Neutral Citation Number: [2020] EWHC 1256 (QB)

Case No: QB-2018-00444

IN THE HIGH COURT OF JUSTICE
QUEEN'S BENCH DIVISION

Royal Courts of Justice
Strand, London, WC2A 2LL

Date: 19 May 2020

Before:

GEOFFREY TATTERSALL QC
(Sitting as a Deputy Judge of the High Court)

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Between:

VALERIE BANNISTER **(Widow and Executrix of the Estate of** **DENNIS CHARLES BANNISTER, Deceased)**	**Claimant**
- and -	
FREEMANS PUBLIC LIMITED COMPANY	**Defendant**

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- -

Harry Steinberg QC and Gemma Scott (instructed by **Fieldfisher LLP**) for the **Claimant**
David Platt QC (instructed by **BLM LLP**) for the **Defendant**

Hearing dates: 16-18 March 2020

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Judgment Approved by the court for handing down

GEOFFREY TATTERSALL QC:

Introduction

1. Valerie Ann Bannister ['the Claimant'] is the widow and executrix of the estate of Dennis Charles Bannister ['the Deceased'] who contracted malignant mesothelioma and, after a prolonged illness, died on 12 March 2019, aged 73 years. It is alleged that the Deceased was exposed to asbestos, negligently and/or in breach of statutory duty, probably more than 35 years ago in the course of his employment by Freemans plc ['the Defendant'] at its premises on Clapham Road London.

2. Two matters should be noted at the outset of this judgment.

3. Firstly, such exposure did not involve the Deceased working with asbestos or being regularly exposed to the clothes of a person who had worked with asbestos. He had been employed by the Defendant as a Manager in its Accounts Department. He alleged that, following the removal of a partition wall containing asbestos in his office at the weekend, on the following Monday he was exposed to a residue of asbestos dust on his desk and on the floor which was gradually removed over the course of the following days by the Defendant`s cleaners who came into the office every evening.

4. Secondly, the Defendant contends that asbestos fibres are found in the lungs of every adult, largely as a consequence of the past presence of asbestos in buildings, vehicles and in commerce, particularly in an urban environment and that a significant percentage of both male, and particularly female, mesothelioma cases cannot positively be attributed to occupational or domestic asbestos exposure.

5. The quantum of recoverable damages has been agreed at £ 320,000 subject to breach of duty and causation. Accordingly, it was unnecessary to consider the witness statement of the Claimant dealing with expenses during the Deceased`s illness and the levels of care provided for him; the witness statement of Mr Mike Horne, the Deceased`s accountant, as to the Deceased`s current and future remuneration as a self-employed recovery auditor; or the parties` respective Schedule and Counter-Schedule of Loss.

6. However, liability is very much in dispute and in order to be able to establish liability against the Defendant I have to resolve a number of issues which may be summarised as follows:

7. Firstly, to what degree, if at all, was the Deceased exposed to asbestos dust during the course of his employment by the Defendant? There is a dispute as to whether or not the Deceased was exposed to any asbestos dust.

8. Secondly, whether such exposure was caused by the Defendant`s negligence and/or breach of statutory duty? On this issue the Defendant concedes that it owed a duty to reduce the Deceased`s exposure to asbestos to the lowest level reasonably practicable and that it would have been in breach of such duty if there was, as the Deceased contends, visible residues of asbestos dust in his office after works in relation to the partitions of the Deceased`s office.

9. Thirdly, what was the extent of that exposure to asbestos dust?

10. Fourthly, whether any such exposure constituted a `material increase in risk` of the Deceased developing mesothelioma which is the modified test of causation in mesothelioma cases following the judgments of the House of Lords in *Fairchild v Glenhaven Funeral Services Ltd & Others* [2003] 1 AC 32 and of the Supreme Court in *Sienkiewicz v Grief (UK) Ltd* [2011] 2 AC 229.

11. After addressing some preliminary matters, I will address each of the first, third and fourth issues in turn below.

12. Proceedings were issued on 11 December 2018 and the Particulars of Claim and Defence were filed on 13 December 2018 and 11 January 2019 respectively. After the Deceased`s death, the pleadings were amended so that the Claimant brought the proceedings as Widow and Executrix of the Deceased. The Deceased`s evidence was taken on commission on 19 February 2019, some three weeks before he died. Witness statements were exchanged by mid February 2019. There was provision for evidence from medical and engineering evidence experts and for Joint Statements by such experts.

13. At the hearing I read the witness statements of the Deceased who had died almost exactly a year before the hearing. His evidence on commission was recorded on video and was played in court during the hearing. I also heard oral evidence from Mr Graham Ford, a fellow employee of the Defendant at the material time. The Defendant did not adduce any factual evidence.

14. As to expert evidence the following experts gave oral evidence before me and were cross-examined, namely:

    i) Mr John Raper, a consultant forensic scientist, instructed by the Claimant;

    ii) Mr Martin Stear, a chartered occupational hygienist, instructed by the Defendant;

    iii) Dr Robin Rudd, the respiratory physician instructed by the Claimant; and

    iv) Dr John Moore-Gillon, the respiratory physician instructed by the Defendant.

15. In addition, I was invited to have regard to the reports of Professor Charles Twort who had addressed issues relating to the Deceased`s diagnosis and life expectancy in his reports dated 26 September 2018 and 16 August 2019. Neither of such reports was in dispute. I have read such reports but they add little, if anything, of relevance to the issues which I have to address.

16. At the hearing before me the Claimant was represented by Mr Harry Steinberg QC and Ms Gemma Scott and the Defendant was represented by Mr David Platt QC.

17. At the conclusion of the oral evidence on 18 March 2020, at the request of the parties I adjourned to enable the parties to obtain a transcript of the evidence given before me and to file and thereafter to serve closing written submissions. Although the parties were content to rely solely on such written closing submissions and any brief responses thereto without the necessity for an oral hearing, I kept open the possibility of an oral hearing, which in the light of current circumstances would have to be conducted by

telephone or video-conferencing. I received all these closing written submissions and responses thereto on 7 April 2020. Such submissions were comprehensive and lengthy and ran to about 150 pages with very extensive citations of authority and other literature. Having considered them, in my judgment it is not necessary that there should be a further oral hearing.

18. I express my profound gratitude to all counsel for dealing with this difficult case expeditiously and efficiently in what were rapidly becoming difficult circumstances and particularly for their immensely helpful detailed closing written submissions.

19. At the outset of this judgment it is helpful to give an overview of mesothelioma and the current state of the law in relation thereto.

An overview of mesothelioma

20. In *Fairchild* Lord Bingham, at 43, stated:

> "From about the 1960s, it became widely known that exposure to asbestos dust and fibres could give rise not only to asbestosis and other pulmonary diseases, but also to the risk of developing a mesothelioma. This is a malignant tumour, usually of the pleura, sometimes of the peritoneum. … It is a condition which may be latent for many years, usually for 30-40 years or more; development of the condition may take as short a period as ten years, but it is thought that this is the period which elapses between the mutation of the first cell and the manifestation of symptoms of the condition. It is invariably fatal, and death usually occurs within one to two years of the condition being diagnosed. … It is not known what level of exposure to asbestos dust and fibre can be tolerated without significant risk of developing a mesothelioma, but it is known that those living in urban environments (although without occupational exposure) inhale large numbers of asbestos fibres without developing a mesothelioma. It is accepted that the risk of developing a mesothelioma increases in proportion to the quantity of asbestos dust and fibres inhaled: the greater the quantity of dust and fibre inhaled, the greater the risk. But the condition may be caused by a single fibre, or a few fibres, or many fibres: medical opinion holds none of these possibilities to be more probably than any other, and the condition once caused is not aggravated by further exposure. … There is no way of identifying, even on a balance of probabilities, the source of the fibre or fibres which initiated the genetic process which culminated in the malignant tumour."

Since that judgment the references to a 10 year "latency period" and to single fibre causation have been qualified by the judgments in the *Employers` Liability Policy Trigger Litigation* [2009] Lloyd`s Law Reports 295 and *Sienkiewicz.* However, the core observations still apply.

21. In such circumstances it was probably inevitable that where a claim was brought by or on behalf of a person who had contracted mesothelioma and it was alleged that such

was caused by exposure to asbestos in breach of a duty of care owed to such person, different principles as to causation would apply.

The current state of the law

22. The first problem to be addressed derived from what Burton J had described in *Durham v BAI (Run Off) Ltd* [2009] Lloyd`s Law Reports 295 as the 'unknowability and indescribability of the precise pathogenesis of mesothelioma and the impossibility of knowing whether any particular exposure to asbestos had caused the mesothelioma'.

23. So it was that in *Fairchild* the House of Lords had to consider the problem of causation where, although the claimants had been employed in a number of employments where they had been exposed to asbestos dust and could prove a negligent breach of duty by their employers, they could not establish, even on a balance of probabilities, which employer`s negligence and/or breach of duty had caused the mesothelioma. As Lord Bingham succinctly put it in *Fairchild* the issue raised in that appeal was:

> "whether, in the special circumstances of such a case, principle, authority or policy requires or justifies a modified approach to proof of causation."

24. *Fairchild* gave rise to a special rule governing the attribution of causation in cases where a claimant had contracted mesothelioma. This was developed further in *Barker v Corus UK Ltd* [2006] 2 AC 572 and further varied by Parliament in section 3 of the Compensation Act 2006. Thus [per Lord Phillips in *Sienkiewicz*, at 239] the rule in its current form can be stated as follows:

> "when a victim contracts mesothelioma each person who has, in breach of duty, been responsible for exposing the victim to a significant quantity of asbestos dust and thus creating a `material increase in risk` of the victim contracting the disease will be held to be jointly and severally liable for causing the disease."

25. Thus, *Fairchild* resolved the issue about proof of causation in cases where there was more than one defendant who was alleged to have been in breach of duty by exposing the claimant to asbestos.

26. *Sienkiewicz* stated two further important propositions, both of which relate particularly to causation in mesothelioma cases.

27. Firstly, the court addressed the question of what constituted a `material increase in risk`. On this issue, at 269, Lord Phillips, with whom the other members of the court agreed, stated, albeit obiter:

> "107. Liability for mesothelioma falls on anyone who has materially increased the risk of the victim contracting the disease. What constitutes a *material* increase of risk? The parties were, I think, agreed that the insertion of the word "material" is intended to exclude an increase of risk that is so insignificant that the court will properly disregard it on the de minimis principle.

> Mr Stuart-Smith submitted that there should be a test of what is de minimis, or immaterial, which can be applied in all cases. Exposure should be held immaterial if it did not at least double the environmental exposure to which the victim was subject. It does not seem to me that there is any justification for adopting the "doubles the risk" test as the bench mark of what constitutes a material increase in risk. Indeed, if one were to accept Mr Stuart-Smith`s argument that the "doubles the risk" test establishes causation, his de minimis argument would amount to saying that no exposure is material for the purpose of the *Fairchild/Barker* test unless on balance of probability it was causative of the mesothelioma. That cannot be right.
>
> 108. I doubt whether it is ever possible to define, in quantitative terms, what for the purposes of the application of any principle of law is de minimis. This must be a question for the judge on the facts of the particular case. In the case of mesothelioma, a stage must be reached at which, even allowing for the possibility that exposure to asbestos can have a cumulative effect, a particular exposure is too insignificant to be taken into account, having regard to the overall exposure that has taken place."

28. Having considered the findings of the trial Judge, at 270, Lord Phillips concluded thus:

> "111. The reality is that in the current state of knowledge about the disease, the only circumstances in which a court will be able to conclude that wrongful exposure of a mesothelioma victim to asbestos dust did not materially increase the victim`s risk of contracting the disease will be where the exposure was insignificant compared to the exposure from other sources."

29. This clarification of what constitutes a `material increase` in risk` applies both to cases where multiple defendants were alleged to have exposed a claimant to asbestos fibres and also to where only one defendant was adjudged to have negligently exposed the claimant to asbestos fibres.

