Neutral Citation Number: [2023] EWHC 1219 (KB)

Case No: QB-2019-0000428

**IN THE HIGH COURT OF JUSTICE**
**KING'S BENCH DIVISION**

Royal Courts of Justice
Strand, London, WC2A 2LL

Date: 23rd May 2023

**Before**:

**HHJ LICKLEY KC SITTING AS A**
**DEPUTY JUDGE OF THE HIGH COURT**

- - - - - - - - - - - - - - - - - - - - -

**Between:**

| | |
|---|---|
| **SHARON ALEXANDRA NESS**<br>**(Personal Representative of the estate of Mr J W Harrison)** | **Claimant** |
| **- and –** | |
| **(1) CARILLION CAPITAL PROJECTS LIMITED**<br>****DISCONTINUED****<br>**(2) LENDLEASE CONSTRUCTION HOLDINGS LIMITED**<br>**(3) R.A. SPEIGHT & SONS (PRESTON) LIMITED**<br>****DISCONTINUED**** | **Defendants** |

- - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - -

**Mr Philip de Berry** (instructed by **Woodward Solicitors**) for the **Claimant**
**Mr Jeremy Roussak** (instructed by **Weightmans Solicitors**) for the **Second Defendant**

Hearing dates: 16th, 17th and 30th March 2023

- - - - - - - - - - - - - - - - - - - - -

# Approved Judgment

.....

This judgment was handed down remotely at 10am on Tuesday, 23 May 2023 by circulation to the parties or their representatives by e-mail and by release to the National Archives.

**HHJ Lickley KC sitting as a Deputy Judge of the High Court:**

## Introduction

1. This case concerns a claim for damages, made by the personal representative of the estate of Mr John Harrison, arising from his exposure to asbestos during the course of his employment in the mid 1960s. Mr Harrison died aged 83 on the 18th September 2019 of mesothelioma[1].

2. At the relevant time, Mr Harrison was employed by a predecessor company of the second defendants, Lendlease Construction Holdings Limited, namely Bovis Limited (Bovis). There is no dispute that Mr Harrison was employed by Bovis for a relatively short period of time in the tax years 1966/67 and 1967/68. Specifically, he worked on the construction of the Guardian Insurance building in Blackpool as a specialist joiner, installing insulation and panels beneath windows. In order to do that work, he used a handsaw to cut the insulation and panelling to size. It is accepted that the total period that Mr Harrison was engaged in that work was limited to between 10 to 14 days. Specifically, Mr Harrison was engaged in installing asbestos cement panels and separate panels made from millboard. At the time, there were types of millboard that contained asbestos and types that did not. The first factual issue I have to resolve is which type of millboard did Mr Harrison cut with his saw and fit to the building? There is no dispute that he did fit asbestos cement panels.

3. The more general pre-trial issues were identified in the claimant's skeleton argument. It is agreed that the defendant company owed Mr Harrison a duty of care to avoid exposing him to asbestos. The claimant must prove that Mr Harrison was exposed to asbestos in breach of that duty of care, and issues include the extent of any exposure and whether there was a foreseeable risk of harm. The claimant suggests that it was agreed pre- trial that if breach of duty is proven, there was a material increase in the risk that Mr Harrison would develop mesothelioma, thus satisfying the causation test in *Sienkiewicz v Grief (UK) Ltd [2011] UKSC 10* and underpinned by the Compensation Act 2006.

4. The second defendant identified the pre-trial issues in a narrower way, namely first, did the millboard contain asbestos? And second, was Mr Harrison's exposure to asbestos millboard and the asbestos cement or from the asbestos cement only sufficient to constitute a breach of duty? Mr Roussak for the defendant added in paragraph 7 of his skeleton argument: "The diagnosis not being in dispute, Dr Warburton's reports also need not be considered*"*. Later at paragraph 20 he said:

> "The claimant's pleaded case does not allege that he was exposed to dust while cutting as opposed to merely handling, asbestos cement. His first statement similarly refers only to cutting millboard. Mr Stear estimates the exposure from cement at 0.021 to 0.029 fibres/ ml years. Such exposure, an order of magnitude less than either expert's estimate of exposure from cutting millboard, is de minimis."

Finally, he said at paragraph 23:

[1] Record of Inquest 26/9/19 p.542.

> "If the millboard did not contain asbestos, exposure from cement was minimal. Even if it did however, guidance at the time did not mandate precautions where exposure was limited and sporadic."

5. Quantum is agreed subject to liability in the sum of £107,500. As a result of that, it was not necessary for me to hear evidence from lay or medical witnesses and therefore the live evidence was limited to the occupational hygienists Laura Martin for the claimant and Martin Stear for the defendant.

6. Whether or not the millboard contained asbestos is not only the first issue to resolve, it was the major point of contention between the parties in terms of evidence adduced and argument. If I were to conclude, on the balance of probabilities, that the millboard installed by Mr Harrison contained asbestos, although not being able to concede the point, Mr Roussak realistically accepted that he would have difficulty contesting liability given the expert evidence first, as to exposure levels that would have occurred as a result of sawing and cutting asbestos millboard and second, the degree and extent of the understanding of the risks of such exposure at the time that a reasonable employer should have been aware of and taken steps to prevent.

7. If, on the other hand, I am not so satisfied, I would then have to consider the extent to which the installation of the asbestos cement exposed Mr Harrison to asbestos and the issues that follow from that require careful consideration. Mr De Berry, for the claimant, confirmed at the beginning of the hearing that if I were considering this alternative his case is that, in any event, liability will be established given the exposure occasioned. In closing submissions, a point of contention arose between the parties when Mr Roussak alleged that if I were considering this alternative situation, the exposure to asbestos occasioned would be so small that liability could not be established. I will return to that issue later in this judgment.

## The Medical Evidence

8. A medical report dated 8th October 2017, written by Dr Warburton, Consultant Physician at Aintree Chest Centre (part of Aintree University Hospitals NHS Foundation Trust), sets out the medical history in this case. Dr Warburton had the advantage of interviewing Mr Harrison by telephone on the 18th of September 2017 and also had sight of a statement made by Mr Harrison dated August 2017. I have not been provided with that statement. At the time of this report, Mr Harrison was 81 years old.

9. Dr Warburton noted that in the statement Mr Harrison described his early life, his occupational history and his exposure to asbestos. Mr Harrison worked for multiple employers. Dr Warburton noted the first report of Laura Martin, dated August 2017, which referred to asbestos exposure with eleven companies between 1953 and 1970. I will return to that report in due course.

10. Dr Warbuton reviewed the medical records which show that in 2001, Mr Harrison complained of shortness of breath, a reduced ability to walk and difficulty climbing stairs. Pleural thickening was noted in April 2017 with right sided pleural effusion.

Lung fibrosis was noted at that time. In June 2017, a video assisted thoracoscopy noted nodular pleural thickening and a biopsy demonstrated epithelloid mesothelioma.

11. Dr Warburton stated:

> "In my view therefore on the balance of probabilities if the court accepts that Mr Harrison has had sufficient asbestos exposure to meet or exceed the Helsinki criteria then in my view he has had asbestosis for a number of years.... Mesothelioma is a rare tumour in persons who have not been exposed to asbestos occurring with an annual incidence of around 1 per million population and most cases occur in persons who have been so exposed. Occasional spontaneous cases unrelated to asbestos exposure do occur however, when there is a history of past asbestos exposure the balance of probabilities strongly favours that exposure having been responsible for a mesothelioma which occurs subsequently."

12. Dr Warburton added: "Mesothelioma can occur after low level asbestos exposure and there is no threshold dose of asbestos below which there is no risk. However, the risk that mesothelioma will occur increases in proportion to the dose of asbestos received and successive periods of exposure each augment the risk that mesothelioma will occur" and "in my view on the balance of probabilities Mr Harrison has developed an asbestos related plural mesothelioma as a consequence of his previous occupational asbestos exposure." Dr Warburton predicted that Mr Harrison would succumb, due to his mesothelioma, within the next six months.

