Neutral Citation Number: [2024] EWHC 496 (KB)

Case No: QB-2022-001304

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

Royal Courts of Justice
Strand, London, WC2A 2LL

Date: 23 February 2024

**Before**:

**ANDREW KINNIER K.C.**
**(Sitting as a Deputy Judge of the High Court)**

**Between:**

**TERESA EVANS**
**(Personal Representative of the Estate of MARIA DRINKWATER)**
**Claimant**

**- and –**

**THE SECRETARY OF STATE FOR HEALTH AND SOCIAL CARE**
**Defendant**

**John McDonald** (instructed by **Slater & Gordon (UK) Limited**) for the **Claimant**
**Alexander Macpherson** (instructed by **Clyde & Co. LLP**) for the **Defendant**

Hearing dates: 10, 11 and 19 October 2023

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# Approved Judgment

This judgment was handed down remotely on 23 February 2024 at 10:30am by circulation to the parties or their representatives by email and released to the National Archives.

## Introduction

1. This is a claim for damages brought by the Claimant, Mrs Teresa Evans, in her capacity as the personal representative of the estate of Mrs Maria Drinkwater, her mother. The Claimant alleges that Mrs Drinkwater was exposed to asbestos dust in the course of her employment by Oxford Area Health Authority ("**the Authority**") at Bradwell Grove Hospital in Burford ("**the hospital**"), that this exposure was negligent and in breach of statutory duty and it caused the development of malignant mesothelioma from which Mrs Drinkwater died.

## Part 1 - background

2. Mrs Drinkwater was born in Sicily on 11 April 1944 and she died on 1 May 2019. She first came to live in England in 1970 and, after some time spent in Italy, she returned to this country in 1974 where she lived for the rest of her life.

3. Between 1974/5 and 1986, the Authority employed Mrs Drinkwater as a carer at the hospital. The Secretary of State for Health and Social Care is the successor to the Authority's liabilities and so she is the defendant to this claim.

4. The hospital opened in 1952 and closed in July 1986. It was originally built as a military transit camp during the Second World War and it was housed in prefabricated-style, single-storey buildings with pitched roofs made of corrugated asbestos sheets. One such building contained Juniper "C" ward ("**the ward**"). The building was very approximately 24 feet wide and 80 feet long and drawings prepared in July 1975 (namely, "BRAD 1/8" and "BRAD 1/8A") show that it was divided into three parts. The first had an internal central corridor off which there were four rooms on each side. There was a set of double doors at both ends of the internal corridor. One set led out of the building and the other led to the second part of the building in which there was a day area which in turn led to the third part which contained a dormitory. The building was connected to the rest of the hospital by an external corridor the location of which is suggested on BRAD 1/8 by an incomplete wall drawn next to the entrance to the first part of the building. The configuration and dimensions of the external corridor are not known.

5. A report dated July 1970 from the Director of the Hospital Advisory Service to the Secretary of State reviewed the hospital's state of repair ("**the 1970 report**"). It said that the exterior of the hospital presented a "grim appearance" (although the hospital secretary's reply disagreed) and that it required attention. The report said that there was a "very marked" contrast between the upgraded wards and those awaiting work. The report observed that the single-storey buildings "are connected by corridors which have recently been upgraded."

6. On 24 October 1975, the Authority's Sector Building Officer sent tender documents, drawings and a detailed eight-page specification for re-roofing the building and upgrading and carrying out internal alteration works to the ward ("**the works**") to six Oxfordshire-based builders. Tenders were invited to be returned no later than 12 November 1975 and it was said to be essential that the work was completed no later than 29 February 1976.

7. As described in the specification and illustrated by the drawings, the scope of the works was extensive. Three elements involved asbestos, namely:

   Replacement of asbestos roofing sheets

   (a) The building was roofed with defective non-standard asbestos corrugated roofing sheets and cappings which were to be removed and handed to the foreman for storage. The building was to be re-roofed with standard corrugated asbestos sheets (which would involve drilling and screwing them) and cappings.

   Asbestolux boarding

   (b) The specification and the drawings show that Asbestolux (a trade name of a type of asbestos insulation board) was to be used for two purposes: first, double doors were to be installed at the entrances to the ward from the external corridor; from the internal corridor to the day area; from the day area to the dormitory and from the day area to a concrete apron. The drawings indicate that the double doors were to be so-called "one-hour" fire check doors and faced with 3/16" asbestos wallboard or millboard.
   (c) Secondly, the specification required the contractor to take off all remaining doors to the rooms off the internal corridor in the first part of the building and fix "3/16$^{th}$ asbestolux boarding to make '½ hour' fire prevention doors."

   Central heating system

   (d) The specification identified two elements to this work: to re-position the radiators in the sluice room and the day room and to install new radiators in the kitchen, staff room and bathroom.

**Part 2 - the proceedings**

*Statements of case*

8. The claim form was issued on 21 April 2022. The Particulars of Claim allege that Mrs Drinkwater was present at the hospital when the works were carried out. The works lasted for several months during which time she had to walk down the external corridor which was connected to the ward several times every day. She was thereby exposed to "visible clouds of dust" which "floated around in the corridor every day while she was walking along it." It is said that Mrs Drinkwater's exposure was caused or permitted by the Defendant's negligence and/or breach of certain statutory duties placed on the Defendant under the Factories Act 1961 ("**the 1961 Act**"), the Construction (General Provisions) Regulations 1961 ("**the 1961 Regulations**"), the Construction (Working Places) Regulations 1966 ("**the 1966 Regulations**") and the Asbestos Regulations 1969 ("**the 1969 Regulations**"). Because of her exposure to asbestos by the Defendant, it is alleged that Mrs Drinkwater contracted mesothelioma.

9. The Defence admitted that Mrs Drinkwater was an employee of the Authority between the tax year 1974/5 and the tax year 1992/3 but no admissions were made about the locations at which she worked. It was denied that the hospital was premises to which the 1961 Act applied and the Claimant was required to prove the application of the other pleaded statutory duties (including those under the 1969 Regulations) to the hospital. Breach of duty was denied: in particular, it was denied that Mrs

Drinkwater was present when the works were carried out; that works involved any form of demolition as opposed to upgrading work; that works were carried out without consideration of contemporary standards; that she would have experienced any or any material occupational exposure to asbestos and, if in the alternative, she had been exposed, it was likely to have been at a background level only and/or de minimis.

10. The Defence made two particular averments: first, in an application for benefits under the Pneumoconiosis etc Workers Compensation Act 1979 ("**the 1979 Act**") (dated 19 March 2018), Mrs Drinkwater denied any occupational asbestos exposure either during her employment by the Defendant or otherwise. Secondly, she had admitted secondary asbestos exposure when laundering her husband's overalls. He had been a plumber and he had worked with, and in the vicinity of, asbestos. It was averred that the secondary exposure was the more likely explanation for the development of mesothelioma and that any asbestos exposure during the course of her employment by the Defendant made no material contribution to the development of mesothelioma.

*Factual evidence*

11. The Claimant relied on two witness statements. The first was made by Mrs Drinkwater on 24 July 2018 and the second on 13 May 2022 by Philip Brown, a friend and neighbour of Mrs Drinkwater, which was relevant only to quantum. The Defendant called no factual evidence although it served a notice under the Civil Evidence Act 1995 (dated 5 October 2023) in relation to a letter from Mr Brown (dated 27 May 2022). Having heard from counsel at the start of the trial, I admitted the letter into evidence.