30. Secondly, the court clarified the effect of section 3(2) of the Compensation Act 2006 which provides that:

> "The responsible person [*defined in section 3(1) as a person who has negligently or in breach of statutory duty caused or permitted another person ("the victim") to be exposed to asbestos*] shall be liable-"
>
> (a) in respect of the whole of the damage caused to the victim by the disease (irrespective of whether the victim was also exposed to asbestos)-
>
> (i) other than by the responsible person, whether or not in circumstances in which another person has liability in tort, or

(ii) by the responsible person in circumstances in which he has no liability in tort, and

(b) jointly and severally with any other responsible person."

31. The court stated that this did *not* provide that, in cases of mesothelioma, the "responsible person", as defined in the Act, would be liable in tort if he had materially increased the risk of a victim contracting mesothelioma, as the Court of Appeal had found. Instead it provided that whether and in what circumstances such a person who had materially increased the risk of a victim contracting mesothelioma was to be decided according to the Common Law, but that once such a person is found liable at Common Law, section 3 provides that he is liable for the whole of the damage so caused and is adjudged jointly and severally liable with any others also adjudged liable to the same victim, subject to issues of contributory negligence or contribution from other tortfeasors : see paras 70-71 of Lord Phillips' judgment.

32. Hence in a mesothelioma case, a Claimant has to prove, on the balance of probabilities, the following four things, namely that:

i) the defendant owed the claimant a duty of care not to expose him to asbestos dust and the consequent risk of asbestos-related injury.

ii) the defendant was in breach of that duty.

iii) the defendant`s negligent breach of that duty caused a material increase in the risk that the claimant would develop mesothelioma. And

iv) the claimant suffered loss and damage in consequence of developing mesothelioma subject to the usual `remoteness` rules.

The issues to be determined in this case

33. I have already noted that in this case the Defendant concedes that, in the event that I were to find that the Deceased was exposed to asbestos dust in the course of his employment, it was in breach of the duty of care owed by the Defendant to the Deceased not to expose him to asbestos dust and the consequent risk of asbestos-related injury.

34. Such concession was properly made, given that Mr Raper and Mr Stear agree that at the time of the Deceased`s employment by the Defendant:

i) The hazards to health associated with exposure to asbestos, particularly mesothelioma but also other asbestos-related diseases, were well known because any such exposure post-dated the publication of *Mesothelioma of Pleura and Peritoneum Following Exposure to Asbestos in the London Area* by Newhouse and Thompson in 1965 and subsequent press reports thereof and, in particular, the publication of *the HSE Guidance Note EH10* in December 1976 and its update in April 1973; and

ii) A number of documents provided advice as to necessary measures for the removal of asbestos containing materials [`ACMs`], the subsequent cleaning of waste created by such work and the guidance specified the application of dust-

free techniques for clearing away dust and debris generated during work with ACMs.

35. Moreover, although it is further agreed that, applying *Sienkiewicz*, in a mesothelioma case in which it is alleged that there was a material increase in the victim`s risk of contracting the disease, it is appropriate to estimate the extent of that exposure to asbestos dust, which the experts have described as the cumulative dose.

36. I now address the three issues which I have to determine, namely:

    i) To what degree, if at all, was the Deceased exposed to asbestos dust during the course of his employment by the Defendant;

    ii) What was the extent of that exposure to asbestos dust; and

    iii) Whether any such exposure constituted a `material increase in risk` of the Deceased developing mesothelioma.

The Deceased`s exposure to asbestos dust in the course of his employment by the Defendant

37. There is some common ground between the parties in that the following matters are agreed.

38. Firstly, at all material times the Defendant was a well-known mail order company which traditionally produced catalogues which set out their range of products which were for sale but has since moved to sell goods online.

39. Secondly, between 1977/78, when the Deceased would have been aged about 31 years, and 1988/89 he was employed as a Manager in its Accounts Department at the Defendant`s premises on Clapham Road, London. This was a large old four storey building, probably Victorian, which had previously been a printing works.

40. Thirdly, the Deceased had his own office on the first floor. It appears to have been one of six offices separations by partitions. There were gaps between the edges of such partitions and the walls and ceiling which were filled with an infill material/board. Outside such offices was a common area in which others worked, including Mr Graham Ford who was then employed by the Defendant as a financial planning assistant reporting to the Deceased.

41. I turn to consider the evidence of the Deceased and Mr Ford.

The evidence of the Deceased and Mr Ford

42. The Deceased made two witness statements.

43. In his first witness statement made on 2 August 2018 the Deceased stated that after leaving school he had worked for a bank in various positions and in his mid-20s began to work as an internal auditor/accountant, initially at Abbey Life, then at Green Shield Trading Stamp Co Ltd [`Green Shield`] and then at the Defendant`s Clapham Road premises which he believed had been built in the 1900s and was formerly a warehouse or an old print works. He was employed as an accounts manager and he had one of 6

offices on the first floor separated by partitions between each office which were about an inch thick. It seems common ground that such partitions contained panels constituting the substance of the partition ['the central panels'] and panels which joined the partition to the walls and ceilings ['the infill panels'].

44. He continued thus:

> "10. … I recall being told that workmen were going to come into the offices to remove the old partitions and replace them over the course of the weekend. I recall coming back to work on the Monday after the work had been completed and there were no partitions between the offices. This is because it took a week for the new partitions to be put in. I believe that the partitions and area around them contained asbestos. I remember being notified of the asbestos removal within the offices when I was working at Freemans. At the time I took no notice of it as I did not know that asbestos was dangerous.
>
> 11. I do recall coming into the office on the Monday after the work had been completed and there being quite a lot of dust on the desks and around the floor. Again, I thought nothing of it at the time. During the course of that week cleaners would have come in to clean the offices as they did every week."

45. It may be noted that the Deceased:

i) did not refer to any memo;

ii) gave no reason for his belief that the partitions and the area around them contained asbestos save being notified of the asbestos removal;

iii) expressly stated that on the Monday morning there was no partition between the offices: it thus follows that both the central panels and the infill panels had been removed; and

iv) stated that it took about a week for the new partition to be installed.

46. In his second witness statement made on 12 February 2019 the Deceased stated that:

i) On his return to work on the Monday, the steel frames of the partitions remained with some of the central pieces and seemingly all of the infill panels of the partitions which were beige in colour had been removed. When he had said in his first statement that on the Monday there were no partitions, he had meant that the material around the partitions had been removed but the steel frame remained. He remembered being able to see his colleagues who were in the offices on either side of his office and recalled that he could see Keith Ellison, his line manager, who was able to ask him what he was doing which he remembers being distracting;

ii) The partitions were `refilled` at most over the next week or two;

iii) He had received a memorandum [`memo`] about the works to be done which specifically highlighted the fact that the infill panels contained asbestos and that it was this material that was being removed. Mr Ford, who was his financial planning assistant, got to know about the memo because the Deceased worked very closely with him and it would have come up in conversation;

iv) Although the Deceased had become aware that Mr Ford recalled him telling Mr Ford that he could taste the dust in his mouth, he did not expressly say that he remembered this but did recall commenting on the dust in his office and telling Mr Ford about it. He repeated that `there was visible dust on my desk and on the floor, that it looked `as though the work had overrun and the builders had not had time to clean it up` and that `the visible dust was cleaned up by the cleaners who came in every evening` and `after a few days they were back to being relatively `clean` again`; and

v) When asked by doctors about whether he had been exposed to asbestos, he had thought that they were only interested in recent exposure and did not then appreciate that exposure over 40 years ago could have caused his mesothelioma.

47. In his cross-examination when he gave evidence on commission the Deceased stated as follows.

48. He agreed that after his initial diagnosis he had told various persons, when asked specifically about any possible exposure to asbestos, that he was unaware of any such exposure: see the letter from Dr Sathyamoorthy dated 23 January 2018, the file note of Ms Forrest, a senior physiotherapist on 21 February 2018 and the letter from Dr Datta dated 5 March 2018 respectively after each had seen the Deceased in clinic. However, in cross-examination Dr Moore-Gillon accepted that it was very common for those diagnosed with mesothelioma to deny any exposure to asbestos.

49. In an application for Industrial Injuries Disablement Benefit [`IIDB`] made on 10 April 2018 after he had become ill [which resulted in a lump sum payment of £ 16,404] he had told the person completing such claim on his behalf that:

> "I was exposed to asbestos when working in various locations including warehouses. The warehouses may have contained asbestos and were dusty.
>
> In one of the offices I worked there was refurbishment work going on where partitions were put up and old partitions were removed. This was dusty work."

Later in the same application form the Deceased listed his employers and said that in respect of both Green Shield and the Defendant he had been exposed to asbestos and in respect of the Defendant referred to a 'warehouse'.

50. Although he had identified his employers at the time of his exposure to asbestos as the Defendant and Green Shield, he subsequently contended that none of his exposure to asbestos had occurred at Green Shield where the building was at most 10 years old and contained no asbestos. When asked why he had identified Green Shield and no other employers other than the Defendant, he could only say that this was a

`misunderstanding. He repeated this explanation and said that he had been filling in a form 'to give as many inferences as to where I could have been exposed to asbestos' in his working career. When pressed further on this, he said that at the time of completing the application form he had thought that he could have believed that he could have been exposed to asbestos at Green Shield but had concluded 'on reflection that's not the case'.

51. He could not specifically remember the contents of the memo, but it referred to the removal of asbestos board but at the time he had no awareness that asbestos was dangerous. He remembered the memo because, as a manager, it was his responsibility to remember a disruption which he had to organise around.

52. On the Monday morning after the partitions had been removed 'there was dust everywhere' and, when it was suggested to him that there could not have been that much dust on the desk if he was able to get on with his work, stated 'you work around anything in a busy accounting office. You don't stop work because there`s a bit of dust'.

53. When he became ill, he was unaware of any exposure to asbestos in the past but at that time he did not appreciate that any exposure very many years ago would be relevant.

54. In his witness statement made on 17 July 2018, Mr Ford stated that he was employed by the Defendant as a financial planning assistant in the Accounts Department between 1979 and 1985, with the Deceased as his Manager. The Defendant`s premises were an old print works, probably built in the early 1900`s. There were a number of offices for the management team on the first floor, of which the Deceased had one, and a general office outside such offices. The offices were separated by partitions but there were gaps between such partitions and the walls and ceiling which was infilled with asbestos. Although he does not expressly say how he knew that the infill panels contained asbestos, he 'distinctly' recalled one instance when asbestos was identified on that floor of the building and removed over a weekend because he had seen a memo regarding the removal of the partitions and the asbestos. He thought that this occurred around 1983/84. He had returned to work on the Monday to find the work completed but there were 'residues of dust left in the offices after the work had been done' and the Deceased told him that he could taste the dust in his mouth. He could remember these events 'like it was yesterday'. Finally, he said that later asbestos was also identified in other parts of the building and those areas were sealed off.

55. In his further witness statement made on 11 February 2019, Mr Ford stated that the partitions were metal partitions with infill panels from the edges of the partition to the walls and ceiling. He had a clear recollection of the memo which referred to the removal of the infill panels which were `quite as few centimetres in width` because such contained asbestos although he did not believe that the partitions themselves [by which I understood him to be referring to the central panels], contained asbestos. On the Monday he had been to see the Deceased and there was 'visible dust in [the Deceased's] office … on his desk and on the floor'. He corrected his earlier statement in that the partitions themselves were not removed, and were only removed years later when the office became open plan: it was just the infill material around the partitions which was removed.

56. In cross-examination Mr Ford stated the following.

57. Although he had worked for the Defendant between 1979 and 1985 with the Deceased as his Manager from about 1980, he had returned to the employment of the Defendant in a different capacity and not in the accounts department in 1986. However, he and the Deceased had kept in touch as friends and until recently he had seen him about once every four months or so.