13. Dr Warbuton produced a final report dated 26th March 2019. He was provided with two additional statements from Mr Harrison and a further report from Laura Martin dated July 2018. The new medical report adds little, save a reference to this defendant and a clarification letter of November 2018.

14. Dr Warburton was not called to give evidence. If there were issues of causation that fell to be resolved as part of this hearing, the doctor should have been called to give evidence or further specific evidence adduced in support of a proposition advanced. I have to deal with the matter on the evidence adduced. The report of Dr Warburton was adduced unchallenged as I understand it.

**Evidence adduced**

15. The first evidence in time is the occupational hygiene report prepared by Laura Martin, Consulting Forensic Scientist, dated 17th August 2017[2]. That report refers to a witness statement from Mr Harrison dated 8th August 2017, and a personal interview with Mr Harrison on the same day. The witness statement and interview undoubtedly form the basis, in large part, of the report. I do not have the 2017 witness statement referred to.

16. From paragraph 3.4 onwards, Laura Martin has set out Mr Harrison's employment history. It is evident that Mr Harrison took time to consider each of his employers

[2] P.380

going back to 1951, and in particular, whether he used materials containing asbestos. I note in particular when referring to his employment with, for example, George Talbot, he stated that he was required to use asbestos tongued and grooved boarding. When working for H&S Builders, he used asbestos insulating board for soffits and wall panelling. When working for J Gerrard and Sons Ltd, he recalled a variety of asbestos products being damaged during extensive works. In 1963/64, when working as a joiner, his work involved the nailing and cutting of asbestos insulating board for wall and ceiling panels. Mr Harrison described what appears to be significant exposure to asbestos when working on a building in Lytham St Annes and on a refurbishment project of Blackpool's north pier. In other instances, however, Mr Harrison either described no use of asbestos materials or minimal exposure to asbestos when working. It is obvious that he was taking great care to describe the materials used that he remembered that did and did not contain asbestos throughout his working life from 1951 to 1972 in particular.

17. At paragraph 3.23, Laura Martin referred to Mr Harrison's employment with Bovis and other companies between 1965 and 1968. She said: "…Mr Harrison worked for several employers on projects requiring general joinery mostly shuttering work for concrete which did not involve asbestos exposure."

18. I can therefore infer that Mr Harrison did not state, either in the 2017 witness statement or in conversation with Laura Martin, that the employment with which I am concerned involved the use of asbestos materials.

19. During the interview, Laura Martin showed Mr Harrison photographs of a range of asbestos products. It appears that Mr Harrison recognised and described working with some of them, namely asbestos sprayed coating, asbestos insulation, asbestos insulating board, asbestos cement and asbestos paper. I have not been provided with all of the photographs used. I have been provided with two photographs. No schedule or list of the photographs produced and shown to Mr Harrison with an index was used.

20. Within the section of her report headed "Asbestos Insulating Board", Laura Martin described that product as the most likely that Mr Harrison would have come into contact with and he worked with most frequently. That is not millboard.

21. Laura Martin then referred to another type of asbestos containing board known as millboard. She described it and its composition. In the next paragraph she said: "Mr Harrison recalled using millboard at times. He remembered cutting it with a handsaw and installing it under windowsills in domestic properties at the Guardian Insurance building." From that description, it is unclear if Mr Harrison was identifying the use of millboard that contained asbestos, or millboard that did not. However, if one compares that to the reference to working for Bovis and the non-use of asbestos products, it suggests non asbestos millboard was used. No photograph is said to have been identified by Mr Harrison of millboard containing asbestos.

22. In the next paragraph, Laura Martin referred to the use of millboard at the Guardian Life building which is where Mr Harrison had worked for Bovis. In any event, given the purpose of the report, namely to identify exposure to asbestos materials at work,

no connection was made at that time in the report with that work and asbestos millboard consistent with her paragraph 3.24.

23. At paragraph 6.17, Laura Martin said in relation to asbestos cement:

> "Whilst work with asbestos cement does not generate highly elevated airborne fibre concentrations, I have carried out airborne monitoring on activities resulting in airborne fibre concentrations in excess of 0.1 f/mls."

24. Laura Martin then considered levels of exposure to asbestos when working, regulations, asbestos legislation, reports and date of knowledge. She summarised her conclusions at section 9 of her report. She said:

> "Mr Harrison's exposure to asbestos is stated to arise from use of asbestos insulating board, being in close proximity to the mixing and installation of asbestos pipe insulation, drilling of asbestos insulation blocks and being in close proximity to the disturbance of asbestos sprayed coating in addition to the use of other, less friable asbestos products such as asbestos paper and asbestos cement."

25. While accepting that whether or not each product contained asbestos is not known, she concluded that Mr Harrison's claim that all of the products described were asbestos containing was entirely credible. She added that while the precise level of exposure in terms of fibres/ml is difficult to quantify, in her view the level of exposure would have been high and, at times, well above the prescribed short term exposure limits at the time. Photographs shown to Mr Harrison were not produced as part of that first report.

26. Laura Martin's conclusion was that in her opinion, Mr Harrison was highly likely, on the balance of probabilities, to have been exposed to significant quantities of asbestos dust on a fairly regular basis whilst working as a joiner during the time period in question. Given the time period between exposure and the development of disease there can, she concluded, be little doubt that occupational asbestos exposure is the cause subject to medical evidence. Given what was said at paragraph 3.23, the report does not attribute any exposure to asbestos materials when Mr Harrison worked for Bovis.

27. The next evidence in time is the second report prepared by Laura Martin dated 20th July 2018[3]. Laura Martin again referred to having the same witness statement of Mr Harrison dated the 8th August 2017, and relied upon her original personal interview with him on the 8th August 2017. There was no new material to consider.

28. At section 3.4, Laura Martin again set out in identical terms Mr Harrison's employment history and the materials he worked with up until paragraph 3.23. In the section where Bovis appeared in the first report, Bovis have been removed and in the new report are the subject of a separate paragraph 3.25. Thereafter, the employment

[3] P.410

history section continues in identical terms to the first report. The difference therefore appears to be only the new paragraph relating to Bovis.

29. The new paragraph 3.25 provides in relation to Bovis Limited:

> "Mr Harrison worked for this employer as one of four in the tax year 1966/67 and one of six in the tax year 1967/68. He says that he worked on a further contract for the construction of the Guardian insurance building in Blackpool, now the AXA building. His primary role was joinery for concrete shuttering again, but he also fitted panels beneath windows (transom panels) using asbestos millboard, which he describes as a 'brownie colour' and asbestos sheeting as another layer which he says was grey. Transom panels are usually made from asbestos cement on the outer side as it is largely weatherproof, especially when painted, therefore I find it reasonable this is what Mr Harrison meant by his description of asbestos sheeting. The millboard layer would have been for the purpose of additional insulation or fireproofing."

Bovis was therefore, for the first time in this report, said to be an employer who had exposed Mr Harrison to asbestos.

30. Another small, perhaps not insignificant, difference between the August 2017 and August 2018 reports appears in paragraph 6.14. That paragraph and the subsequent paragraph 6.15 refer to Mr Harrison using millboard at the Guardian Insurance building. The paragraphs are identical, save for the addition of one sentence at the end of paragraph 6.14 in the second report. In that report, for some reason, Laura Martin has added "millboard had a variety of colour appearances depending on the fibre and binder content." It is important to remind oneself the time of writing the second report. Laura Martin had no new or additional information from Mr Harrison, other than that set out in his August 2017 statement and as a result of the interview that had taken place.