*Expert evidence*

12. The parties had permission to adduce expert evidence in the fields of respiratory medicine and occupational hygiene. As to the former, Professor N.A. Maskell, a consultant respiratory physician, provided a report (dated 19 November 2018) and two short supplemental reports (dated 7 June 2022 and 7 March 2023). His evidence was agreed and so Professor Maskell was not called to give evidence. As to the latter, the Claimant relied upon Mrs Laura Martin who provided a report dated 2 March 2023 and the Defendant on Mr Martin Stear whose report was dated 19 April 2023. They prepared a joint statement (dated 3 July 2023) and both gave evidence and were cross-examined.

*The parties' positions at trial*

13. At trial, liability and causation were in issue. In opening, the Claimant accepted that the 1961 Act did not apply to this claim and the various statutory duties pleaded in the Particulars of Claim did not materially add to those imposed under the 1969 Regulations. The parties also agreed that the statutory duties in the 1969 Regulations added nothing substantive to the common law duty and so argument usefully concentrated on the latter. The Defendant accepted that it owed Mrs Drinkwater a non-delegable duty of care as her employer and that any failure by the building

contractors to take reasonable care in relation to the health and safety of those walking past the works would be attributed to the Defendant.

14. Subject to liability, quantum was agreed in the sum of £95,000 (inclusive of interest but exclusive of any deduction for benefits that Mrs Drinkwater received). Mr Brown was not, therefore, called.

## Part 3 - the factual evidence

15. Mrs Drinkwater's evidence can be summarised as follows:

    (a) She started work at the hospital sometime in 1974 or 1975. The hospital was in "quite a poor state of repair" and some of the buildings were "prefabricated with asbestos corrugated roofs and very grubby."
    (b) She recalled the demolition of one of the prefabricated buildings which had a corrugated roof. There was a corridor along which she "had to walk every day several times a day". The prefabricated building that was being demolished was connected to the corridor and she walked past the building site "several times per day." She recalled that the demolition works lasted "several months" and to the best of her recollection the works started a few months after she joined the hospital.
    (c) She remembered "visible clouds of dust floating around in the corridor along which I had to walk every day for months whilst the building was demolished."
    (d) In relation to the presence of asbestos in the building that she said was being demolished, Mrs Drinkwater identified three possible sources: first, the walls which she said were made of plaster board "which I now believe was asbestos"; secondly, the exterior of the buildings which she said had all been "spray coated with a fire retardant material which left a rough rather than a smooth surface"; thirdly, "old-fashioned radiators with big thick pipes that were covered with a plastered material that ran to every room of the hospital including the room that was being demolished."
    (e) In relation to precautions to minimise asbestos dust, Mrs Drinkwater said that "there were no extractor fans set up in the corridor to remove the dust that was created by the building works" and that she did not recall "anyone with a vacuum cleaner in that corridor whilst the building works were going on to remove the dust." No-one supplied a mask or respiratory equipment to Mrs Drinkwater when she walked down the corridor.
    (f) Mrs Drinkwater believed that the only time that she was exposed to asbestos at work was during her time at the hospital. She also said that she had been exposed to asbestos dust "on my husband's work clothes."

16. As to Mr Brown's letter of 27 May 2022, although it is not entirely clear, it appears to have been written in response to an earlier draft of his statement. Mr Brown said that he and Mrs Drinkwater had discussed the potential cause of her mesothelioma on a few occasions. He recalled that "we dismissed (I think) asbestos from Bradwell Grove" and noted that Mrs Drinkwater had worked at the hospital in the 1970s "when the buildings were altered (asbestos roofing)." Mr Brown said it (presumably, Mrs Drinkwater's exposure to asbestos) was "more likely from her husband Cyril's work clothes." It is not clear whether that assessment reflected Mr Brown's view of what

Mrs Drinkwater had told him or it summarised a shared conclusion following their discussions.

**Part 4 - the expert evidence**

*Respiratory medicine*

17. For present purposes, only Professor Maskell's first report is relevant. Three conclusions are material:

    (a) Mrs Drinkwater suffered from a malignant mesothelioma of the pleura which was diagnosed in February 2018: para. 7.1.
    (b) Mesothelioma is almost invariably caused by exposure to asbestos. Mesothelioma can occur at low levels of asbestos exposure but 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: para. 8.1. There is on average a long latent interval between first exposure to asbestos and the onset of clinical manifestations of mesothelioma. In most reported cases this is more than 30 years but ranges between 10 and 75 years: para. 8.2.
    (c) Based on the information provided to Professor Maskell, Mrs Drinkwater was exposed to asbestos during her employment by the Authority and what is described as "para-asbestos exposure" when washing Mr Drinkwater's work clothes: para. 9.1. In his opinion, "her asbestos exposure would have been enough to cause the development of mesothelioma and/or enough to materially contribute to the risk that she would develop mesothelioma": para. 9.2. Neither the first nor the supplemental reports sought to distinguish between the likely respective contributions of the two sources.

*Occupational hygiene*

18. The experts' reports exhibited relevant literature, extracts from annual reports published by HM Chief Inspector of Factories, government guidance on the use of asbestos (including various Technical Data Notes but, in particular, Technical Data Note 13 ("**TDN13**")) and various publications of the Asbestosis Research Council ("**the ARC**"). I have read and carefully considered the experts' reports and the exhibits.

19. The experts' joint statement helpfully identified the extensive common ground between them as well as their limited points of disagreement. The experts agreed the following principal points:

    (a) Re-roofing works: the predominant fibre type used in asbestos cement roof-sheeting was chrysotile asbestos. It is unlikely that the replacement asbestos roof sheets were made of crocidolite asbestos because a voluntary ban on its use was agreed in 1970: para. 2.1.
    (b) Exterior walls: although Mrs Drinkwater believed that the outside walls had been sprayed with some material containing asbestos, the experts concluded that it was likely to be asbestos-free: para. 2.5.
    (c) Walls: the experts have seen no evidence of asbestos being present in walls or ceiling boards in the ward: para. 2.5.

(d) Internal single doors: 3/16" Asbestolux sheeting was to be fitted to the existing doors to make "half-hour" check doors. Asbestolux predominantly contained amosite although other types (particularly chrysotile) were at times also added: para. 2.2.

(e) Heating pipes, floor ducts and insulation: it was not clear whether the floor ducts already existed or were made for new pipework. They considered it likely that any existing pipework (in floor ducts or elsewhere) would have been insulated in places and would have contained any one of, or a mixture of, chrysotile, amosite and crocidolite asbestos. At the time of the works, the experts considered that if new insulation were required, it is more likely to have been asbestos-free. The experts also agreed that, if Mrs Drinkwater saw pipework covered in a "plastered material" in the hospital, unless newly fitted, it is likely to have contained asbestos: para. 2.3.

(f) The extent of exposure of those working with asbestos-containing material: exposure for those carrying out the work would have depended upon the type of asbestos-containing material that was used, the nature of the activity, how it was carried out and the extent of any care and precautions taken: para. 2.4.

(g) Precautions: the experts had seen no evidence about how those works which involved asbestos-containing materials were carried out and whether any precautions were taken according to the standards of the time. Both agreed that a general specification of works prepared in the mid-1970s, such as the one in this claim, may not have included detail about precautions: para. 2.7.

(h) Mrs Drinkwater's exposure: the experts do not know whether Mrs Drinkwater walked past the ward during the works: para. 2.6. If she did walk past the ward, it is likely that she would have been exposed to asbestos commensurate with the nature and amount of the asbestos-containing material being disturbed, how that work was carried out and her proximity to it: para. 2.6. Subject to the court's findings about the dustiness of conditions (which is considered below), the experts cannot say whether such exposure would have contravened contemporary standards and advice: para. 2.7. If she did not walk past the ward, Mrs Drinkwater was not likely to have been exposed to asbestos: para. 2.6.

