary of</p> <p>3 State when Hallard has not dealt with it. So some</p> <p>4 complaint could be made about this. We have tried to do</p> <p>5 it with reference to evidence before the last Tribunal,</p> <p>6 Regan and Johnston, and the ICRP 103, but if someone</p> <p>7 says to me, "Where is your expert evidence mediation for</p> <p>8 this?", there isn't one.</p> <p>9 So I take you to it. That's our response to hot</p> <p>10 particles, but I acknowledge our vulnerability on those</p> <p>11 passages.</p> <p>12 MR JUSTICE BLAKE: The bottom line, I'm trying to say,</p> <p>13 unless one can say the proposition that there were hot</p> <p>14 particle depositions on Christmas Island following</p> <p>15 Grapple Y doesn't reach the level of plausibility, using</p> <p>16 that word as the surrogate for "reliable", et cetera,</p> <p>17 then it goes into the possibilities balance.</p> <p>18 MR HEPPINSTALL: Yes.</p> <p>19 MR JUSTICE BLAKE: If it goes into the possibilities balance</p> <p>20 and it hasn't been given a specific dose or a dose</p> <p>21 factor or contribution to dose in Hallard's report, does</p> <p>22 one then have to add to Hallard's report or does one say</p> <p>23 he in fact has dealt with it in a generic way by the</p> <p>24 calculations that he's already made that you've been</p> <p>25 telling us about? I'm not quite sure.</p> <p style="text-align: center;">Page 69</p>	<p>1 large-scale ingestion of hot particles, we would be</p> <p>2 looking at a very different biological effect to that</p> <p>3 which has been observed. But I'm not going to go beyond</p> <p>4 that.</p> <p>5 MR JUSTICE BLAKE: Essentially what you are saying, although</p> <p>6 it's a hypothesis, ultimately, because of the effects</p> <p>7 that such a hot particle would have had upon radiation</p> <p>8 exposure, external or internal or combined, to people,</p> <p>9 we can reach the conclusion that it's not a plausible</p> <p>10 candidate?</p> <p>11 MR HEPPINSTALL: Indeed.</p> <p>12 MR JUSTICE BLAKE: So it's going to plausibility, rather</p> <p>13 than to dosimetry?</p> <p>14 MR HEPPINSTALL: I think that if you threw it into the mix</p> <p>15 and said, "One of these appellants might have</p> <p>16 encountered a hot particle, and that raises a reasonable</p> <p>17 doubt of their pancreatic cancer or their CLL or their</p> <p>18 cataracts", I think you are in farfetched territory and</p> <p>19 have fallen foul of Mr Justice Charles' final analysis.</p> <p>20 MR JUSTICE BLAKE: So using the language I put to you, it's</p> <p>21 a possibility that is not plausible?</p> <p>22 MR HEPPINSTALL: Yes.</p> <p>23 MR JUSTICE BLAKE: It's not reliable evidence.</p> <p>24 MR HEPPINSTALL: It's interesting. The possibilities do</p> <p>25 have to go both ways. The Secretary of State did turn</p> <p style="text-align: center;">Page 71</p>
<p>1 MR HEPPINSTALL: I do find it difficult to understand</p> <p>2 hypothetically, if Mr Hallard had had a go at hot</p> <p>3 particles, I'm not really sure what you do with them</p> <p>4 because they have an enormous effect if you do encounter</p> <p>5 one, and if you never encounter one --</p> <p>6 MR JUSTICE BLAKE: They have no effect. So you can't just</p> <p>7 add to it. You have to make up your mind.</p> <p>8 MR HEPPINSTALL: No. The only thing he could have done is</p> <p>9 to say, "I assume everybody swallowed one", but then we</p> <p>10 are in farfetched territory, to use the language of</p> <p>11 Mr Justice Charles.</p> <p>12 MR JUSTICE BLAKE: Because if anyone or everyone had</p> <p>13 swallowed one --</p> <p>14 MR TER HAAR: The NRPB epidemiology results would be very</p> <p>15 different.</p> <p>16 MR JUSTICE BLAKE: So epidemiology is your baseline, get out</p> <p>17 of jail free card?</p> <p>18 MR HEPPINSTALL: Well, I was very careful about not making</p> <p>19 that submission before the last FTT and I will be</p> <p>20 careful because relying on epidemiology to prove</p> <p>21 specific facts is fraught with difficulty.</p> <p>22 MR JUSTICE BLAKE: It's not appropriate.</p> <p>23 MR HEPPINSTALL: See Lord Phillips.</p> <p>24 MR JUSTICE BLAKE: Yes.</p> <p>25 MR HEPPINSTALL: All I'm saying is if there had been</p> <p style="text-align: center;">Page 70</p>	<p>1 up to the hearing and also threw in possibilities.</p> <p>2 I get the impression sometimes that the basket appears</p> <p>3 to only get filled with the appellants' possibilities,</p> <p>4 but it doesn't. It gets filled with all the</p> <p>5 possibilities, including the ones that I threw in there</p> <p>6 when we come to look at causation.</p> <p>7 Carbon-14. Again if we turn to the table I was just</p> <p>8 talking about where I respond to the Battersby/Smith</p> <p>9 case, paragraph 31 onwards, and we look at proposition</p> <p>10 4.29. It's within in my closing submissions.</p> <p>11 MR JUSTICE BLAKE: Yes. I have had to put them elsewhere,</p> <p>12 but I'll come back to them now. We are in the main</p> <p>13 body, tab 1?</p> <p>14 MR HEPPINSTALL: My page numbers are not going to match</p> <p>15 yours because of what I have --</p> <p>16 MR JUSTICE BLAKE: Well, we're in the main tab?</p> <p>17 MR HEPPINSTALL: We are in the main submissions.</p> <p>18 MR JUSTICE BLAKE: Right. Paragraph?</p> <p>19 MR HEPPINSTALL: You get to paragraph 31 and I start a long</p> <p>20 table responding to Dr Busby.</p> <p>21 MR JUSTICE BLAKE: I don't. Our paragraph 31 says:</p> <p>22 "As a result, the SSD submits ..."</p> <p>23 You're either in an appendix --</p> <p>24 MR HEPPINSTALL: No, it's even worse than that. It's that</p> <p>25 my document that I'm working from has mangled the page</p> <p style="text-align: center;">Page 72</p>

<p>1 numbers. I've got two 31s. It's 88. 2 MR JUSTICE BLAKE: Right. 3 MR HEPPINSTALL: I apologise. So 88 -- 4 MR JUSTICE BLAKE: 88, I have a table, "Stepping stone 5 response". 6 MR HEPPINSTALL: Excellent. If you turn to proposition 7 4.29, page 27. 8 MR JUSTICE BLAKE: Page? 9 MR HEPPINSTALL: 27. 10 MR JUSTICE BLAKE: Looking at the real version, rather than 11 the one I've got. I see. Proposition 4.29. 12 MR HEPPINSTALL: So this is the point that carbon-14 has not 13 been taken into account. Again, I frankly admit that 14 this is us searching for information about carbon-14 in 15 the documents that you have, but we do have an UNSCEAR 16 estimate for the worldwide average dose from all tests 17 in 1958. The contribution was 1.6 microsieverts. So 18 that's not just Grapple Y. That's all the atomic 19 nations' tests in 1958 because that UNSCEAR report is 20 about working out the radiological risk from worldwide 21 fallout and they look at the risk per year. 22 MR JUSTICE BLAKE: Mr Hallard did give us some answers on 23 this topic in cross-examination about -- did he? 24 MR HEPPINSTALL: Yes. In fact, I took my hint for the 25 UNSCEAR information because when you look at his report</p> <p style="text-align: center;">Page 73</p>	<p>1 bottom of the page, because if you actually go to the 2 detail, which is buried in a footnote to that point -- 3 MR JUSTICE BLAKE: That's what the quotation is, is it? 4 MR HEPPINSTALL: No, the quotation is the point. 5 MR JUSTICE BLAKE: Is the point at -- 6 MR HEPPINSTALL: And actually you will see that there's 7 a random 20 towards the end of that -- 8 MR JUSTICE BLAKE: 20 uncertainties in risk -- 9 MR HEPPINSTALL: The 20 is my cut and pasting. That's 10 a footnote. It's at footnote 20 where you actually find 11 out what they are saying. They are saying that there 12 are uncertainty factors which are under or overestimate 13 factors and they offer a range of radionuclides, not all 14 of them, and therefore it's unclear what Mr Hallard was 15 supposed to do with that information. 16 I'll leave to you look at that footnote in your own 17 time. 18 MR JUSTICE BLAKE: You have summarised it over the page at 19 22. 20 MR HEPPINSTALL: Yes. 21 MR JUSTICE BLAKE: It's being argued that, heroic as his 22 endeavours may have been, he's been faced with an 23 impossible task. 24 MR HEPPINSTALL: Yes. 25 MR JUSTICE BLAKE: And the non-application of an uncertainty</p> <p style="text-align: center;">Page 75</p>
<p>1 and when he did to tritium, he took his tritium 2 information from that report, and I noticed that he had 3 also dealt with carbon-14. He didn't feel like 4 carbon-14 was something he could opine on. 5 MR JUSTICE BLAKE: So this is one where you added -- it is 6 not going to -- 7 MR HEPPINSTALL: If the worldwide dose is only 1.6 8 microsieverts from all the tests, it's not really going 9 to make much of a contribution to our subset. I imagine 10 others might have something to say about that because 11 I can't give expert evidence. I'm just noting that's 12 what UNSCEAR says. 13 Right. The other one that I have to address is -- 14 MR JUSTICE BLAKE: Sea-to-land? 15 MR HEPPINSTALL: But first, I think, the bigger one is the 16 uncertainty factors. 17 MR JUSTICE BLAKE: Yes, uncertainty factors. 18 MR HEPPINSTALL: Which is in that table, 4.9 and 4.10, which 19 is page 21. 20 In fact there are two potential sets of uncertainty 21 factors being ranged against me. The first one is the 22 one in the CERRIE report that I think Mr Bramhall first 23 drew to our attention, the tenfold. 24 MR JUSTICE BLAKE: Yes. 25 MR HEPPINSTALL: We make a submission about that at the</p> <p style="text-align: center;">Page 74</p>	<p>1 factor is one example of that impossibility. 2 MR HEPPINSTALL: Yes. 3 MR JUSTICE BLAKE: Standing back and looking at the whole 4 landscape of the activity and the report, he's made 5 conservative estimates and multiplied risks in certain 6 cases. 7 MR HEPPINSTALL: Yes. 8 MR JUSTICE BLAKE: But is he meant to stand back and give 9 another multiplier for uncertainty? 10 MR HEPPINSTALL: We say not. When you look at those papers 11 about those uncertainty factors, you can see that what 12 they are doing is working out whether the real numbers 13 -- not the real numbers, the point numbers in the ICRP 14 are reliable. They're not saying, "Here are a load of 15 uncertainty factors. Dosimetries, henceforth times 16 everything by X". They were just saying, "We are 17 looking to see" -- and they were looking at it from the 18 possibility that they were telling the public the wrong 19 story, the papers are about the public limits for 20 radiation, and they are just saying, "Actually, the 21 uncertainty factors are low, and therefore we're okay on 22 those factors". 23 Now, I think what Dr Haylock and Mr Hallard said to 24 you was: we are okay for now, because I think there is 25 work going on to try and make sure we are okay. But</p> <p style="text-align: center;">Page 76</p>

<p>1 what there isn't there are numbers that he should just 2 have times things by. 3 There's two reasons for that. One is there's 4 a whole range of numbers for different radionuclides. 5 Not all the radionuclides, some of which are very 6 exotic, that come out of a nuclear weapon are there. So 7 I'm not sure what he was supposed to do -- times some by 8 10 and some by nil. 9 The other thing is that these uncertainty factors 10 are both overestimates and possibly underestimates, as 11 is made clear by CERRIE. Some might cancel each other 12 out. It would be a silly, silly exercise to perform. 13 So there wasn't anything there which Mr Hallard 14 could have done, although it will be said against 15 me: that's not what he said. I have underlined it in 16 an excess of the Secretary of State discharging his duty 17 zeal. You actually get the concession underlined for 18 all to see. 19 But when you look at what he was talking about, that 20 table that he'd extracted into his report, it's very 21 hard to see what he would do. Therefore we say it 22 doesn't undermine what he has done. 23 We have done hotspots, carbon-14, uncertainty 24 factors. 25 Sea-to-land-to-land transfer. For that I will give</p> <p style="text-align: center;">Page 77</p>	<p>1 are activating the neutrons in the sodium. But that, as 2 Professor Regan points out, is very short-lived. We are 3 lucky that sodium has a very short half life and it 4 disappears. 5 MR JUSTICE BLAKE: 14 hours or something. 6 MR HEPPINSTALL: Yes, something like that. 7 The other criticism made is of the resuspension 8 factor. Again, I'll give you another reference: Day 7, 9 pages 152 to 153. That then gets you into Carter. You 10 will find within that the Carter reference. He took the 11 most conservative resuspension factor that the Carter 12 authors thought would have rarely occurred. So he again 13 is discharging his duty to be as upper limit as 14 possible. They say that there would have been the 15 normal resuspension work, but occasionally there would 16 have been another one that rarely occurred. They were 17 talking about dusty -- the desert at Maralinga, not the 18 coral island of Christmas Island. 19 So that's the answer to that. He has discharged his 20 duty. 21 So that's, I think, the end of my submissions in 22 response to what -- there's one other point on 23 Mr Hallard. 24 There's a lot of material in the Hogan Lovells 25 closing, I think 12 paragraphs, on sticky papers.</p> <p style="text-align: center;">Page 79</p>
<p>1 you a reference. It's T7, so the transcript in these 2 proceedings, Day 7, page 178 to 179, and that is simply 3 where I elicited through the medium of Mr Hallard the 4 references from Regan about how the sea deals with the 5 radioactivity. That's all I have on sea-to-land. 6 The sea-to-land transfer point was put by Dr Busby, 7 I think referring to Sellafield, rather than -- 8 MR JUSTICE BLAKE: Christmas Island. 9 MR HEPPINSTALL: -- the great Pacific Ocean. The slightly 10 smaller bit of sea between us and the Republic of 11 Ireland. 12 MR JUSTICE BLAKE: There's a coastline which the Irish Sea 13 was going to blow into. 14 MR HEPPINSTALL: And a lot of controversy flows therefrom. 15 MR JUSTICE BLAKE: That's why I flagged it up, because you 16 could see there were different parameters between 17 a small coral island in the middle of the Pacific Ocean 18 and sea-to-land in Sellafield. But the answer is the 19 ocean is a great container and -- 20 MR HEPPINSTALL: Yes, and the neutron activation -- you have 21 had evidence on this point -- that goes on in the sea is 22 in the sodium, the salt, and it's very short half life. 23 So you have the radioactivity itself that gets dispersed 24 into the great ocean, and the other thing you worry 25 about is that the sea becomes radioactive, because you</p> <p style="text-align: center;">Page 78</p>	<p>1 MR JUSTICE BLAKE: Yes. 2 MR HEPPINSTALL: If we are talking about refighting the 3 wrong war, that's the wrong war. Sticky papers, Hallard 4 takes them into account, then he spreads a level of 5 contamination over the Island that was never seen on the 6 sticky paper. I'm not relying on sticky papers. 7 So make all your points you want about wet papers, 8 whatever. 9 MR JUSTICE BLAKE: It doesn't go there. 10 MR HEPPINSTALL: It doesn't go there, because Mr Hallard 11 doesn't go there, quite properly. 12 Professor Thomas, I have to say I'm surprised by 13 what Mr ter Haar said about the way she might have given 14 her evidence. She had been receiving those sorts of 15 emails for a while. She'd actually expressed a wish 16 that she didn't want to Tribunal to see them, because 17 she didn't want it to become a public matter. But the 18 reason why you saw the ones on that day is because she 19 felt upset that day. That's why she asked me to show 20 them to you. 21 You will also see in the bundle, you don't need to 22 turn to it now, but at SB6/67, Dr Busby had put in the 23 bundle a -- I don't really know what it is. It's some 24 sort of transcript of some sort of conversation between 25 a gentleman and Professor Thomas on the phone or</p> <p style="text-align: center;">Page 80</p>

1 something.
 2 MR JUSTICE BLAKE: Responding to her BBC report about the
 3 pattern.
 4 MR HEPPINSTALL: I think so. The document is incoherent,
 5 but when I saw that in the bundle, we warned
 6 Professor Thomas that she would be cross-examined in
 7 that manner, and possibly at that level. I'm very
 8 grateful to Dr Busby that he didn't go to that document
 9 and he didn't raise those points. But they were there,
 10 and you can imagine that Professor Thomas was aware of
 11 that.
 12 So I ask you to take that into account. She knew
 13 that document was there, and I ask you to take into
 14 account that she had -- you can see the time on those
 15 emails for yourself, when she got them.
 16 MR JUSTICE BLAKE: Yes.
 17 MR HEPPINSTALL: The curse of the BlackBerry means that she
 18 was checking her emails before she came into court.
 19 So I'm surprised that that point is taken.
 20 Professor Thomas is a public advocate for science. She
 21 does have a public profile and she also has an
 22 enthusiasm and a volubility that no doubt you detected
 23 when she gave her evidence. But I don't think that in
 24 any way detracts from her full discharge of her duties
 25 to this Tribunal, and I would be very sad if that's what

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1 was being said and very sad if that was the finding
 2 against her.
 3 So that's Professor Thomas. Finally, before we move
 4 on, Mr Bramhall. You see what I say. He's actually
 5 quite a useful medium through which we could explore
 6 CERRIE.
 7 MR JUSTICE BLAKE: Can we just go back -- I think I have
 8 read what you said.
 9 MR HEPPINSTALL: Paragraph 71.
 10 MR JUSTICE BLAKE: I'm now jumping around a bit. He's not
 11 a scientist.
 12 MR HEPPINSTALL: Exactly. But it does give you some insight
 13 into ECRR, interestingly enough.
 14 MR JUSTICE BLAKE: Yes.
 15 MR HEPPINSTALL: The next bit: why does an assessment of
 16 dose and risk matter? I have my own handwritten note
 17 against that which says:
 18 "This is the important bit."
 19 This is the important bit, because it is our strong
 20 submission that without a qualitative/quantitative
 21 assessment of dose and probability of causation, we say
 22 that you cannot discharge the burden put on you by
 23 Mr Justice Charles' test. Any dose and any risk will
 24 not pass that threshold.
 25 You drove -- sorry, not drove. You elicited from

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1 Mr ter Haar that 0.1 was enough; 99.9 against in my
 2 currency is enough. And it simply isn't.
 3 I can't tell you where the threshold is because in
 4 that sense you are a jury. A bit like they say the
 5 Employment Tribunal is the industrial jury, this is the
 6 war pensions jury. You have to decide, and you alone.
 7 Mr Justice Charles declined to give you that guide, and
 8 I think he properly did so.
 9 I had a similar debate in the case of JM v Secretary
 10 of State for Defence, which I keep referencing in my
 11 submissions, about whether Mr Justice Charles and two
 12 other Upper Tribunal judges should direct the War
 13 Pensions jurisdiction as to what tests should apply as
 14 to when something is caused by service. Again, the
 15 Upper Tribunal has declined, and it's declined out of
 16 respect for this Tribunal's expertise and its
 17 sovereignty, if you like, over the fact-finding domain.
 18 When this Tribunal makes a finding of fact, as long as
 19 it doesn't fall into error of law, it stands.
 20 Now, that, subject to your duty to give reasons,
 21 protects you and does make you in a sense like a jury.
 22 You do have this problem that you have to give reasons,
 23 unlike a jury. That's really why you have to assess
 24 dose and assess probability.
 25 I use "probability" advisedly. I'm not talking

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1 about 50 per cent because we know that's the wrong
 2 threshold. But when we talk about probability, we are
 3 talking about risk. We are talking about whether
 4 something happened or not, and the quantitative or
 5 qualitative assessment of whether something happened or
 6 not. We could go all the way from 100 per cent, which
 7 is where your criminal jury is, all the way through
 8 50 per cent, which is where the High Court --
 9 MR JUSTICE BLAKE: I'm not sure a criminal jury does apply
 10 100 per cent.
 11 MR HEPPINSTALL: No, but it's the other extremes, the other
 12 "beyond reasonable doubt". Then we come all the way
 13 down to somewhere between 0 and 50. But 99.9 against
 14 just won't do.
 15 MR JUSTICE BLAKE: I'm sure all the learning in different
 16 heads of jurisdiction where assessments of risk have to
 17 be made warns against a statistical drawing across from
 18 a mathematical model to real risk.
 19 MR HEPPINSTALL: Yes.
 20 MR JUSTICE BLAKE: As it happens, in the area that I know
 21 something more about, real risk of persecution, and
 22 there's a reference to Kanarakanan in one of
 23 Mr Justice Charles' rulings, I happen to know that in
 24 about the mid-1990s the US Supreme Court said a 1 in 10
 25 chance gives a real risk of persecution. When an

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1 advocate tried that out in the Court of Appeal in the
 2 House of Lords they weren't too interested in turning
 3 that into a mathematical model but --
 4 MR HEPPINSTALL: Fingers have been burnt in the Crown Court
 5 with DNA. So the DNA expert for the Crown would say
 6 it's a one in a large number chance that the bloke in
 7 the dock has done it.
 8 MR JUSTICE BLAKE: Yes.
 9 MR HEPPINSTALL: And then somebody went to the Court of
 10 Appeal (Criminal Division) and said, "But what was the
 11 statistic the other way?" and it turns out it's bigger.
 12 In fact that's what happened in the Meadow case,
 13 because the evidence was led by the GMC from the
 14 President of the Royal Statistical Society that the
 15 probability that a mother murdered her three children is
 16 far greater than three cot deaths, but the jury didn't
 17 have the benefit of that.
 18 So the American system is: if you have both
 19 statistics, the jury are allowed to weigh them up. The
 20 English system is: no statistics, because it's what's
 21 known as the prosecutor's fallacy. It probably
 22 happened, therefore it did.
 23 Now, in our side of the jurisdiction, the civil side
 24 of the jurisdiction, Sienkiewicz is the classic place
 25 now to go for guidance, but all that you find in

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1 Sienkiewicz is helpful, interesting, probative, but one
 2 thing to weigh into the mix.
 3 What Lord Phillips does say in Sienkiewicz is that
 4 if the relative risk is really high, that's increasing
 5 the probative value of the proposition.
 6 Now, I think Mr ter Haar has misunderstood what I'm
 7 doing in that passage, because I'm not cutting across
 8 a submission that my learned friend Mr McCahey(?) made
 9 on behalf of the Secretary of State before
 10 Mr Justice Charles. I'm actually reversing it in that
 11 that submission was: Mr Justice Charles, be wary of what
 12 the appellants were saying about epidemiology. My
 13 submission is: if it's really low, if the excess
 14 relative risk is really low, such as Dr Haylock is
 15 telling you it is, then Lord Phillips' statement goes
 16 into reverse, and that tells you a lot.
 17 But I'm very clear, and I was very clear before the
 18 last FTT, not to overplay my hand on the epidemiology,
 19 because we just did -- I'll be frank with you. The
 20 reason why we did Dr Haylock's exercise is because
 21 before the last Tribunal I had a go. So I went to the
 22 LSS curve and said: look at age of exposure of
 23 Mr Battersby, look at age of onset. We have only got
 24 the ERRs per 1 gray for LSS, and you will see if you do
 25 a bit of maths, and here is Heppinstall's clumsy

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1 attempt, you get to 99.9 against.
 2 I didn't want to do that, so I got Dr Haylock to do
 3 it, because he knows how to do it.
 4 But all that is is a guide to you that if the dose
 5 is X, and then the other moving parts of that -- and
 6 they are really important -- are age at exposure and
 7 crucially for this case, in 2016, age at onset, because
 8 that's really what reduces the risk. It reduces the
 9 risk because we know that age is an important factor for
 10 these veterans' illnesses and diseases. So that's what
 11 reduces that risk down.
 12 MR JUSTICE BLAKE: Age in the sense of -- there are
 13 childhood leukaemias that are more susceptible, if they
 14 are growing up and there's exposure. So that's
 15 a sensitive age because your body is developing at the
 16 time and you are ingesting more, getting material in.
 17 But they are adults, they are 20, so grown.
 18 MR HEPPINSTALL: Yes.
 19 MR JUSTICE BLAKE: And so that's factor 1 about their age,
 20 and factor 2 is the period of time between --
 21 MR HEPPINSTALL: What we are really getting into now is what
 22 Mr ter Haar described as my thumpingly bad point.
 23 I think he misunderstood my point. I hope that's why he
 24 thought it was thumpingly bad, rather than it actually
 25 being thumpingly bad.