58. At a recent meeting with the Deceased after he had become ill and about the time when he was being asked to make a witness statement on the Deceased`s behalf [his first witness statement is dated 17 July 2018 and preceded the first witness statement of the Deceased which was dated 2 August 2018], the Deceased had told him that he did not know from where he had contracted mesothelioma and Mr Ford had said to him 'don't you remember, they removed asbestos from our offices in the early 80's' whereupon the Deceased 'remembered' this.

59. He could remember nothing about the memo other than that it referred to asbestos. He thought such memo might have come from the Defendant`s Chairman because it was coloured pink and all memos sent by directors were coloured pink. He believed it was in 1983/1984 because he had ceased to work for the Defendant in 1985. Asked about other memos he had seen, he said that towards the end of his employment by the Defendant in that building in 2008 'they were sealing off large chunks of the building because it did contain asbestos'. Although he did not receive memos at that time, he remembered seeing signs saying: `Keep out: asbestos`.

60. He reaffirmed that he did remember the Deceased saying 'I can taste the dust in my mouth'.

61. Mr Ford was also asked about the subsequent replacement of the partition which he agreed took place `a few weeks later` and the following exchange took place between Mr Platt and Mr Ford:

> "Q. Do you remember there being any dust when the other panels were put back in again and fixed to …?
>
> A. No, not particularly, I can`t remember.
>
> Q. Because is it not possible that what you are recalling in terms of Dennis`s reaction was when the panels were put back in again?
>
> A. It could be. I could not honestly say. I do remember him saying 'I can taste the dust in my mouth.'
>
> Q. Similarly, I will suggest to you that it is possible, given the passage of time, that the memo you are referring to either referred to other works or the dust that you saw at the time may have been either it being put back in again or non-asbestos dust such as taking out the partitions in the middle which you do not remember but Dennis does?

A. The memo definitely related to the removal of the asbestos and I do remember Dennis saying, 'I can taste dust in my mouth'.

Q. What I am suggesting is that you may be right that there was a memo about asbestos, it may have been on a different occasion and it may be that any dust that was left was actually other dust that was not asbestos dust because you would not be able to tell the difference?

A. I wouldn't tell the difference, no. I mean, I wasn't in his office. The memo definitely related to the removal of the panels with the asbestos. They wouldn't tell us that they were going to remove them and then tell us that they were going to replace them with something else after the event. …"

62. Mr Platt relies on this passage as a concession by Mr Ford that any dust was produced on an occasion subsequent to the removal of the panels and would not have contained asbestos.

63. By contrast, Mr Steinberg submitted that a reasonable man would say that anything was possible and that the point was clarified in re-examination by the following exchange between Mr Steinberg and Mr Ford:

"Q. … You were asked a lot of questions about the sequencing when you saw this dust and when the memo was delivered. What is your best recollection about seeing the dust?"

A. The only recollection I have is sitting in his office after the partitions … well, the board partitions had been removed and I do remember him saying, 'I can taste dust in my mouth'. That was the recollection I have.

Q. Where was he at that time. Can you picture the scene?

A. He was literally standing in front of me actually he was moving his magazines about and that's when he said he'd got a sticky taste … he could taste dust in his mouth.

Q. It was suggested … well, you remember the layout of the office on that day?

A. Yes

Q. What was around him, how did it look?

A. It would be the normal office with partitions on both sides, the back wall. His desk was in the middle of the office. He would be sat with his back to the window

> and the shelf and the front facing the door to enter his office.
>
> Q. Mr Platt suggested to you that maybe you were confused, maybe it was after the partitions had been removed?
>
> A. I don`t remember it that way. I do remember it … that it was shortly after we had them removed, as I say, because I went into his office on the day, on the Monday."

64. The Deceased`s daily routine involved him going to meetings outside his office and spending time in the IT department so that he spent about 60% of his time in the office. Although he worked a 7½-8 hour day, the Deceased worked longer hours than he did.

65. The evidence from Mr Ford came as a surprise to the non-medical experts who had each assumed that the Deceased spent all his 8-hour working day in his office. As appears below, this led to revised estimates of the Deceased`s cumulative dose to reflect an assumption that the Deceased usually worked a 9-hour day and spent about 60% of his time in his office.

The evidence of the engineering experts

66. None of the experts can assist as to whether or not the materials, partition, central and/or infill panels, which were removed contained asbestos but both Mr Raper and Mr Stear agree that if I were to accept the Deceased`s evidence, it necessarily follows that an asbestos containing material ['ACM'] was removed and that it is more likely than not to have been asbestos insulation board ['AIB'] rather than other asbestos materials.

67. There was further agreement between Mr Raper and Mr Stear as follows.

68. Firstly, that it is a matter for the court to determine how the infill panels were removed and whether or not appropriate precautions were taken.

69. Secondly, the presence of dust in the Deceased`s office on the Monday following works to the partition does not *necessarily* mean that that appropriate precautions were not taken as it is possible that such dust could relate to other works, albeit that:

    i) Mr Raper says that it would be most unusual during asbestos removal work for *only* the asbestos-containing component of debris to have been removed and, given the absence of any evidence as to programming of such work, how such work was carried out or the competence of the contractors, the dust was likely to have been generated during the removal of asbestos containing infill materials.

    ii) Mr Stear says that, given that the Defendant had identified the asbestos infill panels, had decided to remove them and notified employees to that effect, it is unlikely that they would not have appreciated the need to engage a specialist contractor and/or take adequate precautions and it is more likely that asbestos

precautions were taken and that the dust seen by the Deceased and Mr Ford was non-asbestos dust from other works, rather than that no precautions were taken.

70. Thirdly, if the court finds that the asbestos infill panels were removed without precautions being taken, the dust seen by the Deceased and Mr Ford is likely to have contained asbestos.

71. Mr Raper and Mr Stear both agreed that if the court found that a memo was sent to the Deceased, as alleged by him, on the balance of probabilities such would suggest a degree of asbestos awareness on the part of the Defendant and that precautions should have been taken to remove any asbestos-containing dust. However, they disagreed as to the extent of such awareness and its consequences in that Mr Raper notes the failure to refer to the need for precautions during the removal of the partition whereas Mr Stear sees no reason why the memorandum should have detailed the precautions for which to be carried out in the planned absence of the Defendant`s employees.

72. However, I am satisfied that the inferences which can and should be drawn from the facts which I find must ultimately be a matter for me and not these, or any, experts.

The reliability of historical lay evidence

73. Before I set out the parties` closing submissions on the facts and my findings of fact in relation to the evidence given before me, it is appropriate that I should note that in *Sienkiewicz* Lord Rodger stated:

> "166. It is important that judges should bear in mind that the *Fairchild* exception itself represents what the House of Lords considered to be the proper balance between the interests of claimants and defendants in these cases. Especially, having regard to the harrowing nature of the illness, judges, both at first instance and on appeal, must resist any temptation to give the claimant`s case an additional boost by taking a lax approach to the proof of the essential elements. That could only result in the balance struck by the *Fairchild* exception being distorted."

74. In *Kimathi v Foreign and Commonwealth Office* [2018] EWHC 2066 (QB), where Stewart J had to evaluate evidence given in relation to events at the time of the State of Emergency in Kenya in the early 1950s, he cautioned against the overuse of historical lay evidence which is otherwise unsupported by documentary evidence and cited from various authorities. From the analysis of decided cases, which appear at para 95 of his judgment onwards, he observed that memories are believed to be more faithful than they in fact are, that it is erroneous to believe a recollection is more likely to be accurate the stronger and more vivid the recollection is or the more confident way in which it is expressed, that even memories of particularly shocking or traumatic events are fluid and malleable, and that events can come to be recalled which did not happen at all and the process of civil litigation subjects the memories of witnesses to powerful biases.

75. For present purposes I believe it is sufficient to cite dicta from Leggatt J, as he then was, in *Gestmin SPGS SA v Credit Suisse (UK) Limited* [2013] EWHC 3560 (Comm) when he stated:

"15. An obvious difficulty which affects allegations and oral evidence based on recollection of events which occurred several years ago is the unreliability of human memory.

16. While everyone knows that memory is fallible, I do not believe that the legal system has sufficiently absorbed the lessons of a century of psychological research into the nature of memory and the unreliability of eyewitness testimony. One of the most important lessons of such research is that in everyday life we are not aware of the extent to which our own and other people`s memories are unreliable and believe our memories to be more faithful than they are. Two common (and related) errors are to suppose: (1) that the stronger and more vivid is our feeling or experience of recollection, the more likely the recollection is to be accurate; and (2) that the more confident another person is in their recollection, the more likely their recollection is to be accurate.

…

19. The process of civil litigation itself subjects the memories of witnesses to powerful biases. The nature of litigation is such that witnesses often have a stake in a particular version of events. This is obvious where the witness is a party or has a tie of loyalty (such as an employment relationship) to a party to the proceedings. Other, more subtle influences include allegiances created by the process of preparing a witness statement and of coming to court to give evidence for one side in the dispute. A desire to assist, or least not to prejudice, the party who has called the witness or that party`s lawyers, as well as a natural desire to give a good impression in a public forum, can be significant motivating forces.

20. Considerable interference with memory is also introduced in civil litigation by the procedure of preparing for trial. A witness is asked to make a statement, often (as in the present case) when a long time has already elapsed since the relevant events. The statement is usually drafted for the witness by a lawyer who is inevitably conscious of the significance for the issues in the case of what the witness does nor does not say. …The statement may go through several iterations before it is finalized. Then, usually months later, the witness will be asked to re-read his or her statement and review documents again before giving evidence in court. The effect of this process is to establish in the mind of the witness the matters recorded in his or her statement and the other written material, whether they be true or false, and to cause the witness`s memory of events to be based increasingly on this material and later interpretations of it rather than on the original experience of the events.

…

> 22. … This does not mean that oral testimony serves no useful purpose … But its value lies largely, as I see it, in the opportunity which cross-examination affords to subject the documentary record to critical scrutiny and to gauge the personality, motivations and working practices of a witness, rather than in testimony of what the witness recalls of particular conversations and events. Above all, it is important to avoid the fallacy of supposing that, because a witness has confidence in his or her recollection and is honest, evidence based on that recollection provides any reliable guide to the truth."

76. Such cautionary words were echoed by Lord Pentland in *Prescott v The University of St Andrews* [2016] SCOH 3, where the learned judge, having referred to the above observations of Leggatt J in *Gestmin*, stated:

> "42. The process of attempting to remember events in the distant past is an inherently fallible one; it is a process that is highly susceptible to error and inaccuracy. Our efforts to think back many years to recollect the details of past events are liable to be affected by numerous external influences; involvement in civil litigation can in itself operate as a significant influence. All remembering of events many years ago involves processes of a reconstructive nature; these processes are largely unconscious with a result, as Leggatt J said, that the strength, vividness and apparent authenticity of memories are often not reliable markers of their truth. Having seen and heard the pursuer give evidence, I have come to the view that I must evaluate the reliability of his claimed recollections with caution. I have, wherever possible, tested his evidence against other evidence in the case and I have considered objectively where the probabilities lie."

77. So it was that in *Sloper v Lloyds Bank Plc* [2016] EWHC 483 (QB), where Spencer J had to determine whether a claimant`s mesothelioma was caused by, inter alia, either her exposure to asbestos in premises where a suspended ceiling made of asbestos tiles disturbed in the course of maintenance shedding asbestos dust and/or or over several weekends when she was present while substantial building works, including the removal of an asbestos tiled ceiling were undertaken, having cited the above authorities, he stated:

> "64. These latter observations [referring to para 19 in *Gestmin*] are, in my view, particularly apposite in the present case in relation to the evidence of the witnesses called by the claimant. The tragic nature of the case and the natural desire to assist in any proper way, are inevitable human reactions. These, and the other factors referred to in the passages quoted above, make it all the more important to test the recollection of the witnesses against contemporaneous documentation."