(i) Mrs Drinkwater's evidence about dusty conditions: the nature of the dust reported by Mrs Drinkwater was not known and it was not known whether it contained asbestos. That was because the experts did not know what works were taking place when Mrs Drinkwater alleged that she saw clouds of dust: para. 2.8. Subject to those matters, they agreed that for "clouds of dust" to be present in the corridor next to the works suggests "vigorous disturbance of materials (of unknown nature) within the building works with no steps taken to mitigate this": para. 2.8. If it is found that Mrs Drinkwater did see clouds of dust at times and that this likely resulted from the work with, or disturbance of, asbestos-containing material, that suggested uncontrolled work with, or disturbance of, such material. Conversely, if it is found that Mrs Drinkwater saw clouds of dust at times, but it was not likely related to any work with or disturbance of asbestos-containing material, she only saw "general dusts from general works with no steps to control these works": para. 2.9.

(j) Exposure to asbestos: the experts would not expect to see clouds of dust if asbestos cement roof sheets were removed and replaced carefully. They also agreed that when fitting Asbestolux to fire doors or disturbing pipework insulation, it was possible that clouds of dust would be produced "but only likely if vigorous methods of work were employed, such as power tools for the former

and dry removal for the latter". They considered that the use of hand tools (such as a rip saw) were likely to generate dust and airborne asbestos fibre "but in a quantity we would not necessarily expect to be described as a 'cloud'": para. 2.10.

20. The limited area of disagreement was confined to the quantification of potential levels of asbestos exposure. Mrs Martin estimated some potential airborne fibre concentrations in the circumstances in which Mrs Drinkwater said she exposed. Mrs Martin considered that the dose was likely to be in a range of between 0.2-9.2 fibres/ml for someone passing at about 20 feet from work with asbestos insulation board such as Asbestolux or about 0.01-0.4 fibres/ml for a person passing the same distance from work with asbestos cement. Background airborne fibre levels were estimated to be 0.000001-0.0001 fibres/ml in the general atmosphere or about 0.0005 fibres/ml in buildings which included asbestos materials in good condition.

21. Mr Stear said that an accurate estimate of Mrs Drinkwater's exposure was not possible because of the uncertainty about whether and, if so, to what extent she had been exposed to asbestos. Mr Stear thought it unlikely that, if she had been exposed to asbestos, the levels of exposure were in excess of contemporary standards unless lagging contained crocidolite (otherwise known as blue asbestos) was disturbed in an uncontrolled way as she walked past.

22. In para. 2.11 of the joint statement the experts concluded that it was not possible to provide the court with an accurate estimate of Mrs Drinkwater's asbestos dose if the court finds that she was exposed during her employment by the Defendant.

## Part 5 - the law

23. A number of authorities in mesothelioma claims were cited to me in argument. In deference to the parties' submissions, I should summarise the principles that are relevant to this claim.

24. As the Court of Appeal once again confirmed in *Bussey v. 00654701 Limited (formerly Anglia Heating Limited)* [2018] PIQR 248, the duty on an employer in an area where knowledge is developing was defined by Swanwick J in *Stokes v. Guest Keen & Nettlefold* [1968] 1 WLR 1776 at 1783:

> "From these authorities I deduce the principles, that the overall test is still the conduct of the reasonable and prudent employer, taking positive thought for the safety of his workers in the light of what he knows or ought to know; where there is as recognised and general practice which has been followed for a substantial period in similar circumstances without mishap, he is entitled to follow it, unless in the light of common sense or newer knowledge it is clearly bad; but, where there is developing knowledge, he must keep reasonably abreast of it and not be too slow to apply it; and where he has in fact greater than average knowledge of the risks, he may be thereby obliged to take more than the average or standard precautions. He must weigh up the risk in terms of the likelihood of injury occurring and the potential consequences if it does; and he must balance

> against this the probable effectiveness of the precautions that can be taken to meet it and the expenses and inconvenience they involve. If he is found to have fallen below the standard to be properly expected of a reasonable and prudent employer in these respects, he is negligent".

25. In *Thompson v. Smith's Ship Repairers* [1984] 1 QB 405 at 415-6 Mustill J quoted Swanwick J's statement of principle and added the following:

> "I shall direct myself in accordance with this succinct and helpful statement of the law, and will make only one additional comment. In the passage just cited, Swanwick J drew a distinction between a recognised practice followed without mishap, and one which in the light of common sense or increased knowledge is clearly bad. The distinction is indeed valid and sufficient for many cases. The two categories are not, however, exhaustive: as the present actions demonstrate. The practice of leaving employees unprotected against excessive noise had never been followed "without mishap." Yet even the plaintiffs have not suggested that it was "clearly bad," in the sense of creating a potential liability in negligence, at any time before the mid-1930s. Between the two extremes is a type of risk which is regarded at any given time (although not necessarily later) as an inescapable feature of the industry. The employer is not liable for the consequences of such risks, although subsequent changes in social awareness, or improvements in knowledge and technology, may transfer the risk into the category of those against which the employer can and should take care."

26. In *Jeromson v. Shell Tankers UK Limited* [2001] EWCA Civ 100 two former employees had developed mesothelioma. Both had been exposed to asbestos while working in the engine rooms of ships, in one case between 1952 and 1957 and in the other between 1957 and 1961. The claimants succeeded at trial and the Court of Appeal dismissed Shell's appeal. In giving the leading judgment, Hale LJ cited the passages from *Stokes* and *Thompson,* noted that in the 1950s the known risk from asbestos was asbestosis and, at para. 37, said:

> "However, where an employer cannot know the extent of any particular employee's exposure over the period of his employment, knows or ought to know that exposure is variable, and knows or ought to know the potential maximum as well as the potential minimum, a reasonable and prudent employer, taking positive thought for the safety of his workers, would have to take thought for the risks involved in the potential maximum exposure. Only if he could be reassured that none of these employees would be sufficiently exposed to be at risk could he safely ignore it."

27. Hale LJ reviewed the relevant evidence and literature and, at para. 52, said:

> "The point which impressed the judge was the certain knowledge that asbestos dust was dangerous and the absence of any knowledge, and indeed any means of knowledge, about what constituted a safe level of exposure. Mr Mackay's argument relies heavily on the explosion of knowledge which took place during the 1960s. Only then did it become apparent that mesothelioma could result from very limited exposure. In particular, it was only then that knowledge began to develop of the risks to those outside the workplace, such as the wife washing her shipyard worker husband's overalls (as in *Gunn*) or people living near to asbestos works. But just as courts must beware using such later developments to inflate the knowledge which should have been available earlier, they must beware using it to the contrary effect. The fact that other and graver risks emerged later does not detract from the power of what was already known, particularly as it affected employees such as these, working in confined spaces containing a great deal of asbestos which might have to be disturbed at any time. There is no reassurance to be found in the literature that the level of exposure found by the judge in this case was safe and much to suggest that it might well not be so. The judge was entitled to conclude that a prudent employer would have taken precautions or at the very least made enquiries about what precautions, if any, they should take".

28. In *Maguire v. Harland & Wolff PLC* [2005] EWCA Civ 1 the wife of a boiler-maker developed mesothelioma as a result of washing her husband's clothes between 1961 and 1965. Although her widower succeeded at first instance, the Court of Appeal allowed the appeal. Judge LJ, with whom Longmore LJ agreed, concluded, at para. 57, that:

> "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 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. Thereafter, the learning curve about the risks arising from familial exposure was fairly steep. In my judgment, however, Morland J's conclusion that the risk of serious injury to Mrs Maguire's health was 'reasonably foreseeable, indeed obvious' to her husband's employers is not sustainable."

29. In *Williams v. University of Birmingham* [2011] EWCA Civ 1242 the deceased, while he was a physics student at the university between 1970 and 1974, had been exposed to very low levels of asbestos when carrying out experiments in a service tunnel. It was estimated that in total the deceased was exposed to asbestos fibres for between 52 and 78 hours and the concentration of fibres in the atmosphere was close to or just above 0.1 fibres/ml. Although his widow succeeded at trial, that result was reversed by the Court of Appeal.