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1 I'm not running a civil proceedings "in any event"
 2 point. So they could have got cancer from smoking too
 3 many cigarettes; don't give them a war pension. That's
 4 not my point.
 5 My point is very simple. My point is they have
 6 lived their lives from the moment they stepped on to the
 7 cruise liner to go back to Hawaii. They have lived
 8 their lives from 1958 onwards, and those lives involve
 9 ionising radiation and all the other things that make
 10 you have cancer and other illnesses when you are in your
 11 60s and 70s.
 12 MR JUSTICE BLAKE: So your age point is the gap between
 13 period of exposure and period of onset of condition; is
 14 that right?
 15 MR HEPPINSTALL: Oh, yes. Maybe we are misunderstanding
 16 because it's been pointed out I said the wrong thing.
 17 The moving parts are dose, age of exposure and age
 18 of onset, and it's age of onset that's important. Did
 19 I say age of exposure? I apologise.
 20 It's age of onset of the disease that is important,
 21 because that's the risk, that's the life risk. The life
 22 risks here are huge. But also the individual risks are
 23 huge. We've got someone with pancreatic cancer who had
 24 pancreatitis first. We have people complaining of heart
 25 disease with hypercholesterolemia first.

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<p>1 The most extreme example is the late Mr Butler whose 2 claim is partially for bacterial infections that went 3 away when he had antibiotics. You cannot debate these 4 factors in a vacuum, and that's why my possibilities are 5 allowed into the pot. 6 How you weigh them up, how you evaluate them is 7 a different matter, but the dose of radiation in 1958 8 goes into that pot, alongside everything else, and that 9 includes the clinical evidence that you have before you 10 from Mr Acheson, from Professor Catovsky, from others, 11 Professor Forbes on the pancreatic cancer. 12 That's one of the reasons we put it in there. They 13 do actually comment on radiogenicity. But that's not 14 really a matter for them, frankly. They did that but 15 maybe we made a mistake when we instructed them and we 16 put that information before you, but you're better off 17 with Kaldor and Parker and others, frankly. 18 What they say about what they have read from their 19 medical records is important, and you have to weigh that 20 in the balance. It can't just be ignored. 21 Now, if this was a balance of probabilities regime, 22 I would say: right, lots of smoking, pancreatic cancer, 23 hypertension because they've eaten too many beefburgers 24 or whatever, that wins; that's the balance of 25 probabilities.</p> <p style="text-align: center;">Page 89</p>	<p>1 if you live in Cornwall, if you like Transatlantic 2 flights, if you like CT scans, look at 3 Professor Brenner's list and his paper, your dose is 4 going to be higher. 5 That's before we even start to think about diet, 6 smoking, and all the rest of it. 7 So it's not a thumpingly bad point. It's in fact 8 a central point to the situation. 9 It's not that one bus hit and the other didn't hit. 10 Both buses have hit the appellants. We know that. We 11 know there were some sort of insult from ionising 12 radiation. Mr Hallard has given us the doses. But we 13 also know that the other buses have come along. We know 14 that the sun is shining. We know what the background 15 radiation rate is. 16 So they have to go into the mix. It doesn't make 17 your job any easier. That much I can say. But little 18 does in this case, frankly. 19 I have given you the extract from the Crown Court 20 Bench Book. I'm sure you are well aware what a jury is 21 told. If they come back and say the advocate slipped up 22 in this modern era and used "beyond reasonable doubt" 23 rather than "sure", they are told it's "realistic", 24 another synonym for "reasonable", you might think. I 25 just put that in because like your "plausible",</p> <p style="text-align: center;">Page 91</p>
<p>1 That's actually why there are no or very few 2 successful cases for cancer in civil proceedings. 3 That's why the Supreme Court wouldn't take the nuclear 4 test veterans any further, because they were trying to 5 rely on Fairchild and material increase of risk, because 6 they couldn't get over the balance of probabilities 7 test. 8 That's why Loveday v Renton, the great leukaemia 9 Sellafeld case, was stopped in its tracks in this 10 jurisdiction, because we don't know what causes cancer. 11 We can't say on the balance of probabilities what does 12 cause cancer. 13 Now, I can't make that submission. I don't make 14 that submission. All I'm asking you to do is to throw 15 it in with the other possibilities, and when you come to 16 that last paragraph, 101, Mr Justice Charles' evaluative 17 exercise, keep that on your list. Do with it what you 18 will, with the expertise you have in the Tribunal and so 19 forth, but keep it on the list. 20 It's not just a case of 170 millisieverts, if we 21 really are going to take the Rowland figure, that raises 22 a real doubt. It's 170 millisieverts in 1958. But look 23 at what Professor Thomas tells you -- two hundred and 24 odd for the rest of your life, and that's her taking the 25 average UK. If you've been anywhere else in the world,</p> <p style="text-align: center;">Page 90</p>	<p>1 "reliable", "realistic", they are all adjectives of 2 interest in these proceedings. 3 I have set out at length why I say that being lured 4 into not assessing the dose and the risk is simply 5 wrong. All you're being asked to do is assess it on 6 this very odd lawyer's standard of proof, but you still 7 have to assess it. 8 Mr Hallard has tried to do his best for you. We 9 acknowledge that a few holes have been found, but it's 10 the only show in town. I wish it had been a joint 11 exercise. 12 I don't necessarily stand to the arithmetical 13 quantification of doses, but they're certainly within 14 that order as an upper limit, and they're not an order 15 of magnitude that when you put them into the statistical 16 machine they come out as very low statistical 17 probabilities, which is a guide to you. It doesn't 18 answer the reasonable doubt question. 19 I remember once asking Professor Kaldor to give me 20 the reasonable doubt percentage, and in his inimitable 21 Australian fashion. That's why it says in his report 22 it's a matter for the Tribunal and not a matter for him 23 because he didn't know what it meant either. He gives 24 evidence a lot in the Australian equivalent of this 25 Tribunal, where the test is reasonable hypothesis. That</p> <p style="text-align: center;">Page 92</p>

<p>1 Tribunal --</p> <p>2 MR JUSTICE BLAKE: It would seem to make a great deal more</p> <p>3 stones to a lawyer such as myself looking at this issue</p> <p>4 if our regulations were going that way.</p> <p>5 MR HEPPINSTALL: Maybe the Secretary of State should hear</p> <p>6 you.</p> <p>7 MR JUSTICE BLAKE: It's going one way and then back the</p> <p>8 other and then forward again. It just makes this --</p> <p>9 I hope we've really grasped the steer that Mr ter Haar</p> <p>10 told us to and we are trying to do that.</p> <p>11 MR HEPPINSTALL: Absolutely.</p> <p>12 Now, my Lord, there was an interesting issue when</p> <p>13 my Lord was speculating as to why Mr Justice Charles had</p> <p>14 not decided the issue for himself. I think there are</p> <p>15 two points there.</p> <p>16 The practice of the Upper Tribunal when hearing an</p> <p>17 appeal from the War Pensions chamber is to remit back</p> <p>18 because the medical expertise and the service expertise</p> <p>19 on the Tribunal has a respect in case law that isn't</p> <p>20 found in other FTT/UT relationships. We made a strong</p> <p>21 submission to that effect.</p> <p>22 There's also two other clues within his judgment,</p> <p>23 and you will find them set out at 27 and 28 of our</p> <p>24 skeleton, which is now your annex A, which is he</p> <p>25 speculated --</p> <p style="text-align: center;">Page 93</p>	<p>1 said about Rowland.</p> <p>2 MR JUSTICE BLAKE: Yes.</p> <p>3 MR HEPPINSTALL: Just to shortcut the description and for no</p> <p>4 other forensic purpose because I know we can't go there.</p> <p>5 I think Mr ter Haar said 2008 for the issue of the claim</p> <p>6 form. It's 2004, not 2008, if you look at the Court of</p> <p>7 Appeal judgment.</p> <p>8 MR JUSTICE BLAKE: Is it? I thought it was 2007 --</p> <p>9 MR HEPPINSTALL: No.</p> <p>10 MR JUSTICE BLAKE: That was a group litigation order?</p> <p>11 MR HEPPINSTALL: Yes, probably. It's 2004 for the claim</p> <p>12 form.</p> <p>13 You see that paragraph -- I haven't got the</p> <p>14 reference but I can get it for you.</p> <p>15 MR JUSTICE BLAKE: I looked at the Court of Appeal decision</p> <p>16 to see partly where your quotations were, where they</p> <p>17 came from.</p> <p>18 MR HEPPINSTALL: That's where they are from, just to give</p> <p>19 you a good summary. But then we get into the report</p> <p>20 itself at paragraph 100.</p> <p>21 MR JUSTICE BLAKE: Just before we leave 96 and the</p> <p>22 quotations, whether the Court of Appeal accurately</p> <p>23 summarised it or not, we will do our own work on that.</p> <p>24 But the last sentence, is that something you remind us</p> <p>25 to draw into account?</p> <p style="text-align: center;">Page 95</p>
<p>1 MR JUSTICE BLAKE: We can put Hallard away, can we?</p> <p>2 MR HEPPINSTALL: Certainly. If you go to our annex A and</p> <p>3 look at our paragraphs 27 and 28.</p> <p>4 MR JUSTICE BLAKE: Annex A is tab 3, your skeleton argument?</p> <p>5 MR HEPPINSTALL: Yes, annex A, yes.</p> <p>6 So at paragraphs 27 we just note that</p> <p>7 Mr Justice Charles was not convinced that this Tribunal</p> <p>8 would come to a different decision. It could all replay</p> <p>9 all over again, and the decision could be the same, both</p> <p>10 on exposure and radiogenicity.</p> <p>11 One of the reasons he says that is because he</p> <p>12 acknowledged that the way that the Secretary of State</p> <p>13 had put the case before was not quite the way in which</p> <p>14 the First Tier Tribunal had decided.</p> <p>15 So that gives you another clue as to why he didn't</p> <p>16 decide the matter for himself, in answer to the queries</p> <p>17 that you raised with Mr ter Haar.</p> <p>18 So I think that's enough on the legal theory.</p> <p>19 I think it's probably time now to turn to Rowland.</p> <p>20 MR JUSTICE BLAKE: Right.</p> <p>21 MR HEPPINSTALL: So Rowland is at paragraph 39. Not</p> <p>22 paragraph 39. Sorry, I will sort out my copy of my</p> <p>23 submissions. 96, I apologise. The joys of word</p> <p>24 processing.</p> <p>25 Now, I've just given you what the Court of Appeal</p> <p style="text-align: center;">Page 94</p>	<p>1 MR HEPPINSTALL: Yes, although --</p> <p>2 MR JUSTICE BLAKE: I thought that Dr Brenner made the same</p> <p>3 point.</p> <p>4 MR HEPPINSTALL: Yes, he does, but I don't think, to be</p> <p>5 fair, the appellants are doing what the claimants were</p> <p>6 doing in the civil proceedings. The claimants were</p> <p>7 trying make this great leap between Rowland and cancer.</p> <p>8 No one is trying to do that, and the authors of the</p> <p>9 paper, the Wahab paper, very carefully say, "Don't use</p> <p>10 us for that".</p> <p>11 MR JUSTICE BLAKE: There's two real parts to Wahab and</p> <p>12 Rowland, isn't there? One, using mFISH, which for</p> <p>13 reasons we have indicated is a technique which is</p> <p>14 plausible and scientifically approved -- it may not now</p> <p>15 be the best or the only, but it's there -- you come up</p> <p>16 with this comparator between one group and the other,</p> <p>17 and you have evidence of chromosome mutation.</p> <p>18 MR HEPPINSTALL: Yes, and we all agree on that.</p> <p>19 MR JUSTICE BLAKE: That, of course, is not a condition which</p> <p>20 gets you a pension.</p> <p>21 MR HEPPINSTALL: No. Professor Brenner points out that you</p> <p>22 can, through what Professor Thomas described as a very</p> <p>23 complex process, go from a translocation to a cancer,</p> <p>24 but there's no way of knowing. The body repairs</p> <p>25 translocations. We don't know -- I think there is one</p> <p style="text-align: center;">Page 96</p>

1 condition where we could be certain with the
 2 Philadelphia chromosome, but apart from that --
 3 MR JUSTICE BLAKE: The other factor, and I know you have
 4 dealt with it, but we will hear, the other factor is
 5 then working back from a scientist's point of view: if
 6 you had these degrees of mutation, chromosome changes,
 7 what degree of radiation would you need to get it?
 8 MR HEPPINSTALL: Yes.
 9 MR JUSTICE BLAKE: And that's when they irradiate the blood.
 10 MR HEPPINSTALL: That is quite a crude --
 11 MR JUSTICE BLAKE: Quite. That's what they do, and
 12 I appreciate that's a theme that you are going to help
 13 us with.
 14 MR HEPPINSTALL: It's interesting, because I think that the
 15 gloss that Dr Cecilia Busby put on it earlier is quite
 16 an interesting one. Because cobalt 60 is a gamma
 17 emitter. So it's a gamma dose that they are assessing.
 18 You see, that's key. So we are talking about prompt
 19 gamma radiation.
 20 MR JUSTICE BLAKE: Acute?
 21 MR HEPPINSTALL: Yes. Well, at 1,400, we are talking about
 22 epilation and diarrhoea. So that's why Rowland on dose
 23 doesn't work, because it's too far-fetched.
 24 To be fair to Rowland and Wahab, no such claim is
 25 made. I think if I have any submission to make about

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1 Rowland and -- perhaps not Rowland, because that's an
 2 unpublished report to his funding Test Veteran
 3 Association. But Wahab, which had to be peer-reviewed
 4 to go into the literature, not even a claim that we are
 5 talking about Grapple is made. The assertion that's
 6 made is more aberrations in the veterans than the
 7 control. There's a graph with the dose response and
 8 then there's a "probably caused by ionising radiation".
 9 MR JUSTICE BLAKE: I may have taken you out of your course.
 10 MR HEPPINSTALL: No, my Lord. I'd prefer for you to read
 11 the paper and for you to raise to me what you are
 12 concerned about.
 13 But the other thing I would just like to say in
 14 response to Mr ter Haar is that I put in the New Zealand
 15 nuclear test veterans' history, not because I'm going to
 16 say "Look at all the precautions on the boats, look at
 17 the fact that they did have some sort of radiation
 18 monitor in the engine room or something and it never
 19 found anything, apart from once", not least because if
 20 you read that report, you will see that they actually
 21 issued everybody with dosimeters and the things didn't
 22 work. We wouldn't be in this position if the dosimeters
 23 hadn't been exposed to the sun and the whole lot was
 24 junked over the side. That's what the history says.
 25 Also, I'm not going to go back to the old ways

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1 of: look, nothing was measured by these instruments in
 2 the 1950s, therefore there is nothing. All I am saying
 3 in that passage, (b), is that it's a different
 4 experience. These are New Zealand veterans who are
 5 either on ships or on Christmas Island or on their way
 6 to Fiji or on their way back to Auckland, whatever; they
 7 are having very different experiences to these veterans.
 8 I find it a little difficult to accept that when my
 9 learned friend in the key passage in his submissions
 10 says "Not Hallard, because that's all too woolly, and
 11 uncertain and full of holes. Don't go with Hallard who
 12 looked at these veterans personally, looked at their
 13 wounds, looked at their cuts, looked at where they went,
 14 made massive assumptions in their favour. Look at
 15 a completely different set of veterans who had
 16 a completely different experience, especially at the
 17 time of the detonations when they are downwind,
 18 offshore. That's where you want to be, Tribunal. You
 19 want to be somewhere else entirely."
 20 That's the only reason why I'm putting the history
 21 in front of you, because then you can compare that to
 22 the daily lives and experiences of the appellants who
 23 make this appeal.
 24 It really is apples and oranges, and to take the
 25 mean dose is even worse. I mean, to make the mean dose

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1 that is posited by Rowland about those men and then say
 2 that's a proxy for the dose for these veterans on
 3 Christmas Island, you can't do it for Mr Battersby, for
 4 starters, a wholly different kettle of fish. He's on
 5 our now generous assumption cleaning down dangerous
 6 radioactive planes.
 7 You can't do it for Mr Smith who wasn't there at the
 8 time. You can't do it for Mr Butler who went to Ground
 9 Zero after the test.
 10 It is in the far-fetched territory that
 11 Mr Justice Charles warned you off, those rocks, when you
 12 come to your evaluative consideration.
 13 We have the greatest of respect for the work that
 14 Wahab and Rowland did. We understand why the
 15 New Zealand test veterans and the British test veterans
 16 want an answer on dose. We know they are anxious about
 17 it. The Secretary of State is politically aware of that
 18 because of the political campaign that sits alongside of
 19 everything else, and we understand why this was done.
 20 But when you look at the peer-reviewed paper and
 21 look at the assertions being made, they do not include
 22 the assertions that are made by the appellants in this
 23 Tribunal, and that's for very good reason.
 24 MR JUSTICE BLAKE: We know nothing about any follow-up on
 25 these people, whether they got ill, whether they had