78. I bear in mind that in this case no documentary evidence has been produced by either party to support or call into question the oral evidence which was given by the Deceased and Mr Ford.

79. Mr Steinberg sought to diminish the effect of such dicta in this case in that *Kimathi* was a case in which Stewart J was referred to `an abundance of documents` which did not support the evidence given by the test claimant and there was witness to corroborate his evidence; *Sloper* was another case where the claimant`s evidence was contradicted by contemporaneous documentation and evidence; and *Gestmin* was simply an eloquent reminder of the fallibility of human memory, which must apply in every case. He submitted that on the particular facts of this case the position was very different because two witnesses had given clear and corroborative evidence which, although challenged, was never undermined and there was no evidence adduced to the contrary.

80. There is some merit in this submission, subject to the qualifications referred to below.

81. In so far as it relies on the Defendant`s failure to keep or maintain records, it is unrealistic and I reject it because in my judgment it is not reasonable to have expected the Defendant to have kept records from such a long time ago. I do not find the decision or reasoning of the Court of Appeal in *Keefe v Isle of Man Steam Packet* [2010] EWCA Civ 683 to be of assistance.

82. Moreover, although Mr Steinberg stated that Lord Rodger`s dicta in *Sienkiewicz* were simply 'a reminder that the relaxation of the causation test did not apply to or eliminate the other ingredients of tortious liability', I am satisfied that such dicta and the other judicial observations in *Kimathi*, *Gestmin* and *Sloper*, whilst in no way binding on me, are important as a helpful and cautionary general guide to evaluating oral evidence and the accuracy or reliability of memories and I do not propose to allow the Defendant, in Mr Steinberg's words 'to convert one of the inherent difficulties in asbestos litigation - the inevitably long latency periods of the disease - into its first line of defence.'

83. In making my findings of fact I have had regard to the detailed submissions of both Mr Steinberg and Mr Platt, although to set them out in detail would inevitably unnecessarily lengthen this judgment.

84. Having regard to all that is set out above, I set out my findings of fact.

My findings of fact

85. Before considering the detailed facts it is important that I make two preliminary observations.

86. Firstly, although I accept, as did Mr Platt, that both the Deceased and Mr Ford did not give their evidence with any intention to deceive, there were a number of matters which made me have substantial doubt as whether the Deceased`s recollection of events could be relied upon. My reasons for so concluding may be summarised as follows.

87. Firstly, although I note what the Deceased said in cross examination, as set out above, namely that when asked about any exposure to asbestos he believed that the doctors were only interested in recent exposure and I accept Dr Moore-Gillon`s evidence that such denials of exposure to asbestos are not uncommon, such matters notwithstanding, it is in my judgment at the very least surprising that the Deceased denied being exposed to asbestos on three separate occasions during which time he would have had time to reflect on the accuracy of such denials.

88. Secondly, even after making substantial allowances for the fact that his cross-examination took place only 3 weeks before the Deceased died and that in my non-medical view he looked, and must have been, unwell when giving evidence on commission, I did not find what the Deceased said in his IIDB application form as to his alleged exposure to asbestos at all satisfactory for the following reasons:

i) I do not know why he referred to Green Shield at all as a potential source of his exposure to asbestos because, as he says, he worked for that organization in a modern building which was highly unlikely to have contained asbestos. Moreover, I frankly cannot understand why the Deceased referred to working in warehouses which 'may have contained asbestos and were dusty'. In those circumstances, I do not accept that the Deceased, who was obviously an intelligent man and as an accountant well used to the need for accuracy, could ever legitimately have believed that he had been exposed to asbestos at Green Shield.

ii) The Deceased no longer contends that he was exposed to asbestos at Green Shield. Although he still stated that this resulted from a `misunderstanding` and that in completing the application form he saw his role as giving inferences as to where he had been exposed to asbestos, I cannot accept that this was the case. I do not think that what was said by the Deceased in such application form was capable of being a product of `misunderstanding`. I am satisfied that such was said by the Deceased so as to secure IIDB, which it did.

iii) I note that the Deceased said in cross-examination that his initial reliance on an alleged exposure to asbestos at Green Shield was not his `current recollection of what the true facts are` which suggests to me that his recollection of material events has markedly changed, particularly during the course of these proceedings.

iv) I do not understand why there is a reference to a `warehouse` whilst employed by the Defendant, given that it has never been suggested by the Deceased that he was exposed to asbestos in any warehouse.

v) The reference in the IIDB application form, completed less than 4 months before the making of his first witness statement, to refurbishment work involving partitions being put up and removed, which I am satisfied was a reference to his employment by the Defendant, is remarkable for what it does *not* say. I note that there is no reference to:

a) any memo circulated by the Defendant or that any such memo said or gave the Deceased cause to believe that those parts of the partitions which were to be removed contained asbestos.

b) the work being carried out was carried out on the grounds of safety: the use of the word `refurbishment` does not in my judgment connote that such works were being carried out on the grounds of safety, although I am bound to say that this is a relatively minor matter.

c) although the removal of the partitions was said to be `dusty work` there is no indication of the amount of dust found by the Deceased after the refurbishment work

89. Thirdly, even in his first witness statement the Deceased did not refer to the existence of the memo although he does refer to being told, in unspecified manner, that the following weekend workmen were to remove all partitions and of his belief that the partitions contained asbestos. Although the Deceased refers to the memo in his second witness statement and that the memo had highlighted the fact that the infill material around the partitions contained asbestos which was to be removed, I am satisfied that the Deceased had forgotten the existence of any memo until he was reminded thereof by Mr Ford.

90. Fourthly, there is a significant difference between the evidence of the Deceased and Mr Ford as to what parts of the partition were removed. The Deceased`s first witness statement said that on his return to work on the Monday morning there were no partitions between the offices whereas in his second witness statement he stated that on the Monday, the steel frames of the partitions remained with some of the central pieces of the partitions removed but that there were gaps above and the sides of such partitions where the material used to fill such gaps. By contrast, Mr Ford`s evidence, which was relied upon by the Claimant and which I accept, was that only the infill material at the edges of the partition were removed. So it is that the Claimant`s case does not rely on that part of the Deceased`s evidence which referred to the removal of the central pieces of the partition.

91. I am satisfied that, but for Mr Ford 'reminding' the Deceased at their meeting in early 2018 of the existence of the memo or the removal of the partition which contained asbestos, the Deceased would have been unable say all that he did in his witness statements. I note that his first witness was made after the first witness statement of Mr Ford.

92. Although I note that the Deceased and Mr Ford had different descriptions of the colour of the partitions ['indiscriminate grey' [Deceased] and 'magnolia' [Mr Ford] this difference is in my judgment immaterial and can be safely ignored.

93. In conclusion, I am satisfied that firstly, much, if not all, of the Deceased`s evidence was prompted by Mr Ford's recollection of the memo and its reference to the partitions containing asbestos and that secondly, but for Mr Ford's evidence, the Deceased had no significant independent recollection of being exposed to asbestos. It should be noted that the alleged exposure to asbestos in the IIDB application form was expressed in the most general of terms and that, although the Deceased's first witness statement referred to a belief that the partitions contained asbestos, it expressed no basis for such belief and significantly did not rely on the existence of a memo for such belief.

94. Although I note that although it is almost 30 years since they had worked together in the employment of the Defendant, the Deceased and Mr Ford had remained in fairly regular contact and that I have no doubt that it was the Deceased who suggested that Mr Ford might be a witness on his behalf. I thus have asked myself whether, in the light of such regular contact between the Deceased and Mr Ford, I should accept the Deceased`s evidence about the memo, the removal of the partition and the consequential dust, which is in part supported by Mr Ford`s evidence, in particular that

he could taste the dust. However, in so far as it might be suggested that there was any degree of collusion between the Deceased and Mr Ford, whether innocent or deliberate, I unhesitatingly reject any such suggestion, given that I am satisfied that each gave their evidence in an honest and straightforward way without any obvious exaggeration.

95. It seems to me that in determining the factual issues here, it is helpful to address such issues under various headings, namely:

i) Was there a memo sent to the Deceased as alleged?

ii) What works involving the partitions were undertaken?

iii) Was the Deceased exposed to asbestos dust by reason of such works?

Was there a memo sent to the Deceased as alleged?

96. Although not mentioned by the Deceased in his first witness statement, I am satisfied that the Deceased was given prior warning that the partition would be removed and that such warning was contained in a memo sent to the Deceased. In reaching this conclusion I am *not* relying on the Deceased`s evidence but on that of Mr Ford whose evidence on this issue I found convincing, particularly his reference to the fact that this must have come from a director, probably the Chairman, because all the directors' memos were coloured pink and that as a junior employee he rarely saw memos from directors. This is unnecessary detail which I am satisfied was not made up by him. For me to find that, contrary to the evidence of the Deceased and Mr Ford, there was no such memo in the absence of *any* evidence to the contrary adduced by the Defendant, would in my judgment be wholly unjustified on the facts of this case.

97. Although neither the Deceased nor Mr Ford can now set out the precise terms of such memo, which I am satisfied is inevitably due to the lapse of time, I am satisfied that the memo did refer to the infill panels in the partition containing asbestos as was suggested by Mr Ford. I conclude that it is inconceivable that such memo would have so stated unless such was accurate. Whilst I recognise the force of Mr Platt`s submission that for the infill boards to have contained asbestos was `atypical` because such use would have served no obvious purpose, I am not willing to draw an inference that the infill boards did not contain asbestos and prefer the direct evidence of Mr Ford on this issue which I accept. Although at that time asbestos might not have been perceived by laymen to have been as dangerous as it currently is, albeit that I think that employers and building contractors would have been aware of the dangers of asbestos, I can see no reason why either the Deceased or Mr Ford should invent this account.

98. However, I agree with Mr Stear that in circumstances where the Defendant had identified the presence of asbestos containing infill panels which required to be removed, it is very likely on the balance of probabilities that it would have appreciated the need to engage a specialist contractor to undertake the removal of the asbestos and undertake all appropriate and necessary precautions and I draw such inference from the facts here. Of course, that does not *necessarily* mean that such a specialist contractor would have undertaken the work competently and/or properly, having taken such appropriate and necessary precautions.

What works involving the partitions were undertaken?

99. I am satisfied that the partition works were probably carried out in 1983 or 1984 because I accept Mr Ford`s evidence that it was at least a year before he first left the employment of the Defendant in 1985. At the time the Deceased was aged 37-38 years. These works involved the removal of some/all of the partition and its subsequent replacement.

100. Given my findings that there was a memo sent to, inter alia, the Deceased before any works took place [almost certainly from a director because it was coloured pink although Mr Ford recollects that it may have been from Mr Tony Renton, the Defendant`s Chairman] and that such memo referred to the infill panels as containing asbestos, it is self-evident to me, and I draw an inference that, although a specialist contractor would have been likely to have been instructed in relation to the removal works as such involved the removal of asbestos, the subsequent replacement of those infill panels which had been removed would not have required any such specialist contractor as the works did not involve asbestos.

101. As to what works were undertaken, there is some dispute between the Deceased and Mr Ford as to what panels were removed: the central panels, the infill panels or both.

102. Having seen Mr Ford give evidence and, having concluded that he was an honest, reliable and accurate witness, I am satisfied that he is probably correct in that it was only the infill panels which had been removed and not the central panels which again casts some doubt on the Deceased`s assertion that he could see his line manager in the adjacent office or that the latter was able to ask him what he was doing.

103. I thus accept that the weekend immediately after the memo was circulated to the Deceased, the infill panels of the partition were removed. In this context I note that it is contended by Mr Steinberg that the weight of the evidence is that only the infill material of the partitions contained asbestos. He submitted that the only dust-producing material removed at the weekend was such infill material. I accept this.

104. Such works would inevitably have produced asbestos dust and if, as I accept, the Deceased returned to work on the Monday I agree that it is *possible* that he could have been confronted with asbestos dust which had not been removed by the contractors who had undertaken the work.