30. Aikens LJ, in giving the lead judgment, said that the test of negligence was "ought the University reasonably to have foreseen the risk of contracting mesothelioma arising from Mr Williams' exposure to asbestos fibres by undertaking the speed of light experiments in the manner contemplated – and done in fact – to the extent that the University should (acting reasonably) have refused to allow the tests to be done there, or taken further precautions or at the least sought advice." In answering that question, Aikens LJ emphasised three particular points:

    (a) The Supreme Court had reaffirmed in *Baker v. Quantum Clothing Group* [2011] 1 WLR 1003 that the standard of conduct to be expected is that of a reasonable and prudent employer at the time but taking account of developing knowledge about the particular danger.
    (b) There could only be a breach of the university's duty of care if it would have been reasonably foreseeable to a body in its position in 1974 that if it exposed Mr Williams to asbestos fibres at a level of just above 0.1 fibres/ml for a period between 52 and 78 hours, he was exposed to an unacceptable risk of asbestos-related injury.
    (c) TDN 13 was the best guide to what were acceptable and unacceptable levels of asbestos exposure in 1974. In the circumstances, the claimant failed on foreseeability.

31. Finally, in *Bussey's* case the deceased was exposed to relatively low levels of asbestos between 1965 and 1968. The widow's claim was dismissed at trial because the judge found that the deceased had not been exposed to levels of asbestos in excess of those set out in TDN 13. For that reason and applying the approach set out in *Williams*, the claim failed. That decision was reversed by the Court of Appeal. Jackson LJ, at paras. 42-43 of the judgment, rejected the argument that the test of foreseeability, as defined by Aikens LJ in *Williams*, was wrong:

> "Mr Rawlinson criticises Aikens LJ's formulation of the test because it includes the phrase 'unacceptable risk of asbestos-related injury'. He says that the word 'unacceptable' should be omitted.
>
> I reject that submission. Anyone who works or lives in proximity to asbestos faces some risk of mesothelioma. It is possible to reduce that risk by taking available precautions. It is not possible to eliminate it altogether. The residual risk or the risk which remains after taking all proper precautions may be regarded as an 'acceptable' risk."

32. In formulating the test of foreseeability, there was some difference between members of the court about the appropriateness of the concept of an "acceptable risk". At para. 63 of the judgment, Underhill LJ, with whom Moylan LJ agreed, defined the test thus:

> "(a) The first question is whether Anglia should at any time during Mr Bussey's employment – that is, between 1965 and 1968 … - 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.
>
> (b) 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."

33. Finally, the weight to be attached to TDN13 was also considered. Three conclusions are relevant:

    (a) As Jackson LJ put it in para. 47 of the judgment, TDN13 did not establish a "bright line" to be applied in all cases arising out of the period 1970 to 1976. In other words, TDN 13 should not be read as a "universal test of foreseeability in mesothelioma cases." Still less is TDN 13 a bright line to be applied to asbestos exposure in a different period whether before or after 1970 to 1974.
    (b) TDN13 set out exposure levels which, after May 1970, would trigger a prosecution by the Factory Inspectorate. That is a relevant, but not a determinative, consideration when considering foreseeability.
    (c) Underhill LJ observed, at para. 62 of the judgment, that there was no reason to suppose that the employer in *Bussey*'s case took any steps to measure the level of exposure which employees encountered and so could not have known whether it was above or below any supposed "maximum safe limit". In particular, Underhill LJ deprecated comparing back-calculations of exposure (or, as he described them, "back-guestimations") against the figures published in TDN13.

34. As he explained at para. 49 of the judgment, Jackson LJ thought that a more nuanced approach was required in which:

> "it is necessary 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."

35. In *Fairchild v. Glenhaven Funeral Services Limited* [2003] 1 AC 532 the House of Lords considered 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. The issue, therefore, was whether, in the special circumstances of such a case, principle, authority or policy required or justified a modified approach to proof of causation. *Fairchild* gave rise to a special rule governing the attribution of causation in mesothelioma cases (the so-called *Fairchild* exception). Following the decision in *Barker v. Corus UK Limited* [2006] 2 AC 572 and the intervention of Parliament by s. 3 of the Compensation Act 2006 ("**the 2006 Act**"), the law on causation in mesothelioma cases was summarised by Lord Phillips in *Sienkiewicz v. Greif (UK) Limited* [2011] 2 AC 229 at 239:

> "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."

36. In addressing the question what was meant by a "material increase in risk" Lord Phillips stated that:

> "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 …
>
> 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.
>
> …

> 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."

**Part 6 - discussion**

*Approach to the evidence*

37. The long latency period of mesothelioma means that in many, if not all, cases the court is required to assess limited evidence about events that happened many years ago. In considering the evidence in this case, I have reminded myself of the following:

    (a) The burden rests at all times on the Claimant to prove that there was exposure to asbestos dust and that such exposure was caused by the Defendant's breach of duty: *Brett v. Reading University* [2007] EWCA Civ 88, para. 19 (per Sedley LJ) and para. 26 (per Maurice Kay LJ).
    (b) The usual standard of proof applies with the same rigour in mesothelioma claims as in any other. In that regard, 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 mesothelioma cases. Having regard to the harrowing nature of the illness, judges 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: *Sienkiewicz* [2011] 2 AC 229 at 288E-F, para. 166 (per Lord Rodger).
    (c) It is not the duty of fact-finders to reach conclusions of fact, one way or the other, in every case. There are cases where, as a matter of justice and policy, a court should say that the evidence adduced (whatever its type) is too weak to prove anything to an appropriate standard, so that the claim should fail: *Sienkiewicz* [2011] 2 AC 229 at 296C-D, para. 193 (per Lord Mance).
    (d) The process of attempting to remember events in the distant past is an inherently fallible one and it is a process that is highly susceptible to error and inaccuracy. Efforts to think back many years to recollect the details of past events are liable to be affected by numerous external influences and involvement in civil litigation can itself operate as a significant influence: *Jackman v. Harold Firth & Son Ltd* [2021] EWHC 1461, para. 13; *Bannister v. Freemans* [2020] EWHC 1256 (QB), paras. 73-77; *Sloper v. Lloyds Bank* [2016] EWHC 483 (QB), para. 62.
    (e) When a witness recalls events from the past, he or she is in fact unconsciously reconstructing those events. The description the witness provides of the relevant event or events is in fact a description of the reconstruction undertaken at that point: *Jackman* [2021] EWHC 1461, para. 13(iii); *Sloper* [2016] EWHC 483 (QB), para. 62; *Prescott v. The University of St Andrews* [2016] SCOH 3, para. 42; *Gestmin SGPS SA v Credit Suisse (UK) Ltd* [2013] EWHC 3560 (Comm), paras. 15-23.
    (f) Testing recollection against contemporaneous documents is a useful and important exercise because it gives the court an opportunity to compare a near contemporaneous version of events (subject to no or little reconstruction) with a

re-constructed version of events: *Jackman* [2021] EWHC 1461, para. 13; *Bannister* [2020] EWHC 1256 (QB), para. 77; *Sloper* [2016] EWHC 483 (QB), para. 60.

(g) The judge should be careful not to allow the defence to convert one of the inherent difficulties in asbestos litigation – the inevitably long latency periods of mesothelioma – into its first line of defence: *Bannister* [2020] EWHC 1256 (QB), para. 82.

38. In approaching the evidence, I bear all these matters in mind as well as the fact that Mrs Drinkwater's evidence must be viewed in context and as part of the entire evidential picture. That requires me to take account of the fact that the Defendant has called no factual evidence, but that absence does not mean that I must accept Mrs Drinkwater's evidence. The Claimant must still prove her case.