31. Section 6 of the report refers again to the interview with Mr Harrison on the 8th August 2017 and showing him photographs. The entire section appears to be identical to that of a year before. Section 7 of the report is also identical to the earlier report to paragraph 7.9. In the new report however, Laura Martin attempted to estimate the dose with each employer where asbestos exposure is alleged to have occurred. Bovis fell to be considered as the then tenth defendant. Laura Martin said:

> "Use of asbestos millboard and asbestos cement to fit transom panels beneath windows at the Guardian / AXA insurance building. Assuming an equal share of tax year 1966/67 as one of four employers, and one day per week working with asbestos products as opposed to his main shuttering work, exposure duration approximately equivalent to 0.05 working years. Assuming a 50:50 split between cutting/handling asbestos millboard at an average of 5 f/ml and asbestos cement at an average 0.1 f/ml. As work in 1967/68 was one of six employers

> there may be a small additional exposure for any work done in the few weeks worked in that year. Estimated dose contribution 0.13 f/ml years."

32. I have been provided with the notes of interview compiled by Laura Martin dated 8th August 2017[4]. The only note of relevance is a reference to "millboard, Bovis - fitted under windows at guardian insurance (AXA)." The word millboard was followed by a tick that Laura Martin was asked about when she gave evidence. In addition, I have been provided with nine photographs said to be part of that shown to Mr Harrison in interview. The first two are said by Laura Martin to depict millboard[5].

33. The first witness statement I have been provided with, signed and dated by Mr Harrison, is that of 9th August 2018[6]. This is obviously not the first witness statement he prepared for the purposes of court proceedings. As I have stated, I have not been provided with the witness statement from August 2017. The date of this statement post-dates Laura Martin's second report. It is important to analyse what Mr Harrison said about the materials he worked with in order to compare what he says and what Laura Martin has attributed to him, and also her conclusions.

34. Mr Harrison's witness statement of 9th August 2018 lists twelve defendants, which included Bovis as the tenth defendant[7]. In that statement Mr Harrison set out his early life, family and employment history. At paragraph 99, he described working for Bovis Ltd. He said:

> "In 1996/67 I worked for Bovis limited Lytham. I helped in the construction of the Guardian Insurance building in Blackpool. I think that this is now the AXA building. Again, my job was to make shuttering and therefore I was not exposed to asbestos dust when shuttering. However, I used millboard at times. I recall cutting it with a handsaw and installing it under windows sills when working on the Guardian Insurance building. Millboard is a brownie colour. Asbestos is lighter grey. The asbestos would be used first and then the millboard next. Finally, a decorative finish would be applied."

I note the similar colour descriptions used as in Laura Martin's report at paragraph 3.25.

35. It is clear that throughout the entire witness statement, Mr Harrison was being specific as to when he used asbestos products in the course of his work with each employer and when he did not. Mr Harrison sets out in a number of paragraphs his work at specific employers including fitting asbestos sheets to walls and using other materials such as Celotex and formica. His recollection appears to be clear. He did not state the millboard he used when working for Bovis Ltd contained asbestos. He distinguished the colour of the millboard from the asbestos installed under windows. Mr Harrison

[4] P.449
[5] P.452-458
[6] P.232
[7] P.232

did not identify the photographs of materials containing asbestos he had worked with that he had been shown in 2017 by Laura Martin.

36. At paragraph 128, Mr Harrison produced and marked "JWH4" the second report prepared by Laura Martin dated 20th July 2018. Mr Harrison said:

> "If there are any differences between applications that I have made to the DWP and Laura Martin's report I confirm that it is Laura Martin's report that is accurate. I say this because I've had more time to consider my employment history and asbestos exposure when meeting Laura that I had at the time that I applied to the DWP."

37. A further statement has been produced by Mr Harrison headed November 2018 and signed and dated by him on the 6th November 2020[8]. That later date is accepted to be an error given that Mr Harrison died in 2019. The correct date would appear to be 6th November 2018. Mr Harrison set out in more detail his work for Bovis. He described the tools used including hand saws, panel saws and claw hammers. He said he did not work outside, with all of the work being done inside. He said his initial work involved shuttering and after that work finished, he was told to take his finishing tools to work. He said that work involved sawing asbestos millboard and asbestos cement whilst fitting panels beneath the windows. He said he would spend a full day cutting panels with a handsaw and fitting them beneath windows. When considering the amount of time he spent fitting panels, he said he was on and off the job for a couple of months, he would work for one or two days then would go off to do something else and would then go back for another day or two. He said he spent a total of at least 10 full working days doing that work, although it could have been slightly more. It would not have been more than 13 or 14 days. He worked from 8:00am to 5:30pm with a 30-minute lunch break.

38. Therefore, in this witness statement, in approximately November 2018 Mr Harrison referred to the millboard as containing asbestos. That important fact is not contained in his statement of August 2018.

39. A witness statement in response to the second defendant's Part 18 request was completed by Mr Harrison dated the 17th April 2019[9]. In summary, Mr Harrison said the asbestos millboard was light grey in colour, quite hard but could be cut with a saw. He said the cement boards were darker but of a similar size, quite brittle and so he had to be careful when cutting them. He said both the millboard and the cement sheeting were approximately 3 x 4 ft in size. Mr Harrison had changed the colour of the millboard from "browney" to "light grey".

40. Mr Harrison described fitting asbestos sheeting under the windows between the sill and floor. He said he fixed the sheeting to the wall with screws through holes that he had previously drilled. The number of holes depended on the size of the board. He said there were two layers of asbestos sheeting fitted around the windows that he believed was for insulation and fireproofing. He said his work in the course of a typical day involved him measuring, cutting, drilling and screwing the boards in place

[8] P.302
[9] P.305

and then he would repeat the process. When he had finished in one area, he would brush the dust and bits into a pile where a labourer would remove it.

41. A letter has been produced from Laura Martin dated 15th November 2018[10]. The letter concerns a request for clarification regarding Mr Harrison's use of asbestos millboard and asbestos cement when working for Bovis. Laura Martin described the interview that she had with Mr Harrison and said:

> "He described fitting panels beneath the windows, with asbestos cement on the outer side and asbestos millboard on the inner side as an insulative layer. I showed Mr Harrison pictures of asbestos millboard and a similar non asbestos fibreboard without pre identifying which was which to him. Mr Harrison indicated the asbestos version as being the product he had used on this project."

Laura Martin suggested that confusion may have arisen from paragraph 99 of Mr Harrison's witness statement not prefixing the term millboard with the word asbestos.

42. In a further letter dated 24th April 2019, Laura Martin provided further comment in relation to the nature of asbestos cement[11]. She described asbestos millboard as a softer known weatherproof board used a cavity liner for heat retention. She said:

> "Mr Harrison was able to distinguish between photographs of asbestos millboard and flat asbestos cement sheeting without any prompting and identify them to me as the products he used on that particular project."

43. The final evidence is provided by Mr Harrison at an Evidence on Commission hearing[12]. That questioning took place on 23rd July 2019 from the three defendants. I note that an earlier date of 17th May 2019 had originally been scheduled, but that date was not possible because Mr Harrison had become ill and had been admitted to hospital hence the date in July 2019. Mr Harrison died approximately six weeks after the hearing. I have been provided with the video and audio recordings of the hearing, albeit in separate files. I have listened to the relevant audio files and in particular, the questioning of Mr Harrison by Mr Roussak. I have a transcript.

44. It is evident that Mr Harrison was unwell at the time of questioning. Despite that, he shows remarkable determination to complete the exercise. He is modest and reasonable in his account which is of events more than 50 years before. There is no suggestion of exaggeration, and any confusion can be explained by his condition and age.

45. Having affirmed to tell the truth and having answered questions on behalf of another defendant, it was Mr Roussak's turn. Mr Harrison declined the offer of a break. Mr Harrison was full of praise for Bovis as employers. When asked about the "brownish" millboard, Mr Harrison said it was "very flaky". Mr Harrison was asked about his Part 18 response, where he said the millboard was "quite hard but could be cut with a

[10] P.444
[11] P.446
[12] P.323

saw". Mr Harrison agreed the millboard was "pretty hard stuff", but then said it was "very soft". He added: "Very flaky. A lot of dust came off. The other was harder to cut." Despite Mr Roussak trying to clarify the apparent contradiction, Mr Harrison ended these questions by saying the "millboard was soft", then "the millboard was quite soft to cut if I'm right…..it was quite brittle." Finally, when reminded he had said it was quite hard, he said: "Hard but could be cut with a saw." Mr Harrison ended by saying that he could not remember very well.