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<p>1 pensions or --</p> <p>2 MR HEPPINSTALL: No. The New Zealand Government, I think,</p> <p>3 reacted to this report by carving out a special regime</p> <p>4 within their War Pensions process which meant that</p> <p>5 basically it's now like the American regime. If you</p> <p>6 were there and you have a radiogenic condition on</p> <p>7 a list, you get a war pension. That was the political</p> <p>8 reaction to Rowland and Wahab.</p> <p>9 I think there's a footnote that you will find in my</p> <p>10 submissions to that effect. You've got the New Zealand</p> <p>11 list of radiogenic conditions.</p> <p>12 MR JUSTICE BLAKE: So if they develop a radiogenic</p> <p>13 condition --</p> <p>14 MR HEPPINSTALL: According to that list. You will find that</p> <p>15 that list doesn't correspond very well to the list that</p> <p>16 you've got, which is of interest only. I don't push the</p> <p>17 foreign compensation policy point.</p> <p>18 There is the New Zealand epidemiology. There is</p> <p>19 Pearce, and we'll come on to NRPB perhaps after lunch.</p> <p>20 I do need to deal quickly with Mr ter Haar's attempt</p> <p>21 to use some form of concession made by Professor Kaldor.</p> <p>22 So it's said that Professor Kaldor said the phrase: "The</p> <p>23 results of a study raise a question about the validity</p> <p>24 of the dose levels that were measured and recorded for</p> <p>25 the participants at the time of the Pacific tests."</p> <p style="text-align: center;">Page 101</p>	<p>1 made some very bold statements in her expert report, and</p> <p>2 then it's said to Professor Thomas: "She's reputable,</p> <p>3 isn't she?" And Professor Thomas says "Yes". That</p> <p>4 doesn't mean that every single positive word in favour</p> <p>5 of the appellants in Professor Parker's report is turned</p> <p>6 into something that means we shouldn't have bothered</p> <p>7 turning up to these proceedings because that's enough to</p> <p>8 get them home.</p> <p>9 I fully accept that in those cases that Mr ter Haar</p> <p>10 took you to, like Wescott v Roche(?), when they are</p> <p>11 saying the Tribunal went wrong -- well,</p> <p>12 Mr Justice Charles said that the earlier Tribunal went</p> <p>13 wrong when it was trying to balance out experts and say</p> <p>14 "We prefer X to Y", and were being a bit more like</p> <p>15 a civil court. I accept that's wrong. We know that's</p> <p>16 now wrong and they shouldn't have done that. But that</p> <p>17 doesn't mean that you go straight to whenever an</p> <p>18 appellant comes up with a piece of paper signed by</p> <p>19 someone with a PhD and a good university, the Secretary</p> <p>20 of State needn't bother turning up.</p> <p>21 The Secretary of State is entitled to put his</p> <p>22 possibilities in the basket and put his reputable</p> <p>23 scientists in the basket, and to look at all that</p> <p>24 together and then you decide whether it's far-fetched or</p> <p>25 not.</p> <p style="text-align: center;">Page 103</p>
<p>1 We agree. It does raise a question, but it's not</p> <p>2 answered by quickly skipping over all the problems and</p> <p>3 saying it raises a reasonable doubt.</p> <p>4 Also, he is saying "the dose levels that were</p> <p>5 measured and recorded". Well, I have jettisoned those.</p> <p>6 I'm Hallard. I used to be. Look at this AWE letter, it</p> <p>7 says that Mr Butler got 0.5 millisieverts. My numbers</p> <p>8 have gone up a lot since then.</p> <p>9 So that isn't enough to get you home. But what I am</p> <p>10 interested by is this technique of going to one</p> <p>11 assertion by an expert, then saying to Professor Thomas,</p> <p>12 "That person is not mad, are they? That person is</p> <p>13 reputable", and that statement sounds like you have</p> <p>14 a funny feeling and you think a reasonable doubt is</p> <p>15 raised, "Oh, we are home".</p> <p>16 That's the piling up of a lot of random</p> <p>17 possibilities into a heap, and then seeing if the jury</p> <p>18 has a gut reaction. But that's not the challenge, we</p> <p>19 regret, that is facing you. You can't just take</p> <p>20 selective concessions or comments and turn them into</p> <p>21 something else. You can put them into the pile as</p> <p>22 possibilities. But they don't have any other weight</p> <p>23 otherwise.</p> <p>24 The same applies to Professor Mothersill or anybody</p> <p>25 else where that attempt has been made. Professor Parker</p> <p style="text-align: center;">Page 102</p>	<p>1 That seems to be left out of Mr ter Haar's approach.</p> <p>2 So yes, Professor Parker gets in. No criticism, an</p> <p>3 eminent epidemiologist.</p> <p>4 MR JUSTICE BLAKE: As an epidemiologist.</p> <p>5 MR HEPPINSTALL: As an epidemiologist, but so does</p> <p>6 everything else, and then you have to do your exercise</p> <p>7 at that final level.</p> <p>8 Now, I'm going to turn to look at the NRPB and what</p> <p>9 value you can extract from that. Perhaps that would be</p> <p>10 a convenient moment.</p> <p>11 MR JUSTICE BLAKE: Righty-ho. We will break now. If we</p> <p>12 come back at 2 o'clock, how long do you think you will</p> <p>13 be?</p> <p>14 MR HEPPINSTALL: Based on the present running, I think that</p> <p>15 the mid-afternoon break -- by then I may have got either</p> <p>16 to the end or very near the end.</p> <p>17 MR JUSTICE BLAKE: So 3.15 to 3.30?</p> <p>18 MR HEPPINSTALL: Yes, and then it's a matter for Mr ter Haar</p> <p>19 how he feels. He can immediately respond or if he feels</p> <p>20 more time is necessary ...</p> <p>21 MR JUSTICE BLAKE: Yes. If you were on your feet at 3.30,</p> <p>22 do you think more than an hour is going to be needed?</p> <p>23 MR TER HAAR: The blunt answer is I want to discuss with my</p> <p>24 colleagues over lunch what we need to do.</p> <p>25 Probably not, actually. But of course if I say</p> <p style="text-align: center;">Page 104</p>

<p>1 that --</p> <p>2 MR JUSTICE BLAKE: No, not a pair of handcuffs, an enquiry.</p> <p>3 But can you have that discussion? Obviously it</p> <p>4 affects how long we sit tonight, and if it were possible</p> <p>5 without any compression of thought processes it has the</p> <p>6 benefit that we hear from you.</p> <p>7 MR TER HAAR: There is also the question as to whether or</p> <p>8 not, in the circumstances, the Tribunal is minded to</p> <p>9 permit any form of reply from Dr Busby, because some of</p> <p>10 the points raised are really directed at him rather than</p> <p>11 me. It's a matter for the Tribunal, obviously.</p> <p>12 I'm not going to trespass on his territory.</p> <p>13 MR JUSTICE BLAKE: No.</p> <p>14 MR HEPPINSTALL: As the public purse, I think we need to</p> <p>15 give an indication to the stenographers around that</p> <p>16 3 o'clock time contractually.</p> <p>17 MR JUSTICE BLAKE: Yes, quite.</p> <p>18 MR HEPPINSTALL: Much as we value them, they're not</p> <p>19 inexpensive. So a day saved is quite a sum of money.</p> <p>20 MR JUSTICE BLAKE: So if on the last push up the</p> <p>21 mountainside, we might sit a little later than we</p> <p>22 normally do, if we can, if we can do everything that we</p> <p>23 can within a --</p> <p>24 MR HEPPINSTALL: I think on this side of the room we would</p> <p>25 all be content.</p> <p style="text-align: center;">Page 105</p>	<p>1 Assuming that starts at 3.30, and if my Lord is</p> <p>2 willing to sit until at the latest 5 o'clock, we will</p> <p>3 finish.</p> <p>4 MR JUSTICE BLAKE: Yes.</p> <p>5 MR TER HAAR: So it does mean sitting a bit later.</p> <p>6 MR JUSTICE BLAKE: So if we are thinking perhaps 45 minutes</p> <p>7 for you or thereabouts --</p> <p>8 MR TER HAAR: That seems about right.</p> <p>9 MR JUSTICE BLAKE: With a bit of run over just in case.</p> <p>10 I think 5 o'clock will be it.</p> <p>11 MR TER HAAR: It all depends --</p> <p>12 MR JUSTICE BLAKE: So we will decide about our much valued</p> <p>13 stenographers at about 3.15 depending upon where</p> <p>14 Mr Heppinstall has got to.</p> <p>15 MR TER HAAR: I don't, of course, want to do anything other</p> <p>16 than put pressure on Mr Heppinstall, which I have now</p> <p>17 done as best I can.</p> <p>18 MR JUSTICE BLAKE: Right.</p> <p>19 MR HEPPINSTALL: My Lord, I said we were going to go to the</p> <p>20 NRPB study. Can we go to SB3, tab 3. This is the 1993</p> <p>21 update. The Tribunal may appreciate that when the study</p> <p>22 was set up, periodically they'd go back and look at the</p> <p>23 mortality and the cancer incidence numbers.</p> <p>24 MR JUSTICE BLAKE: Yes.</p> <p>25 MR HEPPINSTALL: If we turn to page 49, we see section 7.3</p> <p style="text-align: center;">Page 107</p>
<p>1 MR JUSTICE BLAKE: Yes. Can I ask that everyone who thinks</p> <p>2 that they will be seeking to reply, but given the</p> <p>3 reverse order, I'm not expecting much of a reply because</p> <p>4 the whole purpose of getting your retaliation in first</p> <p>5 was so that we could hear that engagement, but obviously</p> <p>6 I appreciate things arise which may not be, see if we</p> <p>7 can accommodate that, if we get a 3.30 start, by</p> <p>8 5 o'clock, 4.30 or 5.00.</p> <p>9 MR TER HAAR: Certainly. My indication originally was</p> <p>10 exactly that. I was hoping to get my retaliation in</p> <p>11 first, so to speak.</p> <p>12 MR JUSTICE BLAKE: That's my phrase, not yours. I'll take</p> <p>13 responsibility for that. Yes, because I think it would</p> <p>14 be useful if we can know clearly by about 3.15 where we</p> <p>15 are going.</p> <p>16 Right. 2 o'clock. Thank you.</p> <p>17 (12.52 pm)</p> <p>18 (The short adjournment)</p> <p>19 (2.00 pm)</p> <p>20 MR TER HAAR: My Lord, before my learned friend starts,</p> <p>21 I wondered if it would be helpful to give you the</p> <p>22 results of our deliberations, which are these.</p> <p>23 I understand that one or other Dr Busby wants to say</p> <p>24 a few words and talks in terms of a quarter of an hour,</p> <p>25 so I allowed 20 minutes for that.</p> <p style="text-align: center;">Page 106</p>	<p>1 that deals with leukaemia and multiple myeloma and you</p> <p>2 may already have seen this was where the raised</p> <p>3 incidence was thought to be.</p> <p>4 MR JUSTICE BLAKE: Yes.</p> <p>5 MR HEPPINSTALL: At page 51, the last paragraph of that</p> <p>6 section says:</p> <p>7 "On balance, it seems most likely that the excess of</p> <p>8 leukaemia in the test participants compared with the</p> <p>9 controls that was recorded in the previous report was,</p> <p>10 as with multiple myeloma, a chance finding due to the</p> <p>11 occurrence of an exceptionally low rate of disease in</p> <p>12 the controls. The possibility that the participants did</p> <p>13 experience some small risk of developing leukaemia in</p> <p>14 the first 25 years after the test cannot be ruled out,</p> <p>15 but if they did, there is no evident explanation for</p> <p>16 it."</p> <p>17 So that is where the NRPB studies come out on --</p> <p>18 MR JUSTICE BLAKE: That's the last word on epidemiology of</p> <p>19 these war veterans, is it?</p> <p>20 MR HEPPINSTALL: For now, yes. The project remains open for</p> <p>21 now.</p> <p>22 MR JUSTICE BLAKE: Before us?</p> <p>23 MR HEPPINSTALL: Yes. That leukaemia in the first 25 years</p> <p>24 is the genesis for the Secretary of State's policy that</p> <p>25 if you attended the test and you got leukaemia within</p> <p style="text-align: center;">Page 108</p>

<p>1 the first 25 years, a war pension is awarded 2 automatically. 3 MR JUSTICE BLAKE: Yes. So that runs out round about 1983 4 or 1984/1985. 5 MR HEPPINSTALL: Exactly, my Lord, depending upon which test 6 you attended. 7 What I am curious about is that in the Hogan Lovells 8 submissions, this is used as evidence of dose. 9 Now, first of all, if there was an excess of 10 leukaemia, it's not that surprising because all 11 leukaemias, apart from CLL, and I think that's a phrase 12 you will see throughout all the epidemiology in this 13 case, are highly radiogenic, highly sensitive to 14 radiation. Non-CLL leukaemias, that is the disease we 15 are looking for really. It's very sensitive to 16 radiation, and we know that this study covers -- and 17 this is Professor Parker's error when she was trying her 18 hand at dosimetry -- this study covers people who got 19 150 millisieverts through various different activities 20 that they were called upon to do and bravely discharged 21 their duties at the test, whether they are flying 22 through clouds, whether they are officers who 23 volunteered to be the indoctrinees in Australia, whether 24 they may or may not have encountered fallout on 25 HMS Diana.</p> <p style="text-align: center;">Page 109</p>	<p>1 agree on the biological effect -- so let's take LSS. If 2 we agree that RERF half knows what it's doing when it 3 comes to recording the cancers, therefore the biological 4 effect remains the same. If you increase the dose, 5 because they have got the dosimetry wrong, as I think is 6 the allegation against us when it comes to NRPB, the 7 risk per gray goes down, not up. Because it's the same 8 biological effect on a higher dose, not the low dose 9 case that's been run. 10 So I don't really understand the argument in any 11 event. 12 My next topic, and I'm very grateful that Ms Cohen 13 has corrected my numbering on my document, is 14 paragraph 105, radiogenicity. 15 I have just tabulated where the Secretary of State 16 is now. I do want to just go back to pancreatic cancer, 17 to try and explain the Secretary of State's position. 18 Page 34, paragraph 105, I hope. 19 The Secretary of State didn't cross-appeal to 20 Mr Justice Charles. It was quite prepared, even though 21 the FTT had rejected a number of findings, particularly 22 on radiogenicity, to accept that FTT's decision as the 23 new basis of a new policy, which -- 24 MR JUSTICE BLAKE: The FTT's decision? 25 MR HEPPINSTALL: Yes. So the FTT's decision came in. We</p> <p style="text-align: center;">Page 111</p>
<p>1 So there are high risk groups included within this 2 study, and therefore the most radiosensitive of the 3 diseases looked at, apart from maybe cataracts, but 4 that's not a solid cancer and not a blood cancer and 5 therefore not looked at, the fact there was an excess 6 doesn't mean that you can say that there's some evidence 7 of dose in our small appellant population. 8 MR JUSTICE BLAKE: Yes. 9 MR HEPPINSTALL: In any event, we can see that the 10 conclusion didn't quite come out with that anyway. 11 MR JUSTICE BLAKE: Yes. 12 MR HEPPINSTALL: Then the final conclusion is on page 53. 13 Section 8: 14 "It is concluded from this study that participation 15 in the nuclear weapon testing programme has not had 16 a detectable effect on our participants' expectation of 17 life, nor on their risk of developing cancer or other 18 fatal diseases." 19 That's the end result. 20 MR JUSTICE BLAKE: Then there's a possibility of 25 years. 21 MR HEPPINSTALL: Yes. 22 So I don't really understand how you can imply some 23 sort of excessive dose. But the other thing about that 24 argument, and it's an argument that I tried to challenge 25 with Professor Sawada and with others, is that if we</p> <p style="text-align: center;">Page 110</p>	<p>1 did nothing about it. The appellants took it to 2 Mr Justice Charles. We were quite prepared to award 3 pensions based on -- 4 MR JUSTICE BLAKE: And they found pancreatic cancer was 5 radiogenic? 6 MR HEPPINSTALL: Yes. 7 MR JUSTICE BLAKE: I haven't seen the FTT decision. 8 MR HEPPINSTALL: Right. Well, they did. 9 MR JUSTICE BLAKE: That seems to be a bit of a jigsaw. 10 MR HEPPINSTALL: No, they did and that is why, when another 11 case came along like Mr Williams, who was the only 12 veteran who succeeded, we implemented that finding by 13 awarding Mr Battersby a war pension. 14 MR JUSTICE BLAKE: Right. 15 MR HEPPINSTALL: One of the effects, though, of 16 Mr Justice Charles' ruling is to take away that basis 17 for a policy. So we are back to reset and we are back 18 to where we are now. 19 So that explains what otherwise looks -- 20 MR JUSTICE BLAKE: I think you were indicating that when 21 I asked you at the outset. 22 MR HEPPINSTALL: But just to make that clear. 23 MR JUSTICE BLAKE: But pancreatic cancer is not radiogenic. 24 I've got: never; question mark? 25 MR HEPPINSTALL: Well, I think we discussed "never" earlier.</p> <p style="text-align: center;">Page 112</p>

<p>1 MR JUSTICE BLAKE: If you blast with enough --</p> <p>2 MR HEPPINSTALL: Well, pancreatic cancer wouldn't be your</p> <p>3 problem if you blast with enough. In fact, it's more</p> <p>4 blasting a particular organ actually. You're going to</p> <p>5 get pancreatic cancer if you blast the pancreas or some</p> <p>6 organ interacting with it and you are going to get an</p> <p>7 effect. The de Vathaire paper is about diabetes coming</p> <p>8 out of 4 to 5 grays on the tail of the pancreas.</p> <p>9 I agree that maybe we should be slightly more</p> <p>10 accurate and talk about radiogenicity at our end of the</p> <p>11 dose curve, rather than the other extreme end.</p> <p>12 We do have some thresholds. Heart disease, 500</p> <p>13 millisieverts; cataracts, 200 millisieverts, although</p> <p>14 I do find what the ICRP is saying about that difficult</p> <p>15 to follow because the ICRP is talking about</p> <p>16 a radiological protection limit and quite low,</p> <p>17 20 millisieverts. But then when it reviews the</p> <p>18 epidemiology, it leaps back up to 500 millisieverts.</p> <p>19 200 millisieverts are where we are going on cataracts,</p> <p>20 but it's not easy.</p> <p>21 Then the other conditions. Pancreatic cancer we</p> <p>22 have discussed. Chronic lymphatic leukaemia you saw the</p> <p>23 debate.</p> <p>24 MR JUSTICE BLAKE: On that, you have your tab -- at</p> <p>25 paragraph 10 is US Government, isn't it? Yes, the US</p> <p style="text-align: center;">Page 113</p>	<p>1 MR JUSTICE BLAKE: All right. So I've got a side note on</p> <p>2 this saying: but see NIOSH.</p> <p>3 MR HEPPINSTALL: Yes, that's a different -- the American</p> <p>4 civilian scheme and the British civilian scheme is the</p> <p>5 same as lists. Dr Haylock did his calculation over at</p> <p>6 the HPA. If you're over 20 per cent, I think, for</p> <p>7 British, you get compensation, but less the other half.</p> <p>8 So you get 80 per cent compensation if you are 20 per</p> <p>9 cent, or 60/40 if you are a Sellafield worker. The</p> <p>10 American system is the same, but they start at 50,</p> <p>11 rather than at 20.</p> <p>12 But for nuclear test veterans in America, if you</p> <p>13 were there and you're on the list of diseases, you get a</p> <p>14 lump sum payout. The French scheme, if your risk of</p> <p>15 exposure was more than negligible and your condition is</p> <p>16 on the list, you get an award.</p> <p>17 New Zealand we have talked about.</p> <p>18 Australia is a war pension scheme such as this. The</p> <p>19 only -- you will be envious of the Australian scheme</p> <p>20 because the Australian Government legislates the</p> <p>21 conditions and the thresholds. So the test is</p> <p>22 reasonable hypothesis, but you are also told when the</p> <p>23 reasonable hypothesis is passed, and you are</p> <p>24 told: cataracts 200 millisieverts, or whatever. That's</p> <p>25 not the right number. But you get more of a steer.</p> <p style="text-align: center;">Page 115</p>
<p>1 military scheme.</p> <p>2 MR HEPPINSTALL: Yes.</p> <p>3 MR JUSTICE BLAKE: Leukaemia other than chronic lymphocytic</p> <p>4 leukaemia, CLL, but we were shown NIOSH. Is that the</p> <p>5 civilian scheme or military scheme?</p> <p>6 MR HEPPINSTALL: Civilian. That's radiation worker.</p> <p>7 MR JUSTICE BLAKE: But in another part of the US Government</p> <p>8 for radiation workers, CLL can be now considered</p> <p>9 radiogenic in certain circumstances. Age 15 or over</p> <p>10 500 millisieverts.</p> <p>11 MR HEPPINSTALL: Yes. I think I have seen, my Lord, that</p> <p>12 there's a motion before the Senate to be filed for the</p> <p>13 other scheme to catch up.</p> <p>14 MR JUSTICE BLAKE: So military to mirror civilian?</p> <p>15 MR HEPPINSTALL: Possibly.</p> <p>16 MR JUSTICE BLAKE: But the data you have given us at</p> <p>17 footnote 10 is the current military scheme?</p> <p>18 MR HEPPINSTALL: As far as I can be sure when I'm commenting</p> <p>19 on another government scheme. So I'm relying on their</p> <p>20 public statements.</p> <p>21 MR JUSTICE BLAKE: Yes.</p> <p>22 MR HEPPINSTALL: It's interesting that you raise that,</p> <p>23 my Lord, because I have fallen foul of looking at the</p> <p>24 French website and somebody tells me they have moved on</p> <p>25 a little bit. But that's the best I can do.</p> <p style="text-align: center;">Page 114</p>	<p>1 MR JUSTICE BLAKE: So it's a calculation exercise?</p> <p>2 MR HEPPINSTALL: It is, although --</p> <p>3 MR JUSTICE BLAKE: You don't come with your law reports.</p> <p>4 MR HEPPINSTALL: I think Dr Busby has successfully persuaded</p> <p>5 a tribunal to do something different with the dose. But</p> <p>6 it's a different question.</p> <p>7 MR JUSTICE BLAKE: Yes. That's about tissue and --</p> <p>8 MR HEPPINSTALL: Exactly.</p> <p>9 So there we go. That's maybe just a matter of</p> <p>10 interest rather than anything else.</p> <p>11 MR JUSTICE BLAKE: Yes.</p> <p>12 MR HEPPINSTALL: So I just want to turn now very quickly to</p> <p>13 note how we have dealt with the Battersby/Smith case.</p> <p>14 Not only have we made submissions urging you not to take</p> <p>15 into account the expert evidence, but from paragraph 88</p> <p>16 onwards, at page 19, we've addressed the stepping</p> <p>17 stones.</p> <p>18 MR JUSTICE BLAKE: Yes.</p> <p>19 MR HEPPINSTALL: I think I have gone to the ones that</p> <p>20 I wanted to go to. The only one I think I haven't gone</p> <p>21 to is you will recall that -- it's on page 29. The</p> <p>22 title is "Issue 7".</p> <p>23 MR JUSTICE BLAKE: That was: how come four of them have got</p> <p>24 pancreatic cancer? All right.</p> <p>25 MR HEPPINSTALL: Yes. So that's how we have answered it.</p> <p style="text-align: center;">Page 116</p>