*Mrs Drinkwater's evidence*

39. The quality and reliability of Mrs Drinkwater's evidence have been challenged by Mr Macpherson, counsel for the Defendant, on three principal bases: first, the inherent implausibility that the daily presence of "clouds of dust" would be tolerated in a hospital for several months; secondly, the experts' agreement that significant elements of her evidence about the presence of asbestos in the hospital are not correct; and, thirdly, statements made in March and April 2018 that attributed exposure to her husband's work clothes rather than occupational exposure. The Defendant's overarching submission is that Mrs Drinkwater's statement is uncorroborated hearsay evidence untested in cross-examination.

40. Mr McDonald, on behalf of the Claimant, submitted that Mrs Drinkwater's evidence is not only uncontroverted but there was a remarkable similarity between her recollection of the works and the detail in the contemporary documents such as the specification. He argued that, as Mrs Drinkwater had no contemporaneous documents available to her when she prepared her statement, this was not a case of a claimant tailoring her case to suit the documents, still less of her "making up" exposure at the hospital as an afterthought. The fact that her evidence and the available documentary evidence are so remarkably similar was a strong factor in the Claimant's favour.

41. Mrs Drinkwater's recollection of the timing of the works was broadly consistent with the timing of when, as I find in para. 52 below, the works were carried out. Her memory of the state of the hospital buildings and that the single-storey buildings were connected by corridors is supported by paras. 3.1 and 3.2 of the July 1970 report. Having considered the available photographs, Mr Stear considered Mrs Drinkwater's account of the hospital's layout to be plausible: para. 4.4 of his report. Similarly, her evidence that the single-storey buildings were prefabricated and had corrugated roofs is also substantiated by the contemporaneous documents including the specification and the available photographs. To the extent that her recollection is supported by contemporaneous documentary evidence, I accept Mrs Drinkwater's evidence on these points.

42. All remembering of events many years ago involves a process of reconstruction and, as the court noted in *Sloper* and other cases dealing with historic mesothelioma claims, this process is largely unconscious with a result that the strength, vividness

and apparent authenticity of memories are often not reliable markers of their truth. Having carefully considered Mrs Drinkwater's statement in the context of the broader evidence, I have come to the view that I should assess her statement with caution where it is not supported by contemporaneous documents. In assessing Mrs Drinkwater's evidence, I have, where it is possible to do so, tested her evidence against other evidence in the case and considered objectively where the probabilities lie.

43. To a great extent, this claim turns on the reliability of Mrs Drinkwater's evidence that during the course of the works she regularly encountered, several times a day, visible clouds of dust in the external corridor adjoining the ward. Mr Macpherson argued that her evidence was ambiguous and consistent with her encountering dust on only one occasion when she used the corridor several times a day and every day. That is not a fair reading of Mrs Drinkwater's evidence. Having said in para. 11 of her statement that she had to walk along the corridor every day, the words "every day for months" in para. 12 can only sensibly refer, as Mr McDonald submitted, to the frequency with which there were "visible clouds of dust". The reference in that paragraph to "clouds" rather than a "cloud" tends to support that reading.

44. Having carefully considered matters and reminded myself of the guidance summarised in para. 37 above, I have reached the conclusion that, absent any corroboration, I cannot accept Mrs Drinkwater's evidence about regularly encountering visible clouds of dust in the external corridor during the works. Maintenance of cleanliness and hygiene in a hospital is obviously important and in that very particular context it is unlikely that generation of visible clouds of dust into occupied parts of an operational hospital on a consistent and daily basis would have been tolerated for a prolonged period of time, let alone for months. The specification emphasised that "close co-operation between contractor and hospital staff is essential to allow the normal hospital functions to proceed" and in order to achieve that objective and to avoid disruption and inconvenience to clinical staff and patients, it is unlikely that the routine and consistent presence of significant dust outside the ward and in the external corridor would have been allowed or, at the very least, not allowed to persist for months.

45. There are other aspects of Mrs Drinkwater's evidence that have caused concern and have prompted me to treat it cautiously. Following her diagnosis in February 2018 understandably Mrs Drinkwater thought carefully about when she might have been exposed to asbestos. In March 2018 (that is to say, a month or so after mesothelioma was diagnosed), Mrs Drinkwater confirmed in her application for benefits under the 1979 Act that she had not been exposed to asbestos at work (whether during her employment by the Defendant or otherwise). Secondly, when she discussed her diagnosis with her treating clinicians, the post-consultation correspondence sent by Professor Najib Rahman on 13 March 2018 and by Dr Meenali Chitnis on 26 April 2018 exclusively referred to asbestos exposure from her husband's dusty work clothes and not to any exposure during her working life. Therefore, it is clear that before she started to prepare her statement for this claim, Mrs Drinkwater did not think that she had been exposed to asbestos at the hospital or at any time during her employment by the Defendant.

46. Another aspect of her evidence that has prompted concern is Mrs Drinkwater's repeated evidence that she thought that the building was being demolished. Although the scale of the refurbishment works was substantial, it could not be reasonably confused with demolition of the building not least because its walls remained standing. If Mrs Drinkwater had been visiting the site on a single occasion, then a confusion between works of demolition and refurbishment may have been understandable. However, Mrs Drinkwater continued to work at the hospital for another decade after the works had finished. Presumably she continued to walk past the ward while at work and would have noticed that the distinctive prefabricated building which housed the ward and was similar (if not identical) to other hospital buildings had not been pulled down. In the circumstances the basis for her firm, but mistaken, belief that the building was demolished is not obvious.

47. Another concerning part of her evidence was her recollection of the locations in the building where asbestos may have been present. Mrs Drinkwater identified three places in which she believed that asbestos existed: plasterboard on the walls; a fire-retardant material on the outside of the building and in plastered material on pipes that served old-fashioned radiators. The clear weight of the evidence is that she was mistaken in respect of all three. The experts agreed that there was no evidence that asbestos was present in the ward's walls or ceiling boards and the exterior walls were likely to be asbestos-free. Also, as Mr Stear observed and I find in para. 71 below, heating pipes were unlikely to be insulated with asbestos material in rooms which were intended to be heated.

48. For the sake of completeness, I should note Mr Brown's letter of 27 May 2022. In short, I am not satisfied that it has much, if any, probative value not least because it is unclear whether the conclusions are those of Mr Brown alone or those he and Mrs Drinkwater reached after their various discussions. In any event, it is hearsay and Mr Brown was not called to give evidence and be cross-examined.

49. I should emphasise that, in reaching my conclusion about Mrs Drinkwater's evidence about the presence of visible clouds of dust, I do not think that she made it up or was in any way untruthful. On the contrary, her evidence on the point is an illustration of the reconstructive nature of trying to recall events that happened more than four decades before and the value of the apt warning, quoted in *Sloper*'s case and elsewhere, that strong and vivid memories may not be reliable indications of what happened.

*Mrs Drinkwater's exposure to asbestos*

50. At this stage two disputes of fact need to be resolved: first, whether the works were carried out in the winter of 1975/6 and, secondly, if the works were carried out, whether and if so to what extent Mrs Drinkwater was exposed to asbestos during those works.

51. As to the first dispute, I start with the contemporaneous documentation. Although the hospital secretary disagreed with the criticism of the hospital's appearance, the author of the 1970 report thought that refurbishment work was required and, in making that point, he drew an unfavourable comparison between those corridors which had been upgraded and those which had not. The extensive scope of the works identified in the

specification of November 1975 is broadly consistent with the 1970 report's aim of improving the hospital's appearance.