46. Mr Harrison was reminded that when completing the DWP forms, he had not listed Bovis as an employer who had exposed him to asbestos. He said he had no idea why they were not mentioned. When it was suggested that the reason was that he did not think he had been exposed to asbestos in their employ, he said:

> "No it wouldn't be that. It wouldn't be that. It wouldn't be that.
> I just can't understand that."

47. Mr Harrison was asked about his meeting with Laura Martin. When asked if she had suggested that he might have been exposed to asbestos when working for Bovis, Mr Harrison said "Yeah". I add when listening to the audio recording that I am not persuaded that Mr Harrison was necessarily accepting that proposition. His answer might have been because he was tired rather than accepting of the suggestion.

48. Finally, Mr Harrison confirmed he had been shown lots of photos of asbestos products. Mr Harrison said:

> "She showed me lots of examples and I recognised a lot of examples of what was, you know, dangerous asbestos products."

The photographs were not available at the hearing.

49. I note that the letter of claim was dated 30th May 2018, some weeks before the second report of Laura Martin and the witness statement of August 2018[13]. That letter alleged that while working for Bovis, Mr Harrison had used asbestos millboard and asbestos cement to fit transom panels beneath windows at the Guardian Insurance Building, Blackpool. The letter added that he also fitted shuttering but was not exposed to asbestos when doing that work.

**Other evidence**

50. DWP records: On 18th November 2018, the DWP supplied Mr Harrison's records to his solicitors. A claim submitted on 11th July 2017 for industrial injuries disablement benefit for a prescribed industrial disease. Mr Harrison identified he was suffering from mesothelioma as a result of his exposure to asbestos when working as a joiner. The form that he completed provided a section at page 4 for Mr Harrison to name two employers and he named H&S Builders and Tersons Limited. In a separate section, where additional employers who are thought likely to be responsible listed, Mr Harrison named six former employers. He did not name Bovis.

**Evidence before me**

[13] P.3

51. Laura Martin: Laura Martin is employed by SSG Consulting Forensic Engineers (SSG) as a Consulting Forensic Scientist specialising in Occupational Hygiene. She gave her qualifications and set out her experience. She started working for SSG in 2017 a few months before she was involved in this case. She produced her reports, letters and the joint experts report and she confirmed the same as accurate and true to the best of her knowledge and belief.

52. She confirmed that she had seen Mr Harrison once on 8th August 2017. She said she was with him for two to three hours. She produced her notes of the meeting. Bovis were one of ten potential defendants. She said she had a preliminary or draft statement from Mr Harrison. She said there were lots of defendants under consideration at the time, and there was lots of toing and froing about who would be pursued. She said, as she recalled it, Bovis had been grouped together with other employers and the first mention of Bovis was by reference to Mr Harrison's work making shuttering timber to make formwork for concrete that did not generally include asbestos.

53. She was asked about her first report of 2017 in relation to Bovis at paragraph 3.23, where no asbestos materials were said to have been used. She agreed it was the only reference to Bovis. She was asked about para 6.14 in her first report. She said the reference to millboard covers boards that included asbestos and some that did not. She said she did not know the prevalence of each type at the time. She added, given the time we are concerned with, that she thought the more prevalent type contained asbestos, although she could not say for certain. It was put to her that she did not say in her report that Mr Harrison recognised photos of millboard. She said he did when she interviewed him and he positively identified the millboard he used as containing asbestos. She said her notes of the meeting has a tick and that is to indicate a 'positive' for the identification of an asbestos product.

54. Laura Martin was asked about her second report of 2018. She agreed it predated the witness statement of August 2018. She said: "I had no more information than the first statement. I would have recorded any new information."

55. She was asked about the separation of Bovis from paragraph 3.23 and the new paragraph 3.25. She agreed it set out more information and that information was not in the first report. She was asked where the detail had come from. She said:

> "With the passage of time I am not sure, it is firming up my recollections of conversations that are not in my notes and clearing up the aspects that were written up about the Guardian Building and work he did for Bovis."

She agreed it was by then eleven months after she saw Mr Harrison. She said she had a good memory for detail and for things people tell her. She was asked what had prompted her to add the paragraph. She said:

> "I cannot give a definitive answer. In the first report it is not clear enough that the AXA building work described was work with Bovis. I can't recall why."

In short, she could not remember why the change came about and suggested it might have been as a result of a conference or a conversation but could not say why.

56. She was asked about the witness statement of 9th August 2018 and paragraph 99, where Mr Harrison described his work with Bovis. She was asked why the detail in her report at paragraph 3.25 was not as set out in the statement. She said: "asbestos sheeting is what Mr Harrison meant by the asbestos." She was asked about the added sentence about colour in her second report at para 6.14. Laura Martin could not say why she had added that sentence.

57. In relation to the photos shown to Mr Harrison, she said the photos are part of a gallery collection she keeps of asbestos products gathered from the internet. She said the photo at p.452 shows non asbestos millboard or hardboard and that the photo at p.453 shows millboard containing asbestos. She said she did not exhibit the photos to her report but they were produced. She said the photos I had in court are a selection of photos shown to Mr Harrison but she was not entirely sure which ones Mr Harrison saw. She said: "I am confident they are the ones he saw." She said for every asbestos product I show a non-asbestos product. She accepted that her paragraph 6.2 should read "and non-asbestos products".

58. She was asked about her letter p.444. She said the detail ascribed to Mr Harrison was not in her report or her notes. She said it was her recollection of the conversation she had with him. She said:

> "He told me personally that it was asbestos. He did identify the asbestos containing version from the photos. I did not put that in the first report' and 'he recalled clearly and could distinguish between them. My recollection was he could remember and he used asbestos millboard."

59. She said she was confident that the two photos I have were the two Mr Harrison saw. She said they are reasonable examples but acknowledged that they are significantly different. She accepted she did not show pictures of non-asbestos millboard similar to that at p.453. She accepted that for almost every asbestos and non-asbestos material there are versions that look visually similar to each other.

60. Martin Stear: He is employed by Finch Consulting as a Chartered Occupational Hygienist. He set out his qualifications and experience. He produced his reports, the joint report and confirmed the contents set out his views. He said he had been dealing with asbestos since 1983.

61. He said the board shown in the photo at p.452 was not millboard but hardboard. He said millboard would be thicker. Of the photo at p.453, he said he could not definitely say it was asbestos millboard but because it was grey in colour and he could see fibre bundles, that suggested that it was. He added the age of the photo was important because if it was taken in the 1980s it would suggest that it was millboard that did not contain asbestos. The age or date of the photos has not been established.

62. He said when asked about paragraph 99 in the witness statement and the reference to millboard, that he could not say if that was material that contained asbestos or not. He

thought that asbestos millboard was more prevalent in use in the 1960s. He added that although he had no data for use of such products in the 1960s, he merely felt it was reasonable to assume the millboard containing asbestos was more prevalent at that time.

63. He said asbestos millboard can be "browney" in colour, however if it was brown that would suggest it was more likely to be millboard that did not contain asbestos. In terms of colour, if the millboard was white or a muddy white/grey in colour, that was more likely to contain asbestos. He said the normal non-asbestos millboard was made from a wood pulp which was effectively a brown mush, the fibres looked thicker and bulkier than in board containing asbestos. He said non-asbestos millboard could be broken very easily.

64. In his main report[14] from paragraph 4.18, Martin Stear considered the alleged exposure to asbestos with Bovis. He considered the evidence that I have set out above and the descriptions given by Mr Harrison of the materials he used. He said the use of the description as "browney" in colour counters a conclusion that the millboard used contained asbestos. His research revealed that millboard containing asbestos usually contained chrysotile asbestos which was white in colour, which again points away from the description used by Mr Harrison. Martin Stear however noted that in his Part 18 response, Mr Harrison described the millboard as being of a light grey colour.

