

**THE HORNET'S NEST REVISITED - THE DECISION OF THE SUPREME COURT IN  
SIENKIEWICZ v GREIF; WILLMORE v KNOWSLEY MBC**

*“Fairchild kicked open the hornets’ nest. The House of Lords was confronted with several employers, each of which had wrongly exposed their employees to asbestos, but none of which exposure could be shown to have caused the disease. I find it hard to believe that their Lordships there foresaw the logical consequences of abandoning the “but for” test; that an employer or occupier whose wrongful exposure might or might not have led to the disease would be liable in full for the consequences even if it was more likely than not that some other cause was to blame (let alone that it was more likely than not that he was to blame. But as Lord Rodger has explained, that is the logical consequence and there is nothing we can do about it without reversing Fairchild.”* (Lady Hale in **Sienkiewicz and Willmore**, para 167).

Introduction

In **Sienkiewicz v Greif; Willmore v Knowsley MBC [2011] UKSC 10**, the Supreme Court has considered further the application of the principle established in **Fairchild v Glenhaven [2002] UKHL 22**. In that case, the House of Lords had considered the circumstances of a Claimant who developed mesothelioma and who could prove tortious exposure to asbestos by a number of employers. The state of scientific knowledge does not allow one to identify which fibres or fibres (and therefore which employer or employers) are responsible for the development of the disease. Accordingly, on a conventional application of the balance of probabilities test, the Claimant could not establish liability against any employer, even though it was apparent that one or more of the employers were in fact responsible for the development of the disease.

The House of Lords solved the apparent unfairness of this by holding that any employer whose tortious exposure of an employee to asbestos has led to a material increase in the risk of that employee developing mesothelioma is liable for the development of the disease.

In **Barker v Corus**, the House of Lords developed this principle further. Since the basis of the liability was materially increasing the risk of the development of mesothelioma, each employer was held liable only for the extent of that increased risk and so, although the disease was indivisible, the liability was divided in proportion to the contribution to the increased risk.

This decision was rapidly reversed by Parliament in Section 3 of the Compensation Act.

The Supreme Court has now considered the position where exposure is slight and where the only other known exposure is environmental.

#### The two cases

In **Willmore**, the Claimant contended that she had been exposed to low levels of asbestos in the school that she had attended in the 1970s. The trial Judge, Nicol J, had reviewed the evidence and identified three sources of material (that is to say more than *de minimis*) exposure:

- (a) As result of work including the removal, handling and disturbance of ceiling tiles in a corridor along which pupils including Diane Willmore passed;
- (b) As a result of pupils' misbehaviour in putting pupils' belongings into the ceiling void, causing ceiling tiles containing asbestos to get damaged;
- (c) As a result of asbestos ceiling tiles, including broken tiles, being stored in the girls' toilets, which Mrs Willmore used.

Applying the principle in **Fairchild**, Nicol J found the Local Education Authority responsible for the Claimant's development of mesothelioma. The Court of Appeal dismissed the Defendant's appeal, finding that Trial Judge had reached conclusions that were justified on the facts before him in respect of two of the three sources of exposure – the finding in respect of the exposure from ceiling tiles caused by pupils putting items in the ceiling void was overturned on the basis that there was insufficient evidence to support the conclusion that the tiles where this misbehaviour had taken place contained asbestos.

In **Sienkiewicz**, the deceased had worked in the offices of a factory belonging to the Defendant. She had been exposed to low levels of asbestos whilst walking around the factory (in particular in order to meet her husband who worked on the factory floor). The trial Judge analysed evidence of the deceased's exposure to asbestos in her employment and that in the general environment (she lived in Ellesmere Port). He concluded that the deceased's exposure to asbestos had increased her risk of developing mesothelioma from a risk of 24 cases per million due to environmental exposure alone to an incidence of 28.39 cases per million, an increase of 18%<sup>1</sup>. He went on to hold that, in a case of a single tortious exposure to asbestos, it was necessary for the Claimant to prove the exposure had more than doubled the risk of mesothelioma developing in order to make the Defendant liable. Given that his finding only supported a much lower increase in risk, he dismissed the claim. On appeal, the Court of Appeal allowed the appeal, the majority holding that the effect of the decision in **Fairchild** and the enactment of Section 3 of the Compensation Act 2006 were to make a tortfeasor liable for the development of mesothelioma where any exposure to asbestos had materially increased the risk of its development.