<p>1 Then in the individual appellants' papers, we have 2 also -- and we will look at it in a moment -- gone 3 through the stepping stones. 4 There's something that Dr Cecilia Busby said 5 yesterday about Edwards. She took you to paragraph 20 6 of Mr Justice Charles' judgment, and there's a phrase 7 there she read out which was, I think, "agreed by the 8 parties that Edwards was the right test". Crucially we 9 must realise agreed by the parties below in the first 10 FTT. In the Upper Tier we were at odds over Edwards, 11 and in fact Mr Justice Charles found that Edwards was 12 completely the wrong approach. 13 So therefore you can forget about Edwards. Edwards 14 was an attempt to describe what reliable evidence is and 15 we all quite liked the idea that there was a hypothesis 16 and then a bit more evidence and so forth, but 17 Mr Justice Charles said that that didn't really add 18 anything to the word "reliable". The Edwards case was 19 actually a JR about commencement date, not about 20 Article 41. 21 So I was just concerned that when that was read out, 22 we ought to be aware of what -- 23 MR JUSTICE BLAKE: Yes. 24 MR HEPPINSTALL: We don't want to get misled. 25 MR JUSTICE BLAKE: Edwards was a High Court decision?</p> <p style="text-align: center;">Page 117</p>	<p>1 of causation and reasonable doubt at 109 onwards. 2 I have touched on Sienkiewicz and the Sienkiewicz gloss 3 in Williams, but in fact you probably realised when you 4 read that that I'm just showing how it works in other 5 contexts, and then saying: if there's a very low risk, 6 it's of evidential significance. 7 MR JUSTICE BLAKE: Just looking at the various quotations, 8 I'm afraid I haven't had time to read all these 9 authorities overnight, but at 113 Lord Phillips quotes 10 the Chief Justice of the Supreme Court of Texas. Heaven 11 forbid that I should ever agree with such a person, but 12 line 2, "properly designed and executed epidemiological 13 studies could form part of evidence supporting causation 14 in a toxic tort case", seems to be common sense, 15 possibly true? 16 MR HEPPINSTALL: Yes, my Lord. 17 MR JUSTICE BLAKE: Going then to Lord Toulson, I think it's 18 three sentences from the end: 19 "If it is a known fact ..." 20 Although we are not here dealing with causation on 21 the balance of probabilities, so some of the 22 difficulties at the heart of this jurisprudence are not 23 of interest to us, epidemiology can play a role. 24 MR HEPPINSTALL: Yes. 25 MR JUSTICE BLAKE: But it's playing a role, if proper, if</p> <p style="text-align: center;">Page 119</p>
<p>1 MR HEPPINSTALL: Yes. Divisional Court, actually, because 2 it was a judicial review rather than an appeal from 3 a PAT. 4 MR JUSTICE BLAKE: I don't think Mr Justice Charles will be 5 purporting to overrule it, will he? 6 MR HEPPINSTALL: That's interesting. We did have that 7 debate, actually, before Mr Justice Charles about 8 between the Upper Tribunal sitting as a court of record, 9 who knocks out -- anyway. It doesn't matter. Edwards 10 has gone. It is not the right test for Article 41. 11 He can distinguish it. He doesn't need to overrule 12 it, because Edwards was on a different question. It was 13 about: when should the war pension run from? The 14 Secretary of State made a decision. It was judicially 15 reviewed, and the Secretary of State said: actually, we 16 should run the war pension from when the Secretary of 17 State knew that the evidence had crossed the reliable 18 threshold, which is when it went from hypothesis to 19 consensus, or whatever the test was. 20 We then tried use it, both parties tried to use it, 21 to give the last FTT a guide, but Mr Justice Charles 22 said it was not a good guide. 23 I would hate for Edwards to creep back in. 24 MR JUSTICE BLAKE: Right. 25 MR HEPPINSTALL: There is a lengthy section on probabilities</p> <p style="text-align: center;">Page 118</p>	<p>1 relevant, and if you've got a striking effect. 2 MR HEPPINSTALL: Yes. I don't demur from any of that, 3 my Lord. I don't make the submission that somehow the 4 NRPB result gets me home. It's about a population, not 5 about -- it's reassuring, but not much else. 6 Let's have a look at the appellants, because they 7 haven't had much of a mention in three weeks. 8 It is important to recall that whilst I'm sure you 9 will make generic findings where convenient and 10 appropriate, the actual active findings have to be in 11 the appeals. 12 They are separate cases with separate facts. So if 13 we just now turn to appendix B. 14 MR JUSTICE BLAKE: Which is tab 2? 15 MR HEPPINSTALL: Yes. 16 MR JUSTICE BLAKE: It is just that these don't have appendix 17 letters on them. 18 MR HEPPINSTALL: Sorry, mine do. I do apologise. 19 MR JUSTICE BLAKE: Tab B, appendix 4. Then it does. Tab 4. 20 Tab 2 is SSD summary position. 21 MR HEPPINSTALL: Lesson 1: work off same bundle as Tribunal. 22 Failed. 23 MR JUSTICE BLAKE: Annex A, I think, is the skeleton 24 argument. 25 MR HEPPINSTALL: Yes.</p> <p style="text-align: center;">Page 120</p>

<p>1 MR JUSTICE BLAKE: That didn't have it on, so I have written 2 that on. 3 MR HEPPINSTALL: Thank you. 4 MR JUSTICE BLAKE: Appendix B is our tab 4. 5 MR HEPPINSTALL: Yes, "Secretary of State's submissions, 6 individual appellants". 7 MR JUSTICE BLAKE: Yes. 8 MR HEPPINSTALL: And the first thing is a table which we 9 hope you will find useful. The appellants or their 10 successors, children or spouses, have given witness 11 statements. They are in the library and we have given 12 the references should you need them. 13 You've got some other basic details which hopefully 14 will be of assistance. We note when they gave live 15 evidence but the live evidence was not transcribed. So 16 there's no copy of the live evidence. But I think it's 17 fair to say that nobody is relying in any substantial 18 way on the live evidence that they gave. I think they 19 had an opportunity to state whatever live evidence they 20 wanted to state. 21 MR JUSTICE BLAKE: So no critical fact relevant to 22 possibilities, probabilities. 23 MR HEPPINSTALL: Not really. 24 MR JUSTICE BLAKE: They are only to be found in a document 25 we don't have.</p> <p style="text-align: center;">Page 121</p>	<p>1 urology, Dr Braidwood, and then you get our final 2 conclusion in each case. 3 So hopefully that gives you a guide to the way in 4 which we have -- 5 MR JUSTICE BLAKE: Right. 6 MR HEPPINSTALL: This is also done with cross-references 7 back to the appendix which Hogan Lovells put in on each 8 appellant. So we've done a bit of answering from time 9 to time of that appendix. 10 So that's Mr Abdale. Then as you go through, you 11 get Mr Beeton. He's an atherosclerosis and myocardial 12 infarction is his condition. Again, we go through, this 13 is one of the ones where if you turn through to page 11 14 on causation, Mr Hayward, at the second paragraph there, 15 he's our cardiology expert, had noted that Mr Beeton had 16 significant risk factors for his heart disease, namely 17 hyperlipidaemia and hypertension. Those are the sort of 18 things that we ask you to take into account. 19 Mr Butler is next. Mr Butler is the immune system 20 dysfunction and then a host of streptococcal-type 21 infections, and that's the case in which at page 19 his 22 treating consultant popped his case into the medical 23 literature. It's in the library at 318, and he tells us 24 that the pauci-immune crescentic glomerulonephritis with 25 discitis responded to antibiotics alone. So we find it</p> <p style="text-align: center;">Page 123</p>
<p>1 MR HEPPINSTALL: Indeed, happily. 2 Indeed, the good thing is, if you turn over the 3 page, you will see that mostly the agreed factual 4 background is very broad and the disputed facts are very 5 narrow in each case. 6 Again, that's because we are fighting a different 7 forensic context than we were fighting before. 8 Then it all comes out, as far as we are concerned, 9 with the exposures which we have put in a table: 10 External 3, external equivalent on the skin. 11 MR JUSTICE BLAKE: In the first one there are disputed 12 facts. He didn't get into the controlled area. 13 MR HEPPINSTALL: Well, we put that in there. I don't think 14 he's actually saying he went in a controlled area. 15 I think he is saying he had unrestricted access to the 16 Island. It would depend on what time, but given that 17 Mr Hallard spread the whole thing all over, it doesn't 18 really matter. 19 Then we get the upper limit of dose assessed by 20 Mr Hallard, 310 and internal 2. 21 Then we give you an exposition on his two 22 conditions, bladder cancer and cataracts, and refer to 23 Thomas and Haylock and then we go back to some of the 24 evidence we still rely on, Professor Kaldor for 25 epidemiology, Mr Acheson for cataracts, Mr Hrouda for</p> <p style="text-align: center;">Page 122</p>	<p>1 very difficult to see how those conditions could be 2 linked back to radiation in 1957/1958. 3 The immune system dysfunction, we agree that it's 4 a deterministic effect seen in Nagasaki and Hiroshima. 5 If you have a high enough dose, your immune system will 6 collapse, but in fact we see -- I'm sure you will read 7 Dr Braidwood's report and the medical papers in due 8 course, but you will see that in fact immunosuppression 9 was not even commenced in his case. 10 So whilst you can see that some of these 11 conditions -- you could have an infection if your immune 12 system was dysfunctional, it wasn't in fact 13 dysfunctional. 14 It's always struck me that it's odd that in a way 15 Mr Butler is one of the ones with a badge, and one of 16 the ones who went to Ground Zero after the balloon 17 shots. So he's in a higher risk category than the other 18 appellants, but yet absolutely no radiogenic disorder. 19 Now, after each appellant, I forgot to mention, you 20 get a chronology. We may well be overburdening you, and 21 if we are, I apologise. But we did provide it to the 22 other Tribunal. It's basically a distillation of 23 everything in each appellant's file. These are now 24 quite old and they run out in 2010, which is when they 25 came into the jurisdiction of the last Tribunal.</p> <p style="text-align: center;">Page 124</p>

<p>1 But if you're interested in a particular medical 2 fact or other fact in a particular case, you might find 3 them useful. 4 MR JUSTICE BLAKE: But any developments after 2010 are 5 not -- 6 MR HEPPINSTALL: They would be of case management relevance 7 for the last Tribunal. So I didn't think we needed to 8 bring them up to date. 9 Mr Hatton, a little bit of explanation. It's 10 page 25. He's got or had polycythaemia rubra vera, 11 which is a very rare blood condition. If you turn over 12 to page 26, you will see that once upon a time the 13 Secretary of State, at the top of the page there, second 14 paragraph, used to grant a war pension on the basis of 15 PRV, following the Caldwell paper, which is about 16 American test veterans. That's no longer the Secretary 17 of State's policy. We rely on Professor Catovsky, 18 a well-known famous haematologist, who in fact 19 criticises the Caldwell paper and himself says he's 20 unaware of a link, as does Dr Braidwood and 21 Professor Thomas. 22 I should say that in some cases Dr Braidwood's work 23 is summary only. So you will see when you look at the 24 report, she's summarising other work, something that 25 your colleagues may know the medical adviser will do to</p> <p style="text-align: center;">Page 125</p>	<p>1 MR JUSTICE BLAKE: In addition to Christmas Island, there 2 was another exposure pathway? 3 MR HEPPINSTALL: Yes. I think it's something to do with the 4 Windscale accident that you may recall historically 5 occurred, and that occurred at a time when he was 6 stationed near Dunstable. 7 MR JUSTICE BLAKE: I happen to know where Dunstable is, yes. 8 MR HEPPINSTALL: That pathway is still there. It's never 9 been put forward strongly, I don't think, by the Hogan 10 Lovells appellants, but I did feel we ought to repeat 11 our submission on it. 12 So because he wasn't there on Christmas Island when 13 these tests were going on in Malden Island, he has 14 a nil/nil external, but a very low internal because 15 I think one of the alleged pathways that he says is that 16 he worked not far from the airport. I think he was on 17 wireless duties. Therefore, Mr Hallard has thought -- 18 he says, "Well, I was within a certain distance of where 19 they were bringing the contaminated planes in". So very 20 generously, Mr Hallard said it's possible something fell 21 off the plane or he came within some distance. 22 MR JUSTICE BLAKE: The airport is on the northern rim of the 23 Island, isn't it? 24 MR HEPPINSTALL: Yes. 25 Now, there's a difficulty with Mr Hughes that we</p> <p style="text-align: center;">Page 127</p>
<p>1 assist the Tribunal in war pension cases. 2 But in other cases, for example, Mr Butler's, where 3 we don't have a streptococcal infection expert, 4 Dr Braidwood is looking at the medical records as a GP 5 and occupational medic, drawing primary conclusions 6 rather than relying on the work of others. 7 Now, Mr Hughes, he is the only appellant who was on 8 Christmas Island for the first three tests. Page 35. 9 Those three tests were actually not on Christmas Island. 10 They were on Malden Island, 700 kilometres away. So 11 there's a difference there. 12 He's the chap we mentioned earlier who thought there 13 was a test before Grapple X. He also made some 14 allegations about a fire near Dunstable in Bedfordshire 15 which again we just see no basis for that raising any 16 reasonable doubt at all. 17 MR JUSTICE BLAKE: I haven't got that. 18 MR HEPPINSTALL: Page 36. I think it's still in the Hogan 19 Lovells appendix. That's why -- I wasn't planning to 20 write anything about it, but it's still there as 21 a possible exposure pathway. 22 I have to say, when he gave oral evidence, not 23 everybody understood what he was trying to say. 24 I think, with the greatest respect to Mr Hughes, he's 25 a troubled individual.</p> <p style="text-align: center;">Page 126</p>	<p>1 note at page 36, because for reasons that now escape me, 2 and are lost to time, Rosenblatts did not provide any 3 causation evidence in respect of Mr Hughes and that 4 persisted before the last Tribunal and it's still the 5 case, as far as he's concerned, before this Tribunal. 6 I have said, I think, despite the passage of time 7 and hence the ample opportunity to produce such 8 evidence, none has been provided, and the position on 9 the HL appendix is that the only issue for the Tribunal 10 to consider is Mr Hughes' claimed exposure to an 11 ionising radiation and nothing further is said. 12 We have gone on to address causation, but if you 13 feel, you know, that sort of case management point that 14 there's been enough time isn't fair, and you want to 15 leave that to another Tribunal and just decide exposure, 16 so be it. 17 Mr Lovatt is heart conditions again. At page 42 we 18 see that Professor Hayward, I think he now is -- he had 19 uncontrolled hypercholesterolemia, hypertension and 20 a family history of cardiac problems. 21 Mr Pritchard is claiming for a range of conditions, 22 or at least it is the late Mr Pritchard, so his widow. 23 His cause of death was bronchopneumonia, 24 cardio-respiratory failure, and they are of course the 25 primary causes of death. They are caused by Berger's</p> <p style="text-align: center;">Page 128</p>

<p>1 nephropathy, hypertensive heart disease, arterial 2 atheroma and type 2 diabetes. I think it's the type 2 3 diabetes and the heart disease which we concentrate 4 upon. 5 This is the case where attention was drawn by, 6 I think, Professor Parker to the de Vathaire paper. If 7 you look at page 46, Professor Thomas points out that 8 de Vathaire was 65 cases of childhood cancer, the 9 patients receiving 10 gray or more to the tail of the 10 pancreas. It's not surprising that there was an 11.5 11 relative risk for diabetes in those circumstances. But 12 that can't in any way relate to the cases that we are 13 looking at. 14 There are also some other risk factors that were 15 noted as well which you can see in the following 16 paragraph. 17 This is quite a good case, if you turn over the 18 page, to show how we have presented the debate between 19 Parker, Mothersill, Braidwood and so forth. So that was 20 the interplay between the experts below. 21 Mr Selby. He has a different condition entirely. 22 He's got a fibrosing lung condition, or had. You can 23 see how old these cases are. The date of decision 24 there, the Secretary of State made the war pension 25 decision on 8 March 2006, over ten years ago. It is</p> <p style="text-align: center;">Page 129</p>	<p>1 territory. In any event, that's, I think, a different 2 type of lung fibrosis when you look into the evidence. 3 There was, if you look at the end of page 59, 4 a report again in the medical literature about 5 a different veteran on HMS Warrior, which was I think an 6 aircraft carrier off Malden Island for the first three 7 Grapple tests, where there was a diagnosis of IFA. But 8 if you read that paper, which is in the library, you 9 will see that that is assuming an acute radiation 10 exposure. It doesn't actually discuss dose at all. 11 Right. I think of this cohort we have just got Shaw 12 and Sinfield left. 13 Shaw is a case of sub-capsular cataract. Again, you 14 get Professor Kaldor, Mr Acheson, from Moorfields, 15 Dr Braidwood, Professor Thomas, and then Dr Haylock runs 16 the numbers. As we have seen, there's a 0.1 per cent, 17 99.9 per cent against, given the -- 18 MR JUSTICE BLAKE: Where does Mr Shaw begin? Page 63? 19 MR HEPPINSTALL: 63, I beg your pardon. 20 MR JUSTICE BLAKE: Got it, sorry. 21 MR HEPPINSTALL: A sapper with the Royal Engineers. His 22 cataracts are a very radio -- the lens of the eye is 23 very radiosensitive. That's why you wear goggles and 24 things for dental x-rays and so forth. So we fully 25 accept it's radiogenic. I also accept that there's</p> <p style="text-align: center;">Page 131</p>
<p>1 still on appeal. 2 Mr Andrew Selby, his son, gave evidence. You see 3 that Mr Hallard has assessed his dose. Ideopathic 4 fibrosing alveolitis by definition is medically 5 idiopathic, although I should say that there's authority 6 in this jurisdiction that medical ideopathology does not 7 let the Tribunal off. It's quite possible for it to be 8 caused by -- 9 MR JUSTICE BLAKE: It may have a cause even if you don't 10 know what it is. 11 MR HEPPINSTALL: Yes. Well, the fact that the medicine 12 describes it as ideopathic or lacking medical aetiology 13 doesn't stop the law. Actually that's not just the law 14 in this jurisdiction, but the law in civil courts. 15 MR JUSTICE BLAKE: Yes. 16 MR HEPPINSTALL: But in any event, he has some interesting 17 other risk factors because he was a miner, I think, 18 in -- yes, top of page 59: 19 "These documents confirm that Mr Selby worked as 20 a miner for ten years and thereafter as a maintenance 21 fitter in the Carbon Black factory. The exhibit to Mr 22 Andrew Selby's witness also attests to this employment 23 history." 24 There is a type of lung fibrosis that you can get at 25 5 sieverts and above but clearly we are not in that</p> <p style="text-align: center;">Page 130</p>	<p>1 difficulties on the threshold, but at that level of 2 dose, when you run the numbers with Dr Haylock, it's 3 99 per cent against. 4 Mr Sinfield. Mr Sinfield was a claimant before 5 Mr Justice Foskett. That's why it's the witness 6 statement that was before him which is now before you. 7 He also made a war pension claim. You see his dose 8 there, 0.12 and 1. This is non-Hodgkin's lymphoma, 9 which I freely accept that some of our nuclear allies 10 accept is radiogenic, but based on the evidence of 11 Professor Catovsky, and what's important is that 12 Professor Catovsky points out that actually NHL is 13 a real mixed bag of different conditions. This was 14 anaplastic large cell lymphoma. He doesn't help you 15 because it says it's unknown aetiology. 16 This actually shows you why sometimes there's 17 a difference -- a problem with the epidemiology. 18 Epidemiology will often talk about leukaemia, or it will 19 talk about NHL, and in fact there's lots of different 20 types of leukaemia, lots of different types of NHL. 21 It's a problem with the epidemiology. 22 But as far as we can tell on the evidence, there 23 isn't a radiogenic link between NHL, ALCL, and that sort 24 of dose of ionising radiation. 25 We now turn to the two appeals that stand apart by</p> <p style="text-align: center;">Page 132</p>