105. However, it is agreed by both the Deceased and Mr Ford and is probably common ground between the parties that what had been removed that weekend was some short time later replaced, no doubt with non-asbestos containing material. That work too would inevitably have produced dust, although it would not have been asbestos dust because it is not suggested that any replacement materials contained asbestos.

Was the Deceased exposed to asbestos dust by reason of such works?

106. In their Joint Statement Mr Raper and Mr Stear agreed that if I were to accept the Deceased`s evidence as to the presence of dust on his desk and on the floor of his office on the Monday following the removal of the partition, it necessarily followed that ACM was removed and that it is more likely than not to have been AIB rather than other asbestos materials. Moreover, in his Opening Submissions Mr Steinberg told me that it was now agreed that any such AIB was likely to have contained amosite [brown]

asbestos which it is agreed is a type of amphibole asbestos with high potency to cause mesothelioma. Mr Platt did not dispute this was the case and I thus accept that such matters were agreed. It thus follows that the partition was probably AIB and contained amosite asbestos.

107. The question arises whether the Deceased was exposed to asbestos dust or non-asbestos dust which leads on to a consideration of whether any dust to which the Deceased was exposed was on the Monday after the weekend when the partitions had been partly removed or whether it was on the later occasion when the partition was reinstated.

108. The Deceased was not cross-examined about the time when further works were carried out to reinstate the partition. Given my findings as to the overall reliability of his evidence, I am satisfied that I could not have safely relied on any answers which he had given about this unless they were corroborated by Mr Ford.

109. By contrast, Mr Ford was cross-examined about this and I have set out above what Mr Ford said both in cross-examination and re-examination.

110. What Mr Platt was suggesting to Mr Ford was the possibility that the dust to which the Deceased had been exposed was not asbestos dust but ordinary dust which had resulted from the replacement of those parts of the partition which had been removed and I have no doubt that Mr Ford appreciated the significance of the question.

111. Although Mr Ford remembered that the Deceased had at some stage said he could taste dust in his mouth, something which I am satisfied from such evidence that the Deceased did say *at some time*, I understood Mr Ford`s answers to confirm that it `could be` that the dust to which he had been exposed resulted from the time when any parts of the partition were replaced, as opposed to when dust might well have resulted from the removal of the parts of the partition. He did not deny that dust may have been caused on both the removal of parts of the partition *and* their replacement and he agreed that he could not distinguish between asbestos dust and non-asbestos dust.

112. I accept that in re-examination by Mr Steinberg Mr Ford sought to diminish the significance of the answers he had given to Mr Platt. Although Mr Ford gave a graphic description of the Deceased standing in front of his desk, moving magazines about and said he could taste dust in his mouth, I am satisfied that, notwithstanding that Mr Ford said that this occurred on the Monday after the removal of the partition, he does not really know on which occasion of the two occasions the Deceased was exposed to dust.

113. Although Mr Stear attempted to justify the presence of dust after the removal of part of the partition in various other ways, for example by `moving desks to facilitate their work` or by the temporary removal of furniture, I reject this evidence because I regard it as implausible.

114. In those circumstances I have to decide whether on a balance of probabilities the Deceased was exposed to asbestos dust as a result the removal of part of the partition because that is the only time when he could have been so exposed to asbestos dust because any dust resulting from the replacement of the missing parts of the partition would not have been asbestos dust. It is for the Claimant to establish on a balance of probabilities that the Deceased was exposed to asbestos dust.

115. I am not satisfied that I can accept on the balance of probabilities Mr Ford`s evidence that the dust to which the Deceased was exposed occurred on the Monday after part of the partition was removed. I reach this finding even though Mr Ford gave evidence that he remembers the Deceased saying that he could taste the dust on the Monday following the initial works very many years ago. On this issue, I unhesitatingly do not accept his evidence that such conversation took place on the Monday although I accept that such conversation probably occurred after the subsequent replacement of the missing parts of the partition.

116. I have carefully considered this part of Mr Ford's evidence, as I did at the time when he gave it. I was, and remain, unconvinced by his answers in re-examination. I suspect that he, like Mr Steinberg, realised that, in cross-examination, he had given answers which were unhelpful to the Claimant`s case and that he was glad of the opportunity which re-examination gave him of retreating from such evidence.

117. I have borne in mind that the Deceased did not give any evidence as to dust when the partition was replaced and that the `possibility` which Mr Platt put to Mr Ford was not put to the Deceased by different counsel then representing the Defendant. However, in any event for the reasons I have already given, I do not think that I could have relied on any such evidence, had it been given.

118. On the facts of this case I am satisfied on the balance of probabilities that the Defendant probably used reputable and specialist contractors to undertake the works because there would have been little point in it advising employees such as the Deceased of the presence of asbestos in the partitions for it to then ignore the risks associated by asbestos and to engage non-reputable contractors who might not have understood such risks. In such circumstances I have concluded that is probable that firstly, the Defendant engaged such contractors to undertake the works, and secondly, that such contractors would have known that employees such as the Deceased would be exposed to any asbestos dust which was left on his desk and office floor and would not have allowed this to happen. By contrast, it is very likely that non specialist contractors replacing the infill panels in such partition would have been unconcerned about the presence of non asbestos dust.

119. It thus follows that I am not satisfied on the balance of probabilities that the Deceased was exposed to asbestos dust when he returned to work on the Monday morning. However, on any view of the evidence the Deceased was exposed to such other dust for a very short time.

120. That finding is sufficient to dispose of the Claimant`s claim, but out of an abundance of caution I will address the others matters raised in this case, albeit somewhat more briefly than might otherwise have been the case.

What was the extent of the Deceased`s exposure to asbestos dust?

121. I turn to consider the extent of the Deceased`s exposure to asbestos dust and for this part of my judgment I will assume, contrary to the findings of fact which I have made, that the Deceased was exposed to asbestos dust on the Monday after part of the partition was removed and to a lesser degree on each of the following days of that week.

122. The determination of this issue involves consideration of two distinct issues, namely firstly, how should a court assess the Deceased's exposure to asbestos and secondly

what in law constitutes a material increase of the risk of the Deceased developing mesothelioma?

The assessment of the Deceased's exposure to asbestos

The evidence of the engineering experts and the cumulative dose

123. After the Deceased had died, both Mr Raper and Mr Stear were instructed to address the issue of the Deceased`s exposure to asbestos as was alleged by the Deceased and each in their different ways sought to estimate the level to which the Deceased was exposed to asbestos on the Monday when he returned to work and on subsequent days of that week.

124. At this stage I believe that it is helpful to an understanding of the concept of a cumulative dose to refer to para 1-013 of *Asbestos: Law and Litigation*, one of whose General Editors was Mr Steinberg, notwithstanding Mr Platt`s concerns about an advocate citing from their own work. In a chapter dealing with medical aspects of asbestos related conditions entitled `The Epidemiology of Asbestos Related Disease` *jointly* written by both Dr Moore-Gillon and Dr Rudd, they stated:

> " The risk of asbestos associated disease is related to cumulative exposure - often referred to as the dose received. This is the product of the average airborne fibre count (measured in fibres/ml of air breathed) encountered at work, and the duration of exposure. Duration is expressed in years (a working year usually being taken as 1920 hours) and the resulting unit of cumulative exposure is the fibre/ml year. Thus, a cumulative exposure of 10 fibre/ml years would result from ten years working in an average concentration of 1 fibre/ml, or 2 years in 5 fibres/ml … and so on."

125. Mr Raper was a consultant forensic scientist specialising in the management of occupational health hazards and had extensive experience of advising as to the control of occupational health hazards including asbestos. By contrast, Mr Stear is a chartered occupational hygienist providing consultancy services in relation to occupational hygiene who had over 30 years` experience in dealing with the management and control of risks relating to asbestos.

126. Although I have read and considered each of the very lengthy initial reports from Mr Raper and Mr Stear, it is convenient to set out their views as contained in their Joint Statement dated 14 October 2019 in which they stated thus:

> "15. For the illustrative purpose of providing an estimate of exposure we have each, based on [our] own training and experience, referred to published examples of measured asbestos fibre concentrations, should the Court find that asbestos infill panels were removed without precautions with, as a result, asbestos-containing dust present to surfaces on the Monday. We agree that the extent to which asbestos was present in the dust, if at all, would have depended upon the extent of the asbestos infill panels, how they were removed, the extent of any non-asbestos

> materials removed/disturbed, and the extent to which any cleaning/removal of waste took place. Nevertheless, we agree that whilst such matters are not known and that we have cited different studies, the levels of exposure referred to by each of us are not too dissimilar, as follows:
>
> Mr Raper — exposure ranging from around 0.04 fibres/ml or 0.05 fibres/ml to 0.29 fibres/ml during the initial disturbance of deposited material (source: IOM, 2009)
>
> Mr Stear — exposure ranging from around 0.01 fibres/ml to 0.1 fibres/ml during the initial disturbance of deposited materials (source: Cherrie & Cowie, 2004 and Bailey *et al*, 1988)
>
> We have each adopted a convention that exposure for the remainder of the week would have occurred at 10% of exposure experienced during the disturbance of deposited materials; we agree that the actual decay in airborne asbestos fibre concentrations may not be a linear relationship and the approach we have applied has been taken to provide an illustration of decay in asbestos fibre concentrations."

127. I add that it may be the case that these calculations are based on the assumption that there was little, if any, cleaning or removal of asbestos dust generated by such works undertaken by the contractors at the time. Given that I infer from the contents of the memo received by the Deceased that the partition works are likely to have been undertaken by a specialist contractor who understood the dangers posed by asbestos dust and the need to remove such dust, albeit that such contractors may have failed fully to recognise such dangers or need, it may be that the calculation of the magnitude of the Deceased`s exposure to asbestos dust may be at the very upper end of that which is justified.

128. The Joint Statement continued:

> "16. We also agree that the magnitude of the Deceased`s asbestos dose will depend on findings of the Court with regard to whether [exposure] occurred and, if it did, the frequency, duration and extent to which the Deceased was exposed. Nevertheless, we have provided different estimates of the Deceased's cumulative asbestos dose as follows:
>
> Mr Raper — approximately 0.0010 fibre/ml years
>
> Mr Stear — 0.00021 to 0.00058 fibre/ml years (midpoint of about 0.0004 fibre/ml years)."

129. The estimates of the Deceased's levels of exposure to asbestos and his cumulative asbestos dose as set out in paras 15 and 16 respectively of such Joint Statement above had assumed that the Deceased spent all his 8-hour working day in his office.

130. However, having heard Mr Ford`s evidence, namely that the Deceased usually worked a 9 hour day and spent about 60% of his time in his office, it was necessary that such estimates be revised and Mr Raper and Mr Stear agreed that they were lower than that set out in para 16 of the Joint Statement and that the revised estimates of the Deceased`s cumulative dose, reflecting Mr Ford`s evidence, were:

    i) Mr Raper 0.00068 fibre/ml years and

    ii) Mr Stear between 0.00014 to 0.00039 fibre/ml years so that Mr Stear`s estimate was less than half of Mr Raper's estimate

131. The Joint Statement concluded:

> "17. We agree that neither of these dose estimates should be taken as definitive and should only be considered illustrative of the likely magnitude of dose should the Court find that exposure occurred. We agree that whether such low dose was materially causative is a matter for medical comment and ultimately for the Court. Whilst we both agree that the Deceased`s exposure to asbestos would have been very low, we agree that such exposure would have been to a level in excess of published background levels; Mr Raper further considers instantaneous exposure such as that presented in his report and at 15(a) above would have been at some 80 to 290,000 times above such published background concentrations."

132. It is important to note that both experts expressly recognised that, because their calculations of the dose estimates involved assumptions as to the actual decay in airborne asbestos fibre concentrations which might not be a linear relationship, such calculations should not be regarded as definitive and could only be illustrative of the magnitude of the Deceased`s possible exposure to asbestos dust. That said, they both agreed that the Deceased`s exposure to asbestos would have been *very low* but further agreed that it was ultimately a matter for the court to determine whether such a low dose was materially causative of the Deceased`s mesothelioma.