---

<sup>1</sup> On appeal, the Defendant conceded that this calculation was incorrect, but on any basis the evidence did not support the conclusion that the increase in risk amounted to a doubling of the risk.

### Doubling of the risk

In the Supreme Court the Defendants/Appellants argued that, where there was a single occupational exposure to asbestos, the **Fairchild** exception did not apply and the Claimant only succeeded if he could show that the Defendant's tortious exposure had more than doubled the "background" risk of the mesothelioma. Alternately, they argued that exposure which did not at least double the background risk was not "material" exposure within the meaning of **Fairchild** and the Compensation Act.

In his judgment, Lord Phillips summarises what is known about the causation of mesothelioma, as follows:

- (i) Mesothelioma is always, or almost always, caused by the inhalation of asbestos fibres.
- (ii) A significant proportion of those who contract mesothelioma have no record of occupational exposure to asbestos. The likelihood is that in their case the disease results from inhalation of asbestos dust that is in the environment.
- (iii) The more fibres that are inhaled, the greater the risk of contracting mesothelioma.
- (iv) There is usually a very long period, typically at least 30 years, between the exposure to asbestos and the development of the first malignant cell.
- (v) There will be a lengthy period between the development of the first malignant cell and the point at which the disease can be diagnosed, previously thought to be 10 years but now considered to be at least 5. During this period, further exposure to asbestos fibres will have no causative effect.

- (vi) The mechanism by which asbestos fibres cause mesothelioma is still not fully understood. It is believed that a cell has to go through 6 or 7 genetic mutations before it becomes malignant, and asbestos fibres may have causative effect on each of these.
- (vii) It is also possible that asbestos fibres have a causative effect by inhibiting the activity of natural killer cells that would otherwise destroy a mutating cell before it reaches the stage of becoming malignant.

He then considered the Defendant's argument that, in order to establish causation it was incumbent upon the Claimant to prove that the tortious exposure for which the Defendant was liable had at least doubled the risk of the Claimant developing mesothelioma. In the light of the gaps in knowledge about the causation of mesothelioma, his conclusion was that it is not possible to decide causation on the basis of epidemiological evidence and therefore the concept of doubling the risk could have no application. His conclusion was that *"liability for mesothelioma falls on anyone who has materially increased the risk of the victim contracting the disease"* (para 107).

The other Justices unanimously agree that a "doubling the risk" approach was inappropriate to mesothelioma cases even when the only known exposures to asbestos were background environmental levels and a single occupational exposure. The **Fairchild** rule applied in such cases as much as in the case of multiple occupational exposures.

As can be seen from the comments of Lady Hale above, there was some reluctance in coming to this conclusion. She and Lord Brown seem to have been particularly concerned at what they considered to be the unintended consequences of the decision in **Fairchild**.

It was recognised by Lord Phillips that there might be developments in the state of scientific knowledge which led to the Courts abandoning **Fairchild** on the basis that it

may become possible to prove causation on the conventional test of the balance of probabilities.

### Epidemiology

It is of interest to see how the Justices approached the issue of epidemiological evidence. The Justices differed in their opinion as to the weight to be attached to epidemiological evidence. Lord Phillips described epidemiology as follows:

*“Epidemiology is the study of the occurrence and distribution of events such as disease over the human populations. It seeks to determine whether statistical associations between events and supposed determinants can be demonstrated. Whether these associations if proved demonstrate an underlying biological causal relationship is a further and different question from the statistical association on which the epidemiology is initially engaged” (para 80).*

An epidemiologist may investigate whether one cohort of people subject to an exposure is more prone to develop a disease than another cohort which is not so exposed. The epidemiologist will seek to establish a relative risk (RR) – if the RR is 1, that indicates no statistical association between the exposed cohort and the non-exposed. A RR of 2 would indicate that the exposed cohort had double the chance of developing the disease and might be used to support a conclusion that, on the balance of probabilities, the exposure had caused the disease.

However such an approach is open to criticism in a number of respects. The coloured taxi argument is the first. A town has two cab companies, one of which owns 3 blue taxis and one of which owns 1 yellow taxi. A person is negligently knocked down by a cab, but there is no further evidence as to whose taxi caused the accident. Can one say that the taxi that knocked the person down was probably blue? There is a 75% (1 in 4) chance that any random taxi is blue – but that does not amount to saying that it is more probable that the offending taxi was blue. The fact

finder would always look for additional information – evidence of where the taxis were, evidence of damages to the taxis, evidence of the driving record of the drivers.