<p>1 way of their representation. Donald Battersby begins at 2 page 76, and we have taken a slightly different approach 3 because -- well, first of all, we have given you a bit 4 more information about Operation Buffalo. You will see 5 that these are tests of a different order, both in terms 6 of yield -- we are talking kiloton tests here, not 7 megaton. These are atomic weapons. 8 You will also see that distances from the ground are 9 far closer to the ground. They are on the ground in one 10 case. 11 Therefore, entrainment, a large amount of dust into 12 the cloud. 13 MR JUSTICE BLAKE: These are run. 14 MR HEPPINSTALL: Sorry? 15 MR JUSTICE BLAKE: That's a runner. 16 MR HEPPINSTALL: Absolutely. As I said before, when you 17 look at page 77, he has maintained that he serviced the 18 "Sniffer" aircraft and he helped look after them and he 19 made this claim that he was drafted into the active 20 handling flight. He wasn't supposed to be a member, but 21 he was drafted in to help clean up, and we have just now 22 assumed that. We have assumed that in his favour. 23 That's why he has a high dose by our standards. So 24 10 millisieverts external, 680 millisieverts, including 25 11 to the eyes, skin and a high internal dose of</p> <p style="text-align: center;">Page 133</p>	<p>1 I have mentioned co-deposition at the bottom, the 2 fact that the government's answer to no alpha was 3 monitoring gamma because of co-deposition. I'm sure you 4 will have picked that up from Mr Johnston's expert 5 evidence if you have had an opportunity to read it, and 6 so on. We reject, as you know, the ECRR way of looking 7 at things and you will see that here. 8 I think I may have missed it out earlier, but it was 9 interesting when Dr Busby took Professor Thomas and 10 Dr Haylock through those papers about uranium, and each 11 paper had a different problem. There was groundwater in 12 South Carolina. There were uranium miners. There were 13 the US veterans from the Gulf War. 14 I do find that illustrative of the ECRR methodology. 15 It's also the way in which Professor Schmitz 16 Feuerhake -- 17 MR JUSTICE BLAKE: Drawing abstract conclusions from 18 particular studies which don't justify a more -- 19 MR HEPPINSTALL: Exactly, and then sort of multiplying them 20 and saying, "There we go". 21 I'm happy to multiply them and go, "Mm, now, there's 22 an issue that someone ought to look into", but you can't 23 multiply them all up and then say something certain and 24 dramatic about them, especially when it comes to those 25 depleted uranium papers where the papers themselves were</p> <p style="text-align: center;">Page 135</p>
<p>1 43 millisieverts. 2 The issue in his case is one that's been extensively 3 rehearsed before you, which is whether chronic lymphatic 4 leukaemia is radiogenic. It is something that is 5 debated. I fully accept that. You can see that from 6 the NIOSH information. 7 You will see that most epidemiologists or people 8 writing these papers will take out CLL from leukaemia 9 when just discussing ionising radiation, and we don't 10 think that a reasonable doubt is raised on the evidence. 11 There was a debate below, a hot debate, about the 12 Abrenko(?) and Zablotska paper that Professor Thomas has 13 reviewed. These are the Chernobyl liquidation workers. 14 You will see that three paragraphs from the bottom. 15 Hopefully now the idea that Professor Catovsky 16 didn't refer to it or whatever has all gone away. 17 Professor Thomas has looked at it and commented upon it. 18 We have then taken the stepping stones in each case 19 as put forward by Dr Busby and we have addressed them 20 from page 79 onwards. 21 Mostly the response is often that Mr Hallard has 22 taken matters into account. I have noted this point 23 about plutonium and uranium, and plutonium being the 24 greater danger as agreed by Regan and Johnston, and 25 given you some references for that.</p> <p style="text-align: center;">Page 134</p>	<p>1 saying there's an effect from being in the Gulf. There 2 are lots of environmental and other factors that these 3 veterans were probably exposed to in the Gulf. Depleted 4 uranium is one of them, but we don't know. 5 You have to read that and stop and then move on. 6 You can't read that and then say, "Right, I'll add that 7 into Chernobyl, I'll divide it by South Carolina 8 drinking water, and then I've got a case". That's not 9 what Mr Justice Charles had in mind, taking bits of 10 evidence, adding them all up, not least because I'm not 11 quite sure how you would express that in your reasoned 12 judgment. 13 So that's Mr Battersby -- 14 MR JUSTICE BLAKE: But nevertheless, on the assumed facts of 15 washing down contaminated aircraft in Maralinga, we have 16 an internal equivalent skin dose of 680. 17 MR HEPPINSTALL: Skin dose, yes, but remember we are dealing 18 with chronic lymphocytic leukaemia. So I think 19 Dr Haylock keeps you on the straight and narrow and 20 tells you to use the internal for a blood disorder of 21 that type. 22 But, you know, I'm phlegmatic that it's the highest 23 dose. It arises because we have assumed in his favour. 24 To be honest, if anything, it just shows that we did 25 read Mr Justice Charles' judgment and we have complied</p> <p style="text-align: center;">Page 136</p>

<p>1 with it, because I think we were on 3 millisieverts 2 below -- well, not below, sideways -- in the other FTT. 3 MR JUSTICE BLAKE: So he has gone up by a multiplier of 250 4 or something? 5 MR HEPPINSTALL: Yes, because I think to get to the 3, we 6 looked at his badge, and then you will see in the papers 7 that Johnston and Regan have a go at their own form of 8 reverse dissymmetry, and they come out at 1 to 5, 1 to 9 3. We went with 3. But that was rejecting the idea 10 that he was on the active handling flight. Once he's on 11 the active handling flight -- 12 MR JUSTICE BLAKE: Then he is into a risk. 13 MR HEPPINSTALL: Yes. So in a way -- well, I'll leave you 14 to -- 15 MR JUSTICE BLAKE: Yes, okay. 16 MR HEPPINSTALL: Mr Smith. He wasn't there for the tests. 17 Didn't arrive until 30 October 1959. He was an RAF 18 catering assistant. I think we also know that he was 19 a barber. 20 That's why he's got effective nil external skin, but 21 I on the internal because, again, there's a generous 22 allowance for maybe drinking something, maybe eating 23 something. 24 Professor Forbes. He had chronic inflammation of 25 the pancreas which Professor Forbes describes as partly</p> <p style="text-align: center;">Page 137</p>	<p>1 MR HEPPINSTALL: Direction of travel, and also if you get 2 stuck in a rabbit hole on, you know, where did the wind 3 go at Grapple Y or things like that, you can go back 4 there. I hope there's a fund of references there which 5 you can translate into the new bundles. 6 MR JUSTICE BLAKE: Our tab 6, I think it is now, what you 7 handed up yesterday, annex D. 8 MR HEPPINSTALL: Yes. 9 MR JUSTICE BLAKE: Generic submissions. 10 MR HEPPINSTALL: So now you have both my exposure 11 submissions and my causation submissions before the 12 last -- 13 MR JUSTICE BLAKE: From 2013? 14 MR HEPPINSTALL: Yes. 15 MR JUSTICE BLAKE: Which is why all this reference to 16 balance of probabilities. 17 MR HEPPINSTALL: I beg your pardon? 18 MR JUSTICE BLAKE: Why the reference to balance of 19 probabilities. 20 MR HEPPINSTALL: That's ... Yes. 21 MR JUSTICE BLAKE: If you just go to -- 22 MR HEPPINSTALL: Well, you draw me into a ... Yes. 23 MR JUSTICE BLAKE: I just want to be clear. I've just got 24 a note to say what it is. You probably told us. 25 I didn't have it --</p> <p style="text-align: center;">Page 139</p>
<p>1 responsible for the development of cancer. I freely 2 accept "partly responsible" does not get me home. It 3 might do in a different jurisdiction. 4 Mr Smith only has to show a cause, not the cause. 5 But that possibility goes in the basket with his dose, 6 and his dose since he left Christmas Island, his 7 lifetime dose. 8 Professor Thomas expresses her conclusion on 9 adenocarcinoma of the pancreas. She also notes the 10 incidence of pancreatic cancer rises with age. Mr Smith 11 was 68 at diagnosis, when the incident rate is 600 per 12 100,000 in men. 13 Then again we have done you another table. Some of 14 it repetitive. Some of it, there was a difference 15 between the case put forward in Smith and the case put 16 forward in Battersby. So there's some difference there. 17 That is Mr Smith's appeal. 18 That only leaves me, I think, if I just go back to 19 my own stepping stones -- 20 MR JUSTICE BLAKE: Let me just check, whilst we are going 21 through this, appendix C at tab 5 is bundle 22 transpositions. They are your submissions before the 23 previous Tribunal with some transpositions; yes? 24 MR HEPPINSTALL: Yes. 25 MR JUSTICE BLAKE: That's showing the direction of travel?</p> <p style="text-align: center;">Page 138</p>	<p>1 MR HEPPINSTALL: No, I haven't and I deliberately haven't. 2 The case for the Secretary of State below was put on 3 the basis of reasonable doubt, reliable evidence, save 4 for where, following a case in the Upper Tribunal called 5 RAF 107, where Judge Meacher said that to prove the 6 disablement, the appellant also had to prove the 7 injurious process -- 8 MR JUSTICE BLAKE: I think -- 9 MR HEPPINSTALL: So there was a section of the case on the 10 balance of probabilities. 11 MR JUSTICE BLAKE: I think I pick it up from 12 Mr Justice Charles' judgment. 13 MR HEPPINSTALL: Fine. 14 MR JUSTICE BLAKE: I had located this as a 2013 submission 15 by that reference because you wouldn't be doing that 16 now. 17 MR HEPPINSTALL: No. The only reason that's going in is to 18 meet Mr ter Haar's point on Mothersill. Please don't 19 take anything from anywhere else. You would fall into 20 error. 21 MR JUSTICE BLAKE: I just want to mark that up. Yes. You 22 were about to go somewhere else. 23 MR HEPPINSTALL: I think the other thing that we have given 24 you is a few more sheets of paper, as if you haven't got 25 enough, which is called "SSD summary position", which</p> <p style="text-align: center;">Page 140</p>

1 was our attempt to meet your request, not completely,
 2 but there we go.
 3 MR JUSTICE BLAKE: That is our tab 2. I recognise that
 4 that's something I had asked for. Thank you.
 5 MR HEPPINSTALL: The only thing left to do is to note that
 6 we do have some concluding submissions from
 7 paragraph 120 onwards, which no doubt everybody will
 8 read, although I do think there are two things that
 9 I would like to say which are in answer to the
 10 question: why are we here?
 11 The first point is that there are Rule 18 directions
 12 still in force which means that every nuclear test
 13 veteran war pension appeal which arises gets parked
 14 pending this appeal.
 15 So it's not just about these veterans, because the
 16 recast procedural rules for all first tier tribunals
 17 allows group directions to be made. Group directions
 18 were made such that these were the test cases, and then
 19 those constitutions of the Tribunal which come after you
 20 will you use your findings in this case. Then the other
 21 veterans will have to argue about why they don't apply
 22 in their case.
 23 MR JUSTICE BLAKE: The others are all Maralinga or Christmas
 24 Island rather than somewhere else?
 25 MR HEPPINSTALL: There are some appellants who will have

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1 good arguments that they are different because I think
 2 we do have some other places or other times.
 3 MR JUSTICE BLAKE: But they are not expecting us to deal
 4 with that?
 5 MR HEPPINSTALL: No. We will have to do something different
 6 for them. But there's a hardcore group of expectant
 7 veterans who hope that this case determines it one way
 8 or the other, or at least means -- and I think this is
 9 what it really means -- those tribunals that come after
 10 you, the scope of their enquiry will be a lot narrower
 11 because they will take your findings on the Rule 18
 12 under the mechanism and apply them to the facts of that
 13 case.
 14 That's the first reason to answer why the Secretary
 15 of State has invested in these proceedings because
 16 I don't want it to be thought that there are, in the
 17 great scheme of things, low value pensions, not to
 18 belittle the pensions, but low value pensions in play,
 19 and the Secretary of State is using a hammer to crack
 20 a nut. The reason why we have invested is because it's
 21 for the future. It's to stop this happening again so
 22 that other tribunals don't have to do this again.
 23 The second reason is that the Secretary of State is
 24 concerned about the state of the scheme if the threshold
 25 of causation falls too low.

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1 I have said it twice in my written submissions.
 2 It's not meant as some sort of warning. It's made on
 3 direct instructions that we are here to defend the
 4 causal threshold in the scheme because, as I say in my
 5 submissions, I'm sure you can understand that military
 6 life is risky. The scheme covers everything that's
 7 happened to military personnel up to 2005. There aren't
 8 any limitation periods on that scheme. The scheme has
 9 to be funded. We want the scheme to continue to exist,
 10 and that is why we are making strong submissions on the
 11 causal threshold.
 12 It's not an insurance policy. It's not an
 13 occupational pension. Those things exist for servicemen
 14 or some servicemen and women, not all, depending on when
 15 they served. That's something else. Since Crown
 16 immunity was lifted in 2009, they also have other routes
 17 they can take, but that's another reason --
 18 MR JUSTICE BLAKE: Lifted for service personnel?
 19 MR HEPPINSTALL: Yes. That's not a concession on behalf of
 20 the Crown.
 21 So that's another reason why we are here and why we
 22 make these strong submissions that we make.
 23 Finally, the nuclear test veterans have campaigned
 24 for many, many years. You can see that from the
 25 judgment of Mr Justice Foskett.

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1 This is not a public inquiry into the nuclear tests,
 2 but it is one of the only opportunities that has arisen
 3 for the actual facts of the tests to be explored in
 4 a public arena, and we hope in a way that can provide
 5 assurance, some assurance, even at the reasonable doubt
 6 level, to nuclear test veterans about their experience
 7 and about their health.
 8 That's another why reason instructions were given
 9 for Mr Hallard to do the not inexpensive job that he did
 10 because, unlike the Australians, we had never come to
 11 some assessment of dose in a proper way.
 12 I told you about the AWE letters. You will see them
 13 in the files with the badges and the doses. We hope
 14 that we now have done the veterans wider population
 15 a service in Mr Hallard's dose assessment, even at that
 16 upper limit reasonable doubt basis.
 17 We do say that it is a case where we are dealing
 18 with very young servicemen at the time of the tests.
 19 Very young by our standards, immediately after the
 20 Second World War, some of them National Servicemen, and
 21 by virtue of their age at the time, they did have
 22 catering corps support sapper roles.
 23 Those who did other roles which did involve
 24 substantial significant radiological risk are not likely
 25 to be alive. They're not likely to be making war

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<p>1 pension claims at this time.</p> <p>2 In other words, the reason why the public may look</p> <p>3 in on this case and think it strange that these appeals</p> <p>4 don't succeed, one of the reasons why is because we are</p> <p>5 dealing with a population which was the very population</p> <p>6 which, because of their role, was kept as safe as could</p> <p>7 possibly be in all the circumstances at the north end of</p> <p>8 the Island.</p> <p>9 One of them, Mr Butler, did enter Ground Zero.</p> <p>10 Mr Battersby also entered Ground Zero and we have</p> <p>11 assumed he had a dangerous job. Everybody else are of</p> <p>12 that population.</p> <p>13 So that is why we say, especially when you look at</p> <p>14 the reassurance of the NRPB test, it is an unsurprising</p> <p>15 conclusion that what Mr Justice Charles hinted at is the</p> <p>16 decision of this Tribunal that these appeals fail.</p> <p>17 Those are my submissions. I don't know if I can</p> <p>18 assist you in any way or whether you've got any</p> <p>19 questions.</p> <p>20 DR RAYNER: Can I just ask one question.</p> <p>21 MR HEPPINSTALL: Certainly.</p> <p>22 DR RAYNER: Can I ask who did the chronology? Was it</p> <p>23 somebody with a medical qualification?</p> <p>24 MR HEPPINSTALL: No, someone with a legal qualification.</p> <p>25 DR RAYNER: There are some interesting words and spellings.</p> <p style="text-align: center;">Page 145</p>	<p>1 I'm going to start with a comment on CERRIE, which</p> <p>2 is on page 5 of the SSD's closing submissions document</p> <p>3 at paragraph 15.</p> <p>4 It talks at the bottom of the page about:</p> <p>5 "... the inappropriate issuing of a minority report</p> <p>6 which contained material which the rest of the</p> <p>7 committee, including those neutral scientific members,</p> <p>8 Professor Sarah Darby, Dr Philip Day and</p> <p>9 Professor Eric Wright, not employees of the nuclear</p> <p>10 industry ... could not admit into a dissenting statement</p> <p>11 within the body of the official report because of</p> <p>12 scientific and legal hazards contained therein."</p> <p>13 I just ask the Tribunal on that matter, when they</p> <p>14 are thinking about it or discussing it, to just go to</p> <p>15 the Bramhall evidence from transcript Day 1, page 126</p> <p>16 onwards, where he makes clear that there were two</p> <p>17 meetings at which almost unanimous agreement to put the</p> <p>18 dissenting material into the main document was voted on.</p> <p>19 Only one person voted against it out of the whole</p> <p>20 committee.</p> <p>21 In the final meeting where it was decided to exclude</p> <p>22 it, that was on the basis of the legal -- they were told</p> <p>23 that they couldn't legally put it in. Even at that</p> <p>24 point it wasn't an unanimous decision not to put it in.</p> <p>25 Two members abstained. Two members weren't there.</p> <p style="text-align: center;">Page 147</p>
<p>1 MR HEPPINSTALL: Yes, I noticed that over the weekend.</p> <p>2 I did try to correct some of them, but no, not someone</p> <p>3 medically qualified. I'm sure you can correct them.</p> <p>4 MR JUSTICE BLAKE: Thank you very much. Is that</p> <p>5 a convenient time to take a short break?</p> <p>6 MR TER HAAR: Yes, I think the understanding is it will be</p> <p>7 one or other Dr Busby who go first before me and I will</p> <p>8 sweep up after that.</p> <p>9 MR JUSTICE BLAKE: Shall we take a break for ten minutes</p> <p>10 now?</p> <p>11 MR TER HAAR: Certainly.</p> <p>12 MR JUSTICE BLAKE: It looks on any view -- it's now</p> <p>13 3 o'clock -- that we won't be here tomorrow and we</p> <p>14 can --</p> <p>15 MR HEPPINSTALL: We can use my Lord to serve that</p> <p>16 contractual notice. I'm sure Mr Verma will do it in the</p> <p>17 proper way.</p> <p>18 MR JUSTICE BLAKE: Yes, thank you very much.</p> <p>19 (3.00 pm)</p> <p>20 (A short break)</p> <p>21 (3.08 pm)</p> <p>22 MR JUSTICE BLAKE: Yes.</p> <p>23 Reply closing submissions by MS BUSBY</p> <p>24 MS BUSBY: I'm just going to go to one or two points. I'm</p> <p>25 not going to take a long time.</p> <p style="text-align: center;">Page 146</p>	<p>1 MR JUSTICE BLAKE: Okay.</p> <p>2 MS BUSBY: So that's just to correct that.</p> <p>3 The Lesvos declaration was mentioned. I just want</p> <p>4 to say that that came at the end of a week-long</p> <p>5 scientific conference on the issues of low level</p> <p>6 radiation to which a large number of international</p> <p>7 scientists were invited, including those supportive of</p> <p>8 the ICRP model, most of whom chose not to come.</p> <p>9 But nevertheless, there are a lot of scientists</p> <p>10 there, you will see from the signatories, from Belarus,</p> <p>11 Ukraine, Russian Federation, Greece, France, Germany.</p> <p>12 They are certainly not all members of the ECRR. They</p> <p>13 were simply scientists there to discuss the science and</p> <p>14 the declaration came at the end of the week. It was</p> <p>15 a joint decision based on the science that had been</p> <p>16 presented at that conference. So that's just another</p> <p>17 clearing up.</p> <p>18 The SSD mentioned the paper by Busby and</p> <p>19 de Messieres.</p> <p>20 MR JUSTICE BLAKE: Yes.</p> <p>21 MS BUSBY: His main criticisms were, first of all, the</p> <p>22 self-selecting controls.</p> <p>23 MR JUSTICE BLAKE: Yes.</p> <p>24 MS BUSBY: I just want to point out, and you will find it in</p> <p>25 the transcript when this is looked at, that they didn't</p> <p style="text-align: center;">Page 148</p>

<p>1 only use those self-selecting controls. They did also 2 compare to the EUROCAT data on congenital malformation 3 in the general population. So there was an attempt to 4 find a control group that mirrored the veterans, but it 5 was backed up by EUROCAT data.</p> <p>6 The second criticism was bias, and this was accepted 7 as a problem. It was actually written in the paper that 8 they understood that this was a problem. Obviously both 9 the authors and all the experts that have mentioned it 10 have said it's not an ideal study, but there were 11 monetary constraints to the kind of study that we could 12 carry out.</p> <p>13 It's been criticised because the medical issues were 14 self-reporting. I would just like to point out that 15 this isn't minor illnesses that people are reporting on. 16 It's not, "Did your child have measles age 5?" These 17 are very serious conditions. We don't think it's likely 18 that parents would have forgotten.</p> <p>19 We'd also note that it's a large effect. It's ten 20 times the level found in the EUROCAT population. So, 21 yes, there might be biases, yes, it may not be ideal, 22 but it's a very, very large effect.</p> <p>23 Actually we would invite the Ministry of Defence or 24 anyone interested to do a proper follow-up. It would be 25 very interesting to do a follow-up that involved</p> <p style="text-align: center;">Page 149</p>	<p>1 issues on what we've got which were explored with the 2 expert witnesses. We are not doing a free-roaming 3 enquiry to ourselves.</p> <p>4 This is an issue which you know is clearly very, 5 very contentious, and we look at what your witness says 6 and we look at what the paper says and we look at what 7 the others say, and if we come up with a negative 8 conclusion, that's based upon on the material before us.</p> <p>9 MS BUSBY: Well --</p> <p>10 MR JUSTICE BLAKE: If there's other material, you would have 11 put it in, is the inference.</p> <p>12 MS BUSBY: What I'm trying to say, my Lord, is that it isn't 13 actually a contentious issue. We are very surprised 14 that the SSD is trying to --</p> <p>15 MR JUSTICE BLAKE: Well, it is, because it's not agreed. It 16 is a contentious issue. That, I'm afraid, I don't think 17 I can agree with you. You can say it shouldn't have 18 been contentious because it's so obvious that we are 19 right, I'm astonished that they are disagreeing. But it 20 is a contentious issue. But there we are.</p> <p>21 MS BUSBY: Well, maybe I can just say that uranyl acetate is 22 a combination of uranium and acetate. It's the uranium 23 part of it -- if you read the paper I hope it says that, 24 but it should be obvious that it's the uranium part of 25 it that binds to the DNA because it forms a compound</p> <p style="text-align: center;">Page 151</p>
<p>1 checking the medical records. We simply couldn't afford 2 to do that.</p> <p>3 I just then want to go to the criticism about 4 uranium binding to DNA. We put in a single paper 5 because we didn't think it was likely to be a point of 6 controversy. We are extremely surprised that the SSD is 7 still maintaining that this is an issue.</p> <p>8 Assuming that you don't throw out all of 9 Professor Hooper's expert evidence, I hope you will keep 10 his evidence on this issue because he is, after all, 11 a professor of chemistry. The evidence is in the 12 transcript, Day 4, page 77 onwards.</p> <p>13 It is not uranyl acetate that binds to DNA as 14 a compound. Uranyl acetate is a salt of uranium. It's 15 simply a way of delivering uranium to the DNA, and it is 16 the uranium ions, the positively charged ions, that bind 17 to the DNA.</p> <p>18 MR JUSTICE BLAKE: As I understand it, it's accurate, the 19 submission that we have heard, that the only paper 20 that's before us when this was ventilated was the much 21 earlier paper about uranyl acetate.</p> <p>22 MS BUSBY: We are very happy if the Tribunal wish to have 23 other papers on this matter.</p> <p>24 MR JUSTICE BLAKE: My wish for other things has a limit, 25 keen as the appetite is. But we are going to decide the</p> <p style="text-align: center;">Page 150</p>	<p>1 with the phosphate.</p> <p>2 MR JUSTICE BLAKE: You are talking to me, a non-scientist. 3 Nothing is obvious. Everything is delivered.</p> <p>4 MS BUSBY: It forms a compound with the phosphate of the 5 DNA. The acetate is not involved.</p> <p>6 MR JUSTICE BLAKE: I understand what you are telling me.</p> <p>7 MS BUSBY: Okay. We could provide a chemistry A Level 8 textbook, but I assume you are not interested in that.</p> <p>9 I just want to take you then to the carbon-14 dose 10 argument, which is on page 27 of the SSD's --</p> <p>11 MR JUSTICE BLAKE: Yes.</p> <p>12 MS BUSBY: We'd just like to note that the worldwide average 13 dose that they quote of 1.6 microsieverts is obtained by 14 dividing the carbon-14 from those bombs into the entire 15 population of the world.</p> <p>16 MR JUSTICE BLAKE: Yes.</p> <p>17 MS BUSBY: So personally -- well, we believe that that's not 18 the right way to do it. That assumes an equal dose to 19 everyone in the world from those bombs.</p> <p>20 Another point on uncertainty factors. The SSD has 21 argued that, as Mr Hallard said, the ICRP recommends 22 that the dose coefficients are used as point values and 23 that the uncertainty values, although they have 24 calculated them, do not need to be used for the purposes 25 of radiation protection.</p> <p style="text-align: center;">Page 152</p>