52. Although Mrs Drinkwater's later description of the works as a demolition was mistaken, she recalled works being carried out to one of the hospital's single-storey buildings at about the time when she started work at the hospital in 1974/5. Therefore, having regard to the contents of the 1970 report; the broad consistency of the specification with the aims of that report and Mrs Drinkwater's memory of the timing and fact of works; the absence of any evidence of any other similar works being undertaken at the hospital in the winter of 1975/6 and the absence of any indication that that the works were not carried out at all or at least not during that winter, I find that the works were carried out to the extent required by, and at the time proposed in, the specification.

53. The second dispute goes to the fundamental question in this case: was Mrs Drinkwater exposed to asbestos during the works? The essential elements of the Claimant's case are as follows:

    (a) The only evidence of fact on exposure is given by Mrs Drinkwater and it is uncontroverted, namely that there were "visible clouds of dust floating around in the corridor along which I had to walk every day for months whilst the building was being demolished".
    (b) On any one occasion the visible clouds of dust encountered by Mrs Drinkwater may or may not have contained asbestos dust. But having regard to (i) the length of time it would have taken to carry out the work involving asbestos-containing materials and (ii) the fact that Mrs Drinkwater walked past the building site several times a day for months, the probability is that work with/disturbance of asbestos was taking place on at least some of the times when she walked past the works.
    (c) The Defendant failed to take any or all reasonably practicable steps to prevent or reduce Mrs Drinkwater's exposure.

54. In short, the Defendant's case was that Mrs Drinkwater had not been exposed to any or any significant quantities of dust during the course of the works and two particular points were relied upon: first, the inherent implausibility that the significant and persistent escape of "clouds of dust" would have been tolerated in a hospital over the course of months; secondly, the absence of any or any reliable evidence about the nature, extent, frequency, location or duration of work involving asbestos-containing materials and, in particular, whether any such work was likely to have been carried out when Mrs Drinkwater was walking in the vicinity of the works.

55. In resolving the question of exposure, three preliminary points arise. First, for the reasons set out above, I do not accept Mrs Drinkwater's evidence about regularly encountering visible clouds of dust as she walked down the external corridor during the works. It is, of course, possible that on occasion Mrs Drinkwater may have seen some dust in the corridor but it cannot now be known when that may have been; what works were being carried out and how; whether the works involved asbestos and to what extent; how far she was from where the relevant work was being done or the

nature and effectiveness of any precautions. Certainly, it is not now possible reliably to estimate, measure or quantify any exposure.

56. Secondly, the scope of the works required by the specification was extensive and many of its elements are likely to have generated significant amounts of dust. For that reason, exposure to dust from the works does not necessarily mean that all or any dust to which Mrs Drinkwater may have been exposed contained asbestos fibres.

57. Thirdly, the limits of the evidence on exposure. It was common ground between the experts that Mrs Drinkwater had to have walked past the ward at the very time that works involving asbestos were carried out for her to have been exposed. Some 47 years after the works were completed, there is no positive evidence that any works involving asbestos were carried out at a time when Mrs Drinkwater was likely to have walked past the ward or when such work was likely to have been carried out. Mrs Drinkwater did not see any of the work being carried out and so there is no indication about what type of work might have been going on; whether it was likely to have involved asbestos and whether and, if so, what precautions had been taken.

58. The limits of the evidence become even more acute when considering Mrs Drinkwater's proximity to any work involving asbestos. At para. 9.13 of her report, Mrs Martin said that it is generally accepted amongst occupational hygienists that exposure to an observer at about 20 feet distance from an asbestos activity would be around 10% of that experienced by the person carrying out the work. Positions closer would incur a higher proportion of the source concentration but further away that would rapidly fall to negligible levels.

59. There is no evidence that Mrs Drinkwater walked within 20 feet (or thereabouts) of the works involving any asbestos activity because there is no evidence about Mrs Drinkwater's proximity to the works in the ward as she walked past it or where work (if any) involving asbestos took place in the ward. She did not describe the external corridor in her statement or estimate its dimensions. As there is no evidence of the configuration or dimensions of the external corridor beyond the truncated wall depicted in BRAD1/8, it is not known whether Mrs Drinkwater passed within 20 or 30 feet of the ward or, crucially from the perspective of deciding exposure, within 20 or 30 feet of any works involving asbestos inside the ward.

60. Within the context of these preliminary points, I now turn to consider the three elements of the works which involved asbestos and the extent to which each activity generated asbestos dust.

Replacement roof work

61. The building which contained the ward was roofed with "defective non-standard asbestos corrugated roofing sheets" and cappings, all of which had to be stripped and handed to the foreman for storage. That work would have involved the removal and replacement of a shallow-pitched roof some 26 feet across and 80 feet long. Mr Stear estimated that, using standard-sized roof sheets of four feet, the work would involve the removal and replacement of approximately 80 sheets and any cappings. Mrs Martin thought that, using a crew of, say, two workers, the work would have taken between one and two weeks. The experts appeared to agree (or, at least, it was uncontroversial) that removing the sheets with care (as required by the specification)

is likely to have required undoing fixings such as bolts or cutting through them. According to Mr Stear, that would have created limited exposure potential for those carrying out the job but if any sheets had to be cut to fit, then exposure is likely to have been greater. That said, it is not known whether the sheets were in fact cut and, if so, whether it was done using a hand-saw or power-saw. On that point, Mrs Drinkwater did not say that she saw the roof sheets being removed or replaced.

62. Removal of the corrugated asbestos sheets from the roof was a large job but done outside. It appears to be uncontroversial that the sheets would have been removed from the outside and there was a fibreboard ceiling between the roof and the ward which would have prevented asbestos dust from entering the ward. Therefore, if asbestos dust was disturbed and released by removing the roof sheets, it is likely that it was dispersed in the open air and there is no suggestion that Mrs Drinkwater was exposed to asbestos when walking outside.

Asbestolux boards

63. Asbestolux boards were used for two purposes: to make four new pairs of double doors in the ward and as added fire protection to the existing single doors to the eight rooms off the ward's internal corridor.

64. In closing submissions Mr McDonald and Mr Macpherson agreed that the double doors were probably made off-site. Although there may have been some trimming to the asbestos sheeting on the doors to make sure that they fitted properly, there is no evidence about whether the new doors were trimmed on-site or not; if it was done on-site, where that work was done and, in particular, its proximity to the external corridor; how much trimming was done; the duration of trimming work (although it is likely to have been relatively brief and intermittent); what tools were used or whether any precautions were taken.

65. As to the eight internal doors, Mrs Martin said that, as Asbestolux boards were usually four feet by eight feet in size, at least two cuts would have been needed to fit the doors. She estimated (and I did not understand Mr Stear to disagree) that it would take between one and four hours to complete work on each door. Mr Stear also thought that additional cutting would have been required to accommodate handles, locks, push plates and other door fittings.

66. Although there is no evidence about where the work to fit Asbestolux sheeting to the eight internal doors was carried out, Mr McDonald nonetheless submitted that it was more likely to have been done on-site because a close fit was required to provide adequate fire protection. If that is right, there are three possible locations: outside; somewhere inside the 80-feet long building; or in a separate building/shed on-site. There is, however, no evidence that allows me to conclude, on the balance of probabilities, that it was more likely to be somewhere within the ward than anywhere else on-site or, for that matter, what tools were used or what precautions were taken. Even if the work was done somewhere in the ward, there is no evidence that it was carried out sufficiently close to the external corridor to have exposed Mrs Drinkwater to asbestos dust.

Central heating system

67. The work to the central heating system which involved asbestos included re-positioning the radiators in the sluice room and the day room and installing new radiators in the kitchen, staff room and bathroom.

68. Work on the pipework was not something which Mrs Martin's report considered as a potential source of exposure. In her oral evidence, she explained that it was probable that any significant work on insulation would have been mentioned in the specification because the contractor would have been instructed to replace it after the work. The specification contained no such reference and so the inference is that the work was minor.