65. He concluded at paragraph 4.30:

> "In conclusion as stated I do consider it plausible that the insulating material/board of some kind was fitted under windows, behind the asbestos cement. I was drawn to a non-asbestos board by the comment 'browney' but overall, I consider the various sources of evidence too uncertain to draw conclusions as to whether, on the balance of probabilities, the millboard was in asbestos or non-asbestos containing board."

66. In the Joint Experts Report[15], Martin Stear considered the evidence overall to be too uncertain to state whether the deceased worked with asbestos. He did however accept that the use of the word "browney" could be used to describe some form of asbestos millboard, however he was drawn more to a normal asbestos board such as Celotex as that would usually have a clear or strong brown colour.

67. Laura Martin said in the Joint Report that she considered asbestos millboard to be more likely because in interview, Mr Harrison identified asbestos containing millboard from a gallery of images. She rejected any suggestion that Mr Harrison gained knowledge of asbestos products from her or that she guided him to conclusions about product types. She recalled that Mr Harrison described his contacts with asbestos clearly and confidently without hesitancy or any difficulty in recollection due to the passage of time.

68. I add for completeness that I have taken account of the fact that throughout the taking of statements from Mr Harrison, beginning perhaps as early as 2017, he was being

[14] P.459
[15] P.529

asked about events and working practices that took place some 50 years before. Mr Harrison's recollection of detail is bound to have faded with the passage of time. That is understandable and also, inconsistencies in a person's account may emerge and be evident. I also take into account that at the time Mr Harrison answered questions at the Commission hearing, he was undoubtedly gravely ill. I have made appropriate allowances.

69. I have considered the submissions made by counsel concerning the issue of the millboard and whether it contained asbestos. I remind myself that the burden of proof rests with the Claimant, namely that I must be satisfied to the civil standard, that is on the balance of probabilities. Another way of describing that is I must be satisfied that something is more likely than not.

**Did the millboard contain asbestos?**

70. I have to decide this question of fact. Having considered the evidence in this case in relation to the question whether the millboard used by Mr Harrison when working for Bovis contained asbestos or not, my conclusion is that I cannot be satisfied on the balance of probabilities that it did. I come to that conclusion for the following reasons:

(i) When Laura Martin first reported in 2017, she had a witness statement and had spent time discussing Mr Harrison's working history with a number of employers. It is reasonable to infer and conclude that Mr Harrison made no allegation or suggestion that he used millboard containing asbestos when working for Bovis. That is clear from paragraph 3.23, where Bovis are specifically mentioned as an employer where his work did not involve the use of asbestos. I have no doubt, given the obvious care taken in identifying employers and materials used, that if that work had included asbestos materials, it would have been clearly stated. The opposite is the case. Bovis were expressly excluded.

(ii) Laura Martin's notes of her meeting in 2017 are brief and lack detail. If her 'tick' meant asbestos, then I do not understand why that was not reflected in her 2017 report.

(iii) In her second report of 2018, Laura Martin has complied at her paragraph 3.25 an entirely new and unsupported account of Mr Harrison using asbestos millboard. No new material had been supplied to her and she had not spoken to Mr Harrison in the intervening period. Her explanation for how that came to be is not persuasive.

(iv) For the first time in his witness statement in August 2018, Mr Harrison set out in detail his work for Bovis at paragraph 99. Not only is that description at odds with Laura Martin's paragraph 3.25 in the witness statement, Mr Harrison does not specifically state that the millboard he used contained asbestos. Indeed, he draws a distinction with asbestos material he did use, suggesting a difference. He said: "the asbestos would be used first and then the millboard next. Finally, a decorative finish would be applied."

(v) In addition, the first colour described for the millboard was "browney". Mr Harrison said the asbestos was "lighter grey". That colour of the millboard may indicate millboard with asbestos, however on this topic I prefer the evidence of Martin Stear in that the colour "browney" suggests a non-asbestos type of millboard.

(vi) The factual basis for the suggestion that the millboard contained asbestos is further confused by the Part 18 responses and the evidence at the Commission hearing. In the Part 18 response, Mr Harrison is clear as to his use of asbestos millboard. That detail is lacking in paragraph 99 of his witness statement and was not reported to have been said by him in 2017 in the first report of Laura Martin. The evidence at the Commission hearing further confuses the issue with the change of colour and texture.

(vii) The showing of photos to Mr Harrison is also an area of concern and uncertainty. Ordinarily, it would be a useful exercise. The exercise requires an indexed schedule of photos shown, a record of what was and was not identified and if correct. That is what should have happened given the significance of any response. The exercise conducted in this case was poorly managed and executed. There is no record of what was and was not identified by Mr Harrison. The photos shown to me are not agreed as to what they show and the dates of the photos has not been established.

(viii) The use of millboard by Mr Harrison goes back to 1966/67. There are no contemporary records, notes, working diagrams, plans or other documents to assist. The building in question has not been examined and may well no longer exist.

(ix) Overall, the evidence as to the type of millboard used and whether it contained asbestos is unclear, confusing, contradictory and unpersuasive.

(x) Finally, there is no constant theme in the evidence upon which to make safe findings of fact.

71. Accordingly, the Claimant has not satisfied me to the required standard of proof that the millboard used by Mr Harrison when working for Bovis contained asbestos. Accordingly, in this regard, the claim fails. It is therefore not necessary for me to go on to consider the extent to which the millboard used may or may not have shed asbestos fibres when being handled, cut and fitted to the building by Mr Harrison.

72. I now turn to the supplementary issue concerning the extent to which the asbestos cement that was used by Mr Harrison when employed by Bovis exposed him to harmful asbestos fibres.

**The evidence**

73. Before turning to the evidence adduced in court, relevant evidence is set out in the experts reports and their joint report. The experts have used the initials AC when referring to asbestos cement.

(i) It is agreed, between the parties that, despite the initial lack of reference to asbestos materials being used when working for Bovis, that Mr Harrison did cut and fit asbestos cement panels when working for Bovis. That concession arises from consideration of the nature of the work he undoubtedly did and his subsequent references to asbestos materials.

(ii) It is also agreed that the potential exposure level of asbestos from cement was significantly lower than from other products.

(iii) In any event, the claimant maintains that liability is established despite the low levels of exposure to asbestos. The second defendant denies liability.

(iv) There is no suggestion in this case that Mr Harrison was provided with any protective equipment including the relatively simple provision of a face mask.

(v) In addition, no evidence has been adduced by the second defendant that they conducted any risk assessment for the work Mr Harrison undertook, offered any advice, offered or provided any protective equipment or guidance to him or as to their level or knowledge of understanding of the risks posed to Mr Harrison by him having to cut and fit asbestos products.

74. The joint expert report at response 5 states:

> "We agree that should the court accept that the deceased did work with AC the most likely fibre type would have been chrysotile asbestos."

75. In order to establish liability, the claimant must prove, on the balance of probabilities, that the second defendants were negligent. That involves an assessment as to whether or not Bovis breached their duty of care which they undoubtedly owed to Mr Harrison. What was reasonable for them to do in the circumstances turns on the level of knowledge and understanding of the risks posed by the cutting and installation of asbestos cement panels at the relevant time.

**The degree of knowledge and understanding of the risks in 1966/67**

76. The Factories Act 1961 – regulation 63 required that all practicable measures should be taken to protect employed persons against the inhalation of injurious dust. The regulations applied to factories. The Chief Inspector of Factories Annual Report of 1956 had warned about the hazardous nature of asbestos dust. The report was published in January 1958. Indeed, the Chief Inspector of Factories Annual Report of 1949 highlighted the need to prevent as far as reasonably possible the installation of asbestos fibre and dust. It is clear that by the mid 1960s, there was an increased awareness of the risks to health posed by exposure to asbestos.

77. In 1965, Newhouse and Thompson published their findings that established that mesothelioma could be caused by low level exposure and that might affect the families of workers. An article in The Sunday Times on 31st October 1965 highlighted the report findings. In addition, the Chief Inspector of Factories reports from 1966 contained advice on the dangers and precautions necessary to control exposure to asbestos.