This is a distinction has been described as a difference between “fact probability” and “belief probability” – a more than 50% statistical probability of an event having occurred, as a opposed to a belief in the particular circumstances that an event probably did occur.

Lords Phillips and Dyson considered that such statistical or epidemiological evidence alone could at least potentially establish causation. Lord Rodger, Lady Hale, Lord Kerr and Lord Mance were to varying degrees doubtful that this would ever be the case.

#### The reliability of epidemiological evidence

Notwithstanding his relative enthusiasm for the use of epidemiological evidence in principle, Lord Phillips was keen to point out the limits of such evidence in establishing a relationship between exposure and disease. He identified 3 particular factors that make this exercise particularly problematic:

1. The difficulty in collating sound epidemiological data – such data may relate to people with varying degrees of exposure over varying time scales, with (in the case of mesothelioma) long periods of latency, then short periods from diagnosis to death;
2. The difficulty of obtaining reliable evidence as to the experience of the individual, for similar reasons as to those limiting the value of the comparative population;
3. The uncertainty as to the adequacy of the data. If one knows the aetiology of a disease, it may be possible (though arguably unnecessary) to rely on epidemiology to prove causation. In simple terms, if the risk of

contracting a disease is proportionate to exposure to asbestos dust, for example because mesothelioma is triggered by a single fibre and the greater the fibre burden to which one is exposed, the greater chance of this happening, there may be force in an epidemiological approach to risk. But if the single fibre theory is discredited<sup>2</sup> and if causation may depend not only on the dosage but the timing and the cumulative effect of exposure, the relative extent of exposure does not assist in answering the question as to causation.

### The Compensation Act

The Appellants contended that the only purpose of section 3 of the Compensation Act 2006 was to reverse **Barker v Corus** so as to make a tortfeasor liable for the full extent of the injury when the case fell within **Fairchild** – it did not affect the common law test of who was liable for exposure. The Court agreed that the sole purpose of section 3 was to reverse the decision in **Barker v Corus**. It could not assist a Claimant in proving what amounted to material contribution to injury.

### Low-level exposure to asbestos

The decision of the Supreme Court confirms that a Claimant will recover for the development of mesothelioma even where the occupational exposure is very slight (so long as not *de minimis*) and even though that exposure is less than the exposure from the general atmosphere. Such cases are, as Lord Brown puts it “*from the Defendant’s standpoint a lost cause.*”

### Material exposure

---

<sup>2</sup> Lord Phillips came to this conclusion though it was not dealt with in evidence in the cases before him.



Further, it could not be said that the exposure in either of the cases before the Court was *de minimis* even if the Court accepted the difficulty of deciding what is truly *de minimis*.

Lord Phillips put it this way: *"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 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 this is the position in this case"*(para 108).

#### The future for mesothelioma cases – is there any threshold for exposure?

It is clear that it will now be difficult to defend any claim for asbestos-related mesothelioma where there is clear evidence of exposure, even at very low levels. Lord Brown put it this way – *"mesothelioma claims must be considered from the Defendant's standpoint a lost cause."*

Two situations can be distinguished - First, where there is a single source of exposure (as in **Willmore**); second, where there a number of sources of exposure (as in **Sienkiewicz**).

In the first situation, a Claimant is likely to succeed where any actual exposure. In such circumstances, the test of "material contribution to risk" will be met because, assuming this to be asbestos-related exposure, the known exposure (even though very low) is the only identified contribution to the risk. This is likely to be the finding however low the exposure is, so long as actual exposure (rather than a potential for exposure) are shown. Lord Phillips put it this way: *"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 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"* (para 111).

It may be that in such cases, Defendants will in future look further at the argument that the development of mesothelioma was not asbestos-related but was idiopathic. Having regard to the apparently low incidence of idiopathic mesothelioma, it is widely accepted that, where there is evidence of asbestos-exposure, the Court will readily find that the mesothelioma was asbestos-related. But if the Courts are to be looking at cases with lower and lower levels of exposure, insurers are likely to look with renewed interest at the argument that, notwithstanding evidence of exposure, the development of mesothelioma was not asbestos-related.