69. In contrast, Mr Stear did consider work to the pipes as a potential source. In relation to Mrs Drinkwater's recollection, Mr Stear observed, at para. 4.9 of his report, that pipes within rooms and corridors are typically unlagged to allow heat to dissipate. As to the specification itself, Mr Stear noted, at para. 4.10, that there was no mention of lagging at all. That said, he considered that, if pipes ran in a floor duct or ducts, it was likely that (a) they would have been lagged with asbestos and (b) any alteration of the existing pipework would have disturbed the lagging, but he did not know the extent of any disturbance. Finally, in para. 4.11 of his report, Mr Stear recorded that Mrs Drinkwater had not identified the location of the plastered pipes or said that she had seen the removal or application of the lagging.

70. The experts' joint statement on this point reflected Mr Stear's view that it was unclear whether any floor ducts existed or were specifically made for any new pipework. If the ducts already existed, the likelihood is that they would have been lagged with asbestos; if new, they were likely to have been asbestos-free.

71. The pipework in the ward would not, in my judgment, have been lagged because, as Mr Stear observed and I find, that would have prevented heat from dissipating into the ward. The real question is whether pipes ran in any floor duct and, if so, what asbestos was disturbed as a result of any work. Although I accept Mr Stear's evidence that any existing ducts were likely to have been lagged with asbestos, the evidence is insufficiently clear to allow me to conclude on the balance of probabilities that work to the pipework involved any existing floor ducts. It may well be that, as Mrs Martin inferred, any work involving existing floor ducts was minor because it was not expressly mentioned in the specification but that does not assist in identifying whether any existing ducts were lagged with asbestos.

72. If I am wrong and if there were sufficient evidence that existing floor ducts were involved in the work, the result is that at an unknown time during the works and at an unknown location in the ward, some work to existing floor ducts (the nature and scope of which is unknown) may have disturbed asbestos but the extent of that disturbance is not known. Pertinently, there is no evidence that any asbestos was disturbed near Mrs Drinkwater when she walked by the ward.

*Exposure to asbestos dust*

73. Although it is also relevant to causation, it is useful at this stage to consider the evidence about Mrs Drinkwater's estimated exposure to asbestos dust.

74. The experts agreed, at paras. 2.1-2.4 of the joint statement, that asbestos containing materials involved in the works probably contained the following types of asbestos:

    (a) Asbestos cement roofing: mostly chrysotile (white) asbestos although crocidolite (blue) and amosite (brown) asbestos was used at times.
    (b) Asbestos insulation boards: they predominantly contained amosite.
    (c) Lagging on pipes: they contained a mixture of crocidolite, amosite and chrysotile.

75. Table 1 at para. 3.3 of Mr Stear's report sets out the percentage asbestos content of the relevant materials thus: roofing (12%-15%); asbestos insulation boards (24%-40%) and pipe lagging (55%). These figures are uncontroversial.

76. The experts agreed that the level of likely asbestos exposure to a person in the vicinity of construction-related activities is impossible to measure accurately. That said, Mr McDonald drew my attention to the estimates provided in TDN 42 (April 1973) and EH 35 (December 1989) both of which emphasised that they provided guidance only. I was also taken to evidence of exposure figures (provided by Mr Stear) in the case of *Dring v. Cape Intermediate Holdings Limited*. Mrs Martin relied on those figures in para. 9.14 of her report which indicated that hand-sawing of Asbestolux produced exposure of between 2.9 fibre/ml and 92.3 fibres/ml with an average of 36.4 fibres/ml. Drilling and fixing of Asbestolux to structures produced exposure of between 3.5 fibres/ml and 46 fibres/ml with an average of 20.9 fibres/ml.

77. On the basis of the *Dring* data, Mrs Martin estimated that if Mrs Drinkwater had passed by the ward during work to fit the fire doors with Asbestolux, her exposure to asbestos fibres would have been between 0.2 fibres/ml and 9.2 fibres/ml, at averages of 0.3 fibres/ml and 3.6 fibres/ml. If she passed by the ward when the asbestos cement roof work was carried out, that would have exposed Mrs Drinkwater to asbestos fibres in the range of 0.01-0.4 fibres/ml.

78. In cross-examination Mrs Martin accepted that the estimates offered in her report were, in her words, "under-qualified" because they did not take sufficient account of the type of work taking place as Mrs Drinkwater walked past the ward and whether and, if so, to what extent it involved asbestos. In the circumstances, it is doubtful whether the estimates cited by Mrs Martin provide any reliable assistance in determining the extent, if any, of Mrs Drinkwater's exposure to asbestos when she walked past the ward.

79. Mr Stear's position was set out in para. 4.24 of his report: if the court finds that Mrs Drinkwater was exposed to asbestos as a result of the works, although the evidence suggests that any dose was likely to be small, he was unable to provide an accurate dose estimate because of the limitations of the evidence. He maintained that position in para. 2.10(b) of the joint statement and in cross-examination.

80. The expert medical evidence does not assist in deciding whether any asbestos exposure at the hospital was significant or material. As set out at para. 17(c) above, Professor Maskell's conclusion, at para. 9.2 of his first report, was concerned with the materiality of Mrs Drinkwater's overall exposure including from her husband's work clothes. On the basis of Mrs Drinkwater's statement and her treating clinicians' correspondence in March and April 2018, the latter was significant, regular and

consistent during her husband's working life. Given the limited materials that were available to him at the time, it is understandable that Professor Maskell was unable to distinguish between the likely respective contributions of the two potential sources of exposure.

*Exposure – conclusion*

81. For the reasons set out above, I am unable to accept Mrs Drinkwater's evidence that she saw visible clouds of dust on a daily basis for several months in the corridor by the ward. If that is so, it is unlikely, given the experts' agreed position, that there was vigorous and uncontrolled disturbance of materials (including asbestos-containing materials) that generated dust (including asbestos dust) which spread into the external corridor.

82. As an alternative, I have considered whether occasionally some dust may have been encountered by Mrs Drinkwater which may have contained asbestos. In doing so, I had regard to the length of time it would have taken to carry out the work involving asbestos-containing materials and the fact that Mrs Drinkwater said that she walked past the building site several times a day for months.

83. As the experts agreed, the question is whether Mrs Drinkwater was walking sufficiently close (that is to say, within 20-30 feet or thereabouts) to any works involving asbestos to have been exposed to any or any material amount of asbestos dust. Although she may well have walked past the ward several times a day, as the experts agreed it is not known whether Mrs Drinkwater walked past the ward when asbestos-related work was carried out. In particular, it is not known where or how works involving asbestos were carried out or Mrs Drinkwater's proximity to those works when she walked past the ward.

84. Although Mrs Martin was endeavouring to assist the court in providing estimates of asbestos exposure, the limitations of the evidence are such that they are unlikely to be representative and, in my judgment, they do not provide a reliable estimate of exposure even if Mrs Drinkwater's evidence about seeing clouds of dust were to be accepted or, alternatively, she had occasionally encountered some dust during the works. The short point is that it is not now possible reliably to estimate, measure or quantify any exposure because of the limitations of the evidence.

85. My findings on exposure and materiality are sufficient to dispose of the Claimant's claim but I will turn briefly to consider breach of duty and causation.

*Breach of duty – standard of care and foreseeability*

86. To adapt Underhill LJ's first question in *Bussey* to the facts of this case: should the Defendant at the time of the works have been aware that the exposure to asbestos which her work involved gave rise to a significant risk of an asbestos-related injury to Mrs Drinkwater? For these purposes, "significant" means any real risk, albeit statistically small, rather than a fanciful risk and even though the Defendant may have been aware of the risk in general terms, was it reasonable for it to believe at the material time that there was a level of exposure below which there was no significant risk and that Mrs Drinkwater's exposure was below that level?