133. In this context two cautionary caveats needs to be expressed and recorded.

134. Firstly, these assessments of the Deceased`s cumulative dose are particularly dependent on the frequency, duration and extent of the Deceased`s exposure to any asbestos dust and the fact that the experts` assessments of such cumulative dose had to be amended, by a reduction of about one third, to reflect the evidence of Mr Ford as to the average hours which the Deceased worked and the proportion of his day which was spent in his office, illustrates that in practice it is not possible for either expert to offer a definitive quantified estimate of the Deceased`s cumulative dose, a fact which each expert recognised.

135. Moreover, Mr Ford`s evidence on this point might not be entirely reliable, particularly bearing in mind that he was remembering back probably at least 35 years and what he said was probably something which he had probably not given much prior thought to and was likely to be a gut-feeling as to these matters rather than any precise recollection of these matters. Although I am reminded by Mr Steinberg that the easiest way of

ascertain the average number of hours which the Deceased worked would have been to ask the Deceased about this in cross-examination and that without such evidence any estimates of cumulative dose are inherently unreliable, I note that both Mr Raper and Mr Stear each reported and estimated the Deceased`s cumulative dose some months after his death [the Deceased was cross-examined just over two months after the commencement of proceedings] so that in my judgment no valid criticism can be made of such omission. That said, I have no doubt that I am entitled to have regard to any such estimates as rough and ready indications of the amount of the cumulative dose rather than definitive quantified estimates.

136. Secondly, both experts attempted to contrast the risk which the Deceased`s exposure to asbestos might have created [which Mr Raper estimated at 0.00068 fibre/ml years and Mr Stear at about 0.00027 fibre/ml years [the midpoint of his range]] with other risks for various activities and circumstances [see, for example Table 7.1 of *An assessment of the past exposure and estimation of consequent risks to health of staff that may have arisen from asbestos-containing material in cupboards at Lees Brook Community Sports College, Derby* [Jones *et al* April 2009, IOM]] which showed that risks of being struck by lightning [at 0.002] and of exposure to outdoor rural airborne asbestos concentration from birth [at 0.004] were much higher.

137. Apart from demonstrating that the risk which the Deceased`s exposure to asbestos might have created was very small, I did not find these comparisons helpful because they were contrasting situations which occurred without any negligence/breach of statutory duty and where there was no liability to compensate with a situation where a claimant`s exposure to asbestos was negligent or breach of statutory duty and where there was a liability to compensate if the Claimant could establish that such constituted a material increase in the risk of him contracting mesothelioma.

138. Of the two experts, Mr Stear reported first on 17 June 2019.

139. After referring to the evidence of the Deceased and Mr Ford, the likely asbestos content of any dust to which the Deceased was exposed and various papers, namely *A dust survey carried out in buildings incorporating asbestos-based materials in their construction* [1969] by Byrom, *A report on the Likely Risks from Asbestos Exposure at Silverhill School, Derby* [2004] by Cherrie & Cowie and *Personal exposure to asbestos during clearance certification* [1998] by Bailey *et al,* Mr Stear attempted to calculate the Deceased`s cumulative dose of asbestos.

140. I had understood Mr Stear`s conclusions as to the Deceased`s cumulative dose to be based on the papers to which he had referred and indeed that is what para 15 of the Joint Statement expressly recorded. However, in cross-examination he conceded that the range of estimates in his report was *not* based on any of the papers referred to, that such estimates were not derived from any of such papers but were used to give an indication of likely estimates, that in any event such papers did not directly represent the situation faced by the Deceased, and were not based on the fact that AIB typically contained 15-25% of amosite. His range of estimates were based on years of experience of measuring exposure `backed up` by such papers. After one particularly long answer in cross-examination, I summarised his explanation in my notebook as `it is not a calculation as such: it is my assessment based on experience` and Mr Stear accepted that was a fair summary of his approach.

141. I note that in cross-examination Mr Stear was referred to comments made about him by Swift J in the Phurnacite Workers Group Litigation: *Jeffrey Jones & Others v Secretary of State for Energy and Climate Change and Coal Products Limited* [2012] EWHC 2936 (QB) in which Swift J adjudged that Mr Stear was highly partisan and not an impressive witness because he appeared to be fulfilling the role of an advocate than that of an expert witness.

142. Although I have regard to such observations and agree that at times during his evidence before me he appeared to be adopting the role of an advocate, it seemed to me almost inevitable that, in undertaking what is a highly speculative calculation, he would do so. I thus do not myself criticise Mr Stear for sometimes straying beyond the legitimate role of an expert witness or to assess his evidence on the basis that he was an unimpressive, partisan witness.

143. In his report dated 28 August 2019 Mr Raper, after reviewing the evidence, Mr Stear`s report and relevant legislation and guidance, attempted to undertake a similar calculation, albeit with different results.

144. As regards his original estimate range of the cumulative dose of 0.04/0.05 fibres/ml to 0.29 fibres/ml, in using the upper figure of 0.29 fibres/ml Mr Raper had relied on the findings of the IOM *Lees Brook Community Sports College Derby* study by Jones *et al*. In cross-examination he conceded that this represented cleaning asbestos dust with a brush which would have actively generated asbestos into the air which he agreed that the Deceased had not done. He stated that he had referred to the above paper for illustrative purposes and his calculations were not intended to be a definitive calculation of the Deceased`s exposure to asbestos.

145. However, Mr Raper`s estimates gave rise to two concerns.

146. Firstly, as to the lower end of the range, although at paragraph 5.41 of his report he had referred to a Table set out within such para which suggested an estimated concentration of asbestos dust of between 0.017 - 0.05 fibres/ml where some disturbance of deposited material occurred, he had at para 5.56 of such report adopted a lower end of 0.04-0.05 fibres/ml. In my judgment he offered no satisfactory explanation for this when asked about this in cross-examination.

147. Secondly, as to the upper end of the range, he agreed, in answer to me because I wanted to be sure that I did not misunderstand his evidence, that the range he had given was unrealistic because the upper figure of 0.29 fibres/ml represented a person undertaking activities which it was not suggested that the Deceased had undertaken. He subsequently agreed that if the upper figure of 0.29 fibres/ml was removed, his estimated range of the cumulative dose was slightly less than that of Mr Stear. If the upper figure of 0.29 fibres/ml is to be ignored, Mr Raper`s calculation of the Deceased`s exposure becomes about 0.04-0.05 fibres/ml which is marginally less than 0.055 fibres/ml which is the midpoint of Mr Stear`s range of exposure from around 0.01-0.1 fibres/ml.

148. I believe that it is relevant to note that the Deceased was not present when the dust was generated during the works to the partition at the weekend and that it must have left undisturbed to settle before he arrived back at work on the Monday. Mr Raper agreed

that in such circumstances the Deceased`s interaction with such dust was `pretty limited`.

149. During cross-examination I asked Mr Stear about what significance I should attach to Mr Ford`s evidence that the Deceased had told him on the Monday that he could taste dust in his mouth and, given his response that the taste of dust was likely to derive from the larger particles found in the cement fillers in the AIB, I doubt that such evidence takes the matter much further.

150. So it was that neither expert emerged from cross-examination unscathed. However, what was surprising was that, even bearing in mind the cautionary caveats set out above, Mr Raper and Mr Stear were effectively in agreement as to their individual assessments of the Deceased`s cumulative exposure to asbestos. Indeed, I accept Mr Platt`s submission that, so corrected to remove Mr Raper`s upper figure of 0.29 fibres/ml, Mr Raper`s estimated cumulative dose would be even less than that estimated by Mr Stear and that in very general terms the midpoint of the experts` estimates of cumulative dose was in the region of 0.0004 fibre/ml years.

151. I have thus concluded, irrespective of the detailed submissions made by both counsel on this issue, that the experts` calculation of the cumulative dose has a limited value but I am sure that it does have *some* value.

152. The parties adopt different positions as to the utility and/or reliability of such calculations of the Deceased`s cumulative dose of asbestos.

153. Mr Steinberg submitted that it was neither necessary nor desirable that the court should attempt to calculate a precise cumulative dose of the Deceased`s exposure to asbestos dust in the course of his employment by the Defendant because such was inevitably no more than an indicative assessment, as opposed to a meaningful calculation of the Defendant`s exposure to asbestos dust. He relied on dicta of Maurice Kay LJ in *Rolls Royce Industrial Power (India) Ltd v Cox* [2007] EWCA Civ 1189 when he stated:

> " 21. … For the claim to succeed, the judge needed to be satisfied that the extent and duration of the exposure had constituted a material increase in the risk to the Deceased of contracting mesothelioma. No specific measurement of the duration is necessary and the Recorder was right to resist the invitation to fix one."

154. By contrast, Mr Platt relied upon dicta of Aikens LJ in the later decision of the Court of Appeal in *Williams v University of Birmingham & Anr* [2011] EWCA Civ 1242 where Aikens LJ had stated:

> " 44. …a judge must determine the degree of exposure to asbestos fibres to which Mr Williams was actually subjected and whether that was a de minimis or a material exposure. If it was a de minimis exposure then there could be no question of a breach of duty, as the judge recognised. But assuming that the exposure was more than de minimis, it was, in my view, necessary to ask a further question. That is whether, given the degree of actual exposure, it ought to have been reasonably foreseeable to the

> University (with the knowledge a reasonable University should have had in 1974) that, as a result, Mr Williams would have been likely to be exposed to the risk of personal injury in the form of contracting mesothelioma. To determine that question, it seems to me the judge had to make findings about (1) the actual level of exposure to asbestos fibre that Mr Williams was exposed …"

155. Mr Steinberg submitted that, applying the dicta of Maurice Kay LJ in *Rolls Royce*. it was appropriate for a court to reach a more general conclusion as to the nature and extent of the asbestos exposure and unnecessary to produce a very precise estimate of the Deceased`s cumulative dose.

156. Mr Platt submitted that the proper approach to estimates of the cumulative dose was that it was necessary for the court to make some assessment, however rounded, of the Deceased`s cumulative exposure to asbestos and that it was noteworthy that the estimates by both Mr Raper and Mr Stear were remarkably similar.

157. In respect of these submissions, I prefer to rely on and adopt the dicta of Aikens LJ in *Williams* and have concluded that I should make findings as to the Deceased`s actual level of exposure to asbestos, albeit that this might be imprecise.

158. Given that the estimates given by both experts were similar, when amendments are made to the conceded error made by Mr Raper, it may be unnecessary to choose which evidence I prefer. However, if it necessary to indicate which expert`s evidence I prefer to the other, I would prefer that of Mr Stear. My reasons may be summarised thus.

159. Although both experts were cross-examined vigorously and considerable length, I found Mr Stear`s estimates persuasive and accepted that at all times he was relying on his own experience and judgment and referring to the papers only as an indication of the likely accuracy of such estimates. He did not make this crystal clear in his report and he was in error in failing to do so.

160. By contrast, in his report Mr Raper gave estimates for both the lower and upper ends of his range of estimate in relation to the Deceased`s exposure to asbestos when neither could sensibly be justified. At the lower end he could not satisfactorily explain why he had taken the lower figure of 0.017 fibres/ml which was in the Table to para 5.41 of his report and had instead used 0.04 fibres/ml. At the upper end he had used a figure of 0.29 fibres/ml which he had accepted was unrealistic. I am satisfied that Mr Raper well understood that the effect of producing such a range would serve to potentially increase any assessment of the Deceased`s exposure to asbestos. Although I do not go so far as to say that Mr Raper set out to mislead the court because I recognise that this was a difficult case for all experts, it is a fact that had these quite fundamental errors not been elicited in cross-examination by Mr Platt, I would have been misled into believing that there was a greater degree of divergence in views between the experts than in fact there is.