The incidence of truly idiopathic mesothelioma formed one part of the insurers argument in the Supreme Court. Lord Phillips noted, *"There is, however, a possibility that some cases of mesothelioma are "idiopathic," i.e. attributable to an unknown cause other than asbestos. Mr Stuart-Smith QC for Greif submitted that the Peto Report indicates that this is more than a possibility, but I do not so read it. I do not, however, think that it matters whether some cases of the disease are idiopathic."*

Second, where there is more than one source of exposure (as in **Sienkiewicz**), the test of "material contribution to the risk" will have some meaning since the tortious exposure may be only a very small part of the exposure (or the increase in risk). Opinions may differ as to what will be treated as *de minimis*. Perhaps the clearest line that can be drawn is that frequently referred to in multiple-exposure cases, namely that a contribution of less than 1% of the total exposure (or 1% of the risk) is considered to be *de minimis*.

### Evidence of exposure

In one respect the Supreme Court provided some encouragement for Defendants. Lords emphasised the need for trial Judges to take a robust look at the evidence in

support of exposure. Lord Mance in particular said of the evidence in **Willmore** that it would not have persuaded him that the Defendant exposed the Claimant to asbestos. Lady Hale described the Judge's findings in that case as "*truly heroic.*"

One can expect continued efforts from Defendants to scrutinise whether there is proof of any exposure at all.

### Does the doubling of the risk test apply to lung cancer cases?

The application of the "doubling the risk" test where two causes operate cumulatively and simultaneously was rejected. Thus, Lord Phillips suggests, where asbestos and cigarette smoke act cumulatively to cause lung cancer (see the analysis in **Shortell v Bicall**), it is not necessary for a Claimant to prove that the asbestos exposure alone doubled the Claimant's risk of developing lung cancer. "*The expert evidence given by both medical and epidemiological experts but based in the case of each I suspect on epidemiological data was that asbestos and cigarette smoke not merely combined cumulatively to cause lung cancer but that they had a synergistic effect in doing so. This evidence was enough, as I see it, to satisfy the **Bonnington** test of causation, as the victim had been exposed both to significant quantities of asbestos and to significant cigarette smoke*" (para 75 of Lord Phillips' judgment).

This is likely to prove the most controversial part of the judgement in **Sienkiewicz and Willmore**. The causation of lung cancer was not in issue in the case and was not subject to argument. Further the comments are *obiter* to the decision. Nevertheless, industrial disease lawyers will look with interest at Lord Phillips' comments.

It has become commonplace in lung cancer cases to look at the relative contribution to risk of asbestos and smoking. In **Shortell**, MacKay J noted evidence from Dr Rudd that the Claimant's presumed 5% risk of lung cancer from smoking had increased (synergistically) to 25% as a result of asbestos exposure. Thus 20% of the total 25%

risk (that is 80% of the whole risk) was attributable in whole or in part to asbestos exposure and causation was made out. One might alternatively analyse this as 5-fold increase in risk due in whole or in part to asbestos exposure which clearly is significantly more than a doubling of the risk.

The difficulty arises if one assumes different figures - perhaps a heavy smoking, light asbestos-exposed person whose risk of developing lung cancer was 10% due to smoking increased to 15% due to asbestos exposure. In this case, the 5% increase amounts to 33% of the total risk or the risk is 1.5 times that it would have been but for the exposure. Such cases would fail the **Shortell** test. Are they now nevertheless to lead to recovery, applying Lord Phillips comments?

The **Bonnington** test is premised upon cumulative injury, that is to say that each exposure contributes to the severity of the injury but it is impossible to determine the proportion in which the two causes operated. The difficulty in the lung cancers lies in demonstrating that each of the two factors (asbestos and smoking) contributed to the injury itself (as opposed to the risk of injury). In **Ellis v South Australia** [2010] HCA 5, the Claimant was ultimately unsuccessful in seeking to demonstrate this – the evidence showed no more than that the asbestos may have contributed, the type of fact probability considered above.

It is to be noted that there is a significant incidence of lung cancer linked to asbestos exposure – perhaps as many such deaths as from mesothelioma<sup>3</sup>. How would the courts deal with a wave of such cases, in many cases involving heavy smokers but where the asbestos exposure is low?

---

<sup>3</sup> See the figures from the Health and Safety Executive – 2,249 mesothelioma deaths in 2008 (<http://www.hse.gov.uk/statistics/causdis/lungcancer>)