78. In *Maguire v Harland and Wolff plc* [2005] PIQR 21, Judge LJ said [57]:

> "Before 1965 neither the industry generally nor those responsible for safety and health nor the factory inspectorate nor the medical profession suggested that it was necessary or even that it would be prudent for the risks arising from familial exposure to be addressed by the industry. In truth the alarm did not sound until late 1965 when it began to be appreciated that there could be no safe or permissible level of exposure direct or indirect to asbestos dust. There after the learning curve about the risk arising from familial exposure was fairly steep.'"

79. Mr Stear when giving evidence said that the Newhouse and Thompson report and The Sunday Times article raised concerns to much lower levels of exposure to asbestos than had previously been understood. He accepted it was then suggested there was no safe level of exposure and the report had identified concerns with exposure at very low levels, causing very serious illness. He accepted that he did not know what knowledge or awareness Bovis had at the time, but the information available gave rise to the need for employers to consider the risks associated when staff were using asbestos. He accepted a number of simple cost-effective steps could have been taken, including cutting the panels/sheets off site. He said the employees could have been given masks to wear or even if the employer did not know what they needed to do, they could contact the relevant inspectorate and ask what to do. He said the best advice was in the 1967 guidance.

80. The precise dates of Mr Harrison's employment with Bovis in the years 1966/67 and 1967/68 is not capable of being determined with any certainty. Mr Harrison had other employers in those years.

81. During the period I am concerned with, '*The Asbestos Research Council – Recommended Code of Practice'* was issued in April 1965. The code made specific reference to the handling working and fixing of asbestos and asbestos cement products in the building and construction industries. The preamble states:

> "The use and manipulation of asbestos and asbestos cement products is very diverse and ranges from the fixing of occasional single sheets to extensive operations involving cutting or machining by power driven equipment. While care should always be exercised special precautions are only necessary when there is a possibility that operatives may inhale asbestos dust as result of proximity to cutting grinding or similar operations."

82. The code goes on to state that there is no hazard in the handling, working and fixing of those products, provided the simple precautions outlined are followed. In section 3.2 – '*Hand cutting and working',* the code provides:

> "3.2.1 where hand cutting and working has to take place regularly a dust exhaust system will often not be possible.

> Where any risk of inhaling asbestos dust is present operatives should wear approved type respirators."

Other precautions are then set out including damping down etc. No suggestion is made that dust exhaust systems would have been practical in this case. Although the Code may not have made other specific recommendations in relation to Mr Harrison's type of work, it highlighted the need for caution when working with asbestos cement. Finally, an issue arose as to what the word 'regularly' means. In my judgment, it means repetitive work. Mr Harrison was involved in such work on the days in question. He did the same work on a number of days.

83. The first Asbestos Regulations were introduced in 1969, and came into force in 1970, and are therefore outside the time scale for consideration in this case.

84. Bovis were a large national building company engaged in large projects. They were not a small business located in one town or county. It is reasonable to assume they were aware of the growing awareness of the dangers of asbestos from the Newhouse and Thompson report and the issues raised. If they were not aware, they should have been. Mr Stear accepted when he gave evidence that Bovis were a well-known national construction employer who had significant resources and were well funded.

85. The experts considered the likely exposure of airborne asbestos fibres when Mr Harrison was working with asbestos cement. The experts agreed should it have been found that Mr Harrison worked with asbestos millboard that product would have produced higher levels of airborne asbestos fibres than when working with asbestos cement.

86. Laura Martin worked on the assumption that Mr Harrison worked for 12 days, with the work divided equally between working with millboard and asbestos cement. In relation to the latter, she calculated that the average airborne fibre concentration was about 0.1 f/ml. She provided an overall dose for both asbestos millboard and asbestos cement. No other calculations were performed for the tax year 1967/68 because Mr Harrison's employment was likely to have been brief and he had five other employers that year. In her evidence, she said as a comparison that exposure from asbestos cement would be only about 2% of any exposure from asbestos millboard.

87. I have set out above Laura Martin's overall assessment of exposure levels above. In her 2018 report at paragraph 7.8 she stated:

> "In my view Mr Harrison's short-term high-level exposures would certainly have exceeded the fibre levels as described above. Some of the work with asbestos insulating board could have been below at times and with asbestos cement consistently below."

I refer also to my reference to her paragraph 6.17 above.

88. The fibre levels referred to by Laura Martin are the Threshold Limit Values (TVLs) produced by the American conference of governmental hygienists. Laura Martin said those values were used in the UK from 1960 and published in the Safety Health and

Welfare booklet number 8. In the 1968 edition, it was proposed that the TLV be reduced to 12 f/ml. I have been told that the booklet was superseded by Technical Data Note 2 which intimated that the asbestos regulations 1969 would apply where the average dust concentration was 2 f/ml. The Asbestos Regulations 1969 came into force on the 14th May 1970 and Technical Data Note 13 was issued and set at a level of 2 f/ml, the level for exposure to chrysotile asbestos. Apparently, that standard was based on preventing asbestosis and did not address the risk of lung cancer or mesothelioma. I remind myself I am concerned with the period 1966/68.

89. Martin Stear estimated that if Mr Harrison only used asbestos cement for 10 to 14 days, then the exposure level was ten times higher than that assessed by Laura Martin at 1 f/ml x 10-14 days/240 working days, equalling 0.042 to 0.058 f/ml years. That assumed that Mr Harrison worked with asbestos cement all day. If in fact he worked half of his time with asbestos cement and the other half with materials not containing asbestos, then the exposure levels fall 0.021 to 0.29 f/ml years. In his report at paragraph 5.4, when considering exposure levels from both asbestos millboard and asbestos cement, he said:

> "I am not persuaded that this exposure albeit noting the uncertainties, carried a foreseeable risk of injury. Whilst it seems it occurred after the seminal 1965 work of Newhouse and Thompson, the ARC when they produced guidance in April 1967 were advising little or no precautions for small scale intermittent work where hand tools were used, albeit they did for all work, advised dust free methods of cleaning. Whether the second defendant were aware or should have been aware of this guidance is a matter for the court."

90. In his evidence before me, Mr Stear said the exposure levels caused by cutting asbestos cement would not have breached the standards set in the 1960s.

91. I have not been provided with any other evidence on the topic of exposure levels. I have not heard medical evidence as to the significance or otherwise of the levels mentioned other than Dr Warburton saying, importantly, there is no such thing as a safe level of exposure. I have no way of assessing that question other than to note first, the evidence from the experts concerns their estimates of the levels of exposure and there is no way of knowing what the precise level of exposure was and second, the evidence as to levels from both experts varies widely. What the evidence does show however, is that Mr Harrison was exposed to harmful asbestos when working for Bovis and using the asbestos cement albeit at a low level.

92. In *Bussey v 0065401 Ltd (formerly Anglia Heating Ltd) [2018] EWCA Civ* 243, the court considered the appropriate question to ask when assessing the foreseeability of risk in a mesothelioma case. Adapting an earlier formulation of the test to the facts of that case, Jackson LJ at paragraph 44 set out the applicable test. Underhill LJ reformulated the questions given the use of the word 'unacceptable' by Jackson LJ.

93. Underhill LJ posed the question this way [63]:

> "'The first question is whether Anglia should at any time during Mr Bussey's employment - that is, between 1965 and 1968 (the precise dates are not known) - have been aware that the exposure to asbestos dust which his work involved gave rise to a significant risk of asbestos-related injury. (I say "significant" only so as to exclude risks which are purely fanciful: any real risk, albeit statistically small, of a fatal illness is significant.) That will depend on how quickly the knowledge, first widely published in 1965, of the fact that much lower exposures than had previously been thought to be dangerous could cause mesothelioma was disseminated among reasonable and prudent employers whose employees had to work with asbestos. One aspect of this question is whether, even though Anglia may have been aware of the risk in general terms, it was reasonable for it at the material time to believe that there was a level of exposure below which there was no significant risk, and that Mr Bussey's exposure was below that level."
>
> If the answer to the first question is that Anglia should have been aware that Mr Bussey's exposure gave rise to such a risk (including that there was no known safe limit) the second question is whether it took proper precautions to reduce or eliminate that risk. On the facts of the present case, that question may not be difficult to answer, since, as Jackson LJ says at para. 56, the Judge found that there were two simple precautions that could have been taken, and there seems to be no suggestion that they were either impractical or unreasonably expensive: even if the risk was understood to be small, given its seriousness if it eventuated, the precautions ought to have been taken'.