161. I am thus satisfied that Mr Stear`s estimate as to the Deceased`s cumulative dose as to the magnitude of his exposure to asbestos is to be preferred to that expressed by Mr Raper. I thus find as a fact that, in round terms, the Deceased`s exposure to asbestos whilst in the employment of the Defendant gave rise to a cumulative dose in the region of no more than 0.0004 fibre/ml years.

162. It should be noted that Dr Moore-Gillon`s views were based on the upper end of the range of estimates of experts` assessments of the Deceased`s cumulative dose, at originally 0.0005 fibre/ml years and amended during the trial to 0.0004 fibre/ml years. To that limited extent the cumulative dose diminished slightly during the trial.

Did the Deceased`s exposure to asbestos whilst in the Defendant`s employment constitute a material increase of him developing mesothelioma?

163. Mr Steinberg submitted that causation was an issue of fact and relied on dicta of Lord Salmon in *Alphacell Ltd v Woodward* [1972] AC 824, at 847, that is `best answered by ordinary common sense rather than abstract metaphysical theory`. He noted that in *Fairchild*, in which the House of Lords recognised the difficulty that claimants had in proving their exposure to asbestos and that the problem was exacerbated where there was more than one significant exposure to asbestos, Lord Nicholls, at 70, had stated:

> "So long as it was not insignificant, each employer`s wrongful exposure of its employee to asbestos dust, and, hence, to the risk of contracting mesothelioma, should be regarded by the law as a sufficient degree of causal connection."

164. Mr Steinberg relied upon the dicta of Lord Phillips in *Sienkiewicz* which I have already cited above in describing the current state of the law.

165. By contrast, Mr Platt submitted that the test of causation was not one of purely of fact but one of mixed fact and law because any assessment by the court had to reflect what test to apply in the assessment of the risk and what weight to give to epidemiological evidence.

166. I am satisfied that causation cannot just be an issue of fact but must, as Mr Platt submitted, be one of mixed fact and law for the reasons he gave.

167. Mr Platt further submitted that the test was that which had been agreed by both Dr Rudd and Dr Moore-Gillon in *Sloper*. In his report in that case Dr Rudd had expressed the test thus:

> "I suggest that a reasonable approach to determining whether a risk from an identified exposure was more than *de minimis* would be to consider whether the exposure was negligible, ie something so small that it is properly capable of being neglected. I suggest that a dose of asbestos which is properly capable of being neglected could be defined as a dose which a reasonable person who is well informed about the relation between asbestos and mesothelioma would not be worried to discover he had inhaled."

168. However, in cross-examination by Mr Platt in *Sloper*, Dr Rudd agreed that another reasonable formulation of such test would be that:

> " a dose of asbestos which was properly capable of being neglected could be defined as a dose which a medical

> practitioner who is aware of the medical risks would define as something that the average patient should not worry about."

169. In *Sloper* Spencer J did not have to consider the validity of such test because he found on the facts that the Claimant was not exposed to asbestos dust.

170. In cross-examination by Mr Platt in this case, Dr Rudd did not resile from such a formulation.

171. I am satisfied that the test which I have to apply in this case is whether the exposure [for this purpose, assumed] of the Deceased to asbestos whilst in the employment of the Defendant constituted a material increase in risk, ie whether such increase in risk is so insignificant that the court can properly disregard it on the *de minimis* principle. Although in *Sienkiewicz* the Supreme Court rejected the argument that exposure should be adjudged to be immaterial if it did not at least double the victim`s existing environmental exposure, that decision established that what constitutes a material risk must be for a judge on the facts of the particular case.

172. The fact that there is a requirement that an exposure to asbestos has to constitute a material increase in risk must inevitably mean that *any* exposure does not automatically satisfy the requirement of causation. In such circumstances the real question is whether, using Lord Phillips` words, a stage is reached where `even allowing for the possibility that exposure to asbestos can have a cumulative effect, a particular exposure is too insignificant to be taken into account, having regard to the overall exposure that has taken place` [para 108] or `where the exposure was insignificant compared to exposure from other sources` [para 111].

173. In so far as the Defendant attempted to rely on the epidemiological evidence from *The Quantitative Risks of Mesothelioma and Lung Cancer in Relation to Asbestos Exposure* [2000] by Hodgson and Darnton [`H&D`] I note that Mr Steinberg submitted that:

    i) such an approach confuses risk with causation: see Lady Hale in *Sienkiewicz*, at para 170. Moreover, at para 103 of *Sienkiewicz*, Lord Phillips noted that in neither *Fairchild* nor *Barker* was the House of Lords invited to consider epidemiological evidence that, on a balance of probabilities, mesothelioma had been caused by exposure that was not wrongful or might demonstrate that one particular employer was responsible, but stated that had it been, he did not believe that the House would have been persuaded that the epidemiological evidence was `sufficiently reliable to base findings of causation upon it`. However, as Mr Platt observes, all such dicta were obiter and some members of the House, for example Lord Rodger and Lord Dyson were less sceptical about the use of epidemiology.

    ii) H&D was designed to compare the relative potency of three main asbestos types and not to assess the lifetime risk of developing mesothelioma. Dr Moore-Gillon accepted that he had failed to mention in his own report his acceptance of reservations expressed in a report by the Working Group on Action to Control Chemicals [`WATCH`], a government scientific body, as to the reliability of risk estimates in the H&D paper.

iii) The risk calculations in H&D were based on relatively small data samples involving very high levels of exposure which made then an inappropriate starting point for the calculation of risks for low levels of exposure, which the authors of H&D and both Dr Rudd and Dr Moore-Gillon recognised.

174. I heed the caution expressed obiter by the majority in *Sienkiewicz* and I recognise that there is a danger that epidemiological evidence may consist simply of a series of assumptions and speculations which will carry a false air of authority: see Lord Kerr in *Sienkiewicz* at paras 205-206. However, such caution notwithstanding, it seems to me that epidemiology has a limited part to play in a judge`s determination as to whether a defendant is liable to compensate a claimant for an exposure to asbestos dust.

175. I have decided that the test propounded by Dr Rudd in *Sloper* and not resiled from in this case, which is agreed by Dr Moore-Gillon, is a helpful and appropriate means of determining whether there is a material increase in risk. Although ultimately it is a matter for me to determine, notwithstanding the reservations expressed above about reliance on epidemiology, I am satisfied that in making such determination, it is appropriate to have a very limited engagement with statistical risks provided by epidemiology and with the views of medical experts.

176. I now consider the expert evidence of two very experienced respiratory physicians.

The respiratory physicians

177. The contested medical evidence came from two experienced respiratory physicians who are well-known in asbestos litigation.

178. I think it is common ground that the fact that the Deceased developed mesothelioma does not necessarily mean that he was exposed to asbestos whilst he was employed by the Defendant. In his evidence Dr Moore-Gillon referred to *Occupational, domestic and environmental risks in the British population: a case-control study* [*British Journal of Cancer* (2009) 100, 1175] by, inter alia Rake, Gilham and Peto as to the incidence of a person developing mesothelioma with non-occupational exposure to asbestos. The study indicated, at 1181, that in respect of non-industrial and low-risk industrial work, which would seem appropriate to the Deceased`s occupation as an Accounts Manager, there was a lifetime risk of developing mesothelioma of 0.08%. So it was that, if one assumed, as Dr Moore-Gillon was prepared to do, that half of that number sustained some exposure to asbestos of which they were unaware, the resulting figure of 0.04%, would result in some 200 men per annum developing mesothelioma without any exposure to asbestos. Dr Rudd agreed that 0.08% represented the lifetime risk for men from this particular generation born in the 1940s developing mesothelioma who had not been exposed to asbestos but did not agree a rate of 0.04% as representing men developing mesothelioma without any exposure to asbestos.

179. In his report dated 9 September 2019 Dr Rudd expressed his conclusions thus:

> "If the court were to accept the [Deceased's] evidence, on the basis of either Mr Raper's opinion or Mr Stear`s opinion he

> sustained more than usual background exposure to amosite asbestos over a period of at least several days. Amosite is a type of amphibole with high potency to cause mesothelioma. Asbestos exposure increases the risk of mesothelioma with no evidence for a threshold dose below which there is no risk.
>
> The combination of uncertainties inherent in the scientific model used to establish risks at low levels of exposure, inability to account for individual susceptibility, and uncertainties inherent in estimating the dose which [the Deceased] received means the calculation of the resultant risk in numerical terms using the Hodgson and Darnton tables confers spurious precision on what is at best an exercise in approximation with very wide confidence levels. For example, if the upper end of the range quoted by Hodgson and Darnton were correct ie 15 rather than the 2 per 100,000 quoted by Dr Moore-Gillon, and Mr Raper's estimate of 1.7 times the upper end of Mr Stear's estimated range were to be preferred, the estimated risk would have been 7.5 x 1.7, ie 12.75 times higher than that quoted by Dr Moore-Gillon ie 1.275 per 100,000 which is more than the upper boundary of Hodgson and Darnton's 'insignificant' or 'broadly acceptable' range of up to 1 in 100,000.
>
> In my opinion it is safe to conclude that the exposure alleged will have given rise to a very small but more than negligible, ie properly capable of being neglected, risk of mesothelioma, but the evidence is inadequate to justify precise conclusions regarding the size of the risk."

180. In his report dated 25 June 2019 Dr Moore-Gillon:

i) referred to Mr Stear`s estimated range of the Deceased`s asbestos dose as between 0.00021 - 0.00058 fibre/ml years and for the purpose of calculating the medical risk used a figure of 0.0005 fibre/ml years

ii) relying on H&D, and applying Mr Stear`s assumed asbestos dose as 0.0005 fibre/ml years stated that such would produce a risk of 0.2 deaths per 100,000 exposed which would be regarded by H&D and the Health and Safety Executive [`HSE`] guidance as insignificant.

iii) estimated the annual risk of mesothelioma from this exposure as about 1 in 50 million which was about 3,000 times lower than the annual risk of being killed in a road traffic accident.

iv) opined that there was no significant medical risk associated with this exposure.

181. In their Joint Statement dated 2 December 2019 Dr Rudd and Dr Moore-Gillon essentially repeated their previously expressed views and stated that they each approached the matter a little differently so that:

i) Dr Rudd stated that if the Court were to accept that the Deceased sustained above background asbestos exposure in the course of his employment with the Defendant it would be a matter for the Court to determine whether the consequent risk of mesothelioma should be regarded as material, which he points out is a legal rather than a medical term.

ii) Dr Moore-Gillon agreed that `material` is a legal rather than a medical term and broadly agreed with the observations made by Dr Rudd in his report about the caution with which estimates of risk must be treated. Nevertheless, when charged with advising the Court on such matters, medical experts had to work with the resources available to them, both in terms of dosage estimates and of the literature available upon the consequences of such dosages. Referring to the context of what constitutes a 'material risk of harm', 'material' was defined as one which 'a reasonable person in the patient's position would be likely to attach significance to the risk or the doctor is or should reasonably be aware that the particular patient would be likely to attach significance to it' and, acknowledging that this is a matter for the Court to determine, applying that test concluded that 'the risks of the scale discussed in this present case would not fall within that definition'.

182. It should be noted that although Dr Moore-Gillon had based his original report and the Joint Statement on a cumulative dose of 0.0005 fibres ml/years, in the light of the revised evidence of Mr Raper and Mr Stear at the trial he had assumed a cumulative dose of 0.0004 fibres ml/years. Accordingly, his original report and his contribution to the Joint Statement were slightly more advantageous to the Claimant`s case than was his evidence at trial.