87. The answer to that question requires the court 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.

88. The Claimant's case is that as a public health body the Defendant should have had the resources and knowledge to be at the forefront of health and safety matters of the day. Its expected level of knowledge would likely have reasonably exceeded that of a smaller organisation. As knowledge of mesothelioma developed, the Defendant should have been aware from late 1965 onwards that there was no safe level of exposure to asbestos and so taken appropriate precautions.

89. The Defendant submitted that in the mid-1970s some low level of exposure to asbestos in certain applications was considered not to pose a foreseeable risk of injury and thus not to require precautions. Precautions were only required to be taken when that supposedly safe level was exceeded. That changed in December 1976 (that is to say, after the works were due to be completed at the end of February 1976) when for the first time the Health & Safety Executive published EH10 which required all exposure to be reduced to the lowest level reasonably practicable.

90. Because the question of knowledge was not in issue in their reports, it was not addressed in the joint statement. That said, the experts' positions, as canvassed at trial, can be summarised thus:

    (a) Mrs Martin and Mr Stear accepted that the expected standard of care was that of a government body rather than a builders' firm.
    (b) Mrs Martin's essential position on knowledge of the risks flowing from low level of asbestos exposure was set out in para. 10.70 of her report. It said that after national attention was drawn to the work of Dr Newhouse and Mrs Thompson in The Sunday Times article of 31 October 1965 it is generally considered that a prudent employer ought to have been aware of the risk of fatal pulmonary injury (namely, mesothelioma) from any level of asbestos exposure, however modest, and that this included risk to those not involved first hand in work activities.
    (c) Mr Stear's report did not consider the Newhouse and Thompson paper or The Sunday Times article. That said, his opinion on knowledge was recorded in para. 79 of the judgment of HHJ Lickley KC in *Ness v. Carillion Capital Projects Limited* [2023] EWHC 1219 (KB): "… 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." There was no suggestion that the judge summarised Mr Stear's evidence unfairly or inaccurately and in his evidence before me he did not seek to resile from or qualify the opinion he gave in the *Ness* case.
    (d) The experts therefore agreed that from late 1965 there was no safe level of exposure to asbestos.
    (e) Mr Stear agreed that the ARC's Safety Guide No. 3 (revised March 1973) reasonably required precautions to be taken in relation to work with asbestos insulation.

91. Mr Macpherson argued (in detail in para. 59 of his closing skeleton argument) that limited work using hand tools on asbestos cement sheets and Asbestolux boards would not reasonably have required precautions according to contemporary guidance (pre-eminently, the ARC's Control Guide No. 5). This point was not made by Mr Stear in his report or the joint statement and Mr Macpherson relied on documents that (apart from two) were not exhibited to Mr Stear's report and which, I am told, were included in the trial bundle at the request of the Defendant's solicitors.

92. At para. 61 of his closing skeleton argument, Mr Macpherson noted that both Mrs Martin and Mr Stear questioned why precautions were only advised if exposure exceeded the threshold limits in TDN13 when that approach was seemingly inconsistent with the approach in the British Occupational Hygiene Society's publication entitled "Hygiene Standards for Chrysotile Asbestos Dust" (dated June 1968). Mr Macpherson also accepted that both experts had questioned whether the ARC's guidance (particularly Safety Guide No. 5) was consistent with TDN13.

93. In circumstances where Mr Macpherson's argument was not obviously supported by his own expert and, importantly, the experts effectively agreed that from late 1965 the prudent employer knew or should have known that there was no safe level of exposure to asbestos, in my judgment, the Defendant had that knowledge from that time.

94. In my judgment, a decade after the publication of Newhouse and Thompson's paper and The Sunday Times article, in the winter of 1975/6 there was sufficient information for the Defendant, as a public health authority and Mrs Drinkwater's employer, to have been aware of the risk of exposure to asbestos even at low levels. Given the Defendant's position as a government body and, in particular, as a health authority, it should at the time it employed Mrs Drinkwater have been aware that the exposure to asbestos which her work involved gave rise to a significant risk of asbestos-related injury being more than fanciful. Given the state of knowledge at the time, a reasonable and prudent employer in those circumstances should have taken steps to address the risk of exposure even at low levels.

*Breach of duty – precautions*

95. Turning to the second of Underhill LJ's questions in *Bussey*, Mr McDonald accepts that it is for the Claimant to prove on the balance of probabilities that the Defendant failed to take appropriate precautions. Although the specification is silent on precautions, the experts agreed that in the mid-1970s measures to eliminate or mitigate the risks flowing from work with asbestos may not have been included in a specification. If that is so, there is no sound basis upon which to make an adverse finding about, or to draw an adverse inference from, the absence of any provision for precautions in the specification. To the extent that the Claimant relies on the absence of any document that sets out what precautions were taken, in my judgment it is not reasonable to expect the Defendant in this case to have preserved records in relation to a project that was completed 47 years ago at a hospital which closed 37 years ago. In the circumstances, the various decisions that were cited to me about inferences to be drawn in those cases from the absence of documents (including the Court of Appeal's decision in *Keefe v. Isle of Man Steam Packet* [2010] EWCA Civ 683) provide no real assistance in determining the facts of this particular case.

96. Mrs Drinkwater did not see the works and so she did not describe how the works were carried out or what measures (if any) were taken to address any asbestos-related risks. As set out above, I am not persuaded that Mrs Drinkwater saw visible clouds of dust and so it is unlikely that something had gone "wrong", to use Mr Stear's phrase from his cross-examination, with the contractor's dust control systems on-site. Put differently, it is unlikely that there was vigorous and uncontrolled disturbance of materials (including asbestos-containing materials) that generated dust (including asbestos dust) which spread into the external corridor.

97. Mr Macpherson submitted (which I accept) that if the contractor were taking precautions to control the spread of asbestos dust (for example, segregation, impermeable barriers or local exhaust ventilation) these would have been placed near the work with asbestos itself so as to prevent the exposure of other workers carrying out different jobs in the ward. It would not have been appropriate to rely upon a barrier at the limit of the ward as the means of containing the spread of asbestos dust as that would have left workers within the ward unprotected.

98. If dust did occasionally emanate from the works, I accept the Defendant's submission that it cannot be inferred from the absence of wholly effective controls of general construction nuisance dust that no or no effective measures were in place to eliminate or mitigate the risks arising from asbestos exposure.

99. In the circumstances, I am not satisfied on the balance of probabilities that the Defendant failed to put in place precautions.

*Causation*

100. Adopting Lord Phillips' formulation of the test of causation, three questions fall to be decided:

    (a) Is there no significant possibility that the incremental exposure to which Defendant subjected Mrs Drinkwater was instrumental in causing his to contract the disease?
    (b) Was the exposure insignificant compared to the exposure from other sources?
    (c) Was the exposure so insignificant that the court will properly disregard it on the de minimis principle?

101. For the reasons set out above, I am not satisfied that Mrs Drinkwater was exposed to any or any material amounts of asbestos during the works. For that reason, there was no significant possibility that any incremental exposure by the Defendant was instrumental in causing her to contract mesothelioma. In light of my finding that Mrs Drinkwater was not exposed to any or any material amount of asbestos, by definition it was insignificant compared to exposure from the other admitted source, namely her husband's work clothes.

## Part 7 – conclusion

102. Despite my considerable heartfelt sympathy for Mrs Drinkwater and Mrs Evans, I am unable to find that the Defendant exposed Mrs Drinkwater to asbestos dust during the course of the works at the hospital in the winter of 1975/6. Therefore, for the reasons set out above, the claim must be dismissed. I will consider any consequential

applications in writing or, if necessary, at a short hearing. Finally, I would like to express my thanks to Mr McDonald and Mr Macpherson for their considerable assistance and to those who prepared the trial bundle so efficiently.