94. Reformulating the above for this case provides this question: should Bovis at the time they employed Mr Harrison have been aware that the exposure to asbestos which his work involved gave rise to a significant risk of asbestos-related injury? I note significant means any real risk, albeit statistically small, rather than a fanciful risk. Then as part of that question, whether, even though Bovis may have been aware of the risk in general terms, it was reasonable for Bovis at the material time to believe that there was a level of exposure below which there was no significant risk, and that Mr Harrison's exposure was below that level?

95. The answer to the question requires me to look at the information which a reasonable employer in the defendant's position at the relevant time should have acquired, and then to determine what risks such an employer should have foreseen. I have to balance what the employer knew or ought to have known and what steps should have been taken, bearing in mind the accepted low levels of asbestos fibres cutting installing asbestos cement panels would produce.

96. Jackson LJ considered what is the duty of an employer in an area where knowledge is developing. He cited with approval the decision of Swanwick J in *Stokes v Guest and others [1968] 1 WLR 1776.* The judge considered the facts of the case and said [55]:

> "At the time Anglia had no way of measuring the actual level of asbestos to which Mr Bussey was exposed……. all that Anglia knew, or ought to have known, was that Mr Bussey's work could regularly exposed him to small quantities of asbestos dust'. Later he said [57] 'As things stood in 1965-1968 Anglia could not know one way or the other whether the extent of Mr Bussey's exposure was liable to cause mesothelioma. It might or it might not do so. There were ready means of reducing that risk. In my view if the judge had not felt constrained by the decision in Williams v University of Birmingham [2012] PIQR P4 he might have concluded that as a reasonably prudent employer Anglia ought to have foreseen that risk; since that risk could be avoided by simple precautions, it was not a risk which ought to be accepted."

97. The difficulties in proving liability in mesothelioma cases where there were multiple employers and often many instances of exposure but no one incident could be proven to have caused the illness, gave rise to a number of important decisions of the courts. Parliament intervened by passing The Compensation Act 2006 which resolved the issue clearly in favour of claimants in such cases. The provisions have been described as draconian for employers who have being responsible for any small proportion of the overall exposure of a Claimant to asbestos dust.

98. In *Fairchild v Glenhaven Funeral Services Limited [2002] UKHL 22*, Lord Bingham set out the issue that arose in such cases. His Lordship said [7]:

> "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. In the absence of occupational exposure to asbestos dust it is a very rare tumour indeed, afflicting no more than about one person in a million per year. But the incidence of the tumour among those occupationally exposed to asbestos dust is about 1,000 times greater than in the general population, and there are some 1,500 cases reported annually. 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 10 years, but it is thought that that 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 1-2 years of the condition being diagnosed. The mechanism by which a normal mesothelial cell is transformed into a mesothelioma cell is not known. It is believed by the best medical opinion to involve a multi-stage process, in which 6 or 7 genetic changes occur in a normal cell to render it malignant. Asbestos acts in at least one of those stages and may (but this is uncertain) act in more than one. 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 probable than any other, and the condition once caused is not aggravated by further exposure. So if C is employed successively by A and B and is exposed to asbestos dust and fibres during each employment and develops a mesothelioma, the very strong probability is that this will have been caused by inhalation of asbestos dust containing fibres. But C could have inhaled a single fibre giving rise to his condition during employment by A, in which case his exposure by B will have had no effect on his condition; or he could have inhaled a single fibre giving rise to his condition during his employment by B, in which case his exposure by A will have had no effect on his condition; or he could have inhaled fibres during his employment by A and B which together gave rise to his condition; but medical science cannot support the suggestion that any of these possibilities is to be regarded as more probable than any other. 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. It is on this rock of uncertainty, reflecting the point to which medical science has so far advanced, that the three claims were rejected by the Court of Appeal and by two of the three trial judges."

99. Lord Bingham posed six questions to be answered in the affirmative for liability to arise [2]:

> "'The essential question underlying the appeals may be accurately expressed in this way. If"
>
> (1) C was employed at different times and for differing periods by both A and B, and
>
> (2) A and B were both subject to a duty to take reasonable care or to take all practicable measures to prevent C inhaling asbestos dust because of the known risk that asbestos dust (if inhaled) might cause a mesothelioma, and
>
> (3) both A and B were in breach of that duty in relation to C during the periods of C's employment by each of them with the

> result that during both periods C inhaled excessive quantities of asbestos dust, and
>
> (4) C is found to be suffering from a mesothelioma, and
>
> (5) any cause of C's mesothelioma other than the inhalation of asbestos dust at work can be effectively discounted, but
>
> (6) C cannot (because of the current limits of human science) prove, on the balance of probabilities, that his mesothelioma was the result of his inhaling asbestos dust during his employment by A or during his employment by B or during his employment by A and B taken together,
>
> is C entitled to recover damages against either A or B or against both A and B?

100. Lord Bingham concluded [34]:

> "To the question posed in paragraph 2 of this opinion I would answer that where conditions (1)-(6) are satisfied C is entitled to recover against both A and B. That conclusion is in my opinion consistent with principle, and also with authority (properly understood). Where those conditions are satisfied, it seems to me just and in accordance with common sense to treat the conduct of A and B in exposing C to a risk to which he should not have been exposed as making a material contribution to the contracting by C of a condition against which it was the duty of A and B to protect him. I consider that this conclusion is fortified by the wider jurisprudence reviewed above. Policy considerations weigh in favour of such a conclusion. It is a conclusion which follows even if either A or B is not before the court. It was not suggested in argument that C's entitlement against either A or B should be for any sum less than the full compensation to which C is entitled, although A and B could of course seek contribution against each other or any other employer liable in respect of the same damage in the ordinary way. No argument on apportionment was addressed to the House. I would in conclusion emphasise that my opinion is directed to cases in which each of the conditions specified in (1) - (6) of paragraph 2 above is satisfied and to no other case."

101. The Compensation Act s.3 provides:

> "Mesothelioma: damages"
>
> (1) This section applies where—
>
> (a)a person ("the responsible person") has negligently or in breach of statutory duty caused or permitted another person ("the victim") to be exposed to asbestos,

> (b)the victim has contracted mesothelioma as a result of exposure to asbestos,
>
> (c)because of the nature of mesothelioma and the state of medical science, it is not possible to determine with certainty whether it was the exposure mentioned in paragraph (a) or another exposure which caused the victim to become ill, and
>
> (d)the responsible person is liable in tort, by virtue of the exposure mentioned in paragraph (a), in connection with damage caused to the victim by the disease (whether by reason of having materially increased a risk or for any other reason).
>
> (2)The responsible person 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.

102. In *Sienkiewicz,* Lord Phillips said of this section [70]:

> "Section 3(1) Does not state that the responsible person will be liable in tort if he has materially increased the risk of a victim of mesothelioma. It states that the section applies where the responsible person is liable in tort for materially increasing that risk. Whether and in what circumstances liability in tort attaches to one who has materially increased the risk of a victim contracting mesothelioma remains a question of the common law."

103. The important part of the decision concerns the material increase in risk. In this case, a dispute arose as to whether that was an issue confined to breach of duty or is part of causation. It perhaps matters not which it is and I do not have to resolve that issue save to say the "appropriate test for causation" appears in the headnote of *Sienkiewicz*.

104. What does matter is what Lord Phillips said, and I have to consider that in relation to a material increase in risk. His Lordship said, [107-108]:

> "What constitutes a material increase in risk? "
>
> 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 of 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. This cannot be right.