183. When cross-examined Dr Rudd:

i) stated that the Deceased`s exposure to asbestos gave rise to a `small but more than negligible risk` and when asked how that would be expressed in statistical terms to a patient he said that it constituted 'a very small chance' of you having mesothelioma and, if probed further by the patient, it was 'about ten times as big as you winning the jackpot on the lottery'. After I had intervened to observe that how a risk might be evaluated was probably a matter for me to decide, Dr Rudd agreed with Mr Platt that he, like Dr Moore -Gillon, would tell a patient not to worry about such a risk although, however such was expressed, people did worry about risks.

ii) accepted that there were certain levels of exposure which were so trivial that he would dismiss them, such as walking through a garage for 5 minutes once a week for a year: 'one has to look at all the facts of the case and try and come to a sense of whether this is a significant exposure or not.' He further agreed that in past cases he had not supported any suggestion that there was a material increased in risk

iii) accepted that the exercise undertaken in H&D was useful as `a rough indicator of the magnitude of risk.` Although he himself had undertaken H&D calculations in this case and accepted that H&D had validity, he observed:

> "it is all we have but we should use it appropriately. It was designed for regulatory purposes and it gives us an approximation of the risk. But, in my view, it should not be used to calculate an exact figure for the risk for an individual from an identified exposure with all the caveats about the degree of uncertainly in this calculation."

iv) agreed arithmetically with Dr Moore-Gillon`s calculation of the risk but was unable to offer any competing figure.

v) conceded that he was unable to say at what risk level he would conclude that the risk in this case was not material. This was very much like his approach in the *Phurnacite* litigation in relation to asbestos-induced lung cancer that *any* material exposure should be viewed as being contributory towards disease, which approach was rejected by Swift J when she said:

> "8.22. Dr Rudd said that, in order to assess of the contribution made by a carcinogen, it is necessary to refer to the epidemiological evidence and to look at risk factors. He made clear that the issue of the magnitude of the increase in risk that should be considered sufficient to establish whether the contribution made by the carcinogen had been `material` was a matter for the court. From the medical point of view, even very light exposure might contribute to the carcinogenic process. However, a court might consider that the exposure had been so light that it should not attract an award of damages. He did not offer an opinion as to the size of risk that should be accepted by the court as constituting a `material` contribution for the purposes of establishing legal causation …
>
> 8.60. Dr Rudd suggested that it would be necessary for the court to examine the risk factors and to make a judgment as to where the line of materiality should be drawn, according to the court`s view as to whether it would be reasonable to compensate an individual for a specific level of increased risk. … Such an exercise would involve an arbitrary decision on my part as to where to draw the line. … It does not seem to me that it would be permissible for me to carry out such an exercise."

184. When cross-examined Dr Moore-Gillon stated:

i) the non medical experts had come up with answers which were `vanishingly low` in terms of risk. The exposure to which the Deceased had been subjected to in the course of his employment by the Defendant was not a risk he would ever advise a patient was anything to worry about.

ii) when it was put to him by Mr Steinberg that H&D gave 'a broad ballpark estimate of risk', he answered that H&D could 'give you the best answer they can derive from the materials they have to work with'.

185. As to whether it is appropriate that I should rely on H&D, I am satisfied that it is the best and most appropriate paper available and although any conclusions drawn from such paper cannot be definitive, it can offer a reliable but rough and ready indication of the degree of risk to which the Deceased was exposed. I note that when Dr Rudd was asked whether he could demonstrate the quantum of such risk he agreed that he could

not do so in numerical terms and was unable to give any precise definition of what constituted a significant exposure.

186. In short, Dr Moore-Gillon has attempted to evaluate the significance of the cumulative dose which both Mr Raper and Mr Stear had independently calculated, had used H&D to have regard to the statistical risks provided by epidemiology and had endeavoured to weigh the risk which he personally did not believe was significant and was vanishingly low. Although recognising that it was for me to determine whether there was a significant increase in risk, I have no doubt that he believed that it was not. At least he had endeavoured to weigh the risk in a meaningful, if rough and ready way. I found such evidence straightforward and persuasive.

187. By contrast, Dr Rudd conceded that there were some cases where exposure was so trivial that he would regard them as not material but he could not explain on what principled basis I could assess whether there was a *material* increase in risk. Moreover, his evidence made no attempt to assess what level of risk, if any, was created by any exposure to asbestos whilst the Deceased was in the employment of the Defendant or whether such risk was more than *de minimis*.

188. Although I appreciate that Dr Rudd has an outstanding track-record of research into asbestos-related diseases, including mesothelioma, I regret to say that I did not feel that his approach was helpful, very much for the reasons articulated by Swift J in the *Phurnacite* litigation, namely because such approach would establish an arbitrary distinction between different kinds of exposure without any justifiable rationale for such distinction. I recognise that his evidence was at all times measured and thoughtful and his evidence was unchanged, namely that there was a small risk [in his report a `very small` risk] which was more than negligible. Moreover, in-cross-examination when asked by Mr Platt whether Dr Moore-Gillon`s evidence that the level of risk was 1 in 50 million represented a responsible view, he said this:

> " I am not sure that I would even say that it is not one I share. I would not want to give the wrong impression. That is a very small risk. I would agree with him entirely that it is a very small risk and I would reassure a patient that it was a very small risk, but whether that equates to a decision of the court as to whether it is a risk which should be regarded as culpable is a different question."

189. In so far as, as I suspect that the reference to 'culpable' was intended to be a reference to a material increase in risk, I do not accept Dr Rudd`s evidence and I felt that he was straining logic and common sense to regard an annual risk of 1 in 50 million as a material increase in risk and I am satisfied that in making any such assertion that there was a material increase in risk, Dr Rudd was hoping that I would rely on his consummate experience to justify an assertion which he realised could not properly be made.

190. Mr Steinberg submitted that the most which the court could safely conclude was that the Deceased was exposed to `a substantial amount of asbestos dust many times above background levels for, at least, a week`. By contrast, Mr Platt submitted that this was `a tiny dose of asbestos … believed to be the lowest dose ever before an English Court where it is argued to be causative of mesothelioma … and some 32.5 times smaller than

the diminutive dose in *Sienkiewicz*.` I am satisfied that any exposure by the Deceased to asbestos dust whilst in the employment of the Deceased was incredibly small and the annual risk of such causing mesothelioma was about 1 in 50 million. I note that in *Reducing Risk, Protecting People* [2001] produced by the HSE a risk which is broadly acceptable is defined as 1 in 1 million.

191. Mr Platt seeks to distinguish *Sienkiewicz* on the basis that the Supreme Court did not undertake a 'comparative risk assessment' because the judge at first instance had not considered the 'absolute risk'. But Mr Steinberg observes, and I accept, that this approach was expressly rejected by the Court of Appeal in *Williams* where Aikens LJ stated in relation to the issue of causation stated:

> "65. … Mr Feeny`s argument is that the proportion of exposure to asbestos fibres that Mr Williams suffered when working [in the Defendant`s employment] was, *by comparison with* the exposure that he must have suffered elsewhere, a *de minimis* proportion, which meant that it would be possible to find that [such] exposure … had caused a material increase in the risk of Mr Williams contracting mesothelioma.
>
> …
>
> 72. However, as Lord Phillips also stated, the question of whether the tortious exposure to asbestos fibres was material is a question of fact for the judge in each case. The judge might or might not be assisted by mathematical comparisons with other real or hypothetical exposure situations as was attempted at the trial in this case. The judge might be assisted by epidemiological evidence. But, as I read the judgments in [*Sienkiewicz v Greif*], all the judge has to do, ultimately, is to make a finding of fact that the tortious exposure of the victim to asbestos at the hands of the defendant materially increased the risk that the victim would contract mesothelioma. He does not have to do a comparative exercise. So I would reject Mr Feeny`s primary submission on the causation issue."

192. Mr Steinberg submitted that the fact that the non-tortious exposure suffered by a claimant with mesothelioma did not change the situation in that the court still has to consider whether the tortious exposure had materially increased the risk of him suffering mesothelioma. I agree.

193. Mr Steinberg submitted on the basis of Dr Rudd`s evidence, the requirement for causation was `unambiguously established` but that such requirement would also be met even on Dr Moore-Gillon`s evidence given that in cross-examination he conceded that there was no lower dose threshold, that there was an increase in risk and that the tortious exposure and cumulative dose would `push [the Deceased] further along the risk spectrum`. However, in so far as Mr Steinberg submitted firstly, that to establish a breach of duty at Common Law it is necessary for a Claimant to establish a foreseeable risk of harm and that there is only a breach of duty where an act or omission gives rise to such risk, and secondly, that it might be reasonable to assume in most cases that any exposure amounting to a breach of duty would probably amount to a material increase

in the risk. I reject this submission because although I accept the first proposition, I am not satisfied that the second necessarily follows from the first.

194. Whilst conceding that breach of duty and causation are distinct, Mr Steinberg submitted that it would be an unusual situation where an exposure to asbestos which constituted a breach of duty was deemed not to be a material increase in risk. It seems to me that this submission erroneously conflates both breach of duty and causation and I reject it. Had this argument been raised in *Sienkiewicz*, I am sure that it would have been roundly rejected and there would have been no reason why the Supreme Court would have set out the requirement for a material increase in risk or emphasised that what constitutes a material risk must be for a judge on the facts of the particular case to decide.

195. I am satisfied that the burden is on the Claimant to show on a balance of probabilities that any exposure to asbestos suffered by the Deceased in the course of his employment by the Defendant gave rise to a material increase in the risk of the Deceased suffering from mesothelioma: see dicta of Lord Pentland in *Prescott* to that effect when he stated:

> "64. … In order for the pursuer to succeed in establishing negligence against the defenders he must establish, on the balance of probabilities, the actual level of asbestos dust to which he was exposed. It is essential for the actual level of exposure to be proved because otherwise the court cannot decide whether the exposure was more than *de minimis*, in which case liability could not arise. In *Sienkiewicz* … the Supreme Court held that the claimant must prove that the acts or omissions of a particular defendant had materially increased the risk of contracting mesothelioma. The Supreme Court went on to explain that a material increase means a degree of risk that is more than minimal; it is for the trial judge to determine, on the facts of each case, whether the increase in risk was minimal in this sense."

196. In my judgment for the reasons set out above the Claimant has not established to my satisfaction on a balance of probabilities that any exposure which the Deceased suffered in the employment of the Deceased caused a material increase in the risk of him developing mesothelioma.

197. Mr Platt's final submission was that the principles established in *Fairchild* only imposed a liability on a tortfeasor where a claimant's mesothelioma is caused by asbestos and not on the balance of probabilities by natural causes. Mr Steinberg complains that this is a new argument which does not appear in the Defence, nor in the Defendant`s Opening Submissions and submitted that the Defendant should not be permitted to raise this argument at this stage following a trial where these issues could have been dealt with in detail had the point been raised earlier. I agree with Mr Platt that arguments of law do not require to be pleaded, they can be and that although para 9 of the Amended Defence might be argued to raise this issue, albeit somewhat obliquely, I think it would have been far preferable to expressly plead this, particularly since I am being asked to depart from a decision of the House of Lords rather than to simply distinguish it. In such circumstances I have decided that since, it is strictly speaking unnecessary for me to determine this issue between the parties, it is inappropriate that I should do so.

Conclusions

198. Notwithstanding my sympathy for the Deceased and the Claimant, I am thus not persuaded on the balance of probabilities that the Deceased was exposed to asbestos dust during the course of his employment by the Defendant.

199. I am also not persuaded on the balance of probabilities that even if the Deceased had been exposed to asbestos dust in the course of his employment that such exposure resulted in a material increase in the risk of the Deceased developing mesothelioma. In my judgment any such exposure was *de minimis*.

Disposal

200. It necessarily follows that there will be judgment for the Defendant.

201. In the current circumstances I will deal with any ancillary matters by way of written representations and thus make the following Order:

    i) Any party who wishes to seek any further order shall file and serve on the other party within 14 days from the date of the handing down of this judgment written submissions in support of such application;

    ii) The other party shall file and serve on the party seeking a further Order within 28 days from the date of the handing down of this judgment any written submission in response thereto; and

    iii) The court will then determine any such applications on the basis of such written submissions and without any further hearing.