<p>1 That is a very different context to the context we 2 are talking about. In the context of radiation 3 protection there are threshold levels that are set by 4 the ICRP by the government. In the context of those 5 threshold levels, an uncertainty of 3 or 5 isn't really 6 important because the threshold is already set at a very 7 conservative level. It's already very high. What the 8 ICRP are saying when they say you can use point values 9 is: you don't really need to worry about those 10 uncertainties. You can just use point values. 11 In the context of how high might be the dose to an 12 individual, then uncertainty should be taken into 13 account. It should be the highest available. It should 14 not be an average of the possible ups and the possible 15 downs, as Mr Heppinstall said. We are talking about the 16 highest possible dose to which somebody could have been 17 exposed. 18 Now, because it's important to our case, I do want 19 to go in slightly more detail into the paper by the 20 argument of Sawada and Mr Heppinstall's representation 21 of that argument because he's made some fundamental 22 errors in trying to understand what Sawada was saying. 23 He puts forward the idea that an alpha dose of 24 radiation does not cause hair loss or diarrhoea. Well, 25 perhaps I could just remind the Tribunal of the recent</p> <p style="text-align: center;">Page 153</p>	<p>1 argument on the basis that if there was more dose, then 2 that made the risk from the cancers that everyone sees 3 less. 4 MR JUSTICE BLAKE: Yes. 5 MS BUSBY: Well, I would just like to address that, because 6 he says: why don't the cancers go up if the dose is 7 wrong? The answer is they do go up. They do go up in 8 both groups, but the LSS compares the groups to each 9 other. 10 So we have on the one hand the population that's 11 called high dose, which got a high initial dose of gamma 12 radiation, and we have on the other hand a population 13 that is called low dose, that got very low dose initial 14 gamma radiation. But both of them got quite a large 15 dose, we would argue, of these internal emitters, this 16 initial, this fallout. 17 So you have on the one side cancers caused by the 18 fallout and a little bit extra caused by the direct 19 gamma from the bomb, and you compare those to the group 20 that has cancers just from the fallout, and you find 21 a very small difference and you say that difference is 22 because of the gamma radiation. 23 So you're comparing two groups. The fallout is in 24 both groups is equal but it's ignored, and that's 25 Professor Sawada's point.</p> <p style="text-align: center;">Page 155</p>
<p>1 case of Alexander Litvinenko, who was poisoned with 2 polonium. Polonium is a pure alpha emitter. It 3 certainly caused hair loss and diarrhoea. 4 But that is not the really the point, because what 5 Sawada is saying is that the LSS methodology is to 6 divide populations into high and low dose purely on the 7 basis of the direct gamma exposure from the bomb, and 8 that falls off very rapidly with distance from point 9 zero. 10 What they don't consider is the fallout from the 11 black rain. The fallout from the black rain is not just 12 alpha emitters. It's also gamma and beta emitters. 13 There is co-deposition of alpha, gamma and beta in that 14 rain, as we have heard mentioned before. 15 So his point is that this dose is missed. It is 16 assumed to be so low that it can safely be ignored, and 17 his argument is it's not so low it can safely be 18 ignored. It is high enough to have caused hair loss and 19 diarrhoea. If it's high enough to have caused hair loss 20 and diarrhoea, it's high enough to be significant. 21 So the high dose and low dose comparison of the 22 populations in the LSS is unsafe because both of those 23 populations got this extra dose that everyone is 24 ignoring. 25 Mr Heppinstall mentioned his surprise at this</p> <p style="text-align: center;">Page 154</p>	<p>1 That's why the relative cancer between the high dose 2 and the low dose population doesn't go up. Both of them 3 go up equally. So your differential remains the same. 4 Just briefly and finally, there was a response to 5 our responsibility argument about pancreatic cancer. 6 MR JUSTICE BLAKE: Yes. 7 MS BUSBY: The implication was that what unites these 8 veterans with pancreatic cancer is the very fact that 9 they were chosen for the purposes of the case. If they 10 were entirely independent we really wouldn't expect to 11 see that many. So the implication is you knew all these 12 people had pancreatic cancer before you put the case 13 forward. 14 I would just like to say that if we were going to 15 choose people with cancer for this case, we wouldn't 16 have chosen a cancer that was so controversially 17 non-radiogenic or radiogenic. 18 Secondly, his calculations of how many people in the 19 veterans had pancreatic cancer is based on 1998 data. 20 All our cases got their pancreatic cancer post-2000. 21 We would argue that there are probably a lot more 22 cases of pancreatic cancer in the veterans population 23 now than there were in 1998, but no one knows how many 24 those are. 25 We would just also like to point out that in fact,</p> <p style="text-align: center;">Page 156</p>

<p>1 out of the 13 appellants, only seven of them have 2 cancer. So we now have four cases of pancreatic cancer 3 out of seven cases of cancer, and the probability 4 against that being the case in a random group of 5 veterans is extremely small. 6 That's really all I wanted to -- 7 MR JUSTICE BLAKE: All right. Thank you very much. That's 8 very helpful. 9 Reply closing submissions by MR TER HAAR 10 MR TER HAAR: My Lord, a lot of detail of this case, so it's 11 impossible in the closing submission in reply to go into 12 an immense amount of detail. There are a few detailed 13 points I want to cover, but then main think I want to do 14 is to deal with the very, very big points and try to 15 draw some strands together, having heard 16 Mr Heppinstall's closing submissions. 17 Mr Heppinstall's frank confession on behalf of the 18 Secretary of State as to how these cases used to be 19 dealt with was helpful, that a very rough and ready 20 approach used to be adopted. 21 Those who have represented the veterans, and I have 22 come late into that cohort, have pushed for and have 23 succeeded in establishing that that very rough and ready 24 approach is not satisfactory. 25 Where we get to at the end of now a second long FTT</p> <p style="text-align: center;">Page 157</p>	<p>1 part of that study. 2 MR TER HAAR: Yes, I'm going to come to that because the 3 Tribunal has very clearly flagged up that interest. 4 MR JUSTICE BLAKE: That's the bit that would impact upon his 5 calculation. 6 MR TER HAAR: Yes, and I'm going to specifically come to 7 that. 8 MR JUSTICE BLAKE: Okay. I have identified the bit, yes. 9 Now your point? 10 MR TER HAAR: You will find the references in the transcript 11 to that at page 11 of our submissions, footnote 19. 12 My Lord is of course absolutely right as to what it was 13 he was concentrating upon. 14 Can I address fuller what the state of the evidence 15 is as to the Wahab Rowland report on dosimetry? 16 Can I ask you, first of all, to take up the first Wahab 17 Rowland report, which, as you know, is in bundle SB7 at 18 tab 123. 19 Of course, as the Tribunal will remember, you have 20 the Wahab Rowland report and then the second half, the 21 Rowland report. 22 MR JUSTICE BLAKE: Yes. 23 MR TER HAAR: In the original study could I ask you please 24 to go to page 85. At page 85, in the left-hand column 25 at page 85 of the original paper, the authors address</p> <p style="text-align: center;">Page 159</p>
<p>1 hearing is that if one could call it the positive 2 evidence of exposure put forward by the Secretary of 3 State, which used to be just the dosimeters, has 4 narrowed. 5 Finally, in the closing stages of this hearing, my 6 learned friend has effectively abandoned all reliance 7 upon dosimeters because there weren't enough of them, 8 all reliance upon the sticky sample papers because he's 9 accepted there were difficulties there, expressly 10 abandoned that, and he's left as evidence of, if you 11 like, positive evidence of exposure, only with the 12 evidence of Mr Hallard as a health physicist. 13 In that he says Mr Hallard is the only show in town. 14 I'll come back to that because it's not true. There is 15 another show in town which is important. 16 Against that we have also moved to a position where 17 the Secretary of State is no longer seeking to establish 18 that the Wahab Rowland survey is of no use at all. It 19 is not suggested that it's not reliable or plausible 20 evidence. 21 The significance of that is enormous, but in 22 particular Mr Hallard, insofar as he is a show in town, 23 accepted on more than one occasion that if you found the 24 Wahab Rowland study to be credible -- 25 MR JUSTICE BLAKE: The retrospective estimate of dose as</p> <p style="text-align: center;">Page 158</p>	<p>1 the question of reverse dosimetry. 2 MR JUSTICE BLAKE: "Retrospective biological dosimetry." 3 MR TER HAAR: Yes, that's the paragraph. They say: 4 "Retrospective biological dosimetry with over 5 dispersion allowance was attempted from the mFISH data 6 of the veterans by comparison to an extrapolated dose 7 response curve obtained by Lucas formula after scoring 8 translocation frequency." 9 Then dropping to the bottom of that same paragraph: 10 "While the dosimetry just after single dose of 11 x-rays can only give an approximate dosimetric index, 12 this index is still a useful indicator that can be taken 13 into consideration even after complex irradiations." 14 So in fairness to the authors, they weren't 15 overstating their case. They were clearly caveating it. 16 But they say, having caveated it, it's still a useful 17 indicator. 18 Professor Rowland, in his paper which follows in the 19 second half of this, again returns to this issue and 20 again does so in suitably caveated language. 21 If you go to the second half of that tab, almost at 22 the end, page 42, at the bottom of the page, 23 Professor Rowland says this in the third line of the 24 bottom paragraph: 25 "The introduction of FISH has proved a valuable tool</p> <p style="text-align: center;">Page 160</p>

<p>1 to establish the amount of past exposure to radiation in 2 humans. An attempt was made in the current study to 3 reconstruct possible radiation dosage in the Operation 4 Grapple veterans. Possible exposure estimates are 5 listed in table 15. We acknowledge that there are many 6 uncertainties surrounding this estimate, which should be 7 used only as a guide." 8 Then he goes on a little further. Then under 9 "Summary" on the next page, page 44, he summarises it in 10 the third paragraph of that page: 11 "This leads to us a second question. Would then 12 could cause these high translocation frequencies after 13 such a long period of time since the event occurred?" 14 Just pausing there, Mr Heppinstall was keen to 15 emphasise the length of time which had taken place 16 between the original events posited and the study, 17 clearly taken into account by the authors. 18 Professor Rowland goes on: 19 "Different environmental agents can cause 20 chromosomal breakages, but 29 translocations per 1,000 21 cells, as observed in the veterans, as compared to 10 22 for the controls is a particularly high score. The 23 causative agent must be a powerful inducer of chromosome 24 breaks. Very strict exclusion/inclusion criteria were 25 applied in the selection processes of both the veterans</p> <p style="text-align: center;">Page 161</p>	<p>1 I take you again, first of all, to the passage that 2 I have taken you and witnesses to before on more than 3 one occasion at page 3. That's the passage from 4 Professor Kaldor. 5 MR JUSTICE BLAKE: Yes. You don't need to read that out 6 again. 7 MR TER HAAR: No. Can I just emphasise, though, that in 8 that passage I have up to now tended to concentrate on 9 paragraph 48. Can I ask you though to look in your 10 deliberations at 47 -- 11 MR JUSTICE BLAKE: Yes. 12 MR TER HAAR: -- where Professor Kaldor is expressly 13 considering the dosimetry recorded by Wahab and Rowland 14 and does not suggest that they are not plausible or not 15 reliable or whatever words one -- 16 MR JUSTICE BLAKE: The last sentence we note, yes, which 17 seems to reflect what's there. 18 MR TER HAAR: Yes. I'm also drawing attention to what's 19 just before that, where expressly they are referring to 20 retrospective dose reconstruction. 21 Dr Brenner deals in terms lower down that same page 22 about that report in terms of dose reconstruction. 23 Again, I'm not going to read what the Tribunal has 24 already read more than once, but I do emphasise that in 25 terms of the evidence from reliable sources, there is</p> <p style="text-align: center;">Page 163</p>
<p>1 and the controls to exclude possible confounding 2 factors. A detailed analysis of the scientific 3 literature on related studies involving high chromosome 4 translocation frequencies was also conducted. 5 "We submit the view that the probable cause of the 6 veterans' elevated translocation frequencies is 7 radiation exposure, being supported by the observation 8 of a comparatively high dicentric chromosome score in 9 the veterans which is characteristic of radiation 10 exposure." 11 Then it's important to see how measured this is. If 12 you go over the page: 13 "The findings presented here are based on only 50 14 veterans from New Zealand who took part in Operation 15 Grapple. We would encourage those in the authority to 16 initiate research to corroborate our findings by 17 conducting a similar study on British and Fijian 18 personnel who also took part in Operation Grapple." 19 I emphasise the proper scientific caution that the 20 authors have applied to this. 21 As to dosimetry, the evidence which we've been to 22 more than once, and I apologise for taking you back to 23 it, of Dr Brenner is important in this regard. 24 Could I ask you to put that file away and go back to 25 where we have been often before, which is bundle SB11.</p> <p style="text-align: center;">Page 162</p>	<p>1 powerful evidence to say that the dosimetry recorded or 2 posited, perhaps a more accurate word, by Wahab and 3 Rowland has been regarded as being a plausible theory by 4 very eminent authority. 5 MR JUSTICE BLAKE: Yes. The caveat I have noted -- and the 6 last time we will introduce it -- is my present 7 understanding is that if you have a potential exposure, 8 you go and do some mFISH work on chromosome breaks and 9 mutations shortly thereafter. Putting the two together, 10 you may get some pertinent information as to what's 11 happened, if anything, and what kind of thing has 12 happened if something has happened. But one of the 13 problems is retrospective dosimetry after 45 years. 14 MR TER HAAR: That is exactly the point I'm on. What I'm 15 pointing out is that, first of all -- 16 MR JUSTICE BLAKE: The question is whether Brenner is on 17 that point. 18 MR TER HAAR: The answer is he can't not be. He can't not 19 be because, first of all, the report itself drew 20 attention to it. Also, it's blindingly obvious, if 21 I might say so with respect -- 22 MR JUSTICE BLAKE: The blindingly obvious has been ignored 23 more than once in this case so far. Just show me. 24 MR TER HAAR: The answer is it's exactly what he's talking 25 about throughout. The whole of this report is to do</p> <p style="text-align: center;">Page 164</p>

1 with what you can draw from the Wahab and Rowland
 2 report.
 3 If you look in particular --
 4 MR JUSTICE BLAKE: Are you telling me if I go to ISO
 5 standardisation for Dr William Blakely, chief of
 6 biosymmetry research at AFRI, I will find information
 7 about doing this after 45 years?
 8 MR TER HAAR: I can't say that. What I can say --
 9 MR JUSTICE BLAKE: Well, that's the question.
 10 MR TER HAAR: With the greatest respect, if it was going to
 11 be suggested -- this is to an extent an adversarial
 12 process. If it was going to be suggested that
 13 Dr Brenner was in error in that he had ignored the gap,
 14 the passage of time, when what he was expressly asked to
 15 do was to give evidence as to what could be drawn from
 16 that study as to the Christmas Island veterans, it would
 17 be an extraordinary attack upon him which ought to be
 18 flagged up and dealt with in those proceedings.
 19 It's not suggested by my learned friend that in
 20 those proceedings -- that's to say the FTT first time
 21 round or in the next sets of proceedings -- it was
 22 suggested that Dr Brenner had ignored the blindingly
 23 obvious.
 24 Moreover, if you go back to page 2, bottom of that
 25 page, what Dr Brenner is there doing, at the very last

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1 paragraph, is expressly considering what might be the
 2 circumstances between the time of the original posited
 3 exposure and the time of this report which might have
 4 explained the difference. Therefore he is expressly
 5 considering whether there was anything in the
 6 intervening period which might explain the
 7 translocations.
 8 So with the greatest respect, my Lord, what you're
 9 looking for is an answer by Dr Brenner to a point which,
 10 as I understand it, had never been suggested in the
 11 litigation, or in the First Tier Tribunal deliberations,
 12 when the whole report was about: can one rely upon Wahab
 13 Rowland to assess exposure of veterans in Christmas
 14 Island?
 15 With the greatest respect, I would submit that the
 16 Tribunal would fall into serious error if you were to
 17 say, because he hasn't recorded this point which hasn't
 18 been dealt with adversarially, therefore we cannot rely
 19 upon this as being a credible source of reverse
 20 dosimetry.
 21 This feeds exactly into the point my learned friend
 22 sidestepped, which is the refusal or failure by the
 23 Secretary of State to comply with the direction that
 24 matters which were possibilities or certainties should
 25 be addressed.

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1 I appear to find myself in the position -- I know
 2 the Tribunal is only expressing the matters so I can
 3 tackle them -- that the Secretary of State, having
 4 chosen not to engage with the case as directed by
 5 Mr Justice Charles, sought from this Tribunal permission
 6 to go down a different route.
 7 They were then told to go back and actually deal
 8 with possibilities and certainties, failed to do so,
 9 provided a skeleton argument in which they did not raise
 10 this point, and we find it now taken years after this
 11 report was dealt with. As I pointed out, only
 12 yesterday, I think it was, perhaps the day before, we
 13 did actually contact Dr Brenner, and had this point been
 14 raised by the Secretary of State when we contacted
 15 Dr Brenner to ask him whether or not he'd dealt with --
 16 MR JUSTICE BLAKE: I'm sorry, I don't want to get into an
 17 email now that we avoided round. So we are not going to
 18 go there. This point about 45 years was made fairly and
 19 squarely by Professor Thomas.
 20 MR TER HAAR: Well, with the greatest respect,
 21 Professor Thomas did not suggest --
 22 MR JUSTICE BLAKE: It was made, Mr ter Haar. So if you're
 23 going to do some quick emails, it was in play by then.
 24 MR TER HAAR: With the greatest respect, it was not in play
 25 in the sense that it was being relied upon by the

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1 Secretary of State. I have made the point that an awful
 2 lot of Professor Thomas' evidence appeared to be on the
 3 run. We picked up the point which the Tribunal appeared
 4 to be interested in out of her evidence, and --
 5 MR JUSTICE BLAKE: I asked the question because I unpacked
 6 her answer a little bit because it was a bit --
 7 MR TER HAAR: Just for the record, I do say, and I say
 8 firmly, that were you to put aside Dr Brenner's evidence
 9 on the basis that he does not in terms deal with what he
 10 must implicitly have been dealing with, which is a time
 11 gap, I would submit that that would be an unfair route
 12 to go down, and I record that submission.
 13 MR JUSTICE BLAKE: It's recorded.
 14 MR TER HAAR: I do submit that it would be fundamentally
 15 unfair.
 16 At any rate, what I say is the evidence before
 17 you -- and we are up to a point evidence based, there is
 18 still for power for the Tribunal to be inquisitorial but
 19 subject to the rules we have discussed -- the evidence
 20 before you is simply this.
 21 There is a school of thought by one of the most
 22 eminent radiobiologists in the world which is to the
 23 effect that the Wahab Rowland study points to
 24 chromosomal aberrations as a result of exposure which
 25 could well have been at Christmas Island.