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. The question is whether that is the position in this case.

At [110-111] he said,

'I do not think that Judge Main would have dismissed the addition that Greif's wrongful exposure made to the risk that Mrs Costello would contract mesothelioma as statistically insignificant or de minimis. If one assumes, as is likely, that Mrs Costello's disease was asbestos induced, it is plain that a very low level of exposure sufficed to cause the disease. This accords with the expert evidence that there is no known lower threshold of the exposure that is capable of causing mesothelioma. No one could reasonably conclude that there was no significant possibility that the incremental exposure to which Greif subjected Mrs Costello was instrumental in causing her to contract the disease. I am in no doubt that the wrongful exposure to which she was subjected materially increased her risk of contracting mesothelioma.'

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 that exposure was insignificant compared to the exposure from other sources. I note that in Rolls Royce Industrial Power (India) Ltd v Cox

> [2007] EWCA Civ 1189 counsel for the employer conceded that exposure to asbestos dust for a period of one week would not be de minimis."

105. I add that in *Rolls Royce*, the court approved a finding of liability based on exposure being more than de minimis without evidence of fibre levels and levels of exposure but based on a general understanding of the nature of the work undertaken. Maurice kay LJ referred to the need to consider 'the extent and duration of the exposure' he said [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. Exposure that would fall within the de minimis formula would be insufficient. However, the type of contract work undertaken by International Combustion at power stations and the role of the Deceased in that work, coupled with his generic description of conditions in power stations at the time, undoubtedly justified the finding that this was not a de minimis case. Mr Limb frankly conceded that to work in such conditions at a particular location for a week would not be de minimis."

106. In relation to what evidence might be adduced to assist the court as to what and what is not de minimis, I note what Lord Philips said in *Sienkiewicz*, having considered epidemiological evidence earlier in his judgement [106]:

> "Thus the conundrum is answered by saying that there are special features about mesothelioma, and the gaps in our knowledge in relation to it, that render it inappropriate to decide causation on epidemiological data as to exposure. So far as concerns apportionment between tortfeasors jointly liable for causing mesothelioma it is likely to be necessary to use epidemiological evidence faute de mieux."

107. At the end of Mr Roussak's closing submissions, an issue arose concerning the evidence adduced on the topic of de minimis exposure. He maintained that no evidence had been adduced by the Claimant to prove that the level of asbestos produced by the asbestos cement was sufficient to give rise to a materially increased risk of developing the disease. He said the Claimant had failed to prove that vital part of establishing a breach of duty. Mr De Berry objected, in forceful terms, alleging that the Claimant had been misled as to the issues of fact to be resolved by me because the material increase in risk was not raised as an issue pre-trial. He sought, in an adjourned hearing and after both counsel had submitted additional skeleton arguments, to persuade me that he should be permitted to call evidence on the point and/or there should be a re-trial. He produced emails sent by counsel before the trial to suggest the issue had not been raised and so he was wrong footed by the submissions made. I noted at the beginning of this judgment, in summary, the position

of both sides. Mr Roussak made it clear in his skeleton argument that de minimis exposure was an issue. That may have arisen for the first time shortly before the trial.

108. It is for the parties to present the evidence they wish to produce at trial in order to prove or disprove a case. Liability in this case was always in dispute and it may be because the main focus of the evidence and argument concerned millboard, that attention was lost on the subsidiary issue of liability arising out of the use of asbestos cement only. Quite what evidence Mr De Berry would seek to adduce, I do not know. My response to this unfortunate and late dispute is that I have to resolve the case on the evidence presented to me. I do not consider there has been any significant misleading as to the issues and at the highest there may have been no more than a simple misunderstanding. It is not appropriate for further evidence to be adduced and a retrial is not justified. Both experts have given evidence on this topic. The issues have been canvassed very fully I do not consider that additional evidence would assist me in reaching my decision. It is for me, in any event, to decide the issue.

## Decision

109. I have considered the submissions of counsel and the evidence I have been presented with. I make the following findings:

(i) Bovis owed Mr Harrison a duty of care.

(ii) Mr Harrison was engaged as a joiner working for Bovis. His work involved him installing asbestos cement panels. In order to do that, he would have to handle, then cut the panels to size with a saw and fit them to the building under construction. The dust and debris that his work produced was brushed to one side by him to be removed. He did that work for up to 14 days in the period between 1966/67 and 1967/68.

(iii) At the time, there was sufficient information for Bovis, as employers, to have been aware of the risk of exposure to asbestos that Mr Harrison's work with asbestos cement entailed even at low levels. In addition, given the size and nature of Bovis' business they should, at the time they employed Mr Harrison, have been aware that the exposure to asbestos which his work involved gave rise to a significant risk of asbestos-related injury being more than a fanciful risk. In particular, the ARC guidance did warn of the risks associated specifically with asbestos cement and recommended some precautions. Given the state of knowledge at the time, a reasonable and prudent employer in those circumstances should have taken steps to address the issue.

(iv) Given the lack of any evidence that Bovis did anything to address the issue it was not reasonable for Bovis, at the material time, to believe that there was a level of exposure below which there was no significant risk, and that Mr Harrison's exposure was below that level.

(vi) Specifically, the nature of the work ought to have put Bovis on notice of the need to assess and take steps to prevent exposure if appropriate. In this case, there is no evidence of Bovis providing any advice, protective equipment or conducting any additional risk assessment of the dangers the work posed.

Simple measures such as a face mask could have been provided and/or the cutting of panels outdoors mandated. Such measures would have reduced the risk of inhalation of asbestos.

(vii) I find, therefore, that Bovis ought to have reasonably foreseen that Mr Harrison would be exposed to a risk of asbestos related injury.

(viii) Accordingly, Bovis were negligent and in breach of their duty of care.

(ix) Did the work materially increase the risk of developing mesothelioma?

(a) The work undoubtedly exposed Mr Harrison to asbestos. This is not a 'no evidence' case. The experts agree that asbestos dust and/or fibres would have been produced as a result of Mr Harrison's working with asbestos cement panels. They consider it most likely to have been chrysotile asbestos. Mr Harrison was exposed to that asbestos as a result for a period of up to 14 days working, half of that time cutting and fixing the asbestos cement panels. I can be satisfied therefore that Mr Harrison was exposed to asbestos in his employment with Bovis.

(b) The precise level of exposure is impossible to determine with any certainty, given the wide range of exposure levels proposed by the experts. That said there was a measurable exposure level albeit at a low level. That is agreed between the parties and experts.

(c) Was the exposure level more than de minimis? As stated, little if any evidence has been adduced on this point. That said, there is no known lower threshold of exposure that is capable of causing mesothelioma. The questions to ask, adopting Lord Phillips' formulation are:

(i) Is there no significant possibility that the incremental exposure to which Bovis subjected Mr Harrison was instrumental in causing him to contract the disease?

(ii) Was the exposure insignificant compared to the exposure from other sources?

(iii) Was the exposure so insignificant that the court will properly disregard it on the de minimis principle?

(x) Given that it is accepted that very low levels of exposure to asbestos may cause the disease and that Mr Harrison was exposed to measurable and quantifiable low levels of asbestos when working for Bovis, I am satisfied, on the balance of probabilities, that the exposure suffered by Mr Harrison as a result of his working with asbestos cement was not so insignificant that it can be disregarded as de minimis.

(xi) Given the exposure levels, I cannot rule out as a significant possibility that the incremental exposure to asbestos in this case was instrumental in Mr Harrison contracting the disease that killed him.

(xii) There was exposure to asbestos that was not insignificant compared to the exposure from other sources.

(xiii) Accordingly, I am satisfied that the extent and duration of the exposure to asbestos from the cement used constituted a material increase to Mr Harrison's risk of contracting mesothelioma.

110. Therefore, the Claimant succeeds and is entitled to judgment in the agreed sum. Subject to any submissions, the normal rule applies, namely that the Claimant is entitled to and will recover her costs to be assessed if not agreed on the standard basis. I will consider consequential applications in writing or if necessary, a short further hearing.