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<p>1 MR JUSTICE BLAKE: It could have been radiation and 2 Christmas Island is a possible source of the radiation. 3 MR TER HAAR: Yes, but -- 4 MR JUSTICE BLAKE: And you can go back. 5 MR TER HAAR: Of course I keep coming back. I only have to 6 say it's a plausible case. 7 MR JUSTICE BLAKE: For your comfort, Mr ter Haar, when we 8 looked at "probable" in Rowlands a few moments ago, 9 I have already marked alongside it "possible". 10 MR TER HAAR: At any rate, your Lordship has my submission. 11 That is vitally important. It's not the only plank of 12 my case, but it is vitally important because if it be 13 right, as I say, Mr Hallard then accepts that the whole 14 of his evidence, the supposed only show in town, has to 15 be read in that light. 16 Next the point of whether or not he is the only show 17 in town. 18 Perhaps, before I do that, can I just deal with one 19 other point which is important. 20 My learned friend's closing submissions, page 6 -- 21 MR JUSTICE BLAKE: Have we finished 11? 22 MR TER HAAR: We have finished with -- 23 MR JUSTICE BLAKE: Are we likely to go back to it again? 24 MR TER HAAR: No, we have finished with it. I want to just 25 pick up a point which is connected --</p> <p style="text-align: center;">Page 169</p>	<p>1 That ties in with the evidence of Dr Brenner. So 2 I draw your Lordship's attention to it there. 3 Can I then take you, before I come back to 4 Mr Hallard's evidence, to another important point of the 5 evidence of Dr Brenner. 6 My learned friend in his submissions referred you to 7 a paper co-authored -- co-written, I don't think the 8 word "author" really is a verb -- anyway, co-written by 9 Dr Brenner which is to be found -- could I ask you to 10 turn it up, please -- in bundle SB17, tab 34. 11 MR JUSTICE BLAKE: Yes. 12 MR TER HAAR: This is the paper written by, amongst others, 13 Professor Brenner and Sir Richard Doll. There is no 14 possible question about the eminence and integrity of 15 those two gentlemen and the others who are co-authors. 16 MR JUSTICE BLAKE: Yes. 17 MR TER HAAR: This is important in the context of the low 18 dose argument. 19 Could I ask you to turn to the penultimate page, 20 where you'll find the summary. 21 MR JUSTICE BLAKE: Yes. We have been here before, yes. 22 MR TER HAAR: We have been here before. Can I ask you just 23 to note for the purpose of your deliberations that this 24 is a very helpful summary of what I was dealing with in 25 my closing submissions about the point at which</p> <p style="text-align: center;">Page 171</p>
<p>1 MR JUSTICE BLAKE: Yes. 2 MR TER HAAR: -- in my learned friend's closing submissions. 3 It's page 6 of his closing submissions, paragraph 19. 4 Whilst at its high point, in writing, the Secretary 5 of State's case was that you should shut out all of 6 Professor Mothersill's evidence, I do not understand his 7 final position to be that extreme. I understand the 8 Secretary of State's present position to be that you can 9 at least take into account the view expressed in the 10 quotation at page 6, paragraph 19. 11 That is what the Secretary of State says to you: 12 "... may be able to offer evidence of a theoretical 13 risk that everyone faces when exposed to any ionising 14 radiation, which will tell the Tribunal nothing about 15 the effect of the material doses at the tests on the 16 appellants' illnesses." 17 Then we have the quotation there. It is important 18 to note that her evidence, which is accepted as being 19 a plausible view, is she says: 20 "I can say nothing about the outcome from having 21 that mechanism turned on. But I can say that it 22 increases the probability of the kind of diseases we are 23 talking about." 24 So that is accepted by the Secretary of State as 25 evidence which you can take into account.</p> <p style="text-align: center;">Page 170</p>	<p>1 epidemiology stops and mechanistic analysis starts. 2 What they say in the last paragraph, I draw 3 attention to that: 4 "In summary, given our current state of knowledge, 5 the most reasonable assumption is that the cancer risks 6 from low doses of high or gamma rays decrease linearly 7 ... In the light of the evidence of downwardly curving 8 dose responses, this linear assumption is not 9 necessarily the most conservative approach as sometimes 10 has been suggested, and it is likely that it results in 11 an underestimate of some radiation risks and an 12 overestimate of others. Given that it is supported by 13 experimentally grounded, quantifiable, biophysical 14 arguments, a linear extrapolation of cancer risks from 15 intermediate to very low doses currently appears to be 16 the most appropriate methodology." 17 Again, my learned friend -- he didn't actually cite 18 this, although he cited the paper -- didn't take you to 19 the passage which shows that, yes, there is an approach 20 as to what's the best you can do on the current 21 information, but what he constantly sets on one side are 22 the scientific warnings, which we saw in UNSCEAR, that 23 further work needs to be done. 24 Here the words are significant: 25 "It is likely that a linear approach will result in</p> <p style="text-align: center;">Page 172</p>

<p>1 an underestimate of some radiation and an overestimate 2 of others." 3 In other words, all that the linear approach does is 4 provide the best fit we can at the moment if you are 5 looking at balance of probabilities, not looking at the 6 test, the test of reasonable doubt or plausible theory. 7 Can I move away from that, and that bundle can go 8 away. 9 MR JUSTICE BLAKE: Yes. 10 MR TER HAAR: Where I want to do now is just briefly go back 11 to the question of expert evidence in a general sense in 12 these proceedings. 13 My learned friend, with gusto, repeated his 14 submission, which is in his written submissions, that 15 you should apply CPR35 very firmly. He then promised 16 that he was going to take you in reference to his 17 experts to how his expert evidence complied with CPR35 18 and accepted, as I understood it, that if they fell foul 19 of CPR35, you could throw out his expert evidence in the 20 same way he suggested you should throw out the 21 appellants'. 22 The difficulty with that is that actually, for 23 reasons I have already given, both in writing and 24 orally, his expert evidence did not comply with CPR35, 25 and I'm not asking you to pick up his challenge and do</p> <p style="text-align: center;">Page 173</p>	<p>1 suggesting a more austere test. 2 MR TER HAAR: You understand my submission. 3 MR JUSTICE BLAKE: Right. Got it. 4 MR TER HAAR: Can I then move on to another point, though, 5 which again echoes what I have said in my previous oral 6 submission, which is how to deal with the previous 7 reports. 8 My learned friend says, well, effectively we'd 9 already fought the battles on radiobiology and 10 epidemiology before, and therefore I didn't need to come 11 to this Tribunal and refight those battles. 12 With the greatest of respect to my learned friend, 13 he misses the point. The point is this. Where we were 14 putting forward evidence which had been put forward in 15 the original negligence litigation, we were there 16 fighting to establish a case -- not me, but those who 17 were then claimants, fighting to establish a case on 18 a balance of probabilities. 19 Inherent in that, even if the court did not accept 20 that the balance of probabilities test had been passed, 21 the court was quite capable of saying: "There's 22 a plausible view, but I don't accept it." 23 The Secretary of State, on the other hand, as we've 24 seen, for example, in Professor Kaldor's report, was 25 putting forward a case in the negligence litigation that</p> <p style="text-align: center;">Page 175</p>
<p>1 what he suggested. I'm suggesting that it's an 2 unrealistic approach, particularly in a Tribunal of this 3 nature. 4 What I suggest is the right approach is for you to 5 look at each of the experts, weigh them up, bearing in 6 mind the extent to which they have or have not complied 7 with CPR35, and even if there is some formal or serious 8 defect in that respect, if you still find part of the 9 evidence credible or plausible, then to give weight to 10 that as part of the overall balance. 11 I suggest that the approach of a blunderbuss such as 12 putting things out on a very procedural basis is not 13 satisfactory in a case of this sort. 14 MR JUSTICE BLAKE: To this extent, since we are having this 15 submission at the end of the case, having received, read 16 and necessarily evaluated, it may well turn out that 17 there be an evaluation of the evidence, rather than an 18 arbitrary act of tearing them out of the bundles and 19 never darkening our door ever again. But you would 20 accept that those principles are at least a guide to an 21 evaluation of the evidence? 22 MR TER HAAR: Absolutely. I am a long, long way away from 23 suggesting anything to the contrary. 24 MR JUSTICE BLAKE: Of course it may be that -- I haven't 25 read it -- the Supreme Court in another context is</p> <p style="text-align: center;">Page 174</p>	<p>1 the evidence might raise a doubt or a question, but does 2 not pass the reasonable probability test. 3 What the Secretary of State has not done is to go 4 back and ask his experts: "If you were dealing with the 5 matter on the reasonable probability test, what is your 6 view?" One of the best examples of that is 7 Dr Darroudi's evidence. 8 MR HEPPINSTALL: Sorry, I think I have to intervene, 9 because -- 10 MR JUSTICE BLAKE: Civil litigation and -- 11 MR HEPPINSTALL: But before the last FTT, Professor Regan, 12 Mr Johnston, Professor Kaldor and Dr Braidwood, all put 13 in -- they first of all reviewed -- if they had put in 14 one before Foskett, they reviewed it. They then put in 15 bespoke reports that addressed reasonable doubt, not the 16 balance of probabilities. Darroudi, Brenner and Lindahl 17 didn't. But they're the only ones. 18 MR JUSTICE BLAKE: So it's that category. 19 MR TER HAAR: But it's certainly right that at that stage 20 the Secretary of State -- as he accepts, there were some 21 who weren't asked the question at all and others where 22 they weren't asked to reconsider in the light of the 23 guidance given by the Upper Tribunal. 24 Anyway, this Tribunal will doubtless look at that 25 evidence and see the extent to which you think it's a</p> <p style="text-align: center;">Page 176</p>

<p>1 well-founded submission or not. I make the submission. 2 Can I move then to Mr Hallard and deal with him in 3 this respect. 4 First of all, we are now in a position where the 5 only evidence of Mr Hallard which is relied upon on 6 exposure, in truth the only area where his expertise is 7 relied upon is that where he's a health physicist. He's 8 not a health physicist when he's saying where 9 a Shackleton aeroplane flew and insofar as that is 10 concerned there were meteorological considerations, et 11 cetera, which were dealt with by Mr Johnston, who has 12 the relevant expertise, and my learned friend can rely 13 upon whatever Mr Johnston actually said, and when you go 14 to the reference he gave you in his submissions, you 15 will see it doesn't go as far as Mr Hallard does. 16 The only parts of Mr Hallard's investigatory role 17 where his role as a health physicist was relied upon was 18 insofar as he knows about Geiger counters. So far as 19 that is concerned, when one strips it away, once the 20 sticky samplers have been rejected, you are down to 21 this. 22 It is remarkable that at the end of it all, after 23 285 pages of analysis of facts, that some surveys, which 24 were not recorded as to what they were, the results of 25 which were only recorded in very limited respects, were</p> <p style="text-align: center;">Page 177</p>	<p>1 important respects, he was dealing with matters which 2 were not his expertise. 3 The most important areas are these: One which he 4 accepted but then didn't apply, we say, which is the 5 inhomogeneous nature of rainout. That's the example 6 given by Dr Nicholson of rain falling one side of 7 a bridge but not falling the other, a factor which he 8 clearly ignores because he takes the same figure across 9 the Island. 10 Sorry, I say ignores -- he accepts it as 11 a principle, but in application ignores because he takes 12 the same figure across the Island. 13 Secondly, in relation to resuspension, and as to 14 resuspension and its allied aspect, which is deposition, 15 he was right outside his territory and accepted so in 16 evidence. 17 As to resuspension, what you're dealing with there 18 is, once you have deposition on the ground, what level 19 of radioactive material will go back into the air, for 20 example if you scuff the ground or you drive 21 a Land Rover over it, or whatever it might be. 22 As to that, he was not a specialist in environmental 23 pathways. He accepted that in his cross-examination. 24 But he took not, as Mr Heppinstall submitted, a most 25 conservative figure, but a figure which was one factor,</p> <p style="text-align: center;">Page 179</p>
<p>1 carried out in two areas. One is Vaskess Bay and the 2 other is in the forward area. 3 The total evidence of any surveys carried out of the 4 sort that a health physicist might be able to help you 5 with are those two limited surveys. There is no 6 evidence of a primary nature of any wider surveys being 7 carried out on the Island at all. I quite accept that 8 insofar as Mr Hallard is a health physicist, and insofar 9 as it's right in the centre part of his world to look at 10 what a Geiger counter will show you, that is within his 11 expertise. 12 But insofar as one is dealing with primary evidence, 13 the remarkable feature of this case is out of all the 14 mass of evidence that he puts together, forming 15 conclusions, considering matters, the only area on the 16 primary evidence that he is expert on is to do with 17 those investigations. 18 Now, I totally accept, as I did before, that when it 19 comes to taking an assumption and considering, for 20 example, an inhalation, what dose you would then 21 experience on the basis of factual assumptions, he's in 22 his territory. But when he's purporting to carry out 23 primary investigations, he's outside his area of 24 expertise. 25 It's important because in certain respects,</p> <p style="text-align: center;">Page 178</p>	<p>1 one magnitude less, despite the evidence which we 2 pointed out in cross-examination had been before the 3 First Tier Tribunal last time. 4 Even more important is the allied question of what 5 gets down to the ground, because, as he accepted from me 6 in cross-examination, questions of rates of deposition 7 depending upon deposition velocity and other concepts, 8 are outside his expertise, and what you are doing -- and 9 there's reference to this in Dr Nicholson's report for 10 the last Tribunal -- is trying to judge, if you find 11 a level of deposition, how much radioactivity would 12 there have been in the air before. Just to give an 13 example, if you have wind blowing, if I'm trying to work 14 out how much radioactivity material will land on this 15 desk, it will depend, amongst other things, on the speed 16 of the wind and what the nature of the particles are 17 that are in the air. Will they come down quickly or 18 will they move on elsewhere? Very scientific, very 19 difficult, complicated calculations, way outside his 20 expertise, something that he hasn't actually considered. 21 He deals -- in the sense that he hasn't turned to 22 another expert and considered: "Well, if I find this 23 level of deposition, how do I calculate accurately what 24 the volume of radioactive material in the air must have 25 been to achieve that deposition? What are the</p> <p style="text-align: center;">Page 180</p>

<p>1 parameters of uncertainty?"</p> <p>2 That's vitally important. He simply in the result</p> <p>3 has not considered, because he cannot, what the level of</p> <p>4 radioactive material in the air was before it was</p> <p>5 deposited on the ground or in some cases it would never</p> <p>6 have been deposited on the ground that he's considering</p> <p>7 in any event.</p> <p>8 There was evidence at the last hearing from</p> <p>9 Professor Regan, who dealt with what you can deduce in</p> <p>10 relation to particular samples.</p> <p>11 Can I take you to two passages in his evidence.</p> <p>12 First of all, in bundle SB12 --</p> <p>13 MR JUSTICE BLAKE: Report or cross-examination?</p> <p>14 MR TER HAAR: I'm going to go to the cross-examination, but</p> <p>15 first of all the report.</p> <p>16 Tab 14A. This is Professor Regan commenting on</p> <p>17 Mr Johnston's evidence. If you could go, please, there</p> <p>18 are no pages, but to numbered paragraph 20, first of</p> <p>19 all.</p> <p>20 MR JUSTICE BLAKE: Yes.</p> <p>21 MR TER HAAR: Professor Regan said this:</p> <p>22 "The relatively few measurements of the deposited</p> <p>23 radioactivity following Grapple Y which are available</p> <p>24 show deviations of factors of 10 to the 5 ...(Reading to</p> <p>25 the words)... Following on from this, and using</p> <p style="text-align: center;">Page 181</p>	<p>1 from Christmas Island, with measured reported</p> <p>2 extrapolated beta gamma activities of 300 microcuries</p> <p>3 per square metre reported at specific locations after</p> <p>4 two of the drops, but virtually zero at most of the</p> <p>5 other measures stations.</p> <p>6 "I have commented previously that I think in light</p> <p>7 of the importance of these measurements, the number of</p> <p>8 measuring locations of the Christmas Island fallout</p> <p>9 directly following the drops should have been</p> <p>10 significantly more than were used in order to give</p> <p>11 a fuller coverage of the Island's area. Variations</p> <p>12 noted in a few measured examples ..."</p> <p>13 MR JUSTICE BLAKE: We have those paragraphs, and I see what</p> <p>14 they're dealing with.</p> <p>15 MR TER HAAR: Yes. Then this was the subject of</p> <p>16 cross-examination. So if I could ask you, please, to</p> <p>17 turn up bundle SB14, tab 5.2. Again, I'm not, given the</p> <p>18 time, going to read it all out.</p> <p>19 MR JUSTICE BLAKE: No, please don't.</p> <p>20 MR TER HAAR: Can I draw attention to the passage I would</p> <p>21 ask you to look at in due course.</p> <p>22 Starting at page 16 --</p> <p>23 MR JUSTICE BLAKE: Yes. I have marked all this up. Yes,</p> <p>24 give me the passages.</p> <p>25 MR TER HAAR: Page 16, starting at line 17, and it's the</p> <p style="text-align: center;">Page 183</p>
<p>1 estimates of numbers of the amount of 239 Pu released by</p> <p>2 the weapons, it does not seem unreasonable to me that</p> <p>3 similar additional factors of 100,000 or more could be</p> <p>4 generated for other localised depositions on the Island</p> <p>5 which were not measured by the survey teams or picked up</p> <p>6 by the later NRL roving team."</p> <p>7 Further down the same page, paragraph 26:</p> <p>8 "AJ concludes that if the whole of the Island was</p> <p>9 covered with average radiation, equivalent to the</p> <p>10 maximum radiation deposition extrapolated from the</p> <p>11 sticky paper results (300), the typical doses would have</p> <p>12 been in the region of 10 microsieverts per year. This</p> <p>13 is a small fraction of the background dose from</p> <p>14 naturally occurring background radiation."</p> <p>15 Then moving on, at paragraph 52, having a little</p> <p>16 higher up the page dealt with the question of natural</p> <p>17 background radiation, at paragraph 48, paragraph 52,</p> <p>18 Professor Regan said this:</p> <p>19 "In my opinion, the reliance on only using Main Camp</p> <p>20 (ie, inhabited area only data) to infer the exposure to</p> <p>21 239 Pu and other radioactive material is also</p> <p>22 questionable, particularly in light of veteran witness</p> <p>23 statements which describe their movement all over</p> <p>24 Christmas Island over an extended period of time. There</p> <p>25 are clear variations in the measured fallout activity</p> <p style="text-align: center;">Page 182</p>	<p>1 whole of the cross-examination going through to page 28</p> <p>2 at the end. But can I just point out on the way</p> <p>3 through, for your note, in particular passages at</p> <p>4 page 21, line 18, to 22, line 3.</p> <p>5 MR JUSTICE BLAKE: Yes.</p> <p>6 MR TER HAAR: Where he is dealing with the assumption</p> <p>7 Mr Johnston then made --</p> <p>8 MR JUSTICE BLAKE: Yes, I've got that. I have marked all</p> <p>9 this up.</p> <p>10 MR TER HAAR: I'm grateful.</p> <p>11 MR JUSTICE BLAKE: I'm just checking that your passages are</p> <p>12 things which I personally and I'm sure others have</p> <p>13 looked at.</p> <p>14 MR TER HAAR: Then again, the opposite side of the same</p> <p>15 page, page 23, line 18, down to page 24, line 5. This</p> <p>16 deals expressly with the point which re-emerges in my</p> <p>17 learned friend's closing submissions from this FTT,</p> <p>18 which is about people flying through the cloud. My</p> <p>19 learned friend said: how could you have high doses?</p> <p>20 Well, Professor Regan, who is not suggested to be</p> <p>21 anything other than a very distinguished and impressive</p> <p>22 witness, deals expressly with that.</p> <p>23 So I'm not going to, as I say, read that out, but</p> <p>24 I commend particularly to you that evidence because the</p> <p>25 reason why it's important is this.</p> <p style="text-align: center;">Page 184</p>

<p>1 On the last occasion the Secretary of State says: 2 "Well, I'll take a maximum of 300 microcuries per square 3 metre". Now he says "I'll go to 430". All the logic of 4 what Professor Regan said then applies as much to 5 Mr Hallard's analysis now as it did to Mr Johnston's 6 then. 7 The same fallacies infect Mr Hallard's approach -- 8 MR JUSTICE BLAKE: I have the submission. I anticipate that 9 if this were to be put into the debate earlier, the 10 point is that's precisely why one has moved away from 11 sticky paper depositions and particular measurements and 12 particular points, because -- Professor Regan's point -- 13 you can't be sure that any one of those has caught the 14 highest range, so we've moved to the whole island at 15 a significantly higher rate. 16 MR TER HAAR: They were in fact saying then you can take the 17 whole island at the 300 figure. I don't think I made my 18 point clear and I apologise. 19 What is now said is because in certain limited areas 20 surveys were carried out using a Geiger counter which 21 would have revealed a higher level -- 22 MR HEPPINSTALL: No. That's not what Mr Hallard said. 23 That's not where I took you. It's not about the surveys 24 at all. It's not about the sticky papers or the 25 surveys. It's about turning the machine on and seeing</p> <p style="text-align: center;">Page 185</p>	<p>1 MR JUSTICE BLAKE: Any time a Geiger counter is switched on, 2 as I understand it, you are going to get some 3 information of where your starting point is and what you 4 are looking for. 5 MR TER HAAR: You are indeed. Where you are; at the point 6 where you are, you will get information as to what 7 you're finding at that point. I don't deny that. 8 What it doesn't tell you is what information you 9 would get if you turned on the Geiger counter 10 miles 10 away or 5 miles away. 11 MR HEPPINSTALL: The Geiger counter probe -- 12 MR JUSTICE BLAKE: I've got the point. 13 MR HEPPINSTALL: If you read Mr Hallard's report, he is not 14 talking about probes. He's talking about the active 15 laundry. He is talking about the calibrated radiation 16 instruments used daily across the Island. He is not 17 just talking about the mobile 1320 probe. He's talking 18 about everything on the Island that was measuring 19 radiation and had to be calibrated to background. 20 MR TER HAAR: Right. I have to say I don't think that was 21 made very clear in either my learned friend's submission 22 or Mr Hallard's evidence. But I take it as he puts it. 23 We are still dealing with measurements at particular 24 locations and we haven't got set out neatly exactly 25 every location that it's talking about. But we know it</p> <p style="text-align: center;">Page 187</p>
<p>1 the background rate. It's the second time my learned 2 friend has mischaracterised that submission. 3 MR TER HAAR: Well -- 4 MR HEPPINSTALL: I have to say that making this point now 5 about the 100,000 is not a submission in reply. 6 MR JUSTICE BLAKE: Can we just focus on the reply? Because 7 otherwise we do run a risk of getting a new lease of 8 life. But I have very much got the context of the 9 points we've now making. 10 MR TER HAAR: With the greatest of respect to my learned 11 friend, I am answering the point which he makes. 12 What he says is, as I understand it: "I rely upon 13 Mr Hallard as a health physicist". It's his response to 14 my CPR35 challenge. He says: look at this. This is 15 a health physicist saying that anybody carrying out 16 Geiger counter checks would have checked the background 17 radiation and we are looking for something in excess of 18 the background radiation, which begs the question: where 19 and when and how were those checks being carried out? 20 Because as I understand it, the only suggested times 21 that these checks were carried out were in the surveys. 22 So we are back to the surveys. 23 My learned friend may say he isn't, but actually he 24 is because that's where the data he relies upon comes 25 from.</p> <p style="text-align: center;">Page 186</p>	<p>1 includes the laundry. So we are talking about an inside 2 building which has of course got clothing coming through 3 it. We had a reference to measurements with a Geiger 4 counter of people on a boat. We have a rainwater sample 5 in one place. Where else, I ask rhetorically, were the 6 background levels being measured to measure rainout? It 7 simply didn't happen. 8 So although it's put forward as though it's a new 9 point, it actually is subject to exactly the same 10 fallacy as was pointed out in the last proceedings. 11 It is helpful that Secretary of State now accepts 12 you can't rely upon, seemingly, the surveys or the 13 sticky sample papers. So we are now on to a third -- we 14 have had a generation of soldiers being denied 15 compensation on the basis of dosimeters abandoned. We 16 had a case last time primarily based upon sticky papers, 17 now abandoned. We had a case relying upon surveys, now 18 abandoned. Now we have got relying upon background 19 measurements of radiation, measurements of background 20 radiation, in a laundry and few other sample places. 21 It all comes to the same thing. 22 MR JUSTICE BLAKE: Well, I shall examine with care where you 23 explored this with Mr Hallard. 24 MR TER HAAR: Also, my Lord might want to examine with care 25 where this has been dealt with in my learned friend's</p> <p style="text-align: center;">Page 188</p>

<p>1 pleadings in the terms it is now, or his opening 2 submissions.</p> <p>3 My Lord, can I go on to a couple of other points, 4 which is this, and this is completely separate, but 5 again a fundamental conceptual issue.</p> <p>6 My learned friend kept repeating a mantra that the 7 Tribunal has to take into account the Secretary of 8 State's possibilities.</p> <p>9 MR JUSTICE BLAKE: Yes.</p> <p>10 MR TER HAAR: Bluntly, that was nonsense. It was nonsense 11 as a sentence. It was nonsense in terms of any pleaded 12 case, and it's nonsense conceptually, and the 13 conceptually is the most important.</p> <p>14 In deciding whether there's a reasonable doubt, it 15 doesn't get you anywhere. If I hadn't managed otherwise 16 to establish a reasonable doubt on the basis of the 17 possibilities that I rely upon, the fact that there's 18 a whole lot of other possibilities cannot negate the 19 reasonable doubt.</p> <p>20 MR JUSTICE BLAKE: Let's go to the contrary, although 21 I don't particularly want to start an interesting 22 forensic debate at 4.20, but let's just try and tie this 23 down. I don't think how many more new submissions 24 you've got. I have numbered them all. This is 25 number 10. But if you can't establish a reasonable</p> <p style="text-align: center;">Page 189</p>	<p>1 could --</p> <p>2 MR JUSTICE BLAKE: You may live for 45 years and they've got 3 all sorts of other reasons why men of their age might 4 have --</p> <p>5 MR TER HAAR: All that's saying is that it's actually 6 a total non-point.</p> <p>7 It deals with my next point, which will be 8 number 11.</p> <p>9 MR JUSTICE BLAKE: Let's deal with number 10 before we move 10 on to 11.</p> <p>11 MR TER HAAR: The two things seem to be associated.</p> <p>12 What he says is that if it's 99.9 per cent, he says 13 that the chance is 99.9 per cent, therefore no 14 reasonable doubt can exist.</p> <p>15 He says it proves that no reasonable doubt can 16 exist. That simply, for the reasons I have already 17 given yesterday, is wrong, because I say logically they 18 are still a possibility. But once you have taken 19 yourself to 99.9 per cent, you have taken into account 20 every possibility that there could be, logically, 21 because that's what feeds into that.</p> <p>22 MR JUSTICE BLAKE: Maybe where we are at cross-purposes is 23 where you're doing your evaluation and where you're 24 doing your overall estimate.</p> <p>25 But surely at some point in the Tribunal's task of</p> <p style="text-align: center;">Page 191</p>
<p>1 possibility, cadit quaestio.</p> <p>2 If you can, then that is a possibility that 3 certainly goes into the evaluation process. My 4 understanding of the submission I have heard so far from 5 Mr Heppinstall is that there is still an evaluation of 6 the reasonable possibilities to see whether it still 7 keeps its flag of reasonableness going once you put it 8 alongside everything else. Otherwise the point in the 9 direction to us from Mr Justice Charles about putting it 10 alongside everything else and evaluating, dissipates and 11 we wouldn't want that.</p> <p>12 MR TER HAAR: It just isn't right, the submission. How 13 could you possibly have a possibility of something 14 which, if you are otherwise uncertain, if everything 15 else has come into play and you have reached a position 16 of reasonable doubt --</p> <p>17 MR JUSTICE BLAKE: Perhaps you don't reach a position of 18 reasonable doubt until you finish the whole business.</p> <p>19 You have put everything which is possible into the 20 equation and eliminated what doesn't reach that 21 standard, and then you are going to have to ask yourself 22 the overall question.</p> <p>23 Surely there is some degree of comparison?</p> <p>24 MR TER HAAR: My learned friend didn't actually give any 25 suggestion of what this other possibility might be that</p> <p style="text-align: center;">Page 190</p>	<p>1 evaluating, applying the directions which we will apply, 2 we have to put everything in about causation -- your 3 reasonable hypothesis, your hypothesis, your material, 4 your evidence, what the Secretary of State says in 5 response, and then we are going to have to ask the 6 overall question.</p> <p>7 MR TER HAAR: Of course you ask the overall question, but 8 you cannot logically get to the position which he was 9 aiming at, which is that another possibility coming in 10 from his side --</p> <p>11 MR JUSTICE BLAKE: Saves the day.</p> <p>12 MR TER HAAR: -- can save the day. It simply logically and 13 legally cannot happen.</p> <p>14 That's the point, and what he's doing is he's trying 15 to say: well, even if the 1.1 per cent raises 16 a reasonable doubt, I can then rely upon some other 17 possibility --</p> <p>18 MR JUSTICE BLAKE: No, I think he is saying 99.9 per cent is 19 not a reasonable doubt.</p> <p>20 MR HEPPINSTALL: But also I was very clear that the -- one 21 of Dr Haylock's important factors that gets you in is 22 the risks you suffered from 1958 to onset. So that's 23 in. That's in.</p> <p>24 MR JUSTICE BLAKE: I think that's in the equation. I think 25 I've got it, but what was point 11?</p> <p style="text-align: center;">Page 192</p>

<p>1 MR TER HAAR: Point 11 was the 99.9 per cent. That's why 2 I say one leads into the other. 3 It simply isn't -- of course everybody has a chance 4 of getting cancer. Everyone has a chance of getting hit 5 by a lorry. Everybody has a chance. 6 The simple question that you are asked -- not simple 7 to answer, but simply to pose -- is: is it possible? Is 8 it possible or credible or plausible or reasonable or 9 reliable -- whatever the language is -- is it possible 10 that this was the cause? 11 Inherent in that question is the fact there's all 12 sorts of other possibilities. Indeed, going back to the 13 passage which I emphasised yesterday in 14 Mr Justice Charles' judgment, it may well be that 15 there's a strong preponderance or probability that the 16 illness was not attributable to war service. That is 17 not enough. 18 If all my learned friend was saying was: you need to 19 take everything into account to get to 99.9 per cent, 20 I don't disagree. 21 What he can't do is what he appeared to want to do, 22 which is to use the concept of possibilities to rule out 23 the possibilities. 24 MR JUSTICE BLAKE: But an irredeemably reasonable 25 possibility doesn't lose its characteristic because</p> <p style="text-align: center;">Page 193</p>	<p>1 in front of the Upper Tribunal. 2 If, contrary to his submission, you get to a point 3 on the scientific evidence where you say, "Hmm", to use 4 his language, "there's an issue we ought to look into," 5 you are in the position of having a plausible hypothesis 6 which needs to be taken into account. 7 MR JUSTICE BLAKE: I think it depends what is behind the 8 hypothesis and how much you have to look into it. 9 MR TER HAAR: The way he put it, if you get to that -- 10 MR JUSTICE BLAKE: I'll look at it again. 11 MR TER HAAR: I think he was saying, if you took all that 12 material together, the uranium miners and the water in 13 South Carolina, et cetera, he was accepting there was 14 a body of scientific material which raised an issue 15 which ought to be looked into. 16 Anyway, I do submit, as I submitted before, he's 17 constantly coming back to in fact trying to apply the 18 wrong test. 19 My very final point, you will be happy to know, 20 I can deal with very incredibly shortly, although it 21 won't help, I'm afraid, the time taken in writing the 22 decision. I'm not going to go through each of the 23 individual cases. I am going to commend to your 24 attention the appendix to our opening submissions in 25 this hearing, where we deal with great care with the</p> <p style="text-align: center;">Page 195</p>
<p>1 there's another reasonable possibility; yes? 2 MR TER HAAR: Yes. The last couple of points. Two left. 3 The penultimate one -- 4 MR JUSTICE BLAKE: Once upon a time we used to in criminal 5 cases -- and they do in Australia -- direct juries in 6 accordance with the rule in Hodges cases, saying it is 7 not a question of whether you can draw a reasonable 8 hypothesis; it's whether it's the only reasonable 9 hypothesis. We don't like that in the UK: see McGreevy 10 in the House of Lords. But sometimes it helps you focus 11 your mind on circumstantial evidence. Sorry to 12 interrupt you. 13 MR TER HAAR: Almost at the end of my learned friend's 14 submissions he made a submission which I have to say 15 made me think that when he stands up in due course he's 16 going to have a foot with a big hole in it. He said in 17 relation to the studies -- he was dealing with 18 Dr Busby's submissions on uranium, et cetera. He said: 19 "Well, you might get to the point where you say: 20 hmm, there's an issue we ought to look into." 21 I think he was saying that simply because you get to 22 that state of thinking on a wide range of studies, it's 23 not enough. 24 In a sense, that is yet again my learned friend 25 resurrecting the hypothesis argument that he failed on</p> <p style="text-align: center;">Page 194</p>	<p>1 facts relating to each of the appellants that 2 I represent. We deal with the factual circumstances, we 3 deal with the illnesses, we deal with the evidence as to 4 whether it's radiogenetic, all that. 5 MR JUSTICE BLAKE: It is an invitation to marry up those two 6 documents. I accept the invitation. 7 MR TER HAAR: That's the invitation. So rather than telling 8 you what's in there now, it wouldn't be a very welcome 9 exercise at this time -- 10 MR JUSTICE BLAKE: That's an invitation I might not accept. 11 MR TER HAAR: So subject to any questions the Tribunal may 12 have, those are our closing submissions. 13 MR JUSTICE BLAKE: Thank you very much indeed. 14 Thank you very much. We have no further questions. 15 Right. Well, thank you very much to you all (a) for 16 getting through this well within the timetable -- 17 congratulations -- and for some extremely informative 18 and helpful submissions, and none of us underestimate 19 the task that now faces us. 20 We will then conclude this part of the hearing, and 21 then you will wait for a response. 22 It's possible that in the course of our thinking we 23 may ask you for some further assistance, in which case 24 you will get it in writing through the usual channels. 25 We don't want an invitation to re-argue the case,</p> <p style="text-align: center;">Page 196</p>

<p>1 I certainly hope, but to ask any further question or 2 clarification if there's some problem we're still not 3 sure about.</p> <p>4 Secondly, I don't know what the practice is in this 5 chamber when it comes to doing what we have to do, which 6 is to issue a decision or determination, but I'm still 7 thinking of the merits of the practice in the 8 Administrative Court in terms of a hand-down judgment, 9 a draft judgment, with some opportunity for scrutiny of 10 typographical and silly factual errors or points where 11 you say you dealt with 1, 2, 3, 4, but there was still 5 12 somewhere knocking around. In this particular case, 13 given the scale of the material, that might be relevant.</p> <p>14 So I'm thinking that we might be using the hand-down 15 with an opportunity to comment further, because I fear 16 with the scale of the judgment, we might want to do that 17 in two parts, ie to try to provide a narrative of events 18 as we understand them to be, the legal arguments and so 19 forth, and give that to you first, and get that back 20 before going on to part 2. These are just ideas up in 21 my head at the moment. We will have to discuss them, 22 but that is what you might be getting.</p> <p>23 MR TER HAAR: Could I just comment very briefly on that. 24 I understand, of course, the procedure in the 25 Administrative Court and other courts in this building.</p> <p style="text-align: center;">Page 197</p>	<p>1 MR JUSTICE BLAKE: Thank you. Dr Busby?</p> <p>2 DR BUSBY: My Lord, I would just welcome some advice about 3 the situation with regard to giving any reportage or 4 talking to people about the events that have occurred 5 over the last few weeks. I'm not sure what the 6 situation is with regard to that. But I know a lot of 7 the test veterans will be contacting me and my team to 8 ask what the state of play is, what happened, what's 9 going on.</p> <p>10 MR JUSTICE BLAKE: We have now completed the oral 11 submission, determination reserved, is the answer, and 12 you will have to wait and see.</p> <p>13 DR BUSBY: That is to say we are not allowed to say anything 14 about it, just to put it bluntly?</p> <p>15 MR JUSTICE BLAKE: Say anything about what?</p> <p>16 DR BUSBY: About what happened.</p> <p>17 MR JUSTICE BLAKE: This is a public court, a public 18 procedure. The record is public, is it not?</p> <p>19 MR HEPPINSTALL: Save for one difference, which is the final 20 paragraph of the inspection security directions 21 maintains the embargo on the use of documents for the 22 purposes of these proceedings, whether or not they were 23 referred to in public.</p> <p>24 MR JUSTICE BLAKE: Yes.</p> <p>25 MR HEPPINSTALL: That is something I strongly maintain.</p> <p style="text-align: center;">Page 199</p>
<p>1 I do wonder that this is not one of those cases where 2 the moment you ask for any comments, you may find you 3 get quite a lot of comments. So whether it's going to 4 be the most expeditious way of handling matters, but 5 that's obviously a matter for the Tribunal.</p> <p>6 MR JUSTICE BLAKE: Yes. It's just that if in the High Court 7 one wants to get the assistance of the parties as to the 8 integrity of the primary narrative, I don't see why that 9 should be lost when one sits in a tribunal.</p> <p>10 MR TER HAAR: I think I have much more in mind not so much 11 the narrative section as the conclusion section.</p> <p>12 MR JUSTICE BLAKE: It may be that that's why I'm thinking 13 about two parts. But I simply ventilate that, in case 14 anyone says: don't do that, that's unlawful or illegal.</p> <p>15 MR TER HAAR: I'm not suggesting that is unlawful, and it's 16 for the Tribunal to work out --</p> <p>17 MR JUSTICE BLAKE: I know that the Upper Tribunal and the 18 Immigration doing judicial reviews now mirrors the 19 Administrative Court approach. So I have done that in 20 the Tribunal. But I simply don't know, because I know 21 there's a certain format here in this chamber.</p> <p>22 DR BUSBY: My Lord --</p> <p>23 MR HEPPINSTALL: I think the approach is fine, my Lord. We 24 will happily assist in the usual way of an embargo draft 25 judgment, and if it came in two parts or the first part.</p> <p style="text-align: center;">Page 198</p>	<p>1 It's something that we have had to write to Dr Busby 2 about in the past, and in fact all of my experts have 3 expressed to me concern that their reports do not enter 4 the public domain because Dr Busby has had the habit of 5 putting expert reports in these proceedings on websites.</p> <p>6 MR JUSTICE BLAKE: Is Dr Busby receiving a transcript of 7 these proceedings.</p> <p>8 MR HEPPINSTALL: Yes. No, no --</p> <p>9 MR JUSTICE BLAKE: Yes? No?</p> <p>10 MR HEPPINSTALL: Is he? Yes.</p> <p>11 MR JUSTICE BLAKE: Is that embargoed?</p> <p>12 MR HEPPINSTALL: No. It's the --</p> <p>13 MR JUSTICE BLAKE: Documents.</p> <p>14 MR HEPPINSTALL: -- documents and the expert reports which 15 we do not expect to see published elsewhere.</p> <p>16 MR JUSTICE BLAKE: Yes.</p> <p>17 MR HEPPINSTALL: We sought a modification to the normal 18 collateral use rule because we just do not want material 19 running away in the public domain.</p> <p>20 MR JUSTICE BLAKE: Do we have the direction made below in 21 our bundle 1?</p> <p>22 MR HEPPINSTALL: I think all we have got is your direction 23 remaking it.</p> <p>24 MR JUSTICE BLAKE: Does it spell out or does it simply 25 remake something else that you have to go elsewhere to</p> <p style="text-align: center;">Page 200</p>

<p>1 find?</p> <p>2 MR HEPPINSTALL: Yes. ISD, I think, didn't make it into</p> <p>3 this bundle. I think it is only your direction remaking</p> <p>4 it.</p> <p>5 MR JUSTICE BLAKE: Just remind me of the date that -- it was</p> <p>6 Judge Stubbs' original direction, wasn't it? I'm sure</p> <p>7 I have seen it in the past.</p> <p>8 MR HEPPINSTALL: Yes, we put it before you and I think in</p> <p>9 the first ever set of directions that you made in this</p> <p>10 case, which I will endeavour to locate --</p> <p>11 MR JUSTICE BLAKE: It would have been in June, I think.</p> <p>12 MR HEPPINSTALL: Here we go. We do have them. Tab 1.9.</p> <p>13 I'm sure the last direction -- yes, direction 16 -- it's</p> <p>14 that last clause which is different in these proceedings</p> <p>15 to normal proceedings. So:</p> <p>16 "All documents disclosed in these proceedings shall</p> <p>17 be used only for the purposes of the current appeals,</p> <p>18 even where such documents have been read to or by the</p> <p>19 Tribunal or have been referred to at a hearing which has</p> <p>20 been held in public or otherwise."</p> <p>21 MR JUSTICE BLAKE: Right. So the answer to Dr Busby's</p> <p>22 question is (1) the determination is reserved (2) you</p> <p>23 cannot put any document that you've been supplied for</p> <p>24 the purpose of arguing this case into the public domain</p> <p>25 that it is held pending the determination, but (3) if</p> <p style="text-align: center;">Page 201</p>	<p>1 little idea when that will be. Thank you very much.</p> <p>2 (4.36 pm)</p> <p>3 (The hearing concluded)</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9</p> <p>10</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p> <p style="text-align: center;">Page 203</p>
<p>1 someone wants to know what was said in court, the</p> <p>2 transcript is available.</p> <p>3 DR BUSBY: Thank you, my Lord.</p> <p>4 There's one other point. I have just been handed a</p> <p>5 piece of paper by Mr Williams. He's been approached by</p> <p>6 the University of East Anglia Ruskin to be able to take</p> <p>7 one of the bundles that we have and to put it there for</p> <p>8 research use at the University.</p> <p>9 MR JUSTICE BLAKE: That sounds like it's not going to be</p> <p>10 possible.</p> <p>11 MR HEPPINSTALL: That would be a breach.</p> <p>12 MR JUSTICE BLAKE: That would be a breach. So I'm afraid</p> <p>13 the answer is no. They will have to apply to the</p> <p>14 Secretary of State if they want that.</p> <p>15 DR BUSBY: Thank you, my Lord.</p> <p>16 MR HEPPINSTALL: Just two matters. I was handed a note</p> <p>17 about a further legal submission that has been received</p> <p>18 by email, and I replied in writing saying that I wasn't</p> <p>19 amenable to any further legal submissions being made by</p> <p>20 the Battersby/Smith appellants at this time. So</p> <p>21 I record that because I think it's better open than</p> <p>22 notes between parties.</p> <p>23 MR JUSTICE BLAKE: Right, thank you.</p> <p>24 Well, thank you very much. We will let you know as</p> <p>25 soon as we reasonably can, but I'm afraid I have very</p> <p style="text-align: center;">Page 202</p>	<p>1 INDEX</p> <p>2 PAGE</p> <p>3 Housekeeping 1</p> <p>4</p> <p>5 Closing submissions by MR 8</p> <p>6 HEPPINSTALL</p> <p>7</p> <p>8 Reply closing submissions by MS 146</p> <p>9 BUSBY</p> <p>10</p> <p>11 Reply closing submissions by MR TER 157</p> <p>12 HAAR</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p> <p style="text-align: center;">Page 204</p>

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